

Regione Autonoma
della Sardegna



Provincia di Sassari



Comune di Ittiri (SS)



Comune di
Villanova Monteleone (SS)



Committente:

RWE

RWE RENEWABLES ITALIA S.R.L.
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Titolo del Progetto:

PARCO EOLICO "ALAS"

- Comuni di Ittiri e Villanova Monteleone (SS) -

Documento:

STUDIO DI IMPATTO AMBIENTALE

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PEALAS-S02.25.01

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A cura di:



Progettista:



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1 PREMESSA

Il presente documento costituisce un'appendice integrativa dell'Elaborato *PEALAS-S02.25_Studio degli effetti di shadow flickering* allegato alla documentazione progettuale depositata ai fini dell'istanza di VIA statale del Parco eolico denominato "Alas" nei comuni di Ittiri e Villanova Monteleone (SS), proposto dalla società RWE Renewables Italia S.r.l.

Quanto segue si propone di riscontare le richieste formulate dal Ministero della Cultura – Direzione generale belle arti e paesaggio – Servizio V con nota prot. N. 18/03/2021|0008895-P (nel seguito indicata per brevità come "nota MIBACT") e segnatamente il punto 21, laddove è richiesto di estendere la valutazione degli effetti del fenomeno del *shadow-flickering* considerando quali ricettori anche i beni e siti culturali (architettonici e archeologici).



A tal fine, pertanto, si farà riferimento alla ricognizione operata nell'ambito delle verifiche archeologiche condotte dal dott. Matteo Tatti le cui risultanze sono contenute nell'Elaborato *PEALAS-S02.35_Relazione_archeologica* e nella relativa Appendice integrativa (Elaborato PEALAS-S02.35.01 dell'agosto 2021).

In coerenza con l'impostazione del documento principale inerente al fenomeno del *shadow-flickering* sugli ambienti abitativi (Elaborato PEALAS-S02.25), considerata la presenza di alcuni impianti minieolici nel settore di studio, la valutazione ha considerato gli effetti cumulativi indotti dal progetto in relazione allo specifico fattore di impatto.

Per tutto ciò che attiene alla natura del fenomeno dell'ombreggiamento intermittente ed alle ipotesi alla base dei calcoli previsionali, eseguiti a mezzo di specifico software specialistico, si rimanda integralmente ai contenuti dell'Elaborato PEALAS-S02.25.

In relazione all'aspetto ambientale in questione, corre peraltro l'obbligo di sottolineare fin d'ora come non esista una specifica disciplina regolatoria a livello nazionale né le attuali buone pratiche in materia¹ a livello internazionale contemplino l'opportunità di considerare, tra i potenziali ricettori, siti e beni culturali che non siano riconducibili ad ambienti abitativi.

¹ Linee Guida tedesche (Hinweise zur Ermittlung und Beurteilung der optischen Immissionen von Windkraftanlagen – Aktualisierung 2019)



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2 INDIVIDUAZIONE DEI RICETTORI CATALOGABILI COME SITI E BENI CULTURALI

In accordo con le indicazioni del MIBACT, ai fini delle verifiche di esposizione all'ombra intermittente, sono stati assunti come riferimento n. 34 beni archeologici e culturali, individuati planimetricamente nell'Elaborato PEALAS-S02.28.01. La **Errore. L'origine riferimento non è stata trovata.** riporta per ciascun bene individuato le relative coordinate, secondo il sistema Gauss Boaga, e la categoria Catastale.



Tabella 2.1: Elenco dei ricettori catalogabili come siti e beni culturali

Ricettore	Comune	GB Est	GB Nord	Distanza dal più prossimo WTG [m]	Descrizione
RBP_1	Ittiri	1459622	4489649	51	Peso morto o pietra da trebbiatura
RBP_2	Ittiri	1459647	4489815	118	Torre e cortine murarie
RBP_3	Ittiri	1459653	4489846	150	Torre e cortine murarie
RBP_4	Ittiri	1459674	4489879	187	Torre e cortine murarie
RBP_5	Ittiri	1459696	4489940	252	NURAGHE MUROS
RBP_6	Ittiri	1459711	4489977	292	Mura del nuraghe Sos Muros
RBP_7	Ittiri	1459724	4489998	316	Torre nuragica
RBP_8	Ittiri	1461693	4490017	332	Turricula
RBP_9	Ittiri	1459991	4489683	373	NURAGHE FRADES TALAS
RBP_10	Ittiri	1463111	4490150	391	NURAGHE CIROLO
RBP_11	Ittiri	1463683	4489484	401	Circolo megalitico
RBP_12	Ittiri	1463138	4490391	446	Villaggio nuragico
RBP_13	Villanova Monteleone	1458085	4487894	488	Dolmen Pubusattile
RBP_14	Ittiri	1463126	4490510	494	Nuraghe Ciolo II
RBP_15	Ittiri	1460851	4491323	501	Circoli megalitici
RBP_16	Villanova Monteleone	1458088	4487856	515	Coppelle Pubusattile
RBP_17	Villanova Monteleone	1458112	4487866	526	Rifugio sotto roccia di Pubusattile

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RBP_18	Villanova Monteleone	1458139	4487862	550	Domus de janas di Pubusattile I
RBP_19	Villanova Monteleone	1458143	4487863	553	Domus de janas Pubusattile II
RBP_20	Villanova Monteleone	1458145	4487864	554	Domus de janas Pubusattile III
RBP_21	Villanova Monteleone	1458162	4487874	561	Domus de janas Pubusattile IV
RBP_22	Villanova Monteleone	1458178	4487874	574	Domus de janas Pubusattile V
RBP_23	Villanova Monteleone	1458176	4487865	578	Riparo sotto roccia Pubusattile 2
RBP_24	Ittiri	1463716	4489301	581	Struttura megalitica
RBP_25	Villanova Monteleone	1458187	4487875	581	Domus de janas Pubusattile VI
RBP_26	Ittiri	1463588	4489286	613	Struttura megalitica circolare
RBP_27	Ittiri	1463120	4489624	666	Nuraghe Majone
RBP_28	Ittiri	1460610	4489791	692	Nuraghe Monte Alas
RBP_29	Ittiri	1463531	4489155	755	Struttura megalitica rettangolare
RBP_30	Villanova Monteleone	1460017	4488896	766	Menhir Su Filighe
RBP_31	Ittiri	1464467	4489538	810	Turricula Su Crabione
RBP_32	Ittiri	1462024	4490840	937	Turricula
RBP_33	Ittiri	1458472	4489620	943	Nuraghe S'Ozzastrone
RBP_34	Ittiri	1460875	4489724	953	Insediamento Monte Alas

I principali riferimenti dei beni di interesse, comprensivi di uno stralcio della ripresa aerea, sono riportati nell'Elaborato PEALAS-S02.28.01 dell'Agosto 2021.

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3 RISULTATI

Il risultato dei calcoli è reso disponibile dal programma di simulazione (*Windpro*) sotto diversi formati:

- tabellare (calendario per ciascun ricettore) nel quale per ogni giorno dell'anno sono indicate le ore di luce e l'intervallo di tempo di esposizione all'ombra con l'orario in cui si verifica il fenomeno;
- grafico (per ciascun ricettore) nel quale vengono rappresentati i periodi dell'anno in cui si verifica il fenomeno, l'orario e le turbine responsabili dell'ombra;
- grafico globale con la rappresentazione di isolinee rappresentanti l'incidenza dell'ombra espressa in ore/anno.

Considerata la presenza, nel settore in esame, di alcuni impianti minieolici, ai fini di un'opportuna valutazione degli effetti cumulativi, lo scenario di calcolo ha valutato gli effetti associati all'entrata in esercizio del proposto impianto eolico della RWE Renewables Italia S.r.l. in sovrapposizione alla situazione delineata dal funzionamento degli impianti minieolici.

Con riferimento allo Scenario di progetto, le isolinee d'ombra sono state rappresentate su specifica tavola grafica integrativa, in scala adeguata alla dimensione territoriale da rappresentare, per facilitarne la lettura. La tavola è stata realizzata, pertanto, su base cartografica in scala 1:10.000 (Elaborato PEALAS-TA7-1 – Rev. 1 Agosto 2021).



I risultati forniti dal modello di calcolo consentono di valutare approssimativamente sia l'impatto puntuale sul singolo ricettore, sia l'impatto distribuito sul territorio (movimento e persistenza dell'ombra).

Nello specifico, all'interno degli allegati report di calcolo sono indicati, per il singolo ricettore, i valori totali di interferenza da *shadow flickering* (espressi in h/anno), il numero di giorni in cui si verifica l'interferenza ed infine la durata massima per singolo giorno.

Come evidenziato nell'Elaborato PEALAS-S02.25, peraltro, l'output fornito dal modello è alquanto conservativo e non realistico, giacché la simulazione non tiene in considerazione i numerosi fattori sfavorevoli al verificarsi del disturbo.

Per quanto precede, nel seguito si procederà ad esaminare le risultanze dei calcoli modellistici, introducendo nella valutazione di impatto ulteriori elementi che tengano conto delle effettive condizioni di funzionamento degli impianti, in rapporto al quadro anemologico atteso, nonché delle condizioni meteorologiche caratteristiche del sito di Ittiri – Villanova Monteleone, con particolare riferimento alle condizioni medie di copertura del cielo.

I risultati numerici delle simulazioni modellistiche sono riportati in Appendice.



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4 ANALISI DEI RISULTATI E CONCLUSIONI

Con riferimento allo scenario di progetto (funzionamento simultaneo degli esistenti impianti minieolici e del parco eolico ALAS), la Tabella 4.1 riepiloga, per ciascun ricettore rappresentativo dei beni archeologici e architettonici, le risultanze del calcolo modellistico espresse come valori totali di interferenza teorica (o potenziale) da *shadow flickering* (SF_P) in h/anno, numero di giorni in cui si verifica l'interferenza potenziale ed infine durata massima per singolo giorno.

Tabella 4.1: Durata massima del fenomeno di shadow flickering potenziale (SF_P) in corrispondenza dei beni archeologici e culturali individuati entro i 1000 metri dalle postazioni eoliche

ID	Ricettore - Beni archeologici e culturali	[h/anno]	[giorni/anno]	[h/giorno]
1	RBP_1 Peso morto o pietra da trebbiatura	71:14:00	70	01:16
2	RBP_10 NURAGHE CIROLO	289:09:00	231	01:38
3	RBP_11 Circolo megalitico	06:28	32	00:18
4	RBP_12 Villaggio nuragico	198:55:00	199	01:25
5	RBP_13 Dolmen Pubusattile	31:58:00	89	00:40
6	RBP_14 Nuraghe Cirolò II	188:36:00	139	01:39
7	RBP_15 Circoli megalitici	59:11:00	62	01:11
8	RBP_16 Coppelle Pubusattile	35:41:00	88	00:41
9	RBP_17 Rigugio sotto roccia di Pubusattile	32:22:00	85	00:39
10	RBP_18 Domus de janas di Pubusattile I	30:52:00	83	00:39
11	RBP_19 Domus de janas Pubusattile II	30:26:00	83	00:38
12	RBP_2 Torre e cortine murarie	878:24:00	217	04:37
13	RBP_20 Domus de janas Pubusattile III	30:12:00	84	00:38
14	RBP_21 Domus de janas Pubusattile IV	28:43:00	80	00:37
15	RBP_22 Domus de janas Pubusattile V	00:00	00:00	0
16	RBP_23 Riparo sotto roccia Pubusattile	29:44:00	81	00:38
17	RBP_24 Struttura megalitica	08:00	37	00:19
18	RBP_25 Domus de janas Pubusattile	00:00	00:00	0
19	RBP_26 Struttura megalitica circolare	12:36	48	00:23
20	RBP_27 Nuraghe Majone	69:54:00	82	01:01
21	RBP_28 Nuraghe Monte Alas	30:19:00	119	00:34
22	RBP_29 Struttura megalitica rettangolare	23:50	72	00:25
23	RBP_3 Torre e cortine murarie	599:22:00	216	04:07
24	RBP_30 Menhir Su Filighe	53:22:00	112	00:42
25	RBP_31 Turrìcula Su Crabione	58:03:00	96	00:51
26	RBP_32 Turrìcula 59:18 123	59:18:00	123	00:45
27	RBP_33 Nuraghe S'Ozzastrone	49:38:00	111	00:41
28	RBP_34 Insediamento Monte Alas	45:38:00	173	00:30
29	RBP_4 Torre e cortine murarie	382:33:00	153	03:27
30	RBP_5 NURAGHE MUROS	151:05:00	92	02:16

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ID	Ricettore - Beni archeologici e culturali	[h/anno]	[giorni/anno]	[h/giorno]
31	RBP_6 Mura del nuraghe Sos Muros	81:05:00	89	01:34
32	RBP_7 Torre nuragica	75:15:00	94	01:08
33	RBP_8 Turricula	223:22:00	186	01:44
34	RBP_9 NURAGHE FRADES TALAS	307:11:00	301	01:50

Ai fini di una appropriata lettura dei valori di h/anno riportati in Tabella 4.1, è opportuno richiamare, così come evidenziato nel documento del luglio 2020 (Elaborato PEALAS-S02.25), le ipotesi estremamente conservative alla base del calcolo modellistico (cielo sereno, sufficiente contrasto luci-ombre, velocità del vento al mozzo degli aerogeneratori superiore ai 3 m/s - V_{CUT-IN} , piano del rotore frapposto alla congiungente sole-ricettore).

Muovendo dai risultati della simulazione, la stima dei valori di effettiva esposizione all'ombra intermittente può condursi, pertanto, introducendo quantomeno un opportuno coefficiente di riduzione che tenga conto delle condizioni medie di copertura del cielo.

Valutato che, in base ai dati copertura del cielo richiamati in Tabella 4.2, il numero medio di giorni al mese con copertura nuvolosa superiore ai 4/8 è mediamente pari al 45%, è possibile pervenire alla stima dei valori di SF al netto delle giornate con presenza di cielo coperto (SF_{NC}) attraverso la seguente espressione:

$$SF_{NC}[h/anno] = \sum_{i=1}^{12} SF_{Pi} \cdot (1 - R_{Ni})$$

Dove:



SF_{NC} = h/anno di *shadow flickering* potenziale al netto delle giornate con presenza di cielo coperto;

SF_{Pi} = ore di *shadow flickering* teorico da modello di calcolo per il mese i-esimo;

R_{Ni} = frequenza dei giorni con copertura del cielo >4/8 per il mese i-esimo.

Con riferimento ai ricettori di interesse, i dati di SF_{NC} sono riportati in Tabella 4.3.

Tabella 4.2: Aeronautica Militare – Stazione di Capo Frasca (OR). Dati medi di copertura nuvolosa >4/8

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registrati nel periodo 1971÷2000 (Fonte, Aeronautica Militare Italiana)

	Ng h6 Nuv>4	Ngh18 Nuv>4	Media Nuv>4	Media Nuv>4 (%)
gen	14,5	16,5	15,5	50%
feb	14,5	16,6	15,6	56%
mar	16,5	17,6	17,1	55%
apr	19,4	18,4	18,9	63%
mag	15,2	14,8	15,0	48%
giu	11,4	10	10,7	36%
lug	7,9	6,1	7,0	23%
ago	7,8	6,9	7,4	24%
set	10,2	10,6	10,4	35%
ott	15,2	14,7	15,0	48%
nov	15,3	15,5	15,4	51%
dic	14,6	16,3	15,5	50%

Ng h6Nuv>4: Numero medio di giorni al mese con copertura nuvolosa > 4/8 alle ore 6

Ngh18Nuv>4: Numero medio di giorni al mese con copertura nuvolosa > 4/8 alle ore 18

MediaNuv>4: Media del numero medio di giorni al mese con copertura nuvolosa > 4/8 registrata alle ore 6 ed alle 18





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Tabella 4.3: Incidenza del fenomeno del shadow flickering al netto delle giornate con cielo coperto in corrispondenza dei beni archeologici e culturali riconosciuti all'interno dell'areale di interesse

ID	Ricettore - Beni archeologici e culturali	[h/anno]
1	RBP_1 Peso morto o pietra da trebbiatura	39:10:42
2	RBP_10 NURAGHE CIROLO	159:01:57
3	RBP_11 Circolo megalitico	3:33:24
4	RBP_12 Villaggio nuragico	109:24:15
5	RBP_13 Dolmen Pubusattile	17:34:54
6	RBP_14 Nuraghe Cirolu II	103:43:48
7	RBP_15 Circoli megalitici	32:33:03
8	RBP_16 Coppelle Pubusattile	19:37:33
9	RBP_17 Rigugio sotto roccia di Pubusattile	17:48:06
10	RBP_18 Domus de janas di Pubusattile I	16:58:36
11	RBP_19 Domus de janas Pubusattile II	16:44:18
12	RBP_2 Torre e cortine murarie	483:07:12
13	RBP_20 Domus de janas Pubusattile III	16:36:36
14	RBP_21 Domus de janas Pubusattile IV	15:47:39
15	RBP_22 Domus de janas Pubusattile V	0:00:00
16	RBP_23 Riparo sotto roccia Pubusattile	16:21:12
17	RBP_24 Struttura megalitica	4:24:00
18	RBP_25 Domus de janas Pubusattile	0:00:00
19	RBP_26 Struttura megalitica circolare	6:55:48
20	RBP_27 Nuraghe Majone	38:26:42
21	RBP_28 Nuraghe Monte Alas	16:40:27
22	RBP_29 Struttura megalitica rettangolare	13:06:30
23	RBP_3 Torre e cortine murarie	329:39:06
24	RBP_30 Menhir Su Filighe	29:21:06
25	RBP_31 Turracula Su Crabione	31:55:39
26	RBP_32 Turracula 59:18 123	32:36:54
27	RBP_33 Nuraghe S'Ozzastrone	27:17:54
28	RBP_34 Insediamento Monte Alas	25:05:54
29	RBP_4 Torre e cortine murarie	210:24:09
30	RBP_5 NURAGHE MUROS	83:05:45
31	RBP_6 Mura del nuraghe Sos Muros	44:35:45
32	RBP_7 Torre nuragica	41:23:15
33	RBP_8 Turracula	122:51:06
34	RBP_9 NURAGHE FRADES TALAS	168:57:03

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Relativamente alle situazioni potenzialmente più sfavorevoli riscontrate (incidenza stimata SF>100 h/anno) le stesse si riferiscono ai beni elencati in Tabella 4.4 e raffigurati planimetricamente in Figura 4.1.

Tabella 4.4 - Beni archeologici e culturali maggiormente esposti al fenomeno dello shadow-flickering (incidenza stimata SF>100 h/anno)

Ricettore - Beni archeologici e culturali	[h/anno]
RBP_2 Torre e cortine murarie	483:07:12
RBP_3 Torre e cortine murarie	329:39:06
RBP_4 Torre e cortine murarie	210:24:09
RBP_9 NURAGHE FRADES TALAS	168:57:03
RBP_10 NURAGHE CIROLO	159:01:57
RBP_8 Turracula	122:51:06
RBP_12 Villaggio nuragico	109:24:15
RBP_14 Nuraghe Ciolo II	103:43:48





Figura 4.1 – Beni archeologici e culturali maggiormente esposti al fenomeno dello shadow-flickering (incidenza stimata SF>100 h/anno)

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Considerato che:

- non esiste una disciplina regolatoria a livello nazionale né le attuali buone pratiche in materia, a livello internazionale, contemplano l'opportunità di considerare, tra i potenziali ricettori, siti e beni culturali che non siano riconducibili ad ambienti abitativi;
- non esistono conseguentemente soglie di riferimento circa l'incidenza del fenomeno che possano essere ragionevolmente assunte come indicatrici dell'entità di un potenziale disturbo a carico di eventuali saltuari visitatori dei suddetti beni;
- l'incidenza massima del fenomeno di *shadow-flickering* in corrispondenza dei ricettori considerati (riferibile al bene identificato come RBP_2 Torre e cortine murarie) è valutabile in circa l' 11% delle ore di luce in un anno per il sito di Ittiri (stimabili in circa 4200 ore);
- anche in previsione di una eventuale futura valorizzazione e fruizione dei suddetti beni archeologici - attualmente non oggetto di indagini scientifiche, di fruizione o valorizzazione e, addirittura, in alcuni casi in stato di abbandono - ogni eventuale disturbo conseguente alla proiezione di ombre intermittenti per effetto del funzionamento degli aerogeneratori in progetto può essere efficacemente mitigato attraverso l'interposizione di ostacoli visivi di modesta altezza al perimetro dei suddetti beni (quali p.e. cortine arboree);

si può ragionevolmente affermare che gli effetti associati al fenomeno dello *shadow-flickering* sulla godibilità del patrimonio archeologico e culturale riconosciuto in un areale di 1000 metri dal parco eolico in progetto saranno di natura transitoria, scarsamente significativa ed efficacemente mitigabile.

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APPENDICE 1 - REPORT DEI RISULTATI DEL CALCOLO MODELLISTICO – SCENARIO DI PROGETTO

SHADOW - Main Result

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali

Assumptions for shadow calculations

Maximum distance for influence

Calculate only when more than 20 % of sun is covered by the blade

Please look in WTG table

Minimum sun height over horizon for influence 3 °

Day step for calculation 1 days

Time step for calculation 1 minutes

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:

Height contours used: Height Contours: TIN_RWE01.wpo (1)

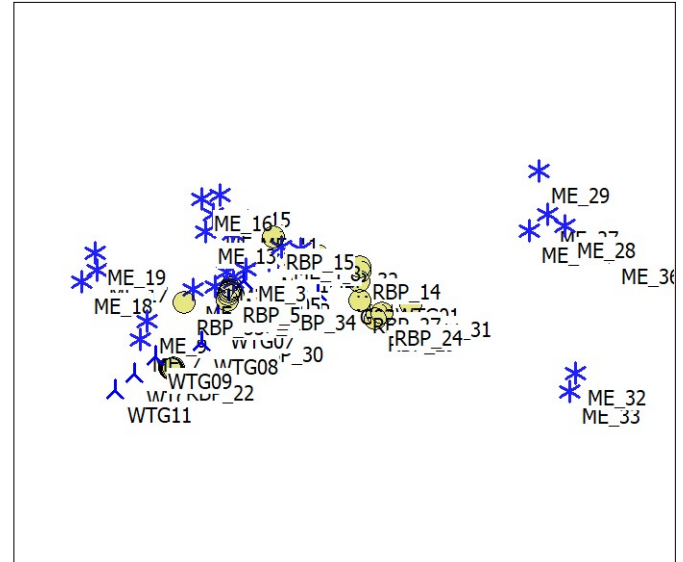
Obstacles used in calculation

Eye height for map: 1,5 m

Grid resolution: 10,0 m

All coordinates are in

Italian Gauss-Boaga west-ROMA40 (IT-peninsular $\pm 4m$)



New WTG

Scale 1:200.000

Existing WTG

Shadow receptor

WTGs

	Easting	Northing	Z	Row data/Description	WTG type		Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Shadow data	
					Valid	Manufact.					Calculation distance [m]	RPM [RPM]
			[m]									
ME_1	1.460.708	4.490.703	459,4	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_10	1.458.687	4.489.969	408,5	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_11	1.460.165	4.491.763	390,0	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_12	1.459.750	4.491.431	383,1	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_13	1.459.030	4.491.489	380,0	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_14	1.459.230	4.491.924	370,6	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_15	1.459.430	4.492.450	320,0	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_16	1.458.934	4.492.332	332,3	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_17	1.456.142	4.490.485	347,6	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_18	1.455.741	4.490.171	320,0	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_19	1.456.110	4.490.945	326,0	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_2	1.459.779	4.490.170	520,0	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_22	1.467.607	4.491.469	558,7	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_27	1.468.097	4.491.882	536,5	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_28	1.468.556	4.491.598	540,0	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_29	1.467.872	4.493.040	451,3	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_3	1.460.106	4.490.491	517,7	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_32	1.468.811	4.487.708	596,7	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_33	1.468.666	4.487.228	535,6	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_36	1.469.739	4.490.899	525,1	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_4	1.461.057	4.491.072	422,7	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_5	1.459.287	4.490.038	503,7	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_6	1.459.590	4.490.423	488,3	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_7	1.457.282	4.488.658	376,0	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_8	1.461.543	4.491.012	460,0	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
ME_9	1.457.475	4.489.120	390,0	VIND-SYSSSEL 150 2...	No	VIND-SYSSSEL	-150	150	26,0	30,0	2.500	0,0
WTG01	1.463.734	4.489.882	456,4	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6.000	6.000	170,0	115,0	2.041	8,8
WTG02	1.462.726	4.490.219	460,1	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6.000	6.000	170,0	115,0	2.041	8,8
WTG03	1.461.994	4.489.878	454,1	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6.000	6.000	170,0	115,0	2.041	8,8
WTG04	1.460.699	4.490.845	447,7	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6.000	6.000	170,0	115,0	2.041	8,8
WTG05	1.460.043	4.490.189	517,2	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6.000	6.000	170,0	115,0	2.041	8,8
WTG06	1.459.626	4.489.685	474,5	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6.000	6.000	170,0	115,0	2.041	8,8
WTG07	1.459.343	4.489.260	453,7	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6.000	6.000	170,0	115,0	2.041	8,8
WTG08	1.458.911	4.488.561	466,9	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6.000	6.000	170,0	115,0	2.041	8,8
WTG09	1.457.705	4.488.201	399,0	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6.000	6.000	170,0	115,0	2.041	8,8
WTG10	1.457.135	4.487.737	405,1	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6.000	6.000	170,0	115,0	2.041	8,8
WTG11	1.456.627	4.487.304	395,5	Siemens Gamesa SG ...	Yes	Siemens Gamesa	SG 6.0-170-6.000	6.000	170,0	115,0	2.041	8,8

SHADOW - Main Result

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali

Shadow receptor-Input

No.	Name	Easting	Northing	Z	Width	Height	Elevation	Slope of	Direction mode	Eye height
				[m]	[m]	[m]	a.g.l.	window		(ZVI) a.g.l.
							[m]	[°]		[m]
RBP_1	Peso morto o pietra da trebbiatura	1.459.622	4.489.649	469,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_10	NURAGHE CIROLO	1.463.111	4.490.150	441,1	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_11	Circolo megalitico	1.463.683	4.489.484	457,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_12	Villaggio nuragico	1.463.138	4.490.391	450,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_13	Dolmen Pubusattile	1.458.085	4.487.894	410,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_14	Nuraghe Ciolo II	1.463.126	4.490.510	460,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_15	Circoli megalitici	1.460.851	4.491.323	386,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_16	Coppelle Pubusattile	1.458.088	4.487.856	391,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_17	Rigugio sotto roccia di Pubusattile	1.458.112	4.487.866	399,6	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_18	Domus de janas di Pubusattile I	1.458.139	4.487.862	398,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_19	Domus de janas Pubusattile II	1.458.143	4.487.863	398,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_2	Torre e cortine murarie	1.459.647	4.489.815	505,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_20	Domus de janas Pubusattile III	1.458.145	4.487.864	399,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_21	Domus de janas Pubusattile IV	1.458.162	4.487.874	401,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_22	Domus de janas Pubusattile V	1.458.178	4.487.874	397,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_23	Riparo sotto roccia Pubusattile 2	1.458.176	4.487.865	391,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_24	Struttura megalitica	1.463.716	4.489.301	445,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_25	Domus de janas Pubusattile VI	1.458.187	4.487.875	394,3	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_26	Struttura megalitica circolare	1.463.588	4.489.286	431,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_27	Nuraghe Majone	1.463.120	4.489.624	429,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_28	Nuraghe Monte Alas	1.460.610	4.489.791	508,5	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_29	Struttura megalitica rettangolare	1.463.531	4.489.155	420,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_3	Torre e cortine murarie	1.459.653	4.489.846	511,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_30	Menhir Su Filighe	1.460.017	4.488.896	463,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_31	Turricula Su Crabione	1.464.467	4.489.538	439,7	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_32	Turricula	1.462.024	4.490.840	452,9	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_33	Nuraghe S'Ozzastrone	1.458.472	4.489.620	350,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_34	Insedimento Monte Alas	1.460.875	4.489.724	509,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_4	Torre e cortine murarie	1.459.674	4.489.879	515,8	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_5	NURAGHE MUROS	1.459.696	4.489.940	520,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_6	Mura del nuraghe Sos Muros	1.459.711	4.489.977	520,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_7	Torre nuragica	1.459.724	4.489.998	520,0	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_8	Turricula	1.461.693	4.490.017	413,2	1,0	1,0	1,0	90,0	"Green house mode"	2,0
RBP_9	NURAGHE FRADES TALAS	1.459.991	4.489.683	471,4	1,0	1,0	1,0	90,0	"Green house mode"	2,0

Calculation Results

Shadow receptor

No.	Name	Shadow, worst case		
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]
RBP_1	Peso morto o pietra da trebbiatura	71:14	70	1:16
RBP_10	NURAGHE CIROLO	289:09	231	1:38
RBP_11	Circolo megalitico	6:28	32	0:18
RBP_12	Villaggio nuragico	198:55	199	1:25
RBP_13	Dolmen Pubusattile	31:58	89	0:40
RBP_14	Nuraghe Ciolo II	188:36	139	1:39
RBP_15	Circoli megalitici	59:11	62	1:11
RBP_16	Coppelle Pubusattile	35:41	88	0:41
RBP_17	Rigugio sotto roccia di Pubusattile	32:22	85	0:39
RBP_18	Domus de janas di Pubusattile I	30:52	83	0:39
RBP_19	Domus de janas Pubusattile II	30:26	83	0:38
RBP_2	Torre e cortine murarie	878:24	217	4:37
RBP_20	Domus de janas Pubusattile III	30:12	84	0:38
RBP_21	Domus de janas Pubusattile IV	28:43	80	0:37
RBP_22	Domus de janas Pubusattile V	0:00	0	0:00
RBP_23	Riparo sotto roccia Pubusattile 2	29:44	81	0:38
RBP_24	Struttura megalitica	8:00	37	0:19
RBP_25	Domus de janas Pubusattile VI	0:00	0	0:00
RBP_26	Struttura megalitica circolare	12:36	48	0:23
RBP_27	Nuraghe Majone	69:54	82	1:01
RBP_28	Nuraghe Monte Alas	30:19	119	0:34
RBP_29	Struttura megalitica rettangolare	23:50	72	0:25

To be continued on next page...

SHADOW - Main Result

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali

...continued from previous page

No.	Name	Shadow, worst case		
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]
RBP_3	Torre e cortine murarie	599:22	216	4:07
RBP_30	Menhir Su Filighe	53:22	112	0:42
RBP_31	Turricula Su Crabione	58:03	96	0:51
RBP_32	Turricula	59:18	123	0:45
RBP_33	Nuraghe S'Ozzastrone	49:38	111	0:41
RBP_34	Insediamiento Monte Alas	45:38	173	0:30
RBP_4	Torre e cortine murarie	382:33	153	3:27
RBP_5	NURAGHE MUROS	151:05	92	2:16
RBP_6	Mura del nuraghe Sos Muros	81:05	89	1:34
RBP_7	Torre nuragica	75:15	94	1:08
RBP_8	Turricula	223:22	186	1:44
RBP_9	NURAGHE FRADES TALAS	307:11	301	1:50

Total amount of flickering on the shadow receptors caused by each WTG

No.	Name	Worst case [h/year]
ME_1	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (42)	0:00
ME_10	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (43)	0:00
ME_11	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (39)	0:00
ME_12	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (38)	0:00
ME_13	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (34)	0:00
ME_14	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (35)	0:00
ME_15	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (36)	0:00
ME_16	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (37)	0:00
ME_17	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (32)	0:00
ME_18	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (31)	0:00
ME_19	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (33)	0:00
ME_2	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (45)	0:10
ME_22	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (54)	0:00
ME_27	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (55)	0:00
ME_28	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (56)	0:00
ME_29	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (58)	0:00
ME_3	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (64)	0:00
ME_32	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (62)	0:00
ME_33	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (61)	0:00
ME_36	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (57)	0:00
ME_4	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (63)	0:00
ME_5	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (44)	8:27
ME_6	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (46)	1:19
ME_7	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (47)	0:00
ME_8	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (41)	0:00
ME_9	VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (48)	0:41
WTG01	Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT: 200,0 m) (12)	258:55
WTG02	Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT: 200,0 m) (11)	547:19
WTG03	Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT: 200,0 m) (10)	290:50
WTG04	Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT: 200,0 m) (9)	69:09
WTG05	Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT: 200,0 m) (8)	67:46
WTG06	Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT: 200,0 m) (7)	1146:41
WTG07	Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT: 200,0 m) (6)	215:10
WTG08	Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT: 200,0 m) (5)	17:51
WTG09	Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT: 200,0 m) (4)	0:00
WTG10	Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT: 200,0 m) (3)	33:01
WTG11	Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT: 200,0 m) (2)	11:23

Total times in Receptor wise and WTG wise tables can differ, as a WTG can lead to flicker at 2 or more receptors simultaneously and/or receptors may receive flicker from 2 or more WTGs simultaneously.

Project:

Ittiri_RWE_26_05_20_GF

Licensed user:

I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
25/06/2021 14:20/3.4.415

SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_1 - Peso morto o pietra da trebbiatura
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains time intervals (e.g., 07:50 - 14:34) and potential sun hours. Summary rows at the bottom show total sun hours and worst case for each month.

Table layout: For each day in each month the following matrix apply

Matrix with 4 columns: Day in month, Sun rise (hh:mm), Sun set (hh:mm), Minutes with flicker, First time (hh:mm) with flicker, Last time (hh:mm) with flicker, (WTG causing flicker first time), (WTG causing flicker last time)

SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_10 - NURAGHE CIROLO

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June
1	07:50 17:09	07:37 17:43	07:02 18:17	07:44 (WTG01) 17:55 (WTG03)	07:12 19:50	06:26 18:04 (WTG02)
2	07:50 17:10	07:36 17:44	07:00 18:18	07:45 (WTG01) 17:57 (WTG03)	07:10 19:51	06:25 18:02 (WTG02)
3	07:50 17:11	07:35 17:46	08:07 (WTG01) 08:18 (WTG01)	06:59 18:18	07:08 19:52	06:24 18:02 (WTG02)
4	07:50 17:12	07:34 17:47	08:23 (WTG01) 08:00 (WTG01)	18:19 06:57	19:52 07:07	06:23 18:02 (WTG02)
5	07:50 17:13	07:33 17:48	08:26 (WTG01) 07:58 (WTG01)	18:20 06:56	19:53 07:05	06:24 18:02 (WTG02)
6	07:50 17:14	07:32 17:49	08:28 (WTG01) 07:56 (WTG01)	18:21 06:54	19:54 07:03	06:25 18:02 (WTG02)
7	07:50 17:15	07:31 17:51	08:30 (WTG01) 07:54 (WTG01)	18:22 06:52	19:55 07:02	06:26 18:01 (WTG02)
8	07:50 17:16	07:30 17:52	08:31 (WTG01) 07:53 (WTG01)	18:23 06:51	19:56 07:00	06:27 18:01 (WTG02)
9	07:50 17:17	07:29 17:53	08:33 (WTG01) 07:52 (WTG01)	18:24 06:49	19:57 06:59	06:18 18:00 (WTG02)
10	07:50 17:18	07:27 17:54	08:34 (WTG01) 07:51 (WTG01)	18:26 06:48	19:58 06:57	06:17 18:50 (WTG02)
11	07:49 17:19	07:26 17:55	08:36 (WTG01) 07:50 (WTG01)	18:27 06:46	19:59 06:55	06:29 18:57 (WTG02)
12	07:49 17:20	07:25 17:57	08:37 (WTG01) 07:48 (WTG01)	18:28 06:44	20:00 06:54	06:28 18:35 (WTG02)
13	07:49 17:21	07:24 17:58	08:37 (WTG01) 07:48 (WTG01)	18:29 06:43	20:01 06:52	06:29 18:31 (WTG02)
14	07:49 17:22	07:23 17:59	08:38 (WTG01) 07:47 (WTG01)	18:30 06:41	20:02 06:51	06:30 18:28 (WTG02)
15	07:48 17:23	07:21 18:00	08:39 (WTG01) 07:46 (WTG01)	18:31 06:40	20:03 06:49	06:31 18:25 (WTG02)
16	07:48 17:24	07:20 18:01	08:40 (WTG01) 07:45 (WTG01)	18:32 06:38	20:05 06:48	06:32 18:23 (WTG02)
17	07:47 17:25	07:19 18:03	08:40 (WTG01) 07:44 (WTG01)	18:33 06:36	20:06 06:46	06:33 18:22 (WTG02)
18	07:47 17:26	07:17 18:04	08:41 (WTG01) 07:43 (WTG01)	18:34 06:35	20:07 06:45	06:34 18:21 (WTG02)
19	07:46 17:27	07:16 18:05	08:41 (WTG01) 07:42 (WTG01)	18:35 06:33	20:08 06:43	06:35 18:20 (WTG02)
20	07:46 17:29	07:15 18:06	08:41 (WTG01) 07:41 (WTG01)	18:36 06:31	20:09 06:42	06:36 18:19 (WTG02)
21	07:45 17:30	07:13 18:07	08:42 (WTG01) 07:40 (WTG01)	18:37 06:30	20:10 06:40	06:37 18:18 (WTG02)
22	07:45 17:31	07:12 18:08	08:42 (WTG01) 07:39 (WTG01)	18:38 06:28	20:11 06:39	06:38 18:17 (WTG02)
23	07:44 17:32	07:10 18:09	08:43 (WTG01) 07:38 (WTG01)	18:40 06:26	20:12 06:37	06:39 18:16 (WTG02)
24	07:43 17:33	07:09 18:10	08:43 (WTG01) 07:37 (WTG01)	18:41 06:25	20:13 06:36	06:40 18:15 (WTG02)
25	07:43 17:35	07:08 18:11	08:44 (WTG01) 07:36 (WTG01)	18:42 06:23	20:14 06:35	06:41 18:14 (WTG02)
26	07:42 17:36	07:06 18:12	08:44 (WTG01) 07:35 (WTG01)	18:43 06:21	20:15 06:33	06:42 18:13 (WTG02)
27	07:41 17:37	07:05 18:13	08:44 (WTG01) 07:34 (WTG01)	18:44 06:20	20:16 06:32	06:43 18:12 (WTG02)
28	07:40 17:38	07:03 18:14	08:45 (WTG01) 07:33 (WTG01)	18:45 06:18	20:17 06:30	06:44 18:11 (WTG02)
29	07:40 17:40	07:02 18:15	08:45 (WTG01) 07:32 (WTG01)	18:46 06:17	20:18 06:29	06:45 18:10 (WTG02)
30	07:39 17:41	07:01 18:16	08:46 (WTG01) 07:31 (WTG01)	18:47 06:15	20:19 06:28	06:46 18:09 (WTG02)
31	07:38 17:42	07:00 18:17	08:46 (WTG01) 07:30 (WTG01)	18:48 06:14	20:20 06:27	06:47 18:08 (WTG02)
Potential sun hours	299	298	370	398	447	451
Total, worst case		1411	906	1451	2968	2730

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_10 - NURAGHE CIROLO

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	July	August	September	October	November	December										
1	05:59	18:13 (WTG02)	06:22	18:11 (WTG02)	06:52	18:34 (WTG02)	07:22	08:39 (WTG01)	06:55	07:21 (WTG01)	07:30					
	21:01	90	19:43 (WTG02)	20:42	97	19:48 (WTG02)	20:00	35	19:09 (WTG02)	19:10	39	18:31 (WTG03)	17:24	44	08:05 (WTG01)	17:00
2	05:59	18:13 (WTG02)	06:23	18:11 (WTG02)	06:53	18:39 (WTG02)	07:23		08:35 (WTG01)	06:56	07:22 (WTG01)	07:31				
	21:01	91	19:44 (WTG02)	20:41	97	19:48 (WTG02)	19:58	25	19:04 (WTG02)	19:08	50	18:32 (WTG03)	17:23	42	08:04 (WTG01)	17:00
3	06:00	18:13 (WTG02)	06:24	18:11 (WTG02)	06:54	18:48 (WTG02)	07:24		08:32 (WTG01)	06:58	07:23 (WTG01)	07:32				
	21:01	91	19:44 (WTG02)	20:40	97	19:48 (WTG02)	19:57	7	18:55 (WTG02)	19:07	58	18:33 (WTG03)	17:22	39	08:02 (WTG01)	17:00
4	06:00	18:13 (WTG02)	06:25	18:11 (WTG02)	06:55		07:25		08:30 (WTG01)	06:59	07:24 (WTG01)	07:33				
	21:00	92	19:45 (WTG02)	20:39	96	19:47 (WTG02)	19:55		19:05	63	18:33 (WTG03)	17:21	37	08:01 (WTG01)	17:00	
5	06:01	18:13 (WTG02)	06:26	18:11 (WTG02)	06:56		07:26		08:28 (WTG01)	07:00	07:25 (WTG01)	07:34				
	21:00	92	19:45 (WTG02)	20:38	96	19:47 (WTG02)	19:53		19:03	69	18:34 (WTG03)	17:19	34	08:00 (WTG01)	16:59	
6	06:01	18:13 (WTG02)	06:27	18:11 (WTG02)	06:57		07:27		08:26 (WTG01)	07:01	07:26 (WTG01)	07:34				
	21:00	92	19:45 (WTG02)	20:37	96	19:47 (WTG02)	19:52		19:02	73	18:34 (WTG03)	17:18	30	07:58 (WTG01)	16:59	
7	06:02	18:12 (WTG02)	06:28	18:11 (WTG02)	06:58		07:28		08:24 (WTG01)	07:02	07:27 (WTG01)	07:35				
	21:00	93	19:45 (WTG02)	20:36	95	19:46 (WTG02)	19:50		19:00	77	18:34 (WTG03)	17:17	25	07:55 (WTG01)	16:59	
8	06:03	18:13 (WTG02)	06:29	18:11 (WTG02)	06:59		07:29		08:23 (WTG01)	07:03	07:28 (WTG01)	07:36				
	20:59	93	19:46 (WTG02)	20:34	95	19:46 (WTG02)	19:49		18:59	80	18:34 (WTG03)	17:16	19	07:52 (WTG01)	16:59	
9	06:03	18:13 (WTG02)	06:30	18:12 (WTG02)	07:00		07:30		08:21 (WTG01)	07:05	07:29 (WTG01)	07:37				
	20:59	93	19:46 (WTG02)	20:33	94	19:46 (WTG02)	19:47		18:57	83	18:34 (WTG03)	17:15	9	07:48 (WTG01)	16:59	
10	06:04	18:12 (WTG02)	06:31	18:11 (WTG02)	07:01		07:31		08:20 (WTG01)	07:06	07:30 (WTG01)	07:38				
	20:59	94	19:46 (WTG02)	20:32	93	19:44 (WTG02)	19:45		18:55	84	18:33 (WTG03)	17:14		16:59		
11	06:05	18:13 (WTG02)	06:32	18:11 (WTG02)	07:02		07:32		08:19 (WTG01)	07:07	07:31 (WTG01)	07:39				
	20:58	93	19:46 (WTG02)	20:31	92	19:43 (WTG02)	19:44		18:54	84	18:31 (WTG03)	17:13		16:59		
12	06:05	18:13 (WTG02)	06:33	18:11 (WTG02)	07:03		07:33		08:18 (WTG01)	07:08	07:32 (WTG01)	07:40				
	20:58	94	19:47 (WTG02)	20:29	92	19:43 (WTG02)	19:42		18:52	83	18:29 (WTG03)	17:12		16:59		
13	06:06	18:12 (WTG02)	06:34	18:12 (WTG02)	07:04		07:34		08:17 (WTG01)	07:09	07:33 (WTG01)	07:41				
	20:57	95	19:47 (WTG02)	20:28	90	19:42 (WTG02)	19:40		18:51	83	18:28 (WTG03)	17:11		17:00		
14	06:07	18:12 (WTG02)	06:35	18:12 (WTG02)	07:05		07:35		08:16 (WTG01)	07:10	07:34 (WTG01)	07:41				
	20:57	95	19:47 (WTG02)	20:27	90	19:42 (WTG02)	19:39		18:49	83	18:26 (WTG03)	17:10		17:00		
15	06:08	18:13 (WTG02)	06:36	18:13 (WTG02)	07:06		07:36		08:16 (WTG01)	07:12	07:35 (WTG01)	07:42				
	20:56	95	19:48 (WTG02)	20:25	88	19:41 (WTG02)	19:37		18:48	80	18:24 (WTG03)	17:09		17:00		
16	06:08	18:13 (WTG02)	06:37	18:13 (WTG02)	07:07		07:37		08:16 (WTG01)	07:13	07:36 (WTG01)	07:43				
	20:56	95	19:48 (WTG02)	20:24	87	19:40 (WTG02)	19:35		18:46	80	18:24 (WTG03)	17:09		17:00		
17	06:09	18:12 (WTG02)	06:38	18:13 (WTG02)	07:08		07:38		08:16 (WTG01)	07:14	07:37 (WTG01)	07:43				
	20:55	95	19:47 (WTG02)	20:23	86	19:39 (WTG02)	19:33		18:45	77	18:22 (WTG03)	17:08		17:01		
18	06:10	18:12 (WTG02)	06:39	18:14 (WTG02)	07:09		07:39		08:15 (WTG01)	07:15	07:38 (WTG01)	07:44				
	20:54	96	19:48 (WTG02)	20:21	84	19:38 (WTG02)	19:32		18:43	74	18:20 (WTG03)	17:07		17:01		
19	06:11	18:12 (WTG02)	06:40	18:15 (WTG02)	07:10		07:41		08:15 (WTG01)	07:16	07:39 (WTG01)	07:45				
	20:54	96	19:48 (WTG02)	20:20	82	19:37 (WTG02)	19:30		18:42	71	18:19 (WTG03)	17:06		17:01		
20	06:12	18:12 (WTG02)	06:41	18:15 (WTG02)	07:11		07:42		08:15 (WTG01)	07:17	07:40 (WTG01)	07:45				
	20:53	96	19:48 (WTG02)	20:18	81	19:36 (WTG02)	19:28		18:40	67	18:17 (WTG03)	17:06		17:02		
21	06:12	18:12 (WTG02)	06:42	18:16 (WTG02)	07:12		07:43		08:14 (WTG01)	07:19	07:41 (WTG01)	07:46				
	20:52	97	19:49 (WTG02)	20:17	78	19:34 (WTG02)	19:27		18:39	58	09:12 (WTG01)	17:05		17:02		
22	06:13	18:11 (WTG02)	06:43	18:17 (WTG02)	07:13		07:44		08:14 (WTG01)	07:20	07:42 (WTG01)	07:46				
	20:52	97	19:48 (WTG02)	20:15	76	19:33 (WTG02)	19:25		18:37	57	09:11 (WTG01)	17:04		17:03		
23	06:14	18:11 (WTG02)	06:44	18:18 (WTG02)	07:14		07:45		08:15 (WTG01)	07:21	07:43 (WTG01)	07:47				
	20:51	97	19:48 (WTG02)	20:14	74	19:32 (WTG02)	19:23		18:36	57	09:12 (WTG01)	17:04		17:03		
24	06:15	18:11 (WTG02)	06:45	18:19 (WTG02)	07:15		07:46		08:15 (WTG01)	07:22	07:44 (WTG01)	07:47				
	20:50	97	19:48 (WTG02)	20:12	71	19:30 (WTG02)	19:22		18:35	56	09:11 (WTG01)	17:03		17:04		
25	06:16	18:11 (WTG02)	06:46	18:20 (WTG02)	07:16		07:47		08:15 (WTG01)	07:23	07:45 (WTG01)	07:48				
	20:49	98	19:49 (WTG02)	20:11	68	19:28 (WTG02)	19:20		17:33	55	08:10 (WTG01)	17:03		17:04		
26	06:17	18:11 (WTG02)	06:47	18:21 (WTG02)	07:17		07:48		08:16 (WTG01)	07:24	07:46 (WTG01)	07:48				
	20:48	98	19:49 (WTG02)	20:09	65	19:26 (WTG02)	19:18		17:32	54	08:10 (WTG01)	17:02		17:05		
27	06:18	18:12 (WTG02)	06:48	18:22 (WTG02)	07:18		07:49		08:17 (WTG01)	07:25	07:47 (WTG01)	07:49				
	20:47	97	19:49 (WTG02)	20:08	62	19:24 (WTG02)	19:17		17:30	53	08:09 (WTG01)	17:02		17:05		
28	06:19	18:12 (WTG02)	06:49	18:24 (WTG02)	07:19		07:50		08:18 (WTG01)	07:26	07:48 (WTG01)	07:49				
	20:46	97	19:49 (WTG02)	20:06	57	19:21 (WTG02)	19:15		17:29	52	08:09 (WTG01)	17:01		17:06		
29	06:19	18:11 (WTG02)	06:49	18:26 (WTG02)	07:20		07:51		08:19 (WTG01)	07:27	07:49 (WTG01)	07:49				
	20:45	97	19:48 (WTG02)	20:05	53	19:19 (WTG02)	19:13	11	18:26 (WTG03)	17:28	50	08:08 (WTG01)	17:01		17:07	
30	06:20	18:11 (WTG02)	06:50	18:28 (WTG02)	07:21		07:52		08:20 (WTG01)	07:28	07:50 (WTG01)	07:49				
	20:44	97	19:48 (WTG02)	20:03	48	19:16 (WTG02)	19:12	18	18:29 (WTG03)	17:27	49	08:07 (WTG01)	17:01		17:08	
31	06:21	18:11 (WTG02)	06:51	18:31 (WTG02)			07:53		08:21 (WTG01)	07:29	07:51 (WTG01)	07:50				
	20:43	97	19:48 (WTG02)	20:01	42	19:13 (WTG02)			17:25	47	08:06 (WTG01)				17:08	
Potential sun hours	458		427		375		346		299		279				289	
Total, worst case	2940		2522		96		2046		279		279				289	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_11 - Circolo megalitico

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:09	07:37 17:43	07:02 18:17	07:12 19:50	06:26 20:21	05:58 20:50	05:59 21:01	06:22 20:42	06:52 20:00	07:22 19:10	06:55 17:24	07:29 17:00
2	07:50 17:10	07:36 17:44	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	05:59 21:01	06:23 20:41	06:53 19:58	07:23 19:08	06:56 17:23	07:31 17:00
3	07:50 17:11	07:35 17:46	06:59 18:19	07:08 19:52	06:24 20:23	05:57 20:51	06:00 21:01	06:24 20:40	06:54 19:57	07:24 19:07	06:58 17:22	07:32 17:00
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24	05:57 20:52	06:00 21:00	06:25 20:39	06:55 19:55	07:25 19:05	06:59 17:20	07:33 17:00
5	07:50 17:13	07:33 17:48	06:55 18:21	07:05 19:54	06:21 20:25	05:57 20:53	06:01 21:00	06:26 20:38	06:56 19:53	07:26 19:03	07:00 17:19	07:33 16:59
6	07:50 17:14	07:32 17:49	06:54 18:22	07:03 19:55	06:20 20:26	05:56 20:54	06:01 21:00	06:27 20:37	06:57 19:52	07:27 19:02	07:01 17:18	07:34 16:59
7	07:50 17:15	07:31 17:51	06:52 18:23	07:02 19:56	06:19 20:27	05:56 20:54	06:02 21:00	06:28 20:36	06:58 19:50	07:28 19:00	07:02 17:17	07:35 16:59
8	07:50 17:16	07:30 17:52	06:51 18:24	07:00 19:57	06:18 20:28	05:56 20:55	06:03 20:59	06:29 20:34	06:59 19:48	07:29 18:59	07:03 17:16	07:36 16:59
9	07:50 17:17	07:29 17:53	06:49 18:26	06:59 19:58	06:17 20:29	05:56 20:55	06:03 20:59	06:30 20:33	07:00 19:47	07:30 18:57	07:05 17:15	07:37 16:59
10	07:50 17:18	07:27 17:54	06:48 18:27	06:57 19:59	06:16 20:30	05:55 20:56	06:04 20:59	06:31 20:32	07:01 19:45	07:31 18:55	07:06 17:14	07:38 16:59
11	07:49 17:19	07:26 17:55	06:46 18:28	06:55 20:00	06:15 20:31	05:55 20:56	06:05 20:58	06:32 20:31	07:02 19:44	07:32 18:54	07:07 17:13	07:39 16:59
12	07:49 17:20	07:25 17:57	06:44 18:29	06:54 20:01	06:14 20:32	05:55 20:57	06:05 20:58	06:33 20:29	07:03 19:42	07:33 18:52	07:08 17:12	07:40 16:59
13	07:49 17:21	07:24 17:58	06:43 18:30	06:52 20:02	06:13 20:33	05:55 20:57	06:06 20:57	06:34 20:28	19:48 (WTG03) 19:57 (WTG03)	07:04 19:40	07:34 18:51	07:09 17:11
14	07:49 17:22	07:23 17:59	06:41 18:31	06:51 20:03	06:12 20:34	05:55 20:58	06:07 20:57	06:35 20:27	9 19:46 (WTG03) 14 20:00 (WTG03)	07:05 19:39	07:35 18:49	07:10 17:10
15	07:48 17:23	07:21 18:00	06:40 18:32	06:49 20:04	06:11 20:35	05:55 20:58	06:08 20:56	06:36 20:25	17 19:44 (WTG03) 17 20:01 (WTG03)	07:06 19:37	07:36 18:48	07:12 17:09
16	07:48 17:24	07:20 18:01	06:38 18:33	06:48 20:06	06:10 20:36	05:55 20:59	06:08 20:56	06:37 20:24	18 19:43 (WTG03) 18 20:01 (WTG03)	07:07 19:35	07:37 18:46	07:13 17:09
17	07:47 17:25	07:19 18:03	06:36 18:34	06:46 20:07	06:09 20:37	05:55 20:59	06:09 20:55	06:38 20:22	18 19:42 (WTG03) 18 20:00 (WTG03)	07:08 19:33	07:38 18:45	07:14 17:08
18	07:47 17:26	07:17 18:04	06:35 18:35	06:45 20:08	06:08 20:38	05:55 20:59	06:10 20:54	06:39 20:21	18 19:41 (WTG03) 18 19:59 (WTG03)	07:09 19:32	07:39 18:43	07:15 17:07
19	07:46 17:27	07:16 18:05	06:33 18:36	06:43 20:09	06:07 20:39	05:55 21:00	06:11 20:54	06:40 20:20	19 19:41 (WTG03) 16 19:57 (WTG03)	07:10 19:30	07:41 18:42	07:16 17:06
20	07:46 17:29	07:15 18:06	06:31 18:37	06:42 20:10	06:06 20:40	05:55 21:00	06:12 20:53	06:41 20:18	16 19:40 (WTG03) 16 19:56 (WTG03)	07:11 19:28	07:42 18:40	07:17 17:06
21	07:45 17:30	07:13 18:07	06:30 18:38	06:40 20:11	06:05 20:41	05:55 21:00	06:12 20:52	06:42 20:17	15 19:40 (WTG03) 15 19:55 (WTG03)	07:12 19:27	07:43 18:39	07:19 17:05
22	07:45 17:31	07:12 18:09	06:28 18:39	06:39 20:12	06:04 20:42	05:56 21:00	06:13 20:52	06:43 20:15	14 19:40 (WTG03) 13 19:53 (WTG03)	07:13 19:25	07:44 18:37	07:20 17:04
23	07:44 17:32	07:10 18:10	06:26 18:41	06:37 20:13	06:04 20:43	05:56 21:01	06:14 20:51	06:44 20:14	12 19:40 (WTG03) 12 19:52 (WTG03)	07:14 19:23	07:45 18:36	07:21 17:04
24	07:43 17:33	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01	06:15 20:50	06:45 20:12	10 19:40 (WTG03) 10 19:50 (WTG03)	07:15 19:22	07:46 18:34	07:22 17:03
25	07:43 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:02 20:44	05:56 21:01	06:16 20:49	06:46 20:11	8 19:40 (WTG03) 8 19:48 (WTG03)	07:16 19:20	06:47 17:33	07:23 17:03
26	07:42 17:36	07:06 18:13	06:21 18:44	06:33 20:16	06:02 20:45	05:57 21:01	06:17 20:48	06:47 20:09	7 19:40 (WTG03) 7 19:47 (WTG03)	07:17 19:18	06:48 17:32	07:24 17:02
27	07:41 17:37	07:05 18:14	06:20 18:45	06:32 20:17	06:01 20:46	05:57 21:01	06:18 20:47	06:48 20:08	4 19:41 (WTG03) 4 19:45 (WTG03)	07:18 19:17	06:49 17:30	07:25 17:02
28	07:40 17:38	07:03 18:15	06:18 18:46	06:30 20:18	06:00 20:47	05:57 21:01	06:19 20:46	06:49 20:06	1 19:43 (WTG03) 1 19:44 (WTG03)	07:19 19:15	06:51 17:29	07:26 17:01
29	07:40 17:39		07:16 19:47	06:29 20:19	06:00 20:48	05:58 21:01	06:19 20:45	06:49 20:05	19:15 (WTG03) 19:13 (WTG03)	07:20 17:28	06:52 17:01	07:27 17:07
30	07:39 17:41		07:15 19:48	06:28 20:20	05:59 20:49	05:58 21:01	06:20 20:44	06:50 20:03	07:21 (WTG03) 19:12 (WTG03)	07:21 17:27	06:53 17:01	07:28 17:08
31	07:38 17:42		07:13 19:49		05:59 20:49		06:21 20:43	06:51 20:01		07:22 (WTG03) 17:25 (WTG03)	06:54 17:01	07:50 17:08
Potential sun hours	299	298	370	398	447	451	457	427	375	346	299	289
Total, worst case				192				196				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_12 - Villaggio nuragico

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June						
1	07:50	08:22 (WTG01)	07:37	08:48 (WTG01)	07:02	16:09 (WTG02)	07:12	06:26	05:58			
	17:09	53	09:15 (WTG01)	17:43	36	17:20 (WTG03)	18:17	84	17:33 (WTG02)	19:50	20:21	20:50
2	07:50	08:22 (WTG01)	07:36	08:52 (WTG01)	07:00	16:10 (WTG02)	07:10	06:25	05:58			
	17:10	54	09:16 (WTG01)	17:44	46	17:21 (WTG03)	18:18	84	17:34 (WTG02)	19:51	20:22	20:51
3	07:50	08:22 (WTG01)	07:35	16:39 (WTG02)	06:59	16:09 (WTG02)	07:08	06:24	05:57			
	17:11	54	09:16 (WTG01)	17:46	43	17:22 (WTG03)	18:19	84	17:33 (WTG02)	19:52	20:23	20:52
4	07:50	08:23 (WTG01)	07:34	16:36 (WTG02)	06:57	16:10 (WTG02)	07:07	06:23	05:57			
	17:12	53	09:16 (WTG01)	17:47	48	17:24 (WTG03)	18:20	84	17:34 (WTG02)	19:53	20:24	20:52
5	07:50	08:23 (WTG01)	07:33	16:33 (WTG02)	06:56	16:09 (WTG02)	07:05	06:21	05:57			
	17:13	54	09:17 (WTG01)	17:48	52	17:25 (WTG03)	18:21	84	17:33 (WTG02)	19:54	20:25	20:53
6	07:50	08:24 (WTG01)	07:32	16:31 (WTG02)	06:54	16:10 (WTG02)	07:03	06:20	05:56			
	17:14	53	09:17 (WTG01)	17:49	56	17:27 (WTG03)	18:22	83	17:33 (WTG02)	19:55	20:26	20:54
7	07:50	08:25 (WTG01)	07:31	16:28 (WTG02)	06:52	16:09 (WTG02)	07:02	06:19	05:56			
	17:15	53	09:18 (WTG01)	17:51	59	17:27 (WTG03)	18:23	83	17:32 (WTG02)	19:56	20:27	20:54
8	07:50	08:25 (WTG01)	07:30	16:27 (WTG02)	06:51	16:09 (WTG02)	07:00	06:18	05:56			
	17:16	53	09:18 (WTG01)	17:52	62	17:29 (WTG03)	18:24	83	17:32 (WTG02)	19:57	20:28	20:55
9	07:50	08:25 (WTG01)	07:29	16:25 (WTG02)	06:49	16:10 (WTG02)	06:59	06:17	05:56			
	17:17	53	09:18 (WTG01)	17:53	65	17:30 (WTG03)	18:26	82	17:32 (WTG02)	19:58	20:29	20:55
10	07:50	08:26 (WTG01)	07:27	16:24 (WTG02)	06:48	16:10 (WTG02)	06:57	06:16	05:55			
	17:18	52	09:18 (WTG01)	17:54	68	17:32 (WTG03)	18:27	81	17:31 (WTG02)	19:59	20:30	20:56
11	07:49	08:26 (WTG01)	07:26	16:23 (WTG02)	06:46	16:11 (WTG02)	06:55	06:15	05:55			
	17:19	53	09:19 (WTG01)	17:55	70	17:33 (WTG03)	18:28	80	17:31 (WTG02)	20:00	20:31	20:56
12	07:49	08:27 (WTG01)	07:25	16:21 (WTG02)	06:44	16:11 (WTG02)	06:54	06:14	05:55			
	17:20	53	09:20 (WTG01)	17:57	72	17:33 (WTG03)	18:29	79	17:30 (WTG02)	20:01	20:32	20:57
13	07:49	08:27 (WTG01)	07:24	16:20 (WTG02)	06:43	16:11 (WTG02)	06:52	06:13	05:55			
	17:21	52	09:19 (WTG01)	17:58	73	17:33 (WTG03)	18:30	78	17:29 (WTG02)	20:02	20:33	20:57
14	07:49	08:28 (WTG01)	07:23	16:19 (WTG02)	06:41	16:12 (WTG02)	06:51	06:12	05:55			
	17:22	52	09:20 (WTG01)	17:59	73	17:32 (WTG03)	18:31	76	17:28 (WTG02)	20:03	20:34	20:58
15	07:48	08:28 (WTG01)	07:21	16:18 (WTG02)	06:40	16:13 (WTG02)	06:49	06:11	05:55			
	17:23	51	09:19 (WTG01)	18:00	74	17:32 (WTG03)	18:32	74	17:27 (WTG02)	20:05	20:35	20:58
16	07:48	08:29 (WTG01)	07:20	16:17 (WTG02)	06:38	16:13 (WTG02)	06:48	06:10	05:55			
	17:24	51	09:20 (WTG01)	18:01	73	17:30 (WTG03)	18:33	73	17:26 (WTG02)	20:06	20:36	20:59
17	07:47	08:29 (WTG01)	07:19	16:16 (WTG02)	06:36	16:14 (WTG02)	06:46	06:09	05:55			
	17:25	50	09:19 (WTG01)	18:03	73	17:29 (WTG03)	18:34	71	17:25 (WTG02)	20:07	20:37	20:59
18	07:47	08:31 (WTG01)	07:17	16:16 (WTG02)	06:35	16:15 (WTG02)	06:45	06:08	05:55			
	17:26	49	09:20 (WTG01)	18:04	74	17:30 (WTG02)	18:35	69	17:24 (WTG02)	20:08	20:38	20:59
19	07:46	08:31 (WTG01)	07:16	16:14 (WTG02)	06:33	16:16 (WTG02)	06:43	06:07	05:55			
	17:28	48	09:19 (WTG01)	18:05	76	17:30 (WTG02)	18:36	66	17:22 (WTG02)	20:09	20:39	21:00
20	07:46	08:32 (WTG01)	07:15	16:14 (WTG02)	06:31	16:17 (WTG02)	06:42	06:06	05:55			
	17:29	48	09:20 (WTG01)	18:06	78	17:32 (WTG02)	18:37	64	17:21 (WTG02)	20:10	20:40	21:00
21	07:45	08:33 (WTG01)	07:13	16:13 (WTG02)	06:30	16:18 (WTG02)	06:40	06:05	05:55			
	17:30	46	09:19 (WTG01)	18:07	78	17:31 (WTG02)	18:38	61	17:19 (WTG02)	20:11	20:41	21:00
22	07:45	08:33 (WTG01)	07:12	16:12 (WTG02)	06:28	16:19 (WTG02)	06:39	06:04	05:56			
	17:31	46	09:19 (WTG01)	18:09	80	17:32 (WTG02)	18:40	58	17:17 (WTG02)	20:12	20:42	21:00
23	07:44	08:35 (WTG01)	07:10	16:11 (WTG02)	06:26	16:21 (WTG02)	06:37	06:04	05:56			
	17:32	44	09:19 (WTG01)	18:10	81	17:32 (WTG02)	18:41	55	17:16 (WTG02)	20:13	20:43	21:01
24	07:43	08:35 (WTG01)	07:09	16:11 (WTG02)	06:25	16:22 (WTG02)	06:36	06:03	05:56			
	17:33	43	09:18 (WTG01)	18:11	82	17:33 (WTG02)	18:42	52	17:14 (WTG02)	20:14	20:44	21:01
25	07:43	08:36 (WTG01)	07:08	16:11 (WTG02)	06:23	16:25 (WTG02)	06:35	06:02	05:56			
	17:35	41	09:17 (WTG01)	18:12	83	17:34 (WTG02)	18:43	48	17:13 (WTG02)	20:15	20:44	21:01
26	07:42	08:37 (WTG01)	07:06	16:10 (WTG02)	06:21	16:26 (WTG02)	06:33	06:02	05:57			
	17:36	39	09:16 (WTG01)	18:13	84	17:34 (WTG02)	18:44	44	17:10 (WTG02)	20:16	20:45	21:01
27	07:41	08:38 (WTG01)	07:05	16:11 (WTG02)	06:20	16:28 (WTG02)	06:32	06:01	05:57			
	17:37	37	09:15 (WTG01)	18:14	83	17:34 (WTG02)	18:45	39	17:07 (WTG02)	20:17	20:46	21:01
28	07:40	08:41 (WTG01)	07:03	16:10 (WTG02)	06:18	16:32 (WTG02)	06:30	06:00	05:57			
	17:38	39	17:15 (WTG03)	18:15	84	17:34 (WTG02)	18:46	32	17:04 (WTG02)	20:18	20:47	21:01
29	07:40	08:42 (WTG01)				17:35 (WTG02)	18:47		06:00	05:58		
	17:39	40	17:16 (WTG03)			19:47	25	18:00 (WTG02)	20:19	20:48	21:01	
30	07:39	08:44 (WTG01)				17:15 (WTG02)	18:48		06:28	05:59	05:58	
	17:41	39	17:17 (WTG03)			19:48	14	17:54 (WTG02)	20:20	20:49	21:01	
31	07:38	08:46 (WTG01)				17:13 (WTG02)			05:59			
	17:42	37	17:18 (WTG03)			19:49			20:49			
Potential sun hours	299		298			370			398		447	451
Total, worst case	1490		1926			1990						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_12 - Villaggio nuragico

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	July	August	September	October	November	December								
1	05:59	06:22	06:52	07:22	16:51 (WTG02)	06:55	15:54 (WTG02)	07:30	08:08 (WTG01)					
	21:01	20:42	20:00	19:10	78	18:09 (WTG02)	17:24	67	17:01 (WTG03)	17:00	53	09:01 (WTG01)		
2	05:59	06:23	06:53	07:23	16:50 (WTG02)	06:56	15:55 (WTG02)	07:31	08:09 (WTG01)					
	21:01	20:41	19:58	19:08	79	18:09 (WTG02)	17:23	65	17:00 (WTG03)	17:00	53	09:02 (WTG01)		
3	06:00	06:24	06:54	07:24	16:49 (WTG02)	06:58	15:57 (WTG02)	07:32	08:09 (WTG01)					
	21:01	20:40	19:57	19:07	80	18:09 (WTG02)	17:22	61	16:58 (WTG03)	17:00	53	09:02 (WTG01)		
4	06:00	06:25	06:55	07:25	16:48 (WTG02)	06:59	15:58 (WTG02)	07:33	08:09 (WTG01)					
	21:00	20:39	19:55	19:05	81	18:09 (WTG02)	17:21	59	16:57 (WTG03)	17:00	53	09:02 (WTG01)		
5	06:01	06:26	06:56	07:26	16:47 (WTG02)	07:00	16:01 (WTG02)	07:34	08:10 (WTG01)					
	21:00	20:38	19:53	19:03	82	18:09 (WTG02)	17:19	55	16:56 (WTG03)	16:59	53	09:03 (WTG01)		
6	06:01	06:27	06:57	07:27	16:46 (WTG02)	07:01	16:03 (WTG02)	07:34	08:10 (WTG01)					
	21:00	20:37	19:52	19:02	83	18:09 (WTG02)	17:18	52	16:55 (WTG03)	16:59	53	09:03 (WTG01)		
7	06:02	06:28	06:58	07:28	16:46 (WTG02)	07:02	16:06 (WTG02)	07:35	08:10 (WTG01)					
	21:00	20:36	19:50	19:00	83	18:09 (WTG02)	17:17	47	16:53 (WTG03)	16:59	54	09:04 (WTG01)		
8	06:03	06:29	06:59	07:29	16:45 (WTG02)	07:03	16:09 (WTG02)	07:36	08:11 (WTG01)					
	20:59	20:34	19:49	18:59	84	18:09 (WTG02)	17:16	43	16:52 (WTG03)	16:59	53	09:04 (WTG01)		
9	06:03	06:30	07:00	07:30	16:44 (WTG02)	07:05	08:23 (WTG01)	07:37	08:11 (WTG01)					
	20:59	20:33	19:47	18:57	84	18:08 (WTG02)	17:15	46	16:52 (WTG03)	16:59	54	09:05 (WTG01)		
10	06:04	06:31	07:01	07:31	16:44 (WTG02)	07:06	08:19 (WTG01)	07:38	08:12 (WTG01)					
	20:59	20:32	19:45	18:55	84	18:08 (WTG02)	17:14	35	16:50 (WTG03)	16:59	54	09:06 (WTG01)		
11	06:05	06:32	07:02	07:32	16:43 (WTG02)	07:07	08:17 (WTG01)	07:39	08:12 (WTG01)					
	20:58	20:31	19:44	18:54	85	18:08 (WTG02)	17:13	37	16:49 (WTG03)	16:59	53	09:05 (WTG01)		
12	06:05	06:33	07:03	07:33	16:43 (WTG02)	07:08	08:15 (WTG01)	07:40	08:12 (WTG01)					
	20:58	20:29	19:42	18:52	84	18:07 (WTG02)	17:12	39	16:48 (WTG03)	16:59	54	09:06 (WTG01)		
13	06:06	06:34	07:04	17:33 (WTG02)	07:34	16:43 (WTG02)	07:09	08:14 (WTG01)	07:41					
	20:57	20:28	19:40	11	17:44 (WTG02)	18:51	84	18:07 (WTG02)	17:11	40	16:48 (WTG03)	17:00	53	09:06 (WTG01)
14	06:07	06:35	07:05	17:26 (WTG02)	07:35	16:42 (WTG02)	07:10	08:12 (WTG01)	07:41					
	20:57	20:27	19:39	24	17:50 (WTG02)	18:49	84	18:06 (WTG02)	17:10	40	16:47 (WTG03)	17:00	53	09:07 (WTG01)
15	06:08	06:36	07:06	17:22 (WTG02)	07:36	16:42 (WTG02)	07:12	08:11 (WTG01)	07:42					
	20:56	20:25	19:37	31	17:53 (WTG02)	18:48	84	18:06 (WTG02)	17:09	37	08:48 (WTG01)	17:00	54	09:07 (WTG01)
16	06:08	06:37	07:07	17:18 (WTG02)	07:37	16:43 (WTG02)	07:13	08:10 (WTG01)	07:43					
	20:56	20:24	19:35	38	17:56 (WTG02)	18:46	83	18:06 (WTG02)	17:09	39	08:49 (WTG01)	17:00	54	09:08 (WTG01)
17	06:09	06:38	07:08	17:15 (WTG02)	07:38	16:43 (WTG02)	07:14	08:10 (WTG01)	07:43					
	20:55	20:23	19:33	43	17:58 (WTG02)	18:45	82	18:05 (WTG02)	17:08	41	08:51 (WTG01)	17:01	53	09:08 (WTG01)
18	06:10	06:39	07:09	17:13 (WTG02)	07:39	16:43 (WTG02)	07:15	08:09 (WTG01)	07:44					
	20:54	20:21	19:32	47	18:00 (WTG02)	18:43	81	18:04 (WTG02)	17:07	43	08:52 (WTG01)	17:01	53	09:08 (WTG01)
19	06:11	06:40	07:10	17:10 (WTG02)	07:41	16:43 (WTG02)	07:16	08:09 (WTG01)	07:45					
	20:54	20:20	19:30	51	18:01 (WTG02)	18:42	81	18:04 (WTG02)	17:06	44	08:53 (WTG01)	17:01	53	09:09 (WTG01)
20	06:12	06:41	07:11	17:08 (WTG02)	07:42	16:43 (WTG02)	07:17	08:08 (WTG01)	07:45					
	20:53	20:18	19:28	54	18:02 (WTG02)	18:40	80	18:03 (WTG02)	17:06	46	08:54 (WTG01)	17:02	53	09:09 (WTG01)
21	06:12	06:42	07:12	17:06 (WTG02)	07:43	16:43 (WTG02)	07:19	08:08 (WTG01)	07:46					
	20:52	20:17	19:27	57	18:03 (WTG02)	18:39	79	18:02 (WTG02)	17:05	46	08:54 (WTG01)	17:02	53	09:10 (WTG01)
22	06:13	06:43	07:13	17:04 (WTG02)	07:44	16:44 (WTG02)	07:20	08:08 (WTG01)	07:46					
	20:52	20:15	19:25	60	18:04 (WTG02)	18:37	77	18:01 (WTG02)	17:04	48	08:56 (WTG01)	17:03	53	09:10 (WTG01)
23	06:14	06:44	07:14	17:02 (WTG02)	07:45	16:45 (WTG02)	07:21	08:08 (WTG01)	07:47					
	20:51	20:14	19:23	63	18:05 (WTG02)	18:36	76	18:01 (WTG02)	17:04	48	08:56 (WTG01)	17:03	53	09:11 (WTG01)
24	06:15	06:45	07:15	17:00 (WTG02)	07:46	16:45 (WTG02)	07:22	08:08 (WTG01)	07:47					
	20:50	20:12	19:22	66	18:06 (WTG02)	18:35	75	18:00 (WTG02)	17:03	49	08:57 (WTG01)	17:04	53	09:11 (WTG01)
25	06:16	06:46	07:16	16:59 (WTG02)	06:47	15:46 (WTG02)	07:23	08:07 (WTG01)	07:48					
	20:49	20:11	19:20	68	18:07 (WTG02)	17:33	73	16:59 (WTG03)	17:03	50	08:57 (WTG01)	17:04	53	09:12 (WTG01)
26	06:17	06:47	07:17	16:57 (WTG02)	06:48	15:47 (WTG02)	07:24	08:07 (WTG01)	07:48					
	20:48	20:09	19:18	70	18:07 (WTG02)	17:32	73	17:00 (WTG03)	17:02	51	08:58 (WTG01)	17:05	53	09:12 (WTG01)
27	06:18	06:48	07:18	16:56 (WTG02)	06:49	15:47 (WTG02)	07:25	08:08 (WTG01)	07:49					
	20:47	20:08	19:17	72	18:08 (WTG02)	17:30	74	17:01 (WTG03)	17:02	51	08:59 (WTG01)	17:05	54	09:13 (WTG01)
28	06:19	06:49	07:19	16:54 (WTG02)	06:51	15:49 (WTG02)	07:26	08:08 (WTG01)	07:49					
	20:46	20:06	19:15	74	18:08 (WTG02)	17:29	73	17:02 (WTG03)	17:01	52	09:00 (WTG01)	17:06	54	09:13 (WTG01)
29	06:19	06:49	07:20	16:53 (WTG02)	06:52	15:50 (WTG02)	07:27	08:08 (WTG01)	07:49					
	20:45	20:05	19:13	76	18:09 (WTG02)	17:28	72	17:02 (WTG03)	17:01	52	09:00 (WTG01)	17:07	53	09:14 (WTG01)
30	06:20	06:50	07:21	16:52 (WTG02)	06:53	15:51 (WTG02)	07:29	08:08 (WTG01)	07:49					
	20:44	20:03	19:12	77	18:09 (WTG02)	17:27	71	17:02 (WTG03)	17:01	53	09:01 (WTG01)	17:08	53	09:14 (WTG01)
31	06:21	06:51		06:54		15:52 (WTG02)			07:50					
	20:43	20:01		17:25	70	17:02 (WTG03)			17:08	54	09:15 (WTG01)			
Potential sun hours	458	427	375	346	299	289								
Total, worst case			982	2459	1436	1652								

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni cultural\Shadow receptor: RBP_13 - Dolmen Pubusattile

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February		March		April	May	June	
1	07:50 17:10	07:37 17:43		07:02 18:17	12	17:44 (WTG10) 17:56 (WTG10)	07:12 19:50	06:27 20:21	05:58 20:50
2	07:50 17:11	07:36 17:45	17:20 (WTG11) 17:21 (WTG11)	07:00 18:18	16	17:41 (WTG10) 17:57 (WTG10)	07:10 19:51	06:25 20:22	05:58 20:51
3	07:50 17:11	07:35 17:46	17:19 (WTG11) 17:22 (WTG11)	06:59 18:19	18	17:40 (WTG10) 17:58 (WTG10)	07:09 19:52	06:24 20:23	05:58 20:52
4	07:50 17:12	07:34 17:47	17:18 (WTG11) 17:17 (WTG11)	06:57 18:20	21	17:38 (WTG10) 17:59 (WTG10)	07:07 19:53	06:23 20:24	05:57 20:52
5	07:50 17:13	07:33 17:48	17:18 (WTG11) 17:25 (WTG11)	06:56 18:21	24	17:36 (WTG10) 18:00 (WTG10)	07:05 19:54	06:22 20:25	05:57 20:53
6	07:50 17:14	07:32 17:50	17:17 (WTG11) 17:27 (WTG11)	06:54 18:23	27	17:35 (WTG10) 18:02 (WTG10)	07:04 19:55	06:21 20:26	05:57 20:54
7	07:50 17:15	07:31 17:51	17:17 (WTG11) 17:28 (WTG11)	06:53 18:24	28	17:34 (WTG10) 18:02 (WTG10)	07:02 19:56	06:19 20:27	05:56 20:54
8	07:50 17:16	07:30 17:52	17:16 (WTG11) 17:29 (WTG11)	06:51 18:25	31	17:33 (WTG10) 18:04 (WTG10)	07:01 19:57	06:18 20:28	05:56 20:55
9	07:50 17:17	07:29 17:53	17:16 (WTG11) 17:30 (WTG11)	06:49 18:26	33	17:32 (WTG10) 18:05 (WTG10)	06:59 19:58	06:17 20:30	05:56 20:56
10	07:50 17:18	07:28 17:55	17:16 (WTG11) 17:32 (WTG11)	06:48 18:27	34	17:31 (WTG10) 18:05 (WTG10)	06:57 20:00	06:16 20:31	05:56 20:56
11	07:50 17:19	07:26 17:56	17:16 (WTG11) 17:33 (WTG11)	06:46 18:28	36	17:31 (WTG10) 18:07 (WTG10)	06:56 20:01	06:15 20:32	05:56 20:57
12	07:49 17:20	07:25 17:57	17:17 (WTG11) 17:35 (WTG11)	06:45 18:29	37	17:31 (WTG10) 18:08 (WTG10)	06:54 20:02	06:14 20:33	05:55 20:57
13	07:49 17:21	07:24 17:58	17:16 (WTG11) 17:35 (WTG11)	06:43 18:30	39	17:31 (WTG10) 18:10 (WTG10)	06:53 20:03	06:13 20:33	05:55 20:58
14	07:49 17:22	07:23 17:59	17:17 (WTG11) 17:37 (WTG11)	06:41 18:31	39	17:31 (WTG10) 18:10 (WTG10)	06:51 20:04	06:12 20:34	05:55 20:58
15	07:48 17:23	07:22 18:01	17:18 (WTG11) 17:38 (WTG11)	06:40 18:32	40	17:30 (WTG10) 18:10 (WTG10)	06:50 20:05	06:11 20:35	05:55 20:58
16	07:48 17:24	07:20 18:02	17:19 (WTG11) 17:38 (WTG11)	06:38 18:33	39	17:31 (WTG10) 18:10 (WTG10)	06:48 20:06	06:10 20:36	05:55 20:59
17	07:48 17:26	07:19 18:03	17:21 (WTG11) 17:37 (WTG11)	06:37 18:34	38	17:31 (WTG10) 18:09 (WTG10)	06:46 20:07	06:09 20:37	05:55 20:59
18	07:47 17:27	07:18 18:04	17:23 (WTG11) 17:36 (WTG11)	06:35 18:36	36	17:31 (WTG10) 18:07 (WTG10)	06:45 20:08	06:08 20:38	05:55 21:00
19	07:47 17:28	07:16 18:05	17:26 (WTG11) 17:31 (WTG11)	06:33 18:37	35	17:32 (WTG10) 18:07 (WTG10)	06:43 20:09	06:07 20:39	05:55 21:00
20	07:46 17:29	07:15 18:06		06:32 18:38	32	17:33 (WTG10) 18:05 (WTG10)	06:42 20:10	06:06 20:40	05:56 21:00
21	07:46 17:30	07:13 18:08		06:30 18:39	30	17:33 (WTG10) 18:03 (WTG10)	06:41 20:11	06:05 20:41	05:56 21:00
22	07:45 17:31	07:12 18:09		06:28 18:40	27	17:35 (WTG10) 18:02 (WTG10)	06:39 20:12	06:05 20:42	05:56 21:01
23	07:44 17:33	07:11 18:10		06:27 18:41	23	17:37 (WTG10) 18:00 (WTG10)	06:38 20:13	06:04 20:43	05:56 21:01
24	07:44 17:34	07:09 18:11		06:25 18:42	17	17:39 (WTG10) 17:56 (WTG10)	06:36 20:14	06:03 20:44	05:56 21:01
25	07:43 17:35	07:08 18:12		06:23 18:43	8	17:44 (WTG10) 17:52 (WTG10)	06:35 20:15	06:03 20:45	05:57 21:01
26	07:42 17:36	07:06 18:13		06:22 18:44			06:33 20:16	06:02 20:45	05:57 21:01
27	07:41 17:37	07:05 18:15		06:20 18:45			06:32 20:17	06:01 20:46	05:57 21:01
28	07:41 17:39	07:03 18:16	17:47 (WTG10) 17:54 (WTG10)	06:18 18:46			06:31 20:18	06:01 20:47	05:58 21:01
29	07:40 17:40			07:17 19:47			06:29 20:19	06:00 20:48	05:58 21:01
30	07:39 17:41			07:15 19:48			06:28 20:20	05:59 20:49	05:59 21:01
31	07:38 17:42			07:13 19:49				05:59 20:49	
Potential sun hours	299	298		370		398	447	451	
Total, worst case		235		720					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_13 - Dolmen Pubusattile

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	July	August	September	October	November	December		
1	05:59 21:01	06:23 20:43	06:53 20:00	07:22 19:10	18:10 (WTG10) 18:48 (WTG10)	06:55 17:24	16:46 (WTG11) 17:01 (WTG11)	07:30 17:01
2	06:00 21:01	06:24 20:41	06:54 19:59	07:23 19:09	18:10 (WTG10) 18:46 (WTG10)	06:57 17:23	16:46 (WTG11) 17:00 (WTG11)	07:31 17:00
3	06:00 21:01	06:24 20:40	06:55 19:57	07:24 19:07	18:10 (WTG10) 18:45 (WTG10)	06:58 17:22	16:46 (WTG11) 16:58 (WTG11)	07:32 17:00
4	06:01 21:01	06:25 20:39	06:56 19:55	07:25 19:05	18:10 (WTG10) 18:43 (WTG10)	06:59 17:21	16:46 (WTG11) 16:57 (WTG11)	07:33 17:00
5	06:01 21:00	06:26 20:38	06:57 19:54	07:26 19:04	18:10 (WTG10) 18:41 (WTG10)	07:00 17:20	16:47 (WTG11) 16:56 (WTG11)	07:34 17:00
6	06:02 21:00	06:27 20:37	06:58 19:52	07:27 19:02	18:10 (WTG10) 18:40 (WTG10)	07:01 17:19	16:47 (WTG11) 16:55 (WTG11)	07:35 17:00
7	06:02 21:00	06:28 20:36	06:58 19:50	07:28 19:00	18:10 (WTG10) 18:38 (WTG10)	07:02 17:17	16:48 (WTG11) 16:54 (WTG11)	07:36 17:00
8	06:03 21:00	06:29 20:35	06:59 19:49	07:29 18:59	18:11 (WTG10) 18:36 (WTG10)	07:04 17:16	16:50 (WTG11) 16:53 (WTG11)	07:37 16:59
9	06:04 20:59	06:30 20:33	07:00 19:47	07:30 18:57	18:12 (WTG10) 18:34 (WTG10)	07:05 17:15	16:51 (WTG11) 16:52 (WTG11)	07:37 16:59
10	06:04 20:59	06:31 20:32	07:01 19:45	07:31 18:56	18:13 (WTG10) 18:33 (WTG10)	07:06 17:14		07:38 17:00
11	06:05 20:58	06:32 20:31	07:02 19:44	07:32 18:54	18:14 (WTG10) 18:31 (WTG10)	07:07 17:13		07:39 17:00
12	06:06 20:58	06:33 20:29	07:03 19:42	07:33 18:53	18:16 (WTG10) 18:29 (WTG10)	07:08 17:12		07:40 17:00
13	06:06 20:58	06:34 20:28	07:04 19:40	07:34 18:51	18:18 (WTG10) 18:28 (WTG10)	07:09 17:11		07:41 17:00
14	06:07 20:57	06:35 20:27	07:05 19:39	07:35 18:49	18:23 (WTG10) 18:27 (WTG10)	07:11 17:11		07:41 17:00
15	06:08 20:56	06:36 20:25	07:06 19:37	07:36 18:48		07:12 17:10		07:42 17:00
16	06:09 20:56	06:37 20:24	07:07 19:35	07:38 18:46		07:13 17:09		07:43 17:01
17	06:09 20:55	06:38 20:23	07:08 19:34	07:39 18:45		07:14 17:08		07:44 17:01
18	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43	18:33 (WTG10) 18:37 (WTG10)	07:15 17:07		07:44 17:01
19	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	18:27 (WTG10) 18:43 (WTG10)	07:16 17:07		07:45 17:02
20	06:12 20:53	06:41 20:18	07:11 19:29	07:42 18:40	18:24 (WTG10) 18:45 (WTG10)	07:18 17:06		07:45 17:02
21	06:13 20:53	06:42 20:17	07:12 19:27	07:43 18:39	18:21 (WTG10) 18:47 (WTG10)	07:19 17:05		07:46 17:02
22	06:14 20:52	06:43 20:16	07:13 19:25	07:44 18:38	18:19 (WTG10) 18:48 (WTG10)	07:20 17:05		07:47 17:03
23	06:14 20:51	06:44 20:14	07:14 19:24	07:45 18:36	18:18 (WTG10) 18:49 (WTG10)	07:21 17:04	17:55 (WTG11) 18:03 (WTG11)	07:47 17:03
24	06:15 20:50	06:45 20:13	07:15 19:22	07:46 18:35	18:16 (WTG10) 18:50 (WTG10)	07:22 17:03	17:52 (WTG11) 18:06 (WTG11)	07:48 17:04
25	06:16 20:49	06:46 20:11	07:16 19:20	07:47 18:33	18:15 (WTG10) 18:51 (WTG10)	07:23 17:03	16:50 (WTG11) 17:07 (WTG11)	07:48 17:05
26	06:17 20:48	06:47 20:09	07:17 19:19	07:49 18:32	18:14 (WTG10) 18:51 (WTG10)	07:24 17:02	16:48 (WTG11) 17:08 (WTG11)	07:48 17:05
27	06:18 20:47	06:48 20:08	07:18 19:17	07:50 18:31	18:13 (WTG10) 18:51 (WTG10)	07:25 17:02	16:48 (WTG11) 17:08 (WTG11)	07:49 17:06
28	06:19 20:47	06:49 20:06	07:19 19:15	07:51 18:30	18:12 (WTG10) 18:51 (WTG10)	07:27 17:02	16:47 (WTG11) 17:06 (WTG11)	07:49 17:06
29	06:20 20:46	06:50 20:05	07:20 19:14	07:52 18:29	18:11 (WTG10) 18:51 (WTG10)	07:28 17:01	16:46 (WTG11) 17:05 (WTG11)	07:49 17:07
30	06:21 20:45	06:51 20:03	07:21 19:12	07:53 18:28	18:11 (WTG10) 18:50 (WTG10)	07:29 17:01	16:45 (WTG11) 17:03 (WTG11)	07:50 17:08
31	06:22 20:44	06:52 20:02		07:54 18:27		07:30 17:03 (WTG11)		07:50 17:09
Potential sun hours	457	427	375	346	299	289		
Total, worst case			390	494	79	289		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_14 - Nuraghe Ciolo II

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June		
1	07:50 17:09	08:47 (WTG01) 16:41 (WTG02)	07:37 17:43	15:40 (WTG02) 17:18 (WTG03)	07:02 18:17	07:12 19:50	06:26 20:21	05:58 20:50
2	07:50 17:10	08:48 (WTG01) 16:42 (WTG02)	07:36 17:44	15:40 (WTG02) 17:18 (WTG03)	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51
3	07:50 17:11	08:49 (WTG01) 16:43 (WTG02)	07:35 17:46	15:40 (WTG02) 17:17 (WTG03)	06:59 18:19	07:08 19:52	06:24 20:23	05:57 20:52
4	07:50 17:12	08:50 (WTG01) 16:44 (WTG02)	07:34 17:47	15:41 (WTG02) 17:16 (WTG03)	06:57 18:20	07:07 19:53	06:23 20:24	05:57 20:52
5	07:50 17:13	08:51 (WTG01) 16:44 (WTG02)	07:33 17:48	15:41 (WTG02) 17:15 (WTG03)	06:56 18:21	07:05 19:54	06:21 20:25	05:57 20:53
6	07:50 17:14	08:53 (WTG01) 16:45 (WTG02)	07:32 17:49	15:42 (WTG02) 17:14 (WTG03)	06:54 18:22	07:03 19:55	06:20 20:26	05:56 20:54
7	07:50 17:15	08:54 (WTG01) 16:46 (WTG02)	07:31 17:51	15:41 (WTG02) 17:12 (WTG03)	06:52 18:23	07:02 19:56	06:19 20:27	05:56 20:54
8	07:50 17:16	08:56 (WTG01) 16:47 (WTG02)	07:30 17:52	15:42 (WTG02) 17:09 (WTG03)	06:51 18:24	07:00 19:57	06:18 20:28	05:56 20:55
9	07:50 17:17	08:57 (WTG01) 16:51 (WTG03)	07:29 17:53	15:43 (WTG02) 16:59 (WTG02)	06:49 18:26	06:59 19:58	06:17 20:29	05:56 20:55
10	07:50 17:18	09:00 (WTG01) 16:52 (WTG03)	07:27 17:54	15:43 (WTG02) 16:59 (WTG02)	06:48 18:27	06:57 19:59	06:16 20:30	05:55 20:56
11	07:49 17:19	09:03 (WTG01) 16:53 (WTG03)	07:26 17:55	15:44 (WTG02) 16:59 (WTG02)	06:46 18:28	06:55 20:00	06:15 20:31	05:55 20:56
12	07:49 17:20	15:38 (WTG02) 16:55 (WTG03)	07:25 17:57	15:44 (WTG02) 16:58 (WTG02)	06:44 18:29	06:54 20:01	06:14 20:32	05:55 20:57
13	07:49 17:21	15:37 (WTG02) 16:55 (WTG03)	07:24 17:58	15:45 (WTG02) 16:58 (WTG02)	06:43 18:30	06:52 20:02	06:13 20:33	05:55 20:57
14	07:49 17:22	15:38 (WTG02) 16:57 (WTG03)	07:23 17:59	15:46 (WTG02) 16:57 (WTG02)	06:41 18:31	06:51 20:03	06:12 20:34	05:55 20:58
15	07:48 17:23	15:37 (WTG02) 16:58 (WTG03)	07:21 18:00	15:48 (WTG02) 16:57 (WTG02)	06:40 18:32	06:49 20:05	06:11 20:35	05:55 20:58
16	07:48 17:24	15:38 (WTG02) 16:59 (WTG03)	07:20 18:01	15:48 (WTG02) 16:55 (WTG02)	06:38 18:33	06:48 20:06	06:10 20:36	05:55 20:59
17	07:47 17:25	15:37 (WTG02) 17:00 (WTG03)	07:19 18:03	15:49 (WTG02) 16:55 (WTG02)	06:36 18:34	06:46 20:07	06:09 20:37	05:55 20:59
18	07:47 17:26	15:38 (WTG02) 17:02 (WTG03)	07:17 18:04	15:51 (WTG02) 16:54 (WTG02)	06:35 18:35	06:45 20:08	06:08 20:38	05:55 20:59
19	07:46 17:28	15:37 (WTG02) 17:07 (WTG03)	07:16 18:05	15:51 (WTG02) 16:52 (WTG02)	06:33 18:36	06:43 20:09	06:07 20:39	05:55 21:00
20	07:46 17:29	15:38 (WTG02) 17:04 (WTG03)	07:15 18:06	15:53 (WTG02) 16:52 (WTG02)	06:31 18:37	06:42 20:10	06:06 20:40	05:55 21:00
21	07:45 17:30	15:38 (WTG02) 17:05 (WTG03)	07:13 18:07	15:54 (WTG02) 16:50 (WTG02)	06:30 18:38	06:40 20:11	06:05 20:41	05:55 21:00
22	07:45 17:31	15:38 (WTG02) 17:06 (WTG03)	07:12 18:09	15:56 (WTG02) 16:49 (WTG02)	06:28 18:40	06:39 20:12	06:04 20:42	05:56 21:00
23	07:44 17:32	15:38 (WTG02) 17:08 (WTG03)	07:10 18:10	15:57 (WTG02) 16:46 (WTG02)	06:26 18:41	06:37 20:13	06:04 20:43	05:56 21:01
24	07:43 17:33	15:38 (WTG02) 17:09 (WTG03)	07:09 18:11	16:00 (WTG02) 16:45 (WTG02)	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01
25	07:43 17:35	15:38 (WTG02) 17:10 (WTG03)	07:08 18:12	16:02 (WTG02) 16:43 (WTG02)	06:23 18:43	06:35 20:15	06:02 20:44	05:56 21:01
26	07:42 17:36	15:38 (WTG02) 17:11 (WTG03)	07:06 18:13	16:04 (WTG02) 16:40 (WTG02)	06:21 18:44	06:33 20:16	06:02 20:45	05:57 21:01
27	07:41 17:37	15:38 (WTG02) 17:12 (WTG03)	07:05 18:14	16:08 (WTG02) 16:37 (WTG02)	06:20 18:45	06:32 20:17	06:01 20:46	05:57 21:01
28	07:40 17:38	15:39 (WTG02) 17:15 (WTG03)	07:03 18:15	16:12 (WTG02) 16:33 (WTG02)	06:18 18:46	06:30 20:18	06:00 20:47	05:57 21:01
29	07:40 17:39	15:39 (WTG02) 17:16 (WTG03)			07:17 19:47	06:29 20:19	06:00 20:48	05:58 21:01
30	07:39 17:41	15:39 (WTG02) 17:17 (WTG03)			07:15 19:48	06:28 20:20	05:59 20:49	05:58 21:01
31	07:38 17:42	15:39 (WTG02) 17:18 (WTG03)			07:13 19:49		05:59 20:49	
Potential sun hours	299		298		370	398	447	451
Total, worst case	2761		1911					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_14 - Nuraghe Ciolo II

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	July	August	September	October	November	December	
1	05:59 21:01	06:22 20:42	06:52 20:00	07:22 19:10	06:55 17:24	15:13 (WTG02) 07:30 82	08:46 (WTG01) 16:36 (WTG03)
2	05:59 21:01	06:23 20:41	06:53 19:58	07:23 19:08	06:56 17:23	15:12 (WTG02) 07:31 86	08:43 (WTG01) 16:35 (WTG03)
3	06:00 21:01	06:24 20:40	06:54 19:57	07:24 19:07	06:58 17:22	15:12 (WTG02) 07:32 87	08:41 (WTG01) 16:35 (WTG03)
4	06:00 21:00	06:25 20:39	06:55 19:55	07:25 19:05	06:59 17:21	15:11 (WTG02) 07:33 91	08:40 (WTG01) 16:31 (WTG02)
5	06:01 21:00	06:26 20:38	06:56 19:53	07:26 19:03	07:00 17:19	15:11 (WTG02) 07:34 93	08:39 (WTG01) 16:31 (WTG02)
6	06:01 21:00	06:27 20:37	06:57 19:52	07:27 19:02	07:01 17:18	15:11 (WTG02) 07:34 94	08:39 (WTG01) 16:31 (WTG02)
7	06:02 21:00	06:28 20:36	06:58 19:50	07:28 19:00	07:02 17:17	15:10 (WTG02) 07:35 96	08:38 (WTG01) 16:32 (WTG02)
8	06:03 20:59	06:29 20:34	06:59 19:49	07:29 18:59	07:03 17:16	15:10 (WTG02) 07:36 97	08:38 (WTG01) 16:32 (WTG02)
9	06:03 20:59	06:30 20:33	07:00 19:47	07:30 18:57	07:05 17:15	15:11 (WTG02) 07:37 98	08:38 (WTG01) 16:32 (WTG02)
10	06:04 20:59	06:31 20:32	07:01 19:45	07:31 18:55	07:06 17:14	15:10 (WTG02) 07:38 99	08:38 (WTG01) 16:32 (WTG02)
11	06:05 20:58	06:32 20:31	07:02 19:44	07:32 18:54	07:07 17:13	15:10 (WTG02) 07:39 99	08:37 (WTG01) 16:32 (WTG02)
12	06:05 20:58	06:33 20:29	07:03 19:42	07:33 18:52	07:08 17:12	15:10 (WTG02) 07:40 98	08:37 (WTG01) 16:32 (WTG02)
13	06:06 20:57	06:34 20:28	07:04 19:40	07:34 18:51	07:09 17:11	15:11 (WTG02) 07:41 97	08:38 (WTG01) 16:32 (WTG02)
14	06:07 20:57	06:35 20:27	07:05 19:39	07:35 18:49	07:10 17:10	15:11 (WTG02) 07:41 96	08:38 (WTG01) 16:33 (WTG02)
15	06:08 20:56	06:36 20:25	07:06 19:37	07:36 18:48	07:12 17:09	15:11 (WTG02) 07:42 94	08:38 (WTG01) 16:32 (WTG02)
16	06:08 20:56	06:37 20:24	07:07 19:35	07:37 18:46	07:13 17:09	15:11 (WTG02) 07:43 93	08:38 (WTG01) 16:33 (WTG02)
17	06:09 20:55	06:38 20:23	07:08 19:33	07:38 18:45	07:14 17:08	15:12 (WTG02) 07:43 92	08:39 (WTG01) 16:34 (WTG02)
18	06:10 20:54	06:39 20:21	07:09 19:32	07:39 18:43	07:15 17:07	15:12 (WTG02) 07:44 91	08:39 (WTG01) 16:33 (WTG02)
19	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	07:16 17:06	15:12 (WTG02) 07:45 90	08:39 (WTG01) 16:34 (WTG02)
20	06:12 20:53	06:41 20:18	07:11 19:28	07:42 18:40	07:17 17:06	15:13 (WTG02) 07:45 88	08:39 (WTG01) 16:34 (WTG02)
21	06:12 20:52	06:42 20:17	07:12 19:27	07:43 18:39	07:19 17:05	15:13 (WTG02) 07:46 87	08:40 (WTG01) 16:35 (WTG02)
22	06:13 20:52	06:43 20:15	07:13 19:25	07:44 18:37	07:20 17:04	15:14 (WTG02) 07:46 86	08:40 (WTG01) 16:35 (WTG02)
23	06:14 20:51	06:44 20:14	07:14 19:23	07:45 18:36	07:21 17:04	15:15 (WTG02) 07:47 85	08:41 (WTG01) 16:36 (WTG02)
24	06:15 20:50	06:45 20:12	07:15 19:22	07:46 18:35	07:22 17:03	15:15 (WTG02) 07:47 84	08:41 (WTG01) 16:36 (WTG02)
25	06:16 20:49	06:46 20:11	07:16 19:20	07:47 18:33	07:23 17:03	15:15 (WTG02) 07:48 83	08:42 (WTG01) 16:37 (WTG02)
26	06:17 20:48	06:47 20:09	07:17 19:18	07:48 18:32	07:24 17:02	15:16 (WTG02) 07:48 81	08:43 (WTG01) 16:37 (WTG02)
27	06:18 20:47	06:48 20:08	07:18 19:17	07:49 18:30	07:25 17:02	15:17 (WTG02) 07:49 81	08:43 (WTG01) 16:38 (WTG02)
28	06:19 20:46	06:49 20:06	07:19 19:15	07:50 18:29	07:26 17:01	15:18 (WTG02) 07:49 79	08:43 (WTG01) 16:38 (WTG02)
29	06:19 20:45	06:49 20:05	07:20 19:13	07:51 18:28	07:27 17:01	15:18 (WTG02) 07:49 78	08:43 (WTG01) 16:40 (WTG02)
30	06:20 20:44	06:50 20:03	07:21 19:12	07:52 18:27	07:29 17:01	15:19 (WTG02) 07:49 77	08:44 (WTG01) 16:40 (WTG02)
31	06:21 20:43	06:51 20:01		07:53 18:25	07:29 16:28 (WTG02)	15:19 (WTG02) 07:49 77	08:44 (WTG01) 16:41 (WTG02)
Potential sun hours	458	427	375	346	299	289	2938
Total, worst case				1039	2667		2938

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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Project:

Ittiri_RWE_26_05_20_GF

Licensed user:

I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
25/06/2021 14:20/3.4.415

SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_15 - Circoli megalitici
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

Table with columns for months (January to December) and rows for days (1 to 31). Each cell contains sun rise and set times (hh:mm) and shadow times (hh:mm) for various receptors. Summary rows at the bottom show 'Potential sun hours' and 'Total, worst case' for each month.

Table layout: For each day in each month the following matrix apply

Day in month Sun rise (hh:mm) Sun set (hh:mm) Minutes with flicker First time (hh:mm) with flicker Last time (hh:mm) with flicker (WTG causing flicker first time) (WTG causing flicker last time)



SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_16 - Coppelle Pubusattile
 Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:58 20:50	
2	07:50 17:11	07:36 17:45	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	
3	07:50 17:11	07:35 17:46	06:59 18:19	07:09 19:52	06:24 20:23	05:58 20:52	
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24	05:57 20:52	
5	07:50 17:13	07:33 17:48	06:56 18:21	07:05 19:54	06:22 20:25	05:57 20:53	
6	07:50 17:14	07:32 17:50	06:54 18:23	17:51 (WTG10) 17:59 (WTG10)	07:04 19:55	06:21 20:26	05:57 20:54
7	07:50 17:15	07:31 17:51	06:53 18:24	17:46 (WTG10) 18:02 (WTG10)	07:02 19:56	06:19 20:27	05:56 20:54
8	07:50 17:16	07:30 17:52	06:51 18:25	17:44 (WTG10) 18:04 (WTG10)	07:01 19:57	06:18 20:28	05:56 20:55
9	07:50 17:17	07:29 17:53	06:49 18:26	17:41 (WTG10) 18:05 (WTG10)	06:59 19:58	06:17 20:30	05:56 20:56
10	07:50 17:18	07:28 17:55	06:48 18:27	17:39 (WTG10) 18:05 (WTG10)	06:57 20:00	06:16 20:31	05:56 20:56
11	07:50 17:19	07:26 17:56	06:46 18:28	17:38 (WTG10) 18:07 (WTG10)	06:56 20:01	06:15 20:32	05:56 20:57
12	07:49 17:20	07:25 17:57	06:45 18:29	17:36 (WTG10) 18:08 (WTG10)	06:54 20:02	06:14 20:33	05:55 20:57
13	07:49 17:21	07:24 17:58	06:43 18:30	17:36 (WTG10) 18:10 (WTG10)	06:53 20:03	06:13 20:33	05:55 20:58
14	07:49 17:22	07:23 17:59	06:41 18:31	17:34 (WTG10) 18:10 (WTG10)	06:51 20:04	06:12 20:34	05:55 20:58
15	07:48 17:23	07:22 18:01	06:40 18:32	17:33 (WTG10) 18:11 (WTG10)	06:50 20:05	06:11 20:35	05:55 20:58
16	07:48 17:24	07:20 18:02	06:38 18:33	17:33 (WTG10) 18:13 (WTG10)	06:48 20:06	06:10 20:36	05:55 20:59
17	07:48 17:26	07:19 18:03	06:37 18:34	17:32 (WTG10) 18:12 (WTG10)	06:46 20:07	06:09 20:37	05:55 20:59
18	07:47 17:27	07:18 18:04	06:35 18:36	17:32 (WTG10) 18:12 (WTG10)	06:45 20:08	06:08 20:38	05:55 21:00
19	07:47 17:28	07:16 18:05	06:33 18:37	17:32 (WTG10) 18:12 (WTG10)	06:43 20:09	06:07 20:39	05:55 21:00
20	07:46 17:29	07:15 18:06	06:32 18:38	17:31 (WTG10) 18:12 (WTG10)	06:42 20:10	06:06 20:40	05:56 21:00
21	07:46 17:30	07:13 18:08	06:30 18:39	17:31 (WTG10) 18:11 (WTG10)	06:41 20:11	06:05 20:41	05:56 21:00
22	07:45 17:31	07:12 18:09	06:28 18:40	17:32 (WTG10) 18:11 (WTG10)	06:39 20:12	06:05 20:42	05:56 21:01
23	07:44 17:33	07:11 18:10	06:27 18:41	17:32 (WTG10) 18:10 (WTG10)	06:38 20:13	06:04 20:43	05:56 21:01
24	07:44 17:34	07:09 18:11	06:25 18:42	17:32 (WTG10) 18:08 (WTG10)	06:36 20:14	06:03 20:44	05:56 21:01
25	07:43 17:35	07:08 18:12	06:23 18:43	17:33 (WTG10) 18:08 (WTG10)	06:35 20:15	06:03 20:45	05:57 21:01
26	07:42 17:36	07:06 18:13	06:22 18:44	17:33 (WTG10) 18:06 (WTG10)	06:33 20:16	06:02 20:45	05:57 21:01
27	07:41 17:37	07:05 18:15	06:20 18:45	17:34 (WTG10) 18:04 (WTG10)	06:32 20:17	06:01 20:46	05:57 21:01
28	07:41 17:39	07:03 18:16	06:18 18:46	17:36 (WTG10) 18:03 (WTG10)	06:31 20:18	06:01 20:47	05:58 21:01
29	07:40 17:40		07:17 19:47	18:37 (WTG10) 19:01 (WTG10)	06:29 20:19	06:00 20:48	05:58 21:01
30	07:39 17:41		07:15 19:48	18:39 (WTG10) 18:57 (WTG10)	06:28 20:20	05:59 20:49	05:59 21:01
31	07:38 17:42		07:13 19:49	18:43 (WTG10) 18:54 (WTG10)		05:59 20:49	
Potential sun hours	299	298	370	398	447	451	
Total, worst case		270	795				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_16 - Coppelle Pubusattile

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	July	August	September	October	November	December		
1	05:59 21:01	06:23 20:43	06:53 20:00	07:22 19:10	18:15 (WTG10) 18:48 (WTG10)	06:55 17:24	16:49 (WTG11) 17:01	07:30 17:01
2	06:00 21:01	06:24 20:41	06:54 19:59	07:23 19:09	18:16 (WTG10) 18:46 (WTG10)	06:57 17:23	16:50 (WTG11) 17:00	07:31 17:00
3	06:00 21:01	06:24 20:40	06:55 19:57	07:24 19:07	18:17 (WTG10) 18:45 (WTG10)	06:58 17:22	16:50 (WTG11) 16:58 (WTG11)	07:32 17:00
4	06:01 21:01	06:25 20:39	06:56 19:55	07:25 19:05	18:18 (WTG10) 18:43 (WTG10)	06:59 17:21	16:52 (WTG11) 16:57 (WTG11)	07:33 17:00
5	06:01 21:00	06:26 20:38	06:57 19:54	07:26 19:04	18:19 (WTG10) 18:41 (WTG10)	07:00 17:20	16:54 (WTG11) 16:56 (WTG11)	07:34 17:00
6	06:02 21:00	06:27 20:37	06:58 19:52	07:27 19:02	18:21 (WTG10) 18:40 (WTG10)	07:01 17:19	16:57 (WTG11) 17:00	07:35 17:00
7	06:02 21:00	06:28 20:36	06:58 19:50	07:28 19:00	18:24 (WTG10) 18:38 (WTG10)	07:02 17:17	17:00	07:36 17:00
8	06:03 21:00	06:29 20:35	06:59 19:49	07:29 18:59	18:41 (WTG10) 18:54 (WTG10)	07:04 17:16	17:00	07:37 16:59
9	06:04 20:59	06:30 20:33	07:00 19:47	07:30 18:57	18:51 (WTG10) 18:57 (WTG10)	07:05 17:15	17:00	07:37 16:59
10	06:04 20:59	06:31 20:32	07:01 19:45	07:31 18:56	18:58 (WTG10) 18:56 (WTG10)	07:06 17:14	17:00	07:38 17:00
11	06:05 20:58	06:32 20:31	07:02 19:44	07:32 18:54	18:59 (WTG10) 18:54 (WTG10)	07:07 17:13	17:00	07:39 17:00
12	06:06 20:58	06:33 20:29	07:03 19:42	07:33 18:53	18:35 (WTG10) 18:44 (WTG10)	07:08 17:12	07:08	07:40 17:00
13	06:06 20:58	06:34 20:28	07:04 19:40	07:34 18:51	18:31 (WTG10) 18:48 (WTG10)	07:09 17:11	07:09	07:41 17:00
14	06:07 20:57	06:35 20:27	07:05 19:39	07:35 18:49	18:28 (WTG10) 18:50 (WTG10)	07:11 17:11	07:11	07:41 17:00
15	06:08 20:56	06:36 20:25	07:06 19:37	07:36 18:48	18:25 (WTG10) 18:52 (WTG10)	07:12 17:10	07:12	07:42 17:00
16	06:09 20:56	06:37 20:24	07:07 19:35	07:38 18:46	18:24 (WTG10) 18:53 (WTG10)	07:13 17:09	07:13	07:43 17:01
17	06:09 20:55	06:38 20:23	07:08 19:34	07:39 18:45	18:22 (WTG10) 18:54 (WTG10)	07:14 17:08	07:14	07:44 17:01
18	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43	18:21 (WTG10) 18:55 (WTG10)	07:15 17:07	07:15	07:44 17:01
19	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	18:19 (WTG10) 18:55 (WTG10)	07:16 17:07	07:16	07:45 17:02
20	06:12 20:53	06:41 20:18	07:11 19:29	07:42 18:40	18:18 (WTG10) 18:56 (WTG10)	07:18 17:06	07:18	07:45 17:02
21	06:13 20:53	06:42 20:17	07:12 19:27	07:43 18:39	18:17 (WTG10) 18:56 (WTG10)	07:19 17:05	07:19	07:46 17:02
22	06:14 20:52	06:43 20:16	07:13 19:25	07:44 18:38	18:17 (WTG10) 18:56 (WTG10)	07:20 17:05	07:20	07:47 17:03
23	06:14 20:51	06:44 20:14	07:14 19:24	07:45 18:36	18:16 (WTG10) 18:56 (WTG10)	07:21 17:04	07:21	07:47 17:03
24	06:15 20:50	06:45 20:13	07:15 19:22	07:46 18:35	18:15 (WTG10) 18:56 (WTG10)	07:22 17:03	07:22	07:48 17:04
25	06:16 20:49	06:46 20:11	07:16 19:20	07:47 18:33	18:15 (WTG10) 18:55 (WTG10)	07:23 17:03	07:23	07:48 17:05
26	06:17 20:48	06:47 20:09	07:17 19:19	07:49 18:32	18:15 (WTG10) 18:55 (WTG10)	07:24 17:02	07:24	07:48 17:05
27	06:18 20:47	06:48 20:08	07:18 19:17	07:50 18:31	18:15 (WTG10) 18:54 (WTG10)	07:25 17:02	07:25	07:49 17:06
28	06:19 20:47	06:49 20:06	07:19 19:15	07:51 18:30	18:15 (WTG10) 18:53 (WTG10)	07:27 17:02	07:27	07:49 17:06
29	06:20 20:46	06:50 20:05	07:20 19:14	07:52 18:29	18:15 (WTG10) 18:51 (WTG10)	07:28 17:01	07:28	07:49 17:07
30	06:21 20:45	06:51 20:03	07:21 19:12	07:53 18:28	18:15 (WTG10) 18:50 (WTG10)	07:29 17:01	07:29	07:50 17:08
31	06:22 20:44	06:52 20:02		07:54 18:27	18:50 (WTG10) 17:26	07:30 17:03	07:30	07:50 17:09
Potential sun hours	457	427	375	346	299	289		
Total, worst case			631	408	37	289		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_17 - Rigugio sotto roccia di Pubusattile
 Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February		March		April	May	June
1	07:50	07:37		07:02		07:12	06:27	05:58
	17:10	17:43		18:17		19:50	20:21	20:50
2	07:50	07:36		07:00		07:10	06:25	05:58
	17:11	17:45		18:18		19:51	20:22	20:51
3	07:50	07:35		06:59		07:09	06:24	05:58
	17:11	17:46		18:19		19:52	20:23	20:52
4	07:50	07:34		06:57		07:07	06:23	05:57
	17:12	17:47		18:20		19:53	20:24	20:52
5	07:50	07:33		06:56	17:49 (WTG10)	07:05	06:22	05:57
	17:13	17:48		18:21	11 18:00 (WTG10)	19:54	20:25	20:53
6	07:50	07:32	17:24 (WTG11)	06:54	17:46 (WTG10)	07:04	06:21	05:57
	17:14	17:50	3 17:27 (WTG11)	18:23	16 18:02 (WTG10)	19:55	20:26	20:54
7	07:50	07:31	17:23 (WTG11)	06:53	17:43 (WTG10)	07:02	06:19	05:56
	17:15	17:51	5 17:28 (WTG11)	18:24	19 18:02 (WTG10)	19:56	20:27	20:54
8	07:50	07:30	17:21 (WTG11)	06:51	17:42 (WTG10)	07:01	06:18	05:56
	17:16	17:52	8 17:29 (WTG11)	18:25	22 18:04 (WTG10)	19:57	20:28	20:55
9	07:50	07:29	17:20 (WTG11)	06:49	17:40 (WTG10)	06:59	06:17	05:56
	17:17	17:53	10 17:30 (WTG11)	18:26	25 18:05 (WTG10)	19:58	20:30	20:56
10	07:50	07:28	17:20 (WTG11)	06:48	17:38 (WTG10)	06:57	06:16	05:56
	17:18	17:54	12 17:32 (WTG11)	18:27	27 18:05 (WTG10)	20:00	20:31	20:56
11	07:50	07:26	17:20 (WTG11)	06:46	17:37 (WTG10)	06:56	06:15	05:56
	17:19	17:56	13 17:33 (WTG11)	18:28	30 18:07 (WTG10)	20:01	20:32	20:57
12	07:49	07:25	17:20 (WTG11)	06:45	17:36 (WTG10)	06:54	06:14	05:55
	17:20	17:57	15 17:35 (WTG11)	18:29	32 18:08 (WTG10)	20:02	20:33	20:57
13	07:49	07:24	17:19 (WTG11)	06:43	17:36 (WTG10)	06:53	06:13	05:55
	17:21	17:58	16 17:35 (WTG11)	18:30	34 18:10 (WTG10)	20:03	20:33	20:58
14	07:49	07:23	17:19 (WTG11)	06:41	17:35 (WTG10)	06:51	06:12	05:55
	17:22	17:59	18 17:37 (WTG11)	18:31	35 18:10 (WTG10)	20:04	20:34	20:58
15	07:48	07:21	17:19 (WTG11)	06:40	17:34 (WTG10)	06:50	06:11	05:55
	17:23	18:01	19 17:38 (WTG11)	18:32	37 18:11 (WTG10)	20:05	20:35	20:58
16	07:48	07:20	17:19 (WTG11)	06:38	17:34 (WTG10)	06:48	06:10	05:55
	17:24	18:02	20 17:39 (WTG11)	18:33	39 18:13 (WTG10)	20:06	20:36	20:59
17	07:48	07:19	17:20 (WTG11)	06:37	17:34 (WTG10)	06:46	06:09	05:55
	17:26	18:03	21 17:41 (WTG11)	18:34	39 18:13 (WTG10)	20:07	20:37	20:59
18	07:47	07:18	17:21 (WTG11)	06:35	17:33 (WTG10)	06:45	06:08	05:55
	17:27	18:04	21 17:42 (WTG11)	18:36	39 18:12 (WTG10)	20:08	20:38	21:00
19	07:47	07:16	17:21 (WTG11)	06:33	17:34 (WTG10)	06:43	06:07	05:55
	17:28	18:05	20 17:41 (WTG11)	18:37	38 18:12 (WTG10)	20:09	20:39	21:00
20	07:46	07:15	17:23 (WTG11)	06:32	17:33 (WTG10)	06:42	06:06	05:56
	17:29	18:06	17 17:40 (WTG11)	18:38	38 18:11 (WTG10)	20:10	20:40	21:00
21	07:46	07:13	17:25 (WTG11)	06:30	17:33 (WTG10)	06:41	06:05	05:56
	17:30	18:08	14 17:39 (WTG11)	18:39	37 18:10 (WTG10)	20:11	20:41	21:00
22	07:45	07:12	17:28 (WTG11)	06:28	17:34 (WTG10)	06:39	06:05	05:56
	17:31	18:09	7 17:35 (WTG11)	18:40	36 18:10 (WTG10)	20:12	20:42	21:01
23	07:44	07:11		06:27	17:35 (WTG10)	06:38	06:04	05:56
	17:33	18:10		18:41	34 18:09 (WTG10)	20:13	20:43	21:01
24	07:44	07:09		06:25	17:35 (WTG10)	06:36	06:03	05:56
	17:34	18:11		18:42	32 18:07 (WTG10)	20:14	20:44	21:01
25	07:43	07:08		06:23	17:37 (WTG10)	06:35	06:03	05:57
	17:35	18:12		18:43	29 18:06 (WTG10)	20:15	20:45	21:01
26	07:42	07:06		06:22	17:38 (WTG10)	06:33	06:02	05:57
	17:36	18:13		18:44	26 18:04 (WTG10)	20:16	20:45	21:01
27	07:41	07:05		06:20	17:39 (WTG10)	06:32	06:01	05:57
	17:37	18:15		18:45	22 18:01 (WTG10)	20:17	20:46	21:01
28	07:41	07:03		06:18	17:42 (WTG10)	06:31	06:01	05:58
	17:39	18:16		18:46	17 17:59 (WTG10)	20:18	20:47	21:01
29	07:40			07:17	18:46 (WTG10)	06:29	06:00	05:58
	17:40			19:47	8 18:54 (WTG10)	20:19	20:48	21:01
30	07:39			07:15		06:28	05:59	05:59
	17:41			19:48		20:20	20:49	21:01
31	07:38			07:13			05:59	
	17:42			19:49			20:49	
Potential sun hours	299	298		370		398	447	451
Total, worst case		239		722				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_17 - Rigugio sotto roccia di Pubusattile
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July	August	September		October		November		December		
1	05:59 21:01	06:23 20:43	06:53 20:00		07:22 19:10	33	18:15 (WTG10) 18:48 (WTG10)	06:55 17:24	11	16:50 (WTG11) 17:01 (WTG11)	07:30 17:01
2	06:00 21:01	06:24 20:41	06:54 19:59		07:23 19:09	30	18:16 (WTG10) 18:46 (WTG10)	06:57 17:23	10	16:50 (WTG11) 17:00 (WTG11)	07:31 17:00
3	06:00 21:01	06:24 20:40	06:55 19:57		07:24 19:07	29	18:16 (WTG10) 18:45 (WTG10)	06:58 17:22	7	16:51 (WTG11) 16:58 (WTG11)	07:32 17:00
4	06:01 21:01	06:25 20:39	06:56 19:55		07:25 19:05	26	18:17 (WTG10) 18:43 (WTG10)	06:59 17:21	5	16:52 (WTG11) 16:57 (WTG11)	07:33 17:00
5	06:01 21:00	06:26 20:38	06:57 19:54		07:26 19:04	23	18:18 (WTG10) 18:41 (WTG10)	07:00 17:20	2	16:54 (WTG11) 16:56 (WTG11)	07:34 17:00
6	06:02 21:00	06:27 20:37	06:58 19:52		07:27 19:02	21	18:19 (WTG10) 18:40 (WTG10)	07:01 17:19			07:35 17:00
7	06:02 21:00	06:28 20:36	06:58 19:50		07:28 19:00	18	18:20 (WTG10) 18:38 (WTG10)	07:02 17:17			07:36 17:00
8	06:03 21:00	06:29 20:35	06:59 19:49		07:29 18:59	13	18:23 (WTG10) 18:36 (WTG10)	07:04 17:16			07:37 16:59
9	06:04 20:59	06:30 20:33	07:00 19:47		07:30 18:57	8	18:30 (WTG10) 18:34 (WTG10)	07:05 17:15			07:37 16:59
10	06:04 20:59	06:31 20:32	07:01 19:45		07:31 18:56			07:06 17:14			07:38 17:00
11	06:05 20:58	06:32 20:31	07:02 19:44		07:32 18:54			07:07 17:13			07:39 17:00
12	06:06 20:58	06:33 20:29	07:03 19:42		07:33 18:53			07:08 17:12			07:40 17:00
13	06:06 20:58	06:34 20:28	07:04 19:40		07:34 18:51			07:09 17:11			07:41 17:00
14	06:07 20:57	06:35 20:27	07:05 19:39	6	18:37 (WTG10) 18:43 (WTG10)			07:11 17:11			07:41 17:00
15	06:08 20:56	06:36 20:25	07:06 19:37	16	18:32 (WTG10) 18:48 (WTG10)			07:12 17:10			07:42 17:00
16	06:09 20:56	06:37 20:24	07:07 19:35	21	18:29 (WTG10) 18:50 (WTG10)			07:13 17:09			07:43 17:01
17	06:09 20:55	06:38 20:23	07:08 19:34	26	18:26 (WTG10) 18:52 (WTG10)			07:14 17:08			07:44 17:01
18	06:10 20:55	06:39 20:21	07:09 19:32	29	18:24 (WTG10) 18:53 (WTG10)			07:15 17:07			07:44 17:01
19	06:11 20:54	06:40 20:20	07:10 19:30	31	18:23 (WTG10) 18:54 (WTG10)			07:16 17:07			07:45 17:02
20	06:12 20:53	06:41 20:18	07:11 19:29	34	18:21 (WTG10) 18:55 (WTG10)	10	17:57 (WTG11) 18:07 (WTG11)	07:18 17:06			07:45 17:02
21	06:13 20:53	06:42 20:17	07:12 19:27	35	18:20 (WTG10) 18:55 (WTG10)	15	17:55 (WTG11) 18:10 (WTG11)	07:19 17:05			07:46 17:02
22	06:14 20:52	06:43 20:16	07:13 19:25	37	18:19 (WTG10) 18:56 (WTG10)	18	17:53 (WTG11) 18:11 (WTG11)	07:20 17:05			07:47 17:03
23	06:14 20:51	06:44 20:14	07:14 19:24	38	18:18 (WTG10) 18:56 (WTG10)	20	17:52 (WTG11) 18:12 (WTG11)	07:21 17:04			07:47 17:03
24	06:15 20:50	06:45 20:13	07:15 19:22	39	18:17 (WTG10) 18:56 (WTG10)	22	17:50 (WTG11) 18:12 (WTG11)	07:22 17:03			07:48 17:04
25	06:16 20:49	06:46 20:11	07:16 19:20	39	18:17 (WTG10) 18:56 (WTG10)	21	16:49 (WTG11) 17:10 (WTG11)	07:23 17:03			07:48 17:05
26	06:17 20:48	06:47 20:09	07:17 19:19	39	18:16 (WTG10) 18:55 (WTG10)	19	16:49 (WTG11) 17:08 (WTG11)	07:24 17:02			07:48 17:05
27	06:18 20:47	06:48 20:08	07:18 19:17	39	18:16 (WTG10) 18:55 (WTG10)	19	16:49 (WTG11) 17:08 (WTG11)	07:25 17:02			07:49 17:06
28	06:19 20:47	06:49 20:06	07:19 19:15	38	18:15 (WTG10) 18:53 (WTG10)	17	16:49 (WTG11) 17:06 (WTG11)	07:27 17:02			07:49 17:06
29	06:20 20:46	06:50 20:05	07:20 19:14	36	18:15 (WTG10) 18:51 (WTG10)	17	16:48 (WTG11) 17:05 (WTG11)	07:28 17:01			07:49 17:07
30	06:21 20:45	06:51 20:03	07:21 19:12	35	18:15 (WTG10) 18:50 (WTG10)	15	16:48 (WTG11) 17:03 (WTG11)	07:29 17:01			07:50 17:08
31	06:22 20:44	06:52 20:02			06:54 17:26	14	16:49 (WTG11) 17:03 (WTG11)				07:50 17:09
Potential sun hours	457	427	375		346		299				289
Total, worst case			538		408		35				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_18 - Domus de janas di Pubusattile I
 Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June		
1	07:50 17:10	07:37 17:43	07:02 18:17		07:12 19:50	05:58 20:50		
2	07:50 17:11	07:36 17:45	07:00 18:18		07:10 19:51	05:58 20:51		
3	07:50 17:11	07:35 17:46	06:59 18:19		07:09 19:52	05:58 20:52		
4	07:50 17:12	07:34 17:47	06:57 18:20		07:07 19:53	05:57 20:52		
5	07:50 17:13	07:33 17:48	06:56 18:21		07:05 19:54	05:57 20:53		
6	07:50 17:14	07:32 17:50	06:54 18:23	11	17:51 (WTG10) 18:02 (WTG10)	07:04 19:55	06:21 20:26	05:57 20:54
7	07:50 17:15	07:31 17:51	17:26 (WTG11) 06:53 18:24	15	17:47 (WTG10) 18:02 (WTG10)	07:02 19:56	06:19 20:27	05:56 20:54
8	07:50 17:16	07:30 17:52	17:24 (WTG11) 06:51 18:25	19	17:45 (WTG10) 18:04 (WTG10)	07:01 19:57	06:18 20:28	05:56 20:55
9	07:50 17:17	07:29 17:53	17:23 (WTG11) 06:49 18:26	22	17:43 (WTG10) 18:05 (WTG10)	06:59 19:58	06:17 20:30	05:56 20:56
10	07:50 17:18	07:28 17:54	17:22 (WTG11) 06:48 18:27	24	17:41 (WTG10) 18:05 (WTG10)	06:57 20:00	06:16 20:31	05:56 20:56
11	07:50 17:19	07:26 17:56	17:22 (WTG11) 06:46 18:28	27	17:40 (WTG10) 18:07 (WTG10)	06:56 20:01	06:15 20:32	05:56 20:57
12	07:49 17:20	07:25 17:57	17:21 (WTG11) 06:45 18:29	29	17:39 (WTG10) 18:08 (WTG10)	06:54 20:02	06:14 20:33	05:55 20:57
13	07:49 17:21	07:24 17:58	17:20 (WTG11) 06:43 18:30	32	17:38 (WTG10) 18:10 (WTG10)	06:53 20:03	06:13 20:33	05:55 20:58
14	07:49 17:22	07:23 17:59	17:21 (WTG11) 06:41 18:31	33	17:37 (WTG10) 18:10 (WTG10)	06:51 20:04	06:12 20:34	05:55 20:58
15	07:48 17:23	07:21 18:01	17:21 (WTG11) 06:40 18:32	35	17:36 (WTG10) 18:11 (WTG10)	06:50 20:05	06:11 20:35	05:55 20:58
16	07:48 17:24	07:20 18:02	17:20 (WTG11) 06:38 18:33	37	17:36 (WTG10) 18:13 (WTG10)	06:48 20:06	06:10 20:36	05:55 20:59
17	07:48 17:26	07:19 18:03	17:21 (WTG11) 06:37 18:34	38	17:36 (WTG10) 18:14 (WTG10)	06:46 20:07	06:09 20:37	05:55 20:59
18	07:47 17:27	07:18 18:04	17:22 (WTG11) 06:35 18:36	38	17:35 (WTG10) 18:13 (WTG10)	06:45 20:08	06:08 20:38	05:55 21:00
19	07:47 17:28	07:16 18:05	17:22 (WTG11) 06:33 18:37	39	17:35 (WTG10) 18:14 (WTG10)	06:43 20:09	06:07 20:39	05:55 21:00
20	07:46 17:29	07:15 18:06	17:23 (WTG11) 06:32 18:38	38	17:35 (WTG10) 18:13 (WTG10)	06:42 20:10	06:06 20:40	05:56 21:00
21	07:46 17:30	07:13 18:08	17:25 (WTG11) 06:30 18:39	37	17:35 (WTG10) 18:12 (WTG10)	06:41 20:11	06:05 20:41	05:56 21:00
22	07:45 17:31	07:12 18:09	17:26 (WTG11) 06:28 18:40	35	17:36 (WTG10) 18:11 (WTG10)	06:39 20:12	06:05 20:42	05:56 21:01
23	07:44 17:33	07:11 18:10	17:31 (WTG11) 06:27 18:41	34	17:36 (WTG10) 18:10 (WTG10)	06:38 20:13	06:04 20:43	05:56 21:01
24	07:44 17:34	07:09 18:11	17:35 (WTG11) 06:25 18:42	32	17:36 (WTG10) 18:08 (WTG10)	06:36 20:14	06:03 20:44	05:56 21:01
25	07:43 17:35	07:08 18:12	06:23 18:43	30	17:38 (WTG10) 18:08 (WTG10)	06:35 20:15	06:03 20:45	05:57 21:01
26	07:42 17:36	07:06 18:13	06:22 18:44	27	17:39 (WTG10) 18:06 (WTG10)	06:33 20:16	06:02 20:45	05:57 21:01
27	07:41 17:37	07:05 18:15	06:20 18:45	23	17:40 (WTG10) 18:03 (WTG10)	06:32 20:17	06:01 20:46	05:57 21:01
28	07:41 17:39	07:03 18:16	06:18 18:46	19	17:42 (WTG10) 18:01 (WTG10)	06:31 20:18	06:01 20:47	05:58 21:01
29	07:40 17:40		07:17 19:47	12	18:45 (WTG10) 18:57 (WTG10)	06:29 20:19	06:00 20:48	05:58 21:01
30	07:39 17:41		07:15 19:48			06:28 20:20	05:59 20:49	05:59 21:01
31	07:38 17:42		07:13 19:49				05:59 20:49	
Potential sun hours	299	298	370	398	447	451		
Total, worst case		230	686					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_18 - Domus de janas di Pubusattile I
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July	August	September		October		November		December	
1	05:59 21:01	06:23 20:43	06:53 20:00		07:22 19:10	30	18:18 (WTG10) 18:48 (WTG10)	06:55 17:24	16:52 (WTG11) 17:01	07:30 17:01
2	06:00 21:01	06:24 20:41	06:54 19:59		07:23 19:09	28	18:18 (WTG10) 18:46 (WTG10)	06:57 17:23	16:53 (WTG11) 17:00	07:31 17:00
3	06:00 21:01	06:24 20:40	06:55 19:57		07:24 19:07	26	18:19 (WTG10) 18:45 (WTG10)	06:58 17:22	16:54 (WTG11) 16:58 (WTG11)	07:32 17:00
4	06:01 21:01	06:25 20:39	06:56 19:55		07:25 19:05	23	18:20 (WTG10) 18:43 (WTG10)	06:59 17:21	16:55 (WTG11) 16:57 (WTG11)	07:33 17:00
5	06:01 21:00	06:26 20:38	06:57 19:54		07:26 19:04	20	18:21 (WTG10) 18:41 (WTG10)	07:00 17:20		07:34 17:00
6	06:02 21:00	06:27 20:37	06:58 19:52		07:27 19:02	18	18:22 (WTG10) 18:40 (WTG10)	07:01 17:19		07:35 17:00
7	06:02 21:00	06:28 20:36	06:58 19:50		07:28 19:00	14	18:24 (WTG10) 18:38 (WTG10)	07:02 17:17		07:36 17:00
8	06:03 21:00	06:29 20:35	06:59 19:49		07:29 18:59	8	18:28 (WTG10) 18:36 (WTG10)	07:04 17:16		07:37 16:59
9	06:04 20:59	06:30 20:33	07:00 19:47		07:30 18:57			07:05 17:15		07:37 16:59
10	06:04 20:59	06:31 20:32	07:01 19:45		07:31 18:56			07:06 17:14		07:38 17:00
11	06:05 20:58	06:32 20:31	07:02 19:44		07:32 18:54			07:07 17:13		07:39 17:00
12	06:06 20:58	06:33 20:29	07:03 19:42		07:33 18:53			07:08 17:12		07:40 17:00
13	06:06 20:58	06:34 20:28	07:04 19:40		07:34 18:51			07:09 17:11		07:41 17:00
14	06:07 20:57	06:35 20:27	07:05 19:39	10	07:35 18:46 (WTG10)			07:11 17:11		07:41 17:00
15	06:08 20:56	06:36 20:25	07:06 19:37	18	07:36 18:50 (WTG10)			07:12 17:10		07:42 17:00
16	06:09 20:56	06:37 20:24	07:07 19:35	23	07:38 18:52 (WTG10)			07:13 17:09		07:43 17:01
17	06:09 20:55	06:38 20:23	07:08 19:34	26	07:39 18:53 (WTG10)			07:14 17:08		07:44 17:01
18	06:10 20:55	06:39 20:21	07:09 19:32	30	07:40 18:55 (WTG10)			07:15 17:07		07:44 17:01
19	06:11 20:54	06:40 20:20	07:10 19:30	31	07:41 18:55 (WTG10)	9	17:59 (WTG11)	07:16 17:07		07:45 17:02
20	06:12 20:53	06:41 20:18	07:11 19:29	33	07:42 18:56 (WTG10)	14	17:56 (WTG11) 18:10 (WTG11)	07:18 17:06		07:45 17:02
21	06:13 20:53	06:42 20:17	07:12 19:27	36	07:43 18:57 (WTG10)	18	17:55 (WTG11) 18:13 (WTG11)	07:19 17:05		07:46 17:02
22	06:14 20:52	06:43 20:16	07:13 19:25	36	07:44 18:57 (WTG10)	19	17:54 (WTG11) 18:13 (WTG11)	07:20 17:05		07:47 17:03
23	06:14 20:51	06:44 20:14	07:14 19:24	37	07:45 18:57 (WTG10)	21	17:52 (WTG11) 18:13 (WTG11)	07:21 17:04		07:47 17:03
24	06:15 20:50	06:45 20:13	07:15 19:22	38	07:46 18:57 (WTG10)	21	17:51 (WTG11) 18:12 (WTG11)	07:22 17:03		07:48 17:04
25	06:16 20:49	06:46 20:11	07:16 19:20	39	07:47 18:57 (WTG10)	20	17:50 (WTG11) 17:10 (WTG11)	07:23 17:03		07:48 17:05
26	06:17 20:48	06:47 20:09	07:17 19:19	38	07:49 18:56 (WTG10)	18	17:50 (WTG11) 17:08 (WTG11)	07:24 17:02		07:48 17:05
27	06:18 20:47	06:48 20:08	07:18 19:17	37	07:50 18:55 (WTG10)	18	17:50 (WTG11) 17:08 (WTG11)	07:25 17:02		07:49 17:06
28	06:19 20:47	06:49 20:06	07:19 19:15	35	07:51 18:53 (WTG10)	16	17:50 (WTG11) 17:06 (WTG11)	07:27 17:02		07:49 17:06
29	06:20 20:46	06:50 20:05	07:20 19:14	34	07:52 18:51 (WTG10)	15	17:50 (WTG11) 17:05 (WTG11)	07:28 17:01		07:49 17:07
30	06:21 20:45	06:51 20:03	07:21 19:12	32	07:53 18:50 (WTG10)	13	17:50 (WTG11) 17:03 (WTG11)	07:29 17:01		07:50 17:08
31	06:22 20:44	06:52 20:02			07:54 17:26	12	16:51 (WTG11) 17:03 (WTG11)			07:50 17:09
Potential sun hours	457	427	375		346		299			289
Total, worst case			533		381		22			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_19 - Domus de janas Pubusattile II
 Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June
1	07:50 17:10	07:37 17:43	07:02 18:17		07:12 19:50	05:58 20:21
2	07:50 17:11	07:36 17:45	07:00 18:18		07:10 19:51	05:58 20:22
3	07:50 17:11	07:35 17:46	06:59 18:19		07:09 19:52	05:58 20:23
4	07:50 17:12	07:34 17:47	06:57 18:20		07:07 19:53	05:57 20:24
5	07:50 17:13	07:33 17:48	06:56 18:21		07:05 19:54	05:57 20:25
6	07:50 17:14	07:32 17:50	06:54 18:23	12	17:50 (WTG10) 18:02 (WTG10)	07:04 19:55
7	07:50 17:15	07:31 17:51	06:53 18:24	15	17:47 (WTG10) 18:02 (WTG10)	07:02 19:56
8	07:50 17:16	07:30 17:52	06:51 18:25	19	17:45 (WTG10) 18:04 (WTG10)	07:01 19:57
9	07:50 17:17	07:29 17:53	06:49 18:26	22	17:43 (WTG10) 18:05 (WTG10)	06:59 19:58
10	07:50 17:18	07:28 17:54	06:48 18:27	24	17:41 (WTG10) 18:05 (WTG10)	06:57 20:00
11	07:50 17:19	07:26 17:56	06:46 18:28	27	17:40 (WTG10) 18:07 (WTG10)	06:56 20:01
12	07:49 17:20	07:25 17:57	06:45 18:29	29	17:39 (WTG10) 18:08 (WTG10)	06:54 20:02
13	07:49 17:21	07:24 17:58	06:43 18:30	32	17:38 (WTG10) 18:10 (WTG10)	06:53 20:03
14	07:49 17:22	07:23 17:59	06:41 18:31	33	17:37 (WTG10) 18:10 (WTG10)	06:51 20:04
15	07:48 17:23	07:21 18:01	06:40 18:32	35	17:36 (WTG10) 18:11 (WTG10)	06:50 20:05
16	07:48 17:24	07:20 18:02	06:38 18:33	37	17:36 (WTG10) 18:13 (WTG10)	06:48 20:06
17	07:48 17:26	07:19 18:03	06:37 18:34	38	17:36 (WTG10) 18:14 (WTG10)	06:46 20:07
18	07:47 17:27	07:18 18:04	06:35 18:36	38	17:35 (WTG10) 18:13 (WTG10)	06:45 20:08
19	07:47 17:28	07:16 18:05	06:33 18:37	37	17:36 (WTG10) 18:13 (WTG10)	06:43 20:09
20	07:46 17:29	07:15 18:06	06:32 18:38	38	17:35 (WTG10) 18:13 (WTG10)	06:42 20:10
21	07:46 17:30	07:13 18:08	06:30 18:39	36	17:35 (WTG10) 18:11 (WTG10)	06:41 20:11
22	07:45 17:31	07:12 18:09	06:28 18:40	35	17:36 (WTG10) 18:11 (WTG10)	06:39 20:12
23	07:44 17:33	07:11 18:10	06:27 18:41	34	17:36 (WTG10) 18:10 (WTG10)	06:38 20:13
24	07:44 17:34	07:09 18:11	06:25 18:42	31	17:37 (WTG10) 18:08 (WTG10)	06:36 20:14
25	07:43 17:35	07:08 18:12	06:23 18:43	29	17:38 (WTG10) 18:07 (WTG10)	06:35 20:15
26	07:42 17:36	07:06 18:13	06:22 18:44	26	17:39 (WTG10) 18:05 (WTG10)	06:33 20:16
27	07:41 17:37	07:05 18:15	06:20 18:45	23	17:40 (WTG10) 18:03 (WTG10)	06:32 20:17
28	07:41 17:39	07:03 18:16	06:18 18:46	18	17:43 (WTG10) 18:01 (WTG10)	06:31 20:18
29	07:40 17:40		07:17 19:47	10	18:46 (WTG10) 18:56 (WTG10)	06:29 20:19
30	07:39 17:41		07:15 19:48		06:28 20:20	05:59 20:49
31	07:38 17:42		07:13 19:49			05:59 20:49
Potential sun hours	299	298	370		398	451
Total, worst case		228	678			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_19 - Domus de janas Pubusattile II
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July	August	September		October		November		December	
1	05:59 21:01	06:23 20:43	06:53 20:00		07:22 19:10	30	18:18 (WTG10) 18:48 (WTG10)	06:55 17:24	16:52 (WTG11) 17:01 (WTG11)	07:30 17:01
2	06:00 21:01	06:24 20:41	06:54 19:59		07:23 19:09	28	18:18 (WTG10) 18:46 (WTG10)	06:57 17:23	16:53 (WTG11) 17:00 (WTG11)	07:31 17:00
3	06:00 21:01	06:24 20:40	06:55 19:57		07:24 19:07	26	18:19 (WTG10) 18:45 (WTG10)	06:58 17:22	16:54 (WTG11) 16:58 (WTG11)	07:32 17:00
4	06:01 21:01	06:25 20:39	06:56 19:55		07:25 19:05	23	18:20 (WTG10) 18:43 (WTG10)	06:59 17:21	16:55 (WTG11) 16:57 (WTG11)	07:33 17:00
5	06:01 21:00	06:26 20:38	06:57 19:54		07:26 19:04	20	18:21 (WTG10) 18:41 (WTG10)	07:00 17:20		07:34 17:00
6	06:02 21:00	06:27 20:37	06:58 19:52		07:27 19:02	18	18:22 (WTG10) 18:40 (WTG10)	07:01 17:19		07:35 17:00
7	06:02 21:00	06:28 20:36	06:58 19:50		07:28 19:00	14	18:24 (WTG10) 18:38 (WTG10)	07:02 17:17		07:36 17:00
8	06:03 21:00	06:29 20:35	06:59 19:49		07:29 18:59	8	18:28 (WTG10) 18:36 (WTG10)	07:04 17:16		07:37 16:59
9	06:04 20:59	06:30 20:33	07:00 19:47		07:30 18:57			07:05 17:15		07:37 16:59
10	06:04 20:59	06:31 20:32	07:01 19:45		07:31 18:56			07:06 17:14		07:38 17:00
11	06:05 20:58	06:32 20:31	07:02 19:44		07:32 18:54			07:07 17:13		07:39 17:00
12	06:06 20:58	06:33 20:29	07:03 19:42		07:33 18:53			07:08 17:12		07:40 17:00
13	06:06 20:58	06:34 20:28	07:04 19:40		07:34 18:51			07:09 17:11		07:41 17:00
14	06:07 20:57	06:35 20:27	07:05 19:39	7	18:38 (WTG10) 18:45 (WTG10)			07:11 17:11		07:41 17:00
15	06:08 20:56	06:36 20:25	07:06 19:37	16	18:33 (WTG10) 18:49 (WTG10)			07:12 17:10		07:42 17:00
16	06:09 20:56	06:37 20:24	07:07 19:35	22	18:30 (WTG10) 18:52 (WTG10)			07:13 17:09		07:43 17:01
17	06:09 20:55	06:38 20:23	07:08 19:34	25	18:28 (WTG10) 18:53 (WTG10)			07:14 17:08		07:44 17:01
18	06:10 20:55	06:39 20:21	07:09 19:32	28	18:26 (WTG10) 18:54 (WTG10)			07:15 17:07		07:44 17:01
19	06:11 20:54	06:40 20:20	07:10 19:30	31	18:24 (WTG10) 18:55 (WTG10)	8	18:00 (WTG11) 18:08 (WTG11)	07:16 17:07		07:45 17:02
20	06:12 20:53	06:41 20:18	07:11 19:29	33	18:23 (WTG10) 18:56 (WTG10)	14	17:56 (WTG11) 18:10 (WTG11)	07:18 17:06		07:45 17:02
21	06:13 20:53	06:42 20:17	07:12 19:27	34	18:22 (WTG10) 18:56 (WTG10)	18	17:55 (WTG11) 18:13 (WTG11)	07:19 17:05		07:46 17:02
22	06:14 20:52	06:43 20:16	07:13 19:25	36	18:21 (WTG10) 18:57 (WTG10)	20	17:54 (WTG11) 18:14 (WTG11)	07:20 17:05		07:47 17:03
23	06:14 20:51	06:44 20:14	07:14 19:24	37	18:20 (WTG10) 18:57 (WTG10)	21	17:52 (WTG11) 18:13 (WTG11)	07:21 17:04		07:47 17:03
24	06:15 20:50	06:45 20:13	07:15 19:22	38	18:19 (WTG10) 18:57 (WTG10)	21	17:51 (WTG11) 18:12 (WTG11)	07:22 17:03		07:48 17:04
25	06:16 20:49	06:46 20:11	07:16 19:20	38	18:19 (WTG10) 18:57 (WTG10)	19	16:51 (WTG11) 17:10 (WTG11)	07:23 17:03		07:48 17:05
26	06:17 20:48	06:47 20:09	07:17 19:19	38	18:18 (WTG10) 18:56 (WTG10)	18	16:50 (WTG11) 17:08 (WTG11)	07:24 17:02		07:48 17:05
27	06:18 20:47	06:48 20:08	07:18 19:17	37	18:18 (WTG10) 18:55 (WTG10)	17	16:51 (WTG11) 17:08 (WTG11)	07:25 17:02		07:49 17:06
28	06:19 20:47	06:49 20:06	07:19 19:15	35	18:18 (WTG10) 18:53 (WTG10)	16	16:50 (WTG11) 17:06 (WTG11)	07:27 17:02		07:49 17:06
29	06:20 20:46	06:50 20:05	07:20 19:14	33	18:18 (WTG10) 18:51 (WTG10)	15	16:50 (WTG11) 17:05 (WTG11)	07:28 17:01		07:49 17:07
30	06:21 20:45	06:51 20:03	07:21 19:12	32	18:18 (WTG10) 18:50 (WTG10)	13	16:50 (WTG11) 17:03 (WTG11)	07:29 17:01		07:50 17:08
31	06:22 20:44	06:52 20:02			06:54 17:26	11	16:52 (WTG11) 17:03 (WTG11)			07:50 17:09
Potential sun hours	457	427	375		346		299			289
Total, worst case			520		378		22			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_2 - Torre e cortine murarie

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January		February		March		April		May		June		
1	07:50		10:42 (WTG06)	07:37	10:52 (WTG06)	07:02	10:58 (WTG06)	07:12	14:25 (WTG06)	06:27	05:58		
	17:10	275	15:17 (WTG06)	17:43	15:27 (WTG06)	18:17	262	15:20 (WTG06)	19:50	79	15:44 (WTG06)	20:21	20:50
2	07:50		10:42 (WTG06)	07:36	10:52 (WTG06)	07:00		10:58 (WTG06)	07:10		14:30 (WTG06)	06:25	05:58
	17:10	276	15:18 (WTG06)	17:45	15:28 (WTG06)	18:18	261	15:19 (WTG06)	19:51	72	15:42 (WTG06)	20:22	20:51
3	07:50		10:42 (WTG06)	07:35	10:52 (WTG06)	06:59		10:59 (WTG06)	07:08		14:36 (WTG06)	06:24	05:58
	17:11	276	15:18 (WTG06)	17:46	15:28 (WTG06)	18:19	260	15:19 (WTG06)	19:52	65	15:41 (WTG06)	20:23	20:52
4	07:50		10:43 (WTG06)	07:34	10:53 (WTG06)	06:57		10:59 (WTG06)	07:07		14:40 (WTG06)	06:23	05:57
	17:12	276	15:19 (WTG06)	17:47	15:28 (WTG06)	18:20	259	15:18 (WTG06)	19:53	58	15:38 (WTG06)	20:24	20:52
5	07:50		10:43 (WTG06)	07:33	10:53 (WTG06)	06:56		10:59 (WTG06)	07:05		14:46 (WTG06)	06:22	05:57
	17:13	276	15:19 (WTG06)	17:48	15:28 (WTG06)	18:21	257	15:16 (WTG06)	19:54	50	15:36 (WTG06)	20:25	20:53
6	07:50		10:44 (WTG06)	07:32	10:53 (WTG06)	06:54		11:00 (WTG06)	07:04		14:51 (WTG06)	06:20	05:56
	17:14	276	15:20 (WTG06)	17:49	15:28 (WTG06)	18:22	256	15:16 (WTG06)	19:55	42	15:33 (WTG06)	20:26	20:54
7	07:50		10:44 (WTG06)	07:31	10:53 (WTG06)	06:53		11:00 (WTG06)	07:02		14:56 (WTG06)	06:19	05:56
	17:15	276	15:20 (WTG06)	17:51	15:28 (WTG06)	18:24	255	15:15 (WTG06)	19:56	33	15:29 (WTG06)	20:27	20:54
8	07:50		10:45 (WTG06)	07:30	10:53 (WTG06)	06:51		11:01 (WTG06)	07:00		15:03 (WTG06)	06:18	05:56
	17:16	276	15:21 (WTG06)	17:52	15:27 (WTG06)	18:25	254	15:15 (WTG06)	19:57	22	15:25 (WTG06)	20:28	20:55
9	07:50		10:45 (WTG06)	07:29	10:53 (WTG06)	06:49		11:01 (WTG06)	06:59			06:17	05:56
	17:17	277	15:22 (WTG06)	17:53	15:27 (WTG06)	18:26	253	15:14 (WTG06)	19:58			20:29	20:56
10	07:50		10:45 (WTG06)	07:28	10:54 (WTG06)	06:48		11:01 (WTG06)	06:57			06:16	05:56
	17:18	276	15:21 (WTG06)	17:54	15:27 (WTG06)	18:27	251	15:12 (WTG06)	19:59			20:30	20:56
11	07:50		10:46 (WTG06)	07:26	10:54 (WTG06)	06:46		11:02 (WTG06)	06:56			06:15	05:55
	17:19	276	15:22 (WTG06)	17:56	15:27 (WTG06)	18:28	250	15:12 (WTG06)	20:01			20:31	20:57
12	07:49		10:46 (WTG06)	07:25	10:55 (WTG06)	06:45		11:02 (WTG06)	06:54			06:14	05:55
	17:20	277	15:23 (WTG06)	17:57	15:27 (WTG06)	18:29	249	15:11 (WTG06)	20:02			20:32	20:57
13	07:49		10:46 (WTG06)	07:24	10:54 (WTG06)	06:43		11:04 (WTG06)	06:53			06:13	05:55
	17:21	276	15:22 (WTG06)	17:58	15:26 (WTG06)	18:30	246	15:10 (WTG06)	20:03			20:33	20:58
14	07:49		10:47 (WTG06)	07:23	10:54 (WTG06)	06:41		11:04 (WTG06)	06:51			06:12	05:55
	17:22	276	15:23 (WTG06)	17:59	15:26 (WTG06)	18:31	245	15:09 (WTG06)	20:04			20:34	20:58
15	07:48		10:47 (WTG06)	07:21	10:55 (WTG06)	06:40		11:04 (WTG06)	06:49			06:11	05:55
	17:23	276	15:23 (WTG06)	18:00	15:26 (WTG06)	18:32	244	15:08 (WTG06)	20:05			20:35	20:58
16	07:48		10:47 (WTG06)	07:20	10:55 (WTG06)	06:38		11:06 (WTG06)	06:48			06:10	05:55
	17:24	277	15:24 (WTG06)	18:02	15:25 (WTG06)	18:33	241	15:07 (WTG06)	20:06			20:36	20:59
17	07:48		10:48 (WTG06)	07:19	10:55 (WTG06)	06:36		11:06 (WTG06)	06:46			06:09	05:55
	17:25	277	15:25 (WTG06)	18:03	15:25 (WTG06)	18:34	240	15:06 (WTG06)	20:07			20:37	20:59
18	07:47		10:48 (WTG06)	07:18	10:56 (WTG06)	06:35		11:07 (WTG06)	06:45			06:08	05:55
	17:27	277	15:25 (WTG06)	18:04	15:25 (WTG06)	18:35	237	15:04 (WTG06)	20:08			20:38	21:00
19	07:47		10:48 (WTG06)	07:16	10:55 (WTG06)	06:33		11:08 (WTG06)	06:43			06:07	05:55
	17:28	277	15:25 (WTG06)	18:05	15:25 (WTG06)	18:37	236	15:04 (WTG06)	20:09			20:39	21:00
20	07:46		10:49 (WTG06)	07:15	10:56 (WTG06)	06:32		11:09 (WTG06)	06:42			06:06	05:55
	17:29	276	15:25 (WTG06)	18:06	15:25 (WTG06)	18:38	233	15:02 (WTG06)	20:10			20:40	21:00
21	07:46		10:49 (WTG06)	07:13	10:57 (WTG06)	06:30		11:10 (WTG06)	06:40			06:05	05:56
	17:30	276	15:25 (WTG06)	18:08	15:25 (WTG06)	18:39	231	15:01 (WTG06)	20:11			20:41	21:00
22	07:45		10:49 (WTG06)	07:12	10:56 (WTG06)	06:28		11:12 (WTG06)	06:39			06:05	05:56
	17:31	276	15:25 (WTG06)	18:09	15:24 (WTG06)	18:40	228	15:00 (WTG06)	20:12			20:42	21:01
23	07:44		10:50 (WTG06)	07:11	10:57 (WTG06)	06:27		11:13 (WTG06)	06:38			06:04	05:56
	17:32	276	15:26 (WTG06)	18:10	15:23 (WTG06)	18:41	226	14:59 (WTG06)	20:13			20:43	21:01
24	07:44		10:50 (WTG06)	07:09	10:57 (WTG06)	06:25		11:15 (WTG06)	06:36			06:03	05:56
	17:34	276	15:26 (WTG06)	18:11	15:22 (WTG06)	18:42	222	14:57 (WTG06)	20:14			20:44	21:01
25	07:43		10:50 (WTG06)	07:08	10:57 (WTG06)	06:23		11:18 (WTG06)	06:35			06:02	05:57
	17:35	276	15:26 (WTG06)	18:12	15:22 (WTG06)	18:43	218	14:56 (WTG06)	20:15			20:45	21:01
26	07:42		10:50 (WTG06)	07:06	10:57 (WTG06)	06:22		11:21 (WTG06)	06:33			06:02	05:57
	17:36	276	15:26 (WTG06)	18:13	15:21 (WTG06)	18:44	213	14:54 (WTG06)	20:16			20:45	21:01
27	07:41		10:51 (WTG06)	07:05	10:58 (WTG06)	06:20		11:26 (WTG06)	06:32			06:01	05:57
	17:37	276	15:27 (WTG06)	18:15	15:21 (WTG06)	18:45	190	14:53 (WTG06)	20:17			20:46	21:01
28	07:41		10:51 (WTG06)	07:03	10:58 (WTG06)	06:18		12:53 (WTG06)	06:31			06:00	05:58
	17:38	276	15:27 (WTG06)	18:16	15:20 (WTG06)	18:46	119	14:52 (WTG06)	20:18			20:47	21:01
29	07:40		10:51 (WTG06)		07:17			14:04 (WTG06)	06:29			06:00	05:58
	17:40	276	15:27 (WTG06)		19:47	106	15:50 (WTG06)	20:19				20:48	21:01
30	07:39		10:51 (WTG06)		07:15			14:11 (WTG06)	06:28			05:59	05:59
	17:41	276	15:27 (WTG06)		19:48	97	15:48 (WTG06)	20:20				20:49	21:01
31	07:38		10:52 (WTG06)		07:13			14:19 (WTG06)				05:59	
	17:42	275	15:27 (WTG06)		19:49	88	15:47 (WTG06)					20:49	
Potential sun hours	299			298		370		398		447		451	
Total, worst case	8560			7577		6927		421					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_2 - Torre e cortine murarie
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July	August	September	October	November	December			
1	05:59 21:01	06:22 20:43	06:53 20:00	07:22 19:10	11:42 (WTG06) 15:50 (WTG06)	06:55 17:24	10:23 (WTG06) 14:57 (WTG06)	07:30 17:00	10:28 (WTG06) 15:04 (WTG06)
2	05:59 21:01	06:23 20:41	06:54 19:58	07:23 19:09	11:41 (WTG06) 15:50 (WTG06)	06:57 17:23	10:23 (WTG06) 14:57 (WTG06)	07:31 17:00	10:28 (WTG06) 15:04 (WTG06)
3	06:00 21:01	06:24 20:40	06:55 19:57	07:24 19:07	11:40 (WTG06) 15:51 (WTG06)	06:58 17:22	10:23 (WTG06) 14:57 (WTG06)	07:32 17:00	10:28 (WTG06) 15:05 (WTG06)
4	06:00 21:01	06:25 20:39	06:55 19:55	15:00 (WTG06) 15:22 (WTG06)	07:25 19:05	06:59 17:21	10:22 (WTG06) 14:57 (WTG06)	07:33 17:00	10:29 (WTG06) 15:05 (WTG06)
5	06:01 21:00	06:26 20:38	06:56 19:54	14:53 (WTG06) 15:26 (WTG06)	07:26 19:04	11:38 (WTG06) 15:51 (WTG06)	10:23 (WTG06) 14:58 (WTG06)	07:34 17:00	10:29 (WTG06) 15:05 (WTG06)
6	06:02 21:00	06:27 20:37	06:57 19:52	14:47 (WTG06) 15:29 (WTG06)	07:27 19:02	11:37 (WTG06) 15:51 (WTG06)	10:23 (WTG06) 14:58 (WTG06)	07:35 16:59	10:30 (WTG06) 15:06 (WTG06)
7	06:02 21:00	06:28 20:36	06:58 19:50	14:42 (WTG06) 15:31 (WTG06)	07:28 19:00	11:36 (WTG06) 15:52 (WTG06)	10:22 (WTG06) 14:58 (WTG06)	07:36 16:59	10:30 (WTG06) 15:06 (WTG06)
8	06:03 21:00	06:29 20:35	06:59 19:49	14:36 (WTG06) 15:33 (WTG06)	07:29 18:59	11:35 (WTG06) 15:52 (WTG06)	10:22 (WTG06) 14:58 (WTG06)	07:36 16:59	10:31 (WTG06) 15:07 (WTG06)
9	06:03 20:59	06:30 20:33	07:00 19:47	14:30 (WTG06) 15:35 (WTG06)	07:30 18:57	11:34 (WTG06) 15:52 (WTG06)	10:23 (WTG06) 14:58 (WTG06)	07:37 16:59	10:31 (WTG06) 15:07 (WTG06)
10	06:04 20:59	06:31 20:32	07:01 19:45	14:25 (WTG06) 15:36 (WTG06)	07:31 18:56	11:33 (WTG06) 15:52 (WTG06)	10:23 (WTG06) 14:58 (WTG06)	07:38 16:59	10:32 (WTG06) 15:08 (WTG06)
11	06:05 20:58	06:32 20:31	07:02 19:44	14:18 (WTG06) 15:36 (WTG06)	07:32 18:54	11:32 (WTG06) 15:52 (WTG06)	10:22 (WTG06) 14:58 (WTG06)	07:39 16:59	10:33 (WTG06) 15:08 (WTG06)
12	06:06 20:58	06:33 20:29	07:03 19:42	14:11 (WTG06) 15:38 (WTG06)	07:33 18:52	11:31 (WTG06) 15:53 (WTG06)	10:23 (WTG06) 14:59 (WTG06)	07:40 17:00	10:32 (WTG06) 15:08 (WTG06)
13	06:06 20:58	06:34 20:28	07:04 19:40	14:04 (WTG06) 15:39 (WTG06)	07:34 18:51	11:31 (WTG06) 15:53 (WTG06)	10:23 (WTG06) 14:59 (WTG06)	07:41 17:00	10:33 (WTG06) 15:09 (WTG06)
14	06:07 20:57	06:35 20:27	07:05 19:39	13:55 (WTG06) 15:40 (WTG06)	07:35 18:49	11:31 (WTG06) 15:54 (WTG06)	10:23 (WTG06) 14:59 (WTG06)	07:41 17:00	10:34 (WTG06) 15:09 (WTG06)
15	06:08 20:56	06:36 20:25	07:06 19:37	13:45 (WTG06) 15:41 (WTG06)	07:36 18:48	11:30 (WTG06) 15:54 (WTG06)	10:23 (WTG06) 14:59 (WTG06)	07:42 17:00	10:34 (WTG06) 15:10 (WTG06)
16	06:09 20:56	06:37 20:24	07:07 19:35	12:17 (WTG06) 15:42 (WTG06)	07:37 18:46	11:29 (WTG06) 15:54 (WTG06)	10:24 (WTG06) 15:00 (WTG06)	07:43 17:00	10:34 (WTG06) 15:10 (WTG06)
17	06:09 20:55	06:38 20:23	07:08 19:34	12:10 (WTG06) 15:42 (WTG06)	07:39 18:45	11:29 (WTG06) 15:54 (WTG06)	10:24 (WTG06) 15:00 (WTG06)	07:44 17:01	10:35 (WTG06) 15:11 (WTG06)
18	06:10 20:55	06:39 20:21	07:09 19:32	12:06 (WTG06) 15:43 (WTG06)	07:40 18:43	11:28 (WTG06) 15:54 (WTG06)	10:24 (WTG06) 15:00 (WTG06)	07:44 17:01	10:35 (WTG06) 15:10 (WTG06)
19	06:11 20:54	06:40 20:20	07:10 19:30	12:03 (WTG06) 15:44 (WTG06)	07:41 18:42	11:27 (WTG06) 15:54 (WTG06)	10:24 (WTG06) 15:00 (WTG06)	07:45 17:01	10:36 (WTG06) 15:11 (WTG06)
20	06:12 20:53	06:41 20:18	07:11 19:29	12:00 (WTG06) 15:45 (WTG06)	07:42 18:40	11:27 (WTG06) 15:54 (WTG06)	10:24 (WTG06) 15:00 (WTG06)	07:45 17:02	10:37 (WTG06) 15:12 (WTG06)
21	06:13 20:52	06:42 20:17	07:12 19:27	11:58 (WTG06) 15:45 (WTG06)	07:43 18:39	11:26 (WTG06) 15:54 (WTG06)	10:25 (WTG06) 15:01 (WTG06)	07:46 17:02	10:37 (WTG06) 15:12 (WTG06)
22	06:13 20:52	06:43 20:15	07:13 19:25	11:56 (WTG06) 15:46 (WTG06)	07:44 18:37	11:26 (WTG06) 15:55 (WTG06)	10:25 (WTG06) 15:01 (WTG06)	07:47 17:03	10:38 (WTG06) 15:13 (WTG06)
23	06:14 20:51	06:44 20:14	07:14 19:24	11:54 (WTG06) 15:46 (WTG06)	07:45 18:36	11:26 (WTG06) 15:55 (WTG06)	10:25 (WTG06) 15:02 (WTG06)	07:47 17:03	10:38 (WTG06) 15:13 (WTG06)
24	06:15 20:50	06:45 20:12	07:15 19:22	11:52 (WTG06) 15:47 (WTG06)	07:46 18:35	11:25 (WTG06) 15:55 (WTG06)	10:25 (WTG06) 15:02 (WTG06)	07:48 17:04	10:38 (WTG06) 15:13 (WTG06)
25	06:16 20:49	06:46 20:11	07:16 19:20	11:50 (WTG06) 15:48 (WTG06)	06:47 17:33	10:25 (WTG06) 14:55 (WTG06)	10:25 (WTG06) 15:02 (WTG06)	07:48 17:04	10:39 (WTG06) 15:14 (WTG06)
26	06:17 20:48	06:47 20:09	07:17 19:19	11:49 (WTG06) 15:48 (WTG06)	06:49 17:32	10:24 (WTG06) 14:55 (WTG06)	10:26 (WTG06) 15:03 (WTG06)	07:48 17:05	10:39 (WTG06) 15:15 (WTG06)
27	06:18 20:47	06:48 20:08	07:18 19:17	11:47 (WTG06) 15:48 (WTG06)	06:50 17:31	10:25 (WTG06) 14:56 (WTG06)	10:27 (WTG06) 15:03 (WTG06)	07:49 17:06	10:39 (WTG06) 15:15 (WTG06)
28	06:19 20:47	06:49 20:06	07:19 19:15	11:46 (WTG06) 15:49 (WTG06)	06:51 17:29	10:24 (WTG06) 14:56 (WTG06)	10:27 (WTG06) 15:03 (WTG06)	07:49 17:06	10:40 (WTG06) 15:16 (WTG06)
29	06:20 20:46	06:50 20:05	07:20 19:14	11:45 (WTG06) 15:49 (WTG06)	06:52 17:28	10:24 (WTG06) 14:56 (WTG06)	10:27 (WTG06) 15:04 (WTG06)	07:49 17:07	10:41 (WTG06) 15:16 (WTG06)
30	06:21 20:45	06:51 20:03	07:21 19:12	11:44 (WTG06) 15:50 (WTG06)	06:53 17:27	10:23 (WTG06) 14:56 (WTG06)	10:27 (WTG06) 15:04 (WTG06)	07:50 17:08	10:41 (WTG06) 15:16 (WTG06)
31	06:22 20:44	06:52 20:02			06:54 17:25	10:23 (WTG06) 14:56 (WTG06)		07:50 17:09	10:41 (WTG06) 15:17 (WTG06)
Potential sun hours	457	427	375	346	299	289			
Total, worst case			4243	8156	8275	8545			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_20 - Domus de janas Pubusattile III
 Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:58 20:50	
2	07:50 17:11	07:36 17:45	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	
3	07:50 17:11	07:35 17:46	06:59 18:19	07:09 19:52	06:24 20:23	05:58 20:52	
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24	05:57 20:52	
5	07:50 17:13	07:33 17:48	06:56 18:21	17:55 (WTG10) 18:00 (WTG10)	07:05 19:54	06:22 20:25	05:57 20:53
6	07:50 17:14	07:32 17:50	06:54 18:23	17:50 (WTG10) 18:02 (WTG10)	07:04 19:55	06:21 20:26	05:57 20:54
7	07:50 17:15	07:31 17:51	17:26 (WTG11) 06:53 18:24	17:46 (WTG10) 18:02 (WTG10)	07:02 19:56	06:19 20:27	05:56 20:54
8	07:50 17:16	07:30 17:52	17:24 (WTG11) 06:51 18:25	17:45 (WTG10) 18:04 (WTG10)	07:01 19:57	06:18 20:28	05:56 20:55
9	07:50 17:17	07:29 17:53	17:23 (WTG11) 06:49 18:26	17:43 (WTG10) 18:05 (WTG10)	06:59 19:58	06:17 20:30	05:56 20:56
10	07:50 17:18	07:28 17:54	17:22 (WTG11) 06:48 18:27	17:41 (WTG10) 18:05 (WTG10)	06:57 20:00	06:16 20:31	05:56 20:56
11	07:50 17:19	07:26 17:56	17:22 (WTG11) 06:46 18:28	17:40 (WTG10) 18:07 (WTG10)	06:56 20:01	06:15 20:32	05:56 20:57
12	07:49 17:20	07:25 17:57	17:22 (WTG11) 06:45 18:29	17:39 (WTG10) 18:08 (WTG10)	06:54 20:02	06:14 20:33	05:55 20:57
13	07:49 17:21	07:24 17:58	17:21 (WTG11) 06:43 18:30	17:38 (WTG10) 18:10 (WTG10)	06:53 20:03	06:13 20:33	05:55 20:58
14	07:49 17:22	07:23 17:59	17:21 (WTG11) 06:41 18:31	17:37 (WTG10) 18:10 (WTG10)	06:51 20:04	06:12 20:34	05:55 20:58
15	07:48 17:23	07:21 18:01	17:21 (WTG11) 06:40 18:32	17:36 (WTG10) 18:11 (WTG10)	06:50 20:05	06:11 20:35	05:55 20:58
16	07:48 17:24	07:20 18:02	17:21 (WTG11) 06:38 18:33	17:36 (WTG10) 18:13 (WTG10)	06:48 20:06	06:10 20:36	05:55 20:59
17	07:48 17:26	07:19 18:03	17:21 (WTG11) 06:37 18:34	17:36 (WTG10) 18:14 (WTG10)	06:46 20:07	06:09 20:37	05:55 20:59
18	07:47 17:27	07:18 18:04	17:22 (WTG11) 06:35 18:36	17:35 (WTG10) 18:13 (WTG10)	06:45 20:08	06:08 20:38	05:55 21:00
19	07:47 17:28	07:16 18:05	17:22 (WTG11) 06:33 18:37	17:36 (WTG10) 18:13 (WTG10)	06:43 20:09	06:07 20:39	05:55 21:00
20	07:46 17:29	07:15 18:06	17:24 (WTG11) 06:32 18:38	17:35 (WTG10) 18:12 (WTG10)	06:42 20:10	06:06 20:40	05:56 21:00
21	07:46 17:30	07:13 18:08	17:25 (WTG11) 06:30 18:39	17:35 (WTG10) 18:11 (WTG10)	06:41 20:11	06:05 20:41	05:56 21:00
22	07:45 17:31	07:12 18:09	17:27 (WTG11) 06:28 18:40	17:36 (WTG10) 18:11 (WTG10)	06:39 20:12	06:05 20:42	05:56 21:01
23	07:44 17:33	07:11 18:10	17:32 (WTG11) 06:27 18:41	17:37 (WTG10) 18:10 (WTG10)	06:38 20:13	06:04 20:43	05:56 21:01
24	07:44 17:34	07:09 18:11	17:34 (WTG11) 06:25 18:42	17:37 (WTG10) 18:08 (WTG10)	06:36 20:14	06:03 20:44	05:56 21:01
25	07:43 17:35	07:08 18:12	06:23 18:43	17:38 (WTG10) 18:07 (WTG10)	06:35 20:15	06:03 20:45	05:57 21:01
26	07:42 17:36	07:06 18:13	06:22 18:44	17:39 (WTG10) 18:05 (WTG10)	06:33 20:16	06:02 20:45	05:57 21:01
27	07:41 17:37	07:05 18:15	06:20 18:45	17:41 (WTG10) 18:02 (WTG10)	06:32 20:17	06:01 20:46	05:57 21:01
28	07:41 17:39	07:03 18:16	06:18 18:46	17:44 (WTG10) 18:00 (WTG10)	06:31 20:18	06:01 20:47	05:58 21:01
29	07:40 17:40		07:17 19:47	18:47 (WTG10) 8 18:55 (WTG10)	06:29 20:19	06:00 20:48	05:58 21:01
30	07:39 17:41		07:15 19:48		06:28 20:20	05:59 20:49	05:59 21:01
31	07:38 17:42		07:13 19:49			05:59 20:49	
Potential sun hours	299	298	370	398	447	451	
Total, worst case		223	676				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_20 - Domus de janas Pubusattile III

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	July	August	September		October		November		December	
1	05:59 21:01	06:23 20:43	06:53 20:00		07:22 19:10	30	18:18 (WTG10) 18:48 (WTG10)	06:55 17:24	16:52 (WTG11) 17:01 (WTG11)	07:30 17:01
2	06:00 21:01	06:24 20:41	06:54 19:59		07:23 19:09	28	18:18 (WTG10) 18:46 (WTG10)	06:57 17:23	16:53 (WTG11) 17:00 (WTG11)	07:31 17:00
3	06:00 21:01	06:24 20:40	06:55 19:57		07:24 19:07	26	18:19 (WTG10) 18:45 (WTG10)	06:58 17:22	16:54 (WTG11) 16:58 (WTG11)	07:32 17:00
4	06:01 21:01	06:25 20:39	06:56 19:55		07:25 19:05	23	18:20 (WTG10) 18:43 (WTG10)	06:59 17:21	16:55 (WTG11) 16:57 (WTG11)	07:33 17:00
5	06:01 21:00	06:26 20:38	06:57 19:54		07:26 19:04	20	18:21 (WTG10) 18:41 (WTG10)	07:00 17:20		07:34 17:00
6	06:02 21:00	06:27 20:37	06:58 19:52		07:27 19:02	18	18:22 (WTG10) 18:40 (WTG10)	07:01 17:19		07:35 17:00
7	06:02 21:00	06:28 20:36	06:58 19:50		07:28 19:00	14	18:24 (WTG10) 18:38 (WTG10)	07:02 17:17		07:36 17:00
8	06:03 21:00	06:29 20:35	06:59 19:49		07:29 18:59	9	18:27 (WTG10) 18:36 (WTG10)	07:04 17:16		07:37 16:59
9	06:04 20:59	06:30 20:33	07:00 19:47		07:30 18:57			07:05 17:15		07:37 16:59
10	06:04 20:59	06:31 20:32	07:01 19:45		07:31 18:56			07:06 17:14		07:38 17:00
11	06:05 20:58	06:32 20:31	07:02 19:44		07:32 18:54			07:07 17:13		07:39 17:00
12	06:06 20:58	06:33 20:29	07:03 19:42		07:33 18:53			07:08 17:12		07:40 17:00
13	06:06 20:58	06:34 20:28	07:04 19:40		07:34 18:51			07:09 17:11		07:41 17:00
14	06:07 20:57	06:35 20:27	07:05 19:39	5	18:39 (WTG10) 18:44 (WTG10)			07:11 17:11		07:41 17:00
15	06:08 20:56	06:36 20:25	07:06 19:37	16	18:33 (WTG10) 18:49 (WTG10)			07:12 17:10		07:42 17:00
16	06:09 20:56	06:37 20:24	07:07 19:35	21	18:30 (WTG10) 18:51 (WTG10)			07:13 17:09		07:43 17:01
17	06:09 20:55	06:38 20:23	07:08 19:34	25	18:28 (WTG10) 18:53 (WTG10)			07:14 17:08		07:44 17:01
18	06:10 20:55	06:39 20:21	07:09 19:32	28	18:26 (WTG10) 18:54 (WTG10)			07:15 17:07		07:44 17:01
19	06:11 20:54	06:40 20:20	07:10 19:30	31	18:24 (WTG10) 18:55 (WTG10)	7	18:00 (WTG11) 18:07 (WTG11)	07:16 17:07		07:45 17:02
20	06:12 20:53	06:41 20:18	07:11 19:29	33	18:23 (WTG10) 18:56 (WTG10)	13	17:57 (WTG11) 18:10 (WTG11)	07:18 17:06		07:45 17:02
21	06:13 20:53	06:42 20:17	07:12 19:27	34	18:22 (WTG10) 18:56 (WTG10)	18	17:55 (WTG11) 18:13 (WTG11)	07:19 17:05		07:46 17:02
22	06:14 20:52	06:43 20:16	07:13 19:25	36	18:21 (WTG10) 18:57 (WTG10)	19	17:54 (WTG11) 18:13 (WTG11)	07:20 17:05		07:47 17:03
23	06:14 20:51	06:44 20:14	07:14 19:24	37	18:20 (WTG10) 18:57 (WTG10)	20	17:53 (WTG11) 18:13 (WTG11)	07:21 17:04		07:47 17:03
24	06:15 20:50	06:45 20:13	07:15 19:22	38	18:19 (WTG10) 18:57 (WTG10)	20	17:52 (WTG11) 18:12 (WTG11)	07:22 17:03		07:48 17:04
25	06:16 20:49	06:46 20:11	07:16 19:20	38	18:19 (WTG10) 18:57 (WTG10)	19	16:51 (WTG11) 17:10 (WTG11)	07:23 17:03		07:48 17:05
26	06:17 20:48	06:47 20:09	07:17 19:19	38	18:18 (WTG10) 18:56 (WTG10)	18	16:50 (WTG11) 17:08 (WTG11)	07:24 17:02		07:48 17:05
27	06:18 20:47	06:48 20:08	07:18 19:17	37	18:18 (WTG10) 18:55 (WTG10)	17	16:51 (WTG11) 17:08 (WTG11)	07:25 17:02		07:49 17:06
28	06:19 20:47	06:49 20:06	07:19 19:15	35	18:18 (WTG10) 18:53 (WTG10)	16	16:50 (WTG11) 17:06 (WTG11)	07:27 17:02		07:49 17:06
29	06:20 20:46	06:50 20:05	07:20 19:14	33	18:18 (WTG10) 18:51 (WTG10)	15	16:50 (WTG11) 17:05 (WTG11)	07:28 17:01		07:49 17:07
30	06:21 20:45	06:51 20:03	07:21 19:12	32	18:18 (WTG10) 18:50 (WTG10)	13	16:50 (WTG11) 17:03 (WTG11)	07:29 17:01		07:50 17:08
31	06:22 20:44	06:52 20:02			06:54 17:26	11	16:52 (WTG11) 17:03 (WTG11)			07:50 17:09
Potential sun hours	457	427	375		346		299			289
Total, worst case			517		374		22			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_21 - Domus de janas Pubusattile IV
 Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June		
1	07:50	07:37	07:02	07:12	06:27	05:58		
	17:10	17:43	18:17	19:50	20:21	20:50		
2	07:50	07:36	07:00	07:10	06:25	05:58		
	17:11	17:45	18:18	19:51	20:22	20:51		
3	07:50	07:35	06:59	07:09	06:24	05:58		
	17:11	17:46	18:19	19:52	20:23	20:52		
4	07:50	07:34	06:57	17:55 (WTG10)	07:07	06:23	05:57	
	17:12	17:47	18:20	17:59 (WTG10)	19:53	20:24	20:52	
5	07:50	07:33	06:56	17:49 (WTG10)	07:05	06:22	05:57	
	17:13	17:48	18:21	18:00 (WTG10)	19:54	20:25	20:53	
6	07:50	07:32	06:54	17:47 (WTG10)	07:04	06:21	05:57	
	17:14	17:50	18:23	18:02 (WTG10)	19:55	20:26	20:54	
7	07:50	07:31	17:25 (WTG11)	06:53	17:44 (WTG10)	07:02	06:19	05:56
	17:15	17:51	3 17:28 (WTG11)	18:24	18:02 (WTG10)	19:56	20:27	20:54
8	07:50	07:30	17:23 (WTG11)	06:51	17:43 (WTG10)	07:01	06:18	05:56
	17:16	17:52	6 17:29 (WTG11)	18:25	18:04 (WTG10)	19:57	20:28	20:55
9	07:50	07:29	17:22 (WTG11)	06:49	17:41 (WTG10)	06:59	06:17	05:56
	17:17	17:53	8 17:30 (WTG11)	18:26	18:05 (WTG10)	19:58	20:30	20:56
10	07:50	07:28	17:22 (WTG11)	06:48	17:39 (WTG10)	06:57	06:16	05:56
	17:18	17:54	10 17:32 (WTG11)	18:27	18:05 (WTG10)	20:00	20:31	20:56
11	07:50	07:26	17:22 (WTG11)	06:46	17:39 (WTG10)	06:56	06:15	05:56
	17:19	17:56	11 17:33 (WTG11)	18:28	18:07 (WTG10)	20:01	20:32	20:57
12	07:49	07:25	17:22 (WTG11)	06:45	17:38 (WTG10)	06:54	06:14	05:55
	17:20	17:57	13 17:35 (WTG11)	18:29	18:08 (WTG10)	20:02	20:33	20:57
13	07:49	07:24	17:21 (WTG11)	06:43	17:38 (WTG10)	06:53	06:13	05:55
	17:21	17:58	14 17:35 (WTG11)	18:30	18:10 (WTG10)	20:03	20:33	20:58
14	07:49	07:23	17:21 (WTG11)	06:41	17:37 (WTG10)	06:51	06:12	05:55
	17:22	17:59	16 17:37 (WTG11)	18:31	18:10 (WTG10)	20:04	20:34	20:58
15	07:48	07:21	17:21 (WTG11)	06:40	17:36 (WTG10)	06:50	06:11	05:55
	17:23	18:01	17 17:38 (WTG11)	18:32	18:11 (WTG10)	20:05	20:35	20:58
16	07:48	07:20	17:21 (WTG11)	06:38	17:36 (WTG10)	06:48	06:10	05:55
	17:24	18:02	18 17:39 (WTG11)	18:33	18:13 (WTG10)	20:06	20:36	20:59
17	07:48	07:19	17:22 (WTG11)	06:37	17:36 (WTG10)	06:46	06:09	05:55
	17:26	18:03	19 17:41 (WTG11)	18:34	18:13 (WTG10)	20:07	20:37	20:59
18	07:47	07:18	17:23 (WTG11)	06:35	17:35 (WTG10)	06:45	06:08	05:55
	17:27	18:04	19 17:42 (WTG11)	18:36	18:12 (WTG10)	20:08	20:38	21:00
19	07:47	07:16	17:23 (WTG11)	06:33	17:36 (WTG10)	06:43	06:07	05:55
	17:28	18:05	20 17:43 (WTG11)	18:37	18:12 (WTG10)	20:09	20:39	21:00
20	07:46	07:15	17:24 (WTG11)	06:32	17:36 (WTG10)	06:42	06:06	05:56
	17:29	18:06	18 17:42 (WTG11)	18:38	18:11 (WTG10)	20:10	20:40	21:00
21	07:46	07:13	17:26 (WTG11)	06:30	17:36 (WTG10)	06:41	06:05	05:56
	17:30	18:08	14 17:40 (WTG11)	18:39	18:10 (WTG10)	20:11	20:41	21:00
22	07:45	07:12	17:29 (WTG11)	06:28	17:37 (WTG10)	06:39	06:05	05:56
	17:31	18:09	8 17:37 (WTG11)	18:40	18:09 (WTG10)	20:12	20:42	21:01
23	07:44	07:11		06:27	17:38 (WTG10)	06:38	06:04	05:56
	17:33	18:10		18:41	18:08 (WTG10)	20:13	20:43	21:01
24	07:44	07:09		06:25	17:38 (WTG10)	06:36	06:03	05:56
	17:34	18:11		18:42	18:06 (WTG10)	20:14	20:44	21:01
25	07:43	07:08		06:23	17:40 (WTG10)	06:35	06:03	05:57
	17:35	18:12		18:43	18:04 (WTG10)	20:15	20:45	21:01
26	07:42	07:06		06:22	17:42 (WTG10)	06:33	06:02	05:57
	17:36	18:13		18:44	18:02 (WTG10)	20:16	20:45	21:01
27	07:41	07:05		06:20	17:44 (WTG10)	06:32	06:01	05:57
	17:37	18:15		18:45	17:58 (WTG10)	20:17	20:46	21:01
28	07:41	07:03		06:18		06:31	06:01	05:58
	17:39	18:16		18:46		20:18	20:47	21:01
29	07:40			07:17		06:29	06:00	05:58
	17:40			19:47		20:19	20:48	21:01
30	07:39			07:15		06:28	05:59	05:59
	17:41			19:48		20:20	20:49	21:01
31	07:38			07:13			05:59	
	17:42			19:49			20:49	
Potential sun hours	299	298		398	447	451		
Total, worst case		214		641				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali Shadow receptor: RBP_21 - Domus de janas Pubusattile IV
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July	August	September	October	November	December	
1	05:59 21:01	06:23 20:43	06:53 20:00	07:22 19:10	18:17 (WTG10) 18:48 (WTG10)	06:55 17:24 16:52 (WTG11)	07:30 17:01
2	06:00 21:01	06:24 20:41	06:54 19:59	07:23 19:09	18:17 (WTG10) 18:46 (WTG10)	06:57 17:23 16:52 (WTG11)	07:31 17:00
3	06:00 21:01	06:24 20:40	06:55 19:57	07:24 19:07	18:18 (WTG10) 18:45 (WTG10)	06:58 17:22 16:53 (WTG11)	07:32 17:00
4	06:01 21:01	06:25 20:39	06:56 19:55	07:25 19:05	18:18 (WTG10) 18:43 (WTG10)	06:59 17:21 16:54 (WTG11)	07:33 17:00
5	06:01 21:00	06:26 20:38	06:57 19:54	07:26 19:04	18:19 (WTG10) 18:41 (WTG10)	07:00 17:20 16:54 (WTG11)	07:34 17:00
6	06:02 21:00	06:27 20:37	06:58 19:52	07:27 19:02	18:20 (WTG10) 18:40 (WTG10)	07:01 17:19 16:54 (WTG11)	07:35 17:00
7	06:02 21:00	06:28 20:36	06:58 19:50	07:28 19:00	18:21 (WTG10) 18:38 (WTG10)	07:02 17:17 16:54 (WTG11)	07:36 17:00
8	06:03 21:00	06:29 20:35	06:59 19:49	07:29 18:59	18:23 (WTG10) 18:36 (WTG10)	07:04 17:16 16:54 (WTG11)	07:37 16:59
9	06:04 20:59	06:30 20:33	07:00 19:47	07:30 18:57	18:26 (WTG10) 18:34 (WTG10)	07:05 17:15 16:54 (WTG11)	07:37 16:59
10	06:04 20:59	06:31 20:32	07:01 19:45	07:31 18:56		07:06 17:14 16:54 (WTG11)	07:38 17:00
11	06:05 20:58	06:32 20:31	07:02 19:44	07:32 18:54		07:07 17:13 16:54 (WTG11)	07:39 17:00
12	06:06 20:58	06:33 20:29	07:03 19:42	07:33 18:53		07:08 17:12 16:54 (WTG11)	07:40 17:00
13	06:06 20:58	06:34 20:28	07:04 19:40	07:34 18:51		07:09 17:11 16:54 (WTG11)	07:41 17:00
14	06:07 20:57	06:35 20:27	07:05 19:39	07:35 18:49		07:11 17:11 16:54 (WTG11)	07:41 17:00
15	06:08 20:56	06:36 20:25	07:06 19:37	07:36 18:48		07:12 17:10 16:54 (WTG11)	07:42 17:00
16	06:09 20:56	06:37 20:24	07:07 19:35	07:38 18:46 (WTG10)	18:34 (WTG10)	07:13 17:09 16:54 (WTG11)	07:43 17:01
17	06:09 20:55	06:38 20:23	07:08 19:34	07:39 18:45 (WTG10)	18:31 (WTG10)	07:14 17:08 16:54 (WTG11)	07:44 17:01
18	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43 (WTG10)	18:28 (WTG10)	07:15 17:07 16:54 (WTG11)	07:44 17:01
19	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42 (WTG10)	18:26 (WTG10)	07:16 17:07 16:54 (WTG11)	07:45 17:02
20	06:12 20:53	06:41 20:18	07:11 19:29	07:42 18:40 (WTG10)	18:24 (WTG10)	07:18 17:06 16:54 (WTG11)	07:45 17:02
21	06:13 20:53	06:42 20:17	07:12 19:27	07:43 18:39 (WTG10)	18:23 (WTG10)	07:19 17:05 16:54 (WTG11)	07:46 17:02
22	06:14 20:52	06:43 20:16	07:13 19:25	07:44 18:38 (WTG10)	18:22 (WTG10)	07:20 17:05 16:54 (WTG11)	07:47 17:03
23	06:14 20:51	06:44 20:14	07:14 19:24	07:45 18:36 (WTG10)	18:21 (WTG10)	07:21 17:04 16:54 (WTG11)	07:47 17:03
24	06:15 20:50	06:45 20:13	07:15 19:22	07:46 18:35 (WTG10)	18:20 (WTG10)	07:22 17:03 16:54 (WTG11)	07:48 17:04
25	06:16 20:49	06:46 20:11	07:16 19:20	07:47 18:33 (WTG10)	18:19 (WTG10)	07:23 17:03 16:54 (WTG11)	07:48 17:05
26	06:17 20:48	06:47 20:09	07:17 19:19	07:48 18:32 (WTG10)	18:18 (WTG10)	07:24 17:02 16:54 (WTG11)	07:48 17:05
27	06:18 20:47	06:48 20:08	07:18 19:17	07:49 18:31 (WTG10)	18:18 (WTG10)	07:25 17:02 16:54 (WTG11)	07:49 17:06
28	06:19 20:47	06:49 20:06	07:19 19:15	07:50 18:30 (WTG10)	18:17 (WTG10)	07:27 17:02 16:54 (WTG11)	07:49 17:06
29	06:20 20:46	06:50 20:05	07:20 19:14	07:51 18:29 (WTG10)	18:17 (WTG10)	07:28 17:01 16:54 (WTG11)	07:49 17:07
30	06:21 20:45	06:51 20:03	07:21 19:12	07:52 18:28 (WTG10)	18:17 (WTG10)	07:29 17:01 16:54 (WTG11)	07:50 17:08
31	06:22 20:44	06:52 20:02		07:53 18:27 (WTG10)	18:17 (WTG10)	07:30 17:00 16:54 (WTG11)	07:50 17:09
Potential sun hours	457	427	375	346	385	299	289
Total, worst case			458	346	385	299	289

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali Shadow receptor: RBP_22 - Domus de janas Pubusattile V
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:58 20:50	05:59 21:01	06:23 20:43	06:53 20:00	07:22 19:10	06:55 17:24	07:30 17:01
2	07:50 17:11	07:36 17:45	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	06:00 21:01	06:24 20:41	06:54 19:59	07:23 19:09	06:57 17:23	07:31 17:00
3	07:50 17:11	07:35 17:46	06:59 18:19	07:09 19:52	06:24 20:23	05:58 20:52	06:00 21:01	06:24 20:40	06:55 19:57	07:24 19:07	06:58 17:22	07:32 17:00
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24	05:57 20:52	06:01 21:01	06:25 20:39	06:56 19:55	07:25 19:05	06:59 17:21	07:33 17:00
5	07:50 17:13	07:33 17:48	06:56 18:21	07:05 19:54	06:22 20:25	05:57 20:53	06:01 21:00	06:26 20:38	06:57 19:54	07:26 19:04	07:00 17:20	07:34 17:00
6	07:50 17:14	07:32 17:50	06:54 18:22	07:04 19:55	06:21 20:26	05:57 20:54	06:02 21:00	06:27 20:37	06:58 19:52	07:27 19:02	07:01 17:19	07:35 17:00
7	07:50 17:15	07:31 17:51	06:53 18:24	07:02 19:56	06:19 20:27	05:56 20:54	06:02 21:00	06:28 20:36	06:58 19:50	07:28 19:00	07:02 17:17	07:36 17:00
8	07:50 17:16	07:30 17:52	06:51 18:25	07:01 19:57	06:18 20:28	05:56 20:55	06:03 21:00	06:29 20:35	06:59 19:49	07:29 18:59	07:04 17:16	07:37 16:59
9	07:50 17:17	07:29 17:53	06:49 18:26	06:59 19:58	06:17 20:30	05:56 20:56	06:04 20:59	06:30 20:33	07:00 19:47	07:30 18:57	07:05 17:15	07:37 16:59
10	07:50 17:18	07:28 17:54	06:48 18:27	06:57 20:00	06:16 20:31	05:56 20:56	06:04 20:59	06:31 20:32	07:01 19:45	07:31 18:56	07:06 17:14	07:38 17:00
11	07:50 17:19	07:26 17:56	06:46 18:28	06:56 20:01	06:15 20:32	05:56 20:57	06:05 20:58	06:32 20:31	07:02 19:44	07:32 18:54	07:07 17:13	07:39 17:00
12	07:49 17:20	07:25 17:57	06:45 18:29	06:54 20:02	06:14 20:33	05:55 20:57	06:06 20:58	06:33 20:29	07:03 19:42	07:33 18:53	07:08 17:12	07:40 17:00
13	07:49 17:21	07:24 17:58	06:43 18:30	06:53 20:03	06:13 20:33	05:55 20:58	06:06 20:58	06:34 20:28	07:04 19:40	07:34 18:51	07:09 17:11	07:41 17:00
14	07:49 17:22	07:23 17:59	06:41 18:31	06:51 20:04	06:12 20:34	05:55 20:58	06:07 20:57	06:35 20:27	07:05 19:39	07:35 18:49	07:11 17:11	07:41 17:00
15	07:48 17:23	07:21 18:01	06:40 18:32	06:50 20:05	06:11 20:35	05:55 20:58	06:08 20:56	06:36 20:25	07:06 19:37	07:36 18:48	07:12 17:10	07:42 17:00
16	07:48 17:24	07:20 18:02	06:38 18:33	06:48 20:06	06:10 20:36	05:55 20:59	06:09 20:56	06:37 20:24	07:07 19:35	07:38 18:46	07:13 17:09	07:43 17:01
17	07:48 17:26	07:19 18:03	06:37 18:34	06:46 20:07	06:09 20:37	05:55 20:59	06:09 20:55	06:38 20:23	07:08 19:34	07:39 18:45	07:14 17:08	07:44 17:01
18	07:47 17:27	07:18 18:04	06:35 18:36	06:45 20:08	06:08 20:38	05:55 21:00	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43	07:15 17:07	07:44 17:01
19	07:47 17:28	07:16 18:05	06:33 18:37	06:43 20:09	06:07 20:39	05:55 21:00	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	07:16 17:07	07:45 17:02
20	07:46 17:29	07:15 18:06	06:32 18:38	06:42 20:10	06:06 20:40	05:56 21:00	06:12 20:53	06:41 20:18	07:11 19:29	07:42 18:40	07:18 17:06	07:45 17:02
21	07:46 17:30	07:13 18:08	06:30 18:39	06:41 20:11	06:05 20:41	05:56 21:00	06:13 20:53	06:42 20:17	07:12 19:27	07:43 18:39	07:19 17:05	07:46 17:02
22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:05 20:42	05:56 21:01	06:14 20:52	06:43 20:16	07:13 19:25	07:44 18:38	07:20 17:05	07:47 17:03
23	07:44 17:33	07:11 18:10	06:27 18:41	06:38 20:13	06:04 20:43	05:56 21:01	06:14 20:51	06:44 20:14	07:14 19:24	07:45 18:36	07:21 17:04	07:47 17:03
24	07:44 17:34	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01	06:15 20:50	06:45 20:13	07:15 19:22	07:46 18:35	07:22 17:03	07:48 17:04
25	07:43 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:03 20:45	05:57 21:01	06:16 20:49	06:46 20:11	07:16 19:20	06:47 17:33	07:23 17:03	07:48 17:05
26	07:42 17:36	07:06 18:13	06:22 18:44	06:33 20:16	06:02 20:45	05:57 21:01	06:17 20:48	06:47 20:09	07:17 19:19	06:49 17:32	07:24 17:02	07:48 17:05
27	07:41 17:37	07:05 18:15	06:20 18:45	06:32 20:17	06:01 20:46	05:57 21:01	06:18 20:47	06:48 20:08	07:18 19:17	06:50 17:31	07:25 17:02	07:49 17:06
28	07:41 17:39	07:03 18:16	06:18 18:46	06:31 20:18	06:01 20:47	05:58 21:01	06:19 20:47	06:49 20:06	07:19 19:15	06:51 17:29	07:27 17:02	07:49 17:06
29	07:40 17:40		07:17 19:47	06:29 20:19	06:00 20:48	05:58 21:01	06:20 20:46	06:50 20:05	07:20 19:14	06:52 17:28	07:28 17:01	07:49 17:07
30	07:39 17:41		07:15 19:48	06:28 20:20	05:59 20:49	05:59 21:01	06:21 20:45	06:51 20:03	07:21 19:12	06:53 17:27	07:29 17:01	07:50 17:08
31	07:38 17:42		07:13 19:49		05:59 20:49		06:22 20:44	06:52 20:02		06:54 17:26		07:50 17:09
Potential sun hours	299	298	370	398	447	451	457	427	375	346	299	289
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_23 - Riparo sotto roccia Pubusattile 2
 Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February		March		April	May	June	
1	07:50 17:10	07:37 17:43		07:02 18:17		07:12 19:50	06:27 20:21	05:58 20:50	
2	07:50 17:11	07:36 17:45		07:00 18:18		07:10 19:51	06:25 20:22	05:58 20:51	
3	07:50 17:11	07:35 17:46		06:59 18:19		07:09 19:52	06:24 20:23	05:58 20:52	
4	07:50 17:12	07:34 17:47		06:57 18:20		07:07 19:53	06:23 20:24	05:57 20:52	
5	07:50 17:13	07:33 17:48		06:56 18:21		07:05 19:54	06:22 20:25	05:57 20:53	
6	07:50 17:14	07:32 17:50		06:54 18:22	3	17:56 (WTG10) 17:59 (WTG10)	07:04 19:55	06:21 20:26	05:57 20:54
7	07:50 17:15	07:31 17:51		06:53 18:24	13	17:49 (WTG10) 18:02 (WTG10)	07:02 19:56	06:19 20:27	05:56 20:54
8	07:50 17:16	07:30 17:52	3	17:26 (WTG11) 17:29 (WTG11)	17	17:47 (WTG10) 18:04 (WTG10)	07:01 19:57	06:18 20:28	05:56 20:55
9	07:50 17:17	07:29 17:53	5	17:25 (WTG11) 17:30 (WTG11)	21	17:44 (WTG10) 18:05 (WTG10)	06:59 19:58	06:17 20:30	05:56 20:56
10	07:50 17:18	07:28 17:54	8	17:24 (WTG11) 17:32 (WTG11)	23	17:42 (WTG10) 18:05 (WTG10)	06:57 20:00	06:16 20:31	05:56 20:56
11	07:50 17:19	07:26 17:56	10	17:23 (WTG11) 17:33 (WTG11)	26	17:41 (WTG10) 18:07 (WTG10)	06:56 20:01	06:15 20:32	05:56 20:57
12	07:49 17:20	07:25 17:57	12	17:23 (WTG11) 17:35 (WTG11)	29	17:39 (WTG10) 18:08 (WTG10)	06:54 20:02	06:14 20:33	05:55 20:57
13	07:49 17:21	07:24 17:58	13	17:22 (WTG11) 17:35 (WTG11)	31	17:39 (WTG10) 18:10 (WTG10)	06:53 20:03	06:13 20:33	05:55 20:58
14	07:49 17:22	07:23 17:59	16	17:21 (WTG11) 17:37 (WTG11)	32	17:38 (WTG10) 18:10 (WTG10)	06:51 20:04	06:12 20:34	05:55 20:58
15	07:48 17:23	07:21 18:01	16	17:22 (WTG11) 17:38 (WTG11)	34	17:37 (WTG10) 18:11 (WTG10)	06:50 20:05	06:11 20:35	05:55 20:58
16	07:48 17:24	07:20 18:02	18	17:21 (WTG11) 17:39 (WTG11)	36	17:37 (WTG10) 18:13 (WTG10)	06:48 20:06	06:10 20:36	05:55 20:59
17	07:48 17:26	07:19 18:03	20	17:21 (WTG11) 17:41 (WTG11)	37	17:36 (WTG10) 18:13 (WTG10)	06:46 20:07	06:09 20:37	05:55 20:59
18	07:47 17:27	07:18 18:04	20	17:22 (WTG11) 17:42 (WTG11)	37	17:35 (WTG10) 18:12 (WTG10)	06:45 20:08	06:08 20:38	05:55 21:00
19	07:47 17:28	07:16 18:05	21	17:22 (WTG11) 17:43 (WTG11)	37	17:36 (WTG10) 18:13 (WTG10)	06:43 20:09	06:07 20:39	05:55 21:00
20	07:46 17:29	07:15 18:06	21	17:23 (WTG11) 17:44 (WTG11)	36	17:36 (WTG10) 18:12 (WTG10)	06:42 20:10	06:06 20:40	05:56 21:00
21	07:46 17:30	07:13 18:08	19	17:24 (WTG11) 17:43 (WTG11)	36	17:35 (WTG10) 18:11 (WTG10)	06:41 20:11	06:05 20:41	05:56 21:00
22	07:45 17:31	07:12 18:09	16	17:25 (WTG11) 17:41 (WTG11)	35	17:36 (WTG10) 18:11 (WTG10)	06:39 20:12	06:05 20:42	05:56 21:01
23	07:44 17:33	07:11 18:10	11	17:28 (WTG11) 17:39 (WTG11)	33	17:36 (WTG10) 18:09 (WTG10)	06:38 20:13	06:04 20:43	05:56 21:01
24	07:44 17:34	07:09 18:11		06:25 18:42	31	17:37 (WTG10) 18:08 (WTG10)	06:36 20:14	06:03 20:44	05:56 21:01
25	07:43 17:35	07:08 18:12		06:23 18:43	29	17:38 (WTG10) 18:07 (WTG10)	06:35 20:15	06:03 20:45	05:57 21:01
26	07:42 17:36	07:06 18:13		06:22 18:44	26	17:39 (WTG10) 18:05 (WTG10)	06:33 20:16	06:02 20:45	05:57 21:01
27	07:41 17:37	07:05 18:15		06:20 18:45	23	17:40 (WTG10) 18:03 (WTG10)	06:32 20:17	06:01 20:46	05:57 21:01
28	07:41 17:39	07:03 18:16		06:18 18:46	18	17:43 (WTG10) 18:01 (WTG10)	06:31 20:18	06:01 20:47	05:58 21:01
29	07:40 17:40			07:17 19:47	12	18:45 (WTG10) 18:57 (WTG10)	06:29 20:19	06:00 20:48	05:58 21:01
30	07:39 17:41			07:15 19:48			06:28 20:20	05:59 20:49	05:59 21:01
31	07:38 17:42			07:13 19:49				05:59 20:49	
Potential sun hours	299	298		370		398	447	451	
Total, worst case		229		655					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_23 - Riparo sotto roccia Pubusattile 2
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July	August	September		October		November		December
1	05:59 21:01	06:23 20:43	06:53 20:00		07:22 19:10		06:55 17:24		07:30 17:01
2	06:00 21:01	06:24 20:41	06:54 19:59		07:23 19:09	29	06:57 17:23	7	07:31 17:00
3	06:00 21:01	06:24 20:40	06:55 19:57		07:24 19:07	27	06:58 17:22	5	07:32 17:00
4	06:01 21:01	06:25 20:39	06:56 19:55		07:25 19:05	25	06:59 17:21	1	07:33 17:00
5	06:01 21:00	06:26 20:38	06:57 19:54		07:26 19:04	22	07:00 17:20		07:34 17:00
6	06:02 21:00	06:27 20:37	06:58 19:52		07:27 19:02	19	07:01 17:19		07:35 17:00
7	06:02 21:00	06:28 20:36	06:58 19:50		07:28 19:00	16	07:02 17:17		07:36 17:00
8	06:03 21:00	06:29 20:35	06:59 19:49		07:29 18:59	10	07:04 17:16		07:37 16:59
9	06:04 20:59	06:30 20:33	07:00 19:47		07:30 18:57		07:05 17:15		07:37 16:59
10	06:04 20:59	06:31 20:32	07:01 19:45		07:31 18:56		07:06 17:14		07:38 17:00
11	06:05 20:58	06:32 20:31	07:02 19:44		07:32 18:54		07:07 17:13		07:39 17:00
12	06:06 20:58	06:33 20:29	07:03 19:42		07:33 18:53		07:08 17:12		07:40 17:00
13	06:06 20:58	06:34 20:28	07:04 19:40		07:34 18:51		07:09 17:11		07:41 17:00
14	06:07 20:57	06:35 20:27	07:05 19:39	9	07:35 18:49		07:11 17:11		07:41 17:00
15	06:08 20:56	06:36 20:25	07:06 19:37	17	07:36 18:48		07:12 17:10		07:42 17:00
16	06:09 20:56	06:37 20:24	07:07 19:35	21	07:38 18:46		07:13 17:09		07:43 17:01
17	06:09 20:55	06:38 20:23	07:08 19:34	26	07:39 18:45		07:14 17:08		07:44 17:01
18	06:10 20:55	06:39 20:21	07:09 19:32	28	07:40 18:43		07:15 17:07		07:44 17:01
19	06:11 20:54	06:40 20:20	07:10 19:30	31	07:41 18:42	6	07:16 17:07		07:45 17:02
20	06:12 20:53	06:41 20:18	07:11 19:29	32	07:42 18:40	13	07:18 17:06		07:45 17:02
21	06:13 20:53	06:42 20:17	07:12 19:27	34	07:43 18:39	17	07:19 17:05		07:46 17:02
22	06:14 20:52	06:43 20:16	07:13 19:25	35	07:44 18:38	19	07:20 17:05		07:47 17:03
23	06:14 20:51	06:44 20:14	07:14 19:24	36	07:45 18:36	22	07:21 17:04		07:47 17:03
24	06:15 20:50	06:45 20:13	07:15 19:22	37	07:46 18:35	21	07:22 17:03		07:48 17:04
25	06:16 20:49	06:46 20:11	07:16 19:20	38	07:47 18:33	20	07:23 17:03		07:48 17:04
26	06:17 20:48	06:47 20:09	07:17 19:19	37	07:48 18:32	19	07:24 17:02		07:48 17:05
27	06:18 20:47	06:48 20:08	07:18 19:17	38	07:49 18:31	17	07:25 17:02		07:49 17:06
28	06:19 20:47	06:49 20:07	07:19 19:16	37	07:50 18:30	17	07:26 17:02		07:49 17:06
29	06:20 20:46	06:50 20:06	07:20 19:15	35	07:51 18:29	15	07:27 17:02		07:49 17:06
30	06:21 20:45	06:51 20:05	07:21 19:14	33	07:52 18:28	14	07:28 17:01		07:49 17:07
31	06:22 20:44	06:52 20:04	07:22 19:13	32	07:53 18:27	11	07:29 17:01		07:50 17:08
Potential sun hours	457	427	375		346		299		289
Total, worst case			518		369		13		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni cultural\Shadow receptor: RBP_24 - Struttura megalitica

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June
1	07:50 17:09	07:37 17:43	07:02 18:17	07:12 19:50	06:26 20:21	19:49 (WTG03) 05:58 20:50
2	07:50 17:10	07:36 17:44	07:00 18:18	07:10 19:51	06:25 20:22	19:48 (WTG03) 05:58 19:59 (WTG03) 20:51
3	07:50 17:11	07:35 17:46	06:59 18:19	07:08 19:52	06:24 20:23	06:57 (WTG03) 05:57 20:00 (WTG03) 20:51
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24	19:47 (WTG03) 05:57 20:01 (WTG03) 20:52
5	07:50 17:13	07:33 17:48	06:55 18:21	07:05 19:54	06:21 20:25	19:47 (WTG03) 05:57 20:02 (WTG03) 20:53
6	07:50 17:14	07:32 17:49	06:54 18:22	07:03 19:55	06:20 20:26	19:47 (WTG03) 05:56 20:03 (WTG03) 20:53
7	07:50 17:15	07:31 17:51	06:52 18:23	07:02 19:56	06:19 20:27	19:47 (WTG03) 05:56 20:04 (WTG03) 20:54
8	07:50 17:16	07:30 17:52	06:51 18:24	07:00 19:57	06:18 20:28	19:47 (WTG03) 05:56 20:05 (WTG03) 20:55
9	07:50 17:17	07:29 17:53	06:49 18:26	06:59 19:58	06:17 20:29	19:47 (WTG03) 05:56 20:06 (WTG03) 20:55
10	07:50 17:18	07:27 17:54	06:48 18:27	06:57 19:59	06:16 20:30	19:48 (WTG03) 05:55 20:07 (WTG03) 20:56
11	07:49 17:19	07:26 17:55	06:46 18:28	06:55 20:00	06:15 20:31	19:48 (WTG03) 05:55 20:07 (WTG03) 20:56
12	07:49 17:20	07:25 17:57	06:44 18:29	06:54 20:01	06:14 20:32	19:49 (WTG03) 05:55 20:06 (WTG03) 20:57
13	07:49 17:21	07:24 17:58	06:43 18:30	06:52 20:02	06:13 20:33	19:50 (WTG03) 05:55 20:05 (WTG03) 20:57
14	07:49 17:22	07:23 17:59	06:41 18:31	06:51 20:03	06:12 20:34	19:51 (WTG03) 05:55 20:03 (WTG03) 20:58
15	07:48 17:23	07:21 18:00	06:40 18:32	06:49 20:04	06:11 20:35	19:54 (WTG03) 05:55 20:02 (WTG03) 20:58
16	07:48 17:24	07:20 18:01	06:38 18:33	06:48 20:06	06:10 20:36	05:55 (WTG03) 20:59 20:59
17	07:47 17:25	07:19 18:03	06:36 18:34	06:46 20:07	06:09 20:37	05:55 (WTG03) 20:59 20:59
18	07:47 17:26	07:17 18:04	06:35 18:35	06:45 20:08	06:08 20:38	05:55 (WTG03) 20:59 20:59
19	07:46 17:28	07:16 18:05	06:33 18:36	06:43 20:09	06:07 20:39	05:55 (WTG03) 21:00 21:00
20	07:46 17:29	07:15 18:06	06:31 18:37	06:42 20:10	06:06 20:40	05:55 (WTG03) 21:00 21:00
21	07:45 17:30	07:13 18:07	06:30 18:38	06:40 20:11	06:05 20:41	05:55 (WTG03) 21:00 21:00
22	07:45 17:31	07:12 18:09	06:28 18:39	06:39 20:12	06:04 20:42	05:56 (WTG03) 21:00 21:00
23	07:44 17:32	07:10 18:10	06:26 18:41	06:37 20:13	06:04 20:43	05:56 (WTG03) 21:01 21:01
24	07:43 17:33	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:56 (WTG03) 21:01 21:01
25	07:43 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:02 20:44	05:56 (WTG03) 21:01 21:01
26	07:42 17:36	07:06 18:13	06:21 18:44	06:33 20:16	06:02 20:45	05:57 (WTG03) 21:01 21:01
27	07:41 17:37	07:05 18:14	06:20 18:45	06:32 20:17	06:01 20:46	05:57 (WTG03) 21:01 21:01
28	07:40 17:38	07:03 18:15	06:18 18:46	06:30 20:18	06:00 20:47	05:57 (WTG03) 21:01 19:52 (WTG03) 20:47
29	07:40 17:39		07:16 19:47	06:29 20:19	06:00 20:48	05:58 (WTG03) 21:01 19:55 (WTG03) 20:48
30	07:39 17:41		07:15 19:48	06:28 20:20	05:59 20:48	05:58 (WTG03) 21:01 19:56 (WTG03) 20:48
31	07:38 17:42		07:13 19:49		05:59 20:49	05:58 (WTG03) 21:01 19:50 (WTG03) 20:48
Potential sun hours	299	298	370	398	447	451
Total, worst case				15	223	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_24 - Struttura megalitica

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July	August	September	October	November	December	
1	05:59 21:01	06:22 20:42	18 19:59 (WTG03)	06:52 20:00	07:22 19:10	06:55 17:24	07:29 17:00
2	05:59 21:01	06:23 20:41	19 19:59 (WTG03)	06:53 19:58	07:23 19:08	06:56 17:23	07:31 17:00
3	06:00 21:01	06:24 20:40	19 19:58 (WTG03)	06:54 19:57	07:24 19:07	06:58 17:22	07:32 17:00
4	06:00 21:00	06:25 20:39	18 19:58 (WTG03)	06:55 19:55	07:25 19:05	06:59 17:20	07:33 17:00
5	06:01 21:00	06:26 20:38	18 19:57 (WTG03)	06:56 19:53	07:26 19:03	07:00 17:19	07:33 16:59
6	06:01 21:00	06:27 20:37	17 19:57 (WTG03)	06:57 19:52	07:27 19:02	07:01 17:18	07:34 16:59
7	06:02 21:00	06:28 20:36	16 19:57 (WTG03)	06:58 19:50	07:28 19:00	07:02 17:17	07:35 16:59
8	06:03 20:59	06:29 20:34	15 19:57 (WTG03)	06:59 19:48	07:29 18:59	07:03 17:16	07:36 16:59
9	06:03 20:59	06:30 20:33	14 19:57 (WTG03)	07:00 19:47	07:30 18:57	07:05 17:15	07:37 16:59
10	06:04 20:59	06:31 20:32	12 19:56 (WTG03)	07:01 19:45	07:31 18:55	07:06 17:14	07:38 16:59
11	06:05 20:58	06:32 20:31	11 19:56 (WTG03)	07:02 19:44	07:32 18:54	07:07 17:13	07:39 16:59
12	06:05 20:58	06:33 20:29	9 19:57 (WTG03)	07:03 19:42	07:33 18:52	07:08 17:12	07:40 16:59
13	06:06 20:57	06:34 20:28	7 19:58 (WTG03)	07:04 19:40	07:34 18:51	07:09 17:11	07:40 17:00
14	06:07 20:57	06:35 20:27	5 19:59 (WTG03)	07:05 19:38	07:35 18:49	07:10 17:10	07:41 17:00
15	06:08 20:56	06:36 20:25	2 20:00 (WTG03)	07:06 19:37	07:36 18:48	07:12 17:09	07:42 17:00
16	06:08 20:56	06:37 20:24		07:07 19:35	07:37 18:46	07:13 17:09	07:43 17:00
17	06:09 20:55	06:38 20:22		07:08 19:33	07:38 18:45	07:14 17:08	07:43 17:01
18	06:10 20:54	06:39 20:21		07:09 19:32	07:39 18:43	07:15 17:07	07:44 17:01
19	06:11 20:54	06:40 20:20		07:10 19:30	07:41 18:42	07:16 17:06	07:45 17:01
20	06:12 20:53	06:41 20:18		07:11 19:28	07:42 18:40	07:17 17:06	07:45 17:02
21	06:12 20:52	06:42 20:17		07:12 19:27	07:43 18:39	07:19 17:05	07:46 17:02
22	06:13 20:52	06:43 20:15		07:13 19:25	07:44 18:37	07:20 17:04	07:46 17:03
23	06:14 20:51	06:44 20:14		07:14 19:23	07:45 18:36	07:21 17:04	07:47 17:03
24	06:15 20:50	06:45 20:12		07:15 19:22	07:46 18:34	07:22 17:03	07:47 17:04
25	06:16 20:49	06:46 20:11		07:16 19:20	06:47 17:33	07:23 17:03	07:48 17:04
26	06:17 20:48	06:47 20:09		07:17 19:18	06:48 17:32	07:24 17:02	07:48 17:05
27	06:18 20:47	06:48 20:08		07:18 19:17	06:49 17:30	07:25 17:02	07:48 17:05
28	06:19 20:46	20:07 (WTG03) 06:49		07:19 19:15	06:51 17:29	07:26 17:01	07:49 17:06
29	06:19 20:45	3 20:10 (WTG03) 06:49		07:20 19:13	06:52 17:28	07:27 17:01	07:49 17:07
30	06:20 20:44	10 20:13 (WTG03) 06:50		07:21 19:12	06:53 17:27	07:28 17:01	07:49 17:08
31	06:21 20:43	13 20:14 (WTG03) 06:51			06:54		07:50
		16 20:16 (WTG03) 06:51			17:25		17:08
Potential sun hours	457	427		375	346	299	289
Total, worst case	42	200					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_25 - Domus de janas Pubusattile VI
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:58 20:50	05:59 21:01	06:23 20:43	06:53 20:00	07:22 19:10	06:55 17:24	07:30 17:01
2	07:50 17:11	07:36 17:45	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	06:00 21:01	06:24 20:41	06:54 19:59	07:23 19:09	06:57 17:23	07:31 17:00
3	07:50 17:11	07:35 17:46	06:59 18:19	07:09 19:52	06:24 20:23	05:58 20:52	06:00 21:01	06:24 20:40	06:55 19:57	07:24 19:07	06:58 17:22	07:32 17:00
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24	05:57 20:52	06:01 21:01	06:25 20:39	06:56 19:55	07:25 19:05	06:59 17:21	07:33 17:00
5	07:50 17:13	07:33 17:48	06:56 18:21	07:05 19:54	06:22 20:25	05:57 20:53	06:01 21:00	06:26 20:38	06:57 19:54	07:26 19:04	07:00 17:20	07:34 17:00
6	07:50 17:14	07:32 17:50	06:54 18:22	07:04 19:55	06:21 20:26	05:57 20:54	06:02 21:00	06:27 20:37	06:58 19:52	07:27 19:02	07:01 17:19	07:35 17:00
7	07:50 17:15	07:31 17:51	06:53 18:24	07:02 19:56	06:19 20:27	05:56 20:54	06:02 21:00	06:28 20:36	06:58 19:50	07:28 19:00	07:02 17:17	07:36 17:00
8	07:50 17:16	07:30 17:52	06:51 18:25	07:01 19:57	06:18 20:28	05:56 20:55	06:03 21:00	06:29 20:35	06:59 19:49	07:29 18:59	07:04 17:16	07:37 16:59
9	07:50 17:17	07:29 17:53	06:49 18:26	06:59 19:58	06:17 20:30	05:56 20:56	06:04 20:59	06:30 20:33	07:00 19:47	07:30 18:57	07:05 17:15	07:37 16:59
10	07:50 17:18	07:28 17:54	06:48 18:27	06:57 20:00	06:16 20:31	05:56 20:56	06:04 20:59	06:31 20:32	07:01 19:45	07:31 18:56	07:06 17:14	07:38 17:00
11	07:50 17:19	07:26 17:56	06:46 18:28	06:56 20:01	06:15 20:32	05:56 20:57	06:05 20:58	06:32 20:31	07:02 19:44	07:32 18:54	07:07 17:13	07:39 17:00
12	07:49 17:20	07:25 17:57	06:45 18:29	06:54 20:02	06:14 20:33	05:55 20:57	06:06 20:58	06:33 20:29	07:03 19:42	07:33 18:53	07:08 17:12	07:40 17:00
13	07:49 17:21	07:24 17:58	06:43 18:30	06:53 20:03	06:13 20:33	05:55 20:58	06:06 20:58	06:34 20:28	07:04 19:40	07:34 18:51	07:09 17:11	07:41 17:00
14	07:49 17:22	07:23 17:59	06:41 18:31	06:51 20:04	06:12 20:34	05:55 20:58	06:07 20:57	06:35 20:27	07:05 19:39	07:35 18:49	07:11 17:11	07:41 17:00
15	07:48 17:23	07:21 18:01	06:40 18:32	06:50 20:05	06:11 20:35	05:55 20:58	06:08 20:56	06:36 20:25	07:06 19:37	07:36 18:48	07:12 17:10	07:42 17:00
16	07:48 17:24	07:20 18:02	06:38 18:33	06:48 20:06	06:10 20:36	05:55 20:59	06:09 20:56	06:37 20:24	07:07 19:35	07:38 18:46	07:13 17:09	07:43 17:01
17	07:48 17:26	07:19 18:03	06:37 18:34	06:46 20:07	06:09 20:37	05:55 20:59	06:09 20:55	06:38 20:23	07:08 19:34	07:39 18:45	07:14 17:08	07:44 17:01
18	07:47 17:27	07:18 18:04	06:35 18:36	06:45 20:08	06:08 20:38	05:55 21:00	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43	07:15 17:07	07:44 17:01
19	07:47 17:28	07:16 18:05	06:33 18:37	06:43 20:09	06:07 20:39	05:55 21:00	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	07:16 17:07	07:45 17:02
20	07:46 17:29	07:15 18:06	06:32 18:38	06:42 20:10	06:06 20:40	05:56 21:00	06:12 20:53	06:41 20:18	07:11 19:29	07:42 18:40	07:18 17:06	07:45 17:02
21	07:46 17:30	07:13 18:08	06:30 18:39	06:41 20:11	06:05 20:41	05:56 21:00	06:13 20:53	06:42 20:17	07:12 19:27	07:43 18:39	07:19 17:05	07:46 17:02
22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:05 20:42	05:56 21:01	06:14 20:52	06:43 20:16	07:13 19:25	07:44 18:38	07:20 17:05	07:47 17:03
23	07:44 17:33	07:11 18:10	06:27 18:41	06:38 20:13	06:04 20:43	05:56 21:01	06:14 20:51	06:44 20:14	07:14 19:24	07:45 18:36	07:21 17:04	07:47 17:03
24	07:44 17:34	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01	06:15 20:50	06:45 20:13	07:15 19:22	07:46 18:35	07:22 17:03	07:48 17:04
25	07:43 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:03 20:45	05:57 21:01	06:16 20:49	06:46 20:11	07:16 19:20	06:47 17:33	07:23 17:03	07:48 17:04
26	07:42 17:36	07:06 18:13	06:22 18:44	06:33 20:16	06:02 20:45	05:57 21:01	06:17 20:48	06:47 20:09	07:17 19:19	06:49 17:32	07:24 17:02	07:48 17:05
27	07:41 17:37	07:05 18:15	06:20 18:45	06:32 20:17	06:01 20:46	05:57 21:01	06:18 20:47	06:48 20:08	07:18 19:17	06:50 17:31	07:25 17:02	07:49 17:06
28	07:41 17:39	07:03 18:16	06:18 18:46	06:31 20:18	06:01 20:47	05:58 21:01	06:19 20:47	06:49 20:06	07:19 19:15	06:51 17:29	07:27 17:02	07:49 17:06
29	07:40 17:40		07:17 19:47	06:29 20:19	06:00 20:48	05:58 21:01	06:20 20:46	06:50 20:05	07:20 19:14	06:52 17:28	07:28 17:01	07:49 17:07
30	07:39 17:41		07:15 19:48	06:28 20:20	05:59 20:49	05:59 21:01	06:21 20:45	06:51 20:03	07:21 19:12	06:53 17:27	07:29 17:01	07:50 17:08
31	07:38 17:42		07:13 19:49		05:59 20:49		06:22 20:44	06:52 20:02		06:54 17:26		07:50 17:09
Potential sun hours	299	298	370	398	447	451	457	427	375	346	299	289
Total, worst case												

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Ittiri_RWE_26_05_20_GF

Licensed user:

I.A.T. Consulenza e progetti S.r.l.
 Via Santa Margherita 4
 IT-09124 Cagliari
 +39 070 658297
 Giuseppe Frongia / direttore@iatprogetti.it
 Calculated:
 25/06/2021 14:20/3.4.415

SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_26 - Struttura megalitica circolare
 Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December	
1	07:50 17:09	07:37 17:43	07:02 18:17	07:12 19:50	06:26 20:21		05:58 21:01	06:22 20:42	19:59 (WTG03) 20:19 (WTG03)	06:52 20:00	07:22 19:10	06:55 17:24	07:29 17:00
2	07:50 17:10	07:36 17:44	07:00 18:18	07:10 19:51	06:25 20:22		05:58 21:01	06:23 20:41	19:59 (WTG03) 20:18 (WTG03)	06:53 19:58	07:23 19:08	06:56 17:23	07:31 17:00
3	07:50 17:11	07:35 17:46	06:59 18:19	07:08 19:52	06:24 20:23	1	05:57 21:01	06:24 20:40	19:59 (WTG03) 20:17 (WTG03)	06:54 19:57	07:24 19:07	06:58 17:22	07:32 17:00
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24	5	05:57 21:00	06:25 20:39	19:59 (WTG03) 20:16 (WTG03)	06:55 19:55	07:25 19:05	06:59 17:20	07:33 17:00
5	07:50 17:13	07:33 17:48	06:55 18:21	07:05 19:54	06:21 20:25	8	06:01 21:00	06:26 20:38	20:00 (WTG03) 20:15 (WTG03)	06:56 19:53	07:26 19:03	07:00 17:19	07:33 16:59
6	07:50 17:14	07:32 17:49	06:54 18:22	07:03 19:55	06:20 20:26	10	06:01 21:00	06:27 20:37	20:01 (WTG03) 20:14 (WTG03)	06:57 19:52	07:27 19:02	07:01 17:18	07:34 16:59
7	07:50 17:15	07:31 17:51	06:52 18:23	07:02 19:56	06:19 20:27	12	06:02 21:00	06:28 20:36	20:01 (WTG03) 20:13 (WTG03)	06:58 19:50	07:28 19:00	07:02 17:17	07:35 16:59
8	07:50 17:16	07:30 17:52	06:51 18:24	07:00 19:57	06:18 20:28	13	06:03 20:59	06:29 20:34	19:49 (WTG03) 20:12 (WTG03)	06:59 19:48	07:29 18:59	07:03 17:16	07:36 16:59
9	07:50 17:17	07:29 17:53	06:49 18:26	06:59 19:58	06:17 20:29	16	06:03 20:59	06:30 20:33	19:49 (WTG03) 20:06 (WTG03)	06:56 19:47	07:00 18:57	07:05 17:15	07:37 16:59
10	07:50 17:18	07:27 17:54	06:48 18:27	06:57 19:59	06:16 20:30	19	06:04 20:59	06:31 20:32	19:48 (WTG03) 20:07 (WTG03)	06:55 19:45	07:01 18:55	07:06 17:14	07:38 16:59
11	07:49 17:19	07:26 17:55	06:46 18:28	06:55 20:00	06:15 20:31	19	06:05 20:58	06:32 20:31	19:48 (WTG03) 20:07 (WTG03)	06:55 19:44	07:02 18:54	07:07 17:13	07:39 16:59
12	07:49 17:20	07:25 17:57	06:44 18:29	06:54 20:01	06:14 20:32	20	06:05 20:58	06:33 20:29	19:48 (WTG03) 20:08 (WTG03)	06:55 19:42	07:03 18:52	07:08 17:12	07:40 16:59
13	07:49 17:21	07:24 17:58	06:43 18:30	06:52 20:02	06:13 20:33	21	06:06 20:57	06:34 20:28	19:48 (WTG03) 20:09 (WTG03)	06:55 19:40	07:04 18:51	07:09 17:11	07:41 17:00
14	07:49 17:22	07:23 17:59	06:41 18:31	06:51 20:03	06:12 20:34	22	06:07 20:57	06:35 20:27	19:48 (WTG03) 20:10 (WTG03)	06:55 19:39	07:05 18:49	07:10 17:10	07:42 17:00
15	07:48 17:23	07:21 18:00	06:40 18:32	06:49 20:04	06:11 20:35	23	06:08 20:56	06:36 20:25	19:49 (WTG03) 20:12 (WTG03)	06:55 19:37	07:06 18:48	07:12 17:09	07:43 17:00
16	07:48 17:24	07:20 18:01	06:38 18:33	06:48 20:06	06:10 20:36	23	06:08 20:56	06:37 20:24	19:49 (WTG03) 20:12 (WTG03)	06:55 19:35	07:07 18:46	07:13 17:09	07:43 17:00
17	07:47 17:25	07:19 18:03	06:36 18:34	06:46 20:07	06:09 20:37	22	06:09 20:55	06:38 20:22	19:50 (WTG03) 20:12 (WTG03)	06:55 19:33	07:08 18:45	07:14 17:08	07:43 17:01
18	07:47 17:26	07:17 18:04	06:35 18:35	06:45 20:08	06:08 20:38	21	06:10 20:54	06:39 20:21	19:50 (WTG03) 20:11 (WTG03)	06:55 19:32	07:09 18:43	07:15 17:07	07:44 17:01
19	07:46 17:28	07:16 18:05	06:33 18:36	06:43 20:09	06:07 20:39	21	06:11 20:54	06:40 20:20	19:50 (WTG03) 20:11 (WTG03)	06:55 19:30	07:10 18:42	07:16 17:06	07:45 17:01
20	07:46 17:29	07:15 18:06	06:31 18:37	06:42 20:10	06:06 20:40	19	06:12 20:53	06:41 20:18	19:51 (WTG03) 20:10 (WTG03)	06:55 19:28	07:11 18:40	07:17 17:06	07:45 17:02
21	07:45 17:30	07:13 18:07	06:30 18:38	06:40 20:11	06:05 20:41	18	06:12 20:52	06:42 20:17	19:52 (WTG03) 20:10 (WTG03)	06:55 19:27	07:12 18:39	07:19 17:05	07:46 17:02
22	07:45 17:31	07:12 18:09	06:28 18:39	06:39 20:12	06:04 20:42	16	06:13 20:52	06:43 20:15	19:53 (WTG03) 20:09 (WTG03)	06:56 19:25	07:13 18:37	07:20 17:04	07:46 17:03
23	07:44 17:32	07:10 18:10	06:26 18:41	06:37 20:13	06:04 20:43	13	06:14 20:51	06:44 20:14	19:54 (WTG03) 20:07 (WTG03)	06:56 19:23	07:14 18:36	07:21 17:04	07:47 17:03
24	07:43 17:33	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	11	06:15 20:50	06:45 20:12	19:56 (WTG03) 20:07 (WTG03)	06:56 19:22	07:15 18:35	07:22 17:03	07:47 17:04
25	07:43 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:02 20:44	6	06:16 20:49	06:46 20:11	19:58 (WTG03) 20:04 (WTG03)	06:56 20:11	07:16 17:33	07:23 17:03	07:48 17:04
26	07:42 17:36	07:06 18:13	06:21 18:44	06:33 20:16	06:02 20:45		06:17 21:01	06:47 20:09	20:00 (WTG03) 20:22 (WTG03)	06:47 20:09	07:17 17:32	07:24 17:02	07:48 17:05
27	07:41 17:37	07:05 18:14	06:20 18:45	06:32 20:17	06:01 20:46		06:18 21:01	06:48 20:08	20:00 (WTG03) 20:23 (WTG03)	06:48 20:08	07:18 19:17	07:25 17:02	07:48 17:05
28	07:40 17:38	07:03 18:15	06:18 18:46	06:30 20:18	06:00 20:47		06:19 21:01	06:49 20:06	20:00 (WTG03) 20:24 (WTG03)	06:49 20:06	07:19 19:15	07:26 17:01	07:49 17:06
29	07:40 17:39		07:16 19:47	06:29 20:19	06:00 20:48		06:19 21:01	06:49 20:05	19:59 (WTG03) 20:21 (WTG03)	06:49 20:05	07:20 19:13	07:27 17:01	07:49 17:07
30	07:39 17:41		07:15 19:48	06:28 20:20	05:59 20:49		06:20 21:01	06:50 20:03	19:59 (WTG03) 20:20 (WTG03)	06:50 20:03	07:21 19:12	07:28 17:01	07:49 17:08
31	07:38 17:42		07:13 19:49	06:28 20:20	05:59 20:49		06:21 20:43	06:51 20:01	19:59 (WTG03) 20:20 (WTG03)	06:51 20:01	07:22 17:25	07:29 17:01	07:50 17:08
Potential sun hours	299	298	370	398	447	451	457	427		375	346	299	289
Total, worst case					376		246	134					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_27 - Nuraghe Majone

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	
1	07:50 17:09	07:37 17:43	07:02 18:17	07:12 19:50	06:26 20:21	05:58 20:50	06:30 (WTG01)
2	07:50 17:10	07:36 17:44	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	57 06:31 (WTG01)
3	07:50 17:11	07:35 17:46	06:59 18:19	07:08 19:52	06:24 20:23	05:57 20:52	57 07:28 (WTG01)
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24	05:57 20:52	58 06:30 (WTG01)
5	07:50 17:13	07:33 17:48	06:55 18:21	07:05 19:54	06:21 20:25	05:57 20:53	58 07:28 (WTG01)
6	07:50 17:14	07:32 17:49	06:54 18:22	07:03 19:55	06:20 20:26	05:56 20:54	59 06:30 (WTG01)
7	07:50 17:15	07:31 17:51	06:52 18:23	07:02 19:56	06:19 20:27	05:56 20:54	59 07:29 (WTG01)
8	07:50 17:16	07:30 17:52	06:51 18:24	07:00 19:57	06:18 20:28	05:56 20:55	60 06:31 (WTG01)
9	07:50 17:17	07:29 17:53	06:49 18:26	06:59 19:58	06:17 20:29	05:56 20:55	60 07:30 (WTG01)
10	07:50 17:18	07:27 17:54	06:48 18:27	06:57 19:59	06:16 20:30	05:55 20:56	61 06:30 (WTG01)
11	07:49 17:19	07:26 17:55	06:46 18:28	06:55 20:00	06:15 20:31	05:55 20:56	60 06:31 (WTG01)
12	07:49 17:20	07:25 17:57	06:44 18:29	06:54 20:01	06:14 20:32	05:55 20:57	60 06:31 (WTG01)
13	07:49 17:21	07:24 17:58	06:43 18:30	06:52 20:02	06:13 20:33	05:55 20:57	61 06:31 (WTG01)
14	07:49 17:22	07:23 17:59	06:41 18:31	06:51 20:03	06:12 20:34	05:55 20:58	61 06:31 (WTG01)
15	07:48 17:23	07:21 18:00	06:40 18:32	06:49 20:05	06:11 20:35	05:55 20:58	61 06:31 (WTG01)
16	07:48 17:24	07:20 18:01	06:38 18:33	06:48 20:06	06:10 20:36	05:55 20:59	61 06:31 (WTG01)
17	07:47 17:25	07:19 18:03	06:36 18:34	06:46 20:07	06:09 20:37	05:55 20:59	61 06:31 (WTG01)
18	07:47 17:26	07:17 18:04	06:35 18:35	06:45 20:08	06:08 20:38	05:55 20:59	61 06:32 (WTG01)
19	07:46 17:28	07:16 18:05	06:33 18:36	06:43 20:09	06:07 20:39	05:55 21:00	61 06:32 (WTG01)
20	07:46 17:29	07:15 18:06	06:31 18:37	06:42 20:10	06:06 20:40	05:55 21:00	61 06:32 (WTG01)
21	07:45 17:30	07:13 18:07	06:30 18:38	06:40 20:11	06:05 20:41	05:55 21:00	61 06:33 (WTG01)
22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:04 20:42	05:56 21:00	61 06:33 (WTG01)
23	07:44 17:32	07:10 18:10	06:26 18:41	06:37 20:13	06:04 20:43	05:56 21:01	61 06:33 (WTG01)
24	07:43 17:33	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01	61 06:33 (WTG01)
25	07:43 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:02 20:44	05:56 21:01	61 06:34 (WTG01)
26	07:42 17:36	07:06 18:13	06:21 18:44	06:33 20:16	06:02 20:45	05:57 21:01	61 06:34 (WTG01)
27	07:41 17:37	07:05 18:14	06:20 18:45	06:32 20:17	06:01 20:46	05:57 21:01	61 06:34 (WTG01)
28	07:40 17:38	07:03 18:16	06:18 18:46	06:30 20:18	06:00 20:47	05:58 21:01	61 06:34 (WTG01)
29	07:40 17:40		07:17 19:47	06:29 20:19	06:00 20:48	05:58 21:01	61 06:34 (WTG01)
30	07:39 17:41		07:15 19:48	06:28 20:20	05:59 20:49	05:58 21:01	60 06:35 (WTG01)
31	07:38 17:42		07:13 19:49	06:27 20:21	05:59 20:49	05:58 21:01	60 06:35 (WTG01)
Potential sun hours	299	298	370	398	447	451	1805
Total, worst case					854		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_27 - Nuraghe Majone

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July		August		September		October	November	December	
1	05:59		06:35 (WTG01)	06:22		07:03 (WTG01)	06:52	07:22	06:55	07:30
	21:01	60	07:35 (WTG01)	20:42	10	07:13 (WTG01)	20:00	19:10	17:24	17:00
2	05:59		06:36 (WTG01)	06:23			06:53	07:23	06:56	07:31
	21:01	60	07:36 (WTG01)	20:41			19:58	19:08	17:23	17:00
3	06:00		06:35 (WTG01)	06:24			06:54	07:24	06:58	07:32
	21:01	60	07:35 (WTG01)	20:40			19:57	19:07	17:22	17:00
4	06:00		06:36 (WTG01)	06:25			06:55	07:25	06:59	07:33
	21:00	60	07:36 (WTG01)	20:39			19:55	19:05	17:21	17:00
5	06:01		06:36 (WTG01)	06:26			06:56	07:26	07:00	07:34
	21:00	59	07:35 (WTG01)	20:38			19:53	19:03	17:19	16:59
6	06:01		06:37 (WTG01)	06:27			06:57	07:27	07:01	07:34
	21:00	59	07:36 (WTG01)	20:37			19:52	19:02	17:18	16:59
7	06:02		06:36 (WTG01)	06:28			06:58	07:28	07:02	07:35
	21:00	59	07:35 (WTG01)	20:36			19:50	19:00	17:17	16:59
8	06:03		06:37 (WTG01)	06:29			06:59	07:29	07:03	07:36
	20:59	59	07:36 (WTG01)	20:34			19:49	18:59	17:16	16:59
9	06:03		06:38 (WTG01)	06:30			07:00	07:30	07:05	07:37
	20:59	58	07:36 (WTG01)	20:33			19:47	18:57	17:15	16:59
10	06:04		06:38 (WTG01)	06:31			07:01	07:31	07:06	07:38
	20:59	57	07:35 (WTG01)	20:32			19:45	18:55	17:14	16:59
11	06:05		06:38 (WTG01)	06:32			07:02	07:32	07:07	07:39
	20:58	57	07:35 (WTG01)	20:31			19:44	18:54	17:13	16:59
12	06:05		06:39 (WTG01)	06:33			07:03	07:33	07:08	07:40
	20:58	57	07:36 (WTG01)	20:29			19:42	18:52	17:12	16:59
13	06:06		06:39 (WTG01)	06:34			07:04	07:34	07:09	07:41
	20:57	56	07:35 (WTG01)	20:28			19:40	18:51	17:11	17:00
14	06:07		06:40 (WTG01)	06:35			07:05	07:35	07:10	07:41
	20:57	55	07:35 (WTG01)	20:27			19:39	18:49	17:10	17:00
15	06:08		06:41 (WTG01)	06:36			07:06	07:36	07:12	07:42
	20:56	54	07:35 (WTG01)	20:25			19:37	18:48	17:09	17:00
16	06:08		06:41 (WTG01)	06:37			07:07	07:37	07:13	07:43
	20:56	54	07:35 (WTG01)	20:24			19:35	18:46	17:09	17:00
17	06:09		06:41 (WTG01)	06:38			07:08	07:38	07:14	07:43
	20:55	53	07:34 (WTG01)	20:23			19:33	18:45	17:08	17:01
18	06:10		06:42 (WTG01)	06:39			07:09	07:39	07:15	07:44
	20:54	51	07:33 (WTG01)	20:21			19:32	18:43	17:07	17:01
19	06:11		06:43 (WTG01)	06:40			07:10	07:41	07:16	07:45
	20:54	50	07:33 (WTG01)	20:20			19:30	18:42	17:06	17:01
20	06:12		06:44 (WTG01)	06:41			07:11	07:42	07:17	07:45
	20:53	49	07:33 (WTG01)	20:18			19:28	18:40	17:06	17:02
21	06:12		06:45 (WTG01)	06:42			07:12	07:43	07:19	07:46
	20:52	47	07:32 (WTG01)	20:17			19:27	18:39	17:05	17:02
22	06:13		06:45 (WTG01)	06:43			07:13	07:44	07:20	07:46
	20:52	46	07:31 (WTG01)	20:15			19:25	18:37	17:04	17:03
23	06:14		06:46 (WTG01)	06:44			07:14	07:45	07:21	07:47
	20:51	44	07:30 (WTG01)	20:14			19:23	18:36	17:04	17:03
24	06:15		06:47 (WTG01)	06:45			07:15	07:46	07:22	07:47
	20:50	43	07:30 (WTG01)	20:12			19:22	18:35	17:03	17:04
25	06:16		06:48 (WTG01)	06:46			07:16	06:47	07:23	07:48
	20:49	41	07:29 (WTG01)	20:11			19:20	17:33	17:03	17:04
26	06:17		06:49 (WTG01)	06:47			07:17	06:48	07:24	07:48
	20:48	39	07:28 (WTG01)	20:09			19:18	17:32	17:02	17:05
27	06:18		06:51 (WTG01)	06:48			07:18	06:49	07:25	07:49
	20:47	35	07:26 (WTG01)	20:08			19:17	17:30	17:02	17:05
28	06:19		06:53 (WTG01)	06:49			07:19	06:51	07:26	07:49
	20:46	32	07:25 (WTG01)	20:06			19:15	17:29	17:01	17:06
29	06:20		06:54 (WTG01)	06:50			07:20	06:52	07:27	07:49
	20:45	28	07:22 (WTG01)	20:05			19:13	17:28	17:01	17:07
30	06:20		06:56 (WTG01)	06:50			07:21	06:53	07:28	07:49
	20:44	24	07:20 (WTG01)	20:03			19:12	17:27	17:01	17:08
31	06:21		06:59 (WTG01)	06:51				06:54		07:50
	20:43	19	07:18 (WTG01)	20:01				17:25		17:08
Potential sun hours	457			427			375	346	299	289
Total, worst case		1525			10					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_28 - Nuraghe Monte Alas
 Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June			
1	07:50	07:37	17:16 (WTG07)	07:02	07:12	07:30 (WTG03)	06:27	05:58	
	17:10	17:43	4 17:20 (WTG07)	18:17	19:50	11 07:41 (WTG03)	20:21	20:50	
2	07:50	07:36	17:15 (WTG07)	07:00	07:10	07:28 (WTG03)	06:25	05:58	
	17:10	17:45	6 17:21 (WTG07)	18:18	19:51	12 07:40 (WTG03)	20:22	20:51	
3	07:50	07:35	17:15 (WTG07)	06:59	07:08	07:27 (WTG03)	06:24	05:57	
	17:11	17:46	7 17:22 (WTG07)	18:19	19:52	13 07:40 (WTG03)	20:23	20:52	
4	07:50	07:34	17:15 (WTG07)	06:57	07:07	07:25 (WTG03)	06:23	05:57	
	17:12	17:47	9 17:24 (WTG07)	18:20	19:53	14 07:39 (WTG03)	20:24	20:52	
5	07:50	07:33	17:15 (WTG07)	06:56	17:56 (WTG06)	07:05	07:24 (WTG03)	06:22	05:57
	17:13	17:48	10 17:25 (WTG07)	18:21	4 18:00 (WTG06)	19:54	15 07:39 (WTG03)	20:25	20:53
6	07:50	07:32	17:15 (WTG07)	06:54	17:54 (WTG06)	07:04	07:22 (WTG03)	06:20	05:56
	17:14	17:49	12 17:27 (WTG07)	18:22	7 18:01 (WTG06)	19:55	15 07:37 (WTG03)	20:26	20:54
7	07:50	07:31	17:16 (WTG07)	06:52	17:52 (WTG06)	07:02	07:20 (WTG03)	06:19	05:56
	17:15	17:51	12 17:28 (WTG07)	18:23	10 18:02 (WTG06)	19:56	16 07:36 (WTG03)	20:27	20:54
8	07:50	07:30	17:15 (WTG07)	06:51	17:51 (WTG06)	07:00	07:19 (WTG03)	06:18	05:56
	17:16	17:52	14 17:29 (WTG07)	18:25	13 18:04 (WTG06)	19:57	15 07:34 (WTG03)	20:28	20:55
9	07:50	07:29	17:16 (WTG07)	06:49	17:49 (WTG06)	06:59	07:17 (WTG03)	06:17	05:56
	17:17	17:53	14 17:30 (WTG07)	18:26	16 18:05 (WTG06)	19:58	15 07:32 (WTG03)	20:29	20:55
10	07:50	07:28	17:16 (WTG07)	06:48	17:48 (WTG06)	06:57	07:21 (WTG03)	06:16	05:55
	17:18	17:54	16 17:32 (WTG07)	18:27	17 18:05 (WTG06)	19:59	7 07:28 (WTG03)	20:30	20:56
11	07:50	07:26	17:17 (WTG07)	06:46	17:47 (WTG06)	06:56		06:15	05:55
	17:19	17:56	16 17:33 (WTG07)	18:28	20 18:07 (WTG06)	20:00		20:31	20:57
12	07:49	07:25	17:18 (WTG07)	06:45	17:46 (WTG06)	06:54		06:14	05:55
	17:20	17:57	17 17:35 (WTG07)	18:29	22 18:08 (WTG06)	20:02		20:32	20:57
13	07:49	07:24	17:19 (WTG07)	06:43	17:45 (WTG06)	06:52		06:13	05:55
	17:21	17:58	16 17:35 (WTG07)	18:30	24 18:09 (WTG06)	20:03		20:33	20:58
14	07:49	07:23	17:20 (WTG07)	06:41	17:45 (WTG06)	06:51		06:12	05:55
	17:22	17:59	17 17:37 (WTG07)	18:31	25 18:10 (WTG06)	20:04		20:34	20:58
15	07:48	07:21	17:22 (WTG07)	06:40	17:44 (WTG06)	06:49		06:11	05:55
	17:23	18:00	16 17:38 (WTG07)	18:32	27 18:11 (WTG06)	20:05		20:35	20:58
16	07:48	07:20	17:24 (WTG07)	06:38	17:45 (WTG06)	06:48		06:10	05:55
	17:24	18:02	12 17:36 (WTG07)	18:33	28 18:13 (WTG06)	20:06		20:36	20:59
17	07:48	07:19		06:36	17:44 (WTG06)	06:46		06:09	05:55
	17:25	18:03		18:34	30 18:14 (WTG06)	20:07		20:37	20:59
18	07:47	07:17		06:35	17:44 (WTG06)	06:45		06:08	05:55
	17:27	18:04		18:35	30 18:14 (WTG06)	20:08		20:38	21:00
19	07:47	07:16		06:33	17:45 (WTG06)	06:43		06:07	05:55
	17:28	18:05		18:36	31 18:16 (WTG06)	20:09		20:39	21:00
20	07:46	07:15		06:31	17:45 (WTG06)	06:42		06:06	05:55
	17:29	18:06		18:38	32 18:17 (WTG06)	20:10		20:40	21:00
21	07:45	07:13		06:30	17:45 (WTG06)	06:40		06:05	05:56
	17:30	18:08		18:39	32 18:17 (WTG06)	20:11		20:41	21:00
22	07:45	07:12		06:28	17:46 (WTG06)	06:39		06:05	05:56
	17:31	18:09		18:40	33 18:19 (WTG06)	20:12		20:42	21:01
23	07:44	07:11		06:27	17:46 (WTG06)	06:38		06:04	05:56
	17:32	18:10		18:41	32 18:18 (WTG06)	20:13		20:43	21:01
24	07:44	07:09		06:25	17:47 (WTG06)	06:36		06:03	05:56
	17:34	18:11		18:42	29 18:16 (WTG06)	20:14		20:44	21:01
25	07:43	07:08		06:23	17:49 (WTG06)	06:35		06:02	05:57
	17:35	18:12		18:43	26 18:15 (WTG06)	20:15		20:45	21:01
26	07:42	07:06		06:22	17:50 (WTG06)	06:33		06:02	05:57
	17:36	18:13		18:44	22 18:12 (WTG06)	20:16		20:45	21:01
27	07:41	07:05		06:20	06:38 (WTG03)	06:32		06:01	05:57
	17:37	18:14		18:45	19 18:09 (WTG06)	20:17		20:46	21:01
28	07:41	07:03		06:18	06:37 (WTG03)	06:31		06:00	05:58
	17:38	18:16		18:46	12 18:05 (WTG06)	20:18		20:47	21:01
29	07:40			07:17	07:35 (WTG03)	06:29		06:00	05:58
	17:40			19:47	6 07:41 (WTG03)	20:19		20:48	21:01
30	07:39			07:15	07:33 (WTG03)	06:28		05:59	05:58
	17:41			19:48	8 07:41 (WTG03)	20:20		20:49	21:01
31	07:38	17:16 (WTG07)		07:13	07:32 (WTG03)			05:59	
	17:42	2 17:18 (WTG07)		19:49	10 07:42 (WTG03)			20:49	
Potential sun hours	299	298	370	398	447	451			
Total, worst case	2	198	565	133	5				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_28 - Nuraghe Monte Alas

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	July	August	September	October	November	December
1	05:59 21:01	06:22 20:42	06:53 20:00	07:22 19:10	18:25 (WTG06) 17:24	16:46 (WTG07) 17:00
2	05:59 21:01	06:23 20:41	06:54 19:58	07:19 (WTG03) 07:23	18:26 (WTG06) 17:23	16:45 (WTG07) 17:00
3	06:00 21:01	06:24 20:40	06:54 19:57	07:15 (WTG03) 07:24	18:26 (WTG06) 17:22	16:45 (WTG07) 17:00
4	06:00 21:01	06:25 20:39	06:55 19:55	07:30 (WTG03) 19:07	18:45 (WTG06) 17:22	16:58 (WTG07) 17:00
5	06:01 21:00	06:26 20:38	06:56 19:54	07:16 (WTG03) 07:25	18:26 (WTG06) 17:21	16:45 (WTG07) 17:00
6	06:02 21:00	06:27 20:37	06:57 19:52	07:31 (WTG03) 19:05	18:43 (WTG06) 17:21	16:57 (WTG07) 17:00
7	06:02 21:00	06:28 20:36	06:58 19:50	07:17 (WTG03) 07:26	18:27 (WTG06) 17:20	16:45 (WTG07) 17:00
8	06:03 21:00	06:29 20:34	06:59 19:49	07:33 (WTG03) 19:04	18:41 (WTG06) 17:19	16:56 (WTG07) 17:00
9	06:03 20:59	06:30 20:33	07:00 19:47	07:18 (WTG03) 07:27	18:28 (WTG06) 17:01	16:45 (WTG07) 17:00
10	06:04 20:59	06:31 20:32	07:01 19:45	07:33 (WTG03) 19:02	18:40 (WTG06) 17:18	16:55 (WTG07) 16:59
11	06:05 20:58	06:32 20:31	07:02 19:44	07:19 (WTG03) 07:28	18:29 (WTG06) 17:02	16:45 (WTG07) 17:00
12	06:05 20:58	06:33 20:29	07:03 19:42	07:34 (WTG03) 19:00	18:38 (WTG06) 17:17	16:53 (WTG07) 16:59
13	06:06 20:57	06:34 20:28	07:04 19:40	07:20 (WTG03) 07:29	18:30 (WTG06) 17:04	16:45 (WTG07) 17:00
14	06:07 20:57	06:35 20:27	07:05 19:39	07:34 (WTG03) 19:00	18:38 (WTG06) 17:17	16:53 (WTG07) 16:59
15	06:08 20:56	06:36 20:25	07:06 19:37	07:21 (WTG03) 07:30	18:33 (WTG06) 17:05	16:46 (WTG07) 17:00
16	06:08 20:56	06:37 20:24	07:07 19:35	07:35 (WTG03) 18:57	18:34 (WTG06) 17:15	16:52 (WTG07) 16:59
17	06:09 20:55	06:38 20:23	07:08 19:34	07:21 (WTG03) 07:31	18:34 (WTG06) 17:16	16:52 (WTG07) 16:59
18	06:10 20:55	06:39 20:22	07:09 19:33	07:34 (WTG03) 18:59	18:36 (WTG06) 17:16	16:54 (WTG07) 16:59
19	06:11 20:54	06:40 20:20	07:10 19:30	07:22 (WTG03) 07:32	18:33 (WTG06) 17:15	16:46 (WTG07) 17:00
20	06:12 20:53	06:41 20:19	07:11 19:29	07:33 (WTG03) 18:54	18:34 (WTG06) 17:15	16:47 (WTG07) 17:00
21	06:13 20:52	06:42 20:18	07:12 19:27	07:33 (WTG03) 18:52	18:34 (WTG06) 17:14	16:52 (WTG07) 16:59
22	06:13 20:52	06:43 20:17	07:13 19:25	07:24 (WTG03) 07:34	18:33 (WTG06) 17:13	16:49 (WTG07) 16:59
23	06:14 20:51	06:44 20:16	07:14 19:23	07:33 (WTG03) 18:51	18:33 (WTG06) 17:12	17:00
24	06:15 20:50	06:45 20:15	07:15 19:21	07:34 (WTG03) 18:51	18:33 (WTG06) 17:12	17:00
25	06:16 20:49	06:46 20:14	07:16 19:20	07:34 (WTG03) 18:51	18:33 (WTG06) 17:12	17:00
26	06:17 20:48	06:47 20:13	07:17 19:19	07:34 (WTG03) 18:51	18:33 (WTG06) 17:12	17:00
27	06:18 20:47	06:48 20:12	07:18 19:18	07:34 (WTG03) 18:51	18:33 (WTG06) 17:12	17:00
28	06:19 20:46	06:49 20:11	07:19 19:17	07:34 (WTG03) 18:51	18:33 (WTG06) 17:12	17:00
29	06:20 20:46	06:50 20:10	07:20 19:16	07:34 (WTG03) 18:51	18:33 (WTG06) 17:12	17:00
30	06:21 20:45	06:51 20:09	07:21 19:15	07:34 (WTG03) 18:51	18:33 (WTG06) 17:12	17:00
31	06:21 20:43	06:52 20:08	07:22 19:14	07:34 (WTG03) 18:51	18:33 (WTG06) 17:12	17:00
Potential sun hours	457	427	375	346	299	289
Total, worst case	5		590	219	102	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

Project:

Ittiri_RWE_26_05_20_GF

Licensed user:

I.A.T. Consulenza e progetti S.r.l.
 Via Santa Margherita 4
 IT-09124 Cagliari
 +39 070 658297
 Giuseppe Frongia / direttore@iatprogetti.it
 Calculated:
 25/06/2021 14:20/3.4.415

SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_29 - Struttura megalitica rettangolare
 Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December	
1	07:50 17:09	07:37 17:43	07:02 18:17	07:12 19:50	06:26 20:21	05:58 20:50	20:01 (WTG03) 20:25 (WTG03)	05:59 21:01	20:09 (WTG03) 20:32 (WTG03)	06:22 20:42	06:52 20:00	07:22 19:10	06:55 17:24
2	07:50 17:10	07:36 17:44	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	20:02 (WTG03) 20:26 (WTG03)	05:59 21:01	20:09 (WTG03) 20:32 (WTG03)	06:23 20:41	06:53 19:58	07:23 19:08	06:56 17:23
3	07:50 17:11	07:35 17:46	06:59 18:19	07:08 19:52	06:24 20:23	05:57 20:51	20:03 (WTG03) 20:27 (WTG03)	06:00 21:01	20:09 (WTG03) 20:32 (WTG03)	06:24 20:40	06:54 19:57	07:24 19:07	06:58 17:22
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24	05:57 20:52	20:02 (WTG03) 20:27 (WTG03)	06:00 21:00	20:09 (WTG03) 20:33 (WTG03)	06:25 20:39	06:55 19:55	07:25 19:05	06:59 17:21
5	07:50 17:13	07:33 17:48	06:55 18:21	07:05 19:54	06:21 20:25	05:57 20:53	20:03 (WTG03) 20:27 (WTG03)	06:01 21:00	20:09 (WTG03) 20:33 (WTG03)	06:26 20:38	06:56 19:53	07:26 19:03	07:00 16:59
6	07:50 17:14	07:32 17:49	06:54 18:22	07:03 19:55	06:20 20:26	05:56 20:54	20:03 (WTG03) 20:27 (WTG03)	06:01 21:00	20:09 (WTG03) 20:34 (WTG03)	06:27 20:37	06:57 19:52	07:27 19:02	07:01 16:59
7	07:50 17:15	07:31 17:51	06:52 18:23	07:02 19:56	06:19 20:27	05:56 20:54	20:04 (WTG03) 20:28 (WTG03)	06:02 21:00	20:09 (WTG03) 20:33 (WTG03)	06:28 20:36	06:58 19:50	07:28 19:00	07:02 16:59
8	07:50 17:16	07:30 17:52	06:51 18:24	07:00 19:57	06:18 20:28	05:56 20:55	20:03 (WTG03) 20:27 (WTG03)	06:03 20:59	20:09 (WTG03) 20:34 (WTG03)	06:29 20:34	06:59 19:48	07:29 18:59	07:03 16:59
9	07:50 17:17	07:29 17:53	06:49 18:26	06:59 19:58	06:17 20:29	05:56 20:55	20:04 (WTG03) 20:27 (WTG03)	06:03 20:59	20:10 (WTG03) 20:34 (WTG03)	06:30 20:33	07:00 19:47	07:30 18:57	07:05 16:59
10	07:50 17:18	07:27 17:54	06:48 18:27	06:57 19:59	06:16 20:30	05:55 20:56	20:04 (WTG03) 20:27 (WTG03)	06:04 20:59	20:09 (WTG03) 20:33 (WTG03)	06:31 20:32	07:01 19:45	07:31 18:55	07:06 16:59
11	07:49 17:19	07:26 17:55	06:46 18:28	06:55 20:00	06:15 20:31	05:55 20:56	20:04 (WTG03) 20:28 (WTG03)	06:05 20:58	20:10 (WTG03) 20:33 (WTG03)	06:32 20:31	07:02 19:44	07:32 18:54	07:07 16:59
12	07:49 17:20	07:25 17:57	06:44 18:29	06:54 20:01	06:14 20:32	05:55 20:57	20:05 (WTG03) 20:28 (WTG03)	06:05 20:58	20:10 (WTG03) 20:33 (WTG03)	06:33 20:29	07:03 19:42	07:33 18:52	07:08 16:59
13	07:49 17:21	07:24 17:58	06:43 18:30	06:52 20:02	06:13 20:33	05:55 20:57	20:05 (WTG03) 20:28 (WTG03)	06:06 20:57	20:10 (WTG03) 20:32 (WTG03)	06:34 20:28	07:04 19:40	07:34 18:51	07:09 16:59
14	07:49 17:22	07:23 17:59	06:41 18:31	06:51 20:03	06:12 20:34	05:55 20:58	20:06 (WTG03) 20:28 (WTG03)	06:07 20:57	20:10 (WTG03) 20:32 (WTG03)	06:35 20:27	07:05 19:39	07:35 18:49	07:10 16:59
15	07:48 17:23	07:21 18:00	06:40 18:32	06:49 20:04	06:11 20:35	05:55 20:58	20:06 (WTG03) 20:28 (WTG03)	06:08 20:56	20:11 (WTG03) 20:32 (WTG03)	06:36 20:25	07:06 19:37	07:36 18:48	07:12 16:59
16	07:48 17:24	07:20 18:01	06:38 18:33	06:48 20:06	06:10 20:36	05:55 20:59	20:06 (WTG03) 20:28 (WTG03)	06:08 20:56	20:11 (WTG03) 20:31 (WTG03)	06:37 20:24	07:07 19:35	07:37 18:46	07:13 16:59
17	07:47 17:25	07:19 18:03	06:36 18:34	06:46 20:07	06:09 20:37	05:55 20:59	20:09 (WTG03) 20:13 (WTG03)	06:09 20:55	20:11 (WTG03) 20:30 (WTG03)	06:38 20:22	07:08 19:33	07:38 18:45	07:14 16:59
18	07:47 17:26	07:17 18:04	06:35 18:35	06:45 20:08	06:08 20:38	05:55 20:59	20:07 (WTG03) 20:14 (WTG03)	06:10 20:54	20:11 (WTG03) 20:30 (WTG03)	06:39 20:21	07:09 19:32	07:39 18:43	07:15 16:59
19	07:46 17:28	07:16 18:05	06:33 18:36	06:43 20:09	06:07 20:39	05:55 21:00	20:05 (WTG03) 20:15 (WTG03)	06:11 21:00	20:12 (WTG03) 20:29 (WTG03)	06:40 20:20	07:10 19:30	07:41 18:42	07:16 16:59
20	07:46 17:29	07:15 18:06	06:31 18:37	06:42 20:10	06:06 20:40	05:55 21:01	20:04 (WTG03) 20:16 (WTG03)	06:12 21:00	20:12 (WTG03) 20:29 (WTG03)	06:41 20:18	07:11 19:28	07:42 18:40	07:17 16:59
21	07:45 17:30	07:13 18:07	06:30 18:38	06:40 20:11	06:05 20:41	05:55 21:01	20:04 (WTG03) 20:17 (WTG03)	06:12 21:00	20:13 (WTG03) 20:28 (WTG03)	06:42 20:17	07:12 19:27	07:43 18:39	07:19 16:59
22	07:45 17:31	07:12 18:09	06:28 18:39	06:39 20:12	06:04 20:42	05:56 21:01	20:03 (WTG03) 20:18 (WTG03)	06:13 21:00	20:13 (WTG03) 20:27 (WTG03)	06:43 20:15	07:13 19:25	07:44 18:37	07:20 16:59
23	07:44 17:32	07:10 18:10	06:26 18:41	06:37 20:13	06:04 20:43	05:56 21:01	20:02 (WTG03) 20:18 (WTG03)	06:14 21:01	20:14 (WTG03) 20:26 (WTG03)	06:44 20:14	07:14 19:23	07:45 18:36	07:21 16:59
24	07:43 17:33	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01	20:03 (WTG03) 20:20 (WTG03)	06:15 21:01	20:15 (WTG03) 20:26 (WTG03)	06:45 20:12	07:15 19:22	07:46 18:35	07:22 16:59
25	07:43 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:02 20:44	05:56 21:01	20:02 (WTG03) 20:20 (WTG03)	06:16 20:49	20:16 (WTG03) 20:25 (WTG03)	06:46 20:11	07:16 19:20	07:47 18:33	07:23 16:59
26	07:42 17:36	07:06 18:13	06:21 18:44	06:33 20:16	06:02 20:45	05:57 21:01	20:01 (WTG03) 20:20 (WTG03)	06:17 21:01	20:18 (WTG03) 20:24 (WTG03)	06:47 20:09	07:17 19:18	07:48 18:32	07:24 16:59
27	07:41 17:37	07:05 18:14	06:20 18:45	06:32 20:17	06:01 20:46	05:57 21:01	20:02 (WTG03) 20:22 (WTG03)	06:18 21:01	20:21 (WTG03) 20:24 (WTG03)	06:48 20:08	07:18 19:17	07:49 18:30	07:25 16:59
28	07:40 17:38	07:03 18:15	06:18 18:46	06:30 20:18	06:00 20:47	05:58 21:01	20:01 (WTG03) 20:22 (WTG03)	06:19 21:01	20:22 (WTG03) 20:31 (WTG03)	06:49 20:06	07:19 19:15	07:50 18:29	07:26 16:59
29	07:40 17:40	07:06 19:47	06:16 19:29	06:29 20:48	06:00 21:01	05:58 21:01	20:02 (WTG03) 20:23 (WTG03)	06:19 20:45	20:08 (WTG03) 20:31 (WTG03)	06:50 20:05	07:20 19:13	07:51 18:28	07:27 16:59
30	07:39 17:41	07:15 19:48	06:28 19:20	06:59 20:20	06:59 20:49	05:58 21:01	20:01 (WTG03) 20:24 (WTG03)	06:20 20:44	20:09 (WTG03) 20:32 (WTG03)	06:50 20:03	07:21 19:12	07:52 18:27	07:28 16:59
31	07:38 17:42	07:13 19:49	06:27 19:19	06:58 20:49	06:58 20:49	05:59 20:49	20:02 (WTG03) 20:25 (WTG03)	06:21 20:43	20:03 (WTG03)	06:51 20:01	07:22 19:11	07:53 18:25	07:29 16:59
Potential sun hours	299	298	370	398	447	451	457	427	375	346	299	289	
Total, worst case					239	679	512						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_3 - Torre e cortine murarie
 Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June								
1	07:50	11:01 (WTG06)	07:37	11:17 (WTG06)	07:02	11:48 (WTG06)	07:12	06:27	05:58	20:21 (ME_5)				
	17:10	246	15:07 (WTG06)	17:43	235	15:12 (WTG06)	18:17	184	14:52 (WTG06)	19:50	20:21	05:58	5	20:26 (ME_5)
2	07:50	11:01 (WTG06)	07:36	11:18 (WTG06)	07:00	11:51 (WTG06)	07:10	06:25	05:58	20:20 (ME_5)				
	17:10	247	15:08 (WTG06)	17:45	234	15:12 (WTG06)	18:18	179	14:50 (WTG06)	19:51	20:22	05:58	6	20:26 (ME_5)
3	07:50	11:02 (WTG06)	07:35	11:18 (WTG06)	06:59	11:55 (WTG06)	07:08	06:24	05:58	20:20 (ME_5)				
	17:11	246	15:08 (WTG06)	17:46	234	15:12 (WTG06)	18:19	174	14:49 (WTG06)	19:52	20:23	05:57	7	20:27 (ME_5)
4	07:50	11:02 (WTG06)	07:34	11:19 (WTG06)	06:57	12:00 (WTG06)	07:07	06:23	05:57	20:21 (ME_5)				
	17:12	247	15:09 (WTG06)	17:47	233	15:12 (WTG06)	18:20	167	14:47 (WTG06)	19:53	20:24	05:57	7	20:28 (ME_5)
5	07:50	11:03 (WTG06)	07:33	11:19 (WTG06)	06:56	12:05 (WTG06)	07:05	06:22	05:57	20:20 (ME_5)				
	17:13	246	15:09 (WTG06)	17:48	233	15:12 (WTG06)	18:21	159	14:44 (WTG06)	19:54	20:25	05:56	8	20:28 (ME_5)
6	07:50	11:04 (WTG06)	07:32	11:20 (WTG06)	06:54	12:13 (WTG06)	07:04	06:20	05:56	20:21 (ME_5)				
	17:14	245	15:09 (WTG06)	17:49	231	15:11 (WTG06)	18:22	150	14:43 (WTG06)	19:55	20:26	05:56	8	20:29 (ME_5)
7	07:50	11:04 (WTG06)	07:31	11:21 (WTG06)	06:53	12:23 (WTG06)	07:02	06:19	05:56	20:21 (ME_5)				
	17:15	246	15:10 (WTG06)	17:51	230	15:11 (WTG06)	18:24	137	14:40 (WTG06)	19:56	20:27	05:56	9	20:30 (ME_5)
8	07:50	11:05 (WTG06)	07:30	11:21 (WTG06)	06:51	12:36 (WTG06)	07:00	06:18	05:56	20:22 (ME_5)				
	17:16	245	15:10 (WTG06)	17:52	229	15:10 (WTG06)	18:25	122	14:38 (WTG06)	19:57	20:28	05:55	8	20:30 (ME_5)
9	07:50	11:06 (WTG06)	07:29	11:22 (WTG06)	06:49	12:50 (WTG06)	06:59	06:17	05:56	20:21 (ME_5)				
	17:17	245	15:11 (WTG06)	17:53	228	15:10 (WTG06)	18:26	105	14:35 (WTG06)	19:58	20:29	05:56	9	20:30 (ME_5)
10	07:50	11:05 (WTG06)	07:28	11:23 (WTG06)	06:48	13:03 (WTG06)	06:57	06:16	05:56	20:22 (ME_5)				
	17:18	246	15:11 (WTG06)	17:54	226	15:09 (WTG06)	18:27	89	14:32 (WTG06)	19:59	20:30	05:55	9	20:31 (ME_5)
11	07:50	11:06 (WTG06)	07:26	11:23 (WTG06)	06:46	13:15 (WTG06)	06:56	06:15	05:55	20:22 (ME_5)				
	17:19	245	15:11 (WTG06)	17:56	226	15:09 (WTG06)	18:28	74	14:29 (WTG06)	20:01	20:31	05:55	9	20:31 (ME_5)
12	07:49	11:07 (WTG06)	07:25	11:24 (WTG06)	06:45	13:26 (WTG06)	06:54	06:14	05:55	20:22 (ME_5)				
	17:20	245	15:12 (WTG06)	17:57	225	15:09 (WTG06)	18:29	58	14:24 (WTG06)	20:02	20:32	05:55	10	20:32 (ME_5)
13	07:49	11:07 (WTG06)	07:24	11:25 (WTG06)	06:43	13:39 (WTG06)	06:53	06:13	05:55	20:23 (ME_5)				
	17:21	244	15:11 (WTG06)	17:58	222	15:07 (WTG06)	18:30	39	14:18 (WTG06)	20:03	20:33	05:55	9	20:32 (ME_5)
14	07:49	11:08 (WTG06)	07:23	11:26 (WTG06)	06:41	14:01 (WTG06)	06:51	06:12	05:55	20:23 (ME_5)				
	17:22	244	15:12 (WTG06)	17:59	221	15:07 (WTG06)	18:31	20:04	05:55	20:23 (ME_5)				
15	07:48	11:08 (WTG06)	07:21	11:27 (WTG06)	06:40	14:14 (WTG06)	06:49	06:11	05:55	20:23 (ME_5)				
	17:23	244	15:12 (WTG06)	18:00	220	15:07 (WTG06)	18:32	20:05	05:55	20:23 (ME_5)				
16	07:48	11:09 (WTG06)	07:20	11:27 (WTG06)	06:38	14:29 (WTG06)	06:48	06:10	05:55	20:24 (ME_5)				
	17:24	243	15:12 (WTG06)	18:02	218	15:05 (WTG06)	18:33	20:06	05:55	20:24 (ME_5)				
17	07:48	11:10 (WTG06)	07:19	11:28 (WTG06)	06:36	14:42 (WTG06)	06:46	06:09	05:55	20:24 (ME_5)				
	17:25	243	15:13 (WTG06)	18:03	217	15:05 (WTG06)	18:34	20:07	05:55	20:24 (ME_5)				
18	07:47	11:10 (WTG06)	07:18	11:30 (WTG06)	06:35	14:56 (WTG06)	06:45	06:08	05:55	20:24 (ME_5)				
	17:27	243	15:13 (WTG06)	18:04	214	15:04 (WTG06)	18:35	20:08	05:55	20:24 (ME_5)				
19	07:47	11:10 (WTG06)	07:16	11:30 (WTG06)	06:33	15:10 (WTG06)	06:43	06:07	05:55	20:24 (ME_5)				
	17:28	242	15:12 (WTG06)	18:05	213	15:03 (WTG06)	18:37	20:09	05:55	20:24 (ME_5)				
20	07:46	11:11 (WTG06)	07:15	11:32 (WTG06)	06:32	15:24 (WTG06)	06:42	06:06	05:55	20:25 (ME_5)				
	17:29	242	15:13 (WTG06)	18:06	210	15:02 (WTG06)	18:38	20:10	05:55	20:25 (ME_5)				
21	07:46	11:11 (WTG06)	07:13	11:33 (WTG06)	06:30	15:37 (WTG06)	06:40	06:05	05:56	20:25 (ME_5)				
	17:30	242	15:13 (WTG06)	18:08	209	15:02 (WTG06)	18:39	20:11	05:56	20:25 (ME_5)				
22	07:45	11:11 (WTG06)	07:12	11:34 (WTG06)	06:28	15:50 (WTG06)	06:39	06:05	05:56	20:25 (ME_5)				
	17:31	242	15:13 (WTG06)	18:09	206	15:00 (WTG06)	18:40	20:12	05:56	20:25 (ME_5)				
23	07:44	11:12 (WTG06)	07:11	11:36 (WTG06)	06:27	16:03 (WTG06)	06:38	06:04	05:56	20:25 (ME_5)				
	17:32	241	15:13 (WTG06)	18:10	204	15:00 (WTG06)	18:41	20:13	05:56	20:25 (ME_5)				
24	07:44	11:13 (WTG06)	07:09	11:37 (WTG06)	06:25	16:17 (WTG06)	06:36	06:03	05:56	20:26 (ME_5)				
	17:34	240	15:13 (WTG06)	18:11	201	14:58 (WTG06)	18:42	20:14	05:56	20:26 (ME_5)				
25	07:43	11:13 (WTG06)	07:08	11:39 (WTG06)	06:23	16:31 (WTG06)	06:35	06:02	05:57	20:26 (ME_5)				
	17:35	240	15:13 (WTG06)	18:12	198	14:57 (WTG06)	18:43	20:15	05:57	20:26 (ME_5)				
26	07:42	11:13 (WTG06)	07:06	11:41 (WTG06)	06:22	16:45 (WTG06)	06:33	06:02	05:57	20:26 (ME_5)				
	17:36	240	15:13 (WTG06)	18:13	195	14:56 (WTG06)	18:44	20:16	05:57	20:26 (ME_5)				
27	07:41	11:15 (WTG06)	07:05	11:43 (WTG06)	06:20	16:58 (WTG06)	06:32	06:01	05:57	20:27 (ME_5)				
	17:37	239	15:14 (WTG06)	18:15	192	14:55 (WTG06)	18:45	20:17	05:57	20:27 (ME_5)				
28	07:41	11:15 (WTG06)	07:03	11:45 (WTG06)	06:18	17:10 (WTG06)	06:31	06:00	05:58	20:26 (ME_5)				
	17:38	238	15:13 (WTG06)	18:16	188	14:53 (WTG06)	18:46	20:18	05:58	20:26 (ME_5)				
29	07:40	11:15 (WTG06)			07:17		06:29	06:00	05:58	20:26 (ME_5)				
	17:40	238	15:13 (WTG06)		19:47		20:19	20:48	05:58	20:26 (ME_5)				
30	07:39	11:16 (WTG06)			07:15		06:28	05:59	05:59	20:27 (ME_5)				
	17:41	237	15:13 (WTG06)		19:48		20:20	20:49	05:59	20:27 (ME_5)				
31	07:38	11:16 (WTG06)			07:13			05:59		20:27 (ME_5)				
	17:42	237	15:13 (WTG06)		19:49			20:49	05:59	20:27 (ME_5)				
Potential sun hours	299		298		370		398	447	451	271				
Total, worst case	7528		6092		1637			14						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_3 - Torre e cortine murarie
 Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	July	August	September	October	November	December				
1	05:59 21:01	20:26 (ME_5) 20:36 (ME_5)	06:22 20:43	06:53 20:00	07:22 19:10	14:11 (WTG06) 15:01 (WTG06)	06:55 17:24	10:52 (WTG06) 14:39 (WTG06)	07:30 17:00	10:48 (WTG06) 14:53 (WTG06)
2	05:59 21:01	20:27 (ME_5) 20:36 (ME_5)	06:23 20:41	06:54 19:58	07:23 19:09	13:59 (WTG06) 15:06 (WTG06)	06:57 17:23	10:51 (WTG06) 14:39 (WTG06)	07:31 17:00	10:48 (WTG06) 14:54 (WTG06)
3	06:00 21:01	20:26 (ME_5) 20:35 (ME_5)	06:24 20:40	06:55 19:57	07:24 19:07	13:47 (WTG06) 15:09 (WTG06)	06:58 17:22	10:50 (WTG06) 14:40 (WTG06)	07:32 17:00	10:49 (WTG06) 14:54 (WTG06)
4	06:00 21:01	20:27 (ME_5) 20:36 (ME_5)	06:25 20:39	06:55 19:55	07:25 19:05	13:34 (WTG06) 15:12 (WTG06)	06:59 17:21	10:50 (WTG06) 14:40 (WTG06)	07:33 17:00	10:49 (WTG06) 14:54 (WTG06)
5	06:01 21:00	20:27 (ME_5) 20:35 (ME_5)	06:26 20:38	06:56 19:54	07:26 19:04	13:20 (WTG06) 15:14 (WTG06)	07:00 17:20	10:50 (WTG06) 14:41 (WTG06)	07:34 17:00	10:49 (WTG06) 14:55 (WTG06)
6	06:02 21:00	20:27 (ME_5) 20:35 (ME_5)	06:27 20:37	06:57 19:52	07:27 19:02	13:06 (WTG06) 15:16 (WTG06)	07:01 17:18	10:49 (WTG06) 14:41 (WTG06)	07:35 16:59	10:50 (WTG06) 14:55 (WTG06)
7	06:02 21:00	20:28 (ME_5) 20:35 (ME_5)	06:28 20:36	06:58 19:50	07:28 19:00	12:54 (WTG06) 15:18 (WTG06)	07:02 17:17	10:49 (WTG06) 14:42 (WTG06)	07:36 16:59	10:50 (WTG06) 14:56 (WTG06)
8	06:03 21:00	20:27 (ME_5) 20:34 (ME_5)	06:29 20:35	06:59 19:49	07:29 18:59	12:45 (WTG06) 15:19 (WTG06)	07:04 17:16	10:48 (WTG06) 14:42 (WTG06)	07:36 16:59	10:50 (WTG06) 14:57 (WTG06)
9	06:03 20:59	20:28 (ME_5) 20:34 (ME_5)	06:30 20:33	07:00 19:47	07:30 18:57	12:37 (WTG06) 15:21 (WTG06)	07:05 17:15	10:48 (WTG06) 14:43 (WTG06)	07:37 16:59	10:51 (WTG06) 14:57 (WTG06)
10	06:04 20:59	20:27 (ME_5) 20:33 (ME_5)	06:31 20:32	07:01 19:45	07:31 18:56	12:32 (WTG06) 15:22 (WTG06)	07:06 17:14	10:48 (WTG06) 14:43 (WTG06)	07:38 16:59	10:51 (WTG06) 14:58 (WTG06)
11	06:05 20:58	20:28 (ME_5) 20:33 (ME_5)	06:32 20:31	07:02 19:44	07:32 18:54	12:27 (WTG06) 15:23 (WTG06)	07:07 17:13	10:47 (WTG06) 14:44 (WTG06)	07:39 16:59	10:52 (WTG06) 14:58 (WTG06)
12	06:06 20:58	20:28 (ME_5) 20:33 (ME_5)	06:33 20:29	07:03 19:42	07:33 18:52	12:23 (WTG06) 15:24 (WTG06)	07:08 17:12	10:48 (WTG06) 14:45 (WTG06)	07:40 17:00	10:52 (WTG06) 14:58 (WTG06)
13	06:06 20:58	20:29 (ME_5) 20:33 (ME_5)	06:34 20:28	07:04 19:40	07:34 18:51	12:19 (WTG06) 15:25 (WTG06)	07:09 17:11	10:47 (WTG06) 14:45 (WTG06)	07:41 17:00	10:52 (WTG06) 14:59 (WTG06)
14	06:07 20:57	20:29 (ME_5) 20:32 (ME_5)	06:35 20:27	07:05 19:39	07:35 18:49	12:17 (WTG06) 15:27 (WTG06)	07:11 17:10	10:47 (WTG06) 14:45 (WTG06)	07:41 17:00	10:53 (WTG06) 15:00 (WTG06)
15	06:08 20:56	20:29 (ME_5) 20:32 (ME_5)	06:36 20:25	07:06 19:37	07:36 18:48	12:15 (WTG06) 15:28 (WTG06)	07:12 17:10	10:47 (WTG06) 14:46 (WTG06)	07:42 17:00	10:54 (WTG06) 15:00 (WTG06)
16	06:09 20:56	20:30 (ME_5) 20:32 (ME_5)	06:37 20:24	07:07 19:35	07:37 18:46	12:12 (WTG06) 15:28 (WTG06)	07:13 17:09	10:47 (WTG06) 14:47 (WTG06)	07:43 17:00	10:53 (WTG06) 15:00 (WTG06)
17	06:09 20:55	20:32 (ME_5) 20:23	06:38 20:23	07:08 19:34	07:39 18:45	12:10 (WTG06) 15:29 (WTG06)	07:14 17:08	10:47 (WTG06) 14:47 (WTG06)	07:44 17:01	10:54 (WTG06) 15:01 (WTG06)
18	06:10 20:55	20:29 (ME_5) 20:21	06:39 19:32	07:09 19:32	07:40 18:43	12:08 (WTG06) 15:30 (WTG06)	07:15 17:07	10:47 (WTG06) 14:47 (WTG06)	07:44 17:01	10:54 (WTG06) 15:01 (WTG06)
19	06:11 20:54	20:28 (ME_5) 20:20	06:40 19:30	07:10 19:30	07:41 18:42	12:06 (WTG06) 15:30 (WTG06)	07:16 17:07	10:46 (WTG06) 14:47 (WTG06)	07:45 17:01	10:55 (WTG06) 15:02 (WTG06)
20	06:12 20:53	20:27 (ME_5) 20:18	06:41 19:29	07:11 19:30	07:42 18:40	12:04 (WTG06) 15:31 (WTG06)	07:18 17:06	10:46 (WTG06) 14:48 (WTG06)	07:45 17:02	10:56 (WTG06) 15:03 (WTG06)
21	06:13 20:52	20:28 (ME_5) 20:17	06:42 19:27	07:12 19:30	07:43 18:39	12:02 (WTG06) 15:32 (WTG06)	07:19 17:05	10:47 (WTG06) 14:49 (WTG06)	07:46 17:02	10:56 (WTG06) 15:03 (WTG06)
22	06:13 20:52	20:28 (ME_5) 20:15	06:43 19:25	07:13 19:30	07:44 18:37	12:02 (WTG06) 15:33 (WTG06)	07:20 17:05	10:47 (WTG06) 14:49 (WTG06)	07:47 17:03	10:57 (WTG06) 15:04 (WTG06)
23	06:14 20:51	20:29 (ME_5) 20:14	06:44 19:24	07:14 19:30	07:45 18:36	12:00 (WTG06) 15:34 (WTG06)	07:21 17:04	10:47 (WTG06) 14:49 (WTG06)	07:47 17:03	10:57 (WTG06) 15:04 (WTG06)
24	06:15 20:50	20:30 (ME_5) 20:12	06:45 19:22	07:15 19:30	07:46 18:35	11:59 (WTG06) 15:34 (WTG06)	07:22 17:03	10:47 (WTG06) 14:50 (WTG06)	07:48 17:04	10:57 (WTG06) 15:04 (WTG06)
25	06:16 20:49	20:31 (ME_5) 20:11	06:46 19:20	07:16 19:30	07:47 17:33	10:58 (WTG06) 14:35 (WTG06)	07:23 17:03	10:47 (WTG06) 14:50 (WTG06)	07:48 17:04	10:58 (WTG06) 15:05 (WTG06)
26	06:17 20:48	20:32 (ME_5) 20:09	06:47 19:19	07:17 19:30	07:48 17:32	10:56 (WTG06) 14:35 (WTG06)	07:24 17:02	10:48 (WTG06) 14:51 (WTG06)	07:48 17:05	10:58 (WTG06) 15:05 (WTG06)
27	06:18 20:47	20:33 (ME_5) 20:08	06:48 19:17	07:18 19:30	07:49 17:31	10:56 (WTG06) 14:36 (WTG06)	07:25 17:02	10:48 (WTG06) 14:52 (WTG06)	07:49 17:06	10:58 (WTG06) 15:05 (WTG06)
28	06:19 20:47	20:34 (ME_5) 20:06	06:49 19:15	07:19 19:30	07:50 17:29	10:55 (WTG06) 14:37 (WTG06)	07:27 17:01	10:48 (WTG06) 14:52 (WTG06)	07:49 17:06	10:59 (WTG06) 15:06 (WTG06)
29	06:20 20:46	20:35 (ME_5) 20:05	06:50 19:14	07:20 19:30	07:51 17:28	10:54 (WTG06) 14:37 (WTG06)	07:28 17:01	10:48 (WTG06) 14:52 (WTG06)	07:49 17:07	11:00 (WTG06) 15:06 (WTG06)
30	06:21 20:45	20:36 (ME_5) 20:03	06:51 19:12	07:21 30	07:52 17:27	10:53 (WTG06) 14:38 (WTG06)	07:29 17:01	10:48 (WTG06) 14:53 (WTG06)	07:50 17:08	11:00 (WTG06) 15:07 (WTG06)
31	06:22 20:44	20:37 (ME_5) 20:02	06:52 19:14	07:22 30	07:53 17:25	10:52 (WTG06) 14:38 (WTG06)	07:30 17:01	10:48 (WTG06) 14:53 (WTG06)	07:51 17:09	11:00 (WTG06) 15:07 (WTG06)
Potential sun hours	457	427	375	346	299	289	247	289	247	15:07 (WTG06)
Total, worst case	101		30	5509	7139		7641			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_30 - Menhir Su Filighe

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June		
1	07:50 17:10	07:37 17:43	07:02 18:17	17:20 (WTG08) 17:52 (WTG08)	07:12 19:50	06:27 20:21	05:58 20:50	19:54 (WTG07) 20:26 (WTG07)
2	07:50 17:10	07:36 17:45	07:00 18:18	17:20 (WTG08) 17:51 (WTG08)	07:10 19:51	06:25 20:22	05:58 20:51	19:53 (WTG07) 20:26 (WTG07)
3	07:50 17:11	07:35 17:46	06:59 18:19	17:21 (WTG08) 17:50 (WTG08)	07:08 19:52	06:24 20:23	05:58 20:52	19:53 (WTG07) 20:27 (WTG07)
4	07:50 17:12	07:34 17:47	06:57 18:20	17:22 (WTG08) 17:48 (WTG08)	07:07 19:53	06:23 20:24	05:57 20:52	19:53 (WTG07) 20:28 (WTG07)
5	07:50 17:13	07:33 17:48	06:56 18:21	17:23 (WTG08) 17:46 (WTG08)	07:05 19:54	06:22 20:25	05:57 20:53	19:52 (WTG07) 20:28 (WTG07)
6	07:50 17:14	07:32 17:49	06:54 18:22	17:25 (WTG08) 17:45 (WTG08)	07:04 19:55	06:20 20:26	05:56 20:54	19:52 (WTG07) 20:29 (WTG07)
7	07:50 17:15	07:31 17:51	06:53 18:24	17:27 (WTG08) 17:42 (WTG08)	07:02 19:56	06:19 20:27	05:56 20:54	19:52 (WTG07) 20:30 (WTG07)
8	07:50 17:16	07:30 17:52	06:51 18:25	17:33 (WTG08) 17:37 (WTG08)	07:00 19:57	06:18 20:28	05:56 20:55	19:52 (WTG07) 20:30 (WTG07)
9	07:50 17:17	07:29 17:53	06:49 18:26	06:49 18:26	06:59 19:58	06:17 20:29	05:56 20:55	19:52 (WTG07) 20:30 (WTG07)
10	07:50 17:18	07:28 17:54	06:48 18:27	06:48 18:27	06:57 19:59	06:16 20:30	05:56 20:56	19:52 (WTG07) 20:31 (WTG07)
11	07:50 17:19	07:26 17:56	06:46 18:28	06:46 18:28	06:56 20:00	06:15 20:31	05:55 20:57	19:52 (WTG07) 20:31 (WTG07)
12	07:49 17:20	07:25 17:57	06:45 18:29	06:45 18:29	06:54 20:02	06:14 20:32	05:55 20:57	19:52 (WTG07) 20:32 (WTG07)
13	07:49 17:21	07:24 17:58	06:43 18:30	06:43 18:30	06:53 20:03	06:13 20:33	05:55 20:58	19:52 (WTG07) 20:32 (WTG07)
14	07:49 17:22	07:23 17:59	17:31 (WTG08) 17:37 (WTG08)	06:41 18:31	06:51 20:04	06:12 20:34	05:55 20:58	19:52 (WTG07) 20:33 (WTG07)
15	07:48 17:23	07:21 18:00	17:28 (WTG08) 17:38 (WTG08)	06:40 18:32	06:49 20:05	06:11 20:35	05:55 20:58	19:52 (WTG07) 20:33 (WTG07)
16	07:48 17:24	07:20 18:02	17:26 (WTG08) 17:39 (WTG08)	06:38 18:33	06:48 20:06	06:10 20:36	05:55 20:59	19:52 (WTG07) 20:33 (WTG07)
17	07:48 17:25	07:19 18:03	17:24 (WTG08) 17:41 (WTG08)	06:36 18:34	06:46 20:07	06:09 20:37	05:55 20:59	19:52 (WTG07) 20:34 (WTG07)
18	07:47 17:27	07:17 18:04	17:23 (WTG08) 17:42 (WTG08)	06:35 18:35	06:45 20:08	06:08 20:38	05:55 21:00	19:52 (WTG07) 20:34 (WTG07)
19	07:47 17:28	07:16 18:05	17:22 (WTG08) 17:43 (WTG08)	06:33 18:36	06:43 20:09	06:07 20:39	05:55 21:00	19:52 (WTG07) 20:34 (WTG07)
20	07:46 17:29	07:15 18:06	17:21 (WTG08) 17:45 (WTG08)	06:32 18:38	06:42 20:10	06:06 20:40	05:55 21:00	19:53 (WTG07) 20:35 (WTG07)
21	07:45 17:30	07:13 18:08	17:20 (WTG08) 17:45 (WTG08)	06:30 18:39	06:40 20:11	06:05 20:41	05:56 21:00	19:53 (WTG07) 20:35 (WTG07)
22	07:45 17:31	07:12 18:09	17:20 (WTG08) 17:47 (WTG08)	06:28 18:40	06:39 20:12	06:05 20:42	05:56 21:01	19:53 (WTG07) 20:35 (WTG07)
23	07:44 17:32	07:11 18:10	17:20 (WTG08) 17:49 (WTG08)	06:27 18:41	06:38 20:13	06:04 20:43	05:56 21:01	19:53 (WTG07) 20:35 (WTG07)
24	07:44 17:34	07:09 18:11	17:19 (WTG08) 17:49 (WTG08)	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01	19:54 (WTG07) 20:36 (WTG07)
25	07:43 17:35	07:08 18:12	17:19 (WTG08) 17:51 (WTG08)	06:23 18:43	06:35 20:15	06:02 20:45	05:57 21:01	19:54 (WTG07) 20:36 (WTG07)
26	07:42 17:36	07:06 18:13	17:19 (WTG08) 17:52 (WTG08)	06:22 18:44	06:33 20:16	06:02 20:45	05:57 21:01	19:54 (WTG07) 20:36 (WTG07)
27	07:41 17:37	07:05 18:15	17:19 (WTG08) 17:53 (WTG08)	06:20 18:45	06:32 20:17	06:01 20:46	05:57 21:01	19:55 (WTG07) 20:36 (WTG07)
28	07:41 17:38	07:03 18:16	17:19 (WTG08) 17:52 (WTG08)	06:18 18:46	06:31 20:18	06:00 20:47	05:58 21:01	19:55 (WTG07) 20:36 (WTG07)
29	07:40 17:40	07:00 18:16	17:19 (WTG08) 17:52 (WTG08)	06:17 18:46	06:29 20:19	06:00 20:48	05:58 21:01	19:55 (WTG07) 20:36 (WTG07)
30	07:39 17:41	07:00 18:16	17:19 (WTG08) 17:52 (WTG08)	06:16 18:46	06:28 20:20	06:00 20:49	05:58 21:01	19:55 (WTG07) 20:36 (WTG07)
31	07:38 17:42	07:00 18:16	17:19 (WTG08) 17:52 (WTG08)	06:15 18:46	06:27 20:21	06:00 20:50	05:58 21:01	19:55 (WTG07) 20:36 (WTG07)
Potential sun hours	299	298	353	370	398	447	451	1184
Total, worst case								

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_30 - Menhir Su Filighe
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July	August	September	October	November	December		
1	05:59	19:56 (WTG07)	06:22	06:53	07:22	06:55	07:30	
	21:01	39 20:35 (WTG07)	20:42	20:00	19:10	17:24	17:00	
2	05:59	19:57 (WTG07)	06:23	06:54	07:23	06:57	07:31	
	21:01	39 20:36 (WTG07)	20:41	19:58	19:09	17:23	17:00	
3	06:00	19:57 (WTG07)	06:24	06:55	07:24	06:58	07:32	
	21:01	38 20:35 (WTG07)	20:40	19:57	19:07	17:22	17:00	
4	06:00	19:57 (WTG07)	06:25	06:55	07:25	06:59	07:33	
	21:01	39 20:36 (WTG07)	20:39	19:55	19:05	17:21	17:00	
5	06:01	19:57 (WTG07)	06:26	06:56	07:26	07:00	07:34	
	21:00	38 20:35 (WTG07)	20:38	19:54	19:04	17:20	17:00	
6	06:02	19:58 (WTG07)	06:27	06:57	07:27	18:06 (WTG08)	07:01	07:35
	21:00	37 20:35 (WTG07)	20:37	19:52	19:02	10 18:16 (WTG08)	17:18	16:59
7	06:02	19:59 (WTG07)	06:28	06:58	07:28	18:02 (WTG08)	07:02	07:36
	21:00	36 20:35 (WTG07)	20:36	19:50	19:00	17 18:19 (WTG08)	17:17	16:59
8	06:03	19:59 (WTG07)	06:29	06:59	07:29	17:59 (WTG08)	07:04	07:36
	21:00	35 20:34 (WTG07)	20:34	19:49	18:59	22 18:21 (WTG08)	17:16	16:59
9	06:03	20:00 (WTG07)	06:30	07:00	07:30	17:57 (WTG08)	07:05	07:37
	20:59	34 20:34 (WTG07)	20:33	19:47	18:57	25 18:22 (WTG08)	17:15	16:59
10	06:04	20:01 (WTG07)	06:31	07:01	07:31	17:56 (WTG08)	07:06	07:38
	20:59	33 20:34 (WTG07)	20:32	19:45	18:56	27 18:23 (WTG08)	17:14	16:59
11	06:05	20:01 (WTG07)	06:32	07:02	07:32	17:54 (WTG08)	07:07	07:39
	20:58	32 20:33 (WTG07)	20:31	19:44	18:54	30 18:24 (WTG08)	17:13	16:59
12	06:06	20:02 (WTG07)	06:33	07:03	07:33	17:53 (WTG08)	07:08	07:40
	20:58	31 20:33 (WTG07)	20:29	19:42	18:52	31 18:24 (WTG08)	17:12	17:00
13	06:06	20:03 (WTG07)	06:34	07:04	07:34	17:52 (WTG08)	07:09	07:41
	20:57	30 20:33 (WTG07)	20:28	19:40	18:51	33 18:25 (WTG08)	17:11	17:00
14	06:07	20:03 (WTG07)	06:35	07:05	07:35	17:51 (WTG08)	07:11	07:41
	20:57	29 20:32 (WTG07)	20:27	19:39	18:49	34 18:25 (WTG08)	17:10	17:00
15	06:08	20:04 (WTG07)	06:36	07:06	07:36	17:52 (WTG08)	07:12	07:42
	20:56	28 20:32 (WTG07)	20:25	19:37	18:48	33 18:25 (WTG08)	17:10	17:00
16	06:09	20:05 (WTG07)	06:37	07:07	07:37	17:51 (WTG08)	07:13	07:43
	20:56	26 20:31 (WTG07)	20:24	19:35	18:46	33 18:24 (WTG08)	17:09	17:00
17	06:09	20:06 (WTG07)	06:38	07:08	07:39	17:51 (WTG08)	07:14	07:44
	20:55	25 20:31 (WTG07)	20:23	19:34	18:45	31 18:22 (WTG08)	17:08	17:01
18	06:10	20:07 (WTG07)	06:39	07:09	07:40	17:51 (WTG08)	07:15	07:44
	20:55	23 20:30 (WTG07)	20:21	19:32	18:43	29 18:20 (WTG08)	17:07	17:01
19	06:11	20:08 (WTG07)	06:40	07:10	07:41	17:51 (WTG08)	07:16	07:45
	20:54	21 20:29 (WTG07)	20:20	19:30	18:42	28 18:19 (WTG08)	17:07	17:01
20	06:12	20:10 (WTG07)	06:41	07:11	07:42	17:51 (WTG08)	07:18	07:45
	20:53	19 20:29 (WTG07)	20:18	19:29	18:40	26 18:17 (WTG08)	17:06	17:02
21	06:13	20:11 (WTG07)	06:42	07:12	07:43	17:51 (WTG08)	07:19	07:46
	20:52	17 20:28 (WTG07)	20:17	19:27	18:39	24 18:15 (WTG08)	17:05	17:02
22	06:13	20:13 (WTG07)	06:43	07:13	07:44	17:52 (WTG08)	07:20	07:46
	20:52	15 20:28 (WTG07)	20:15	19:25	18:37	23 18:15 (WTG08)	17:05	17:03
23	06:14	20:15 (WTG07)	06:44	07:14	07:45	17:53 (WTG08)	07:21	07:47
	20:51	11 20:26 (WTG07)	20:14	19:24	18:36	20 18:13 (WTG08)	17:04	17:03
24	06:15	20:19 (WTG07)	06:45	07:15	07:46	17:53 (WTG08)	07:22	07:47
	20:50	7 20:26 (WTG07)	20:12	19:22	18:35	19 18:12 (WTG08)	17:03	17:04
25	06:16		06:46	07:16	06:47	16:54 (WTG08)	07:23	07:48
	20:49		20:11	19:20	17:33	16 17:10 (WTG08)	17:03	17:04
26	06:17		06:47	07:17	06:48	16:56 (WTG08)	07:24	07:48
	20:48		20:09	19:18	17:32	12 17:08 (WTG08)	17:02	17:05
27	06:18		06:48	07:18	06:50	16:58 (WTG08)	07:25	07:49
	20:47		20:08	19:17	17:31	10 17:08 (WTG08)	17:02	17:06
28	06:19		06:49	07:19	06:51	17:01 (WTG08)	07:26	07:49
	20:46		20:06	19:15	17:29	5 17:06 (WTG08)	17:01	17:06
29	06:20		06:50	07:20	06:52		07:28	07:49
	20:46		20:05	19:13	17:28		17:01	17:07
30	06:21		06:51	07:21	06:53		07:29	07:50
	20:45		20:03	19:12	17:27		17:01	17:08
31	06:22		06:52		06:54			07:50
	20:44		20:02		17:25			17:09
Potential sun hours	457		427	375	346		299	289
Total, worst case		682			538			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_31 - Turracula Su Crabione

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May		June	
1	07:50	07:37	07:02	07:12	06:26		05:58	19:37 (WTG01)
	17:09	17:43	18:17	19:50	20:21		20:50	46 20:23 (WTG01)
2	07:50	07:36	07:00	07:10	06:25		05:58	19:37 (WTG01)
	17:10	17:44	18:18	19:51	20:22		20:51	47 20:24 (WTG01)
3	07:50	07:35	06:59	07:08	06:24		05:57	19:37 (WTG01)
	17:11	17:46	18:19	19:52	20:23		20:51	48 20:25 (WTG01)
4	07:50	07:34	06:57	07:07	06:23		05:57	19:36 (WTG01)
	17:12	17:47	18:20	19:53	20:24		20:52	49 20:25 (WTG01)
5	07:50	07:33	06:55	07:05	06:21	20:01 (WTG02)	05:57	19:37 (WTG01)
	17:13	17:48	18:21	19:54	20:25	1 20:02 (WTG02)	20:53	48 20:25 (WTG01)
6	07:50	07:32	06:54	07:03	06:20	19:59 (WTG02)	05:56	19:37 (WTG01)
	17:14	17:49	18:22	19:55	20:26	4 20:03 (WTG02)	20:53	49 20:26 (WTG01)
7	07:50	07:31	06:52	07:02	06:19	19:58 (WTG02)	05:56	19:37 (WTG01)
	17:15	17:51	18:23	19:56	20:27	6 20:04 (WTG02)	20:54	49 20:26 (WTG01)
8	07:50	07:30	06:51	07:00	06:18	19:56 (WTG02)	05:56	19:36 (WTG01)
	17:16	17:52	18:24	19:57	20:28	9 20:05 (WTG02)	20:55	50 20:26 (WTG01)
9	07:50	07:29	06:49	06:59	06:17	19:55 (WTG02)	05:55	19:37 (WTG01)
	17:17	17:53	18:26	19:58	20:29	11 20:06 (WTG02)	20:55	49 20:26 (WTG01)
10	07:50	07:27	06:48	06:57	06:16	19:54 (WTG02)	05:55	19:37 (WTG01)
	17:18	17:54	18:27	19:59	20:30	13 20:07 (WTG02)	20:56	50 20:27 (WTG01)
11	07:49	07:26	06:46	06:55	06:15	19:54 (WTG02)	05:55	19:37 (WTG01)
	17:19	17:55	18:28	20:00	20:31	13 20:07 (WTG02)	20:56	50 20:27 (WTG01)
12	07:49	07:25	06:44	06:54	06:14	19:54 (WTG02)	05:55	19:37 (WTG01)
	17:20	17:57	18:29	20:01	20:32	14 20:08 (WTG02)	20:57	51 20:28 (WTG01)
13	07:49	07:24	06:43	06:52	06:12	19:53 (WTG02)	05:55	19:37 (WTG01)
	17:21	17:58	18:30	20:02	20:33	16 20:09 (WTG02)	20:57	51 20:28 (WTG01)
14	07:49	07:22	06:41	06:51	06:11	19:53 (WTG02)	05:55	19:38 (WTG01)
	17:22	17:59	18:31	20:03	20:34	17 20:10 (WTG02)	20:58	50 20:28 (WTG01)
15	07:48	07:21	06:39	06:49	06:10	19:54 (WTG02)	05:55	19:38 (WTG01)
	17:23	18:00	18:32	20:04	20:35	18 20:12 (WTG02)	20:58	51 20:29 (WTG01)
16	07:48	07:20	06:38	06:48	06:10	19:51 (WTG01)	05:55	19:38 (WTG01)
	17:24	18:01	18:33	20:05	20:36	22 20:13 (WTG02)	20:59	51 20:29 (WTG01)
17	07:47	07:19	06:36	06:46	06:09	19:48 (WTG01)	05:55	19:38 (WTG01)
	17:25	18:03	18:34	20:07	20:37	25 20:13 (WTG02)	20:59	51 20:29 (WTG01)
18	07:47	07:17	06:35	06:45	06:08	19:46 (WTG01)	05:55	19:38 (WTG01)
	17:26	18:04	18:35	20:08	20:38	28 20:14 (WTG02)	20:59	51 20:29 (WTG01)
19	07:46	07:16	06:33	06:43	06:07	19:44 (WTG01)	05:55	19:38 (WTG01)
	17:28	18:05	18:36	20:09	20:39	31 20:15 (WTG02)	21:00	51 20:29 (WTG01)
20	07:46	07:15	06:31	06:42	06:06	19:43 (WTG01)	05:55	19:38 (WTG01)
	17:29	18:06	18:37	20:10	20:40	31 20:14 (WTG02)	21:00	51 20:29 (WTG01)
21	07:45	07:13	06:30	06:40	06:05	19:43 (WTG01)	05:55	19:39 (WTG01)
	17:30	18:07	18:38	20:11	20:41	33 20:16 (WTG01)	21:00	51 20:30 (WTG01)
22	07:45	07:12	06:28	06:39	06:04	19:42 (WTG01)	05:56	19:39 (WTG01)
	17:31	18:09	18:39	20:12	20:42	35 20:17 (WTG01)	21:00	51 20:30 (WTG01)
23	07:44	07:10	06:26	06:37	06:04	19:40 (WTG01)	05:56	19:39 (WTG01)
	17:32	18:10	18:40	20:13	20:43	38 20:18 (WTG01)	21:01	51 20:30 (WTG01)
24	07:43	07:09	06:25	06:36	06:03	19:40 (WTG01)	05:56	19:39 (WTG01)
	17:33	18:11	18:42	20:14	20:43	39 20:19 (WTG01)	21:01	51 20:30 (WTG01)
25	07:43	07:07	06:23	06:35	06:02	19:39 (WTG01)	05:56	19:40 (WTG01)
	17:35	18:12	18:43	20:15	20:44	41 20:20 (WTG01)	21:01	51 20:31 (WTG01)
26	07:42	07:06	06:21	06:33	06:02	19:38 (WTG01)	05:57	19:40 (WTG01)
	17:36	18:13	18:44	20:16	20:45	42 20:20 (WTG01)	21:01	51 20:31 (WTG01)
27	07:41	07:05	06:20	06:32	06:01	19:39 (WTG01)	05:57	19:40 (WTG01)
	17:37	18:14	18:45	20:17	20:46	42 20:21 (WTG01)	21:01	51 20:31 (WTG01)
28	07:40	07:03	06:18	06:30	06:00	19:38 (WTG01)	05:57	19:41 (WTG01)
	17:38	18:15	18:46	20:18	20:47	43 20:21 (WTG01)	21:01	50 20:31 (WTG01)
29	07:40		07:16	06:29	06:00	19:38 (WTG01)	05:58	19:41 (WTG01)
	17:39		19:47	20:19	20:48	44 20:22 (WTG01)	21:01	50 20:31 (WTG01)
30	07:39		07:15	06:28	05:59	19:37 (WTG01)	05:58	19:41 (WTG01)
	17:41		19:48	20:20	20:48	45 20:22 (WTG01)	21:01	51 20:32 (WTG01)
31	07:38		07:13		05:59	19:37 (WTG01)		
	17:42		19:49		20:49	46 20:23 (WTG01)		
Potential sun hours	299	298	370	398	447		451	
Total, worst case					707			1501

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_31 - Turracula Su Crabione

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	July	August	September	October	November	December			
1	05:59 21:01	19:41 (WTG01) 20:31 (WTG01)	06:22 20:42	15	20:04 (WTG02) 20:00	06:52 19:10	07:22 17:24	06:55 17:00	
2	05:59 21:01	19:42 (WTG01) 20:32 (WTG01)	06:23 20:41	13	20:05 (WTG02) 20:18 (WTG02)	06:53 19:58	07:23 19:08	06:56 17:23	07:30 17:00
3	06:00 21:01	19:42 (WTG01) 20:32 (WTG01)	06:24 20:40	12	20:05 (WTG02) 20:17 (WTG02)	06:54 19:57	07:24 19:07	06:57 17:22	07:31 17:00
4	06:00 21:00	19:43 (WTG01) 20:32 (WTG01)	06:25 20:39	10	20:06 (WTG02) 20:16 (WTG02)	06:55 19:55	07:25 19:05	06:59 17:20	07:32 17:00
5	06:01 21:00	19:42 (WTG01) 20:32 (WTG01)	06:26 20:38	8	20:07 (WTG02) 20:15 (WTG02)	06:56 19:53	07:26 19:03	07:00 17:19	07:33 16:59
6	06:01 21:00	19:43 (WTG01) 20:32 (WTG01)	06:27 20:37	6	20:08 (WTG02) 20:14 (WTG02)	06:57 19:52	07:27 19:02	07:01 17:18	07:34 16:59
7	06:02 21:00	19:43 (WTG01) 20:32 (WTG01)	06:28 20:35	4	20:09 (WTG02) 20:13 (WTG02)	06:58 19:50	07:28 19:00	07:02 17:17	07:35 16:59
8	06:03 20:59	19:44 (WTG01) 20:32 (WTG01)	06:29 20:34	1	20:11 (WTG02) 20:12 (WTG02)	06:59 19:48	07:29 18:59	07:03 17:16	07:36 16:59
9	06:03 20:59	19:44 (WTG01) 20:32 (WTG01)	06:30 20:33			07:00 19:47	07:30 18:57	07:05 17:15	07:37 16:59
10	06:04 20:59	19:44 (WTG01) 20:31 (WTG01)	06:31 20:32			07:01 19:45	07:31 18:55	07:06 17:14	07:38 16:59
11	06:05 20:58	19:45 (WTG01) 20:32 (WTG01)	06:32 20:31			07:02 19:43	07:32 18:54	07:07 17:13	07:39 16:59
12	06:05 20:58	19:46 (WTG01) 20:32 (WTG01)	06:33 20:29			07:03 19:42	07:33 18:52	07:08 17:12	07:40 16:59
13	06:06 20:57	19:45 (WTG01) 20:31 (WTG01)	06:34 20:28			07:04 19:40	07:34 18:51	07:09 17:11	07:40 16:59
14	06:07 20:57	19:46 (WTG01) 20:31 (WTG01)	06:35 20:27			07:05 19:38	07:35 18:49	07:10 17:10	07:41 17:00
15	06:08 20:56	19:47 (WTG01) 20:31 (WTG01)	06:36 20:25			07:06 19:37	07:36 18:48	07:12 17:09	07:42 17:00
16	06:08 20:56	19:48 (WTG01) 20:31 (WTG01)	06:37 20:24			07:07 19:35	07:37 18:46	07:13 17:09	07:43 17:00
17	06:09 20:55	19:48 (WTG01) 20:30 (WTG01)	06:38 20:22			07:08 19:33	07:38 18:45	07:14 17:08	07:43 17:00
18	06:10 20:54	19:48 (WTG01) 20:29 (WTG01)	06:39 20:21			07:09 19:32	07:39 18:43	07:15 17:07	07:44 17:01
19	06:11 20:54	19:49 (WTG01) 20:29 (WTG01)	06:40 20:20			07:10 19:30	07:40 18:42	07:16 17:06	07:45 17:01
20	06:12 20:53	19:50 (WTG01) 20:29 (WTG01)	06:41 20:18			07:11 19:28	07:42 18:40	07:17 17:06	07:45 17:02
21	06:12 20:52	19:51 (WTG01) 20:28 (WTG01)	06:42 20:17			07:12 19:27	07:43 18:39	07:18 17:05	07:46 17:02
22	06:13 20:51	19:52 (WTG01) 20:26 (WTG01)	06:43 20:15			07:13 19:25	07:44 18:37	07:20 17:04	07:46 17:03
23	06:14 20:51	19:53 (WTG01) 20:26 (WTG01)	06:44 20:14			07:14 19:23	07:45 18:36	07:21 17:04	07:47 17:03
24	06:15 20:50	19:54 (WTG01) 20:25 (WTG02)	06:45 20:12			07:15 19:22	07:46 18:34	07:22 17:03	07:47 17:04
25	06:16 20:49	19:56 (WTG01) 20:25 (WTG02)	06:46 20:11			07:16 19:20	06:47 17:33	07:23 17:03	07:48 17:04
26	06:17 20:48	19:58 (WTG01) 20:24 (WTG02)	06:47 20:09			07:17 19:18	06:48 17:32	07:24 17:02	07:48 17:05
27	06:18 20:47	20:00 (WTG01) 20:24 (WTG02)	06:47 20:08			07:18 19:17	06:49 17:30	07:25 17:02	07:48 17:05
28	06:19 20:46	20:03 (WTG01) 20:23 (WTG02)	06:48 20:06			07:19 19:15	06:51 17:29	07:26 17:01	07:49 17:06
29	06:19 20:45	20:04 (WTG02) 20:21 (WTG02)	06:49 20:05			07:20 19:13	06:52 17:28	07:27 17:01	07:49 17:07
30	06:20 20:44	20:04 (WTG02) 20:20 (WTG02)	06:50 20:03			07:21 19:12	06:53 17:26	07:28 17:01	07:49 17:08
31	06:21 20:43	20:04 (WTG02) 20:20 (WTG02)	06:51 20:01				06:54 17:25		07:50 17:08
Potential sun hours	457	427	375	346	299	289			
Total, worst case	1206	69							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_32 - Turricola

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January		February		March		April		May		June	
1	07:50		08:26 (WTG02)	07:37	08:02 (WTG01)	07:02	07:12	19:02 (WTG04)	06:27	05:58		
	17:09	43	09:09 (WTG02)	17:43	08:14 (WTG01)	18:17	19:50	27	19:29 (WTG04)	20:21	20:50	
2	07:50		08:26 (WTG02)	07:36	08:05 (WTG01)	07:00	07:10		19:02 (WTG04)	06:25	05:58	
	17:10	44	09:10 (WTG02)	17:44	08:12 (WTG01)	18:18	19:51	25	19:27 (WTG04)	20:22	20:51	
3	07:50		08:27 (WTG02)	07:35		06:59	07:08		19:04 (WTG04)	06:24	05:57	
	17:11	43	09:10 (WTG02)	17:46		18:19	19:52	23	19:27 (WTG04)	20:23	20:52	
4	07:50		08:28 (WTG02)	07:34		06:57	07:07		19:04 (WTG04)	06:23	05:57	
	17:12	42	09:10 (WTG02)	17:47		18:20	19:53	20	19:24 (WTG04)	20:24	20:52	
5	07:50		08:28 (WTG02)	07:33		06:56	07:05		19:06 (WTG04)	06:22	05:57	
	17:13	43	09:11 (WTG02)	17:48		18:21	19:54	16	19:22 (WTG04)	20:25	20:53	
6	07:50		08:29 (WTG02)	07:32		06:54	07:04		19:09 (WTG04)	06:20	05:56	
	17:14	42	09:11 (WTG02)	17:49		18:22	19:55	10	19:19 (WTG04)	20:26	20:54	
7	07:50		08:30 (WTG02)	07:31		06:52	07:02			06:19	05:56	
	17:15	41	09:11 (WTG02)	17:51		18:23	19:56			20:27	20:54	
8	07:50		08:31 (WTG02)	07:30		06:51	07:00			06:18	05:56	
	17:16	41	09:12 (WTG02)	17:52		18:25	19:57			20:28	20:55	
9	07:50		08:32 (WTG02)	07:29		06:49	06:59			06:17	05:56	
	17:17	40	09:12 (WTG02)	17:53		18:26	19:58			20:29	20:55	
10	07:50		08:32 (WTG02)	07:27		06:48	06:57			06:16	05:55	
	17:18	39	09:11 (WTG02)	17:54		18:27	19:59			20:30	20:56	
11	07:50		08:33 (WTG02)	07:26		06:46	06:56			06:15	05:55	
	17:19	38	09:11 (WTG02)	17:55		18:28	20:00			20:31	20:57	
12	07:49		08:34 (WTG02)	07:25		06:44	06:54			06:14	05:55	
	17:20	38	09:12 (WTG02)	17:57		18:29	20:01			20:32	20:57	
13	07:49		08:34 (WTG02)	07:24		06:43	06:52			06:13	05:55	
	17:21	37	09:11 (WTG02)	17:58		18:30	20:02			20:33	20:58	
14	07:49		08:35 (WTG02)	07:23		06:41	06:51			06:12	05:55	
	17:22	36	09:11 (WTG02)	17:59		18:31	20:04			20:34	20:58	
15	07:48		08:09 (WTG01)	07:21		06:40	06:49			06:11	05:55	
	17:23	35	09:10 (WTG02)	18:00		18:32	20:05			20:35	20:58	
16	07:48		08:09 (WTG01)	07:20		06:38	06:48			06:10	05:55	
	17:24	35	09:10 (WTG02)	18:02		18:33	20:06			20:36	20:59	
17	07:48		08:08 (WTG01)	07:19		06:36	06:46			06:09	05:55	
	17:25	35	09:09 (WTG02)	18:03		18:34	20:07			20:37	20:59	
18	07:47		08:08 (WTG01)	07:17		06:35	06:45			06:08	05:55	
	17:26	35	09:09 (WTG02)	18:04		18:35	20:08			20:38	20:59	
19	07:47		08:07 (WTG01)	07:16		06:33	06:43			06:07	05:55	
	17:28	34	09:08 (WTG02)	18:05		18:36	20:09			20:39	21:00	
20	07:46		08:07 (WTG01)	07:15		06:31	18:12 (WTG04)	06:42		06:06	05:55	
	17:29	33	09:08 (WTG02)	18:06		18:37	5	18:17 (WTG04)	20:10	20:40	21:00	
21	07:45		08:06 (WTG01)	07:13		06:30	18:09 (WTG04)	06:40		06:05	05:56	
	17:30	32	09:06 (WTG02)	18:07		18:39	8	18:17 (WTG04)	20:11	20:41	21:00	
22	07:45		08:05 (WTG01)	07:12		06:28	18:08 (WTG04)	06:39		06:04	05:56	
	17:31	29	09:04 (WTG02)	18:09		18:40	11	18:19 (WTG04)	20:12	20:42	21:01	
23	07:44		08:05 (WTG01)	07:11		06:26	18:06 (WTG04)	06:37		06:04	05:56	
	17:32	24	09:02 (WTG02)	18:10		18:41	14	18:20 (WTG04)	20:13	20:43	21:01	
24	07:44		08:04 (WTG01)	07:09		06:25	18:04 (WTG04)	06:36		06:03	05:56	
	17:33	13	08:17 (WTG01)	18:11		18:42	17	18:21 (WTG04)	20:14	20:44	21:01	
25	07:43		08:03 (WTG01)	07:08		06:23	18:04 (WTG04)	06:35		06:02	05:56	
	17:35	14	08:17 (WTG01)	18:12		18:43	18	18:22 (WTG04)	20:15	20:45	21:01	
26	07:42		08:02 (WTG01)	07:06		06:22	18:03 (WTG04)	06:33		06:02	05:57	
	17:36	15	08:17 (WTG01)	18:13		18:44	20	18:23 (WTG04)	20:16	20:45	21:01	
27	07:41		08:02 (WTG01)	07:05		06:20	18:02 (WTG04)	06:32		06:01	05:57	
	17:37	16	08:18 (WTG01)	18:14		18:45	22	18:24 (WTG04)	20:17	20:46	21:01	
28	07:41		08:01 (WTG01)	07:03		06:18	18:02 (WTG04)	06:30		06:00	05:58	
	17:38	16	08:17 (WTG01)	18:16		18:46	23	18:25 (WTG04)	20:18	20:47	21:01	
29	07:40		08:00 (WTG01)			07:17	19:02 (WTG04)	06:29		06:00	05:58	
	17:40	17	08:17 (WTG01)			19:47	24	19:26 (WTG04)	20:19	20:48	21:01	
30	07:39		08:00 (WTG01)			07:15	19:01 (WTG04)	06:28		05:59	05:58	
	17:41	16	08:16 (WTG01)			19:48	26	19:27 (WTG04)	20:20	20:49	21:01	
31	07:38		08:01 (WTG01)			07:13	19:02 (WTG04)			05:59		
	17:42	14	08:15 (WTG01)			19:49	26	19:28 (WTG04)		20:49		
Potential sun hours	299		298			370		398		447		451
Total, worst case	980		19			214		121				

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_32 - Turracula

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July	August	September	October	November	December		
1	05:59 21:01	06:22 20:42	06:52 20:00	07:22 19:10	06:55 17:24	07:30 17:00	38	08:15 (WTG02)
2	05:59 21:01	06:23 20:41	06:53 19:58	07:23 19:08	06:56 17:23	07:31 17:00	39	08:15 (WTG02) 08:54 (WTG02)
3	06:00 21:01	06:24 20:40	06:54 19:57	07:24 19:07	06:58 17:22	07:32 17:00	40	08:15 (WTG02) 08:55 (WTG02)
4	06:00 21:01	06:25 20:39	06:55 19:55	07:25 19:05	06:59 17:21	07:33 17:00	41	08:15 (WTG02) 08:56 (WTG02)
5	06:01 21:00	06:26 20:38	06:56 19:54	07:26 19:04	07:00 17:19	07:34 16:59	41	08:15 (WTG02) 08:56 (WTG02)
6	06:01 21:00	06:27 20:37	06:57 19:52	19:05 (WTG04) 19:15 (WTG04)	07:27 19:02	07:01 17:18	42	08:15 (WTG02) 08:57 (WTG02)
7	06:02 21:00	06:28 20:36	06:58 19:50	19:02 (WTG04) 19:18 (WTG04)	07:28 19:00	07:02 17:17	43	08:15 (WTG02) 08:58 (WTG02)
8	06:03 20:59	06:29 20:34	06:59 19:49	19:00 (WTG04) 19:19 (WTG04)	07:29 18:59	07:03 17:16	42	08:16 (WTG02) 08:58 (WTG02)
9	06:03 20:59	06:30 20:33	07:00 19:47	18:57 (WTG04) 19:20 (WTG04)	07:30 18:57	07:05 17:15	7	07:36 (WTG01) 07:43 (WTG01)
10	06:04 20:59	06:31 20:32	07:01 19:45	18:55 (WTG04) 19:20 (WTG04)	07:31 18:55	07:06 17:14	12	07:33 (WTG01) 07:45 (WTG01)
11	06:05 20:58	06:32 20:31	07:02 19:44	18:54 (WTG04) 19:21 (WTG04)	07:32 18:54	07:07 17:13	14	07:32 (WTG01) 07:46 (WTG01)
12	06:05 20:58	06:33 20:29	07:03 19:42	18:53 (WTG04) 19:20 (WTG04)	07:33 18:52	07:08 17:12	17	07:30 (WTG01) 07:47 (WTG01)
13	06:06 20:57	06:34 20:28	07:04 19:40	18:53 (WTG04) 19:18 (WTG04)	07:34 18:51	07:09 17:11	17	07:32 (WTG01) 07:49 (WTG01)
14	06:07 20:57	06:35 20:27	07:05 19:39	18:52 (WTG04) 19:16 (WTG04)	07:35 18:49	07:11 17:10	16	07:33 (WTG01) 07:49 (WTG01)
15	06:08 20:56	06:36 20:25	07:06 19:37	18:52 (WTG04) 19:15 (WTG04)	07:36 18:48	07:12 17:10	16	07:34 (WTG01) 07:50 (WTG01)
16	06:08 20:56	06:37 20:24	07:07 19:35	18:51 (WTG04) 19:13 (WTG04)	07:37 18:46	07:13 17:09	15	07:35 (WTG01) 07:50 (WTG01)
17	06:09 20:55	06:38 20:23	07:08 19:34	18:51 (WTG04) 19:11 (WTG04)	07:38 18:45	07:14 17:08	14	07:37 (WTG01) 07:51 (WTG01)
18	06:10 20:55	06:39 20:21	07:09 19:32	18:51 (WTG04) 19:10 (WTG04)	07:40 18:43	07:15 17:07	13	07:38 (WTG01) 07:51 (WTG01)
19	06:11 20:54	06:40 20:20	07:10 19:30	18:51 (WTG04) 19:08 (WTG04)	07:41 18:42	07:16 17:06	24	07:39 (WTG01) 08:36 (WTG02)
20	06:12 20:53	06:41 20:18	07:11 19:28	18:52 (WTG04) 19:07 (WTG04)	07:42 18:40	07:17 17:06	29	07:40 (WTG01) 08:39 (WTG02)
21	06:12 20:52	06:42 20:17	07:12 19:27	18:53 (WTG04) 19:05 (WTG04)	07:43 18:39	07:19 17:05	31	07:42 (WTG01) 08:42 (WTG02)
22	06:13 20:52	06:43 20:15	07:13 19:25	18:54 (WTG04) 19:03 (WTG04)	07:44 18:37	07:20 17:04	33	07:43 (WTG01) 08:44 (WTG02)
23	06:14 20:51	06:44 20:14	07:14 19:23	18:55 (WTG04) 19:02 (WTG04)	07:45 18:36	07:21 17:04	34	07:44 (WTG01) 08:45 (WTG02)
24	06:15 20:50	06:45 20:12	07:15 19:22	18:58 (WTG04) 19:00 (WTG04)	07:46 18:35	07:22 17:03	35	07:45 (WTG01) 08:46 (WTG02)
25	06:16 20:49	06:46 20:11	07:16 19:20	06:47 17:33	07:23 17:03	07:23 17:03	35	07:46 (WTG01) 08:47 (WTG02)
26	06:17 20:48	06:47 20:09	07:17 19:18	06:48 17:32	07:24 17:02	07:24 17:02	36	07:47 (WTG01) 08:48 (WTG02)
27	06:18 20:47	06:48 20:08	07:18 19:17	06:50 17:30	07:25 17:02	07:25 17:02	35	07:49 (WTG01) 08:50 (WTG02)
28	06:19 20:46	06:49 20:06	07:19 19:15	06:51 17:29	07:26 17:01	07:26 17:01	35	08:16 (WTG02) 08:51 (WTG02)
29	06:20 20:45	06:50 20:05	07:20 19:13	06:52 17:28	07:28 17:01	07:28 17:01	37	08:15 (WTG02) 08:52 (WTG02)
30	06:20 20:44	06:51 20:03	07:21 19:12	06:53 17:27	07:29 17:01	07:29 17:01	38	08:15 (WTG02) 08:53 (WTG02)
31	06:21 20:43	06:51 20:02		06:54 17:25				07:50 17:08
Potential sun hours	458	427	375	346	299	289		09:09 (WTG02)
Total, worst case			342		543		1339	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_33 - Nuraghe S'Ozzastrone

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June			
1	07:50	07:37	17:13 (ME_9)	07:02	07:56 (WTG07)	07:12	06:27	05:58	
	17:10	17:43	3 17:16 (ME_9)	18:17	40 08:36 (WTG07)	19:50	20:21	20:50	
2	07:50	07:36		07:00	07:55 (WTG07)	07:10	06:25	05:58	
	17:10	17:45		18:18	41 08:36 (WTG07)	19:51	20:22	20:51	
3	07:50	07:35		06:59	07:56 (WTG07)	07:09	06:24	05:58	
	17:11	17:46		18:19	40 08:36 (WTG07)	19:52	20:23	20:52	
4	07:50	07:34		06:57	07:56 (WTG07)	07:07	06:23	05:57	
	17:12	17:47		18:20	39 08:35 (WTG07)	19:53	20:24	20:52	
5	07:50	07:33		06:56	07:55 (WTG07)	07:05	06:22	05:57	
	17:13	17:48		18:21	38 08:33 (WTG07)	19:54	20:25	20:53	
6	07:50	07:32		06:54	07:56 (WTG07)	07:04	07:48 (WTG06)	06:21	05:57
	17:14	17:50		18:22	37 08:33 (WTG07)	19:55	14 08:02 (WTG06)	20:26	20:54
7	07:50	07:31		06:53	07:56 (WTG07)	07:02	07:45 (WTG06)	06:19	05:56
	17:15	17:51		18:24	36 08:32 (WTG07)	19:56	19 08:04 (WTG06)	20:28	20:54
8	07:50	07:30		06:51	07:58 (WTG07)	07:00	07:43 (WTG06)	06:18	05:56
	17:16	17:52		18:25	33 08:31 (WTG07)	19:57	23 08:06 (WTG06)	20:29	20:55
9	07:50	07:29		06:49	07:58 (WTG07)	06:59	07:41 (WTG06)	06:17	05:56
	17:17	17:53		18:26	31 08:29 (WTG07)	19:58	26 08:07 (WTG06)	20:30	20:56
10	07:50	07:28		06:48	07:59 (WTG07)	06:57	07:40 (WTG06)	06:16	05:56
	17:18	17:54		18:27	28 08:27 (WTG07)	20:00	28 08:08 (WTG06)	20:31	20:56
11	07:50	07:26		06:46	08:01 (WTG07)	06:56	07:38 (WTG06)	06:15	05:55
	17:19	17:56		18:28	24 08:25 (WTG07)	20:01	30 08:08 (WTG06)	20:32	20:57
12	07:49	07:25		06:45	08:03 (WTG07)	06:54	07:38 (WTG06)	06:14	05:55
	17:20	17:57		18:29	19 08:22 (WTG07)	20:02	31 08:09 (WTG06)	20:33	20:57
13	07:49	07:24		06:43	08:06 (WTG07)	06:53	07:37 (WTG06)	06:13	05:55
	17:21	17:58		18:30	13 08:19 (WTG07)	20:03	32 08:09 (WTG06)	20:34	20:58
14	07:49	07:23		06:41		06:51	07:37 (WTG06)	06:12	05:55
	17:22	17:59		18:31		20:04	32 08:09 (WTG06)	20:34	20:58
15	07:48	07:22	08:16 (WTG07)	06:40		06:50	07:36 (WTG06)	06:11	05:55
	17:23	18:01	4 08:20 (WTG07)	18:32		20:05	33 08:09 (WTG06)	20:35	20:59
16	07:48	07:20	08:09 (WTG07)	06:38		06:48	07:35 (WTG06)	06:10	05:55
	17:24	18:02	16 08:25 (WTG07)	18:33		20:06	33 08:08 (WTG06)	20:36	20:59
17	07:48	07:19	08:07 (WTG07)	06:37		06:46	07:35 (WTG06)	06:09	05:55
	17:26	18:03	21 08:28 (WTG07)	18:34		20:07	33 08:08 (WTG06)	20:37	20:59
18	07:47	07:18	08:05 (WTG07)	06:35		06:45	07:35 (WTG06)	06:08	05:55
	17:27	18:04	25 08:30 (WTG07)	18:36		20:08	33 08:08 (WTG06)	20:38	21:00
19	07:47	07:16	08:03 (WTG07)	06:33		06:43	07:35 (WTG06)	06:07	05:55
	17:28	18:05	28 08:31 (WTG07)	18:37		20:09	32 08:07 (WTG06)	20:39	21:00
20	07:46	07:15	08:02 (WTG07)	06:32		06:42	07:35 (WTG06)	06:06	05:56
	17:29	18:06	31 08:33 (WTG07)	18:38		20:10	32 08:07 (WTG06)	20:40	21:00
21	07:46	07:13	08:01 (WTG07)	06:30		06:41	07:35 (WTG06)	06:05	05:56
	17:30	18:08	33 08:34 (WTG07)	18:39		20:11	31 08:06 (WTG06)	20:41	21:00
22	07:45	07:12	07:59 (WTG07)	06:28		06:39	07:36 (WTG06)	06:05	05:56
	17:31	18:09	36 08:35 (WTG07)	18:40		20:12	29 08:05 (WTG06)	20:42	21:01
23	07:44	07:11	07:59 (WTG07)	06:27		06:38	07:36 (WTG06)	06:04	05:56
	17:32	18:10	37 08:36 (WTG07)	18:41		20:13	27 08:03 (WTG06)	20:43	21:01
24	07:44	07:09	07:58 (WTG07)	06:25		06:36	07:37 (WTG06)	06:03	05:56
	17:34	18:11	38 08:36 (WTG07)	18:42		20:14	25 08:02 (WTG06)	20:44	21:01
25	07:43	07:08	07:57 (WTG07)	06:23		06:35	07:38 (WTG06)	06:02	05:57
	17:35	18:12	39 08:36 (WTG07)	18:43		20:15	23 08:01 (WTG06)	20:45	21:01
26	07:42	07:06	07:56 (WTG07)	06:22		06:33	07:39 (WTG06)	06:02	05:57
	17:36	18:13	40 08:36 (WTG07)	18:44		20:16	20 07:59 (WTG06)	20:45	21:01
27	07:41	07:05	07:56 (WTG07)	06:20		06:32	07:41 (WTG06)	06:01	05:57
	17:37	18:15	41 08:37 (WTG07)	18:45		20:17	16 07:57 (WTG06)	20:46	21:01
28	07:41	17:12 (ME_9)	07:03	06:18		06:31	07:44 (WTG06)	06:01	05:58
	17:39	3 17:15 (ME_9)	18:16	40 08:36 (WTG07)	18:46	20:18	10 07:54 (WTG06)	20:47	21:01
29	07:40	17:12 (ME_9)		07:17		06:29		06:00	05:58
	17:40	4 17:16 (ME_9)		19:47		20:19		20:48	21:01
30	07:39	17:12 (ME_9)		07:15		06:28		05:59	05:59
	17:41	5 17:17 (ME_9)		19:48		20:20		20:49	21:01
31	07:38	17:12 (ME_9)		07:13				05:59	
	17:42	5 17:17 (ME_9)		19:49				20:50	
Potential sun hours	299	298	370	398	447	451			
Total, worst case	17	432	419	612					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_33 - Nuraghe S'Ozzastrone

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July	August	September	October	November	December
1	05:59 21:01	06:23 20:43	06:53 20:00	07:37 (WTG06) 19:10	07:22 18 08:43 (WTG07) 09:01 (WTG07)	06:55 17:24
2	06:00 21:01	06:23 20:41	06:54 19:59	07:38 (WTG06) 28 08:06 (WTG06) 19:09	07:23 22 08:41 (WTG07) 09:03 (WTG07)	06:57 17:23
3	06:00 21:01	06:24 20:40	06:55 19:57	07:39 (WTG06) 26 08:05 (WTG06) 19:07	07:24 27 08:38 (WTG07) 09:05 (WTG07)	06:58 17:22
4	06:01 21:01	06:25 20:39	06:56 19:55	07:40 (WTG06) 23 08:03 (WTG06) 19:05	07:25 30 08:36 (WTG07) 09:06 (WTG07)	06:59 17:21
5	06:01 21:00	06:26 20:38	06:57 19:54	07:42 (WTG06) 19 08:01 (WTG06) 19:04	07:26 32 08:35 (WTG07) 09:07 (WTG07)	07:00 17:20
6	06:02 21:00	06:27 20:37	06:57 19:52	07:44 (WTG06) 14 07:58 (WTG06) 19:02	07:27 34 08:34 (WTG07) 09:08 (WTG07)	07:01 17:18
7	06:02 21:00	06:28 20:36	06:58 19:50	07:50 (WTG06) 2 07:52 (WTG06) 19:00	07:28 36 08:32 (WTG07) 09:08 (WTG07)	07:02 17:17
8	06:03 21:00	06:29 20:35	06:59 19:49	07:29 38 08:31 (WTG07) 09:09 (WTG07)	07:04 17:16	16:59
9	06:04 20:59	06:30 20:33	07:00 19:47	07:30 38 08:31 (WTG07) 09:09 (WTG07)	07:05 17:15	16:59
10	06:04 20:59	06:31 20:32	07:01 19:45	07:31 39 08:30 (WTG07) 09:09 (WTG07)	07:06 17:14	16:44 (ME_9) 16:59
11	06:05 20:58	06:32 20:31	07:02 19:44	07:32 40 08:29 (WTG07) 09:09 (WTG07)	07:07 5 16:43 (ME_9) 17:13	16:59 17:00
12	06:06 20:58	06:33 20:29	07:03 19:42	07:33 40 08:29 (WTG07) 09:09 (WTG07)	07:08 6 16:43 (ME_9) 17:12	17:00
13	06:06 20:58	06:34 20:28	07:04 19:40	07:34 41 08:28 (WTG07) 09:09 (WTG07)	07:09 4 16:44 (ME_9) 17:11	17:00
14	06:07 20:57	06:35 20:27	07:05 19:39	07:35 41 08:29 (WTG07) 09:10 (WTG07)	07:11 3 16:44 (ME_9) 17:11	17:00
15	06:08 20:56	06:36 20:25	07:06 12 08:02 (WTG06) 19:37	07:36 40 08:29 (WTG07) 09:09 (WTG07)	07:12 17:10	17:00
16	06:09 20:56	06:37 20:24	07:07 17 08:04 (WTG06) 19:35	07:38 39 08:29 (WTG07) 09:08 (WTG07)	07:13 17:09	17:00
17	06:09 20:55	06:38 20:23	07:08 21 08:06 (WTG06) 19:34	07:39 39 08:29 (WTG07) 09:08 (WTG07)	07:14 17:08	17:01
18	06:10 20:55	06:39 20:21	07:09 23 08:07 (WTG06) 19:32	07:40 38 08:29 (WTG07) 09:07 (WTG07)	07:15 17:07	17:01
19	06:11 20:54	06:40 20:20	07:10 25 08:08 (WTG06) 19:30	07:41 36 08:30 (WTG07) 09:06 (WTG07)	07:16 17:07	17:01
20	06:12 20:53	06:41 20:18	07:11 27 08:09 (WTG06) 19:29	07:42 35 08:30 (WTG07) 09:05 (WTG07)	07:18 17:06	17:02
21	06:13 20:53	06:42 20:17	07:12 29 08:10 (WTG06) 19:27	07:43 33 08:32 (WTG07) 09:05 (WTG07)	07:19 17:05	17:02
22	06:13 20:52	06:43 20:16	07:13 30 08:10 (WTG06) 19:25	07:44 30 08:33 (WTG07) 09:03 (WTG07)	07:20 17:05	17:03
23	06:14 20:51	06:44 20:14	07:14 32 08:11 (WTG06) 19:24	07:45 27 08:34 (WTG07) 09:01 (WTG07)	07:21 17:04	17:03
24	06:15 20:50	06:45 20:13	07:15 32 08:11 (WTG06) 19:22	07:46 24 08:35 (WTG07) 08:59 (WTG07)	07:22 17:03	17:04
25	06:16 20:49	06:46 20:11	07:16 33 08:11 (WTG06) 19:20	06:47 20 07:37 (WTG07) 07:57 (WTG07)	07:23 17:03	17:04
26	06:17 20:48	06:47 20:09	07:17 33 08:11 (WTG06) 19:19	06:49 13 07:53 (WTG07) 07:40 (WTG07)	07:24 17:02	17:05
27	06:18 20:48	06:48 20:08	07:18 33 08:11 (WTG06) 19:17	06:50 17:31	07:25 17:02	17:06
28	06:19 20:47	06:49 20:06	07:19 34 08:11 (WTG06) 19:15	06:51 17:29	07:27 17:02	17:06
29	06:20 20:46	06:50 20:05	07:20 33 08:09 (WTG06) 19:14	06:52 17:28	07:28 17:01	17:07
30	06:21 20:45	06:51 20:03	07:21 32 08:09 (WTG06) 19:12	06:53 8 08:48 (WTG07) 08:56 (WTG07)	07:29 17:01	17:08
31	06:22 20:44	06:52 20:02	07:22 31 08:08 (WTG06) 19:11	06:54 17:26	17:02	17:09
Potential sun hours	457	427	375	346	299	289
Total, worst case		477	150	850	21	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_34 - Insediamento Monte Alas
 Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	19:09 (WTG06) 19:18 (WTG06)	06:27 20:21
2	07:50 17:10	07:36 17:45	07:00 18:18	07:10 19:51	07:28 (WTG03) 07:29 (WTG03)	06:25 20:22
3	07:50 17:11	07:35 17:46	06:59 18:19	07:08 19:52	07:27 (WTG03) 07:31 (WTG03)	06:24 20:23
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	07:25 (WTG03) 07:31 (WTG03)	06:23 20:24
5	07:50 17:13	07:33 17:48	06:56 18:21	07:05 19:54	07:24 (WTG03) 07:32 (WTG03)	06:22 20:25
6	07:50 17:14	07:32 17:49	06:54 18:22	07:04 19:55	07:22 (WTG03) 07:32 (WTG03)	06:20 20:26
7	07:50 17:15	07:31 17:51	06:52 18:23	07:02 19:56	07:20 (WTG03) 07:32 (WTG03)	06:19 20:27
8	07:50 17:16	07:30 17:52	06:51 18:25	07:00 19:57	07:19 (WTG03) 07:33 (WTG03)	06:18 20:28
9	07:50 17:17	07:29 17:53	06:49 18:26	06:59 19:58	07:17 (WTG03) 07:32 (WTG03)	06:17 20:29
10	07:50 17:18	07:28 17:54	06:48 18:27	06:57 19:59	07:16 (WTG03) 07:33 (WTG03)	06:16 20:30
11	07:50 17:19	07:26 17:56	06:46 18:28	06:56 20:00	07:14 (WTG03) 07:32 (WTG03)	06:15 20:31
12	07:49 17:20	07:25 17:57	06:45 18:29	06:54 20:01	07:12 (WTG03) 07:31 (WTG03)	06:14 20:32
13	07:49 17:21	07:24 17:58	06:43 18:30	06:52 20:03	07:11 (WTG03) 07:31 (WTG03)	06:13 20:33
14	07:49 17:22	07:23 17:59	06:41 18:31	06:51 20:04	07:09 (WTG03) 07:30 (WTG03)	06:12 20:34
15	07:48 17:23	07:21 18:00	06:40 18:32	06:49 20:05	07:08 (WTG03) 18:11 (WTG06)	06:11 20:35
16	07:48 17:24	07:20 18:02	06:38 18:33	06:48 20:06	07:06 (WTG03) 18:13 (WTG06)	06:10 20:36
17	07:48 17:25	07:19 18:03	06:36 18:34	06:46 20:07	07:05 (WTG03) 18:14 (WTG06)	06:09 20:37
18	07:47 17:27	07:17 18:04	06:35 18:35	06:45 20:08	07:03 (WTG03) 18:14 (WTG06)	06:08 20:38
19	07:47 17:28	07:16 18:05	06:33 18:36	06:43 20:09	07:02 (WTG03) 18:16 (WTG06)	06:07 20:39
20	07:46 17:29	07:15 18:06	06:31 18:38	06:42 20:10	07:02 (WTG03) 18:17 (WTG06)	06:06 20:40
21	07:45 17:30	07:13 18:08	06:30 18:39	06:40 20:11	07:03 (WTG03) 18:17 (WTG06)	06:05 20:41
22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:58 (WTG02) 18:19 (WTG06)	06:05 20:42
23	07:44 17:32	07:11 18:10	06:27 18:41	06:38 20:13	06:56 (WTG02) 18:20 (WTG06)	06:04 20:43
24	07:44 17:34	07:09 18:11	06:25 18:42	06:36 20:14	06:55 (WTG02) 18:21 (WTG06)	06:03 20:44
25	07:43 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:54 (WTG02) 18:22 (WTG06)	06:02 20:45
26	07:42 17:36	07:06 18:13	06:22 18:44	06:33 20:16	06:52 (WTG02) 18:23 (WTG06)	06:02 20:45
27	07:41 17:37	07:05 18:14	06:20 18:45	06:32 20:17	06:51 (WTG02) 18:24 (WTG06)	06:01 20:46
28	07:41 17:38	07:03 18:16	06:18 18:46	06:31 20:18	06:50 (WTG02) 18:25 (WTG06)	20:15 (WTG05) 20:47
29	07:40 17:40		06:17 19:47	06:30 20:19	06:48 (WTG02) 19:03 (WTG06)	20:12 (WTG05) 20:48
30	07:39 17:41		06:15 19:48	06:28 20:20	06:47 (WTG02) 19:04 (WTG06)	20:10 (WTG05) 20:49
31	07:38 17:42		06:13 19:49	06:27 20:21	06:46 (WTG02) 19:06 (WTG06)	20:09 (WTG05) 20:49
Potential sun hours	299	298	370	398	447	451
Total, worst case		98	279	393	56	815

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_34 - Insediamento Monte Alas
 Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July	August	September	October	November	December				
1	05:59	20:08 (WTG05)	06:22	06:53	07:13 (WTG03)	07:22	06:55	07:30		
	21:01	28 20:36 (WTG05)	20:42	20:00	18 07:31 (WTG03)	19:10	17:24	17:00		
2	05:59	20:09 (WTG05)	06:23	06:54	07:14 (WTG03)	07:23	06:56	07:31		
	21:01	27 20:36 (WTG05)	20:41	19:58	17 07:31 (WTG03)	19:08	17:23	17:00		
3	06:00	20:09 (WTG05)	06:24	06:54	07:15 (WTG03)	07:24	06:58	07:32		
	21:01	26 20:35 (WTG05)	20:40	19:57	15 07:30 (WTG03)	19:07	17:22	17:00		
4	06:00	20:10 (WTG05)	06:25	06:55	07:16 (WTG03)	07:25	06:59	07:33		
	21:01	26 20:36 (WTG05)	20:39	19:55	14 07:30 (WTG03)	19:05	17:21	17:00		
5	06:01	20:10 (WTG05)	06:26	06:56	07:17 (WTG03)	07:26	07:00	07:34		
	21:00	25 20:35 (WTG05)	20:38	19:54	12 07:29 (WTG03)	19:04	17:19	17:00		
6	06:02	20:11 (WTG05)	06:27	06:57	07:18 (WTG03)	07:27	07:01	07:35		
	21:00	24 20:35 (WTG05)	20:37	19:52	10 07:28 (WTG03)	19:02	17:18	16:59		
7	06:02	20:12 (WTG05)	06:28	06:58	07:19 (WTG03)	07:28	07:02	07:36		
	21:00	23 20:35 (WTG05)	20:36	19:50	8 07:27 (WTG03)	19:00	17:17	16:59		
8	06:03	20:12 (WTG05)	06:29	06:59	07:20 (WTG03)	07:29	07:04	07:36		
	21:00	22 20:34 (WTG05)	20:34	19:49	6 07:26 (WTG03)	18:59	17:16	16:59		
9	06:03	20:13 (WTG05)	06:30	07:00	07:21 (WTG03)	07:30	07:05	07:37		
	20:59	21 20:34 (WTG05)	20:33	19:47	4 07:25 (WTG03)	18:57	17:15	16:59		
10	06:04	20:14 (WTG05)	06:31	07:01	07:21 (WTG03)	07:31	07:06	07:38		
	20:59	19 20:33 (WTG05)	20:32	19:45	1 07:22 (WTG03)	18:56	17:14	16:59		
11	06:05	20:15 (WTG05)	06:32	06:54 (WTG02)	07:02	19:02 (WTG06)	07:32	07:07	07:39	
	20:58	18 20:33 (WTG05)	20:31	6 07:00 (WTG02)	19:44	7 19:09 (WTG06)	18:54	17:13	16:59	
12	06:05	20:17 (WTG05)	06:33	06:54 (WTG02)	07:03	18:58 (WTG06)	07:33	07:08	07:40	
	20:58	16 20:33 (WTG05)	20:29	8 07:02 (WTG02)	19:42	15 19:13 (WTG06)	18:52	17:12	17:00	
13	06:06	20:18 (WTG05)	06:34	06:55 (WTG02)	07:04	18:55 (WTG06)	07:34	07:09	07:41	
	20:57	15 20:33 (WTG05)	20:28	8 07:03 (WTG02)	19:40	20 19:15 (WTG06)	18:51	17:11	17:00	
14	06:07	20:20 (WTG05)	06:35	06:56 (WTG02)	07:05	18:53 (WTG06)	07:35	07:11	07:41	
	20:57	12 20:32 (WTG05)	20:27	8 07:04 (WTG02)	19:39	23 19:16 (WTG06)	18:49	17:10	17:00	
15	06:08	20:22 (WTG05)	06:36	06:57 (WTG02)	07:06	18:52 (WTG06)	07:36	18:19 (WTG07)	07:12	07:42
	20:56	9 20:31 (WTG05)	20:25	8 07:05 (WTG02)	19:37	23 19:15 (WTG06)	18:48	1 18:20 (WTG07)	17:10	17:00
16	06:08	20:23 (WTG05)	06:37	06:58 (WTG02)	07:07	18:50 (WTG06)	07:37	18:13 (WTG07)	07:13	07:43
	20:56	20:24	7 07:05 (WTG02)	19:35	23 19:13 (WTG06)	18:46	11 18:24 (WTG07)	17:09	17:00	
17	06:09	20:25 (WTG05)	06:38	06:59 (WTG02)	07:08	18:49 (WTG06)	07:38	18:11 (WTG07)	07:14	07:44
	20:55	20:23	7 07:06 (WTG02)	19:34	22 19:11 (WTG06)	18:45	11 18:22 (WTG07)	17:08	17:01	
18	06:10	20:24 (WTG05)	06:39	07:00 (WTG02)	07:09	18:48 (WTG06)	07:40	18:09 (WTG07)	07:15	07:44
	20:55	20:21	6 07:06 (WTG02)	19:32	22 19:10 (WTG06)	18:43	11 18:20 (WTG07)	17:07	17:01	
19	06:11	20:22 (WTG05)	06:40	07:01 (WTG02)	07:10	18:48 (WTG06)	07:41	18:08 (WTG07)	07:16	07:45
	20:54	20:20	5 07:06 (WTG02)	19:30	20 19:08 (WTG06)	18:42	11 18:19 (WTG07)	17:06	17:01	
20	06:12	20:21 (WTG05)	06:41	07:02 (WTG02)	07:11	18:47 (WTG06)	07:42	18:07 (WTG07)	07:18	07:45
	20:53	20:18	3 07:05 (WTG02)	19:29	20 19:07 (WTG06)	18:40	10 18:17 (WTG07)	17:06	17:02	
21	06:13	20:22 (WTG05)	06:42	07:03 (WTG02)	07:12	18:47 (WTG06)	07:43	18:06 (WTG07)	07:19	07:46
	20:52	20:17	14 07:23 (WTG03)	19:27	18 19:05 (WTG06)	18:39	9 18:15 (WTG07)	17:05	17:02	
22	06:13	20:23 (WTG05)	06:43	07:08 (WTG03)	07:13	18:46 (WTG06)	07:44	18:06 (WTG07)	07:20	07:46
	20:52	20:15	18 07:26 (WTG03)	19:25	17 19:03 (WTG06)	18:37	9 18:15 (WTG07)	17:04	17:03	
23	06:14	20:24 (WTG05)	06:44	07:06 (WTG03)	07:14	18:46 (WTG06)	07:45	18:06 (WTG07)	07:21	07:47
	20:51	20:14	21 07:27 (WTG03)	19:23	16 19:02 (WTG06)	18:36	7 18:13 (WTG07)	17:04	17:03	
24	06:15	20:25 (WTG05)	06:45	07:06 (WTG03)	07:15	18:46 (WTG06)	07:46	18:05 (WTG07)	07:22	07:47
	20:50	20:12	23 07:29 (WTG03)	19:22	14 19:00 (WTG06)	18:35	7 18:12 (WTG07)	17:03	17:04	
25	06:16	20:26 (WTG05)	06:46	07:07 (WTG03)	07:16	18:47 (WTG06)	06:47	17:05 (WTG07)	07:23	07:48
	20:49	20:11	23 07:30 (WTG03)	19:20	11 18:58 (WTG06)	17:33	5 17:10 (WTG07)	17:03	17:04	
26	06:17	20:27 (WTG05)	06:47	07:08 (WTG03)	07:17	18:47 (WTG06)	06:48	17:05 (WTG07)	07:24	07:48
	20:48	20:09	23 07:31 (WTG03)	19:18	9 18:56 (WTG06)	17:32	3 17:08 (WTG07)	17:02	17:05	
27	06:18	20:28 (WTG05)	06:48	07:08 (WTG03)	07:18	18:48 (WTG06)	06:50	17:06 (WTG07)	07:25	07:49
	20:47	20:08	22 07:30 (WTG03)	19:17	7 18:55 (WTG06)	17:31	2 17:08 (WTG07)	17:02	17:06	
28	06:19	20:29 (WTG05)	06:49	07:09 (WTG03)	07:19	18:49 (WTG06)	06:51	17:07 (WTG07)	07:26	07:49
	20:46	20:06	22 07:31 (WTG03)	19:15	4 18:53 (WTG06)	17:29	17:01	17:06		
29	06:20	20:30 (WTG05)	06:50	07:10 (WTG03)	07:20	18:50 (WTG06)	06:52	17:02	07:49	
	20:45	20:05	21 07:31 (WTG03)	19:13	1 18:51 (WTG06)	17:28	17:01	17:07		
30	06:21	20:31 (WTG05)	06:51	07:11 (WTG03)	07:21	18:51 (WTG06)	06:53	17:02	07:49	
	20:45	20:03	20 07:31 (WTG03)	19:12	17:27	17:01	17:08			
31	06:21	20:32 (WTG05)	06:52	07:12 (WTG03)	07:22	18:52 (WTG06)	06:54	17:03	07:50	
	20:43	20:02	19 07:31 (WTG03)	19:13	17:25	17:04	17:08			
Potential sun hours	457	427	375	397	346	299	289			
Total, worst case	311	292	375	397	346	299	289			

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_4 - Torre e cortine murarie
 Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June		
1	07:50 17:10 206	11:43 (WTG06) 15:09 (WTG06)	07:37 17:43 178	12:10 (WTG06) 15:08 (WTG06)	07:02 18:17	07:12 19:50	06:27 20:21	05:58 20:50
2	07:50 17:10 205	11:44 (WTG06) 15:09 (WTG06)	07:36 17:45 176	12:11 (WTG06) 15:07 (WTG06)	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51
3	07:50 17:11 206	11:44 (WTG06) 15:10 (WTG06)	07:35 17:46 174	12:13 (WTG06) 15:07 (WTG06)	06:59 18:19	07:08 19:52	06:24 20:23	05:58 20:52
4	07:50 17:12 205	11:45 (WTG06) 15:10 (WTG06)	07:34 17:47 172	12:14 (WTG06) 15:06 (WTG06)	06:57 18:20	07:07 19:53	06:23 20:24	05:57 20:52
5	07:50 17:13 204	11:46 (WTG06) 15:10 (WTG06)	07:33 17:48 169	12:16 (WTG06) 15:05 (WTG06)	06:56 18:21	07:05 19:54	06:22 20:25	05:57 20:53
6	07:50 17:14 205	11:46 (WTG06) 15:11 (WTG06)	07:32 17:49 167	12:18 (WTG06) 15:05 (WTG06)	06:54 18:22	07:04 19:55	06:20 20:26	05:56 20:54
7	07:50 17:15 204	11:47 (WTG06) 15:11 (WTG06)	07:31 17:51 164	12:20 (WTG06) 15:04 (WTG06)	06:53 18:24	07:02 19:56	06:19 20:27	05:56 20:54
8	07:50 17:16 203	11:48 (WTG06) 15:11 (WTG06)	07:30 17:52 161	12:21 (WTG06) 15:02 (WTG06)	06:51 18:25	07:00 19:57	06:18 20:28	05:56 20:55
9	07:50 17:17 203	11:49 (WTG06) 15:12 (WTG06)	07:29 17:53 158	12:23 (WTG06) 15:01 (WTG06)	06:49 18:26	06:59 19:58	06:17 20:29	05:56 20:56
10	07:50 17:18 202	11:49 (WTG06) 15:11 (WTG06)	07:28 17:54 154	12:26 (WTG06) 15:00 (WTG06)	06:48 18:27	06:57 19:59	06:16 20:30	05:56 20:56
11	07:50 17:19 202	11:50 (WTG06) 15:12 (WTG06)	07:26 17:56 150	12:29 (WTG06) 14:59 (WTG06)	06:46 18:28	06:56 20:01	06:15 20:31	05:55 20:57
12	07:49 17:20 201	11:51 (WTG06) 15:12 (WTG06)	07:25 17:57 146	12:32 (WTG06) 14:58 (WTG06)	06:45 18:29	06:54 20:02	06:14 20:32	05:55 20:57
13	07:49 17:21 201	11:51 (WTG06) 15:12 (WTG06)	07:24 17:58 142	12:34 (WTG06) 14:56 (WTG06)	06:43 18:30	06:53 20:03	06:13 20:33	05:55 20:58
14	07:49 17:22 200	11:52 (WTG06) 15:12 (WTG06)	07:23 17:59 137	12:38 (WTG06) 14:55 (WTG06)	06:41 18:31	06:51 20:04	06:12 20:34	05:55 20:58
15	07:48 17:23 200	11:52 (WTG06) 15:12 (WTG06)	07:21 18:00 132	12:42 (WTG06) 14:54 (WTG06)	06:40 18:32	06:49 20:05	06:11 20:35	05:55 20:58
16	07:48 17:24 199	11:53 (WTG06) 15:13 (WTG06)	07:20 18:02 126	12:45 (WTG06) 14:51 (WTG06)	06:38 18:33	06:48 20:06	06:10 20:36	05:55 20:59
17	07:48 17:25 198	11:55 (WTG06) 15:13 (WTG06)	07:19 18:03 120	12:50 (WTG06) 14:50 (WTG06)	06:36 18:34	06:46 20:07	06:09 20:37	05:55 20:59
18	07:47 17:27 197	11:55 (WTG06) 15:12 (WTG06)	07:18 18:04 113	12:55 (WTG06) 14:48 (WTG06)	06:35 18:35	06:45 20:08	06:08 20:38	05:55 21:00
19	07:47 17:28 196	11:56 (WTG06) 15:12 (WTG06)	07:16 18:05 105	13:00 (WTG06) 14:45 (WTG06)	06:33 18:37	06:43 20:09	06:07 20:39	05:55 21:00
20	07:46 17:29 195	11:57 (WTG06) 15:12 (WTG06)	07:15 18:06 97	13:06 (WTG06) 14:43 (WTG06)	06:32 18:38	06:42 20:10	06:06 20:40	05:55 21:00
21	07:46 17:30 194	11:58 (WTG06) 15:12 (WTG06)	07:13 18:08 86	13:14 (WTG06) 14:40 (WTG06)	06:30 18:39	06:40 20:11	06:05 20:41	05:56 21:00
22	07:45 17:31 193	11:58 (WTG06) 15:11 (WTG06)	07:12 18:09 76	13:20 (WTG06) 14:36 (WTG06)	06:28 18:40	06:39 20:12	06:05 20:42	05:56 21:01
23	07:44 17:32 192	12:00 (WTG06) 15:12 (WTG06)	07:11 18:10 64	13:29 (WTG06) 14:33 (WTG06)	06:27 18:41	06:38 20:13	06:04 20:43	05:56 21:01
24	07:44 17:34 191	12:00 (WTG06) 15:11 (WTG06)	07:09 18:11 49	13:38 (WTG06) 14:27 (WTG06)	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01
25	07:43 17:35 190	12:01 (WTG06) 15:11 (WTG06)	07:08 18:12 28	13:51 (WTG06) 14:19 (WTG06)	06:23 18:43	06:35 20:15	06:02 20:45	05:57 21:01
26	07:42 17:36 188	12:02 (WTG06) 15:10 (WTG06)	07:06 18:13		06:22 18:44	06:33 20:16	06:02 20:45	05:57 21:01
27	07:41 17:37 187	12:04 (WTG06) 15:11 (WTG06)	07:05 18:15		06:20 18:45	06:32 20:17	06:01 20:46	05:57 21:01
28	07:41 17:38 185	12:05 (WTG06) 15:10 (WTG06)	07:03 18:16		06:18 18:46	06:31 20:18	06:00 20:47	05:58 21:01
29	07:40 17:40 184	12:06 (WTG06) 15:10 (WTG06)			07:17 19:47	06:29 20:19	06:00 20:48	05:58 21:01
30	07:39 17:41 182	12:07 (WTG06) 15:09 (WTG06)			07:15 19:48	06:28 20:20	05:59 20:49	05:58 21:01
31	07:38 17:42 181	12:08 (WTG06) 15:09 (WTG06)			07:13 19:49		05:59 20:49	
Potential sun hours	299		298		370	398	447	451
Total, worst case	6099		3244				42	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_4 - Torre e cortine murarie
 Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July	August	September	October	November	December
1	05:59 21:01	06:22 20:43	20:16 (ME_5) 06:53	07:22 19:10	06:55 17:24	11:55 (WTG06) 07:30
2	05:59 21:01	06:23 20:41	20:16 (ME_5) 06:54	07:23 19:09	06:57 17:23	11:53 (WTG06) 07:31
3	06:00 21:01	06:24 20:40	20:16 (ME_5) 06:55	07:24 19:07	06:58 17:22	11:50 (WTG06) 07:32
4	06:00 21:01	06:25 20:39	20:17 (ME_5) 06:55	07:25 19:05	06:59 17:21	11:48 (WTG06) 07:33
5	06:01 21:00	06:26 20:38	06:56 19:54	07:26 19:04	07:00 17:20	11:47 (WTG06) 07:34
6	06:02 21:00	06:27 20:37	06:57 19:52	07:27 19:02	07:01 17:18	11:46 (WTG06) 07:35
7	06:02 21:00	06:28 20:36	06:58 19:50	07:28 19:00	07:02 17:17	11:44 (WTG06) 07:36
8	06:03 21:00	06:29 20:35	06:59 19:49	07:29 18:59	07:04 17:16	11:42 (WTG06) 07:36
9	06:03 20:59	06:30 20:33	07:00 19:47	07:30 18:57	07:05 17:15	11:42 (WTG06) 07:37
10	06:04 20:59	06:31 20:32	07:01 19:45	07:31 18:56	07:06 17:14	11:40 (WTG06) 07:38
11	06:05 20:58	06:32 20:31	07:02 19:44	07:32 18:54	07:07 17:13	11:39 (WTG06) 07:39
12	06:06 20:58	06:33 20:29	07:03 19:42	07:33 18:52	07:08 17:12	11:39 (WTG06) 07:40
13	06:06 20:58	06:34 20:28	07:04 19:40	07:34 18:51	07:09 17:11	11:38 (WTG06) 07:41
14	06:07 20:57	06:35 20:27	07:05 19:39	07:35 18:49	07:11 17:10	11:37 (WTG06) 07:41
15	06:08 20:56	06:36 20:25	07:06 19:37	07:36 18:48	07:12 17:10	11:36 (WTG06) 07:42
16	06:09 20:56	06:37 20:24	07:07 19:35	07:37 18:46	07:13 17:09	11:36 (WTG06) 07:43
17	06:09 20:55	06:38 20:23	07:08 19:34	07:39 18:45	07:14 17:08	11:35 (WTG06) 07:44
18	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43	07:15 17:07	11:34 (WTG06) 07:44
19	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	07:16 17:07	11:34 (WTG06) 07:45
20	06:12 20:53	06:41 20:18	07:11 19:29	07:42 18:40	07:17 17:06	11:33 (WTG06) 07:45
21	06:13 20:52	06:42 20:17	07:12 19:27	07:43 18:39	07:18 17:05	11:33 (WTG06) 07:46
22	06:13 20:52	06:43 20:15	07:13 19:25	07:44 18:37	07:19 17:05	11:34 (WTG06) 07:46
23	06:14 20:51	06:44 20:14	07:14 19:24	07:45 18:36	07:20 17:04	11:33 (WTG06) 07:47
24	06:15 20:50	20:22 (ME_5) 06:45	07:15 19:22	07:46 18:35	07:21 17:03	11:33 (WTG06) 07:47
25	06:16 20:49	20:20 (ME_5) 06:46	07:16 19:20	07:47 18:33	07:22 17:03	11:32 (WTG06) 07:48
26	06:17 20:48	5 20:25 (ME_5) 06:47	07:17 19:19	07:49 18:32	07:23 17:02	11:32 (WTG06) 07:48
27	06:18 20:47	5 20:24 (ME_5) 06:48	07:18 19:17	07:50 18:31	07:24 17:02	11:33 (WTG06) 07:49
28	06:19 20:47	6 20:24 (ME_5) 06:49	07:19 19:15	07:51 18:30	07:25 17:01	11:32 (WTG06) 07:49
29	06:20 20:46	6 20:23 (ME_5) 06:50	07:20 19:14	07:52 18:29	07:26 17:01	11:32 (WTG06) 07:49
30	06:21 20:45	5 20:22 (ME_5) 06:51	07:21 19:12	07:53 18:28	07:27 17:01	11:32 (WTG06) 07:50
31	06:22 20:44	4 20:21 (ME_5) 06:52	07:22 19:11	07:54 18:27	07:28 17:01	11:32 (WTG06) 07:50
Potential sun hours	457	427	375	346	299	289
Total, worst case	39	6		1612	5532	6379

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_5 - NURAGHE MUROS

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	
1	07:50 17:10 133	12:34 (WTG06) 14:47 (WTG06)	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21 05:58	
2	07:50 17:10 132	12:35 (WTG06) 14:47 (WTG06)	07:36 17:45	07:00 18:18	07:10 19:51	06:25 20:22 05:58	
3	07:50 17:11 131	12:36 (WTG06) 14:47 (WTG06)	07:35 17:46	06:59 18:19	07:08 19:52	06:24 20:23 05:58	
4	07:50 17:12 130	12:37 (WTG06) 14:47 (WTG06)	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24 05:57	
5	07:50 17:13 129	12:38 (WTG06) 14:47 (WTG06)	07:33 17:48	06:56 18:21	07:05 19:54	06:22 20:25 05:57	
6	07:50 17:14 128	12:39 (WTG06) 14:47 (WTG06)	07:32 17:49	06:54 18:22	07:04 19:55	06:20 20:26 05:56	
7	07:50 17:15 127	12:40 (WTG06) 14:47 (WTG06)	07:31 17:51	06:53 18:24	07:02 19:56	06:19 20:27 05:56	
8	07:50 17:16 125	12:42 (WTG06) 14:47 (WTG06)	07:30 17:52	06:51 18:25	07:00 19:57	06:18 20:28 05:56	
9	07:50 17:17 124	12:43 (WTG06) 14:47 (WTG06)	07:29 17:53	06:49 18:26	06:59 19:58	06:17 20:29 05:56	
10	07:50 17:18 123	12:44 (WTG06) 14:47 (WTG06)	07:28 17:54	06:48 18:27	06:57 19:59	06:16 20:30 05:56	
11	07:50 17:19 122	12:45 (WTG06) 14:47 (WTG06)	07:26 17:56	06:46 18:28	06:56 20:01	06:15 20:31 05:55	
12	07:49 17:20 120	12:47 (WTG06) 14:47 (WTG06)	07:25 17:57	06:45 18:29	06:54 20:02	06:14 20:32 05:55	
13	07:49 17:21 118	12:48 (WTG06) 14:46 (WTG06)	07:24 17:58	06:43 18:30	06:53 20:03	06:13 20:33 05:55	
14	07:49 17:22 116	12:50 (WTG06) 14:46 (WTG06)	07:23 17:59	06:41 18:31	06:51 20:04	06:12 20:34 05:55	
15	07:48 17:23 114	12:51 (WTG06) 14:45 (WTG06)	07:21 18:00	06:40 18:32	06:49 20:05	06:11 20:35 05:55	
16	07:48 17:24 111	12:53 (WTG06) 14:44 (WTG06)	07:20 18:02	06:38 18:33	06:48 20:06	06:10 20:36 05:55	
17	07:48 17:25 109	12:55 (WTG06) 14:44 (WTG06)	07:19 18:03	06:36 18:34	06:46 20:07	06:09 20:37 05:55	
18	07:47 17:27 106	12:57 (WTG06) 14:43 (WTG06)	07:18 18:04	06:35 18:35	06:45 20:08	06:08 20:38 05:55	
19	07:47 17:28 103	12:59 (WTG06) 14:42 (WTG06)	07:16 18:05	06:33 18:37	06:43 20:09	06:07 20:39 05:55	
20	07:46 17:29 101	13:01 (WTG06) 14:42 (WTG06)	07:15 18:06	06:32 18:38	06:42 20:10	19:47 (ME_5) 06:06 05:55	
21	07:46 17:30 97	13:03 (WTG06) 14:40 (WTG06)	07:13 18:08	06:30 18:39	06:40 20:11	19:47 (ME_5) 06:05 05:56	
22	07:45 17:31 93	13:06 (WTG06) 14:39 (WTG06)	07:12 18:09	06:28 18:40	06:39 20:12	19:48 (ME_5) 06:05 05:56	
23	07:44 17:32 89	13:09 (WTG06) 14:38 (WTG06)	07:11 18:10	06:27 18:41	06:38 20:13	19:50 (ME_5) 06:05 05:56	
24	07:44 17:34 84	13:12 (WTG06) 14:36 (WTG06)	07:09 18:11	06:25 18:42	06:36 20:14	19:51 (ME_5) 06:03 05:56	
25	07:43 17:35 79	13:15 (WTG06) 14:34 (WTG06)	07:08 18:12	06:23 18:43	06:35 20:15	19:52 (ME_5) 06:02 05:57	
26	07:42 17:36 74	13:18 (WTG06) 14:32 (WTG06)	07:06 18:13	06:22 18:44	06:33 20:16	06:02 20:45 05:57	
27	07:41 17:37 68	13:23 (WTG06) 14:31 (WTG06)	07:05 18:15	06:20 18:45	06:32 20:17	06:01 20:46 05:57	
28	07:41 17:38 61	13:27 (WTG06) 14:28 (WTG06)	07:03 18:16	06:18 18:46	06:31 20:18	06:00 20:47 05:58	
29	07:40 17:40 53	13:32 (WTG06) 14:25 (WTG06)	07:02 18:17	06:17 19:47	06:29 20:19	06:00 20:48 05:58	
30	07:39 17:41 43	13:38 (WTG06) 14:21 (WTG06)	07:01 18:18	06:15 19:48	06:28 20:20	05:59 20:49 05:58	
31	07:38 17:42 30	13:45 (WTG06) 14:15 (WTG06)	07:00 19:49	06:13 19:49	06:27 20:20	05:58 20:49 05:59	
Potential sun hours	299		298	370	398	447	451
Total, worst case	3173				8		

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_5 - NURAGHE MUROS

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	July	August	September	October	November	December		
1	05:59 21:01	06:22 20:43	06:53 20:00	07:22 19:10	06:55 17:24	07:30 17:00	122	12:27 (WTG06) 14:29 (WTG06)
2	05:59 21:01	06:23 20:41	06:54 19:58	07:23 19:09	06:57 17:23	07:31 17:00	123	12:27 (WTG06) 14:30 (WTG06)
3	06:00 21:01	06:24 20:40	06:55 19:57	07:24 19:07	06:58 17:22	07:32 17:00	124	12:26 (WTG06) 14:30 (WTG06)
4	06:00 21:01	06:25 20:39	06:55 19:55	07:25 19:05	06:59 17:21	07:33 17:00	125	12:26 (WTG06) 14:31 (WTG06)
5	06:01 21:00	06:26 20:38	06:56 19:54	07:26 19:04	07:00 17:20	07:34 17:00	127	12:25 (WTG06) 14:32 (WTG06)
6	06:02 21:00	06:27 20:37	06:57 19:52	07:27 19:02	07:01 17:18	07:35 16:59	128	12:25 (WTG06) 14:33 (WTG06)
7	06:02 21:00	06:28 20:36	06:58 19:50	07:28 19:00	07:02 17:17	07:36 16:59	129	12:25 (WTG06) 14:34 (WTG06)
8	06:03 21:00	06:29 20:35	06:59 19:49	07:29 18:59	07:04 17:16	07:36 16:59	130	12:25 (WTG06) 14:35 (WTG06)
9	06:03 20:59	06:30 20:33	07:00 19:47	07:30 18:57	07:05 17:15	07:37 16:59	131	12:25 (WTG06) 14:36 (WTG06)
10	06:04 20:59	06:31 20:32	07:01 19:45	07:31 18:56	07:06 17:14	07:38 16:59	132	12:25 (WTG06) 14:37 (WTG06)
11	06:05 20:58	06:32 20:31	07:02 19:44	07:32 18:54	07:07 17:13	07:39 16:59	133	12:25 (WTG06) 14:38 (WTG06)
12	06:06 20:58	06:33 20:29	07:03 19:42	07:33 18:52	07:08 17:12	07:40 17:00	134	12:24 (WTG06) 14:38 (WTG06)
13	06:06 20:58	06:34 20:28	07:04 19:40	07:34 18:51	07:09 17:11	07:41 17:00	134	12:25 (WTG06) 14:39 (WTG06)
14	06:07 20:57	06:35 20:27	07:05 19:39	07:35 18:49	07:11 17:10	07:41 17:00	135	12:25 (WTG06) 14:40 (WTG06)
15	06:08 20:56	06:36 20:25	07:06 19:37	07:36 18:48	07:12 17:10	07:42 17:00	134	12:26 (WTG06) 14:40 (WTG06)
16	06:09 20:56	06:37 20:24	07:07 19:35	07:37 18:46	07:13 17:09	07:43 17:00	135	12:25 (WTG06) 14:40 (WTG06)
17	06:09 20:55	06:38 20:23	07:08 19:34	07:39 18:45	07:14 17:08	07:44 17:01	135	12:26 (WTG06) 14:41 (WTG06)
18	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43	07:15 17:07	07:44 17:01	136	12:25 (WTG06) 14:41 (WTG06)
19	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	07:16 17:07	07:45 17:01	136	12:26 (WTG06) 14:42 (WTG06)
20	06:12 20:53	06:41 20:18	07:11 19:54 (ME_5)	07:42 18:40	07:18 17:06	07:45 17:02	136	12:27 (WTG06) 14:43 (WTG06)
21	06:13 20:52	06:42 20:17	07:12 19:52 (ME_5)	07:43 18:39	07:19 17:05	07:46 17:02	136	12:27 (WTG06) 14:43 (WTG06)
22	06:13 20:52	06:43 20:15	07:13 19:51 (ME_5)	07:44 18:37	07:20 17:05	07:47 17:03	136	12:28 (WTG06) 14:44 (WTG06)
23	06:14 20:51	06:44 20:14	07:14 19:53 (ME_5)	07:45 18:36	07:21 17:04	07:47 17:03	136	12:28 (WTG06) 14:44 (WTG06)
24	06:15 20:50	06:45 20:12	07:15 19:52 (ME_5)	07:46 18:35	07:22 17:03	07:48 17:04	136	12:28 (WTG06) 14:44 (WTG06)
25	06:16 20:49	06:46 20:11	07:16 19:20	06:47 17:33	07:23 17:03	07:48 17:04	136	12:29 (WTG06) 14:45 (WTG06)
26	06:17 20:48	06:47 20:09	07:17 19:19	06:49 17:32	07:24 17:02	07:48 17:05	135	12:30 (WTG06) 14:45 (WTG06)
27	06:18 20:47	06:48 20:08	07:18 19:17	06:50 17:31	07:25 17:02	07:49 17:06	135	12:30 (WTG06) 14:45 (WTG06)
28	06:19 20:47	06:49 20:06	07:19 19:15	06:51 17:29	07:27 17:01	07:49 17:06	135	12:31 (WTG06) 14:46 (WTG06)
29	06:20 20:46	06:50 20:05	07:20 19:14	06:52 17:28	07:28 17:01	07:49 17:07	134	12:32 (WTG06) 14:46 (WTG06)
30	06:21 20:45	06:51 20:03	07:21 19:12	06:53 17:27	07:29 17:01	07:50 17:08	135	12:32 (WTG06) 14:47 (WTG06)
31	06:22 20:44	06:52 20:02		06:54 17:25		07:50 17:09	134	12:33 (WTG06) 14:47 (WTG06)
Potential sun hours	457	427	375	346	299	289		
Total, worst case		9			1768		4107	

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_6 - Mura del nuraghe Sos Muros
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June
1	07:50 17:10	13:05 (WTG06) 14:32 (WTG06)	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21
2	07:50 17:10	13:06 (WTG06) 14:32 (WTG06)	07:36 17:45	07:00 18:18	07:10 19:51	06:25 20:22
3	07:50 17:11	13:07 (WTG06) 14:32 (WTG06)	07:35 17:46	06:59 18:19	07:08 19:52	06:24 20:23
4	07:50 17:12	13:08 (WTG06) 14:32 (WTG06)	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24
5	07:50 17:13	13:10 (WTG06) 14:31 (WTG06)	07:33 17:48	06:56 18:21	07:05 19:54	06:22 20:25
6	07:50 17:14	13:12 (WTG06) 14:31 (WTG06)	07:32 17:49	06:54 18:22	07:04 19:55	06:20 20:26
7	07:50 17:15	13:13 (WTG06) 14:31 (WTG06)	07:31 17:51	06:53 18:24	07:02 19:56	06:19 20:27
8	07:50 17:16	13:15 (WTG06) 14:30 (WTG06)	07:30 17:52	06:51 18:25	07:00 19:57	06:18 20:28
9	07:50 17:17	13:17 (WTG06) 14:30 (WTG06)	07:29 17:53	06:49 18:26	06:59 19:58	06:17 20:29
10	07:50 17:18	13:19 (WTG06) 14:28 (WTG06)	07:28 17:54	06:48 18:27	06:57 19:59	06:16 20:30
11	07:50 17:19	13:21 (WTG06) 14:27 (WTG06)	07:26 17:56	06:46 18:28	06:56 20:01	06:15 20:31
12	07:49 17:20	13:24 (WTG06) 14:27 (WTG06)	07:25 17:57	06:45 18:29	06:54 20:02	06:14 20:32
13	07:49 17:21	13:26 (WTG06) 14:25 (WTG06)	07:24 17:58	06:43 18:30	06:53 20:03	06:13 20:33
14	07:49 17:22	13:29 (WTG06) 14:23 (WTG06)	07:23 17:59	06:41 18:31	06:51 20:04	06:12 20:34
15	07:48 17:23	13:32 (WTG06) 14:21 (WTG06)	07:21 18:00	06:40 18:32	06:49 20:05	06:11 20:35
16	07:48 17:24	13:37 (WTG06) 14:19 (WTG06)	07:20 18:02	06:38 18:33	06:48 20:06	06:10 20:36
17	07:48 17:25	13:42 (WTG06) 14:16 (WTG06)	07:19 18:03	06:36 18:34	06:46 20:07	06:09 20:37
18	07:47 17:27	13:47 (WTG06) 14:11 (WTG06)	07:18 18:04	06:35 18:35	06:45 20:08	06:08 20:38
19	07:47 17:28		07:16 18:05	06:33 18:37	06:43 20:09	06:07 20:39
20	07:46 17:29		07:15 18:06	06:32 18:38	06:42 20:10	06:06 20:40
21	07:46 17:30		07:13 18:08	06:30 18:39	06:40 20:11	06:05 20:41
22	07:45 17:31		07:12 18:09	06:28 18:40	06:39 20:12	06:05 20:42
23	07:44 17:32		07:11 18:10	06:27 18:41	06:38 20:13	06:04 20:43
24	07:44 17:34		07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44
25	07:43 17:35		07:08 18:12	06:23 18:43	06:35 20:15	06:02 20:45
26	07:42 17:36		07:06 18:13	06:22 18:44	06:33 20:16	06:02 20:45
27	07:41 17:37		07:05 18:15	06:20 18:45	06:32 20:17	06:01 20:46
28	07:41 17:38		07:03 18:16	06:18 18:46	06:31 20:18	06:00 20:47
29	07:40 17:40			07:17 19:47	06:29 20:19	06:00 20:48
30	07:39 17:41			07:15 19:48	06:28 20:20	05:59 20:49
31	07:38 17:42			07:13 19:49		05:59 20:49
Potential sun hours	299		298	370	398	447
Total, worst case	1188				5	451
						598

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_6 - Mura del nuraghe Sos Muros
 Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	July		August		September		October		November		December	
1	05:59	06:41 (WTG05)	06:22	06:53	19:36 (ME_5)	07:22	06:55	07:30	13:03 (WTG06)			
	21:01	20 07:01 (WTG05)	20:43	20:00	2 19:38 (ME_5)	19:10	17:24	17:00	66 14:09 (WTG06)			
2	05:59	06:43 (WTG05)	06:23	06:54	19:35 (ME_5)	07:23	06:57	07:31	13:02 (WTG06)			
	21:01	17 07:00 (WTG05)	20:41	19:58	1 19:36 (ME_5)	19:09	17:23	17:00	69 14:11 (WTG06)			
3	06:00	06:46 (WTG05)	06:24	06:55	19:34 (ME_5)	07:24	06:58	07:32	13:01 (WTG06)			
	21:01	11 06:57 (WTG05)	20:40	19:57	1 19:35 (ME_5)	19:07	17:22	17:00	72 14:13 (WTG06)			
4	06:00		06:25	06:55		07:25	06:59	07:33	12:59 (WTG06)			
	21:01		20:39	19:55		19:05	17:21	17:00	75 14:14 (WTG06)			
5	06:01		06:26	06:56		07:26	07:00	07:34	12:59 (WTG06)			
	21:00		20:38	19:54		19:04	17:20	17:00	77 14:16 (WTG06)			
6	06:02		06:27	06:57		07:27	07:01	07:35	12:58 (WTG06)			
	21:00		20:37	19:52		19:02	17:18	16:59	79 14:17 (WTG06)			
7	06:02		06:28	06:58		07:28	07:02	07:36	12:57 (WTG06)			
	21:00		20:36	19:50		19:00	17:17	16:59	81 14:18 (WTG06)			
8	06:03		06:29	06:59		07:29	07:04	07:36	12:57 (WTG06)			
	21:00		20:35	19:49		18:59	17:16	16:59	82 14:19 (WTG06)			
9	06:03		06:30	07:00		07:30	07:05	07:37	12:56 (WTG06)			
	20:59		20:33	19:47		18:57	17:15	16:59	85 14:21 (WTG06)			
10	06:04		06:31	07:01		07:31	07:06	07:38	12:56 (WTG06)			
	20:59		20:32	19:45		18:56	17:14	16:59	86 14:22 (WTG06)			
11	06:05		06:32	07:02		07:32	07:07	07:39	12:56 (WTG06)			
	20:58		20:31	19:44		18:54	17:13	16:59	87 14:23 (WTG06)			
12	06:06		06:33	07:03		07:33	07:08	07:40	12:55 (WTG06)			
	20:58		20:29	19:42		18:52	17:12	17:00	88 14:23 (WTG06)			
13	06:06		06:34	07:04		07:34	07:09	07:41	12:55 (WTG06)			
	20:58		20:28	19:40		18:51	17:11	17:00	89 14:24 (WTG06)			
14	06:07		06:35	07:05		07:35	07:11	07:41	12:55 (WTG06)			
	20:57		20:27	19:39		18:49	17:10	17:00	90 14:25 (WTG06)			
15	06:08		06:36	07:06		07:36	07:12	07:42	12:55 (WTG06)			
	20:56		20:25	19:37		18:48	17:10	17:00	91 14:26 (WTG06)			
16	06:09		06:37	07:07		07:37	07:13	07:43	12:55 (WTG06)			
	20:56		20:24	19:35		18:46	17:09	17:00	91 14:26 (WTG06)			
17	06:09		06:38	07:08		07:39	07:14	07:44	12:55 (WTG06)			
	20:55		20:23	19:34		18:45	17:08	17:01	93 14:28 (WTG06)			
18	06:10		06:39	07:09		07:40	07:15	07:44	12:55 (WTG06)			
	20:55		20:21	19:32		18:43	17:07	17:01	93 14:28 (WTG06)			
19	06:11		06:40	07:10		07:41	07:16	07:45	12:55 (WTG06)			
	20:54		20:20	19:30		18:42	17:07	17:01	94 14:29 (WTG06)			
20	06:12		06:41	07:11		07:42	07:18	07:45	12:56 (WTG06)			
	20:53		20:18	19:29		18:40	17:06	17:02	94 14:30 (WTG06)			
21	06:13		06:42	07:12		07:43	07:19	07:46	12:56 (WTG06)			
	20:52		20:17	19:27		18:39	17:05	17:02	94 14:30 (WTG06)			
22	06:13		06:43	07:13		07:44	07:20	07:47	12:57 (WTG06)			
	20:52		20:15	19:25		18:37	17:05	17:03	94 14:31 (WTG06)			
23	06:14		06:44	07:14		07:45	07:21	07:47	12:57 (WTG06)			
	20:51		20:14	19:24		18:36	17:04	17:03	94 14:31 (WTG06)			
24	06:15		06:45	07:15		07:46	07:22	07:48	12:57 (WTG06)			
	20:50		20:12	19:22		18:35	17:03	24 13:48 (WTG06)	17:04	94 14:31 (WTG06)		
25	06:16		06:46	07:16		06:47	07:23	13:19 (WTG06)	07:48	12:59 (WTG06)		
	20:49		20:11	19:20		17:33	17:03	34 13:53 (WTG06)	17:04	93 14:32 (WTG06)		
26	06:17		06:47	07:17		06:49	07:24	13:16 (WTG06)	07:48	12:59 (WTG06)		
	20:48		20:09	19:19		17:32	17:02	42 13:58 (WTG06)	17:05	93 14:32 (WTG06)		
27	06:18		06:48	07:18		06:50	07:25	13:12 (WTG06)	07:49	12:59 (WTG06)		
	20:47		20:08	19:17		17:31	17:02	49 14:01 (WTG06)	17:06	93 14:32 (WTG06)		
28	06:19		06:49	07:19		06:51	07:27	13:10 (WTG06)	07:49	13:01 (WTG06)		
	20:47		20:06	19:15		17:29	17:01	53 14:03 (WTG06)	17:06	91 14:32 (WTG06)		
29	06:20		06:50	07:20		06:52	07:28	13:07 (WTG06)	07:49	13:02 (WTG06)		
	20:46		20:05	19:14		17:28	17:01	59 14:06 (WTG06)	17:07	90 14:32 (WTG06)		
30	06:21		06:51	07:21		06:53	07:29	13:05 (WTG06)	07:50	13:02 (WTG06)		
	20:45		20:03	19:12		17:27	17:01	63 14:08 (WTG06)	17:08	90 14:32 (WTG06)		
31	06:22		06:52	19:38 (ME_5)		06:54		07:50	13:03 (WTG06)			
	20:44		20:02	1 19:39 (ME_5)		17:25		17:09	89 14:32 (WTG06)			
Potential sun hours	457		427	375		346	299	324	289			
Total, worst case	48		1	4								2697

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)		Last time (hh:mm) with flicker	(WTG causing flicker last time)

SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_7 - Torre nuragica

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June
1	07:50	13:26 (WTG06)	07:37	07:02	07:12	06:27
	17:10	59 14:25 (WTG06)	17:43	18:17	19:50	20:21
2	07:50	13:28 (WTG06)	07:36	07:00	07:10	06:25
	17:10	57 14:25 (WTG06)	17:45	18:18	19:51	20:22
3	07:50	13:30 (WTG06)	07:35	06:59	07:08	06:24
	17:11	54 14:24 (WTG06)	17:46	18:19	19:52	1 19:30 (ME_5) 20:23
4	07:50	13:32 (WTG06)	07:34	06:57	07:07	06:23
	17:12	51 14:23 (WTG06)	17:47	18:20	19:53	2 19:32 (ME_5) 20:24
5	07:50	13:34 (WTG06)	07:33	06:56	07:05	19:32 (ME_5) 06:22
	17:13	49 14:23 (WTG06)	17:48	18:21	19:54	1 19:33 (ME_5) 20:25
6	07:50	13:36 (WTG06)	07:32	06:54	07:04	06:20
	17:14	46 14:22 (WTG06)	17:49	18:22	19:55	20:26
7	07:50	13:39 (WTG06)	07:31	06:53	07:02	06:19
	17:15	41 14:20 (WTG06)	17:51	18:24	19:56	20:27
8	07:50	13:42 (WTG06)	07:30	06:51	07:00	06:18
	17:16	37 14:19 (WTG06)	17:52	18:25	19:57	20:28
9	07:50	13:45 (WTG06)	07:29	06:49	06:59	06:17
	17:17	32 14:17 (WTG06)	17:53	18:26	19:58	20:29
10	07:50	13:49 (WTG06)	07:28	06:48	06:57	06:16
	17:18	24 14:13 (WTG06)	17:54	18:27	19:59	20:30
11	07:50	13:56 (WTG06)	07:26	06:46	06:56	06:15
	17:19	12 14:08 (WTG06)	17:56	18:28	20:01	20:31
12	07:49		07:25	06:45	06:54	06:14
	17:20		17:57	18:29	20:02	20:32
13	07:49		07:24	06:43	06:53	06:13
	17:21		17:58	18:30	20:03	20:33
14	07:49		07:23	06:41	06:51	06:12
	17:22		17:59	18:31	20:04	20:34
15	07:48		07:21	06:40	06:49	06:11
	17:23		18:00	18:32	20:05	20:35
16	07:48		07:20	06:38	06:48	06:10
	17:24		18:02	18:33	20:06	20:36
17	07:48		07:19	06:36	06:46	06:09
	17:25		18:03	18:34	20:07	20:37
18	07:47		07:18	06:35	06:45	06:08
	17:27		18:04	18:35	20:08	20:38
19	07:47		07:16	06:33	06:43	06:07
	17:28		18:05	18:37	20:09	20:39
20	07:46		07:15	06:32	06:42	06:06
	17:29		18:06	18:38	20:10	20:40
21	07:46		07:13	06:30	06:40	06:05
	17:30		18:08	18:39	20:11	20:41
22	07:45		07:12	06:28	06:39	06:05
	17:31		18:09	18:40	20:12	20:42
23	07:44		07:11	06:27	06:38	06:04
	17:32		18:10	18:41	20:13	20:43
24	07:44		07:09	06:25	06:36	06:03
	17:34		18:11	18:42	20:14	20:44
25	07:43		07:08	06:23	06:35	06:02
	17:35		18:12	18:43	20:15	20:45
26	07:42		07:06	06:22	06:33	06:02
	17:36		18:13	18:44	20:16	20:46
27	07:41		07:05	06:20	06:32	06:01
	17:37		18:15	18:45	20:17	20:47
28	07:41		07:03	06:18	06:31	06:00
	17:38		18:16	18:46	20:18	20:48
29	07:40			07:17	06:29	06:00
	17:40			19:47	20:19	11 06:47 (WTG05) 20:48
30	07:39			07:15	06:28	05:59
	17:41			19:48	20:20	21 07:03 (WTG05) 20:49
31	07:38			07:13		05:59
	17:42			19:49		28 07:07 (WTG05) 20:49
Potential sun hours	299		298	370	398	447
Total, worst case	462				4	60
						451
						1641

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_7 - Torre nuragica
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October	November	December			
1	05:59 21:01	06:31 (WTG05) 07:27 (WTG05)	06:22 20:43	06:53 20:00	07:22 19:10	06:55 17:24	07:30 17:00	11	13:39 (WTG06)
2	05:59 21:01	06:32 (WTG05) 07:27 (WTG05)	06:23 20:41	06:54 19:58	07:23 19:09	06:57 17:23	07:31 17:00	24	13:32 (WTG06)
3	06:00 21:01	06:33 (WTG05) 07:26 (WTG05)	06:24 20:40	06:55 19:57	07:24 19:07	06:58 17:22	07:32 17:00	31	13:29 (WTG06)
4	06:00 21:01	06:34 (WTG05) 07:26 (WTG05)	06:25 20:39	06:55 19:55	07:25 19:05	06:59 17:21	07:33 17:00	37	13:26 (WTG06)
5	06:01 21:00	06:35 (WTG05) 07:25 (WTG05)	06:26 20:38	06:56 19:54	07:26 19:04	07:00 17:20	07:34 17:00	41	13:24 (WTG06)
6	06:02 21:00	06:36 (WTG05) 07:24 (WTG05)	06:27 20:37	06:57 19:52	07:27 19:02	07:01 17:18	07:35 16:59	45	13:22 (WTG06)
7	06:02 21:00	06:38 (WTG05) 07:24 (WTG05)	06:28 20:36	06:58 19:50	19:27 (ME_5) 19:29 (ME_5)	07:28 19:00	07:02 17:17	48	13:21 (WTG06)
8	06:03 21:00	06:39 (WTG05) 07:22 (WTG05)	06:29 20:35	06:59 19:49	19:26 (ME_5) 19:27 (ME_5)	07:29 18:59	07:04 17:16	51	13:20 (WTG06)
9	06:03 20:59	06:40 (WTG05) 07:21 (WTG05)	06:30 20:33	07:00 19:47	07:30 18:57	07:05 17:15	07:37 16:59	54	14:11 (WTG06)
10	06:04 20:59	06:42 (WTG05) 07:19 (WTG05)	06:31 20:32	07:01 19:45	07:31 18:56	07:06 17:14	07:38 16:59	57	14:13 (WTG06)
11	06:05 20:58	06:44 (WTG05) 07:18 (WTG05)	06:32 20:31	07:02 19:44	07:32 18:54	07:07 17:13	07:39 16:59	58	14:16 (WTG06)
12	06:06 20:58	06:46 (WTG05) 07:16 (WTG05)	06:33 20:29	07:03 19:42	07:33 18:52	07:08 17:12	07:40 17:00	60	14:16 (WTG06)
13	06:06 20:58	06:50 (WTG05) 07:14 (WTG05)	06:34 20:28	07:04 19:40	07:34 18:51	07:09 17:11	07:41 17:00	62	14:16 (WTG06)
14	06:07 20:57	06:53 (WTG05) 07:09 (WTG05)	06:35 20:27	07:05 19:39	07:35 18:49	07:11 17:10	07:41 17:00	63	14:16 (WTG06)
15	06:08 20:56	06:56 (WTG05) 07:08 (WTG05)	06:36 20:25	07:06 19:37	07:36 18:48	07:12 17:10	07:42 17:00	64	14:19 (WTG06)
16	06:08 20:56	06:57 (WTG05) 07:07 (WTG05)	06:37 20:24	07:07 19:35	07:37 18:46	07:13 17:09	07:43 17:00	65	14:20 (WTG06)
17	06:09 20:55	06:58 (WTG05) 07:06 (WTG05)	06:38 20:23	07:08 19:34	07:39 18:45	07:14 17:08	07:44 17:01	66	14:22 (WTG06)
18	06:10 20:55	06:59 (WTG05) 07:05 (WTG05)	06:39 20:21	07:09 19:32	07:40 18:43	07:15 17:07	07:44 17:01	67	14:22 (WTG06)
19	06:11 20:54	07:00 (WTG05) 07:04 (WTG05)	06:40 20:20	07:10 19:30	07:41 18:42	07:16 17:07	07:45 17:01	67	14:22 (WTG06)
20	06:12 20:53	07:01 (WTG05) 07:03 (WTG05)	06:41 20:18	07:11 19:29	07:42 18:40	07:18 17:06	07:45 17:02	68	14:24 (WTG06)
21	06:13 20:52	07:02 (WTG05) 07:02 (WTG05)	06:42 20:17	07:12 19:27	07:43 18:39	07:19 17:05	07:46 17:02	68	14:24 (WTG06)
22	06:13 20:52	07:03 (WTG05) 07:01 (WTG05)	06:43 20:15	07:13 19:25	07:44 18:37	07:20 17:05	07:47 17:03	68	14:25 (WTG06)
23	06:14 20:51	07:04 (WTG05) 07:00 (WTG05)	06:44 20:14	07:14 19:24	07:45 18:36	07:21 17:04	07:47 17:03	68	14:25 (WTG06)
24	06:15 20:50	07:05 (WTG05) 06:59 (WTG05)	06:45 20:12	07:15 19:22	07:46 18:35	07:22 17:03	07:48 17:04	67	14:25 (WTG06)
25	06:16 20:49	07:06 (WTG05) 06:58 (WTG05)	06:46 20:11	07:16 19:20	07:47 18:34	07:23 17:03	07:48 17:04	67	14:25 (WTG06)
26	06:17 20:48	07:07 (WTG05) 06:57 (WTG05)	06:47 20:09	07:17 19:19	07:48 18:33	07:24 17:02	07:48 17:05	67	14:26 (WTG06)
27	06:18 20:47	07:08 (WTG05) 06:56 (WTG05)	06:48 20:08	07:18 19:17	07:49 18:32	07:25 17:02	07:49 17:06	66	14:26 (WTG06)
28	06:19 20:47	07:09 (WTG05) 06:55 (WTG05)	06:49 20:06	07:19 19:15	07:50 18:31	07:27 17:02	07:49 17:06	66	14:26 (WTG06)
29	06:20 20:46	07:10 (WTG05) 06:54 (WTG05)	06:50 20:05	07:20 19:14	07:51 18:30	07:28 17:01	07:49 17:07	64	14:26 (WTG06)
30	06:21 20:45	07:11 (WTG05) 06:53 (WTG05)	06:51 20:03	07:21 19:12	07:52 18:29	07:29 17:01	07:50 17:08	63	14:26 (WTG06)
31	06:22 20:44	07:12 (WTG05) 06:52 (WTG05)	06:52 20:02		07:53 18:28	07:29 17:00	07:50 17:09	62	14:26 (WTG06)
Potential sun hours	457	427	375	346	299	289	1760		
Total, worst case	585		3						

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_8 - Turrucula

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June				
1	07:50	07:37	07:02	08:11 (WTG03)	07:12	08:58 (WTG03)	06:27	07:01 (WTG02)	05:58	
	17:09	17:43	18:17	92 09:43 (WTG03)	19:50	89 10:27 (WTG03)	20:21	37 07:38 (WTG02)	20:50	
2	07:50	07:36	07:00	08:10 (WTG03)	07:10	08:58 (WTG03)	06:25	07:00 (WTG02)	05:58	
	17:10	17:44	18:18	93 09:43 (WTG03)	19:51	87 10:25 (WTG03)	20:22	37 07:37 (WTG02)	20:51	
3	07:50	07:35	06:59	08:08 (WTG03)	07:08	08:59 (WTG03)	06:24	07:01 (WTG02)	05:57	
	17:11	17:46	18:19	95 09:43 (WTG03)	19:52	85 10:24 (WTG03)	20:23	36 07:37 (WTG02)	20:52	
4	07:50	07:34	06:57	08:08 (WTG03)	07:07	08:59 (WTG03)	06:23	07:01 (WTG02)	05:57	
	17:12	17:47	18:20	96 09:44 (WTG03)	19:53	83 10:22 (WTG03)	20:24	35 07:36 (WTG02)	20:52	
5	07:50	07:33	06:56	08:06 (WTG03)	07:05	09:00 (WTG03)	06:22	07:02 (WTG02)	05:57	
	17:13	17:48	18:21	98 09:44 (WTG03)	19:54	81 10:21 (WTG03)	20:25	34 07:36 (WTG02)	20:53	
6	07:50	07:32	06:54	08:06 (WTG03)	07:04	09:00 (WTG03)	06:20	07:02 (WTG02)	05:56	
	17:14	17:49	18:22	99 09:45 (WTG03)	19:55	88 19:25 (WTG05)	20:26	33 07:35 (WTG02)	20:54	
7	07:50	07:31	06:52	08:05 (WTG03)	07:02	09:01 (WTG03)	06:19	07:03 (WTG02)	05:56	
	17:15	17:51	18:23	100 09:45 (WTG03)	19:56	91 19:27 (WTG05)	20:27	31 07:34 (WTG02)	20:54	
8	07:50	07:30	06:51	08:05 (WTG03)	07:00	09:02 (WTG03)	06:18	07:04 (WTG02)	05:56	
	17:16	17:52	18:25	100 09:45 (WTG03)	19:57	91 19:28 (WTG05)	20:28	30 07:34 (WTG02)	20:55	
9	07:50	07:29	06:49	08:04 (WTG03)	06:59	09:02 (WTG03)	06:17	07:05 (WTG02)	05:56	
	17:17	17:53	18:26	101 09:45 (WTG03)	19:58	91 19:29 (WTG05)	20:29	28 07:33 (WTG02)	20:55	
10	07:50	07:27	06:48	08:02 (WTG03)	06:57	09:04 (WTG03)	06:16	07:05 (WTG02)	05:55	
	17:18	17:54	18:27	103 09:45 (WTG03)	19:59	90 19:30 (WTG05)	20:30	25 07:30 (WTG02)	20:56	
11	07:50	07:26	06:46	08:02 (WTG03)	06:56	09:04 (WTG03)	06:15	07:06 (WTG02)	05:55	
	17:19	17:56	18:28	103 09:45 (WTG03)	20:00	89 19:30 (WTG05)	20:31	23 07:29 (WTG02)	20:57	
12	07:49	07:25	08:47 (WTG03)	06:44	08:01 (WTG03)	06:54	09:05 (WTG03)	06:14	07:08 (WTG02)	05:55
	17:20	17:57	21 09:08 (WTG03)	18:29	104 09:45 (WTG03)	20:01	85 19:29 (WTG05)	20:32	20 07:28 (WTG02)	20:57
13	07:49	07:24	08:42 (WTG03)	06:43	103 09:45 (WTG03)	06:52	09:06 (WTG03)	06:13	07:10 (WTG02)	05:55
	17:21	17:58	32 09:14 (WTG03)	18:30	103 09:44 (WTG03)	20:02	83 19:30 (WTG05)	20:33	16 07:26 (WTG02)	20:57
14	07:49	07:23	08:38 (WTG03)	06:41	103 08:01 (WTG03)	06:51	09:07 (WTG03)	06:12	07:13 (WTG02)	05:55
	17:22	17:59	40 09:18 (WTG03)	18:31	103 09:44 (WTG03)	20:04	79 19:29 (WTG05)	20:34	11 07:24 (WTG02)	20:58
15	07:48	07:21	08:35 (WTG03)	06:40	103 08:00 (WTG03)	06:49	07:19 (WTG02)	06:11		05:55
	17:23	18:00	46 09:21 (WTG03)	18:32	104 09:44 (WTG03)	20:05	83 19:29 (WTG05)	20:35		20:58
16	07:48	07:20	08:32 (WTG03)	06:38	104 08:00 (WTG03)	06:48	07:14 (WTG02)	06:10		05:55
	17:24	18:02	52 09:24 (WTG03)	18:33	104 09:44 (WTG03)	20:06	86 19:28 (WTG05)	20:36		20:59
17	07:48	07:19	08:30 (WTG03)	06:36	104 07:59 (WTG03)	06:46	07:12 (WTG02)	06:09		05:55
	17:25	18:03	56 09:26 (WTG03)	18:34	104 09:43 (WTG03)	20:07	85 19:28 (WTG05)	20:37		20:59
18	07:47	07:17	08:28 (WTG03)	06:35	103 07:59 (WTG03)	06:45	07:09 (WTG02)	06:08		05:55
	17:27	18:04	61 09:29 (WTG03)	18:35	103 09:42 (WTG03)	20:08	82 19:26 (WTG05)	20:38		20:59
19	07:47	07:16	08:25 (WTG03)	06:33	103 07:59 (WTG03)	06:43	07:08 (WTG02)	06:07		05:55
	17:28	18:05	65 09:30 (WTG03)	18:36	103 09:42 (WTG03)	20:09	77 19:25 (WTG05)	20:39		21:00
20	07:46	07:15	08:24 (WTG03)	06:31	103 07:58 (WTG03)	06:42	07:06 (WTG02)	06:06		05:55
	17:29	18:06	68 09:32 (WTG03)	18:37	103 09:41 (WTG03)	20:10	68 19:23 (WTG05)	20:40		21:00
21	07:45	07:13	08:21 (WTG03)	06:30	102 07:58 (WTG03)	06:40	07:05 (WTG02)	06:05		05:56
	17:30	18:07	72 09:33 (WTG03)	18:39	102 09:40 (WTG03)	20:11	55 19:21 (WTG05)	20:41		21:00
22	07:45	07:12	08:20 (WTG03)	06:28	101 07:58 (WTG03)	06:39	07:04 (WTG02)	06:04		05:56
	17:31	18:09	75 09:35 (WTG03)	18:40	101 09:39 (WTG03)	20:12	34 07:38 (WTG02)	20:42		21:00
23	07:44	07:11	08:19 (WTG03)	06:26	100 07:58 (WTG03)	06:37	07:03 (WTG02)	06:04		05:56
	17:32	18:10	78 09:37 (WTG03)	18:41	100 09:38 (WTG03)	20:13	35 07:38 (WTG02)	20:43		21:01
24	07:44	07:09	08:17 (WTG03)	06:25	100 07:57 (WTG03)	06:36	07:03 (WTG02)	06:03		05:56
	17:34	18:11	81 09:38 (WTG03)	18:42	100 09:37 (WTG03)	20:14	36 07:39 (WTG02)	20:44		21:01
25	07:43	07:08	08:16 (WTG03)	06:23	99 07:58 (WTG03)	06:35	07:01 (WTG02)	06:02		05:57
	17:35	18:12	83 09:39 (WTG03)	18:43	98 09:36 (WTG03)	20:15	37 07:38 (WTG02)	20:45		21:01
26	07:42	07:06	08:14 (WTG03)	06:22	98 07:57 (WTG03)	06:33	07:01 (WTG02)	06:02		05:57
	17:36	18:13	86 09:40 (WTG03)	18:44	98 09:35 (WTG03)	20:16	38 07:39 (WTG02)	20:45		21:01
27	07:41	07:05	08:13 (WTG03)	06:20	97 07:57 (WTG03)	06:32	07:01 (WTG02)	06:01		05:57
	17:37	18:14	88 09:41 (WTG03)	18:45	97 09:34 (WTG03)	20:17	38 07:39 (WTG02)	20:46		21:01
28	07:41	07:03	08:12 (WTG03)	06:18	95 07:58 (WTG03)	06:31	07:00 (WTG02)	06:00		05:58
	17:38	18:16	90 09:42 (WTG03)	18:46	95 09:33 (WTG03)	20:18	38 07:38 (WTG02)	20:47		21:01
29	07:40			07:17	93 08:58 (WTG03)	06:29	07:00 (WTG02)	06:00		05:58
	17:40			19:47	93 10:31 (WTG03)	20:19	38 07:38 (WTG02)	20:48		21:01
30	07:39			07:15	93 08:57 (WTG03)	06:28	07:01 (WTG02)	05:59		05:58
	17:41			19:48	93 10:30 (WTG03)	20:20	37 07:38 (WTG02)	20:49		21:01
31	07:38			07:13	91 08:58 (WTG03)			05:59		
	17:42			19:49	91 10:29 (WTG03)			20:49		
Potential sun hours	299	298	370	398	398	447	451			
Total, worst case		1094	3079	2079	396					

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturalShadow receptor: RBP_8 - Turrucula

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	July	August	September	October	November	December								
1	05:59	06:22	07:18 (WTG02)	06:52	09:03 (WTG03)	07:22	08:41 (WTG03)	06:55	07:30					
	21:01	20:42	21	07:39 (WTG02)	20:00	89	19:29 (WTG05)	19:10	103	10:24 (WTG03)	17:24	17:00		
2	05:59	06:23	07:16 (WTG02)	06:53	09:02 (WTG03)	07:23	08:41 (WTG03)	06:56	07:31					
	21:01	20:41	24	07:40 (WTG02)	19:58	90	19:28 (WTG05)	19:08	103	10:24 (WTG03)	17:23	17:00		
3	06:00	06:24	07:15 (WTG02)	06:54	09:00 (WTG03)	07:24	08:41 (WTG03)	06:58	07:32					
	21:01	20:40	27	07:42 (WTG02)	19:57	91	19:27 (WTG05)	19:07	102	10:23 (WTG03)	17:22	17:00		
4	06:00	06:25	07:14 (WTG02)	06:55	08:59 (WTG03)	07:25	08:41 (WTG03)	06:59	07:33					
	21:01	20:39	29	07:43 (WTG02)	19:55	92	19:26 (WTG05)	19:05	102	10:23 (WTG03)	17:21	17:00		
5	06:01	06:26	07:13 (WTG02)	06:56	08:58 (WTG03)	07:26	08:41 (WTG03)	07:00	07:34					
	21:00	20:38	31	07:44 (WTG02)	19:54	91	19:24 (WTG05)	19:04	101	10:22 (WTG03)	17:19	16:59		
6	06:02	06:27	07:13 (WTG02)	06:57	08:56 (WTG03)	07:27	08:41 (WTG03)	07:01	07:35					
	21:00	20:37	31	07:44 (WTG02)	19:52	89	19:21 (WTG05)	19:02	101	10:22 (WTG03)	17:18	16:59		
7	06:02	06:28	07:12 (WTG02)	06:58	08:55 (WTG03)	07:28	08:41 (WTG03)	07:02	07:35					
	21:00	20:36	33	07:45 (WTG02)	19:50	81	10:16 (WTG03)	19:00	100	10:21 (WTG03)	17:17	16:59		
8	06:03	06:29	07:11 (WTG02)	06:59	08:54 (WTG03)	07:29	08:42 (WTG03)	07:03	07:36					
	20:59	20:34	35	07:46 (WTG02)	19:49	83	10:17 (WTG03)	18:59	98	10:20 (WTG03)	17:16	16:59		
9	06:03	06:30	07:11 (WTG02)	07:00	08:53 (WTG03)	07:30	08:42 (WTG03)	07:05	07:37					
	20:59	20:33	35	07:46 (WTG02)	19:47	85	10:18 (WTG03)	18:57	97	10:19 (WTG03)	17:15	16:59		
10	06:04	06:31	07:10 (WTG02)	07:01	08:51 (WTG03)	07:31	08:42 (WTG03)	07:06	07:38					
	20:59	20:32	36	07:46 (WTG02)	19:45	87	10:18 (WTG03)	18:55	96	10:18 (WTG03)	17:14	16:59		
11	06:05	06:32	07:09 (WTG02)	07:02	08:50 (WTG03)	07:32	08:43 (WTG03)	07:07	07:39					
	20:58	20:31	37	07:46 (WTG02)	19:44	89	10:19 (WTG03)	18:54	94	10:17 (WTG03)	17:13	16:59		
12	06:05	06:33	07:09 (WTG02)	07:03	08:49 (WTG03)	07:33	08:43 (WTG03)	07:08	07:40					
	20:58	20:29	37	07:46 (WTG02)	19:42	91	10:20 (WTG03)	18:52	93	10:16 (WTG03)	17:12	16:59		
13	06:06	06:34	07:08 (WTG02)	07:04	08:49 (WTG03)	07:34	08:44 (WTG03)	07:09	07:41					
	20:57	20:28	38	07:46 (WTG02)	19:40	92	10:21 (WTG03)	18:51	91	10:15 (WTG03)	17:11	17:00		
14	06:07	06:35	07:08 (WTG02)	07:05	08:48 (WTG03)	07:35	08:45 (WTG03)	07:11	07:41					
	20:57	20:27	38	07:46 (WTG02)	19:39	93	10:21 (WTG03)	18:49	89	10:14 (WTG03)	17:10	17:00		
15	06:08	06:36	07:08 (WTG02)	07:06	08:47 (WTG03)	07:36	08:46 (WTG03)	07:12	07:42					
	20:56	20:25	38	07:46 (WTG02)	19:37	95	10:22 (WTG03)	18:48	87	10:13 (WTG03)	17:10	17:00		
16	06:08	06:37	07:08 (WTG02)	07:07	08:46 (WTG03)	07:37	08:47 (WTG03)	07:13	07:43					
	20:56	20:24	38	07:46 (WTG02)	19:35	97	10:23 (WTG03)	18:46	85	10:12 (WTG03)	17:09	17:00		
17	06:09	06:38	07:08 (WTG02)	07:08	08:46 (WTG03)	07:38	08:48 (WTG03)	07:14	07:43					
	20:55	20:23	37	07:45 (WTG02)	19:34	97	10:23 (WTG03)	18:45	82	10:10 (WTG03)	17:08	17:01		
18	06:10	06:39	07:08 (WTG02)	07:09	08:45 (WTG03)	07:40	08:49 (WTG03)	07:15	07:44					
	20:55	20:21	37	07:45 (WTG02)	19:32	99	10:24 (WTG03)	18:43	80	10:09 (WTG03)	17:07	17:01		
19	06:11	06:40	07:09 (WTG02)	07:10	08:45 (WTG03)	07:41	08:50 (WTG03)	07:16	07:45					
	20:54	20:20	35	07:44 (WTG02)	19:30	99	10:24 (WTG03)	18:42	77	10:07 (WTG03)	17:06	17:01		
20	06:12	06:41	07:09 (WTG02)	07:11	08:44 (WTG03)	07:42	08:51 (WTG03)	07:17	07:45					
	20:53	20:18	35	07:44 (WTG02)	19:29	100	10:24 (WTG03)	18:40	74	10:05 (WTG03)	17:06	17:02		
21	06:12	06:42	07:09 (WTG02)	07:12	08:44 (WTG03)	07:43	08:52 (WTG03)	07:19	07:46					
	20:52	20:17	34	07:43 (WTG02)	19:27	101	10:25 (WTG03)	18:39	72	10:04 (WTG03)	17:05	17:02		
22	06:13	06:43	07:10 (WTG02)	07:13	08:43 (WTG03)	07:44	08:55 (WTG03)	07:20	07:46					
	20:52	20:15	58	19:26 (WTG05)	19:25	102	10:25 (WTG03)	18:37	68	10:03 (WTG03)	17:04	17:03		
23	06:14	06:44	07:11 (WTG02)	07:14	08:43 (WTG03)	07:45	08:56 (WTG03)	07:21	07:47					
	20:51	20:14	70	19:28 (WTG05)	19:23	102	10:25 (WTG03)	18:36	64	10:00 (WTG03)	17:04	17:03		
24	06:15	06:45	07:12 (WTG02)	07:15	08:42 (WTG03)	07:46	08:58 (WTG03)	07:22	07:47					
	20:50	20:12	77	19:29 (WTG05)	19:22	103	10:25 (WTG03)	18:35	60	09:58 (WTG03)	17:03	17:04		
25	06:16	06:46	07:13 (WTG02)	07:16	08:42 (WTG03)	06:47	08:00 (WTG03)	07:23	07:48					
	20:49	20:11	84	19:30 (WTG05)	19:20	103	10:25 (WTG03)	17:33	55	08:55 (WTG03)	17:03	17:04		
26	06:17	06:47	07:15 (WTG02)	07:17	08:42 (WTG03)	06:48	08:02 (WTG03)	07:24	07:48					
	20:48	20:09	87	19:31 (WTG05)	19:18	103	10:25 (WTG03)	17:32	51	08:53 (WTG03)	17:02	17:05		
27	06:18	06:48	07:16 (WTG02)	07:18	08:41 (WTG03)	06:50	08:05 (WTG03)	07:25	07:49					
	20:47	20:08	86	19:30 (WTG05)	19:17	104	10:25 (WTG03)	17:31	45	08:50 (WTG03)	17:02	17:06		
28	06:19	06:49	07:20 (WTG02)	07:19	08:41 (WTG03)	06:51	08:09 (WTG03)	07:26	07:49					
	20:46	20:06	83	19:30 (WTG05)	19:15	104	10:25 (WTG03)	17:29	38	08:47 (WTG03)	17:01	17:06		
29	06:20	07:26 (WTG02)	06:50	09:08 (WTG03)	07:20	08:41 (WTG03)	06:52	08:12 (WTG03)	07:28	07:49				
	20:45	6	07:32 (WTG02)	20:05	80	19:30 (WTG05)	19:13	104	10:25 (WTG03)	17:28	30	08:42 (WTG03)	17:01	17:07
30	06:20	07:21 (WTG02)	06:51	09:06 (WTG03)	07:21	104	08:41 (WTG03)	06:53	08:18 (WTG03)	07:29	07:49			
	20:44	14	07:35 (WTG02)	20:03	84	19:30 (WTG05)	19:12	104	10:25 (WTG03)	17:27	18	08:36 (WTG03)	17:01	17:08
31	06:21	07:19 (WTG02)	06:52	09:05 (WTG03)			06:54						07:50	
	20:43	18	07:37 (WTG02)	20:02	85	19:29 (WTG05)	17:25						17:08	
Potential sun hours	457		427		375		346		299		289			
Total, worst case	38		1500		2860		2356							

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_9 - NURAGHE FRADES TALAS
 Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
 The sun is shining all the day, from sunrise to sunset
 The rotor plane is always perpendicular to the line from the WTG to the sun
 The WTG is always operating

	January	February	March	April	May	June
1	07:50 17:10	16:11 (WTG07) 16:44 (WTG07)	07:37 17:43	16:21 (WTG07) 17:09 (WTG07)	07:02 18:17	07:12 19:50
2	07:50 17:10	16:12 (WTG07) 16:44 (WTG07)	07:36 17:45	16:22 (WTG07) 17:09 (WTG07)	07:00 18:18	07:10 19:51
3	07:50 17:11	16:12 (WTG07) 16:45 (WTG07)	07:35 17:46	16:23 (WTG07) 17:08 (WTG07)	06:59 18:19	07:08 19:52
4	07:50 17:12	16:12 (WTG07) 16:46 (WTG07)	07:34 17:47	16:24 (WTG07) 17:08 (WTG07)	06:57 18:20	07:07 19:53
5	07:50 17:13	16:12 (WTG07) 16:47 (WTG07)	07:33 17:48	16:25 (WTG07) 17:07 (WTG07)	06:56 18:21	07:05 19:54
6	07:50 17:14	16:13 (WTG07) 16:48 (WTG07)	07:32 17:49	16:26 (WTG07) 17:06 (WTG07)	06:54 18:22	07:04 19:55
7	07:50 17:15	16:13 (WTG07) 16:49 (WTG07)	07:31 17:51	16:28 (WTG07) 17:05 (WTG07)	06:53 18:24	07:02 19:56
8	07:50 17:16	16:13 (WTG07) 16:51 (WTG07)	07:30 17:52	16:28 (WTG07) 17:03 (WTG07)	06:51 18:25	07:00 19:57
9	07:50 17:17	16:14 (WTG07) 16:52 (WTG07)	07:29 17:53	16:30 (WTG07) 17:02 (WTG07)	06:49 18:26	06:59 19:58
10	07:50 17:18	16:14 (WTG07) 16:53 (WTG07)	07:28 17:54	16:32 (WTG07) 17:00 (WTG07)	06:48 18:27	06:57 19:59
11	07:50 17:19	16:15 (WTG07) 16:54 (WTG07)	07:26 17:56	16:35 (WTG07) 16:58 (WTG07)	06:46 18:28	06:56 20:00
12	07:49 17:20	16:14 (WTG07) 16:55 (WTG07)	07:25 17:57	16:39 (WTG07) 16:55 (WTG07)	06:45 18:29	06:54 20:02
13	07:49 17:21	16:14 (WTG07) 16:55 (WTG07)	07:24 17:58	16:43 18:30	06:43 18:30	06:53 20:03
14	07:49 17:22	16:14 (WTG07) 16:57 (WTG07)	07:23 17:59	16:41 18:31	06:41 18:31	06:51 20:04
15	07:48 17:23	16:14 (WTG07) 16:58 (WTG07)	07:21 18:00	16:40 18:32	06:40 18:32	06:49 20:05
16	07:48 17:24	16:14 (WTG07) 16:59 (WTG07)	07:20 18:02	16:38 18:33	06:38 18:33	06:48 20:06
17	07:48 17:25	16:14 (WTG07) 17:00 (WTG07)	07:19 18:03	16:36 18:34	06:36 18:34	06:46 20:07
18	07:47 17:27	16:15 (WTG07) 17:02 (WTG07)	07:18 18:04	16:35 18:35	6 17:43 (WTG06) 17:26 (WTG06)	06:45 20:08
19	07:47 17:28	16:15 (WTG07) 17:03 (WTG07)	07:16 18:05	16:33 18:36	27 17:53 (WTG06) 17:22 (WTG06)	06:43 20:09
20	07:46 17:29	16:16 (WTG07) 17:04 (WTG07)	07:15 18:06	16:32 18:38	36 17:58 (WTG06) 17:17 (WTG06)	06:42 20:10
21	07:46 17:30	16:15 (WTG07) 17:05 (WTG07)	07:13 18:08	16:30 18:39	44 18:01 (WTG06) 17:13 (WTG06)	06:40 20:11
22	07:45 17:31	16:15 (WTG07) 17:06 (WTG07)	07:12 18:09	16:29 18:40	51 18:04 (WTG06) 17:11 (WTG06)	06:39 20:12
23	07:44 17:32	16:16 (WTG07) 17:08 (WTG07)	07:11 18:10	16:27 18:41	56 18:07 (WTG06) 18:08 (WTG06)	06:38 20:13
24	07:44 17:34	16:17 (WTG07) 17:09 (WTG07)	07:09 18:11	16:25 18:42	60 18:08 (WTG06) 17:05 (WTG06)	06:36 20:14
25	07:43 17:35	16:17 (WTG07) 17:10 (WTG07)	07:08 18:12	16:23 18:43	65 18:10 (WTG06) 18:12 (WTG06)	06:35 20:15
26	07:42 17:36	16:17 (WTG07) 17:10 (WTG07)	07:06 18:13	16:22 18:44	68 18:12 (WTG06) 17:01 (WTG06)	06:33 20:16
27	07:41 17:37	16:18 (WTG07) 17:10 (WTG07)	07:05 18:15	16:20 18:45	72 18:13 (WTG06) 16:59 (WTG06)	06:32 20:17
28	07:41 17:38	16:19 (WTG07) 17:10 (WTG07)	07:03 18:16	16:18 18:46	75 18:14 (WTG06) 16:58 (WTG06)	06:31 20:18
29	07:40 17:40	16:19 (WTG07) 17:10 (WTG07)	18:16	17:17 19:47	78 18:16 (WTG06) 17:56 (WTG06)	06:29 20:19
30	07:39 17:41	16:20 (WTG07) 17:10 (WTG07)		17:15 19:48	81 17:54 (WTG06) 17:54 (WTG06)	06:28 20:20
31	07:38 17:42	16:20 (WTG07) 17:09 (WTG07)		17:13 19:49	83 19:17 (WTG06) 17:53 (WTG06)	06:20 20:20
Potential sun hours	299	298	370	398	447	451
Total, worst case	1362	437	888	3028	2372	1070

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliShadow receptor: RBP_9 - NURAGHE FRADES TALAS
 Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
 The sun is shining all the day, from sunrise to sunset
 The rotor plane is always perpendicular to the line from the WTG to the sun
 The WTG is always operating

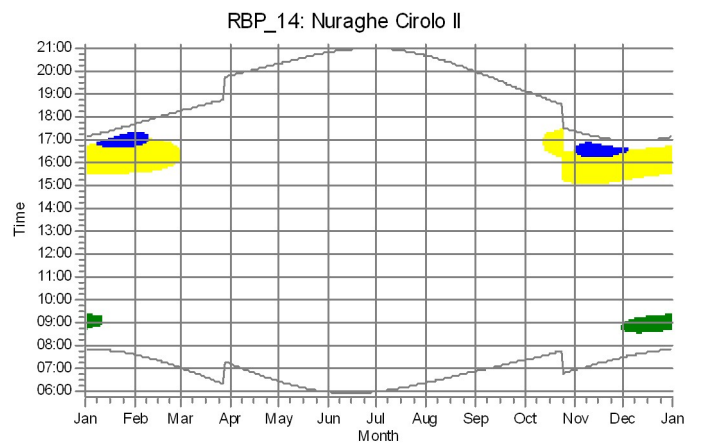
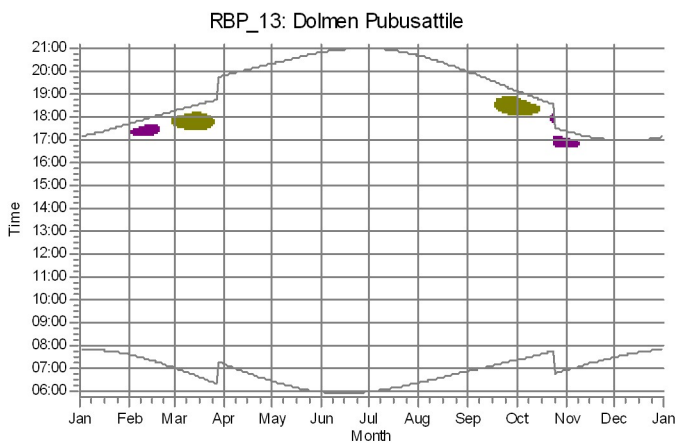
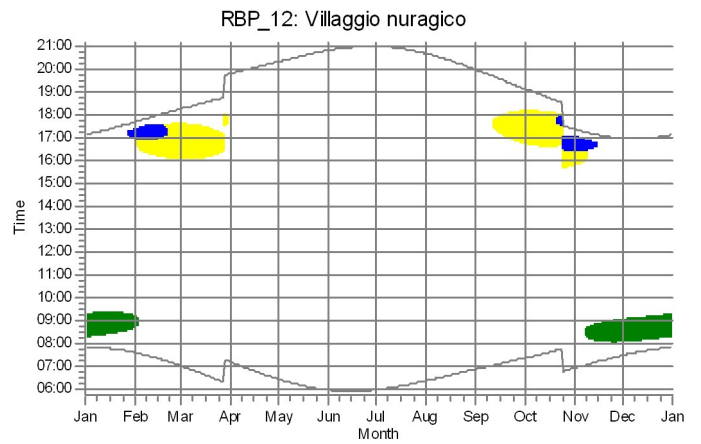
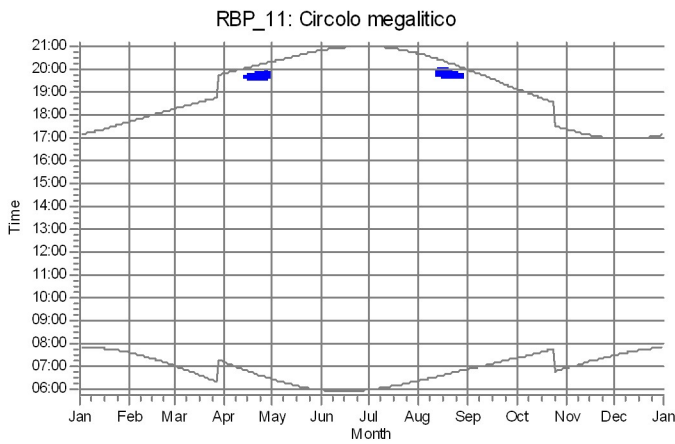
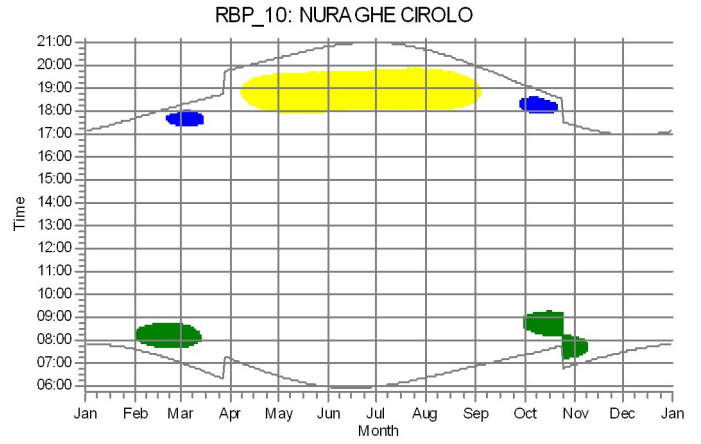
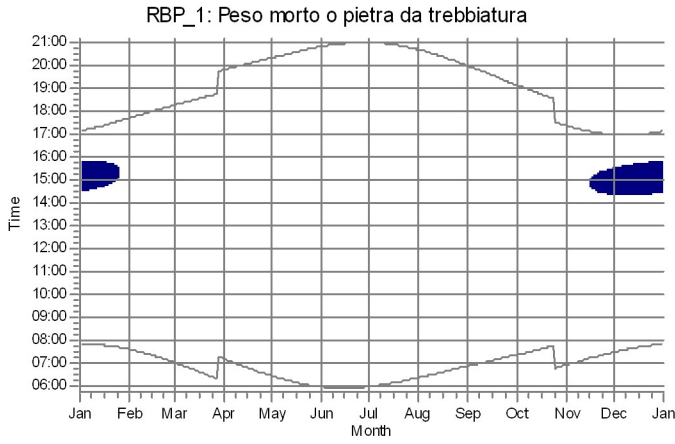
	July		August		September		October		November		December	
1	05:59	18:22 (WTG06)	06:22	17:59 (WTG06)	06:53	07:14 (WTG03)	07:22	06:55	16:02 (WTG07)	07:30	15:55 (WTG07)	
	21:01	35	18:57 (WTG06)	20:42	84	19:23 (WTG06)	20:00	110	19:22 (WTG06)	19:10	17:24	28
2	05:59	18:22 (WTG06)	06:23	17:59 (WTG06)	06:54	07:14 (WTG03)	07:23	06:57	16:00 (WTG07)	07:31	15:56 (WTG07)	
	21:01	37	18:59 (WTG06)	20:41	85	19:24 (WTG06)	19:58	110	19:21 (WTG06)	19:09	17:23	32
3	06:00	18:21 (WTG06)	06:24	17:58 (WTG06)	06:55	07:15 (WTG03)	07:24	06:58	15:58 (WTG07)	07:32	15:57 (WTG07)	
	21:01	38	18:59 (WTG06)	20:40	86	19:24 (WTG06)	19:57	109	19:20 (WTG06)	19:07	17:22	35
4	06:00	18:21 (WTG06)	06:25	17:57 (WTG06)	06:55	07:16 (WTG03)	07:25	06:59	15:56 (WTG07)	07:33	15:57 (WTG07)	
	21:01	39	19:00 (WTG06)	20:39	88	19:25 (WTG06)	19:55	109	19:20 (WTG06)	19:05	17:21	38
5	06:01	18:19 (WTG06)	06:26	17:56 (WTG06)	06:56	07:17 (WTG03)	07:26	07:00	15:56 (WTG07)	07:34	15:58 (WTG07)	
	21:00	42	19:01 (WTG06)	20:38	89	19:25 (WTG06)	19:54	107	19:19 (WTG06)	19:04	17:20	40
6	06:02	18:19 (WTG06)	06:27	17:56 (WTG06)	06:57	07:18 (WTG03)	07:27	07:01	15:55 (WTG07)	07:35	15:59 (WTG07)	
	21:00	43	19:02 (WTG06)	20:37	90	19:26 (WTG06)	19:52	104	19:18 (WTG06)	19:02	17:18	42
7	06:02	18:19 (WTG06)	06:28	17:55 (WTG06)	06:58	07:19 (WTG03)	07:28	07:02	15:53 (WTG07)	07:36	15:59 (WTG07)	
	21:00	44	19:03 (WTG06)	20:36	91	19:26 (WTG06)	19:50	102	19:17 (WTG06)	19:00	17:17	45
8	06:03	18:18 (WTG06)	06:29	17:54 (WTG06)	06:59	07:20 (WTG03)	07:29	07:04	15:52 (WTG07)	07:36	15:59 (WTG07)	
	21:00	46	19:04 (WTG06)	20:34	93	19:27 (WTG06)	19:49	99	19:16 (WTG06)	18:59	17:16	46
9	06:03	18:17 (WTG06)	06:30	17:54 (WTG06)	07:00	07:21 (WTG03)	07:30	07:05	15:53 (WTG07)	07:37	16:01 (WTG07)	
	20:59	48	19:05 (WTG06)	20:33	93	19:27 (WTG06)	19:47	96	19:15 (WTG06)	18:57	17:15	47
10	06:04	18:16 (WTG06)	06:31	17:53 (WTG06)	07:01	07:22 (WTG03)	07:31	07:06	15:52 (WTG07)	07:38	16:02 (WTG07)	
	20:59	49	19:05 (WTG06)	20:32	94	19:27 (WTG06)	19:45	93	19:14 (WTG06)	18:56	17:14	48
11	06:05	18:16 (WTG06)	06:32	17:52 (WTG06)	07:02	07:44 (WTG06)	07:32	07:07	15:51 (WTG07)	07:39	16:01 (WTG07)	
	20:58	51	19:07 (WTG06)	20:31	95	19:27 (WTG06)	19:44	87	19:11 (WTG06)	18:54	17:13	49
12	06:06	18:15 (WTG06)	06:33	17:52 (WTG06)	07:03	07:44 (WTG06)	07:33	07:08	15:51 (WTG07)	07:40	16:02 (WTG07)	
	20:58	53	19:08 (WTG06)	20:29	96	19:28 (WTG06)	19:42	86	19:10 (WTG06)	18:52	17:12	50
13	06:06	18:15 (WTG06)	06:34	17:50 (WTG06)	07:04	07:45 (WTG06)	07:34	07:09	15:51 (WTG07)	07:41	16:03 (WTG07)	
	20:57	54	19:09 (WTG06)	20:28	97	19:27 (WTG06)	19:40	84	19:09 (WTG06)	18:51	17:11	51
14	06:07	18:13 (WTG06)	06:35	17:50 (WTG06)	07:05	07:46 (WTG06)	07:35	07:11	15:51 (WTG07)	07:41	16:04 (WTG07)	
	20:57	56	19:09 (WTG06)	20:27	97	19:27 (WTG06)	19:39	81	19:07 (WTG06)	18:49	17:10	51
15	06:08	18:13 (WTG06)	06:36	17:49 (WTG06)	07:06	07:47 (WTG06)	07:36	07:12	15:50 (WTG07)	07:42	16:05 (WTG07)	
	20:56	57	19:10 (WTG06)	20:25	98	19:27 (WTG06)	19:37	78	19:05 (WTG06)	18:48	17:10	52
16	06:08	18:12 (WTG06)	06:37	17:48 (WTG06)	07:07	07:48 (WTG06)	07:37	07:13	15:50 (WTG07)	07:43	16:05 (WTG07)	
	20:56	60	19:12 (WTG06)	20:24	99	19:27 (WTG06)	19:35	76	19:04 (WTG06)	18:46	17:09	52
17	06:09	18:12 (WTG06)	06:38	17:48 (WTG06)	07:08	07:49 (WTG06)	07:39	07:14	15:51 (WTG07)	07:44	16:06 (WTG07)	
	20:55	61	19:13 (WTG06)	20:23	99	19:27 (WTG06)	19:34	73	19:02 (WTG06)	18:45	17:08	53
18	06:10	18:10 (WTG06)	06:39	17:47 (WTG06)	07:09	07:50 (WTG06)	07:40	07:15	15:51 (WTG07)	07:44	16:06 (WTG07)	
	20:55	63	19:13 (WTG06)	20:21	100	19:27 (WTG06)	19:32	70	19:00 (WTG06)	18:43	17:07	52
19	06:11	18:10 (WTG06)	06:40	17:47 (WTG06)	07:10	07:52 (WTG06)	07:41	07:16	15:50 (WTG07)	07:45	16:07 (WTG07)	
	20:54	64	19:14 (WTG06)	20:20	100	19:27 (WTG06)	19:30	66	18:58 (WTG06)	18:42	17:06	52
20	06:12	18:09 (WTG06)	06:41	17:46 (WTG06)	07:11	07:54 (WTG06)	07:42	07:18	15:50 (WTG07)	07:45	16:08 (WTG07)	
	20:53	66	19:15 (WTG06)	20:18	101	19:27 (WTG06)	19:29	61	18:55 (WTG06)	18:40	17:06	51
21	06:13	18:09 (WTG06)	06:42	17:46 (WTG06)	07:12	07:56 (WTG06)	07:43	07:19	15:51 (WTG07)	07:46	16:08 (WTG07)	
	20:52	67	19:16 (WTG06)	20:17	101	19:27 (WTG06)	19:27	57	18:53 (WTG06)	18:39	17:05	50
22	06:13	18:08 (WTG06)	06:43	17:45 (WTG06)	07:13	07:58 (WTG06)	07:44	07:20	15:52 (WTG07)	07:47	16:09 (WTG07)	
	20:52	69	19:17 (WTG06)	20:15	102	19:27 (WTG06)	19:25	52	18:50 (WTG06)	18:37	17:05	48
23	06:14	18:06 (WTG06)	06:44	17:45 (WTG06)	07:14	07:59 (WTG06)	07:45	07:21	15:52 (WTG07)	07:47	16:09 (WTG07)	
	20:51	71	19:17 (WTG06)	20:14	102	19:27 (WTG06)	19:24	47	18:47 (WTG06)	18:36	17:04	48
24	06:15	18:06 (WTG06)	06:45	17:45 (WTG06)	07:15	08:04 (WTG06)	07:46	07:22	15:52 (WTG07)	07:47	16:09 (WTG07)	
	20:50	72	19:18 (WTG06)	20:12	101	19:26 (WTG06)	19:22	39	18:43 (WTG06)	18:35	17:03	47
25	06:16	18:05 (WTG06)	06:46	17:44 (WTG06)	07:16	08:08 (WTG06)	07:47	07:23	15:52 (WTG07)	07:48	16:10 (WTG07)	
	20:49	74	19:19 (WTG06)	20:11	102	19:26 (WTG06)	19:20	30	18:38 (WTG06)	17:33	17:03	46
26	06:17	18:04 (WTG06)	06:47	17:44 (WTG06)	07:17	08:15 (WTG06)	07:48	07:24	15:53 (WTG07)	07:48	16:10 (WTG07)	
	20:48	76	19:20 (WTG06)	20:09	102	19:26 (WTG06)	19:18	16	18:31 (WTG06)	17:32	17:02	45
27	06:18	18:04 (WTG06)	06:48	17:44 (WTG06)	07:18	08:20 (WTG06)	07:49	07:25	15:54 (WTG07)	07:49	16:10 (WTG07)	
	20:47	76	19:20 (WTG06)	20:08	101	19:25 (WTG06)	19:17		17:31		17:02	44
28	06:19	18:03 (WTG06)	06:49	17:43 (WTG06)	07:19	08:24 (WTG06)	07:50	07:27	15:54 (WTG07)	07:49	16:11 (WTG07)	
	20:47	78	19:21 (WTG06)	20:06	101	19:24 (WTG06)	19:15		17:29		17:01	43
29	06:20	18:02 (WTG06)	06:50	17:42 (WTG06)	07:20	08:28 (WTG06)	07:51	07:29	15:54 (WTG07)	07:49	16:11 (WTG07)	
	20:46	80	19:22 (WTG06)	20:05	102	19:24 (WTG06)	19:13		17:28		17:01	43
30	06:21	18:02 (WTG06)	06:51	17:42 (WTG06)	07:21	08:32 (WTG06)	07:52	8	16:20 (WTG07)	17:01	16:37 (WTG07)	17:07
	20:45	81	19:23 (WTG06)	20:03	101	19:23 (WTG06)	19:12		16:07 (WTG07)	17:01	15:55 (WTG07)	07:50
31	06:22	18:00 (WTG06)	06:52	17:42 (WTG06)	07:22	08:36 (WTG06)	07:53	18	16:25 (WTG07)	17:01	16:36 (WTG07)	17:08
	20:44	82	19:22 (WTG06)	20:02	100	19:22 (WTG06)	19:11		16:03 (WTG07)	17:01	16:36 (WTG07)	17:08
Potential sun hours	457		427						17:25	24	16:27 (WTG07)	17:09
Total, worst case	1832		2990		375	2042		50	346		299	991

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	(WTG causing flicker first time)	(WTG causing flicker last time)
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SHADOW - Calendar, graphical

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali

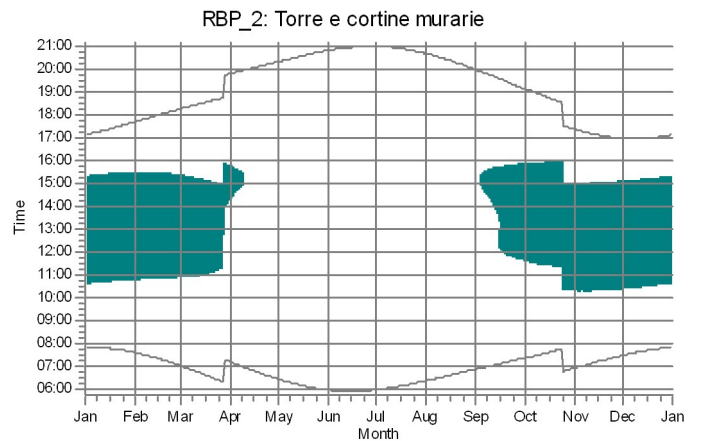
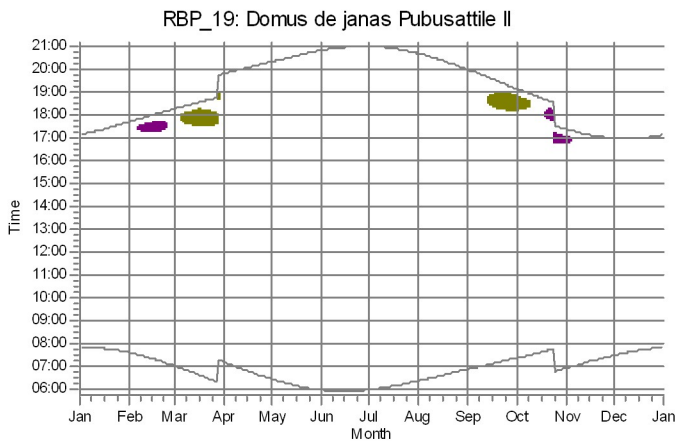
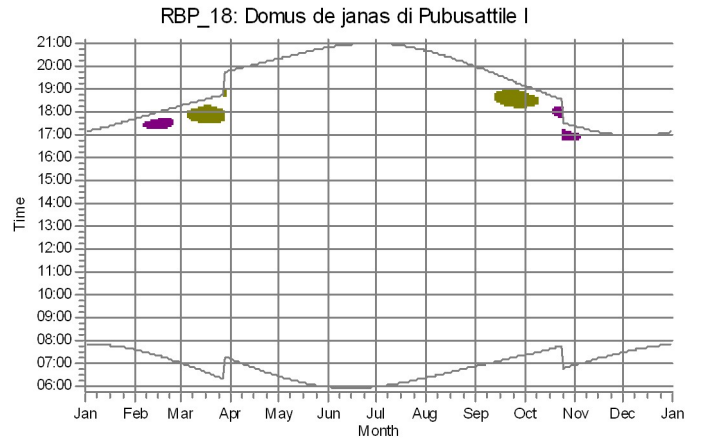
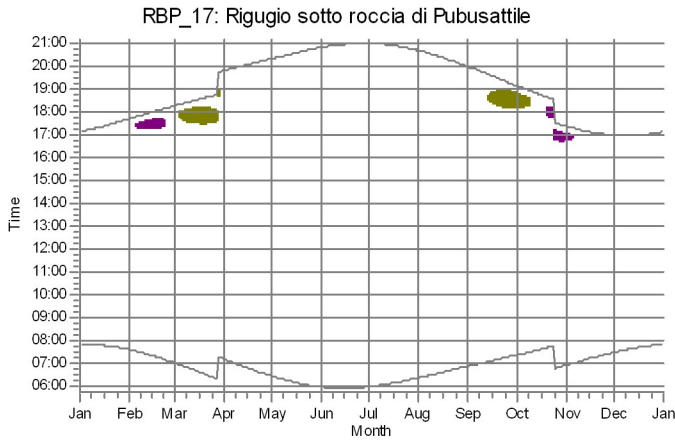
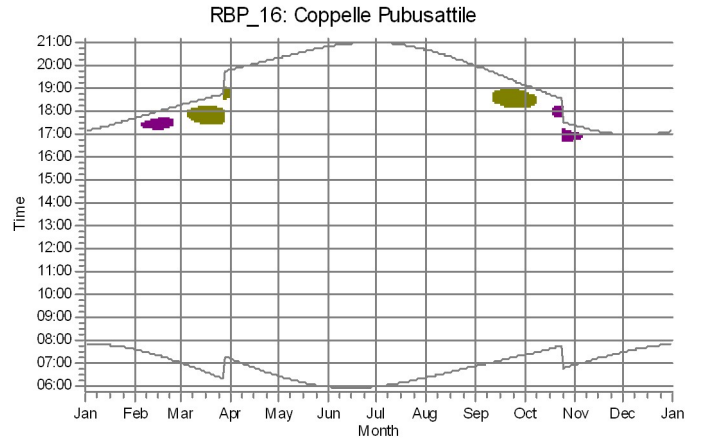
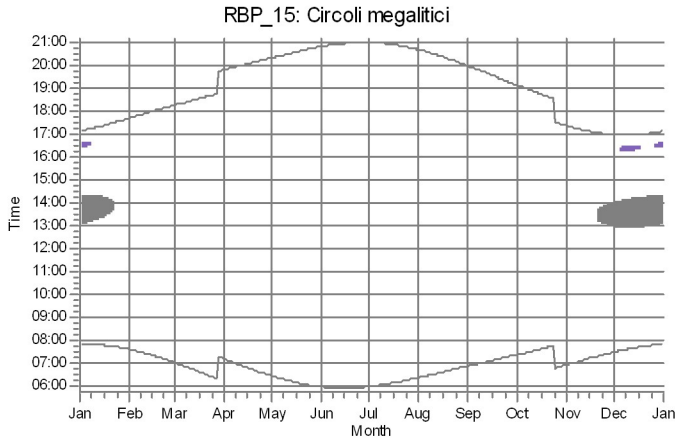


WTGs

- WTG01: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (12)
- WTG02: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (11)
- WTG03: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (10)
- WTG07: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (6)
- WTG10: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (3)
- WTG11: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (2)

SHADOW - Calendar, graphical

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali



WTGs

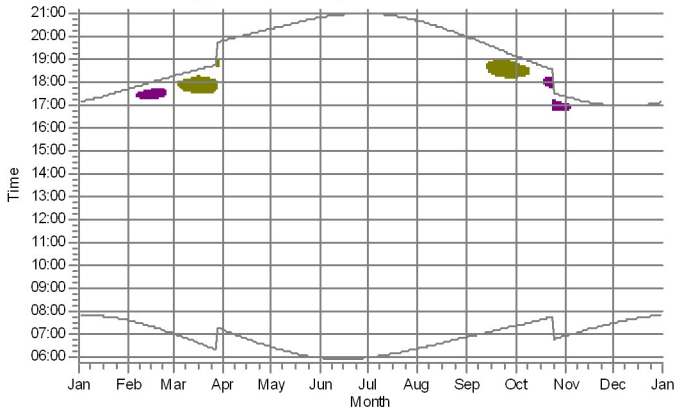
WTG04: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (9)
 WTG10: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (3)
 ME_6: VIND-SYSSEL 150 26.0 H# hub: 30.0 m (TOT: 43.0 m) (46)

WTG06: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (7)
 WTG11: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (2)

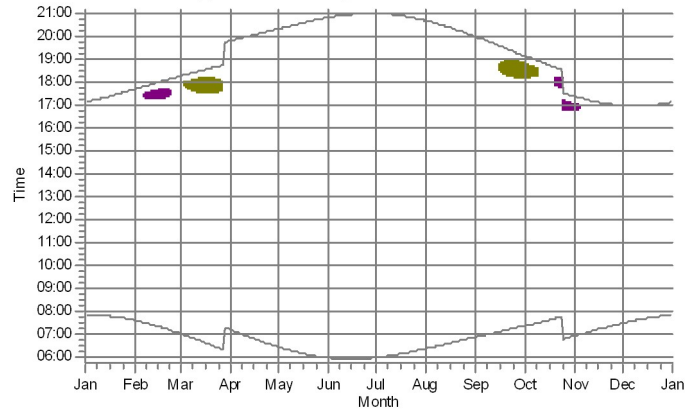
SHADOW - Calendar, graphical

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali

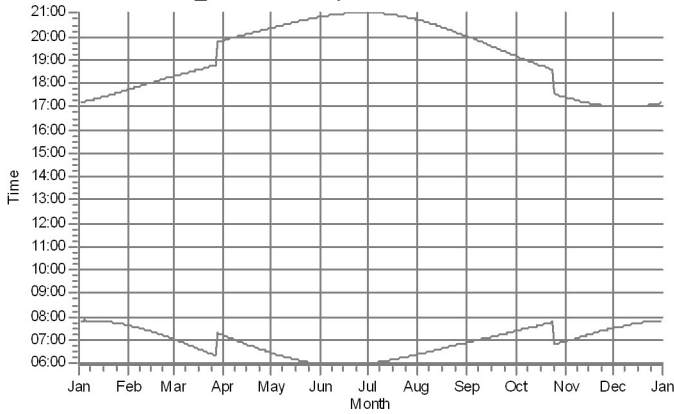
RBP_20: Domus de janas Pubusattile III



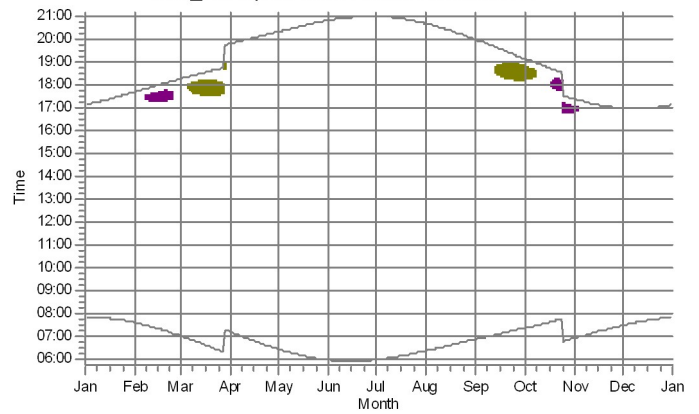
RBP_21: Domus de janas Pubusattile IV



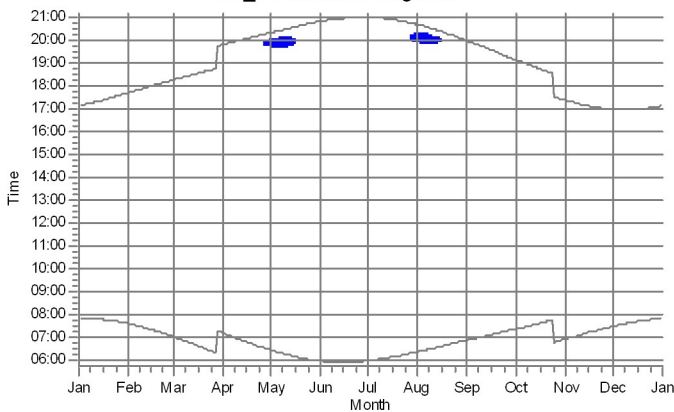
RBP_22: Domus de janas Pubusattile V



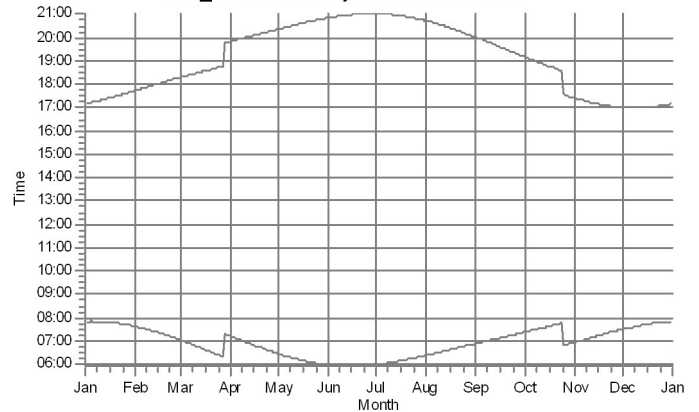
RBP_23: Riparo sotto roccia Pubusattile 2



RBP_24: Struttura megalitica



RBP_25: Domus de janas Pubusattile VI

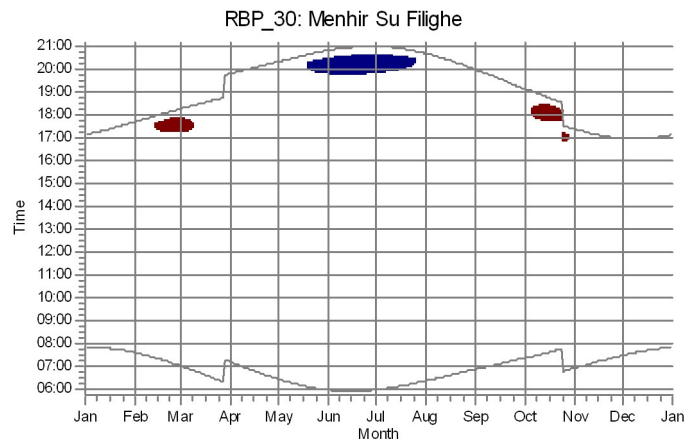
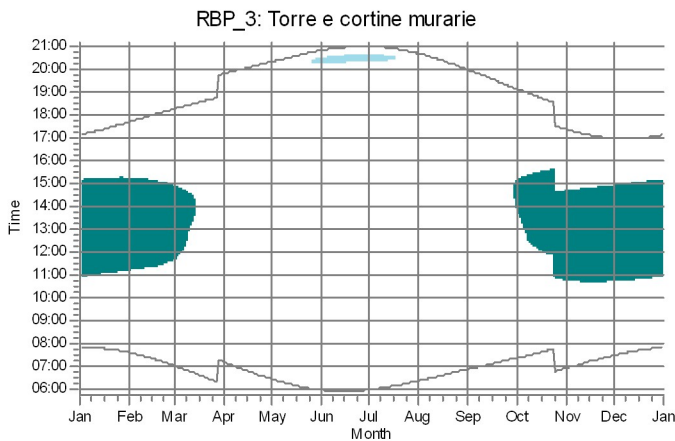
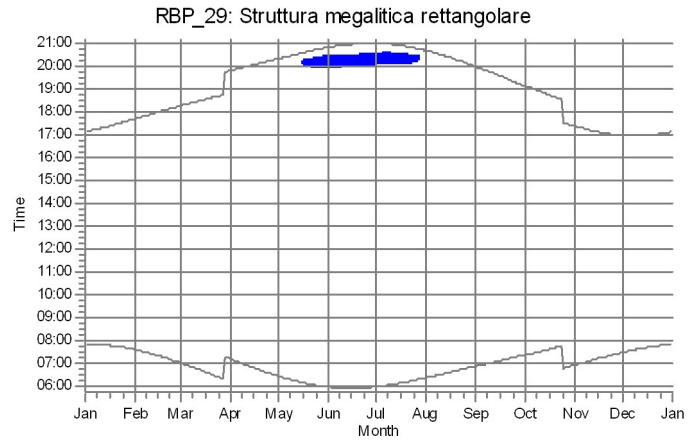
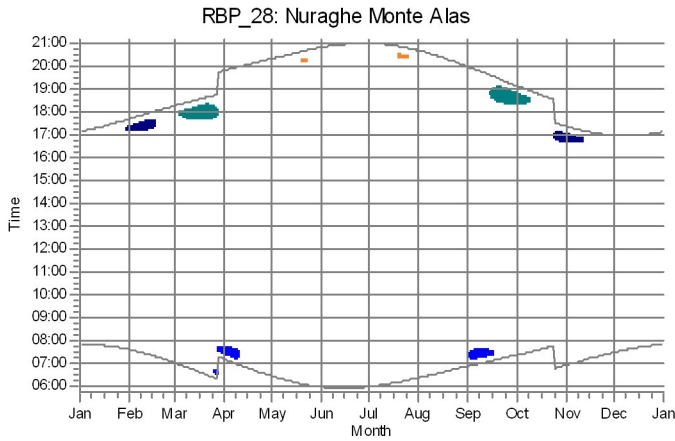
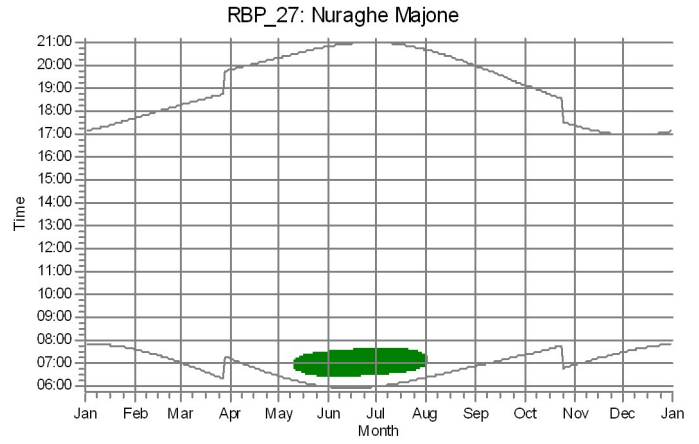
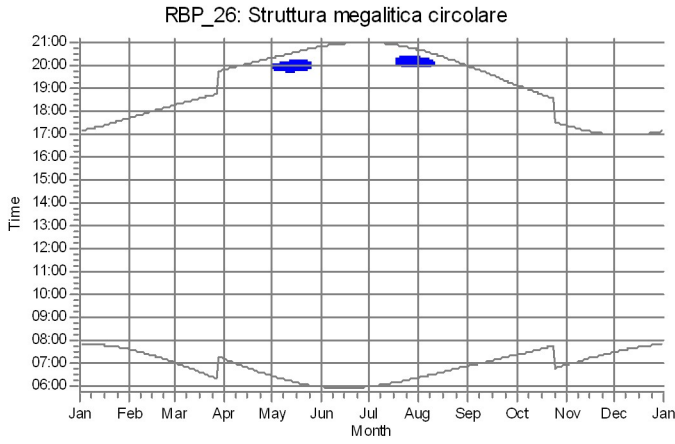


WTGs

WTG03: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (10) WTG10: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (3) WTG11: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (2)

SHADOW - Calendar, graphical

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali

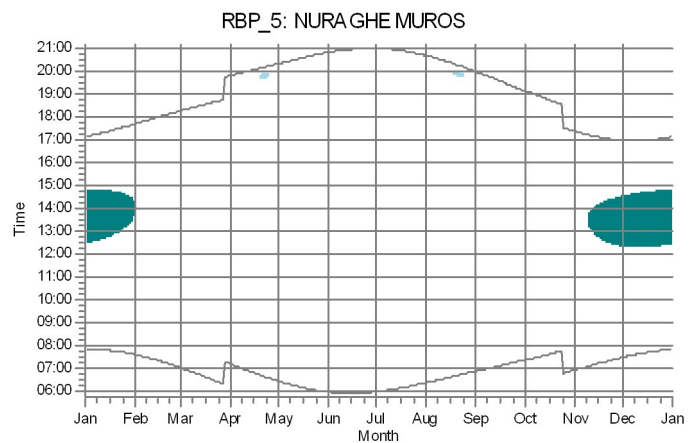
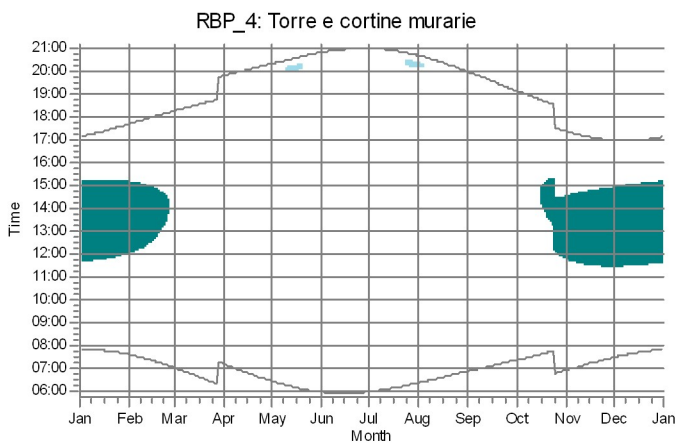
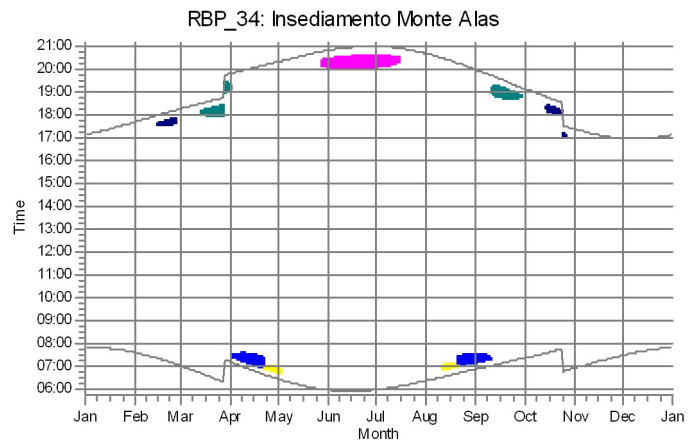
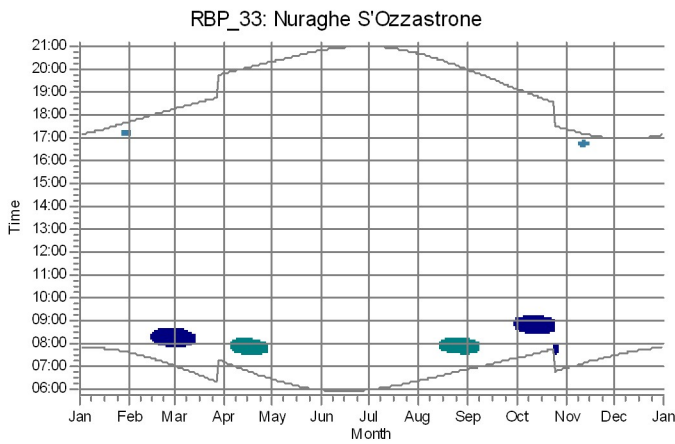
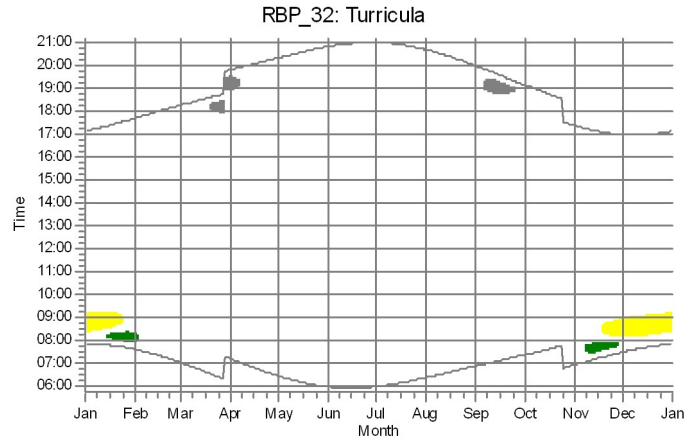
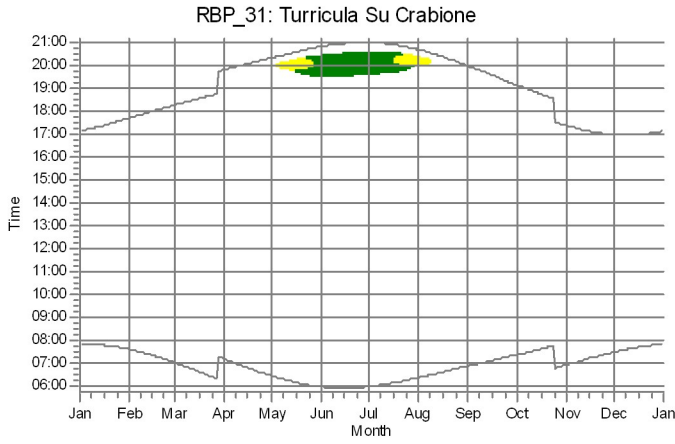


WTGs










- WTG01: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (12)
- WTG03: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (10)
- WTG06: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (7)
- WTG07: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (6)
- WTG08: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (5)
- ME_2: VIND-SYSEL 150 26.0 H#! hub: 30.0 m (TOT: 43.0 m) (45)
- ME_5: VIND-SYSEL 150 26.0 H#! hub: 30.0 m (TOT: 43.0 m) (44)

SHADOW - Calendar, graphical

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali

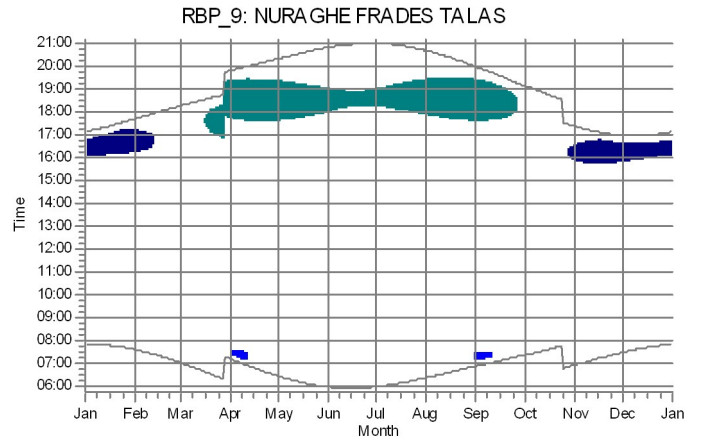
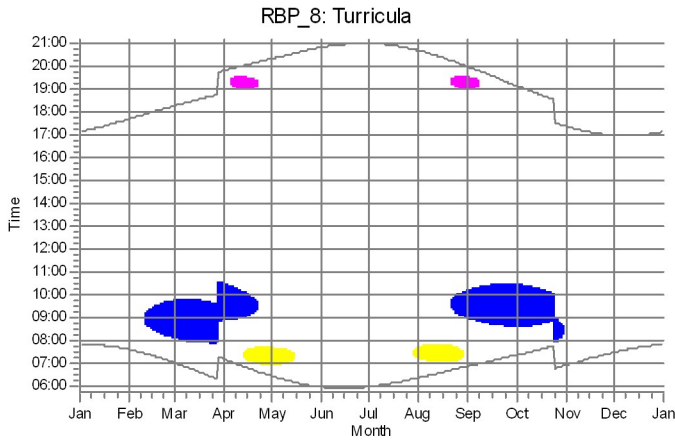
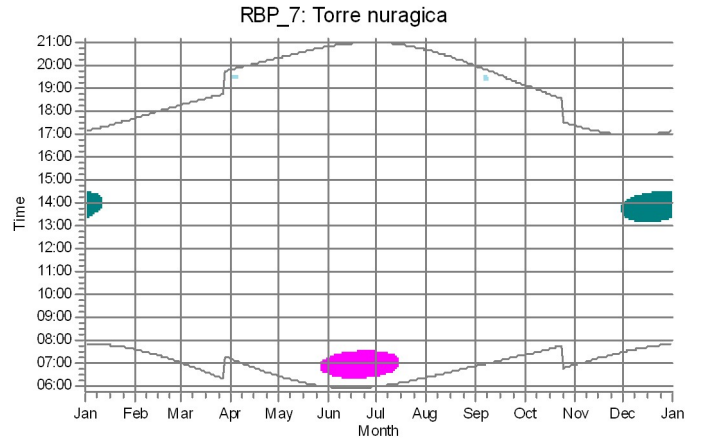
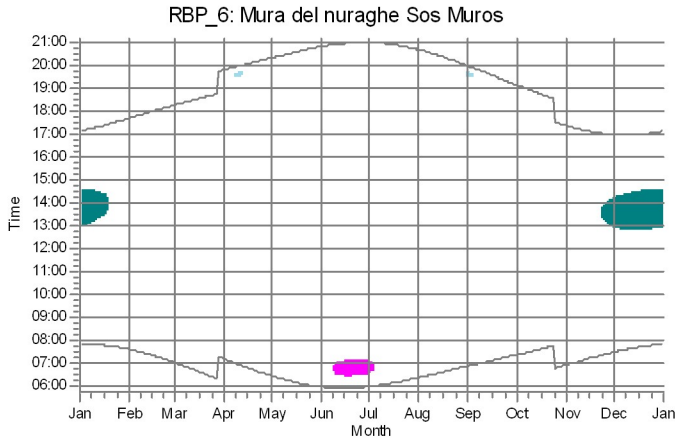


WTGs

- | | | |
|--|---|---|
|  WTG01: Siemens Gamesa SG 6.0-170 6000 170.0 I0I hub: 115.0 m (TOT: 200.0 m) (12) |  WTG04: Siemens Gamesa SG 6.0-170 6000 170.0 I0I hub: 115.0 m (TOT: 200.0 m) (9) |  WTG07: Siemens Gamesa SG 6.0-170 6000 170.0 I0I hub: 115.0 m (TOT: 200.0 m) (6) |
|  WTG02: Siemens Gamesa SG 6.0-170 6000 170.0 I0I hub: 115.0 m (TOT: 200.0 m) (11) |  WTG05: Siemens Gamesa SG 6.0-170 6000 170.0 I0I hub: 115.0 m (TOT: 200.0 m) (8) |  ME_5: VIND-SYSEL 150 26.0 I#I hub: 30.0 m (TOT: 43.0 m) (44) |
|  WTG03: Siemens Gamesa SG 6.0-170 6000 170.0 I0I hub: 115.0 m (TOT: 200.0 m) (10) |  WTG06: Siemens Gamesa SG 6.0-170 6000 170.0 I0I hub: 115.0 m (TOT: 200.0 m) (7) |  ME_9: VIND-SYSEL 150 26.0 I#I hub: 30.0 m (TOT: 43.0 m) (48) |

SHADOW - Calendar, graphical

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali



WTGs

- WTG02: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (11)
- WTG03: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (10)
- WTG05: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (8)
- WTG06: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (7)
- WTG07: Siemens Gamesa SG 6.0-170 6000 170.0 H0! hub: 115.0 m (TOT: 200.0 m) (6)
- ME_5: VIND-SVSSL 150 26.0 H#! hub: 30.0 m (TOT: 43.0 m) (44)

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali|WTG: WTG01 - Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT: 200,0 m) (12)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June
1	07:50 08:22-09:18/56 17:09	07:37 08:02-08:14/12 17:43 08:48-09:08/20	07:02 07:44-08:38/54 18:17	07:12 19:50	06:26 20:21	05:58 19:37-20:23/46 20:50 06:30-07:27/57
2	07:50 08:22-09:18/56 17:10	07:36 08:05-08:18/13 17:44 08:52-09:04/12	07:00 07:45-08:37/52 18:18	07:10 19:51	06:25 20:22	05:58 19:37-20:24/47 20:51 06:31-07:28/57
3	07:50 08:22-09:18/56 17:11	07:35 08:03-08:23/20 17:46	06:59 07:45-08:36/51 18:19	07:08 19:52	06:24 20:23	05:57 19:37-20:25/48 20:51 06:31-07:29/58
4	07:50 08:23-09:18/55 17:12	07:34 08:00-08:26/26 17:47	06:57 07:46-08:35/49 18:20	07:07 19:53	06:23 20:24	05:57 19:36-20:25/49 20:52 06:30-07:28/58
5	07:50 08:23-09:17/54 17:13	07:33 07:58-08:28/30 17:48	06:55 07:46-08:34/48 18:21	07:05 19:54	06:21 20:25	05:57 19:37-20:25/48 20:53 06:30-07:29/59
6	07:50 08:24-09:17/53 17:14	07:32 07:56-08:30/34 17:49	06:54 07:48-08:33/45 18:22	07:03 19:55	06:20 20:26	05:56 19:37-20:26/49 20:54 06:31-07:30/59
7	07:50 08:25-09:18/53 17:15	07:31 07:54-08:31/37 17:51	06:52 07:48-08:31/43 18:23	07:02 19:56	06:19 20:27	05:56 19:37-20:26/49 20:54 06:31-07:30/59
8	07:50 08:25-09:18/53 17:16	07:30 07:53-08:33/40 17:52	06:51 07:49-08:29/40 18:24	07:00 19:57	06:18 20:28	05:56 19:36-20:26/50 20:55 06:30-07:30/60
9	07:50 08:25-09:18/53 17:17	07:29 07:52-08:34/42 17:53	06:49 07:51-08:27/36 18:26	06:59 19:58	06:17 20:29	05:56 19:37-20:26/49 20:55 06:30-07:30/60
10	07:50 08:26-09:18/52 17:18	07:27 07:51-08:36/45 17:54	06:48 07:53-08:25/32 18:27	06:57 19:59	06:16 20:30	05:55 19:37-20:27/50 20:56 06:30-07:31/61
11	07:49 08:26-09:19/53 17:19	07:26 07:50-08:37/47 17:55	06:46 07:55-08:22/27 18:28	06:55 20:00	06:15 20:31	05:55 19:37-20:27/50 20:56 06:31-07:31/60
12	07:49 08:27-09:20/53 17:20	07:25 07:48-08:37/49 17:57	06:44 07:58-08:18/20 18:29	06:54 20:01	06:14 06:50-07:05/15 20:32	05:55 19:37-20:28/51 20:57 06:31-07:31/60
13	07:49 08:27-09:19/52 17:21	07:24 07:48-08:38/50 17:58	06:43 08:02-08:12/10 18:30	06:52 20:02	06:13 06:47-07:08/21 20:33	05:55 19:37-20:28/51 20:57 06:31-07:32/61
14	07:49 08:28-09:20/52 17:22	07:23 07:47-08:39/52 17:59	06:41 18:31	06:51 20:03	06:11 06:44-07:11/27 20:34	05:55 19:38-20:28/50 20:58 06:31-07:32/61
15	07:48 08:09-08:10/1 17:23	07:21 07:47-08:40/53 18:00	06:40 18:32	06:49 20:04	06:11 19:54-20:05/11 20:35 06:43-07:14/31	05:55 19:38-20:29/51 20:58 06:31-07:32/61
16	07:48 08:09-08:11/2 17:24	07:20 07:46-08:40/54 18:01	06:38 18:33	06:48 20:06	06:10 19:51-20:08/17 20:36 06:41-07:15/34	05:55 19:38-20:29/51 20:59 06:31-07:32/61
17	07:47 08:08-08:12/4 17:25	07:19 07:46-08:41/55 18:03	06:36 18:34	06:46 20:07	06:09 19:48-20:10/22 20:37 06:40-07:16/36	05:55 19:38-20:29/51 20:59 06:31-07:32/61
18	07:47 08:08-08:14/6 17:26	07:17 07:46-08:41/55 18:04	06:35 18:35	06:45 20:08	06:08 19:46-20:12/26 20:38 06:38-07:18/40	05:55 19:38-20:29/51 20:59 06:32-07:33/61
19	07:46 08:07-08:14/7 17:28	07:16 07:45-08:41/56 18:05	06:33 18:36	06:43 20:09	06:07 19:44-20:13/29 20:39 06:37-07:19/42	05:55 19:39-20:30/51 21:00 06:32-07:33/61
20	07:46 08:07-08:15/8 17:29	07:15 07:45-08:42/57 18:06	06:31 18:37	06:42 20:10	06:06 19:43-20:14/31 20:40 06:36-07:19/43	05:55 19:38-20:29/51 21:00 06:32-07:33/61
21	07:45 08:06-08:16/10 17:30	07:13 07:44-08:41/57 18:07	06:30 18:38	06:40 20:11	06:05 19:43-20:16/33 20:41 06:36-07:21/45	05:55 19:39-20:30/51 21:00 06:33-07:34/61
22	07:45 08:05-08:16/11 17:31	07:12 07:44-08:41/57 18:09	06:28 18:39	06:39 20:12	06:04 19:42-20:17/35 20:42 06:35-07:22/47	05:55 19:39-20:30/51 21:00 06:33-07:34/61
23	07:44 08:05-08:17/12 17:32	07:10 07:43-08:41/58 18:10	06:26 18:41	06:37 20:13	06:04 19:40-20:18/38 20:43 06:34-07:22/48	05:56 19:39-20:30/51 21:01 06:33-07:34/61
24	07:43 08:04-08:17/13 17:33	07:09 07:44-08:41/57 18:11	06:25 18:42	06:36 20:14	06:03 19:40-20:19/39 20:44 06:34-07:24/50	05:56 19:39-20:30/51 21:01 06:33-07:34/61
25	07:43 08:03-08:17/14 17:35	07:08 07:44-08:41/57 18:12	06:23 18:43	06:35 20:15	06:02 19:39-20:20/41 20:44 06:33-07:24/51	05:56 19:40-20:31/51 21:01 06:34-07:35/61
26	07:42 08:02-08:17/15 17:36	07:06 07:44-08:40/56 18:13	06:21 18:44	06:33 20:16	06:02 19:38-20:20/42 20:45 06:32-07:24/52	05:57 19:40-20:31/51 21:01 06:33-07:34/61
27	07:41 08:02-08:18/16 17:37	07:05 07:44-08:40/56 18:14	06:20 18:45	06:32 20:17	06:01 19:39-20:21/42 20:46 06:32-07:25/53	05:57 19:40-20:31/51 21:01 06:33-07:34/61
28	07:40 08:01-08:17/16 17:38	07:03 07:44-08:39/55 18:15	06:18 18:46	06:30 20:18	06:00 19:38-20:21/43 20:47 06:31-07:25/54	05:57 19:41-20:31/50 21:01 06:34-07:35/61
29	07:40 08:00-08:17/17 17:39	07:00 08:00-08:17/17 18:16	06:16 19:47	06:29 20:19	06:00 19:38-20:22/44 20:48 06:32-07:26/54	05:58 19:41-20:31/50 21:01 06:34-07:35/61
30	07:39 08:00-08:16/16 17:41	06:59 08:00-08:16/16 18:17	06:15 19:48	06:28 20:20	05:59 19:37-20:22/45 20:49 06:31-07:26/55	05:58 19:41-20:32/51 21:01 06:35-07:35/60
31	07:38 08:01-08:15/14 17:42	06:58 08:01-08:15/14 18:18	06:14 19:49	06:27 20:21	05:59 19:37-20:23/46 20:49 06:31-07:27/56	05:58 19:41-20:32/51 21:01 06:35-07:35/60
Potential sun hours	299	298	370	398	447	451
Sum of minutes with flicker	1644	1312	507	0	1438	3306

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali WTG: WTG01 - Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT: 200,0 m) (12)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July	August	September	October	November	December
1	05:59 19:41-20:31/50 21:01 06:35-07:35/60	06:22 07:03-07:13/10 20:42	06:52 20:00	07:22 08:39-08:56/17 19:10	06:55 07:21-08:05/44 17:24	07:30 08:08-09:01/53 17:00
2	05:59 19:42-20:32/50 21:01 06:36-07:36/60	06:23 20:41	06:53 19:58	07:23 08:35-09:00/25 19:08	06:56 07:22-08:04/42 17:23	07:31 08:09-09:02/53 17:00
3	06:00 19:42-20:32/50 21:01 06:35-07:35/60	06:24 20:40	06:54 19:57	07:24 08:32-09:02/30 19:07	06:58 07:23-08:02/39 17:22	07:32 08:09-09:02/53 17:00
4	06:00 19:43-20:32/49 21:00 06:36-07:36/60	06:25 20:39	06:55 19:55	07:25 08:30-09:04/34 19:05	06:59 07:24-08:01/37 17:20	07:33 08:09-09:02/53 17:00
5	06:01 19:42-20:32/50 21:00 06:36-07:35/59	06:26 20:38	06:56 19:53	07:26 08:28-09:06/38 19:03	07:00 07:26-08:00/34 17:19	07:34 08:10-09:03/53 16:59
6	06:01 19:43-20:32/49 21:00 06:37-07:36/59	06:27 20:37	06:57 19:52	07:27 08:26-09:07/41 19:02	07:01 07:28-07:58/30 17:18	07:34 08:10-09:03/53 16:59
7	06:02 19:43-20:32/49 21:00 06:36-07:35/59	06:28 20:36	06:58 19:50	07:28 08:24-09:08/44 19:00	07:02 07:30-07:55/25 17:17	07:35 08:10-09:04/54 16:59
8	06:03 19:44-20:32/48 20:59 06:37-07:36/59	06:29 20:34	06:59 19:48	07:29 08:23-09:09/46 18:59	07:03 07:33-07:52/19 17:16	07:36 08:11-09:05/54 16:59
9	06:03 19:44-20:32/48 20:59 06:38-07:36/58	06:30 20:33	07:00 19:47	07:30 08:21-09:10/49 18:57	07:05 07:36-07:48/12 17:15	07:37 08:11-09:07/56 16:59
10	06:04 19:44-20:31/47 20:59 06:38-07:35/57	06:31 20:32	07:01 19:45	07:31 08:20-09:10/50 18:55	07:06 07:33-07:45/12 17:14	07:38 08:12-09:08/56 16:59
11	06:05 19:45-20:32/47 20:58 06:38-07:35/57	06:32 20:31	07:02 19:44	07:32 08:19-09:11/52 18:54	07:07 07:32-07:46/14 17:13	07:39 08:12-09:08/56 16:59
12	06:05 19:46-20:32/46 20:58 06:39-07:36/57	06:33 20:29	07:03 19:42	07:33 08:18-09:11/53 18:52	07:08 07:30-07:47/17 17:12	07:40 08:12-09:09/57 16:59
13	06:06 19:45-20:31/46 20:57 06:39-07:35/56	06:34 20:28	07:04 19:40	07:34 08:17-09:11/54 18:51	07:09 07:32-07:49/17 17:11	07:41 08:13-09:10/57 17:00
14	06:07 19:46-20:31/45 20:57 06:40-07:35/55	06:35 20:27	07:05 19:39	07:35 08:16-09:12/56 18:49	07:10 07:33-07:49/16 17:10	07:41 08:14-09:11/57 17:00
15	06:08 19:47-20:31/44 20:56 06:41-07:35/54	06:36 20:25	07:06 19:37	07:36 08:16-09:12/56 18:48	07:12 07:34-07:50/16 17:09	07:42 08:13-09:11/58 17:00
16	06:08 19:48-20:31/43 20:56 06:41-07:35/54	06:37 20:24	07:07 19:35	07:37 08:16-09:13/57 18:46	07:13 07:35-07:50/15 17:09	07:43 08:14-09:12/58 17:00
17	06:09 19:48-20:30/42 20:55 06:41-07:34/53	06:38 20:22	07:08 19:33	07:38 08:16-09:13/57 18:45	07:14 07:37-07:51/14 17:08	07:43 08:15-09:13/58 17:00
18	06:10 19:48-20:29/41 20:54 06:42-07:33/51	06:39 20:21	07:09 19:32	07:39 08:15-09:12/57 18:43	07:15 07:38-07:51/13 17:07	07:44 08:15-09:13/58 17:01
19	06:11 19:49-20:29/40 20:54 06:43-07:33/50	06:40 20:20	07:10 19:30	07:41 08:15-09:12/57 18:42	07:16 07:39-07:51/12 17:06	07:45 08:16-09:14/58 17:01
20	06:12 19:50-20:29/39 20:53 06:44-07:33/49	06:41 20:18	07:11 19:28	07:42 08:15-09:12/57 18:40	07:17 07:40-07:51/11 17:06	07:45 08:16-09:14/58 17:02
21	06:12 19:51-20:28/37 20:52 06:45-07:32/47	06:42 20:17	07:12 19:27	07:43 08:14-09:12/58 18:39	07:19 07:42-07:52/10 17:05	07:46 08:17-09:15/58 17:02
22	06:13 19:52-20:26/34 20:52 06:45-07:31/46	06:43 20:15	07:13 19:25	07:44 08:14-09:11/57 18:37	07:20 07:43-07:51/8 17:04	07:46 08:17-09:15/58 17:03
23	06:14 19:53-20:26/33 20:51 06:46-07:30/44	06:44 20:14	07:14 19:23	07:45 08:15-09:12/57 18:36	07:21 07:44-07:51/7 17:04	07:47 08:18-09:16/58 17:03
24	06:15 19:54-20:25/31 20:50 06:47-07:30/43	06:45 20:12	07:15 19:22	07:46 08:15-09:11/56 18:34	07:22 07:45-07:51/6 17:03	07:47 08:18-09:16/58 17:04
25	06:16 19:56-20:23/27 20:49 06:48-07:29/41	06:46 20:11	07:16 19:20	06:47 07:15-08:10/55 17:33	07:23 07:46-07:50/4 17:03	07:48 08:19-09:17/58 17:04
26	06:17 19:58-20:22/24 20:48 06:49-07:28/39	06:47 20:09	07:17 19:18	06:48 07:16-08:10/54 17:32	07:24 07:47-07:50/3 17:02	07:48 08:19-09:17/58 17:05
27	06:18 20:00-20:20/20 20:47 06:51-07:26/35	06:48 20:08	07:18 19:17	06:49 07:16-08:09/53 17:30	07:25 07:49-07:50/1 17:02	07:48 08:19-09:17/58 17:05
28	06:19 20:03-20:17/14 20:46 06:53-07:25/32	06:48 20:06	07:19 19:15	06:51 07:17-08:09/52 17:29	07:26 08:08-09:00/52 17:01	07:49 08:19-09:17/58 17:06
29	06:19 20:07-20:11/4 20:45 06:54-07:22/28	06:49 20:05	07:20 19:13	06:52 07:18-08:08/50 17:28	07:27 08:08-09:00/52 17:01	07:49 08:21-09:18/57 17:07
30	06:20 06:56-07:20/24 20:44	06:50 20:03	07:21 19:12	06:53 07:18-08:07/49 17:27	07:28 08:08-09:01/53 17:01	07:49 08:21-09:18/57 17:08
31	06:21 06:59-07:18/19 20:43	06:51 20:01	 19:11	06:54 07:19-08:06/47 17:25	 17:01	07:50 08:21-09:18/57 17:08
Potential sun hours	457	427	375	346	299	289
Sum of minutes with flicker	2672	10	0	1518	1380	1748

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali|WTG: WTG02 - Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115.0 m (TOT: 200.0 m) (11)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	
1	07:50 08:26-09:09/43 17:09 15:36-16:41/65	07:37 15:40-17:00/80 17:43	07:02 16:09-17:33/84 18:17	07:12 19:50	06:26 07:01-07:38/37 18:04-19:35/91 20:21 06:46-06:53/7	05:58 18:04-19:38/94 20:50	
2	07:50 08:26-09:10/44 17:10 15:37-16:42/65	07:36 15:40-17:00/80 17:44	07:00 16:10-17:34/84 18:18	07:10 19:51	06:25 07:00-07:37/37 18:02-19:35/93 20:22 06:47-06:50/3	05:58 18:05-19:39/94 20:51	
3	07:50 08:27-09:10/43 17:11 15:37-16:43/66	07:35 15:40-17:05/85 17:46	06:59 16:09-17:33/84 18:19	07:08 19:52	06:24 07:01-07:37/36 20:23 18:02-19:36/94	05:57 18:06-19:39/93 20:52	
4	07:50 08:28-09:10/42 17:12 15:37-16:44/67	07:34 15:41-17:09/88 17:47	06:57 16:10-17:34/84 18:20	07:07 19:53	06:23 07:01-07:36/35 20:24 18:02-19:36/94	05:57 18:06-19:38/92 20:52	
5	07:50 08:28-09:11/43 17:13 15:37-16:44/67	07:33 15:41-17:12/91 17:48	06:56 16:09-17:33/84 18:21	07:05 19:54	06:21 07:02-07:36/34 18:02-19:36/94 20:25 20:01-20:02/1	05:57 18:06-19:39/93 20:53	
6	07:50 08:29-09:11/42 17:14 15:37-16:45/68	07:32 15:42-17:14/92 17:49	06:54 16:10-17:33/83 18:22	07:03 19:55	06:20 07:02-07:35/33 18:02-19:37/95 20:26 19:59-20:03/4	05:56 18:07-19:39/92 20:54	
7	07:50 08:30-09:11/41 17:15 15:37-16:46/69	07:31 15:41-17:15/94 17:51	06:52 16:09-17:32/83 18:23	07:02 19:56	06:19 07:03-07:34/31 18:01-19:37/96 20:27 19:58-20:04/6	05:56 18:07-19:39/92 20:54	
8	07:50 08:31-09:12/41 17:16 15:38-16:47/69	07:30 15:42-17:17/95 17:52	06:51 16:09-17:32/83 18:24	07:00 19:57	06:18 07:04-07:34/30 18:01-19:38/97 20:28 19:56-20:05/9	05:56 18:07-19:39/92 20:55	
9	07:50 08:32-09:12/40 17:17 15:37-16:47/70	07:29 15:43-17:19/96 17:53	06:49 16:10-17:32/82 18:26	06:59 18:50-18:57/7	06:17 07:05-07:33/28 18:00-19:37/97 20:29 19:55-20:06/11	05:55 18:07-19:39/92 20:55	
10	07:50 08:32-09:11/39 17:18 15:37-16:48/71	07:27 15:43-17:21/98 17:54	06:48 16:10-17:31/81 18:27	06:57 18:40-19:05/25	06:16 07:05-07:30/25 18:00-19:37/97 20:30 19:54-20:07/13	05:55 18:08-19:39/91 20:56	
11	07:50 08:33-09:11/38 17:19 15:38-16:49/71	07:26 15:44-17:23/99 17:55	06:46 16:11-17:31/80 18:28	06:56 18:35-19:10/35	06:15 07:06-07:29/23 18:00-19:37/97 20:31 19:54-20:07/13	05:55 18:08-19:39/91 20:56	
12	07:49 08:34-09:12/38 17:20 15:38-16:50/72	07:25 15:44-17:23/99 17:57	06:44 16:11-17:30/79 18:29	06:54 18:31-19:13/42	06:14 07:08-07:28/20 18:00-19:37/97 20:32 19:54-20:08/14	05:55 18:09-19:40/91 20:57	
13	07:49 08:34-09:11/37 17:21 15:37-16:50/73	07:24 15:45-17:25/100 17:58	06:43 16:11-17:29/78 18:30	06:52 18:28-19:16/48	06:13 07:10-07:26/16 18:00-19:37/97 20:33 19:53-20:09/16	05:55 18:09-19:40/91 20:57	
14	07:49 08:35-09:11/36 17:22 15:38-16:52/74	07:23 15:46-17:26/100 17:59	06:41 16:12-17:28/76 18:31	06:51 18:25-19:18/53	06:12 07:13-07:24/11 18:00-19:37/97 20:34 19:53-20:10/17	05:55 18:09-19:40/91 20:58	
15	07:48 08:36-09:10/34 17:23 15:37-16:52/75	07:21 15:48-17:28/100 18:00	06:40 16:13-17:27/74 18:32	06:49 07:19-07:27/8	06:11 19:54-20:12/18 20:35 18:01-19:38/97	05:55 18:10-19:40/90 20:58	
16	07:48 08:37-09:10/33 17:24 15:38-16:53/75	07:20 15:48-17:28/100 18:01	06:38 16:13-17:26/73 18:33	06:48 07:14-07:30/16	06:10 19:54-20:13/19 20:36 18:01-19:38/97	05:55 18:10-19:40/90 20:59	
17	07:47 08:38-09:09/31 17:25 15:37-16:53/76	07:19 15:49-17:29/100 18:03	06:36 16:14-17:25/71 18:34	06:46 07:12-07:33/21	06:09 19:54-20:13/19 20:37 18:01-19:38/97	05:55 18:10-19:40/90 20:59	
18	07:47 08:40-09:09/29 17:26 15:38-16:54/76	07:17 15:51-17:30/99 18:04	06:35 16:15-17:24/69 18:35	06:45 07:09-07:34/25	06:08 19:55-20:14/19 20:38 18:01-19:38/97	05:55 18:10-19:40/90 20:59	
19	07:47 08:41-09:08/27 17:28 15:37-16:54/77	07:16 15:51-17:30/99 18:05	06:33 16:16-17:22/66 18:36	06:43 07:08-07:36/28	06:07 19:55-20:15/20 20:39 18:01-19:38/97	05:55 18:10-19:40/90 21:00	
20	07:46 08:43-09:08/25 17:29 15:38-16:56/78	07:15 15:53-17:32/99 18:06	06:31 16:17-17:21/64 18:37	06:42 07:06-07:36/30	06:06 19:55-20:14/19 20:40 18:01-19:38/97	05:55 18:10-19:40/90 21:00	
21	07:45 08:44-09:06/22 17:30 15:38-16:56/78	07:13 15:54-17:31/97 18:07	06:30 16:18-17:19/61 18:38	06:40 07:05-07:37/32	06:05 19:57-20:14/17 20:41 18:02-19:39/97	05:55 18:12-19:41/89 21:00	
22	07:45 08:46-09:04/18 17:31 15:38-16:56/78	07:12 15:56-17:32/96 18:09	06:28 16:19-17:17/58 18:40	06:39 07:04-07:38/34 18:11-19:30/79	06:04 19:57-20:13/16 20:42 18:02-19:38/96	05:56 18:11-19:41/90 21:00	
23	07:44 08:50-09:02/12 17:32 15:38-16:57/79	07:10 15:57-17:32/95 18:10	06:26 16:21-17:16/55 18:41	06:37 07:03-07:38/35 18:10-19:30/80	06:04 19:58-20:12/14 20:43 18:02-19:38/96	05:56 18:11-19:41/90 21:01	
24	07:43 15:38-16:58/80 17:33	07:09 16:00-17:33/93 18:11	06:25 16:22-17:14/52 18:42	06:36 07:03-07:39/36 18:09-19:31/82	06:03 19:59-20:12/13 20:44 18:03-19:39/96	05:56 18:11-19:41/90 21:01	
25	07:43 15:38-16:58/80 17:35	07:08 16:02-17:34/92 18:12	06:23 16:25-17:13/48 18:43	06:35 07:01-07:38/37 18:07-19:31/84	06:02 20:00-20:10/10 20:44 18:03-19:38/95	05:56 18:12-19:42/90 21:01	
26	07:42 15:38-16:58/80 17:36	07:06 16:04-17:34/90 18:13	06:21 16:26-17:10/44 18:44	06:33 07:01-07:39/38 18:07-19:32/85	06:02 20:02-20:08/6 20:45 18:02-19:38/96	05:57 18:12-19:42/90 21:01	
27	07:41 15:38-16:58/80 17:37	07:05 16:08-17:34/86 18:14	06:20 16:28-17:07/39 18:45	06:32 07:01-07:39/38 18:06-19:33/87	06:01 18:03-19:39/96 20:46	05:57 18:12-19:42/90 21:01	
28	07:40 15:39-16:59/80 17:38	07:03 16:10-17:34/84 18:16	06:18 16:32-17:04/32 18:46	06:30 07:00-07:38/38 18:05-19:33/88	06:00 18:03-19:38/95 20:47	05:58 18:13-19:43/90 21:01	
29	07:40 15:39-17:00/81 17:40	07:01 17:35-18:00/25 19:47	06:17 17:35-18:00/25 19:47	06:29 07:00-07:38/38 18:04-19:34/90	06:00 18:04-19:39/95 20:48	05:58 18:12-19:43/91 21:01	
30	07:39 15:39-17:00/81 17:41	07:15 17:40-17:54/14 19:48	06:28 07:01-07:38/37 18:04-19:35/91 19:48	06:28 07:01-07:38/37 18:04-19:35/91	05:59 18:04-19:38/94 20:49	05:58 18:13-19:44/91 21:01	
31	07:38 15:39-17:00/81 17:42	07:13 19:49	07:13 19:49	20:20 06:47-06:55/8	05:59 18:05-19:39/94 20:49	21:01	
	Potential sun hours Sum of minutes with flicker	299 3100	298 2627	370 1990	398 1997	447 3668	451 2730

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali|WTG: WTG02 - Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT: 200,0 m) (11)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	July	August	September	October	November	December	
1	05:59 18:13-19:43/90 21:01	06:22 07:18-07:39/21 18:11-19:48/97 20:42 20:04-20:19/15	06:52 18:34-19:09/35 20:00	07:22 16:51-18:09/78 19:10	06:55 15:13-16:51/98 17:24	07:30 08:15-08:53/38 17:00 15:20-16:31/71	
2	05:59 18:13-19:44/91 21:01	06:23 07:16-07:40/24 18:11-19:48/97 20:41 20:05-20:18/13	06:53 18:39-19:04/25 19:58	07:23 16:50-18:09/79 19:08	06:56 15:12-16:49/97 17:23	07:31 08:15-08:54/39 17:00 15:20-16:31/71	
3	06:00 18:13-19:44/91 21:01	06:24 07:15-07:42/27 18:11-19:48/97 20:40 20:05-20:17/12	06:54 18:48-18:55/7 19:57	07:24 16:49-18:09/80 19:07	06:58 15:12-16:47/95 17:22	07:32 08:15-08:55/40 17:00 15:21-16:31/70	
4	06:00 18:13-19:45/92 21:01	06:25 07:14-07:43/29 18:11-19:47/96 20:39 20:06-20:16/10	06:55 19:55	07:25 16:48-18:09/81 19:05	06:59 15:11-16:45/94 17:21	07:33 08:15-08:56/41 17:00 15:22-16:31/69	
5	06:01 18:13-19:45/92 21:00	06:26 07:13-07:44/31 18:11-19:47/96 20:38 20:07-20:15/8	06:56 19:53	07:26 16:47-18:09/82 19:03	07:00 15:11-16:44/93 17:19	07:34 08:15-08:56/41 16:59 15:22-16:31/69	
6	06:01 18:13-19:45/92 21:00	06:27 07:13-07:44/31 18:11-19:47/96 20:37 20:08-20:14/6	06:57 19:52	07:27 16:46-18:09/83 19:02	07:01 15:11-16:41/90 17:18	07:35 08:15-08:57/42 16:59 15:23-16:31/68	
7	06:02 18:12-19:45/93 21:00	06:28 07:12-07:45/33 18:11-19:46/95 20:36 20:09-20:13/4	06:58 19:50	07:28 16:46-18:09/83 19:00	07:02 15:10-16:38/88 17:17	07:36 08:15-08:58/43 16:59 15:24-16:32/68	
8	06:03 18:13-19:46/93 20:59	06:29 07:11-07:46/35 18:11-19:46/95 20:34 20:11-20:12/1	06:59 19:49	07:29 16:45-18:09/84 18:59	07:03 15:10-16:35/85 17:16	07:37 08:16-08:58/42 16:59 15:25-16:32/67	
9	06:03 18:13-19:46/93 20:59	06:30 07:11-07:46/35 20:33 18:12-19:46/94	07:00 19:47	07:30 16:44-18:08/84 18:57	07:05 15:11-16:31/80 17:15	07:38 08:16-08:59/43 16:59 15:26-16:32/66	
10	06:04 18:12-19:46/94 20:59	06:31 07:10-07:46/36 20:32 18:11-19:44/93	07:01 19:45	07:31 16:44-18:08/84 18:55	07:06 15:10-16:31/81 17:14	07:39 08:16-08:59/43 16:59 15:27-16:32/65	
11	06:05 18:13-19:46/93 20:58	06:32 07:09-07:46/37 18:11-19:43/92 20:31 06:54-07:00/6	07:02 19:44	07:32 16:43-18:08/85 18:54	07:07 15:10-16:31/81 17:13	07:40 08:17-09:00/43 16:59 15:26-16:32/66	
12	06:05 18:13-19:47/94 20:58	06:33 07:09-07:46/37 18:11-19:43/92 20:29 06:54-07:02/8	07:03 19:42	07:33 16:43-18:07/84 18:52	07:08 15:10-16:31/81 17:12	07:40 08:17-09:00/43 16:59 15:27-16:32/65	
13	06:06 18:12-19:47/95 20:57	06:34 07:08-07:46/38 18:12-19:42/90 20:28 06:55-07:03/8	07:04 19:40	07:34 16:43-18:07/84 18:51	07:09 15:11-16:32/81 17:11	07:41 08:17-09:01/44 17:00 15:28-16:32/64	
14	06:07 18:12-19:47/95 20:57	06:35 07:08-07:46/38 18:12-19:42/90 20:27 06:56-07:04/8	07:05 19:39	07:35 16:42-18:06/84 18:49	07:10 15:11-16:31/80 17:10	07:41 08:18-09:02/44 17:00 15:29-16:33/64	
15	06:08 18:13-19:48/95 20:56	06:36 07:08-07:46/38 18:13-19:41/88 20:25 06:57-07:05/8	07:06 19:37	07:36 16:38-18:06/88 18:48	07:12 15:11-16:31/80 17:09	07:42 08:17-09:02/45 17:00 15:30-16:32/63	
16	06:08 18:13-19:48/95 20:56	06:37 07:08-07:46/38 18:13-19:40/87 20:24 06:58-07:05/7	07:07 19:35	07:37 16:36-18:06/90 18:46	07:13 15:11-16:31/80 17:09	07:43 08:18-09:02/44 17:00 15:30-16:33/63	
17	06:09 20:13-20:16/3 20:55 18:12-19:47/95 06:10 20:11-20:19/8	06:38 07:08-07:45/37 18:13-19:39/86 20:23 06:59-07:06/7	07:08 19:34	07:38 16:33-18:05/92 18:45	07:14 15:12-16:32/80 17:08	07:43 08:19-09:03/44 17:01 15:31-16:34/63	
18	06:10 20:11-20:19/8 20:54 18:12-19:48/96 06:11 20:09-20:21/12	06:39 07:08-07:45/37 18:14-19:38/84 20:21 07:00-07:06/6	07:09 19:32	07:39 16:30-18:04/94 18:43	07:15 15:12-16:32/80 17:07	07:44 08:19-09:03/44 17:01 15:31-16:33/62	
19	06:12 18:12-19:48/96 20:54 18:12-19:48/96 06:12 20:09-20:22/13	06:40 07:09-07:44/35 18:15-19:37/82 20:20 07:01-07:06/5	07:10 19:30	07:41 16:28-18:04/96 18:42	07:16 08:24-08:36/12 17:06 15:12-16:31/79	07:45 08:20-09:04/44 17:01 15:32-16:34/62	
20	06:12 18:12-19:48/96 20:53 18:12-19:48/96 06:12 20:08-20:23/17	06:41 07:09-07:44/35 18:15-19:36/81 20:18 07:02-07:05/3	07:11 19:28	07:42 16:26-18:03/97 18:40	07:17 08:21-08:39/18 17:06 15:13-16:31/78	07:45 08:21-09:05/44 17:02 15:32-16:34/62	
21	06:12 18:12-19:49/97 20:52 18:12-19:49/97 06:13 20:06-20:23/17	06:42 07:09-07:43/34 18:16-19:34/78 20:17 07:03-07:05/2	07:12 19:27	07:43 16:24-18:02/98 18:39	07:19 08:21-08:42/21 17:05 15:13-16:31/78	07:46 08:20-09:05/45 17:02 15:33-16:35/62	
22	06:13 18:11-19:48/97 20:52 18:11-19:48/97 06:14 20:06-20:24/18	06:43 07:10-07:42/32 20:15 18:17-19:33/76	07:13 19:25	07:44 16:22-18:01/99 18:37	07:20 08:19-08:44/25 17:04 15:14-16:32/78	07:46 08:20-09:05/45 17:03 15:33-16:35/62	
23	06:14 20:06-20:24/18 20:51 18:11-19:48/97 06:15 20:06-20:25/19	06:44 07:11-07:41/30 20:14 18:18-19:32/74	07:14 19:23	07:45 16:22-18:01/99 18:36	07:21 08:18-08:45/27 17:04 15:15-16:31/76	07:47 08:21-09:06/45 17:03 15:34-16:36/62	
24	06:15 18:11-19:48/97 20:50 18:11-19:48/97 06:16 20:05-20:25/20	06:45 07:12-07:39/27 20:12 18:19-19:30/71	07:15 19:22	07:46 16:20-18:00/100 18:35	07:22 08:17-08:46/29 17:03 15:15-16:31/76	07:47 08:22-09:06/44 17:04 15:34-16:36/62	
25	06:16 18:11-19:49/98 20:49 18:11-19:49/98 06:17 20:05-20:24/19	06:46 07:13-07:38/25 20:11 18:20-19:28/68	07:16 19:20	07:47 15:19-16:59/100 17:33	07:23 08:16-08:47/31 17:03 15:15-16:31/76	07:48 08:23-09:07/44 17:04 15:35-16:37/62	
26	06:17 20:05-20:24/19 20:48 18:11-19:49/98 06:18 20:05-20:24/19	06:47 07:15-07:36/21 20:09 18:21-19:26/65	07:17 19:18	07:48 15:17-16:57/100 17:32	07:24 08:15-08:48/33 17:02 15:16-16:31/75	07:48 08:23-09:07/44 17:05 15:35-16:37/62	
27	06:18 18:12-19:49/97 20:47 18:12-19:49/97 06:19 20:05-20:23/18	06:48 07:16-07:32/16 20:08 18:22-19:24/62	07:18 19:17	07:49 15:16-16:56/100 17:30	07:25 08:16-08:50/34 17:02 15:17-16:32/75	07:49 08:23-09:07/44 17:05 15:35-16:38/63	
28	06:19 18:12-19:49/97 20:46 18:12-19:49/97 06:20 07:26-07:32/6 18:11-19:48/97	06:49 07:20-07:28/8 20:06 18:24-19:21/57	07:19 19:15	07:50 15:16-16:56/100 17:29	07:26 08:16-08:51/35 17:01 15:18-16:32/74	07:49 08:24-09:09/45 17:06 15:35-16:38/63	
29	06:20 20:04-20:21/17 06:20 07:21-07:35/14 18:11-19:48/97	06:50 18:26-19:19/53 20:05	07:20 19:13	07:51 15:16-54/99 17:28	07:27 08:15-08:52/37 17:01 15:18-16:31/73	07:49 08:25-09:09/44 17:07 15:36-16:40/64	
30	06:20 07:21-07:35/14 18:11-19:48/97 20:44 20:04-20:20/16	06:50 18:28-19:16/48 20:03	07:21 19:12	07:52 15:14-16:53/99 17:27	07:29 08:15-08:53/38 17:01 15:19-16:31/72	07:49 08:25-09:09/44 17:08 15:36-16:40/64	
31	06:21 07:19-07:37/18 18:11-19:48/97 20:43 20:04-20:20/16	06:51 18:31-19:13/42 20:02	 	06:54 15:13-16:51/98 17:25	 	07:50 08:25-09:09/44 17:08 15:36-16:41/65	
	Potential sun hours Sum of minutes with flicker	458 3208	427 3524	375 1049	346 2804	299 2794	289 3348

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali|WTG: WTG03 - Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115.0 m (TOT: 200.0 m) (10)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June
1	07:50 17:09	07:37 16:49-17:20/31 17:43	07:02 08:11-09:43/92 18:17 17:26-17:55/29	07:12 08:58-10:27/89 19:50 07:30-07:41/11	06:27 19:49-19:59/10 20:21	05:58 20:01-20:25/24 20:50
2	07:50 17:10	07:36 16:50-17:21/31 17:44	07:00 08:10-09:43/93 18:18 17:26-17:57/31	07:10 07:28-07:40/12 19:51 08:58-10:25/87	06:25 19:48-19:59/11 20:22	05:58 20:02-20:26/24 20:51
3	07:50 17:11	07:35 16:51-17:22/31 17:46	06:59 08:08-09:43/95 18:19 17:25-17:57/32	07:08 07:27-07:40/13 19:52 08:59-10:24/85	06:24 19:47-20:00/13 20:23	05:57 20:03-20:27/24 20:52
4	07:50 17:12	07:34 16:52-17:24/32 17:47	06:57 08:08-09:44/96 18:20 17:25-17:59/34	07:07 07:25-07:39/14 19:53 08:59-10:22/83	06:23 19:47-20:01/14 20:24	05:57 20:02-20:27/25 20:52
5	07:50 17:13	07:33 16:53-17:25/32 17:48	06:56 08:06-09:44/98 18:21 17:24-17:58/34	07:05 07:24-07:39/15 19:54 09:00-10:21/81	06:22 19:47-20:02/15 20:25	05:57 20:03-20:27/24 20:53
6	07:50 17:14	07:32 16:55-17:27/32 17:49	06:54 08:06-09:45/99 18:22 17:25-17:59/34	07:04 07:22-07:37/15 19:55 09:00-10:19/79	06:20 19:47-20:03/16 20:26	05:56 20:03-20:27/24 20:54
7	07:50 17:15	07:31 16:56-17:27/31 17:51	06:52 08:05-09:45/100 18:23 17:25-17:58/33	07:02 07:20-07:36/16 19:56 09:01-10:17/76	06:19 19:47-20:04/17 20:27	05:56 20:04-20:28/24 20:54
8	07:50 17:16	07:30 17:00-17:29/29 17:52	06:51 08:05-09:45/100 18:25 17:25-17:56/31	07:00 07:19-07:34/15 19:57 09:02-10:16/74	06:18 19:47-20:05/18 20:28	05:56 20:03-20:27/24 20:55
9	07:50 16:50-16:51/1 17:17	07:29 17:01-17:30/29 17:53	06:49 08:04-09:45/101 18:26 17:26-17:56/30	06:59 07:17-07:32/15 19:58 09:02-10:13/71	06:17 19:47-20:06/19 20:29	05:56 20:04-20:27/23 20:55
10	07:50 16:50-16:52/2 17:18	07:27 17:01-17:32/31 17:54	06:48 08:02-09:45/103 18:27 17:26-17:55/29	06:57 07:16-07:33/17 19:59 09:04-10:12/68	06:16 19:48-20:07/19 20:30	05:55 20:04-20:27/23 20:56
11	07:50 16:49-16:53/4 17:19	07:26 17:02-17:33/31 17:56	06:46 08:02-09:45/103 18:28 17:28-17:54/26	06:56 07:14-07:32/18 20:00 09:04-10:10/66	06:15 19:48-20:07/19 20:31	05:55 20:04-20:28/24 20:56
12	07:49 16:49-16:55/6 17:20	07:25 08:47-09:08/21 17:57 17:02-17:33/31	06:44 08:01-09:45/104 18:29 17:29-17:52/23	06:54 08:01-09:45/104 20:01 07:12-07:31/19	06:14 19:48-20:08/20 20:32	05:55 20:05-20:28/23 20:57
13	07:49 16:48-16:55/7 17:21	07:24 08:42-09:14/32 17:58 17:02-17:33/31	06:43 08:01-09:44/103 18:30 17:30-17:49/19	06:52 09:06-10:05/59 20:02 07:11-07:31/20	06:13 19:48-20:09/21 20:33	05:55 20:05-20:28/23 20:57
14	07:49 16:48-16:57/9 17:22	07:23 08:38-09:18/40 17:59 17:03-17:32/29	06:41 08:01-09:44/103 18:31 17:33-17:47/14	06:51 09:07-10:03/56 20:04 07:09-07:30/21	06:12 19:48-20:10/22 20:34	05:55 20:06-20:28/22 20:58
15	07:48 16:47-16:58/11 17:23	07:21 08:35-09:21/46 18:00 17:04-17:32/28	06:40 08:00-09:44/104 18:32	06:49 09:09-10:01/52 19:42-19:43/1 20:05 07:08-07:30/22	06:11 19:49-20:12/23 20:35	05:55 20:06-20:28/22 20:58
16	07:48 16:47-16:59/12 17:24	07:20 08:32-09:24/52 18:02 17:04-17:30/26	06:38 08:00-09:44/104 18:33	06:48 09:10-09:58/48 19:39-19:43/4 20:06 07:06-07:28/22	06:10 19:49-20:12/23 20:36	05:55 20:06-20:28/22 20:59
17	07:48 16:46-17:00/14 17:25	07:19 08:30-09:26/56 18:03 17:06-17:29/23	06:36 07:59-09:43/104 18:34	06:46 09:12-09:55/43 19:38-19:45/7 20:07 07:05-07:28/23	06:09 19:50-20:13/23 20:37	05:55 20:06-20:28/22 20:59
18	07:47 16:46-17:02/16 17:26	07:17 08:28-09:29/61 18:04 17:08-17:28/20	06:35 07:59-09:42/103 18:35	06:45 09:14-09:52/38 19:37-19:45/8 20:08 07:03-07:26/23	06:08 19:50-20:14/24 20:38	05:55 20:06-20:28/22 20:59
19	07:47 16:46-17:02/16 17:28	07:16 08:25-09:30/65 18:05 17:09-17:25/16	06:33 07:59-09:42/103 18:36	06:43 09:17-09:49/32 19:36-19:47/11 20:09 07:02-07:25/23	06:07 19:50-20:15/25 20:39	05:55 20:07-20:28/21 21:00
20	07:46 16:46-17:04/18 17:29	07:15 08:24-09:32/68 18:06 17:13-17:23/10	06:31 07:58-09:41/103 18:37	06:42 09:20-09:44/24 19:35-19:47/12 20:10 07:02-07:23/21	06:06 19:51-20:16/25 20:40	05:55 20:07-20:28/21 21:00
21	07:45 16:46-17:05/19 17:30	07:13 08:21-09:33/72 18:07 17:40-17:45/5	06:30 07:58-09:40/102 18:39	06:40 09:25-09:39/14 19:35-19:49/14 20:11 07:03-07:21/18	06:05 19:52-20:17/25 20:41	05:56 20:08-20:29/21 21:00
22	07:45 16:46-17:06/20 17:31	07:12 08:20-09:35/75 18:09 17:36-17:47/11	06:28 07:58-09:39/101 18:40	06:39 07:06-07:18/12 20:12 19:35-19:50/15	06:04 19:53-20:18/25 20:42	05:56 20:08-20:29/21 21:00
23	07:44 16:46-17:08/22 17:32	07:10 08:19-09:37/78 18:10 17:33-17:48/15	06:26 07:58-09:38/100 18:41	06:37 19:35-19:50/15 20:13	06:04 19:54-20:18/24 20:43	05:56 20:08-20:29/21 21:01
24	07:44 16:46-17:09/23 17:34	07:09 08:17-09:38/81 18:11 17:31-17:49/18	06:25 07:57-09:37/100 18:42	06:36 19:35-19:52/17 20:14	06:03 19:56-20:20/24 20:44	05:56 20:08-20:29/21 21:01
25	07:43 16:46-17:10/24 17:35	07:08 08:16-09:39/83 18:12 17:30-17:51/21	06:23 07:58-09:36/98 18:43	06:35 19:35-19:52/17 20:15	06:02 19:58-20:20/22 20:44	05:57 20:08-20:30/22 21:01
26	07:42 16:46-17:11/25 17:36	07:06 08:14-09:40/86 18:13 17:29-17:52/23	06:22 07:57-09:35/98 18:44	06:33 19:36-19:53/17 20:16	06:02 20:01-20:20/19 20:45	05:57 20:08-20:30/22 21:01
27	07:41 16:46-17:12/26 17:37	07:05 08:13-09:41/88 18:14 17:28-17:53/25	06:20 07:57-09:34/97 18:45 06:38-06:40/2	06:32 19:37-19:55/18 20:17	06:01 20:02-20:22/20 20:46	05:57 20:08-20:30/22 21:01
28	07:40 16:47-17:15/28 17:38	07:03 08:12-09:42/90 18:16 17:27-17:54/27	06:18 07:58-09:33/95 18:46 06:37-06:41/4	06:30 19:37-19:55/18 20:18	06:00 20:01-20:22/21 20:47	05:58 20:09-20:31/22 21:01
29	07:40 16:48-17:16/28 17:40	07:02 08:11-09:41/89 18:17 17:27-17:54/27	06:17 07:57-09:32/96 19:47 07:35-07:41/6	06:29 19:39-19:56/17 20:19	06:00 20:02-20:23/21 20:48	05:58 20:08-20:31/23 21:01
30	07:39 16:48-17:17/29 17:41	07:01 08:10-09:40/87 18:18 17:27-17:54/27	06:16 07:56-09:31/97 19:48 07:33-07:41/8	06:28 19:50-19:57/7 20:20 19:41-19:49/8	05:59 20:01-20:24/23 20:49	05:58 20:09-20:32/23 21:01
31	07:38 16:48-17:18/30 17:42	06:59 08:09-09:40/91 18:19 17:27-17:54/27	06:15 08:58-10:29/91 19:49 07:32-07:42/10		05:59 20:02-20:25/23 20:49	
Potential sun hours	299	298	370	398	447	451
Sum of minutes with flicker	390	1793	3508	1878	624	679

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali|WTG: WTG03 - Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT: 200,0 m) (10)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July	August	September	October	November	December
1	05:59 20:09-20:32/23 21:01	06:22 19:59-20:19/20 20:42	06:52 07:13-07:31/18 20:00 09:03-10:09/66	07:22 08:41-10:24/103 19:10 18:09-18:31/22	06:55 16:31-17:01/30 17:24	07:30 16:31-16:36/5 17:00
2	05:59 20:09-20:32/23 21:01	06:23 19:59-20:18/19 20:41	06:53 07:14-07:31/17 19:58 09:02-10:10/68	07:23 08:41-10:24/103 19:08 18:07-18:32/25	06:56 16:31-17:00/29 17:23	07:31 16:33-16:35/2 17:00
3	06:00 20:09-20:32/23 21:00	06:24 19:58-20:17/19 20:40	06:54 07:15-07:30/15 19:57 09:00-10:11/71	07:24 08:41-10:23/102 19:07 18:05-18:33/28	06:58 16:29-16:58/29 17:22	07:32 16:34-16:35/1 17:00
4	06:00 20:09-20:33/24 21:01	06:25 19:58-20:16/18 20:39	06:55 07:16-07:31/15 19:55 08:59-10:13/74	07:25 08:41-10:23/102 19:05 18:04-18:33/29	06:59 16:26-16:57/31 17:21	07:33 17:00 17:00
5	06:01 20:09-20:33/24 21:00	06:26 19:57-20:15/18 20:38	06:56 07:17-07:33/16 19:53 08:58-10:14/76	07:26 08:41-10:22/101 19:04 18:03-18:34/31	07:00 16:25-16:56/31 17:19	07:34 16:59 17:00
6	06:02 20:09-20:34/25 21:00	06:27 19:57-20:14/17 20:37	06:57 07:18-07:33/15 19:52 08:56-10:15/79	07:27 08:41-10:22/101 19:02 18:02-18:34/32	07:01 16:23-16:55/32 17:18	07:35 16:59 17:00
7	06:02 20:09-20:33/24 21:00	06:28 19:57-20:13/16 20:36	06:58 07:19-07:34/15 19:50 08:55-10:16/81	07:28 08:41-10:21/100 19:00 18:01-18:34/33	07:02 16:22-16:53/31 17:17	07:35 16:59 17:00
8	06:03 20:09-20:34/25 20:59	06:29 19:57-20:12/15 20:34	06:59 07:20-07:34/14 19:49 08:54-10:17/83	07:29 08:42-10:20/98 18:59 18:00-18:34/34	07:03 16:21-16:52/31 17:16	07:36 16:59 17:00
9	06:03 20:10-20:34/24 20:59	06:30 19:57-20:11/14 20:33	07:00 07:21-07:35/14 19:47 08:53-10:18/85	07:30 08:42-10:19/97 18:57 18:00-18:34/34	07:05 16:21-16:52/31 17:15	07:37 16:59 17:00
10	06:04 20:09-20:33/24 20:59	06:31 19:56-20:08/12 20:32	07:01 07:21-07:34/13 19:45 08:51-10:18/87	07:31 08:42-10:18/96 18:55 17:59-18:33/34	07:06 16:20-16:50/30 17:14	07:38 16:59 17:00
11	06:05 20:10-20:33/23 20:58	06:32 19:56-20:07/11 20:31	07:02 08:50-10:19/89 19:44 07:22-07:33/11	07:32 08:43-10:17/94 18:54 17:59-18:31/32	07:07 16:19-16:49/30 17:13	07:39 16:59 17:00
12	06:05 20:10-20:33/23 20:58	06:33 19:57-20:06/9 20:29	07:03 08:49-10:20/91 19:42 07:23-07:33/10	07:33 08:43-10:16/93 18:52 17:59-18:29/30	07:08 16:19-16:48/29 17:12	07:40 16:59 17:00
13	06:06 20:10-20:32/22 20:57	06:34 19:58-20:05/7 20:28	07:04 08:49-10:21/92 19:40 07:24-07:32/8	07:34 08:44-10:15/91 18:51 17:59-18:28/29	07:09 16:20-16:48/28 17:11	07:41 17:00 17:00
14	06:07 20:10-20:32/22 20:57	06:35 19:46-20:04/18 20:27	07:05 08:48-10:21/93 19:39 07:25-07:32/7	07:35 08:45-10:14/89 18:49 17:59-18:26/27	07:10 16:19-16:47/28 17:10	07:41 17:00 17:00
15	06:08 20:11-20:32/21 20:56	06:36 19:44-20:02/18 20:25	07:06 08:47-10:22/95 19:37 07:26-07:31/5	07:36 08:46-10:13/87 18:48 18:00-18:24/24	07:12 16:19-16:45/26 17:10	07:42 17:00 17:00
16	06:08 20:11-20:31/20 20:56	06:37 19:43-20:01/18 20:24	07:07 08:46-10:23/97 19:35 07:27-07:30/3	07:37 08:47-10:12/85 18:46 18:01-18:24/23	07:13 16:19-16:44/25 17:09	07:43 17:00 17:00
17	06:09 20:11-20:30/19 20:55	06:38 19:42-20:00/18 20:23	07:08 08:46-10:23/97 19:34	07:38 08:48-10:10/82 18:45 18:02-18:22/20	07:14 16:20-16:44/24 17:08	07:43 17:01 17:00
18	06:10 20:09-20:30/21 20:54	06:39 19:41-19:59/18 20:21	07:09 08:45-10:24/99 19:32	07:40 08:49-10:09/80 18:43 18:03-18:20/17	07:15 16:20-16:43/23 17:07	07:44 17:01 17:00
19	06:11 20:06-20:29/23 20:54	06:40 19:41-19:57/16 20:20	07:10 08:45-10:24/99 19:30	07:41 08:50-10:07/77 18:42 18:05-18:19/14	07:16 16:20-16:42/22 17:06	07:45 17:01 17:00
20	06:12 20:05-20:29/24 20:53	06:41 19:40-19:56/16 20:18	07:11 08:44-10:24/100 19:28	07:42 08:51-10:05/74 18:40 18:07-18:17/10	07:17 16:21-16:41/20 17:06	07:45 17:02 17:00
21	06:12 20:04-20:28/24 20:52	06:42 07:11-07:23/12 20:17	07:12 08:44-10:25/101 19:27	07:43 08:52-10:04/72 18:39	07:19 16:21-16:40/19 17:05	07:46 17:02 17:00
22	06:13 20:02-20:27/25 20:52	06:43 09:29-09:45/16 19:40-19:53/13 20:15	07:13 08:43-10:25/102 19:25	07:44 08:55-10:03/68 18:37 17:41-17:53/12	07:20 16:22-16:40/18 17:04	07:46 17:03 17:00
23	06:14 20:02-20:26/24 20:51	06:44 09:24-09:50/26 19:40-19:52/12 20:14	07:14 08:43-10:25/102 19:23	07:45 08:56-10:00/64 18:36 17:39-17:57/18	07:21 16:23-16:40/17 17:04	07:47 17:03 17:00
24	06:15 20:01-20:26/25 20:50	06:45 09:20-09:53/33 19:40-19:50/10 20:12	07:15 08:42-10:25/103 19:22	07:46 08:58-09:58/60 18:35 17:37-17:58/21	07:22 16:23-16:39/16 17:03	07:47 17:04 17:00
25	06:16 20:01-20:25/24 20:49	06:46 09:17-09:56/39 19:40-19:48/8 20:11	07:16 08:42-10:25/103 19:20	06:47 08:00-08:55/55 17:33 16:35-16:59/24	07:23 16:24-16:38/14 17:03	07:48 17:04 17:00
26	06:17 20:00-20:24/24 20:48	06:47 09:15-09:59/44 19:40-19:47/7 20:09	07:17 08:42-10:25/103 19:18	06:48 08:02-08:53/51 17:32 16:34-17:00/26	07:24 16:25-16:37/12 17:02	07:48 17:05 17:00
27	06:18 20:00-20:24/24 20:47	06:48 09:12-10:00/48 19:41-19:45/4 20:08	07:18 08:41-10:25/104 19:17	06:50 08:05-08:50/45 17:31 16:33-17:01/28	07:25 16:27-16:38/11 17:02	07:49 17:06 17:00
28	06:19 20:00-20:23/23 20:46	06:49 09:10-10:02/52 19:43-19:44/1 20:06	07:19 08:41-10:25/104 19:15	06:51 08:09-08:47/38 17:29 16:33-17:02/29	07:26 16:28-16:37/9 17:01	07:49 17:06 17:00
29	06:20 19:59-20:21/22 20:45	06:50 09:08-10:04/56 20:05	07:20 08:41-10:25/104 19:13	06:52 08:12-08:42/30 17:28 16:32-17:02/30	07:27 16:29-16:36/7 17:01	07:49 17:07 17:00
30	06:20 19:59-20:20/21 20:44	06:51 09:06-10:06/60 20:03	07:21 08:41-10:25/104 19:12	06:53 08:18-08:36/18 17:27 16:31-17:02/31	07:29 16:30-16:36/6 17:01	07:49 17:08 17:00
31	06:21 19:59-20:20/21 20:43	06:52 09:05-10:07/62 20:02	07:22 08:41-10:25/104 19:11	06:54 16:31-17:02/31 17:25	07:30 16:31-16:36/6 17:01	07:50 17:08 17:00
Potential sun hours	457	427	375	346	299	289
Sum of minutes with flicker	714	1056	2977	3134	689	8

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni cultural\WTG: WTG04 - Siemens Gamesa SG 6.0-170 6000 170.0 IO! hub: 115,0 m (TOT: 200,0 m) (9)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June
1	07:50 13:11-14:17/66 17:10	07:37 17:43	07:02 18:17	07:12 19:02-19:29/27 19:50	06:27 20:21	05:58 20:50
2	07:50 13:12-14:17/65 17:10	07:36 17:45	07:00 18:18	07:10 19:02-19:27/25 19:51	06:25 20:22	05:58 20:51
3	07:50 13:12-14:17/65 17:11	07:35 17:46	06:59 18:19	07:08 19:04-19:27/23 19:52	06:24 20:23	05:57 20:52
4	07:50 13:13-14:17/64 17:12	07:34 17:47	06:57 18:20	07:07 19:04-19:24/20 19:53	06:23 20:24	05:57 20:52
5	07:50 13:14-14:17/63 17:13	07:33 17:48	06:56 18:21	07:05 19:06-19:22/16 19:54	06:22 20:25	05:57 20:53
6	07:50 13:16-14:17/61 17:14	07:32 17:49	06:54 18:22	07:04 19:09-19:19/10 19:55	06:20 20:26	05:56 20:54
7	07:50 13:17-14:17/60 17:15	07:31 17:51	06:52 18:23	07:02 19:56	06:19 20:27	05:56 20:54
8	07:50 13:18-14:17/59 17:16	07:30 17:52	06:51 18:25	07:00 19:57	06:18 20:28	05:56 20:55
9	07:50 13:19-14:17/58 17:17	07:29 17:53	06:49 18:26	06:59 19:58	06:17 20:29	05:56 20:56
10	07:50 13:20-14:16/56 17:18	07:28 17:54	06:48 18:27	06:57 19:59	06:16 20:30	05:55 20:56
11	07:50 13:22-14:16/54 17:19	07:26 17:56	06:46 18:28	06:56 20:00	06:15 20:31	05:55 20:57
12	07:49 13:23-14:16/53 17:20	07:25 17:57	06:45 18:29	06:54 20:02	06:14 20:32	05:55 20:57
13	07:49 13:24-14:15/51 17:21	07:24 17:58	06:43 18:30	06:52 20:03	06:13 20:33	05:55 20:58
14	07:49 13:26-14:15/49 17:22	07:23 17:59	06:41 18:31	06:51 20:04	06:12 20:34	05:55 20:58
15	07:48 13:28-14:13/45 17:23	07:21 18:00	06:40 18:32	06:49 20:05	06:11 20:35	05:55 20:58
16	07:48 13:30-14:13/43 17:24	07:20 18:02	06:38 18:33	06:48 20:06	06:10 20:36	05:55 20:59
17	07:48 13:32-14:11/39 17:25	07:19 18:03	06:36 18:34	06:46 20:07	06:09 20:37	05:55 20:59
18	07:47 13:35-14:10/35 17:27	07:17 18:04	06:35 18:35	06:45 20:08	06:08 20:38	05:55 21:00
19	07:47 13:37-14:08/31 17:28	07:16 18:05	06:33 18:36	06:43 20:09	06:07 20:39	05:55 21:00
20	07:46 13:42-14:06/24 17:29	07:15 18:06	06:31 18:38	06:42 20:10	06:06 20:40	05:55 21:00
21	07:46 13:46-14:02/16 17:30	07:13 18:08	06:30 18:39	06:40 20:11	06:05 20:41	05:56 21:00
22	07:45 17:31 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:05 20:42	05:56 21:01
23	07:44 17:32 17:32	07:11 18:10	06:27 18:41	06:37 20:13	06:04 20:43	05:56 21:01
24	07:44 17:33 17:33	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01
25	07:43 17:34 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:02 20:45	05:57 21:01
26	07:42 17:36 17:36	07:06 18:13	06:22 18:44	06:33 20:16	06:02 20:45	05:57 21:01
27	07:41 17:37 17:37	07:05 18:14	06:20 18:45	06:32 20:17	06:01 20:46	05:57 21:01
28	07:41 17:38 17:38	07:03 18:16	06:18 18:46	06:31 20:18	06:00 20:47	05:58 21:01
29	07:40 17:40 17:40	07:17 19:02-19:26/24	07:17 19:02-19:26/24	06:29 20:19	06:00 20:48	05:58 21:01
30	07:39 17:41 17:41	07:15 19:01-19:27/26	07:15 19:01-19:27/26	06:28 20:20	05:59 20:49	05:58 21:01
31	07:38 17:42 17:42	07:13 19:02-19:28/26	07:13 19:02-19:28/26	06:28 20:20	05:59 20:49	05:58 21:01
Potential sun hours	299	298	370	398	447	451
Sum of minutes with flicker	1057	0	214	121	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni cultural\WTG: WTG04 - Siemens Gamesa SG 6.0-170 6000 170.0 IO! hub: 115,0 m (TOT: 200,0 m) (9)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	July	August	September	October	November	December
1	05:59 21:01	06:22 20:42	06:53 20:00	07:22 19:10	06:55 17:24	07:30 13:04-13:58/54 17:00
2	05:59 21:01	06:23 20:41	06:53 19:58	07:23 19:08	06:57 17:23	07:31 13:03-13:59/56 17:00
3	06:00 21:01	06:24 20:40	06:54 19:57	07:24 19:07	06:58 17:22	07:32 13:03-14:00/57 17:00
4	06:00 21:01	06:25 20:39	06:55 19:55	07:25 19:05	06:59 17:21	07:33 13:02-14:01/59 17:00
5	06:01 21:00	06:26 20:38	06:56 19:54	07:26 19:04	07:00 17:19	07:34 13:02-14:02/60 17:00
6	06:02 21:00	06:27 20:37	06:57 19:05-19:15/10 19:52	07:27 19:02	07:01 17:18	07:35 13:02-14:03/61 16:59
7	06:02 21:00	06:28 20:36	06:58 19:02-19:18/16 19:50	07:28 19:00	07:02 17:17	07:36 13:02-14:04/62 16:59
8	06:03 21:00	06:29 20:34	06:59 19:00-19:19/19 19:49	07:29 18:59	07:04 17:16	07:36 13:01-14:05/64 16:59
9	06:03 20:59	06:30 20:33	07:00 18:57-19:20/23 19:47	07:30 18:57	07:05 17:15	07:37 13:02-14:06/64 16:59
10	06:04 20:59	06:31 20:32	07:01 18:55-19:20/25 19:45	07:31 18:56	07:06 17:14	07:38 13:02-14:07/65 16:59
11	06:05 20:58	06:32 20:31	07:02 18:54-19:21/27 19:44	07:32 18:54	07:07 17:13	07:39 13:02-14:08/66 16:59
12	06:05 20:58	06:33 20:29	07:03 18:53-19:20/27 19:42	07:33 18:52	07:08 17:12	07:40 13:01-14:08/67 16:59
13	06:06 20:57	06:34 20:28	07:04 18:53-19:18/25 19:40	07:34 18:51	07:09 17:11	07:41 13:02-14:09/67 17:00
14	06:07 20:57	06:35 20:27	07:05 18:52-19:16/24 19:39	07:35 18:49	07:11 17:10	07:41 13:02-14:09/67 17:00
15	06:08 20:56	06:36 20:25	07:06 18:52-19:15/23 19:37	07:36 18:48	07:12 17:10	07:42 13:03-14:10/67 17:00
16	06:08 20:56	06:37 20:24	07:07 18:51-19:13/22 19:35	07:37 18:46	07:13 17:09	07:43 13:02-14:10/68 17:00
17	06:09 20:55	06:38 20:23	07:08 18:51-19:11/20 19:34	07:39 18:45	07:14 17:08	07:44 13:03-14:11/68 17:01
18	06:10 20:55	06:39 20:21	07:09 18:51-19:10/19 19:32	07:40 18:43	07:15 17:07	07:44 13:02-14:11/69 17:01
19	06:11 20:54	06:40 20:20	07:10 18:51-19:08/17 19:30	07:41 18:42	07:16 17:06	07:45 13:03-14:12/69 17:01
20	06:12 20:53	06:41 20:18	07:11 18:52-19:07/15 19:29	07:42 18:40	07:18 17:06	07:45 13:04-14:13/69 17:02
21	06:12 20:52	06:42 20:17	07:12 18:53-19:05/12 19:27	07:43 18:39	07:19 13:22-13:38/16 17:05	07:46 13:04-14:13/69 17:02
22	06:13 20:52	06:43 20:15	07:13 18:54-19:03/9 19:25	07:44 18:37	07:20 13:18-13:42/24 17:04	07:47 13:05-14:14/69 17:03
23	06:14 20:51	06:44 20:14	07:14 18:55-19:02/7 19:23	07:45 18:36	07:21 13:14-13:45/31 17:04	07:47 13:05-14:14/69 17:03
24	06:15 20:50	06:45 20:12	07:15 18:58-19:00/2 19:22	07:46 18:35	07:22 13:12-13:47/35 17:03	07:47 13:05-14:14/69 17:04
25	06:16 20:49	06:46 20:11	07:16 19:20	06:47 17:33	07:23 13:10-13:49/39 17:03	07:48 13:06-14:15/69 17:04
26	06:17 20:48	06:47 20:09	07:17 19:18	06:48 17:32	07:24 13:09-13:52/43 17:02	07:48 13:07-14:15/68 17:05
27	06:18 20:47	06:48 20:08	07:18 19:17	06:50 17:31	07:25 13:08-13:53/45 17:02	07:49 13:07-14:15/68 17:06
28	06:19 20:46	06:49 20:06	07:19 19:15	06:51 17:29	07:27 13:06-13:55/49 17:01	07:49 13:08-14:16/68 17:06
29	06:20 20:46	06:50 20:05	07:20 19:13	06:52 17:28	07:28 13:05-13:56/51 17:01	07:49 13:09-14:16/67 17:07
30	06:21 20:45	06:51 20:03	07:21 19:12	06:53 17:27	07:29 13:04-13:57/53 17:01	07:50 13:09-14:16/67 17:08
31	06:21 20:44	06:52 20:02		06:54 17:25		07:50 13:10-14:17/67 17:08
Potential sun hours	458	427	375	346	299	289
Sum of minutes with flicker	0	0	342	0	386	2029

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali|WTG: WTG05 - Siemens Gamesa SG 6.0-170 6000 170.0 IO! hub: 115,0 m (TOT: 200,0 m) (8)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:58 06:38-07:10/32 20:50 20:08-20:26/18
2	07:50 17:10	07:36 17:45	07:00 18:18	07:10 19:51	06:25 20:22	05:58 06:35-07:11/36 20:51 20:07-20:26/19
3	07:50 17:11	07:35 17:46	06:59 18:19	07:08 19:52	06:24 20:23	05:57 06:34-07:13/39 20:52 20:06-20:27/21
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24	05:57 06:33-07:15/42 20:52 20:05-20:27/22
5	07:50 17:13	07:33 17:48	06:56 18:21	07:05 19:54	06:22 20:25	05:57 06:31-07:16/45 20:53 20:05-20:28/23
6	07:50 17:14	07:32 17:49	06:54 18:22	07:04 19:16-19:25/9 19:55	06:20 20:26	05:56 06:30-07:18/48 20:54 20:05-20:29/24
7	07:50 17:15	07:31 17:51	06:53 18:24	07:02 19:12-19:27/15 19:56	06:19 20:27	05:56 06:30-07:19/49 20:54 20:05-20:30/25
8	07:50 17:16	07:30 17:52	06:51 18:25	07:00 19:11-19:28/17 19:57	06:18 20:28	05:56 06:29-07:21/52 20:55 20:05-20:30/25
9	07:50 17:17	07:29 17:53	06:49 18:26	06:59 19:09-19:29/20 19:58	06:17 20:29	05:56 06:28-07:21/53 20:56 20:04-20:30/26
10	07:50 17:18	07:28 17:54	06:48 18:27	06:57 19:08-19:30/22 19:59	06:16 20:30	05:56 06:27-07:22/55 20:56 20:04-20:31/27
11	07:50 17:19	07:26 17:56	06:46 18:28	06:56 19:07-19:30/23 20:01	06:15 20:31	05:55 06:27-07:23/56 20:57 20:04-20:31/27
12	07:49 17:20	07:25 17:57	06:45 18:29	06:54 19:06-19:29/23 20:02	06:14 20:32	05:55 06:27-07:24/57 20:57 20:04-20:32/28
13	07:49 17:21	07:24 17:58	06:43 18:30	06:53 19:06-19:30/24 20:03	06:13 20:33	05:55 06:27-07:24/57 20:58 20:04-20:32/28
14	07:49 17:22	07:23 17:59	06:41 18:31	06:51 19:06-19:29/23 20:04	06:12 20:34	05:55 06:26-07:25/59 20:58 20:04-20:33/29
15	07:48 17:23	07:21 18:00	06:40 18:32	06:49 19:06-19:29/23 20:05	06:11 20:35	05:55 06:26-07:25/59 20:58 20:04-20:33/29
16	07:48 17:24	07:20 18:02	06:38 18:33	06:48 19:06-19:28/22 20:06	06:10 20:36	05:55 06:26-07:26/60 20:59 20:04-20:33/29
17	07:48 17:25	07:19 18:03	06:36 18:34	06:46 19:07-19:28/21 20:07	06:09 20:37	05:55 06:26-07:26/60 20:59 20:04-20:34/30
18	07:47 17:27	07:18 18:04	06:35 18:35	06:45 19:07-19:26/19 20:08	06:08 20:38	05:55 06:26-07:27/61 21:00 20:04-20:34/30
19	07:47 17:28	07:16 18:05	06:33 18:36	06:43 19:08-19:25/17 20:09	06:07 20:39	05:55 06:26-07:27/61 21:00 20:04-20:34/30
20	07:46 17:29	07:15 18:06	06:32 18:38	06:42 19:09-19:23/14 20:10	06:06 20:40	05:55 06:27-07:28/61 21:00 20:05-20:35/30
21	07:46 17:30	07:13 18:08	06:30 18:39	06:40 19:12-19:21/9 20:11	06:05 20:41	05:56 06:27-07:28/61 21:00 20:05-20:35/30
22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:05 20:42	05:56 06:27-07:28/61 21:01 20:05-20:35/30
23	07:44 17:32	07:11 18:10	06:27 18:41	06:38 20:13	06:04 20:43	05:56 06:27-07:28/61 21:01 20:05-20:35/30
24	07:44 17:34	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:56 06:28-07:29/61 21:01 20:06-20:36/30
25	07:43 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:02 20:45	05:57 06:28-07:28/60 21:01 20:06-20:36/30
26	07:42 17:36	07:06 18:13	06:22 18:44	06:33 20:16	06:02 20:45	05:57 06:28-07:28/60 21:01 20:06-20:36/30
27	07:41 17:37	07:05 18:15	06:20 18:45	06:32 20:17	06:01 20:46	05:57 06:29-07:29/60 21:01 20:07-20:36/29
28	07:41 17:38	07:03 18:16	06:18 18:46	06:31 20:18	06:00 20:15-20:20/5 20:47	05:58 06:29-07:28/59 21:01 20:07-20:36/29
29	07:40 17:40		07:17 19:47	06:29 20:19	06:00 06:47-06:58/11 20:48 20:12-20:23/11	05:58 06:29-07:28/59 21:01 20:07-20:36/29
30	07:39 17:41		07:15 19:48	06:28 20:20	05:59 06:42-07:03/21 20:49 20:10-20:24/14	05:58 06:31-07:28/57 21:01 20:08-20:36/28
31	07:38 17:42		07:13 19:49		05:59 06:39-07:07/28 20:49 20:09-20:25/16	
Potential sun hours	299	298	370	398	447	451
Sum of minutes with flicker	0	0	0	301	106	2456

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
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SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni cultural\WTG: WTG05 - Siemens Gamesa SG 6.0-170 6000 170.0 IO! hub: 115,0 m (TOT: 200,0 m) (8)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	July	August	September	October	November	December
1	05:59 06:31-07:27/56 21:01 20:08-20:36/28	06:22 20:42	06:53 19:06-19:29/23 20:00	07:22 19:10	06:55 17:24	07:30 17:00
2	05:59 06:32-07:27/55 21:01 20:09-20:36/27	06:23 20:41	06:54 19:06-19:28/22 19:58	07:23 19:09	06:57 17:23	07:31 17:00
3	06:00 06:33-07:26/53 21:01 20:09-20:35/26	06:24 20:40	06:55 19:07-19:27/20 19:57	07:24 19:07	06:58 17:22	07:32 17:00
4	06:00 06:34-07:26/52 21:01 20:10-20:36/26	06:25 20:39	06:55 19:08-19:26/18 19:55	07:25 19:05	06:59 17:21	07:33 17:00
5	06:01 06:35-07:25/50 21:00 20:10-20:35/25	06:26 20:38	06:56 19:09-19:24/15 19:54	07:26 19:04	07:00 17:20	07:34 17:00
6	06:02 06:36-07:24/48 21:00 20:11-20:35/24	06:27 20:37	06:57 19:11-19:21/10 19:52	07:27 19:02	07:01 17:18	07:35 16:59
7	06:02 06:38-07:24/46 21:00 20:12-20:35/23	06:28 20:36	06:58 19:50	07:28 19:00	07:02 17:17	07:36 16:59
8	06:03 06:39-07:22/43 21:00 20:12-20:34/22	06:29 20:34	06:59 19:49	07:29 18:59	07:04 17:16	07:36 16:59
9	06:03 06:40-07:21/41 20:59 20:13-20:34/21	06:30 20:33	07:00 19:47	07:30 18:57	07:05 17:15	07:37 16:59
10	06:04 06:42-07:19/37 20:59 20:14-20:33/19	06:31 20:32	07:01 19:45	07:31 18:56	07:06 17:14	07:38 16:59
11	06:05 06:44-07:18/34 20:58 20:15-20:33/18	06:32 20:31	07:02 19:44	07:32 18:54	07:07 17:13	07:39 16:59
12	06:06 06:46-07:16/30 20:58 20:17-20:33/16	06:33 20:29	07:03 19:42	07:33 18:52	07:08 17:12	07:40 17:00
13	06:06 06:50-07:14/24 20:57 20:18-20:33/15	06:34 20:28	07:04 19:40	07:34 18:51	07:09 17:11	07:41 17:00
14	06:07 06:53-07:09/16 20:57 20:20-20:32/12	06:35 20:27	07:05 19:39	07:35 18:49	07:11 17:10	07:41 17:00
15	06:08 20:22-20:31/9 20:56	06:36 20:25	07:06 19:37	07:36 18:48	07:12 17:10	07:42 17:00
16	06:08 20:56	06:37 20:24	07:07 19:35	07:37 18:46	07:13 17:09	07:43 17:00
17	06:09 20:55	06:38 20:23	07:08 19:34	07:39 18:45	07:14 17:08	07:44 17:01
18	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43	07:15 17:07	07:44 17:01
19	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	07:16 17:06	07:45 17:01
20	06:12 20:53	06:41 20:18	07:11 19:29	07:42 18:40	07:18 17:06	07:45 17:02
21	06:13 20:52	06:42 20:17	07:12 19:27	07:43 18:39	07:19 17:05	07:46 17:02
22	06:13 20:52	06:43 19:16-19:26/10 20:15	07:13 19:25	07:44 18:37	07:20 17:04	07:47 17:03
23	06:14 20:51	06:44 19:14-19:28/14 20:14	07:14 19:24	07:45 18:36	07:21 17:04	07:47 17:03
24	06:15 20:50	06:45 19:12-19:29/17 20:12	07:15 19:22	07:46 18:35	07:22 17:03	07:47 17:04
25	06:16 20:49	06:46 19:10-19:30/20 20:11	07:16 19:20	06:47 17:33	07:23 17:03	07:48 17:04
26	06:17 20:48	06:47 19:09-19:31/22 20:09	07:17 19:18	06:48 17:32	07:24 17:02	07:48 17:05
27	06:18 20:47	06:48 19:08-19:30/22 20:08	07:18 19:17	06:50 17:31	07:25 17:02	07:49 17:06
28	06:19 20:47	06:49 19:07-19:30/23 20:06	07:19 19:15	06:51 17:29	07:27 17:01	07:49 17:06
29	06:20 20:46	06:50 19:06-19:30/24 20:05	07:20 19:13	06:52 17:28	07:28 17:01	07:49 17:07
30	06:21 20:45	06:51 19:06-19:30/24 20:03	07:21 19:12	06:53 17:27	07:29 17:01	07:50 17:08
31	06:22 20:44	06:52 19:06-19:29/23 20:02		06:54 17:25		07:50 17:09
Potential sun hours	458	427	375	346	299	289
Sum of minutes with flicker	896	199	108	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali|WTG: WTG06 - Siemens Gamesa SG 6.0-170 6000 170.0 IO! hub: 115,0 m (TOT: 200,0 m) (7)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June
1	07:50 10:42-15:17/275 17:10	07:37 10:52-15:27/275 17:43	07:02 10:58-15:20/262 18:17	07:12 17:52-19:19/87 19:50 14:25-15:44/79	06:27 17:43-19:19/96 20:21	05:58 18:08-19:00/52 20:50
2	07:50 10:42-15:18/276 17:10	07:36 10:52-15:28/276 17:45	07:00 10:58-15:19/261 18:18	07:10 17:50-19:19/89 19:51 14:30-15:42/72	06:25 17:44-19:19/95 20:22	05:58 18:08-18:58/50 20:51
3	07:50 10:42-15:18/276 17:11	07:35 10:52-15:28/276 17:46	06:59 10:59-15:19/260 18:19	07:08 17:50-19:21/91 19:52 14:36-15:41/65	06:24 17:44-19:17/93 20:23	05:58 18:10-18:58/48 20:52
4	07:50 10:43-15:19/276 17:12	07:34 10:53-15:28/275 17:47	06:57 10:59-15:18/259 18:20	07:07 17:48-19:21/93 19:53 14:40-15:38/58	06:23 17:44-19:17/93 20:24	05:57 18:11-18:58/47 20:52
5	07:50 10:43-15:19/276 17:13	07:33 10:53-15:28/275 17:48	06:56 10:59-15:16/257 18:21 17:56-18:00/4	07:05 17:48-19:22/94 19:54 14:46-15:36/50	06:22 17:45-19:17/92 20:25	05:57 18:11-18:57/46 20:53
6	07:50 10:44-15:20/276 17:14	07:32 10:53-15:28/275 17:49	06:54 11:00-15:16/256 18:22 17:54-18:01/7	07:04 17:47-19:22/95 14:51-15:33/42 19:55 07:48-08:02/14	06:20 17:46-19:16/90 20:26	05:56 18:13-18:56/43 20:54
7	07:50 10:44-15:20/276 17:15	07:31 10:53-15:28/275 17:51	06:53 11:00-15:15/255 18:24 17:52-18:02/10	07:02 17:45-19:22/97 14:56-15:29/33 19:56 07:45-08:04/19	06:19 17:46-19:16/90 20:27	05:56 18:14-18:56/42 20:54
8	07:50 10:45-15:21/276 17:16	07:30 10:53-15:27/274 17:52	06:51 11:01-15:15/254 18:25 17:51-18:04/13	07:00 17:45-19:23/98 15:03-15:25/22 19:57 07:43-08:06/23	06:18 17:47-19:15/88 20:28	05:56 18:15-18:55/40 20:55
9	07:50 10:45-15:22/277 17:17	07:29 10:53-15:27/274 17:53	06:49 11:01-15:14/253 18:26 17:49-18:05/16	06:59 17:44-19:22/98 19:58 07:41-08:07/26	06:17 17:48-19:15/87 20:29	05:56 18:15-18:54/39 20:56
10	07:50 10:45-15:21/276 17:18	07:28 10:54-15:27/273 17:54	06:48 11:01-15:12/251 18:27 17:48-18:05/17	06:57 17:44-19:23/99 19:59 07:40-08:08/28	06:16 17:48-19:14/86 20:30	05:56 18:16-18:54/38 20:56
11	07:50 10:46-15:22/276 17:19	07:26 10:54-15:27/273 17:56	06:46 11:02-15:12/250 18:28 17:47-18:07/20	06:56 17:43-19:23/100 20:01 07:38-08:08/30	06:15 17:49-19:14/85 20:31	05:55 18:17-18:53/36 20:57
12	07:49 10:46-15:23/277 17:20	07:25 10:55-15:27/272 17:57	06:45 11:02-15:11/249 18:29 17:46-18:08/22	06:54 17:43-19:24/101 20:02 07:38-08:09/31	06:14 17:50-19:13/83 20:32	05:55 18:18-18:53/35 20:57
13	07:49 10:46-15:22/276 17:21	07:24 10:54-15:26/272 17:58	06:43 11:04-15:10/246 18:30 17:45-18:09/24	06:53 17:42-19:23/101 20:03 07:37-08:09/32	06:13 17:51-19:12/81 20:33	05:55 18:19-18:53/34 20:58
14	07:49 10:47-15:23/276 17:22	07:23 10:54-15:26/272 17:59	06:41 17:45-18:10/25 18:31 11:04-15:09/245	06:51 17:41-19:23/102 20:04 07:37-08:09/32	06:12 17:51-19:12/81 20:34	05:55 18:20-18:52/32 20:58
15	07:48 10:47-15:23/276 17:23	07:21 10:55-15:26/271 18:00	06:40 17:44-18:11/27 18:32 11:04-15:08/244	06:49 17:42-19:23/101 20:05 07:36-08:09/33	06:11 17:52-19:11/79 20:35	05:55 18:20-18:52/32 20:58
16	07:48 10:47-15:24/277 17:24	07:20 10:55-15:25/270 18:02	06:38 17:45-18:13/28 18:33 11:06-15:07/241	06:48 17:41-19:23/102 20:06 07:35-08:08/33	06:10 17:53-19:10/77 20:36	05:55 18:21-18:52/31 20:59
17	07:48 10:48-15:25/277 17:25	07:19 10:55-15:25/270 18:03	06:36 17:37-17:43/6 11:06-15:06/240 18:34 17:44-18:14/30	06:46 17:41-19:23/102 20:07 07:35-08:08/33	06:09 17:53-19:10/77 20:37	05:55 18:22-18:52/30 20:59
18	07:47 10:48-15:25/277 17:27	07:18 10:56-15:25/269 18:04	06:35 17:26-18:14/48 18:35 11:07-15:04/237	06:45 17:41-19:22/101 20:08 07:35-08:08/33	06:08 17:54-19:09/75 20:38	05:55 18:22-18:51/29 21:00
19	07:47 10:48-15:25/277 17:28	07:16 10:55-15:25/270 18:05	06:33 17:22-18:16/54 18:37 11:08-15:04/236	06:43 17:41-19:23/102 20:09 07:35-08:07/32	06:07 17:55-19:08/73 20:39	05:55 18:22-18:51/29 21:00
20	07:46 10:49-15:25/276 17:29	07:15 10:56-15:25/269 18:06	06:32 17:17-18:17/60 18:38 11:09-15:02/233	06:42 17:41-19:23/102 20:10 07:35-08:07/32	06:06 17:56-19:08/72 20:40	05:55 18:23-18:52/29 21:00
21	07:46 10:49-15:25/276 17:30	07:13 10:57-15:25/268 18:08	06:30 17:13-18:17/64 18:39 11:10-15:01/231	06:40 17:41-19:22/101 20:11 07:35-08:06/31	06:05 17:57-19:07/70 20:41	05:56 18:24-18:52/28 21:00
22	07:45 10:49-15:25/276 17:31	07:12 10:56-15:24/268 18:09	06:28 17:12-18:19/68 18:40 11:12-15:00/228	06:39 17:41-19:22/101 20:12 07:36-08:05/29	06:05 17:58-19:06/68 20:42	05:56 18:23-18:52/29 21:01
23	07:44 10:50-15:26/276 17:32	07:11 10:57-15:23/266 18:10	06:27 17:08-18:20/72 18:41 11:13-14:59/226	06:38 17:41-19:21/100 20:13 07:36-08:03/27	06:04 17:58-19:05/67 20:43	05:56 18:23-18:52/29 21:01
24	07:44 10:50-15:26/276 17:34	07:09 10:57-15:22/265 18:11	06:25 17:05-18:21/76 18:42 11:15-14:57/222	06:36 17:41-19:21/100 20:14 07:37-08:02/25	06:03 18:00-19:05/65 20:44	05:56 18:24-18:53/29 21:01
25	07:43 10:50-15:26/276 17:35	07:08 10:57-15:22/265 18:12	06:23 17:04-18:22/78 18:43 11:18-14:56/218	06:35 17:42-19:22/100 20:15 07:38-08:01/23	06:02 18:00-19:04/64 20:45	05:57 18:24-18:54/30 21:01
26	07:42 10:50-15:26/276 17:36	07:06 10:57-15:21/264 18:13	06:22 17:01-18:23/82 18:44 11:21-14:54/213	06:33 17:41-19:21/100 20:16 07:39-07:59/20	06:02 18:02-19:04/62 20:45	05:57 18:23-18:54/31 21:01
27	07:41 10:51-15:27/276 17:37	07:05 10:58-15:21/263 18:15	06:20 16:59-18:24/85 11:26-12:15/49 18:45 12:32-14:53/141	06:32 17:42-19:20/98 20:17 07:41-07:57/16	06:01 18:03-19:03/60 20:46	05:57 18:24-18:55/31 21:01
28	07:41 10:51-15:27/276 17:38	07:03 10:58-15:20/262 18:16	06:18 16:58-18:25/87 18:46 12:53-14:52/119	06:31 17:42-19:20/98 20:18 07:44-07:54/10	06:00 18:03-19:02/59 20:47	05:58 18:23-18:55/32 21:01
29	07:40 10:51-15:27/276 17:40		07:17 17:56-19:26/90 19:47 14:04-15:50/106	06:29 17:42-19:19/97 20:19	06:00 18:05-19:01/56 20:48	05:58 18:22-18:56/34 21:01
30	07:39 10:51-15:27/276 17:41		07:15 17:54-19:24/90 19:48 14:11-15:48/97	06:28 17:43-19:19/96 20:20	05:59 18:05-19:00/55 20:49	05:59 18:22-18:57/35 21:01
31	07:38 10:52-15:27/275 17:42		07:13 17:53-19:22/89 19:49 14:19-15:47/88		05:59 18:07-19:00/53 20:49	
Potential sun hours	299	298	370	398	447	451
Sum of minutes with flicker	8560	7577	8219	3979	2372	1070

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali|WTG: WTG06 - Siemens Gamesa SG 6.0-170 6000 170.0 IO! hub: 115,0 m (TOT: 200,0 m) (7)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July	August	September	October	November	December	
1	05:59 18:22-18:57/35 21:01	06:22 17:59-19:23/84 20:42	06:53 17:42-19:22/100 20:00 07:37-08:07/30	07:22 11:42-15:50/248 19:10 18:25-18:48/23	06:55 10:23-14:57/274 17:24	07:30 10:28-15:04/276 17:00	
2	05:59 18:22-18:59/37 21:01	06:23 17:59-19:24/85 20:41	06:54 17:42-19:21/99 19:58 07:38-08:06/28	07:23 11:41-15:50/249 19:09 18:26-18:46/20	06:57 10:23-14:57/274 17:23	07:31 10:28-15:04/276 17:00	
3	06:00 18:21-18:59/38 21:01	06:24 17:58-19:24/86 20:40	06:55 17:42-19:20/98 19:57 07:39-08:05/26	07:24 11:40-15:51/251 19:07 18:26-18:45/19	06:58 10:23-14:57/274 17:22	07:32 10:28-15:05/277 17:00	
4	06:00 18:21-19:00/39 21:01	06:25 17:57-19:25/88 20:39	06:56 17:42-19:20/98 15:00-15:22/22 19:55 07:40-08:03/23	07:25 11:39-15:51/252 19:05 18:26-18:43/17	06:59 10:22-14:57/275 17:21	07:33 10:29-15:05/276 17:00	
5	06:01 18:19-19:01/42 21:00	06:26 17:56-19:25/89 20:38	06:56 17:42-19:19/97 14:53-15:26/33 19:54 07:42-08:01/19	07:26 11:38-15:51/253 19:04 18:27-18:41/14	07:00 10:23-14:58/275 17:20	07:34 10:29-15:05/276 17:00	
6	06:02 18:19-19:02/43 21:00	06:27 17:56-19:26/90 20:37	06:57 17:43-19:18/95 14:47-15:29/42 19:52 07:44-07:58/14	07:27 11:37-15:51/254 19:02 18:28-18:40/12	07:01 10:23-14:58/275 17:18	07:35 10:30-15:06/276 16:59	
7	06:02 18:19-19:03/44 21:00	06:28 17:55-19:26/91 20:36	06:58 17:43-19:17/94 14:42-15:31/49 19:50 07:50-07:52/2	07:28 11:36-15:52/256 19:00 18:29-18:38/9	07:02 10:22-14:58/276 17:17	07:36 10:30-15:06/276 16:59	
8	06:03 18:18-19:04/46 21:00	06:29 17:54-19:27/93 20:35	06:59 17:43-19:16/93 19:49 14:36-15:33/57	07:29 11:35-15:52/257 18:59 18:30-18:36/6	07:04 10:22-14:58/276 17:16	07:36 10:31-15:07/276 16:59	
9	06:03 18:17-19:05/48 20:59	06:30 17:54-19:27/93 20:33	07:00 17:44-19:15/91 19:47 14:30-15:35/65	07:30 11:34-15:52/258 18:57 18:33-18:34/1	07:05 10:23-14:58/275 17:15	07:37 10:31-15:07/276 16:59	
10	06:04 18:16-19:05/49 20:59	06:31 17:53-19:27/94 20:32	07:01 17:44-19:14/90 19:45 14:25-15:36/71	07:31 11:33-15:52/259 18:56	07:06 10:23-14:58/275 17:14	07:38 10:32-15:08/276 16:59	
11	06:05 18:16-19:07/51 20:58	06:32 17:52-19:27/95 20:31	07:02 17:44-19:11/87 19:44 14:18-15:36/78	07:32 11:32-15:52/260 18:54	07:07 10:22-14:58/276 17:13	07:39 10:33-15:08/275 16:59	
12	06:06 18:15-19:08/53 20:58	06:33 17:52-19:28/96 20:29	07:03 17:44-19:13/89 19:42 14:11-15:38/87	07:33 11:31-15:53/262 18:52	07:08 10:23-14:59/276 17:12	07:40 10:32-15:08/276 17:00	
13	06:06 18:15-19:09/54 20:58	06:34 17:50-19:27/97 20:28	07:04 17:45-19:15/90 19:40 14:04-15:39/95	07:34 11:31-15:53/262 18:51	07:09 10:23-14:59/276 17:11	07:41 10:33-15:09/276 17:00	
14	06:07 18:13-19:09/56 20:57	06:35 17:50-19:27/97 20:27	07:05 17:46-19:16/90 19:39 13:55-15:40/105	07:35 11:31-15:54/263 18:49	07:11 10:23-14:59/276 17:10	07:41 10:34-15:09/275 17:00	
15	06:08 18:13-19:10/57 20:56	06:36 17:49-19:27/98 20:25 07:50-08:02/12	07:06 17:47-19:15/88 19:37 13:45-15:41/116	07:36 11:30-15:54/264 18:48	07:12 10:23-14:59/276 17:10	07:42 10:34-15:10/276 17:00	
16	06:09 18:12-19:12/60 20:56	06:37 17:48-19:27/99 20:24 07:47-08:04/17	07:07 17:48-19:13/85 12:17-12:56/39 19:35 13:28-15:42/134	07:37 11:29-15:54/265 18:46	07:13 10:24-15:00/276 17:09	07:43 10:34-15:10/276 17:00	
17	06:09 18:12-19:13/61 20:55	06:38 17:48-19:27/99 20:23 07:45-08:06/21	07:08 17:49-19:11/82 19:34 12:10-15:42/212	07:39 11:29-15:54/265 18:45	07:14 10:24-15:00/276 17:08	07:44 10:35-15:11/276 17:01	
18	06:10 18:10-19:13/63 20:55	06:39 17:47-19:27/100 20:21 07:44-08:07/23	07:09 17:50-19:10/80 19:32 12:06-15:43/217	07:40 11:28-15:54/266 18:43	07:15 10:24-15:00/276 17:07	07:44 10:35-15:10/275 17:01	
19	06:11 18:10-19:14/64 20:54	06:40 17:47-19:27/100 20:20 07:43-08:08/25	07:10 17:52-19:08/76 19:30 12:03-15:44/221	07:41 11:27-15:54/267 18:42	07:16 10:24-15:00/276 17:07	07:45 10:36-15:11/275 17:01	
20	06:12 18:09-19:15/66 20:53	06:41 17:46-19:27/101 20:18 07:42-08:09/27	07:11 17:54-19:07/73 19:29 12:00-15:45/225	07:42 11:27-15:54/267 18:40	07:18 10:24-15:00/276 17:06	07:45 10:37-15:12/275 17:02	
21	06:13 18:09-19:16/67 20:52	06:42 17:46-19:27/101 20:17 07:41-08:10/29	07:12 17:56-19:05/69 19:27 11:58-15:45/227	07:43 11:26-15:54/268 18:39	07:19 10:25-15:01/276 17:05	07:46 10:37-15:12/275 17:02	
22	06:13 18:08-19:17/69 20:52	06:43 17:45-19:27/102 20:15 07:40-08:10/30	07:13 17:58-19:03/65 19:25 11:56-15:46/230	07:44 11:26-15:55/269 18:37	07:20 10:25-15:01/276 17:05	07:47 10:38-15:13/275 17:03	
23	06:14 18:06-19:17/71 20:51	06:44 17:45-19:27/102 20:14 07:39-08:11/32	07:14 18:00-19:02/62 19:24 11:54-15:46/232	07:45 11:26-15:55/269 18:36	07:21 10:25-15:02/277 17:04	07:47 10:38-15:13/275 17:03	
24	06:15 18:06-19:18/72 20:50	06:45 17:45-19:26/101 20:12 07:39-08:11/32	07:15 18:04-19:00/56 19:22 11:52-15:47/235	07:46 11:25-15:55/270 18:35	07:22 10:25-15:02/277 17:03	07:47 10:38-15:13/275 17:04	
25	06:16 18:05-19:19/74 20:49	06:46 17:44-19:26/102 20:11 07:38-08:11/33	07:16 18:08-18:58/50 19:20 11:50-15:48/238	06:47 10:25-14:55/270 17:33	07:23 10:25-15:02/277 17:03	07:48 10:39-15:14/275 17:04	
26	06:17 18:04-19:20/76 20:48	06:47 17:44-19:26/102 20:09 07:38-08:11/33	07:17 18:15-18:56/41 19:19 11:49-15:48/239	06:49 10:24-14:55/271 17:32	07:24 10:26-15:03/277 17:02	07:48 10:39-15:15/276 17:05	
27	06:18 18:04-19:20/76 20:47	06:48 17:44-19:25/101 20:08 07:38-08:11/33	07:18 18:26-18:55/29 19:17 11:47-15:48/241	06:50 10:25-14:56/271 17:31	07:25 10:27-15:03/276 17:02	07:49 10:39-15:15/276 17:06	
28	06:19 18:03-19:21/78 20:47	06:49 17:43-19:24/101 20:06 07:37-08:11/34	07:19 18:26-18:53/27 19:15 11:46-15:49/243	06:51 10:24-14:56/272 17:29	07:27 10:27-15:03/276 17:01	07:49 10:40-15:16/276 17:06	
29	06:20 18:02-19:22/80 20:46	06:50 17:42-19:24/102 20:05 07:36-08:09/33	07:20 18:26-18:51/25 19:14 11:45-15:49/244	06:52 10:24-14:56/272 17:28	07:28 10:27-15:04/277 17:01	07:49 10:41-15:16/275 17:07	
30	06:21 18:02-19:23/81 20:45	06:51 17:42-19:23/101 20:03 07:37-08:09/32	07:21 11:44-15:50/246 19:12 18:26-18:50/24	06:53 10:23-14:56/273 17:27	07:29 10:27-15:04/277 17:01	07:50 10:41-15:16/275 17:08	
31	06:22 18:00-19:22/82 20:44	06:52 17:42-19:22/100 20:02 07:37-08:08/31		06:54 10:23-14:56/273 17:25		07:50 10:41-15:17/276 17:09	
	Potential sun hours Sum of minutes with flicker	457 1832	427 3467	375 6628	346 8277	299 8275	289 8545

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali|WTG: WTG07 - Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT: 200,0 m) (6)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June
1	07:50 16:11-16:44/33 17:10 14:34-15:46/72	07:37 16:21-17:09/48 17:43 17:16-17:20/4	07:02 07:56-08:36/40 18:17	07:12 19:50	06:27 20:21	05:58 19:54-20:26/32 20:50
2	07:50 16:12-16:44/32 17:10 14:34-15:46/72	07:36 16:22-17:09/47 17:45 17:15-17:21/6	07:00 07:55-08:36/41 18:18	07:10 19:51	06:25 20:22	05:58 19:53-20:26/33 20:51
3	07:50 16:12-16:45/33 17:11 14:35-15:47/72	07:35 16:23-17:08/45 17:46 17:15-17:22/7	06:59 07:56-08:36/40 18:19	07:09 19:52	06:24 20:23	05:58 19:53-20:27/34 20:52
4	07:50 16:12-16:46/34 17:12 14:36-15:47/71	07:34 16:24-17:08/44 17:47 17:15-17:24/9	06:57 07:56-08:35/39 18:20	07:07 19:53	06:23 20:24	05:57 19:53-20:28/35 20:52
5	07:50 16:12-16:47/35 17:13 14:37-15:47/70	07:33 16:25-17:07/42 17:48 17:15-17:25/10	06:56 07:55-08:33/38 18:21	07:05 19:54	06:22 20:25	05:57 19:52-20:28/36 20:53
6	07:50 16:13-16:48/35 17:14 14:38-15:47/69	07:32 16:26-17:06/40 17:50 17:15-17:27/12	06:54 07:56-08:33/37 18:22	07:04 19:55	06:20 20:26	05:56 19:52-20:29/37 20:54
7	07:50 16:13-16:49/36 17:15 14:39-15:47/68	07:31 16:28-17:05/37 17:51 17:16-17:28/12	06:53 07:56-08:32/36 18:24	07:02 19:56	06:19 20:27	05:56 19:52-20:30/38 20:54
8	07:50 16:13-16:51/38 17:16 14:40-15:47/67	07:30 16:28-17:03/35 17:52 17:15-17:29/14	06:51 07:58-08:31/33 18:25	07:00 19:57	06:18 20:28	05:56 19:52-20:30/38 20:55
9	07:50 16:14-16:52/38 17:17 14:41-15:47/66	07:29 16:30-17:02/32 17:53 17:16-17:30/14	06:49 07:58-08:29/31 18:26	06:59 19:58	06:17 20:29	05:56 19:52-20:30/38 20:56
10	07:50 16:13-16:52/39 17:18 14:42-15:46/64	07:28 16:32-17:00/28 17:54 17:16-17:32/16	06:48 07:59-08:27/28 18:27	06:57 19:59	06:16 20:30	05:56 19:52-20:31/39 20:56
11	07:50 16:13-16:54/41 17:19 14:43-15:47/64	07:26 16:35-16:58/23 17:56 17:17-17:33/16	06:46 08:01-08:25/24 18:28	06:56 20:01	06:15 20:31	05:55 19:52-20:31/39 20:57
12	07:49 16:14-16:55/41 17:20 14:45-15:47/62	07:25 16:39-16:55/16 17:57 17:18-17:35/17	06:45 08:03-08:22/19 18:29	06:54 20:02	06:14 20:32	05:55 19:52-20:32/40 20:57
13	07:49 16:13-16:55/42 17:21 14:45-15:46/61	07:24 17:19-17:35/16 17:58	06:43 08:06-08:19/13 18:30	06:53 20:03	06:13 20:33	05:55 19:52-20:32/40 20:58
14	07:49 16:14-16:57/43 17:22 14:47-15:46/59	07:23 17:20-17:37/17 17:59	06:41 18:31	06:51 20:04	06:12 20:34	05:55 19:52-20:33/41 20:58
15	07:48 16:14-16:58/44 17:23 14:48-15:45/57	07:21 17:22-17:38/16 18:00 08:16-08:20/4	06:40 18:32	06:49 20:05	06:11 20:35	05:55 19:52-20:33/41 20:58
16	07:48 16:14-16:59/45 17:24 14:50-15:44/54	07:20 17:24-17:39/15 18:02 08:09-08:25/16	06:38 18:33	06:48 20:06	06:10 20:36	05:55 19:52-20:33/41 20:59
17	07:48 16:14-17:00/46 17:25 14:52-15:44/52	07:19 17:35-17:41/6 18:03 08:07-08:28/21	06:36 18:34	06:46 20:07	06:09 20:37	05:55 19:52-20:34/42 20:59
18	07:47 16:15-17:02/47 17:27 14:53-15:43/50	07:18 17:36-17:42/6 18:04 08:05-08:30/25	06:35 18:35	06:45 20:08	06:08 20:38	05:55 19:52-20:34/42 21:00
19	07:47 16:15-17:03/48 17:28 14:55-15:42/47	07:16 17:35-17:43/8 18:05 08:03-08:31/28	06:33 18:37	06:43 20:09	06:07 20:39	05:55 19:52-20:34/42 21:00
20	07:46 16:16-17:04/48 17:29 14:57-15:41/44	07:15 17:36-17:45/9 18:06 08:02-08:33/31	06:32 18:38	06:42 20:10	06:06 20:07-20:16/9 20:40	05:56 19:53-20:35/42 21:00
21	07:46 16:15-17:05/50 17:30 14:59-15:39/40	07:13 17:35-17:45/10 18:08 08:01-08:34/33	06:30 18:39	06:40 20:11	06:05 20:04-20:17/13 20:41	05:56 19:53-20:35/42 21:00
22	07:45 16:15-17:06/51 17:31 15:01-15:37/36	07:12 17:36-17:47/11 18:09 07:59-08:35/36	06:28 18:40	06:39 20:12	06:05 20:02-20:18/16 20:42	05:56 19:53-20:35/42 21:01
23	07:44 16:16-17:08/52 17:32 15:05-15:36/31	07:11 17:38-17:49/11 18:10 07:59-08:36/37	06:27 18:41	06:38 20:13	06:04 20:00-20:18/18 20:43	05:56 19:53-20:35/42 21:01
24	07:44 16:17-17:09/52 17:34 15:08-15:33/25	07:09 17:38-17:49/11 18:11 07:58-08:36/38	06:25 18:42	06:36 20:14	06:03 19:59-20:20/21 20:44	05:56 19:54-20:36/42 21:01
25	07:43 16:17-17:10/53 17:35 15:13-15:29/16	07:08 17:40-17:51/11 18:12 07:57-08:36/39	06:23 18:43	06:35 20:15	06:02 19:58-20:20/22 20:45	05:57 19:54-20:36/42 21:01
26	07:42 16:17-17:10/53 17:36	07:06 17:42-17:52/10 18:13 07:56-08:36/40	06:22 18:44	06:33 20:16	06:02 19:57-20:21/24 20:45	05:57 19:54-20:36/42 21:01
27	07:41 16:18-17:10/52 17:37	07:05 07:56-08:37/41 18:15	06:20 18:45	06:32 20:17	06:01 19:56-20:22/26 20:46	05:57 19:55-20:36/41 21:01
28	07:41 16:19-17:10/51 17:38	07:03 07:56-08:36/40 18:16	06:18 18:46	06:31 20:18	06:01 19:55-20:22/27 20:47	05:58 19:55-20:36/41 21:01
29	07:40 16:19-17:10/51 17:40		07:17 19:47	06:29 20:19	06:00 19:55-20:23/28 20:48	05:58 19:55-20:35/40 21:01
30	07:39 16:20-17:10/50 17:41		07:15 19:48	06:28 20:20	05:59 19:54-20:24/30 20:49	05:59 19:56-20:36/40 21:01
31	07:38 16:20-17:09/49 17:42 17:16-17:18/2		07:13 19:49		05:59 19:54-20:25/31 20:49	
Potential sun hours	299	298	370	398	447	451
Sum of minutes with flicker	2753	1160	419	0	265	1184

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni cultural\WTG: WTG07 - Siemens Gamesa SG 6.0-170 6000 170.0 IO! hub: 115,0 m (TOT: 200,0 m) (6)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	July	August	September	October	November	December
1	05:59 19:56-20:35/39 21:01	06:22 20:43	06:53 20:00	07:22 08:43-09:01/18 19:10	06:55 16:02-16:30/28 17:24 16:46-17:01/15	07:30 15:55-16:36/41 17:00 14:25-15:29/64
2	05:59 19:57-20:36/39 21:01	06:23 20:41	06:54 19:58	07:23 08:41-09:03/22 19:09	06:57 16:00-16:32/32 17:23 16:45-17:00/15	07:31 15:56-16:35/39 17:00 14:25-15:29/64
3	06:00 19:57-20:35/38 21:01	06:24 20:40	06:55 19:57	07:24 08:38-09:05/27 19:07	06:58 15:58-16:33/35 17:22 16:45-16:58/13	07:32 15:57-16:35/38 17:00 14:24-15:30/66
4	06:01 19:57-20:36/39 21:01	06:25 20:39	06:56 19:55	07:25 08:36-09:06/30 19:05	06:59 15:56-16:34/38 17:21 16:45-16:57/12	07:33 15:57-16:35/38 17:00 14:24-15:31/67
5	06:01 19:57-20:35/38 21:00	06:26 20:38	06:56 19:54	07:26 08:35-09:07/32 19:04	07:00 15:56-16:36/40 17:20 16:45-16:56/11	07:34 15:58-16:34/36 17:00 14:24-15:32/68
6	06:02 19:58-20:35/37 21:00	06:27 20:37	06:57 19:52	07:27 08:34-09:08/34 19:02	07:01 15:55-16:37/42 17:18 16:45-16:55/10	07:35 15:59-16:34/35 16:59 14:24-15:33/69
7	06:02 19:59-20:35/36 21:00	06:28 20:36	06:58 19:50	07:28 08:32-09:08/36 19:00	07:02 15:53-16:38/45 17:17 16:45-16:53/8	07:36 15:59-16:34/35 16:59 14:24-15:34/70
8	06:03 19:59-20:34/35 21:00	06:29 20:35	06:59 19:49	07:29 08:31-09:09/38 18:59	07:04 15:52-16:38/46 17:16 16:45-16:52/7	07:36 16:00-16:34/34 16:59 14:24-15:35/71
9	06:04 20:00-20:34/34 20:59	06:30 20:33	07:00 19:47	07:30 08:31-09:09/38 18:57	07:05 15:53-16:40/47 17:15 16:46-16:52/6	07:37 16:01-16:34/33 16:59 14:24-15:36/72
10	06:04 20:01-20:34/33 20:59	06:31 20:32	07:01 19:45	07:31 08:30-09:09/39 18:56	07:06 15:52-16:40/48 17:14 16:47-16:50/3	07:38 16:02-16:34/32 16:59 14:24-15:36/72
11	06:05 20:01-20:33/32 20:58	06:32 20:31	07:02 19:44	07:32 08:29-09:09/40 18:54	07:07 15:51-16:40/49 17:13 16:47-16:49/2	07:39 16:01-16:34/33 16:59 14:25-15:37/72
12	06:06 20:02-20:33/31 20:58	06:33 20:29	07:03 19:42	07:33 08:29-09:09/40 18:52	07:08 15:51-16:41/50 17:12	07:40 16:02-16:34/32 17:00 14:24-15:37/73
13	06:06 20:03-20:33/30 20:58	06:34 20:28	07:04 19:40	07:34 08:28-09:09/41 18:51	07:09 15:51-16:42/51 17:11	07:41 16:03-16:34/31 17:00 14:24-15:38/74
14	06:07 20:03-20:32/29 20:57	06:35 20:27	07:05 19:39	07:35 08:29-09:10/41 18:49	07:11 15:51-16:42/51 17:11	07:41 16:04-16:35/31 17:00 14:25-15:39/74
15	06:08 20:04-20:32/28 20:56	06:36 20:25	07:06 19:37	07:36 18:19-18:20/1 18:48 08:29-09:09/40	07:12 15:50-16:42/52 17:10	07:42 16:05-16:35/30 17:00 14:25-15:40/75
16	06:09 20:05-20:31/26 20:56	06:37 20:24	07:07 19:35	07:37 18:13-18:24/11 18:46 08:29-09:08/39	07:13 15:50-16:42/52 17:09	07:43 16:05-16:35/30 17:00 14:25-15:40/75
17	06:09 20:06-20:31/25 20:55	06:38 20:23	07:08 19:34	07:39 18:11-18:22/11 18:45 08:29-09:08/39	07:14 15:51-16:44/53 17:08 14:47-15:03/16	07:44 16:06-16:35/29 17:01 14:26-15:41/75
18	06:10 20:07-20:30/23 20:55	06:39 20:21	07:09 19:32	07:40 18:09-18:20/11 18:43 08:29-09:07/38	07:15 15:51-16:43/52 17:07 14:42-15:07/25	07:44 16:06-16:35/29 17:01 14:25-15:41/76
19	06:11 20:08-20:29/21 20:54	06:40 20:20	07:10 19:30	07:41 18:08-18:19/11 18:42 08:30-09:06/36	07:16 15:50-16:42/52 17:07 14:39-15:10/31	07:45 16:07-16:36/29 17:01 14:26-15:42/76
20	06:12 20:10-20:29/19 20:53	06:41 20:18	07:11 19:29	07:42 18:07-18:17/10 18:40 08:30-09:05/35	07:18 15:50-16:41/51 17:06 14:36-15:12/36	07:45 16:08-16:37/29 17:02 14:27-15:42/75
21	06:13 20:11-20:28/17 20:52	06:42 20:17	07:12 19:27	07:43 18:06-18:15/9 18:39 08:32-09:05/33	07:19 15:51-16:41/50 17:05 14:35-15:15/40	07:46 16:08-16:37/29 17:02 14:27-15:42/75
22	06:13 20:13-20:28/15 20:52	06:43 20:15	07:13 19:25	07:44 18:06-18:15/9 18:38 08:33-09:03/30	07:20 15:52-16:40/48 17:05 14:33-15:17/44	07:47 16:09-16:38/29 17:03 14:28-15:43/75
23	06:14 20:15-20:26/11 20:51	06:44 20:14	07:14 19:24	07:45 18:06-18:13/7 18:36 08:34-09:01/27	07:21 15:52-16:40/48 17:04 14:32-15:19/47	07:47 16:09-16:38/29 17:03 14:28-15:43/75
24	06:15 20:19-20:26/7 20:50	06:45 20:12	07:15 19:22	07:46 18:05-18:12/7 18:35 08:35-08:59/24	07:22 15:52-16:39/47 17:03 14:30-15:20/50	07:47 16:09-16:38/29 17:04 14:28-15:44/76
25	06:16 20:49 20:47	06:46 20:11	07:16 19:20	06:47 17:05-17:10/5 16:58-17:02/4 17:33 07:37-07:57/20	07:23 15:52-16:38/46 17:03 14:29-15:21/52	07:48 16:10-16:39/29 17:04 14:29-15:45/76
26	06:17 20:48 20:47	06:47 20:09	07:17 19:19	06:49 16:53-17:08/15 17:32 07:40-07:53/13	07:24 15:53-16:38/45 17:02 14:29-15:23/54	07:48 16:10-16:39/29 17:05 14:30-15:45/75
27	06:18 20:47 20:47	06:48 20:08	07:18 19:17	06:50 16:52-17:08/16 17:31	07:25 15:54-16:38/44 17:02 14:28-15:25/57	07:49 16:10-16:40/30 17:06 14:30-15:45/75
28	06:19 20:47 20:46	06:49 20:06	07:19 19:15	06:51 16:50-17:06/16 17:29	07:27 15:54-16:37/43 17:01 14:27-15:26/59	07:49 16:11-16:41/30 17:06 14:31-15:46/75
29	06:20 20:46 20:46	06:50 20:05	07:20 19:14	06:52 16:12-16:20/8 17:28 16:48-17:05/17	07:28 15:54-16:37/43 17:01 14:26-15:27/61	07:49 16:11-16:41/30 17:07 14:32-15:46/74
30	06:21 20:45 20:44	06:51 20:03	07:21 08:48-08:56/8 19:12	06:53 16:07-16:25/18 17:27 16:47-17:03/16	07:29 15:55-16:36/41 17:01 14:26-15:28/62	07:50 16:11-16:42/31 17:08 14:32-15:46/74
31	06:22 20:44 20:44	06:52 20:02		06:54 16:03-16:27/24 17:25 16:46-17:02/16		07:50 16:11-16:43/32 17:09 14:33-15:46/73
Potential sun hours	457	427	375	346	299	289
Sum of minutes with flicker	682	0	8	1092	2105	3242

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni cultural\WTG: WTG08 - Siemens Gamesa SG 6.0-170 6000 170.0 IO! hub: 115,0 m (TOT: 200,0 m) (5)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December	
1	07:50 17:10	07:37 17:43	07:02 18:17	17:20-17:52/32 19:50	07:12 20:21	06:27 20:50	05:58 21:01	05:59 20:43	06:23 20:00	06:53 19:10	07:22 19:10	06:55 17:24	07:30 17:01
2	07:50 17:10	07:36 17:45	07:00 18:18	17:20-17:51/31 19:51	07:10 20:22	06:25 20:51	05:58 21:01	06:00 20:41	06:23 19:58	06:54 19:09	07:23 19:09	06:57 17:23	07:31 17:00
3	07:50 17:11	07:35 17:46	06:59 18:19	17:21-17:50/29 19:52	07:09 20:23	06:24 20:52	05:58 21:01	06:00 20:40	06:24 19:57	06:55 19:07	07:24 19:07	06:58 17:22	07:32 17:00
4	07:50 17:12	07:34 17:47	06:57 18:20	17:22-17:48/26 19:53	07:07 20:24	06:23 20:52	05:57 21:01	06:01 20:39	06:25 19:55	06:56 19:05	07:25 19:05	06:59 17:21	07:33 17:00
5	07:50 17:13	07:33 17:48	06:56 18:21	17:23-17:46/23 19:54	07:05 20:25	06:22 20:53	05:57 21:00	06:01 20:38	06:26 19:54	06:57 19:04	07:26 19:04	07:00 17:20	07:34 17:00
6	07:50 17:14	07:32 17:50	06:54 18:22	17:25-17:45/20 19:55	07:04 20:26	06:21 20:54	05:57 21:00	06:02 20:37	06:27 19:52	06:57 19:02	07:27 18:06-18:16/10	07:01 17:18	07:35 17:00
7	07:50 17:15	07:31 17:51	06:53 18:24	17:27-17:42/15 19:56	07:02 20:27	06:19 20:54	05:56 21:00	06:02 20:36	06:28 19:50	06:58 19:00	07:28 18:02-18:19/17	07:02 17:17	07:36 16:59
8	07:50 17:16	07:30 17:52	06:51 18:25	17:33-17:37/4 19:57	07:00 20:28	06:18 20:55	05:56 21:00	06:03 20:35	06:29 19:49	06:59 18:59	07:29 17:59-18:21/22	07:04 17:16	07:36 16:59
9	07:50 17:17	07:29 17:53	06:49 18:26	17:33-17:37/4 19:58	06:59 20:29	06:17 20:56	05:56 21:00	06:04 20:33	06:30 19:47	07:00 18:57	07:30 17:57-18:22/25	07:05 17:15	07:37 16:59
10	07:50 17:18	07:28 17:54	06:48 18:27	17:33-17:37/4 19:59	06:57 20:30	06:16 20:56	05:56 21:00	06:04 20:32	06:31 19:45	07:01 18:56	07:31 17:56-18:23/27	07:06 17:14	07:38 16:59
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12	07:49 17:20	07:25 17:57	06:45 18:29	17:33-17:37/4 19:59	06:54 20:32	06:14 20:58	05:55 21:00	06:06 20:58	06:33 19:42	07:03 18:52	07:33 17:53-18:24/31	07:08 17:12	07:40 17:00
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16	07:48 17:24	07:20 18:02	06:38 18:33	17:26-17:39/13 19:59	06:48 20:36	06:10 20:59	05:55 21:00	06:09 20:56	06:37 19:35	07:07 18:46	07:37 17:51-18:24/33	07:13 17:09	07:43 17:00
17	07:48 17:26	07:19 18:03	06:36 18:34	17:24-17:41/17 19:59	06:46 20:37	06:09 20:59	05:55 21:00	06:09 20:55	06:38 19:34	07:08 18:45	07:39 17:51-18:22/31	07:14 17:08	07:44 17:01
18	07:47 17:27	07:18 18:04	06:35 18:35	17:23-17:42/19 19:59	06:45 20:38	06:08 21:00	05:55 21:00	06:10 20:55	06:39 19:32	07:09 18:43	07:40 17:51-18:20/29	07:15 17:07	07:44 17:01
19	07:47 17:28	07:16 18:05	06:33 18:37	17:22-17:43/21 19:59	06:43 20:39	06:07 21:00	05:55 21:00	06:11 20:54	06:40 19:30	07:10 18:42	07:41 17:51-18:19/28	07:16 17:07	07:45 17:01
20	07:46 17:29	07:15 18:06	06:32 18:38	17:21-17:45/24 19:59	06:42 20:40	06:06 21:00	05:56 21:00	06:12 20:53	06:41 19:29	07:11 18:40	07:42 17:51-18:17/26	07:18 17:06	07:45 17:02
21	07:46 17:30	07:13 18:08	06:30 18:39	17:20-17:45/25 19:59	06:41 20:41	06:05 21:00	05:56 21:00	06:13 20:52	06:42 19:27	07:12 18:39	07:43 17:51-18:15/24	07:19 17:05	07:46 17:02
22	07:45 17:31	07:12 18:09	06:28 18:40	17:20-17:47/27 19:59	06:39 20:42	06:05 21:01	05:56 21:00	06:13 20:52	06:43 19:25	07:13 18:38	07:44 17:52-18:15/23	07:20 17:05	07:47 17:03
23	07:44 17:32	07:11 18:10	06:27 18:41	17:20-17:49/29 19:59	06:38 20:43	06:04 21:01	05:56 21:00	06:14 20:51	06:44 19:24	07:14 18:36	07:45 17:53-18:13/20	07:21 17:04	07:47 17:03
24	07:44 17:34	07:09 18:11	06:25 18:42	17:19-17:49/30 19:59	06:36 20:44	06:03 21:01	05:56 21:00	06:15 20:50	06:45 19:22	07:15 18:35	07:46 17:53-18:12/19	07:22 17:03	07:48 17:04
25	07:43 17:35	07:08 18:12	06:23 18:43	17:19-17:51/32 19:59	06:35 20:45	06:02 21:01	05:57 21:00	06:16 20:49	06:46 19:20	07:16 17:33	06:47 16:54-17:10/16	07:23 17:03	07:48 17:04
26	07:42 17:36	07:06 18:13	06:22 18:44	17:19-17:52/33 19:59	06:33 20:46	06:02 21:01	05:57 21:00	06:17 20:48	06:47 19:19	07:17 17:32	06:49 16:56-17:08/12	07:24 17:02	07:48 17:05
27	07:41 17:37	07:05 18:15	06:20 18:45	17:19-17:53/34 19:59	06:32 20:47	06:01 21:01	05:57 21:00	06:18 20:47	06:48 19:17	07:18 17:31	06:50 16:58-17:08/10	07:25 17:02	07:49 17:06
28	07:41 17:39	07:03 18:16	06:18 18:46	17:19-17:52/33 19:59	06:31 20:48	06:01 21:01	05:58 21:00	06:19 20:47	06:49 19:15	07:19 17:29	06:51 17:01-17:06/5	07:27 17:02	07:49 17:06
29	07:40 17:40	07:02 18:17	06:17 18:47	17:19-17:52/33 19:59	06:29 20:49	06:00 21:01	05:58 21:00	06:20 20:46	06:50 19:14	07:20 17:28	06:52 17:01-17:06/5	07:28 17:01	07:49 17:07
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31	07:38 17:42	07:00 18:19	06:15 18:49	17:19-17:52/33 19:59	06:27 20:51	05:58 21:01	05:58 21:00	06:22 20:44	06:52 19:11	07:22 17:26	06:54 17:01-17:06/5	07:30 17:01	07:50 17:09
	Potential sun hours	299	298	370	398	447	451	457	427	375	346	299	289
	Sum of minutes with flicker	0	353	180	0	0	0	0	0	0	538	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali|WTG: WTG09 - Siemens Gamesa SG 6.0-170 6000 170.0 IO! hub: 115,0 m (TOT: 200,0 m) (4)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:59 20:50	05:59 21:01	06:23 20:43	06:53 20:00	07:22 19:10	06:55 17:24	07:30 17:01
2	07:50 17:11	07:36 17:45	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	06:00 21:01	06:24 20:41	06:54 19:59	07:23 19:09	06:57 17:23	07:31 17:00
3	07:50 17:11	07:35 17:46	06:59 18:19	07:09 19:52	06:24 20:23	05:58 20:52	06:00 21:01	06:24 20:40	06:55 19:57	07:24 19:07	06:58 17:22	07:32 17:00
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24	05:57 20:52	06:01 21:01	06:25 20:39	06:56 19:55	07:25 19:05	06:59 17:21	07:33 17:00
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19	07:47 17:28	07:16 18:05	06:33 18:37	06:44 20:09	06:07 20:39	05:55 21:00	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	07:16 17:07	07:45 17:02
20	07:46 17:29	07:15 18:07	06:32 18:38	06:42 20:10	06:06 20:40	05:56 21:00	06:12 20:53	06:41 20:18	07:11 19:29	07:42 18:40	07:18 17:06	07:45 17:02
21	07:46 17:30	07:13 18:08	06:30 18:39	06:41 20:11	06:06 20:41	05:56 21:00	06:13 20:53	06:42 20:17	07:12 19:27	07:43 18:39	07:19 17:05	07:46 17:02
22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:05 20:42	05:56 21:01	06:14 20:52	06:43 20:16	07:13 19:25	07:44 18:38	07:20 17:05	07:47 17:03
23	07:44 17:33	07:11 18:10	06:27 18:41	06:38 20:13	06:04 20:43	05:56 21:01	06:14 20:51	06:44 20:14	07:14 19:24	07:45 18:36	07:21 17:04	07:47 17:03
24	07:44 17:34	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01	06:15 20:50	06:45 20:13	07:15 19:22	07:46 18:35	07:22 17:03	07:48 17:04
25	07:43 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:03 20:45	05:57 21:01	06:16 20:49	06:46 20:11	07:16 19:20	06:47 17:33	07:23 17:03	07:48 17:05
26	07:42 17:36	07:06 18:13	06:22 18:44	06:33 20:16	06:02 20:45	05:57 21:01	06:17 20:48	06:47 20:10	07:17 19:19	06:49 17:32	07:24 17:02	07:48 17:05
27	07:41 17:37	07:05 18:15	06:20 18:45	06:32 20:17	06:01 20:46	05:57 21:01	06:18 20:48	06:48 20:08	07:18 19:17	06:50 17:31	07:25 17:02	07:49 17:06
28	07:41 17:39	07:03 18:16	06:18 18:46	06:31 20:18	06:01 20:47	05:58 21:01	06:19 20:47	06:49 20:06	07:19 19:15	06:51 17:29	07:27 17:02	07:49 17:06
29	07:40 17:40		07:17 19:47	06:29 20:19	06:00 20:48	05:58 21:01	06:20 20:46	06:50 20:05	07:20 19:14	06:52 17:28	07:28 17:01	07:49 17:07
30	07:39 17:41		07:15 19:48	06:28 20:20	05:59 20:49	05:59 21:01	06:21 20:45	06:51 20:03	07:21 19:12	06:53 17:27	07:29 17:01	07:50 17:08
31	07:38 17:42		07:13 19:49		05:59 20:50		06:22 20:44	06:52 20:02		06:54 17:26		07:50 17:09
Potential sun hours	299	298	370	398	447	451	457	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

Project:

Ittiri_RWE_26_05_20_GF

Licensed user:

I.A.T. Consulenza e progetti S.r.l.

Via Santa Margherita 4

IT-09124 Cagliari

+39 070 658297

Giuseppe Frongia / direttore@iatprogetti.it

Calculated:

25/06/2021 14:20/3.4.415

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturaliWTG: WTG10 - Siemens Gamesa SG 6.0-170 6000 170.0 IO! hub: 115,0 m (TOT: 200,0 m) (3)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December	
1	07:50 17:10	07:37 17:44	07:02 17:44-17:56/12 18:17	07:12 19:50	06:27 20:21	05:59 20:50	05:59 21:01	06:23 20:43	06:53 20:00	07:22 18:10-18:48/38 19:10	06:55 17:24	07:30 17:01	
2	07:50 17:11	07:36 17:45	07:00 17:41-17:57/16 18:18	07:10 19:51	06:26 20:22	05:58 20:51	06:00 21:01	06:24 20:42	06:54 19:59	07:23 18:10-18:46/36 19:09	06:57 17:23	07:31 17:00	
3	07:50 17:11	07:35 17:46	06:59 17:40-17:58/18 18:19	07:09 19:52	06:24 20:23	05:58 20:52	06:00 21:01	06:25 20:40	06:55 19:57	07:24 18:10-18:45/35 19:07	06:58 17:22	07:32 17:00	
4	07:50 17:12	07:34 17:47	06:57 17:38-17:59/21 18:20	07:07 19:53	06:23 20:24	05:57 20:52	06:01 21:01	06:25 20:39	06:56 19:55	07:25 18:10-18:43/33 19:05	06:59 17:21	07:33 17:00	
5	07:50 17:13	07:33 17:48	06:56 17:36-18:00/24 18:21	07:05 19:54	06:22 20:25	05:57 20:53	06:01 21:00	06:26 20:38	06:57 19:54	07:26 18:10-18:41/31 19:04	07:00 17:20	07:34 17:00	
6	07:50 17:14	07:32 17:50	06:54 17:35-18:02/27 18:23	07:04 19:55	06:21 20:27	05:57 20:54	06:02 21:00	06:27 20:37	06:58 19:52	07:27 18:10-18:40/30 19:02	07:01 17:19	07:35 17:00	
7	07:50 17:15	07:31 17:51	06:53 17:34-18:02/28 18:24	07:02 19:56	06:19 20:28	05:56 20:54	06:02 21:00	06:28 20:36	06:59 19:50	07:28 18:10-18:38/28 19:01	07:02 17:17	07:36 17:00	
8	07:50 17:16	07:30 17:52	06:51 17:33-18:04/31 18:25	07:01 19:57	06:18 20:29	05:56 20:55	06:03 21:00	06:29 20:35	07:00 19:49	07:29 18:11-18:36/25 18:59	07:04 17:16	07:37 17:00	
9	07:50 17:17	07:29 17:53	06:49 17:32-18:05/33 18:26	06:59 19:59	06:17 20:30	05:56 20:56	06:04 20:59	06:30 20:33	07:00 19:47	07:30 18:12-18:34/22 18:57	07:05 17:15	07:37 17:00	
10	07:50 17:18	07:28 17:55	06:48 17:31-18:05/34 18:27	06:58 20:00	06:16 20:31	05:56 20:56	06:04 20:59	06:31 20:32	07:01 19:45	07:31 18:13-18:33/20 18:56	07:06 17:14	07:38 17:00	
11	07:50 17:19	07:26 17:56	06:46 17:31-18:07/36 18:28	06:56 20:01	06:15 20:32	05:56 20:57	06:05 20:58	06:32 20:31	07:02 19:44	07:32 18:14-18:31/17 18:54	07:07 17:13	07:39 17:00	
12	07:49 17:20	07:25 17:57	06:45 17:31-18:08/37 18:29	06:54 20:02	06:14 20:33	05:55 20:57	06:06 20:58	06:33 20:30	07:03 18:35-18:44/9 19:42	07:33 18:16-18:29/13 18:53	07:08 17:12	07:40 17:00	
13	07:49 17:21	07:24 17:58	06:43 17:31-18:10/39 18:30	06:53 20:03	06:13 20:34	05:55 20:58	06:06 20:58	06:34 20:28	07:04 18:31-18:48/17 19:40	07:34 18:18-18:28/10 18:51	07:10 17:12	07:41 17:00	
14	07:49 17:22	07:23 17:59	06:41 17:31-18:10/39 18:31	06:51 20:04	06:12 20:35	05:55 20:58	06:07 20:57	06:35 20:27	07:05 18:28-18:50/22 19:39	07:35 18:23-18:27/4 18:49	07:11 17:11	07:42 17:00	
15	07:48 17:23	07:22 18:01	06:40 17:30-18:11/41 18:32	06:50 20:05	06:11 20:35	05:55 20:59	06:08 20:57	06:36 20:26	07:06 18:25-18:52/27 19:37	07:36 18:18-18:28/10 18:48	07:12 17:10	07:42 17:00	
16	07:48 17:25	07:20 18:02	06:38 17:31-18:13/42 18:33	06:48 20:06	06:10 20:36	05:55 20:59	06:09 20:56	06:37 20:24	07:07 18:24-18:53/29 19:35	07:38 18:18-18:28/10 18:46	07:13 17:09	07:43 17:01	
17	07:48 17:26	07:19 18:03	06:37 17:31-18:14/43 18:35	06:47 20:07	06:09 20:37	05:55 20:59	06:09 20:55	06:38 20:23	07:08 18:22-18:54/32 19:34	07:39 18:18-18:28/10 18:45	07:14 17:08	07:44 17:01	
18	07:47 17:27	07:18 18:04	06:35 17:31-18:13/42 18:36	06:45 20:08	06:08 20:38	05:55 21:00	06:10 20:55	06:39 20:21	07:09 18:21-18:55/34 19:32	07:40 18:18-18:28/10 18:43	07:15 17:07	07:44 17:01	
19	07:47 17:28	07:16 18:05	06:33 17:32-18:14/42 18:37	06:44 20:09	06:07 20:39	05:56 21:00	06:11 20:54	06:40 20:20	07:10 18:19-18:55/36 19:30	07:41 18:18-18:28/10 18:42	07:17 17:07	07:45 17:02	
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21	07:46 17:30	07:14 18:08	06:30 17:31-18:12/41 18:39	06:41 20:11	06:06 20:41	05:56 21:00	06:13 20:53	06:42 20:17	07:12 18:17-18:57/40 19:27	07:43 18:18-18:28/10 18:39	07:19 17:05	07:46 17:02	
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23	07:44 17:33	07:11 18:10	06:27 17:32-18:10/38 18:41	06:38 20:13	06:04 20:43	05:56 21:01	06:14 20:51	06:44 20:14	07:14 18:16-18:57/41 19:24	07:45 18:18-18:28/10 18:36	07:21 17:04	07:47 17:03	
24	07:44 17:34	07:09 18:11	06:25 17:32-18:08/36 18:42	06:36 20:14	06:03 20:44	05:57 21:01	06:15 20:50	06:45 20:13	07:15 18:15-18:57/42 19:22	07:46 18:18-18:28/10 18:35	07:22 17:04	07:48 17:04	
25	07:43 17:35	07:08 18:12	06:23 17:33-18:08/35 18:43	06:35 20:15	06:03 20:45	05:57 21:01	06:16 20:49	06:46 20:11	07:16 18:15-18:57/42 19:20	07:47 18:18-18:28/10 17:33	07:23 17:03	07:48 17:05	
26	07:42 17:36	07:06 18:14	06:22 17:33-18:06/33 18:44	06:33 20:16	06:02 20:46	05:57 21:01	06:17 20:48	06:47 20:10	07:17 18:14-18:56/42 19:19	07:48 18:18-18:28/10 17:32	07:24 17:03	07:48 17:05	
27	07:41 17:37	07:05 18:15	06:20 17:34-18:04/30 18:45	06:32 20:17	06:01 20:46	05:57 21:01	06:18 20:48	06:48 20:08	07:18 18:13-18:55/42 19:17	07:49 18:18-18:28/10 17:31	07:25 17:02	07:49 17:06	
28	07:41 17:39	07:03 18:16	06:18 17:36-18:03/27 18:46	06:31 20:18	06:01 20:47	05:58 21:01	06:19 20:47	06:49 20:06	07:19 18:12-18:53/41 19:15	07:50 18:18-18:28/10 17:29	07:26 17:02	07:49 17:06	
29	07:40 17:40		07:17 18:37-19:01/24 19:47	06:29 20:19	06:00 20:48	05:58 21:01	06:20 20:46	06:50 20:05	07:20 18:11-18:51/40 19:14	07:51 18:18-18:28/10 17:28	07:27 17:01	07:49 17:07	
30	07:39 17:41		07:15 18:39-18:57/18 19:48	06:28 20:20	06:00 20:49	05:59 21:01	06:21 20:45	06:51 20:03	07:21 18:11-18:50/39 19:12	07:52 18:18-18:28/10 17:27	07:29 17:01	07:50 17:08	
31	07:38 17:42		07:14 18:43-18:54/11 19:49	06:27 20:50	05:59 20:50	05:59 20:50	06:22 20:44	06:52 20:02	07:22 18:11-18:50/39 19:12	07:53 18:18-18:28/10 17:26	07:30 17:09	07:50 17:09	
	Potential sun hours	299	298	370	398	447	451	457	427	375	346	299	289
	Sum of minutes with flicker	0	7	979	0	0	0	0	0	653	342	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali|WTG: WTG11 - Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT: 200,0 m) (2)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:10	07:37 17:44	07:02 18:17	07:12 19:50	06:27 20:21	05:59 20:50	05:59 21:01	06:23 20:43	06:53 20:00	07:22 19:10	06:55 16:46-17:01/15 17:24	07:30 17:01
2	07:50 17:11	07:36 17:20-17:21/1 17:45	07:00 18:18	07:10 19:51	06:26 20:22	05:58 20:51	06:00 21:01	06:24 20:42	06:54 19:59	07:23 19:09	06:57 16:46-17:00/14 17:23	07:31 17:00
3	07:50 17:11	07:35 17:19-17:22/3 17:46	06:59 18:19	07:09 19:52	06:24 20:23	05:58 20:52	06:00 21:01	06:25 20:40	06:55 19:57	07:24 19:07	06:58 16:46-16:58/12 17:22	07:32 17:00
4	07:50 17:12	07:34 17:18-17:24/6 17:47	06:57 18:20	07:07 19:53	06:23 20:24	05:57 20:52	06:01 21:01	06:26 20:39	06:56 19:55	07:25 19:05	06:59 16:46-16:57/11 17:21	07:33 17:00
5	07:50 17:13	07:33 17:18-17:25/7 17:48	06:56 18:21	07:05 19:54	06:22 20:25	05:57 20:53	06:01 21:00	06:26 20:38	06:57 19:54	07:26 19:04	07:00 16:47-16:56/9 17:20	07:34 17:00
6	07:50 17:14	07:32 17:17-17:27/10 17:50	06:54 18:23	07:04 19:55	06:21 20:27	05:57 20:54	06:02 21:00	06:27 20:37	06:58 19:52	07:27 19:02	07:01 16:47-16:55/8 17:19	07:35 17:00
7	07:50 17:15	07:31 17:17-17:28/11 17:51	06:53 18:24	07:02 19:56	06:19 20:28	05:56 20:54	06:02 21:00	06:28 20:36	06:59 19:50	07:28 19:01	07:02 16:48-16:54/6 17:18	07:36 17:00
8	07:50 17:16	07:30 17:16-17:29/13 17:52	06:51 18:25	07:01 19:58	06:18 20:29	05:56 20:55	06:03 21:00	06:29 20:35	07:00 19:49	07:29 18:59	07:04 16:50-16:53/3 17:16	07:37 17:00
9	07:50 17:17	07:29 17:16-17:30/14 17:53	06:50 18:26	06:59 19:59	06:17 20:30	05:56 20:56	06:04 20:59	06:30 20:33	07:00 19:47	07:30 18:57	07:05 16:51-16:52/1 17:15	07:37 17:00
10	07:50 17:18	07:28 17:16-17:32/16 17:55	06:48 18:27	06:57 20:00	06:16 20:31	05:56 20:56	06:04 20:59	06:31 20:32	07:01 19:45	07:31 18:56	07:06 17:14 17:14	07:38 17:00
11	07:50 17:19	07:27 17:16-17:33/17 17:56	06:46 18:28	06:56 20:01	06:15 20:32	05:56 20:57	06:05 20:59	06:32 20:31	07:02 19:44	07:32 18:54	07:07 17:13 17:13	07:39 17:00
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19	07:47 17:28	07:16 17:19-17:43/24 18:05	06:33 18:37	06:44 20:09	06:07 20:39	05:56 21:00	06:11 20:54	06:40 20:20	07:10 19:30	07:41 17:57-18:10/13 18:42	07:17 17:07 17:07	07:45 17:02
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26	07:42 17:36	07:06 18:14	06:22 18:44	06:34 20:16	06:02 20:46	05:57 21:01	06:17 20:48	06:47 20:10	07:17 19:19	06:49 16:47-17:08/21 17:32	07:24 17:03 17:03	07:48 17:05
27	07:41 17:37	07:05 18:15	06:20 18:45	06:32 20:17	06:01 20:46	05:58 21:01	06:18 20:48	06:48 20:08	07:18 19:17	06:50 16:48-17:08/20 17:31	07:26 17:02 17:02	07:49 17:06
28	07:41 17:39	07:03 18:16	06:18 18:46	06:31 20:18	06:01 20:47	05:58 21:01	06:19 20:47	06:49 20:06	07:19 19:15	06:51 16:47-17:06/19 17:29	07:27 17:02 17:02	07:49 17:07
29	07:40 17:40		07:17 19:47	06:29 20:19	06:00 20:48	05:58 21:01	06:20 20:46	06:50 20:05	07:20 19:14	06:52 16:46-17:05/19 17:28	07:28 17:01 17:01	07:49 17:07
30	07:39 17:41		07:15 19:48	06:28 20:20	06:00 20:49	05:59 21:01	06:21 20:45	06:51 20:03	07:21 19:12	06:53 16:45-17:03/18 17:27	07:29 17:01 17:01	07:50 17:08
31	07:38 17:42		07:14 19:49	06:27 20:20	05:59 20:50		06:22 20:44	06:52 20:02		06:54 16:46-17:03/17 17:26		07:50 17:09
	Potential sun hours	299	370	398	447	451	457	427	375	346	299	289
	Sum of minutes with flicker	0	0	0	0	0	0	0	0	266	79	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali\WTG: ME_1 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (42)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:58 20:50	05:59 21:01	06:22 20:42	06:53 20:00	07:22 19:10	06:55 17:24	07:30 17:00
2	07:50 17:10	07:36 17:45	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	05:59 21:01	06:23 20:41	06:53 19:58	07:23 19:08	06:57 17:23	07:31 17:00
3	07:50 17:11	07:35 17:46	06:59 18:19	07:08 19:52	06:24 20:23	05:57 20:52	06:00 21:01	06:24 20:40	06:54 19:57	07:24 19:07	06:58 17:22	07:32 17:00
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24	05:57 20:52	06:00 21:01	06:25 20:39	06:55 19:55	07:25 19:05	06:59 17:21	07:33 17:00
5	07:50 17:13	07:33 17:48	06:56 18:21	07:05 19:54	06:22 20:25	05:57 20:53	06:01 21:00	06:26 20:38	06:56 19:54	07:26 19:04	07:00 17:19	07:34 17:00
6	07:50 17:14	07:32 17:49	06:54 18:22	07:04 19:55	06:20 20:26	05:56 20:54	06:02 21:00	06:27 20:37	06:57 19:52	07:27 19:02	07:01 17:18	07:35 16:59
7	07:50 17:15	07:31 17:51	06:52 18:23	07:02 19:56	06:19 20:27	05:56 20:54	06:02 21:00	06:28 20:36	06:58 19:50	07:28 19:00	07:02 17:17	07:36 16:59
8	07:50 17:16	07:30 17:52	06:51 18:25	07:00 19:57	06:18 20:28	05:56 20:55	06:03 21:00	06:29 20:34	06:59 19:49	07:29 18:59	07:04 17:16	07:36 16:59
9	07:50 17:17	07:29 17:53	06:49 18:26	06:59 19:58	06:17 20:29	05:56 20:55	06:03 20:59	06:30 20:33	07:00 19:47	07:30 18:57	07:05 17:15	07:37 16:59
10	07:50 17:18	07:28 17:54	06:48 18:27	06:57 19:59	06:16 20:30	05:55 20:56	06:04 20:59	06:31 20:32	07:01 19:45	07:31 18:56	07:06 17:14	07:38 16:59
11	07:50 17:19	07:26 17:56	06:46 18:28	06:56 20:00	06:15 20:31	05:55 20:57	06:05 20:58	06:32 20:31	07:02 19:44	07:32 18:54	07:07 17:13	07:39 16:59
12	07:49 17:20	07:25 17:57	06:45 18:29	06:54 20:02	06:14 20:32	05:55 20:57	06:05 20:58	06:33 20:29	07:03 19:42	07:33 18:52	07:08 17:12	07:40 16:59
13	07:49 17:21	07:24 17:58	06:43 18:30	06:52 20:03	06:13 20:33	05:55 20:58	06:06 20:57	06:34 20:28	07:04 19:40	07:34 18:51	07:09 17:11	07:41 17:00
14	07:49 17:22	07:23 17:59	06:41 18:31	06:51 20:04	06:12 20:34	05:55 20:58	06:07 20:57	06:35 20:27	07:05 19:39	07:35 18:49	07:11 17:10	07:41 17:00
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16	07:48 17:24	07:20 18:02	06:38 18:33	06:48 20:06	06:10 20:36	05:55 20:59	06:08 20:56	06:37 20:24	07:07 19:35	07:37 18:46	07:13 17:09	07:43 17:00
17	07:48 17:25	07:19 18:03	06:36 18:34	06:46 20:07	06:09 20:37	05:55 20:59	06:09 20:55	06:38 20:23	07:08 19:34	07:38 18:45	07:14 17:08	07:44 17:01
18	07:47 17:27	07:17 18:04	06:35 18:35	06:45 20:08	06:08 20:38	05:55 21:00	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43	07:15 17:07	07:44 17:01
19	07:47 17:28	07:16 18:05	06:33 18:36	06:43 20:09	06:07 20:39	05:55 21:00	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	07:16 17:06	07:45 17:01
20	07:46 17:29	07:15 18:06	06:31 18:38	06:42 20:10	06:06 20:40	05:55 21:00	06:12 20:53	06:41 20:18	07:11 19:29	07:42 18:40	07:18 17:06	07:45 17:02
21	07:46 17:30	07:13 18:08	06:30 18:39	06:40 20:11	06:05 20:41	05:56 21:00	06:12 20:52	06:42 20:17	07:12 19:27	07:43 18:39	07:19 17:05	07:46 17:02
22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:05 20:42	05:56 21:01	06:13 20:52	06:43 20:15	07:13 19:25	07:44 18:37	07:20 17:04	07:47 17:03
23	07:44 17:32	07:11 18:10	06:27 18:41	06:37 20:13	06:04 20:43	05:56 21:01	06:14 20:51	06:44 20:14	07:14 19:23	07:45 18:36	07:21 17:04	07:47 17:03
24	07:44 17:34	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01	06:15 20:50	06:45 20:12	07:15 19:22	07:46 18:35	07:22 17:03	07:47 17:04
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28	07:41 17:38	07:03 18:16	06:18 18:46	06:31 20:18	06:00 20:47	05:58 21:01	06:19 20:46	06:49 20:06	07:19 19:15	06:51 17:29	07:26 17:01	07:49 17:06
29	07:40 17:40		07:17 19:47	06:29 20:19	06:00 20:48	05:58 21:01	06:20 20:46	06:50 20:05	07:20 19:13	06:52 17:28	07:28 17:01	07:49 17:07
30	07:39 17:41		07:15 19:48	06:28 20:20	05:59 20:49	05:58 21:01	06:21 20:45	06:51 20:03	07:21 19:12	06:53 17:27	07:29 17:01	07:50 17:08
31	07:38 17:42		07:13 19:49		05:59 20:49		06:21 20:44	06:52 20:02		06:54 17:25		07:50 17:08
Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali WTG: ME_10 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (43)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:58 20:50	05:59 21:01	06:23 20:43	06:53 20:00	07:22 19:10	06:55 17:24	07:30 17:00
2	07:50 17:10	07:36 17:45	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	05:59 21:01	06:23 20:41	06:54 19:59	07:23 19:09	06:57 17:23	07:31 17:00
3	07:50 17:11	07:35 17:46	06:59 18:19	07:09 19:52	06:24 20:23	05:58 20:52	06:00 21:01	06:24 20:40	06:55 19:57	07:24 19:07	06:58 17:22	07:32 17:00
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24	05:57 20:52	06:01 21:01	06:25 20:39	06:56 19:55	07:25 19:05	06:59 17:21	07:33 17:00
5	07:50 17:13	07:33 17:48	06:56 18:21	07:05 19:54	06:22 20:25	05:57 20:53	06:01 21:00	06:26 20:38	06:57 19:54	07:26 19:04	07:00 17:20	07:34 17:00
6	07:50 17:14	07:32 17:50	06:54 18:22	07:04 19:55	06:20 20:26	05:57 20:54	06:02 21:00	06:27 20:37	06:57 19:52	07:27 19:02	07:01 17:18	07:35 17:00
7	07:50 17:15	07:31 17:51	06:53 18:24	07:02 19:56	06:19 20:27	05:56 20:54	06:02 21:00	06:28 20:36	06:58 19:50	07:28 19:00	07:02 17:17	07:36 16:59
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13	07:49 17:21	07:24 17:58	06:43 18:30	06:53 20:03	06:13 20:34	05:55 20:58	06:06 20:58	06:34 20:28	07:04 19:40	07:34 18:51	07:09 17:11	07:41 17:00
14	07:49 17:22	07:23 17:59	06:41 18:31	06:51 20:04	06:12 20:34	05:55 20:58	06:07 20:57	06:35 20:27	07:05 19:39	07:35 18:49	07:11 17:11	07:42 17:00
15	07:48 17:23	07:22 18:00	06:40 18:32	06:49 20:05	06:11 20:35	05:55 20:59	06:08 20:56	06:36 20:25	07:06 19:37	07:36 18:48	07:12 17:10	07:42 17:00
16	07:48 17:24	07:20 18:02	06:38 18:33	06:48 20:06	06:10 20:36	05:55 20:59	06:09 20:56	06:37 20:24	07:07 19:35	07:38 18:46	07:13 17:09	07:43 17:00
17	07:48 17:26	07:19 18:03	06:36 18:34	06:46 20:07	06:09 20:37	05:55 20:59	06:09 20:55	06:38 20:23	07:08 19:34	07:39 18:45	07:14 17:08	07:44 17:01
18	07:47 17:27	07:18 18:04	06:35 18:35	06:45 20:08	06:08 20:38	05:55 21:00	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43	07:15 17:07	07:44 17:01
19	07:47 17:28	07:16 18:05	06:33 18:37	06:43 20:09	06:07 20:39	05:55 21:00	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	07:16 17:07	07:45 17:01
20	07:46 17:29	07:15 18:06	06:32 18:38	06:42 20:10	06:06 20:40	05:56 21:00	06:12 20:53	06:41 20:18	07:11 19:29	07:42 18:40	07:18 17:06	07:46 17:02
21	07:46 17:30	07:13 18:08	06:30 18:39	06:40 20:11	06:05 20:41	05:56 21:00	06:13 20:53	06:42 20:17	07:12 19:27	07:43 18:39	07:19 17:05	07:46 17:02
22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:05 20:42	05:56 21:01	06:13 20:52	06:43 20:16	07:13 19:25	07:44 18:38	07:20 17:05	07:47 17:03
23	07:44 17:32	07:11 18:10	06:27 18:41	06:38 20:13	06:04 20:43	05:56 21:01	06:14 20:51	06:44 20:14	07:14 19:24	07:45 18:36	07:21 17:04	07:47 17:03
24	07:44 17:34	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01	06:15 20:50	06:45 20:13	07:15 19:22	07:46 18:35	07:22 17:03	07:48 17:04
25	07:43 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:02 20:45	05:57 21:01	06:16 20:49	06:46 20:11	07:16 19:20	06:47 17:33	07:23 17:03	07:48 17:04
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27	07:41 17:37	07:05 18:15	06:20 18:45	06:32 20:17	06:01 20:46	05:57 21:01	06:18 20:48	06:48 20:08	07:18 19:17	06:50 17:31	07:25 17:02	07:49 17:06
28	07:41 17:38	07:03 18:16	06:18 18:46	06:31 20:18	06:01 20:47	05:58 21:01	06:19 20:47	06:49 20:06	07:19 19:15	06:51 17:29	07:27 17:02	07:49 17:06
29	07:40 17:40		07:17 19:47	06:29 20:19	06:00 20:48	05:58 21:01	06:20 20:46	06:50 20:05	07:20 19:14	06:52 17:28	07:28 17:01	07:49 17:07
30	07:39 17:41		07:15 19:48	06:28 20:20	05:59 20:49	05:59 21:01	06:21 20:45	06:51 20:03	07:21 19:12	06:53 17:27	07:29 17:01	07:50 17:08
31	07:38 17:42		07:13 19:49		05:59 20:50		06:22 20:44	06:52 20:02		06:54 17:26		07:50 17:09
Potential sun hours	299	298	370	398	447	451	457	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali WTG: ME_11 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (39)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:58 20:50	05:59 21:01	06:22 20:43	06:53 20:00	07:22 19:10	06:55 17:24	07:30 17:00
2	07:50 17:10	07:36 17:45	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	05:59 21:01	06:23 20:41	06:54 19:58	07:23 19:09	06:57 17:23	07:31 17:00
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16	07:48 17:24	07:20 18:02	06:38 18:33	06:48 20:06	06:10 20:36	05:55 20:59	06:08 20:56	06:37 20:24	07:07 19:35	07:37 18:46	07:13 17:09	07:43 17:00
17	07:48 17:25	07:19 18:03	06:36 18:34	06:46 20:07	06:09 20:37	05:55 20:59	06:09 20:55	06:38 20:23	07:08 19:34	07:39 18:45	07:14 17:08	07:44 17:01
18	07:47 17:27	07:18 18:04	06:35 18:35	06:45 20:08	06:08 20:38	05:55 21:00	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43	07:15 17:07	07:44 17:01
19	07:47 17:28	07:16 18:05	06:33 18:36	06:43 20:09	06:07 20:39	05:55 21:00	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	07:16 17:06	07:45 17:01
20	07:46 17:29	07:15 18:06	06:31 18:38	06:42 20:10	06:06 20:40	05:55 21:00	06:12 20:53	06:41 20:18	07:11 19:29	07:42 18:40	07:18 17:06	07:45 17:02
21	07:46 17:30	07:13 18:08	06:30 18:39	06:40 20:11	06:05 20:41	05:56 21:00	06:12 20:53	06:42 20:17	07:12 19:27	07:43 18:39	07:19 17:05	07:46 17:02
22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:05 20:42	05:56 21:01	06:13 20:52	06:43 20:15	07:13 19:25	07:44 18:37	07:20 17:04	07:47 17:03
23	07:44 17:32	07:11 18:10	06:27 18:41	06:38 20:13	06:04 20:43	05:56 21:01	06:14 20:51	06:44 20:14	07:14 19:24	07:45 18:36	07:21 17:04	07:47 17:03
24	07:44 17:34	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01	06:15 20:50	06:45 20:12	07:15 19:22	07:46 18:35	07:22 17:03	07:48 17:04
25	07:43 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:02 20:45	05:57 21:01	06:16 20:49	06:46 20:11	07:16 19:20	07:47 17:33	07:23 17:03	07:48 17:04
26	07:42 17:36	07:06 18:13	06:22 18:44	06:33 20:16	06:02 20:45	05:57 21:01	06:17 20:48	06:47 20:09	07:17 19:18	07:48 17:32	07:24 17:02	07:48 17:05
27	07:41 17:37	07:05 18:14	06:20 18:45	06:32 20:17	06:01 20:46	05:57 21:01	06:18 20:47	06:48 20:08	07:18 19:17	07:49 17:31	07:25 17:02	07:49 17:06
28	07:41 17:38	07:03 18:16	06:18 18:46	06:31 20:18	06:00 20:47	05:58 21:01	06:19 20:47	06:49 20:06	07:19 19:15	07:50 17:29	07:27 17:01	07:49 17:06
29	07:40 17:40		07:17 19:47	06:29 20:19	06:00 20:48	05:58 21:01	06:20 20:46	06:50 20:05	07:20 19:13	06:52 17:28	07:28 17:01	07:49 17:07
30	07:39 17:41		07:15 19:48	06:28 20:20	05:59 20:49	05:58 21:01	06:21 20:45	06:51 20:03	07:21 19:12	06:53 17:27	07:29 17:01	07:50 17:08
31	07:38 17:42		07:13 19:49		05:59 20:50		06:21 20:44	06:52 20:02		06:54 17:25		07:50 17:08
Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali WTG: ME_12 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (38)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:58 20:50	05:59 21:01	06:22 20:43	06:53 20:00	07:22 19:10	06:55 17:24	07:30 17:00
2	07:50 17:10	07:36 17:45	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	05:59 21:01	06:23 20:41	06:54 19:58	07:23 19:09	06:57 17:23	07:31 17:00
3	07:50 17:11	07:35 17:46	06:59 18:19	07:08 19:52	06:24 20:23	05:57 20:52	06:00 21:01	06:24 20:40	06:55 19:57	07:24 19:07	06:58 17:22	07:32 17:00
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24	05:57 20:52	06:00 21:01	06:25 20:39	06:55 19:55	07:25 19:05	06:59 17:21	07:33 17:00
5	07:50 17:13	07:33 17:48	06:56 18:21	07:05 19:54	06:22 20:25	05:57 20:53	06:01 21:00	06:26 20:38	06:56 19:54	07:26 19:04	07:00 17:20	07:34 17:00
6	07:50 17:14	07:32 17:49	06:54 18:22	07:04 19:55	06:20 20:26	05:56 20:54	06:02 21:00	06:27 20:37	06:57 19:52	07:27 19:02	07:01 17:18	07:35 16:59
7	07:50 17:15	07:31 17:51	06:53 18:24	07:02 19:56	06:19 20:27	05:56 20:54	06:02 21:00	06:28 20:36	06:58 19:50	07:28 19:00	07:02 17:17	07:36 16:59
8	07:50 17:16	07:30 17:52	06:51 18:25	07:00 19:57	06:18 20:28	05:56 20:55	06:03 21:00	06:29 20:35	06:59 19:49	07:29 18:59	07:04 17:16	07:37 16:59
9	07:50 17:17	07:29 17:53	06:49 18:26	06:59 19:58	06:17 20:30	05:56 20:56	06:03 20:59	06:30 20:33	07:00 19:47	07:30 18:57	07:05 17:15	07:37 16:59
10	07:50 17:18	07:28 17:54	06:48 18:27	06:57 19:59	06:16 20:31	05:55 20:56	06:04 20:59	06:31 20:32	07:01 19:45	07:31 18:56	07:06 17:14	07:38 16:59
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14	07:49 17:22	07:23 17:59	06:41 18:31	06:51 20:04	06:12 20:34	05:55 20:58	06:07 20:57	06:35 20:27	07:05 19:39	07:35 18:49	07:11 17:10	07:41 17:00
15	07:48 17:23	07:21 18:00	06:40 18:32	06:49 20:05	06:11 20:35	05:55 20:59	06:08 20:56	06:36 20:25	07:06 19:37	07:36 18:48	07:12 17:10	07:42 17:00
16	07:48 17:24	07:20 18:02	06:38 18:33	06:48 20:06	06:10 20:36	05:55 20:59	06:08 20:56	06:37 20:24	07:07 19:35	07:37 18:46	07:13 17:09	07:43 17:00
17	07:48 17:25	07:19 18:03	06:36 18:34	06:46 20:07	06:09 20:37	05:55 20:59	06:09 20:55	06:38 20:23	07:08 19:34	07:39 18:45	07:14 17:08	07:44 17:01
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19	07:47 17:28	07:16 18:05	06:33 18:37	06:43 20:09	06:07 20:39	05:55 21:00	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	07:16 17:06	07:45 17:01
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21	07:46 17:30	07:13 18:08	06:30 18:39	06:40 20:11	06:05 20:41	05:56 21:00	06:13 20:53	06:42 20:17	07:12 19:27	07:43 18:39	07:19 17:05	07:46 17:02
22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:05 20:42	05:56 21:01	06:13 20:52	06:43 20:15	07:13 19:25	07:44 18:37	07:20 17:04	07:47 17:03
23	07:44 17:32	07:11 18:10	06:27 18:41	06:38 20:13	06:04 20:43	05:56 21:01	06:14 20:51	06:44 20:14	07:14 19:24	07:45 18:36	07:21 17:04	07:47 17:03
24	07:44 17:34	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01	06:15 20:50	06:45 20:13	07:15 19:22	07:46 18:35	07:22 17:03	07:48 17:04
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28	07:41 17:38	07:03 18:16	06:18 18:46	06:31 20:18	06:00 20:47	05:58 21:01	06:19 20:47	06:49 20:06	07:19 19:15	07:50 17:29	07:27 17:01	07:49 17:06
29	07:40 17:40		07:17 19:47	06:29 20:19	06:00 20:48	05:58 21:01	06:20 20:46	06:50 20:05	07:20 19:13	06:52 17:28	07:28 17:01	07:49 17:07
30	07:39 17:41		07:15 19:48	06:28 20:20	05:59 20:49	05:58 21:01	06:21 20:45	06:51 20:03	07:21 19:12	06:53 17:27	07:29 17:01	07:50 17:08
31	07:38 17:42		07:13 19:49		05:59 20:50		06:21 20:44	06:52 20:02		06:54 17:25		07:50 17:08
Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali WTG: ME_13 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (34)
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:58 20:50	05:59 21:01	06:22 20:43	06:53 20:00	07:22 19:10	06:55 17:24	07:30 17:00
2	07:50 17:10	07:36 17:45	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	05:59 21:01	06:23 20:41	06:54 19:59	07:23 19:09	06:57 17:23	07:31 17:00
3	07:50 17:11	07:35 17:46	06:59 18:19	07:09 19:52	06:24 20:23	05:57 20:52	06:00 21:01	06:24 20:40	06:55 19:57	07:24 19:07	06:58 17:22	07:32 17:00
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23	07:44 17:32	07:11 18:10	06:27 18:41	06:38 20:13	06:04 20:43	05:56 21:01	06:14 20:51	06:44 20:14	07:14 19:24	07:45 18:36	07:21 17:04	07:47 17:03
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31	07:38 17:42		07:13 19:49		05:59 20:50		06:22 20:44	06:52 20:02		06:54 17:25		07:50 17:09
Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali WTG: ME_14 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (35)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:58 20:50	05:59 21:01	06:22 20:43	06:53 20:00	07:22 19:10	06:55 17:24	07:30 17:00
2	07:50 17:10	07:36 17:45	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	05:59 21:01	06:23 20:41	06:54 19:58	07:23 19:09	06:57 17:23	07:31 17:00
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Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali WTG: ME_15 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (36)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:58 20:50	05:59 21:01	06:22 20:43	06:53 20:00	07:22 19:10	06:55 17:24	07:30 17:00
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Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali WTG: ME_16 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (37)
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:58 20:50	05:59 21:01	06:22 20:43	06:53 20:00	07:22 19:10	06:55 17:24	07:30 17:00
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28	07:41 17:38	07:03 18:16	06:18 18:46	06:31 20:18	06:00 20:47	05:58 21:01	06:19 20:47	06:49 20:06	07:19 19:15	06:51 17:29	07:27 17:01	07:49 17:06
29	07:40 17:40		07:17 19:47	06:29 20:19	06:00 20:48	05:58 21:01	06:20 20:46	06:50 20:05	07:20 19:14	06:52 17:28	07:28 17:01	07:49 17:07
30	07:39 17:41		07:15 19:48	06:28 20:20	05:59 20:49	05:58 21:01	06:21 20:45	06:51 20:03	07:21 19:12	06:53 17:27	07:29 17:01	07:50 17:08
31	07:38 17:42		07:13 19:49		05:59 20:50		06:22 20:44	06:52 20:02		06:54 17:25		07:50 17:08
Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali WTG: ME_17 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (32)
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:10	07:37 17:44	07:02 18:17	07:12 19:50	06:27 20:21	05:59 20:50	05:59 21:01	06:23 20:43	06:53 20:00	07:22 19:10	06:56 17:24	07:30 17:01
2	07:50 17:11	07:36 17:45	07:00 18:18	07:10 19:51	06:26 20:22	05:58 20:51	06:00 21:01	06:24 20:42	06:54 19:59	07:23 19:09	06:57 17:23	07:31 17:00
3	07:50 17:11	07:35 17:46	06:59 18:19	07:09 19:52	06:24 20:24	05:58 20:52	06:00 21:01	06:25 20:41	06:55 19:57	07:24 19:07	06:58 17:22	07:32 17:00
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:25	05:57 20:53	06:01 21:01	06:25 20:39	06:56 19:55	07:25 19:05	06:59 17:21	07:33 17:00
5	07:51 17:13	07:33 17:48	06:56 18:21	07:05 19:54	06:22 20:26	05:57 20:53	06:01 21:01	06:26 20:38	06:57 19:54	07:26 19:04	07:00 17:20	07:34 17:00
6	07:50 17:14	07:32 17:50	06:54 18:23	07:04 19:55	06:21 20:27	05:57 20:54	06:02 21:00	06:27 20:37	06:58 19:52	07:27 19:02	07:01 17:19	07:35 17:00
7	07:50 17:15	07:31 17:51	06:53 18:24	07:02 19:57	06:19 20:28	05:56 20:55	06:02 21:00	06:28 20:36	06:59 19:51	07:28 19:01	07:03 17:17	07:36 17:00
8	07:50 17:16	07:30 17:52	06:51 18:25	07:01 19:58	06:18 20:29	05:56 20:55	06:03 21:00	06:29 20:35	07:00 19:49	07:29 18:59	07:04 17:16	07:37 16:59
9	07:50 17:17	07:29 17:53	06:50 18:26	06:59 19:59	06:17 20:30	05:56 20:56	06:04 20:59	06:30 20:33	07:00 19:47	07:30 18:57	07:05 17:15	07:38 16:59
10	07:50 17:18	07:28 17:55	06:48 18:27	06:57 20:00	06:16 20:31	05:56 20:56	06:04 20:59	06:31 20:32	07:01 19:46	07:31 18:56	07:06 17:14	07:38 17:00
11	07:50 17:19	07:27 17:56	06:46 18:28	06:56 20:01	06:15 20:32	05:56 20:57	06:05 20:59	06:32 20:31	07:02 19:44	07:32 18:54	07:07 17:13	07:39 17:00
12	07:50 17:20	07:25 17:57	06:45 18:29	06:54 20:02	06:14 20:33	05:55 20:57	06:06 20:58	06:33 20:30	07:03 19:42	07:33 18:53	07:08 17:12	07:40 17:00
13	07:49 17:21	07:24 17:58	06:43 18:30	06:53 20:03	06:13 20:34	05:55 20:58	06:06 20:58	06:34 20:28	07:04 19:41	07:34 18:51	07:10 17:12	07:41 17:00
14	07:49 17:22	07:23 17:59	06:42 18:31	06:51 20:04	06:12 20:35	05:55 20:58	06:07 20:57	06:35 20:27	07:05 19:39	07:35 18:50	07:11 17:11	07:42 17:00
15	07:49 17:23	07:22 18:01	06:40 18:32	06:50 20:05	06:11 20:36	05:55 20:59	06:08 20:57	06:36 20:26	07:06 19:37	07:37 18:48	07:12 17:10	07:42 17:00
16	07:48 17:24	07:20 18:02	06:38 18:33	06:48 20:06	06:10 20:37	05:55 20:59	06:09 20:56	06:37 20:24	07:07 19:36	07:38 18:46	07:13 17:09	07:43 17:01
17	07:48 17:26	07:19 18:03	06:37 18:35	06:47 20:07	06:09 20:38	05:55 20:59	06:09 20:55	06:38 20:23	07:08 19:34	07:39 18:45	07:14 17:08	07:44 17:01
18	07:47 17:27	07:18 18:04	06:35 18:36	06:45 20:08	06:08 20:38	05:55 21:00	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43	07:15 17:07	07:44 17:01
19	07:47 17:28	07:16 18:05	06:33 18:37	06:44 20:09	06:07 20:39	05:55 21:00	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	07:17 17:07	07:45 17:02
20	07:46 17:29	07:15 18:07	06:32 18:38	06:42 20:10	06:06 20:40	05:56 21:00	06:12 20:53	06:41 20:19	07:11 19:29	07:42 18:41	07:18 17:06	07:46 17:02
21	07:46 17:30	07:14 18:08	06:30 18:39	06:41 20:11	06:06 20:41	05:56 21:01	06:13 20:53	06:42 20:17	07:12 19:27	07:43 18:39	07:19 17:05	07:46 17:02
22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:05 20:42	05:56 21:01	06:14 20:52	06:43 20:16	07:13 19:25	07:44 18:38	07:20 17:05	07:47 17:03
23	07:44 17:33	07:11 18:10	06:27 18:41	06:38 20:13	06:04 20:43	05:56 21:01	06:14 20:51	06:44 20:14	07:14 19:24	07:45 18:36	07:21 17:04	07:47 17:03
24	07:44 17:34	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01	06:15 20:50	06:45 20:13	07:15 19:22	07:46 18:35	07:22 17:04	07:48 17:04
25	07:43 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:03 20:45	05:57 21:01	06:16 20:49	06:46 20:11	07:16 19:20	07:48 17:33	07:23 17:03	07:48 17:05
26	07:42 17:36	07:06 18:14	06:22 18:44	06:33 20:16	06:02 20:46	05:57 21:01	06:17 20:49	06:47 20:10	07:17 19:19	07:49 17:32	07:25 17:02	07:49 17:05
27	07:42 17:37	07:05 18:15	06:20 18:45	06:32 20:17	06:01 20:46	05:57 21:01	06:18 20:48	06:48 20:08	07:18 19:17	07:50 17:31	07:26 17:02	07:49 17:06
28	07:41 17:39	07:03 18:16	06:18 18:46	06:31 20:18	06:01 20:47	05:58 21:01	06:19 20:47	06:49 20:07	07:19 19:15	07:51 17:29	07:27 17:02	07:49 17:06
29	07:40 17:40		07:17 19:47	06:29 20:19	06:00 20:48	05:58 21:01	06:20 20:46	06:50 20:05	07:20 19:14	06:52 17:28	07:28 17:01	07:49 17:07
30	07:39 17:41		07:15 19:48	06:28 20:20	06:00 20:49	05:59 21:01	06:21 20:45	06:51 20:03	07:21 19:12	06:53 17:27	07:29 17:01	07:50 17:08
31	07:38 17:42		07:14 19:49		05:59 20:50		06:22 20:44	06:52 20:02		06:54 17:26		07:50 17:09
Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali WTG: ME_18 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (31)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:10	07:37 17:44	07:02 18:17	07:12 19:50	06:27 20:21	05:59 20:50	05:59 21:01	06:23 20:43	06:53 20:00	07:22 19:10	06:56 17:24	07:30 17:01
2	07:50 17:11	07:36 17:45	07:00 18:18	07:10 19:51	06:26 20:23	05:58 20:51	06:00 21:01	06:24 20:42	06:54 19:59	07:23 19:09	06:57 17:23	07:31 17:00
3	07:50 17:11	07:35 17:46	06:59 18:19	07:09 19:52	06:24 20:24	05:58 20:52	06:00 21:01	06:25 20:41	06:55 19:57	07:24 19:07	06:58 17:22	07:32 17:00
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:25	05:57 20:53	06:01 21:01	06:25 20:39	06:56 19:55	07:25 19:05	06:59 17:21	07:33 17:00
5	07:51 17:13	07:33 17:48	06:56 18:21	07:05 19:54	06:22 20:26	05:57 20:53	06:01 21:01	06:26 20:38	06:57 19:54	07:26 19:04	07:00 17:20	07:34 17:00
6	07:50 17:14	07:32 17:50	06:54 18:23	07:04 19:56	06:21 20:27	05:57 20:54	06:02 21:00	06:27 20:37	06:58 19:52	07:27 19:02	07:01 17:19	07:35 17:00
7	07:50 17:15	07:31 17:51	06:53 18:24	07:02 19:57	06:19 20:28	05:56 20:55	06:02 21:00	06:28 20:36	06:59 19:51	07:28 19:01	07:03 17:18	07:36 17:00
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12	07:50 17:20	07:25 17:57	06:45 18:29	06:54 20:02	06:14 20:33	05:55 20:57	06:06 20:58	06:33 20:30	07:03 19:42	07:33 18:53	07:08 17:12	07:40 17:00
13	07:49 17:21	07:24 17:58	06:43 18:30	06:53 20:03	06:13 20:34	05:55 20:58	06:06 20:58	06:34 20:28	07:04 19:41	07:34 18:51	07:10 17:12	07:41 17:00
14	07:49 17:22	07:23 17:59	06:42 18:31	06:51 20:04	06:12 20:35	05:55 20:58	06:07 20:57	06:35 20:27	07:05 19:39	07:36 18:50	07:11 17:11	07:42 17:00
15	07:49 17:23	07:22 18:01	06:40 18:32	06:50 20:05	06:11 20:36	05:55 20:59	06:08 20:57	06:36 20:26	07:06 19:37	07:37 18:48	07:12 17:10	07:42 17:00
16	07:48 17:25	07:20 18:02	06:38 18:34	06:48 20:06	06:10 20:37	05:55 20:59	06:09 20:56	06:37 20:24	07:07 19:36	07:38 18:46	07:13 17:09	07:43 17:01
17	07:48 17:26	07:19 18:03	06:37 18:35	06:47 20:07	06:09 20:38	05:55 20:59	06:09 20:55	06:38 20:23	07:08 19:34	07:39 18:45	07:14 17:08	07:44 17:01
18	07:47 17:27	07:18 18:04	06:35 18:36	06:45 20:08	06:08 20:38	05:55 21:00	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43	07:15 17:07	07:44 17:01
19	07:47 17:28	07:16 18:05	06:33 18:37	06:44 20:09	06:07 20:39	05:56 21:00	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	07:17 17:07	07:45 17:02
20	07:46 17:29	07:15 18:07	06:32 18:38	06:42 20:10	06:06 20:40	05:56 21:00	06:12 20:53	06:41 20:19	07:11 19:29	07:42 18:41	07:18 17:06	07:46 17:02
21	07:46 17:30	07:14 18:08	06:30 18:39	06:41 20:11	06:06 20:41	05:56 21:01	06:13 20:53	06:42 20:17	07:12 19:27	07:43 18:39	07:19 17:05	07:46 17:02
22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:05 20:42	05:56 21:01	06:14 20:52	06:43 20:16	07:13 19:25	07:44 18:38	07:20 17:05	07:47 17:03
23	07:44 17:33	07:11 18:10	06:27 18:41	06:38 20:13	06:04 20:43	05:56 21:01	06:14 20:51	06:44 20:14	07:14 19:24	07:45 18:36	07:21 17:04	07:47 17:03
24	07:44 17:34	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:57 21:01	06:15 20:50	06:45 20:13	07:15 19:22	07:46 18:35	07:22 17:04	07:48 17:04
25	07:43 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:03 20:45	05:57 21:01	06:16 20:49	06:46 20:11	07:16 19:20	07:48 17:33	07:23 17:03	07:48 17:05
26	07:42 17:36	07:06 18:14	06:22 18:44	06:34 20:16	06:02 20:46	05:57 21:01	06:17 20:49	06:47 20:10	07:17 19:19	07:49 17:32	07:25 17:03	07:49 17:05
27	07:42 17:37	07:05 18:15	06:20 18:45	06:32 20:17	06:01 20:46	05:57 21:01	06:18 20:48	06:48 20:08	07:18 19:17	07:50 17:31	07:26 17:02	07:49 17:06
28	07:41 17:39	07:03 18:16	06:19 18:46	06:31 20:18	06:01 20:47	05:58 21:01	06:19 20:47	06:49 20:07	07:19 19:15	07:51 17:29	07:27 17:02	07:49 17:06
29	07:40 17:40		07:17 19:47	06:29 20:19	06:00 20:48	05:58 21:01	06:20 20:46	06:50 20:05	07:20 19:14	06:52 17:28	07:28 17:01	07:49 17:07
30	07:39 17:41		07:15 19:48	06:28 20:20	06:00 20:49	05:59 21:01	06:21 20:45	06:51 20:03	07:21 19:12	06:53 17:27	07:29 17:01	07:50 17:08
31	07:38 17:42		07:14 19:49		05:59 20:50		06:22 20:44	06:52 20:02		06:54 17:26		07:50 17:09
Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali WTG: ME_19 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (33)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:59 20:50	05:59 21:01	06:23 20:43	06:53 20:00	07:22 19:10	06:56 17:24	07:30 17:01
2	07:50 17:11	07:36 17:45	07:00 18:18	07:10 19:51	06:26 20:23	05:58 20:51	06:00 21:01	06:24 20:42	06:54 19:59	07:23 19:09	06:57 17:23	07:31 17:00
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17	07:48 17:26	07:19 18:03	06:37 18:35	06:47 20:07	06:09 20:38	05:55 20:59	06:09 20:55	06:38 20:23	07:08 19:34	07:39 18:45	07:14 17:08	07:44 17:01
18	07:47 17:27	07:18 18:04	06:35 18:36	06:45 20:08	06:08 20:38	05:55 21:00	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43	07:15 17:07	07:44 17:01
19	07:47 17:28	07:16 18:05	06:33 18:37	06:44 20:09	06:07 20:39	05:55 21:00	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	07:17 17:07	07:45 17:02
20	07:46 17:29	07:15 18:07	06:32 18:38	06:42 20:10	06:06 20:40	05:56 21:00	06:12 20:53	06:41 20:19	07:11 19:29	07:42 18:41	07:18 17:06	07:46 17:02
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22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:05 20:42	05:56 21:01	06:14 20:52	06:43 20:16	07:13 19:25	07:44 18:38	07:20 17:05	07:47 17:03
23	07:44 17:33	07:11 18:10	06:27 18:41	06:38 20:13	06:04 20:43	05:56 21:01	06:14 20:51	06:44 20:14	07:14 19:24	07:45 18:36	07:21 17:04	07:47 17:03
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27	07:42 17:37	07:05 18:15	06:20 18:45	06:32 20:17	06:01 20:46	05:57 21:01	06:18 20:48	06:48 20:08	07:18 19:17	06:50 17:31	07:26 17:02	07:49 17:06
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31	07:38 17:42		07:14 19:49		05:59 20:50		06:22 20:44	06:52 20:02		06:54 17:26		07:50 17:09
Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali\WTG: ME_2 - VIND-SYSSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (45)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:58 20:50	05:59 21:01	06:22 20:43	06:53 20:00	07:22 19:10	06:55 17:24	07:30 17:00
2	07:50 17:10	07:36 17:45	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	05:59 21:01	06:23 20:41	06:54 19:58	07:23 19:09	06:57 17:23	07:31 17:00
3	07:50 17:11	07:35 17:46	06:59 18:19	07:08 19:52	06:24 20:23	05:57 20:52	06:00 21:01	06:24 20:40	06:55 19:57	07:24 19:07	06:58 17:22	07:32 17:00
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24	05:57 20:52	06:00 21:01	06:25 20:39	06:55 19:55	07:25 19:05	06:59 17:21	07:33 17:00
5	07:50 17:13	07:33 17:48	06:56 18:21	07:05 19:54	06:22 20:25	05:57 20:53	06:01 21:00	06:26 20:38	06:56 19:54	07:26 19:04	07:00 17:20	07:34 17:00
6	07:50 17:14	07:32 17:49	06:54 18:22	07:04 19:55	06:20 20:26	05:56 20:54	06:02 21:00	06:27 20:37	06:57 19:52	07:27 19:02	07:01 17:18	07:35 16:59
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8	07:50 17:16	07:30 17:52	06:51 18:25	07:00 19:57	06:18 20:28	05:56 20:55	06:03 21:00	06:29 20:35	06:59 19:49	07:29 18:59	07:04 17:16	07:36 16:59
9	07:50 17:17	07:29 17:53	06:49 18:26	06:59 19:58	06:17 20:29	05:56 20:56	06:03 20:59	06:30 20:33	07:00 19:47	07:30 18:57	07:05 17:15	07:37 16:59
10	07:50 17:18	07:28 17:54	06:48 18:27	06:57 19:59	06:16 20:30	05:56 20:56	06:04 20:59	06:31 20:32	07:01 19:45	07:31 18:56	07:06 17:14	07:38 16:59
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14	07:49 17:22	07:23 17:59	06:41 18:31	06:51 20:04	06:12 20:34	05:55 20:58	06:07 20:57	06:35 20:27	07:05 19:39	07:35 18:49	07:11 17:10	07:41 17:00
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22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:05 20:42	05:56 21:01	06:13 20:52	06:43 20:15	07:13 19:25	07:44 18:37	07:20 17:04	07:47 17:03
23	07:44 17:32	07:11 18:10	06:27 18:41	06:38 20:13	06:04 20:43	05:56 21:01	06:14 20:51	06:44 20:14	07:14 19:24	07:45 18:36	07:21 17:04	07:47 17:03
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31	07:38 17:42		07:13 19:49	06:27 20:20	05:59 20:49		06:22 20:44	06:52 20:02	07:22 19:12	06:54 17:25	07:30 17:01	07:50 17:09
Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	5	0	5	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali WTG: ME_22 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (54)
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:09	07:37 17:43	07:01 18:16	07:11 19:50	06:26 20:21	05:58 20:50	05:59 21:01	06:22 20:42	06:52 20:00	07:22 19:10	06:55 17:24	07:29 17:00
2	07:50 17:10	07:36 17:44	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	05:59 21:01	06:23 20:41	06:53 19:58	07:23 19:08	06:56 17:23	07:30 17:00
3	07:50 17:11	07:35 17:45	06:58 18:19	07:08 19:52	06:24 20:23	05:57 20:51	06:00 21:00	06:24 20:40	06:54 19:56	07:24 19:07	06:57 17:21	07:31 17:00
4	07:50 17:12	07:34 17:47	06:57 18:20	07:06 19:53	06:22 20:24	05:57 20:52	06:00 21:00	06:25 20:39	06:55 19:55	07:25 19:05	06:59 17:20	07:32 16:59
5	07:50 17:13	07:33 17:48	06:55 18:21	07:05 19:54	06:21 20:25	05:56 20:53	06:01 21:00	06:26 20:38	06:56 19:53	07:26 19:03	07:00 17:19	07:33 16:59
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21	07:45 17:30	07:13 18:07	06:29 18:38	06:40 20:11	06:05 20:41	05:55 21:00	06:12 20:52	06:41 20:17	07:12 19:27	07:43 18:39	07:18 17:05	07:46 17:02
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23	07:44 17:32	07:10 18:10	06:26 18:40	06:37 20:13	06:03 20:43	05:56 21:00	06:14 20:51	06:43 20:14	07:14 19:23	07:45 18:36	07:21 17:04	07:47 17:03
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31	07:38 17:42		07:13 19:49		05:58 20:49		06:21 20:43	06:51 20:01		06:54 17:25		07:49 17:08
Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali WTG: ME_27 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (55)
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:09	07:37 17:43	07:01 18:16	07:11 19:50	06:26 20:21	05:58 20:50	05:58 21:01	06:22 20:42	06:52 20:00	07:21 19:10	06:55 17:24	07:29 17:00
2	07:50 17:10	07:36 17:44	07:00 18:18	07:10 19:51	06:25 20:22	05:57 20:51	05:59 21:01	06:23 20:41	06:53 19:58	07:22 19:08	06:56 17:23	07:30 17:00
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4	07:50 17:12	07:34 17:47	06:57 18:20	07:06 19:53	06:22 20:24	05:57 20:52	06:00 21:00	06:25 20:39	06:55 19:55	07:25 19:05	06:59 17:20	07:32 16:59
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Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali WTG: ME_28 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (56)
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:09	07:37 17:43	07:01 18:16	07:11 19:50	06:26 20:21	05:58 20:50	05:58 21:01	06:22 20:42	06:52 20:00	07:21 19:10	06:55 17:24	07:29 17:00
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Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali WTG: ME_29 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (58)
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:09	07:37 17:43	07:01 18:16	07:11 19:50	06:26 20:21	05:58 20:50	05:58 21:01	06:22 20:42	06:52 20:00	07:21 19:10	06:55 17:24	07:29 17:00
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29	07:39 17:39		07:16 19:47	06:29 20:19	05:59 20:48	05:58 21:01	06:19 20:45	06:49 20:04	07:19 19:13	07:51 17:28	07:27 17:01	07:49 17:07
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31	07:38 17:42		07:13 19:49	06:27 20:21	05:58 20:49	05:58 21:01	06:21 20:43	06:51 20:01	07:21 19:10	07:53 17:25	07:29 17:00	07:49 17:08
Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali\WTG: ME_3 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (64)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:58 20:50	05:59 21:01	06:22 20:42	06:53 20:00	07:22 19:10	06:55 17:24	07:30 17:00
2	07:50 17:10	07:36 17:45	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	05:59 21:01	06:23 20:41	06:54 19:58	07:23 19:09	06:57 17:23	07:31 17:00
3	07:50 17:11	07:35 17:46	06:59 18:19	07:08 19:52	06:24 20:23	05:57 20:52	06:00 21:01	06:24 20:40	06:55 19:57	07:24 19:07	06:58 17:22	07:32 17:00
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24	05:57 20:52	06:00 21:01	06:25 20:39	06:55 19:55	07:25 19:05	06:59 17:21	07:33 17:00
5	07:50 17:13	07:33 17:48	06:56 18:21	07:05 19:54	06:22 20:25	05:57 20:53	06:01 21:00	06:26 20:38	06:56 19:54	07:26 19:04	07:00 17:20	07:34 17:00
6	07:50 17:14	07:32 17:49	06:54 18:22	07:04 19:55	06:20 20:26	05:56 20:54	06:02 21:00	06:27 20:37	06:57 19:52	07:27 19:02	07:01 17:18	07:35 16:59
7	07:50 17:15	07:31 17:51	06:53 18:24	07:02 19:56	06:19 20:27	05:56 20:54	06:02 21:00	06:28 20:36	06:58 19:50	07:28 19:00	07:02 17:17	07:36 16:59
8	07:50 17:16	07:30 17:52	06:51 18:25	07:00 19:57	06:18 20:28	05:56 20:55	06:03 21:00	06:29 20:34	06:59 19:49	07:29 18:59	07:04 17:16	07:36 16:59
9	07:50 17:17	07:29 17:53	06:49 18:26	06:59 19:58	06:17 20:29	05:56 20:56	06:03 20:59	06:30 20:33	07:00 19:47	07:30 18:57	07:05 17:15	07:37 16:59
10	07:50 17:18	07:28 17:54	06:48 18:27	06:57 19:59	06:16 20:30	05:55 20:56	06:04 20:59	06:31 20:32	07:01 19:45	07:31 18:56	07:06 17:14	07:38 16:59
11	07:50 17:19	07:26 17:56	06:46 18:28	06:56 20:01	06:15 20:31	05:55 20:57	06:05 20:58	06:32 20:31	07:02 19:44	07:32 18:54	07:07 17:13	07:39 16:59
12	07:49 17:20	07:25 17:57	06:45 18:29	06:54 20:02	06:14 20:32	05:55 20:57	06:05 20:58	06:33 20:29	07:03 19:42	07:33 18:52	07:08 17:12	07:40 17:00
13	07:49 17:21	07:24 17:58	06:43 18:30	06:53 20:03	06:13 20:33	05:55 20:58	06:06 20:58	06:34 20:28	07:04 19:40	07:34 18:51	07:09 17:11	07:41 17:00
14	07:49 17:22	07:23 17:59	06:41 18:31	06:51 20:04	06:12 20:34	05:55 20:58	06:07 20:57	06:35 20:27	07:05 19:39	07:35 18:49	07:11 17:10	07:41 17:00
15	07:48 17:23	07:21 18:00	06:40 18:32	06:49 20:05	06:11 20:35	05:55 20:58	06:08 20:56	06:36 20:25	07:06 19:37	07:36 18:48	07:12 17:10	07:42 17:00
16	07:48 17:24	07:20 18:02	06:38 18:33	06:48 20:06	06:10 20:36	05:55 20:59	06:08 20:56	06:37 20:24	07:07 19:35	07:37 18:46	07:13 17:09	07:43 17:00
17	07:48 17:25	07:19 18:03	06:36 18:34	06:46 20:07	06:09 20:37	05:55 20:59	06:09 20:55	06:38 20:23	07:08 19:34	07:39 18:45	07:14 17:08	07:44 17:01
18	07:47 17:27	07:18 18:04	06:35 18:35	06:45 20:08	06:08 20:38	05:55 21:00	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43	07:15 17:07	07:44 17:01
19	07:47 17:28	07:16 18:05	06:33 18:36	06:43 20:09	06:07 20:39	05:55 21:00	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	07:16 17:06	07:45 17:01
20	07:46 17:29	07:15 18:06	06:31 18:38	06:42 20:10	06:06 20:40	05:55 21:00	06:12 20:53	06:41 20:18	07:11 19:29	07:42 18:40	07:18 17:06	07:45 17:02
21	07:46 17:30	07:13 18:08	06:30 18:39	06:40 20:11	06:05 20:41	05:56 21:00	06:13 20:52	06:42 20:17	07:12 19:27	07:43 18:39	07:19 17:05	07:46 17:02
22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:05 20:42	05:56 21:01	06:13 20:52	06:43 20:15	07:13 19:25	07:44 18:37	07:20 17:04	07:47 17:03
23	07:44 17:32	07:11 18:10	06:27 18:41	06:38 20:13	06:04 20:43	05:56 21:01	06:14 20:51	06:44 20:14	07:14 19:24	07:45 18:36	07:21 17:04	07:47 17:03
24	07:44 17:34	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01	06:15 20:50	06:45 20:12	07:15 19:22	07:46 18:35	07:22 17:03	07:47 17:04
25	07:43 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:02 20:45	05:57 21:01	06:16 20:49	06:46 20:11	07:16 19:20	07:47 17:33	07:23 17:03	07:48 17:04
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27	07:41 17:37	07:05 18:14	06:20 18:45	06:32 20:17	06:01 20:46	05:57 21:01	06:18 20:47	06:48 20:08	07:18 19:17	07:49 17:31	07:25 17:02	07:49 17:06
28	07:41 17:38	07:03 18:16	06:18 18:46	06:31 20:18	06:00 20:47	05:58 21:01	06:19 20:47	06:49 20:06	07:19 19:15	07:50 17:29	07:27 17:01	07:49 17:06
29	07:40 17:40		07:17 19:47	06:29 20:19	06:00 20:48	05:58 21:01	06:20 20:46	06:50 20:05	07:20 19:13	06:52 17:28	07:28 17:01	07:49 17:07
30	07:39 17:41		07:15 19:48	06:28 20:20	05:59 20:49	05:58 21:01	06:21 20:45	06:51 20:03	07:21 19:12	06:53 17:27	07:29 17:01	07:50 17:08
31	07:38 17:42		07:13 19:49		05:59 20:49		06:21 20:44	06:52 20:02		06:54 17:25		07:50 17:08
Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali WTG: ME_32 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (62)
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:09	07:37 17:43	07:01 18:16	07:11 19:50	06:26 20:21	05:58 20:50	05:59 21:01	06:22 20:42	06:52 20:00	07:21 19:10	06:55 17:24	07:29 17:00
2	07:50 17:10	07:36 17:44	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:50	05:59 21:00	06:23 20:41	06:53 19:58	07:22 19:08	06:56 17:23	07:30 17:00
3	07:50 17:11	07:35 17:45	06:58 18:19	07:08 19:52	06:24 20:23	05:57 20:51	06:00 21:00	06:24 20:40	06:54 19:56	07:23 19:06	06:57 17:21	07:31 17:00
4	07:50 17:12	07:34 17:47	06:57 18:20	07:06 19:53	06:22 20:24	05:57 20:52	06:00 21:00	06:25 20:39	06:55 19:55	07:24 19:05	06:58 17:20	07:32 16:59
5	07:50 17:13	07:33 17:48	06:55 18:21	07:05 19:54	06:21 20:25	05:56 20:53	06:01 21:00	06:26 20:38	06:56 19:53	07:25 19:03	07:00 17:19	07:33 16:59
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21	07:45 17:30	07:13 18:07	06:29 18:38	06:40 20:10	06:05 20:41	05:55 21:00	06:12 20:52	06:41 20:16	07:12 19:26	07:42 18:39	07:18 17:05	07:46 17:02
22	07:44 17:31	07:12 18:08	06:28 18:39	06:39 20:11	06:04 20:41	05:55 21:00	06:13 20:51	06:42 20:15	07:13 19:25	07:44 18:37	07:19 17:04	07:46 17:02
23	07:44 17:32	07:10 18:09	06:26 18:40	06:37 20:13	06:03 20:42	05:56 21:00	06:14 20:50	06:43 20:14	07:13 19:23	07:45 18:36	07:21 17:04	07:47 17:03
24	07:43 17:33	07:09 18:11	06:24 18:41	06:36 20:14	06:03 20:43	05:56 21:00	06:15 20:50	06:44 20:12	07:14 19:21	07:46 18:34	07:22 17:03	07:47 17:03
25	07:42 17:34	07:07 18:12	06:23 18:42	06:34 20:15	06:02 20:44	05:56 21:01	06:16 20:49	06:45 20:09	07:15 19:20	06:47 17:33	07:23 17:02	07:47 17:04
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29	07:39 17:39		07:16 19:47	06:29 20:19	06:00 20:47	05:58 21:01	06:19 20:45	06:49 20:04	07:19 19:13	06:51 17:28	07:27 17:01	07:49 17:07
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31	07:38 17:42		07:13 19:49		05:58 20:49		06:21 20:43	06:51 20:01		06:54 17:25		07:49 17:08
Potential sun hours	299	298	370	398	447	451	457	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali WTG: ME_33 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (61)
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:09	07:37 17:43	07:01 18:16	07:11 19:50	06:26 20:21	05:58 20:50	05:59 21:01	06:22 20:42	06:52 20:00	07:21 19:10	06:55 17:24	07:29 17:00
2	07:50 17:10	07:36 17:44	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:50	05:59 21:00	06:23 20:41	06:53 19:58	07:22 19:08	06:56 17:23	07:30 17:00
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18	07:47 17:26	07:17 18:04	06:34 18:35	06:44 20:07	06:44 20:38	05:55 20:59	06:10 20:54	06:39 20:21	07:09 19:32	07:39 18:43	07:15 17:07	07:44 17:01
19	07:46 17:27	07:16 18:05	06:33 18:36	06:43 20:08	06:07 20:39	05:55 20:59	06:11 20:53	06:40 20:19	07:10 19:30	07:40 18:41	07:16 17:06	07:44 17:01
20	07:46 17:29	07:14 18:06	06:31 18:37	06:42 20:09	06:06 20:40	05:55 21:00	06:11 20:53	06:40 20:18	07:11 19:28	07:41 18:40	07:17 17:05	07:45 17:01
21	07:45 17:30	07:13 18:07	06:29 18:38	06:40 20:10	06:05 20:41	05:55 21:00	06:12 20:52	06:41 20:16	07:12 19:26	07:42 18:39	07:18 17:05	07:46 17:02
22	07:44 17:31	07:12 18:08	06:28 18:39	06:39 20:11	06:04 20:41	05:55 21:00	06:13 20:51	06:42 20:15	07:13 19:25	07:44 18:37	07:19 17:04	07:46 17:02
23	07:44 17:32	07:10 18:10	06:26 18:40	06:37 20:13	06:03 20:42	05:56 21:00	06:14 20:50	06:43 20:14	07:13 19:23	07:45 18:36	07:21 17:04	07:47 17:03
24	07:43 17:33	07:09 18:11	06:24 18:41	06:36 20:14	06:03 20:43	05:56 21:00	06:15 20:50	06:44 20:12	07:14 19:21	07:46 18:34	07:22 17:03	07:47 17:03
25	07:42 17:34	07:07 18:12	06:23 18:42	06:34 20:15	06:02 20:44	05:56 21:01	06:16 20:49	06:45 20:09	07:15 19:20	06:47 17:33	07:23 17:02	07:47 17:04
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27	07:41 17:37	07:04 18:14	06:20 18:44	06:32 20:17	06:01 20:46	05:57 21:01	06:17 20:47	06:47 20:07	07:17 19:16	06:49 17:30	07:25 17:02	07:48 17:05
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29	07:39 17:39		07:16 19:47	06:29 20:19	06:00 20:47	05:58 21:01	06:19 20:45	06:49 20:04	07:19 19:13	06:51 17:28	07:27 17:01	07:49 17:07
30	07:38 17:41		07:15 19:48	06:28 20:20	05:59 20:48	05:58 21:01	06:20 20:44	06:50 20:03	07:20 19:11	06:53 17:26	07:28 17:00	07:49 17:07
31	07:38 17:42		07:13 19:49		05:58 20:49		06:21 20:43	06:51 20:01		06:54 17:25		07:49 17:08
Potential sun hours	299	298	370	398	447	451	457	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali WTG: ME_36 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (57)
Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:09	07:37 17:43	07:01 18:16	07:11 19:50	06:26 20:21	05:58 20:50	05:58 21:01	06:22 20:42	06:52 20:00	07:21 19:10	06:55 17:24	07:29 17:00
2	07:50 17:10	07:36 17:44	07:00 18:17	07:10 19:51	06:25 20:22	05:57 20:51	05:59 21:01	06:23 20:41	06:53 19:58	07:22 19:08	06:56 17:23	07:30 17:00
3	07:50 17:11	07:35 17:45	06:58 18:19	07:08 19:52	06:24 20:23	05:57 20:51	05:59 21:00	06:24 20:40	06:54 19:56	07:23 19:06	06:57 17:21	07:31 16:59
4	07:50 17:12	07:34 17:47	06:57 18:20	07:06 19:53	06:22 20:24	05:57 20:52	06:00 21:00	06:25 20:39	06:55 19:55	07:24 19:05	06:58 17:20	07:32 16:59
5	07:50 17:13	07:33 17:48	06:55 18:21	07:05 19:54	06:21 20:25	05:56 20:53	06:01 21:00	06:26 20:38	06:56 19:53	07:25 19:03	07:00 17:19	07:33 16:59
6	07:50 17:13	07:32 17:49	06:54 18:22	07:03 19:55	06:20 20:26	05:56 20:53	06:01 21:00	06:27 20:36	06:57 19:52	07:26 19:02	07:01 17:18	07:34 16:59
7	07:50 17:14	07:31 17:50	06:52 18:23	07:02 19:56	06:19 20:27	05:56 20:54	06:02 20:59	06:28 20:35	06:58 19:50	07:28 19:00	07:02 17:17	07:35 16:59
8	07:50 17:15	07:29 17:51	06:50 18:24	07:00 19:57	06:18 20:28	05:55 20:54	06:02 20:59	06:29 20:34	06:59 19:48	07:29 18:58	07:03 17:16	07:36 16:59
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12	07:49 17:19	07:25 17:56	06:44 18:29	06:54 20:01	06:13 20:32	05:55 20:57	06:05 20:58	06:33 20:29	07:03 19:42	07:33 18:52	07:08 17:12	07:39 16:59
13	07:49 17:21	07:24 17:58	06:42 18:30	06:52 20:02	06:12 20:33	05:55 20:57	06:06 20:57	06:34 20:28	07:04 19:40	07:34 18:50	07:09 17:11	07:40 16:59
14	07:48 17:22	07:22 17:59	06:41 18:31	06:50 20:03	06:11 20:34	05:55 20:58	06:06 20:57	06:35 20:26	07:05 19:38	07:35 18:49	07:10 17:10	07:41 16:59
15	07:48 17:23	07:21 18:00	06:39 18:32	06:49 20:04	06:10 20:35	05:55 20:58	06:07 20:56	06:35 20:25	07:06 19:37	07:36 18:47	07:11 17:09	07:42 17:00
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21	07:45 17:30	07:13 18:07	06:29 18:38	06:40 20:10	06:05 20:41	05:55 21:00	06:12 20:52	06:41 20:16	07:11 19:26	07:42 18:38	07:18 17:05	07:46 17:02
22	07:44 17:31	07:12 18:08	06:28 18:39	06:39 20:11	06:04 20:42	05:55 21:00	06:13 20:51	06:42 20:15	07:12 19:25	07:44 18:37	07:19 17:04	07:46 17:02
23	07:44 17:32	07:10 18:09	06:26 18:40	06:37 20:13	06:03 20:42	05:56 21:00	06:14 20:50	06:43 20:14	07:13 19:23	07:45 18:36	07:21 17:03	07:47 17:03
24	07:43 17:33	07:09 18:11	06:24 18:41	06:36 20:14	06:03 20:43	05:56 21:00	06:15 20:50	06:44 20:12	07:14 19:21	07:46 18:34	07:22 17:03	07:47 17:03
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29	07:39 17:39		07:16 19:47	06:29 20:19	05:59 20:47	05:58 21:01	06:19 20:45	06:49 20:04	07:19 19:13	06:51 17:28	07:27 17:01	07:49 17:07
30	07:38 17:40		07:15 19:48	06:27 20:20	05:59 20:48	05:58 21:01	06:20 20:44	06:50 20:03	07:20 19:11	06:53 17:26	07:28 17:00	07:49 17:07
31	07:38 17:42		07:13 19:49		05:58 20:49		06:21 20:43	06:51 20:01		06:54 17:25		07:49 17:08
Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali\WTG: ME_4 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (63)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:09	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:58 20:50	05:59 21:01	06:22 20:42	06:53 20:00	07:22 19:10	06:55 17:24	07:30 17:00
2	07:50 17:10	07:36 17:44	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	05:59 21:01	06:23 20:41	06:53 19:58	07:23 19:08	06:56 17:23	07:31 17:00
3	07:50 17:11	07:35 17:46	06:59 18:19	07:08 19:52	06:24 20:23	05:57 20:52	06:00 21:01	06:24 20:40	06:54 19:57	07:24 19:07	06:58 17:22	07:32 17:00
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14	07:49 17:22	07:23 17:59	06:41 18:31	06:51 20:04	06:12 20:34	05:55 20:58	06:07 20:57	06:35 20:27	07:05 19:39	07:35 18:49	07:11 17:10	07:41 17:00
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16	07:48 17:24	07:20 18:02	06:38 18:33	06:48 20:06	06:10 20:36	05:55 20:59	06:08 20:56	06:37 20:24	07:07 19:35	07:37 18:46	07:13 17:09	07:43 17:00
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18	07:47 17:27	07:17 18:04	06:35 18:35	06:45 20:08	06:08 20:38	05:55 21:00	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43	07:15 17:07	07:44 17:01
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20	07:46 17:29	07:15 18:06	06:31 18:38	06:42 20:10	06:06 20:40	05:55 21:00	06:12 20:53	06:41 20:18	07:11 19:29	07:42 18:40	07:18 17:06	07:45 17:02
21	07:45 17:30	07:13 18:07	06:30 18:39	06:40 20:11	06:05 20:41	05:56 21:00	06:12 20:52	06:42 20:17	07:12 19:27	07:43 18:39	07:19 17:05	07:46 17:02
22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:04 20:42	05:56 21:01	06:13 20:52	06:43 20:15	07:13 19:25	07:44 18:37	07:20 17:04	07:47 17:03
23	07:44 17:32	07:11 18:10	06:27 18:41	06:37 20:13	06:04 20:43	05:56 21:01	06:14 20:51	06:44 20:14	07:14 19:23	07:45 18:36	07:21 17:04	07:47 17:03
24	07:44 17:34	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01	06:15 20:50	06:45 20:12	07:15 19:22	07:46 18:35	07:22 17:03	07:47 17:04
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28	07:41 17:38	07:03 18:16	06:18 18:46	06:31 20:18	06:00 20:47	05:58 21:01	06:19 20:46	06:49 20:06	07:19 19:15	07:50 17:29	07:26 17:01	07:49 17:06
29	07:40 17:40		07:17 19:47	06:29 20:19	06:00 20:48	05:58 21:01	06:20 20:46	06:50 20:05	07:20 19:13	07:51 17:28	07:27 17:01	07:49 17:07
30	07:39 17:41		07:15 19:48	06:28 20:20	05:59 20:49	05:58 21:01	06:20 20:45	06:51 20:03	07:21 19:12	07:52 17:27	07:29 17:01	07:50 17:08
31	07:38 17:42		07:13 19:49	06:27 20:21	05:59 20:49	05:59 21:01	06:21 20:44	06:52 20:02		07:53 17:25	07:30 17:02	07:51 17:08
Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali\WTG: ME_5 - VIND-SYSSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (44)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:58 20:21-20:26/5 20:50
2	07:50 17:10	07:36 17:45	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:20-20:26/6 20:51
3	07:50 17:11	07:35 17:46	06:59 18:19	07:08 19:30-19:31/1 19:52	06:24 20:23	05:58 20:20-20:27/7 20:52
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:30-19:32/2 19:53	06:23 20:24	05:57 20:21-20:28/7 20:52
5	07:50 17:13	07:33 17:48	06:56 18:21	07:05 19:32-19:33/1 19:54	06:22 20:25	05:57 20:20-20:28/8 20:53
6	07:50 17:14	07:32 17:50	06:54 18:22	07:04 19:55	06:20 20:26	05:56 20:21-20:29/8 20:54
7	07:50 17:15	07:31 17:51	06:53 18:24	07:02 19:56	06:19 20:27	05:56 20:21-20:30/9 20:54
8	07:50 17:16	07:30 17:52	06:51 18:25	07:00 19:57	06:18 20:28	05:56 20:22-20:30/8 20:55
9	07:50 17:17	07:29 17:53	06:49 18:26	06:59 19:36-19:37/1 19:58	06:17 20:29	05:56 20:21-20:30/9 20:56
10	07:50 17:18	07:28 17:54	06:48 18:27	06:57 19:37-19:38/1 19:59	06:16 20:06-20:08/2 20:31	05:56 20:22-20:31/9 20:56
11	07:50 17:19	07:26 17:56	06:46 18:28	06:56 19:37-19:39/2 20:01	06:15 20:06-20:08/2 20:32	05:55 20:22-20:31/9 20:57
12	07:49 17:20	07:25 17:57	06:45 18:29	06:54 19:39-19:40/1 20:02	06:14 20:06-20:09/3 20:32	05:55 20:22-20:32/10 20:57
13	07:49 17:21	07:24 17:58	06:43 18:30	06:53 20:03	06:13 20:06-20:10/4 20:33	05:55 20:23-20:32/9 20:58
14	07:49 17:22	07:23 17:59	06:41 18:31	06:51 20:04	06:12 20:06-20:11/5 20:34	05:55 20:23-20:33/10 20:58
15	07:48 17:23	07:21 18:00	06:40 18:32	06:49 20:05	06:11 20:07-20:12/5 20:35	05:55 20:23-20:33/10 20:58
16	07:48 17:24	07:20 18:02	06:38 18:33	06:48 20:06	06:10 20:07-20:13/6 20:36	05:55 20:24-20:33/9 20:59
17	07:48 17:25	07:19 18:03	06:36 18:34	06:46 20:07	06:09 20:08-20:13/5 20:37	05:55 20:24-20:34/10 20:59
18	07:47 17:27	07:18 18:04	06:35 18:35	06:45 20:08	06:08 20:09-20:14/5 20:38	05:55 20:24-20:34/10 21:00
19	07:47 17:28	07:16 18:05	06:33 18:37	06:43 20:09	06:07 20:10-20:15/5 20:39	05:55 20:24-20:34/10 21:00
20	07:46 17:29	07:15 18:06	06:32 18:38	06:42 19:47-19:48/1 20:10	06:06 20:40	05:55 20:25-20:35/10 21:00
21	07:46 17:30	07:13 18:08	06:30 18:39	06:40 19:47-19:49/2 20:11	06:05 20:41	05:56 20:25-20:35/10 21:00
22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 19:48-19:50/2 20:12	06:05 20:42	05:56 20:25-20:35/10 21:01
23	07:44 17:32	07:11 18:10	06:27 18:41	06:38 19:48-19:50/2 20:13	06:04 20:43	05:56 20:25-20:35/10 21:01
24	07:44 17:34	07:09 18:11	06:25 18:42	06:36 19:51-19:52/1 20:14	06:03 20:44	05:56 20:26-20:36/10 21:01
25	07:43 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:02 20:45	05:57 20:26-20:36/10 21:01
26	07:42 17:36	07:06 18:13	06:22 18:44	06:33 20:16	06:02 20:45	05:57 20:26-20:36/10 21:01
27	07:41 17:37	07:05 18:15	06:20 18:45	06:32 20:17	06:01 20:21-20:22/1 20:46	05:57 20:27-20:36/9 21:01
28	07:41 17:38	07:03 18:16	06:18 18:46	06:31 20:18	06:00 20:20-20:22/2 20:47	05:58 20:26-20:36/10 21:01
29	07:40 17:40		07:17 19:47	06:29 20:19	06:00 20:21-20:23/2 20:48	05:58 20:26-20:36/10 21:01
30	07:39 17:41		07:15 19:48	06:28 20:20	05:59 20:20-20:24/4 20:49	05:59 20:27-20:36/9 21:01
31	07:38 17:42		07:13 19:49		05:59 20:20-20:25/5 20:50	
Potential sun hours	299	298	370	398	447	451
Sum of minutes with flicker	0	0	0	17	56	271

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
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SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali\WTG: ME_5 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (44)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	July	August	September	October	November	December
1	05:59 20:26-20:36/10 21:01	06:22 20:16-20:19/3 20:43	06:53 19:36-19:38/2 20:00	07:22 19:10	06:55 17:24	07:30 17:00
2	05:59 20:27-20:36/9 21:01	06:23 20:16-20:18/2 20:41	06:54 19:35-19:36/1 19:58	07:23 19:09	06:57 17:23	07:31 17:00
3	06:00 20:26-20:35/9 21:01	06:24 20:16-20:17/1 20:40	06:55 19:34-19:35/1 19:57	07:24 19:07	06:58 17:22	07:32 17:00
4	06:00 20:27-20:36/9 21:01	06:25 20:39	06:56 19:55	07:25 19:05	06:59 17:21	07:33 17:00
5	06:01 20:27-20:35/8 21:00	06:26 20:38	06:56 19:54	07:26 19:04	07:00 17:20	07:34 17:00
6	06:02 20:27-20:35/8 21:00	06:27 20:37	06:57 19:52	07:27 19:02	07:01 17:18	07:35 16:59
7	06:02 20:28-20:35/7 21:00	06:28 20:36	06:58 19:27-19:29/2 19:50	07:28 19:00	07:02 17:17	07:36 16:59
8	06:03 20:27-20:34/7 21:00	06:29 20:35	06:59 19:26-19:27/1 19:49	07:29 18:59	07:04 17:16	07:37 16:59
9	06:03 20:28-20:34/6 20:59	06:30 20:33	07:00 19:47	07:30 18:57	07:05 17:15	07:37 16:59
10	06:04 20:27-20:33/6 20:59	06:31 20:32	07:01 19:45	07:31 18:56	07:06 17:14	07:38 16:59
11	06:05 20:28-20:33/5 20:58	06:32 20:31	07:02 19:44	07:32 18:54	07:07 17:13	07:39 16:59
12	06:06 20:28-20:33/5 20:58	06:33 20:29	07:03 19:42	07:33 18:52	07:08 17:12	07:40 17:00
13	06:06 20:29-20:33/4 20:58	06:34 20:28	07:04 19:40	07:34 18:51	07:09 17:11	07:41 17:00
14	06:07 20:29-20:32/3 20:57	06:35 20:27	07:05 19:39	07:35 18:49	07:11 17:11	07:41 17:00
15	06:08 20:29-20:32/3 20:56	06:36 20:25	07:06 19:37	07:36 18:48	07:12 17:10	07:42 17:00
16	06:09 20:30-20:32/2 20:56	06:37 20:24	07:07 19:35	07:37 18:46	07:13 17:09	07:43 17:00
17	06:09 20:55	06:38 20:23	07:08 19:34	07:39 18:45	07:14 17:08	07:44 17:01
18	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43	07:15 17:07	07:44 17:01
19	06:11 20:54	06:40 19:56-19:57/1 20:20	07:10 19:30	07:41 18:42	07:16 17:07	07:45 17:01
20	06:12 20:53	06:41 19:54-19:56/2 20:18	07:11 19:29	07:42 18:40	07:18 17:06	07:45 17:02
21	06:13 20:53	06:42 19:52-19:55/3 20:17	07:12 19:27	07:43 18:39	07:19 17:05	07:46 17:02
22	06:13 20:52	06:43 19:51-19:53/2 20:15	07:13 19:25	07:44 18:38	07:20 17:05	07:47 17:03
23	06:14 20:51	06:44 19:51-19:52/1 20:14	07:14 19:24	07:45 18:36	07:21 17:04	07:47 17:03
24	06:15 20:22-20:26/4 20:50	06:45 20:13	07:15 19:22	07:46 18:35	07:22 17:03	07:48 17:04
25	06:16 20:20-20:25/5 20:49	06:46 20:11	07:16 19:20	06:47 17:33	07:23 17:03	07:48 17:04
26	06:17 20:19-20:24/5 20:48	06:47 20:09	07:17 19:19	06:49 17:32	07:24 17:02	07:48 17:05
27	06:18 20:18-20:24/6 20:47	06:48 20:08	07:18 19:17	06:50 17:31	07:25 17:02	07:49 17:06
28	06:19 20:17-20:23/6 20:47	06:49 20:06	07:19 19:15	06:51 17:29	07:27 17:01	07:49 17:06
29	06:20 20:17-20:22/5 20:46	06:50 20:05	07:20 19:14	06:52 17:28	07:28 17:01	07:49 17:07
30	06:21 20:17-20:21/4 20:45	06:51 20:03	07:21 19:12	06:53 17:27	07:29 17:01	07:50 17:08
31	06:22 20:16-20:20/4 20:44	06:52 19:38-19:39/1 20:02		06:54 17:25		07:50 17:09
Potential sun hours	457	427	375	346	299	289
Sum of minutes with flicker	140	16	7	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali\WTG: ME_6 - VIND-SYSSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (46)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 16:31-16:35/4 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:58 20:50	05:59 21:01	06:22 20:43	06:53 20:00	07:22 19:10	06:55 17:24	07:30 17:00
2	07:50 16:31-16:36/5 17:10	07:36 17:45	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	05:59 21:01	06:23 20:41	06:54 19:58	07:23 19:09	06:57 17:23	07:31 17:00
3	07:50 16:32-16:36/4 17:11	07:35 17:46	06:59 18:19	07:08 19:52	06:24 20:23	05:57 20:52	06:00 21:01	06:24 20:40	06:55 19:57	07:24 19:07	06:58 17:22	07:32 17:00
4	07:50 16:32-16:37/5 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24	05:57 20:52	06:00 21:01	06:25 20:39	06:55 19:55	07:25 19:05	06:59 17:21	07:33 17:00
5	07:50 16:33-16:37/4 17:13	07:33 17:48	06:56 18:21	07:05 19:54	06:22 20:25	05:57 20:53	06:01 21:00	06:26 20:38	06:56 19:54	07:26 19:04	07:00 17:20	07:34 17:00
6	07:50 16:34-16:37/3 17:14	07:32 17:49	06:54 18:22	07:04 19:55	06:20 20:26	05:56 20:54	06:02 21:00	06:27 20:37	06:57 19:52	07:27 19:02	07:01 17:18	07:35 16:59
7	07:50 16:35-16:37/2 17:15	07:31 17:51	06:53 18:24	07:02 19:56	06:19 20:27	05:56 20:54	06:02 21:00	06:28 20:36	06:58 19:50	07:28 19:00	07:02 17:17	07:36 16:59
8	07:50 17:16	07:30 17:52	06:51 18:25	07:00 19:57	06:18 20:28	05:56 20:55	06:03 21:00	06:29 20:35	06:59 19:49	07:29 18:59	07:04 17:16	07:37 16:59
9	07:50 17:17	07:29 17:53	06:49 18:26	06:59 19:58	06:17 20:29	05:56 20:56	06:03 20:59	06:30 20:33	07:00 19:47	07:30 18:57	07:05 17:15	07:37 16:59
10	07:50 17:18	07:28 17:54	06:48 18:27	06:57 19:59	06:16 20:30	05:56 20:56	06:04 20:59	06:31 20:32	07:01 19:45	07:31 18:56	07:06 17:14	07:38 16:59
11	07:50 17:19	07:26 17:56	06:46 18:28	06:56 20:01	06:15 20:31	05:55 20:57	06:05 20:58	06:32 20:31	07:02 19:44	07:32 18:54	07:07 17:13	07:39 16:59
12	07:49 17:20	07:25 17:57	06:45 18:29	06:54 20:02	06:14 20:32	05:55 20:57	06:06 20:58	06:33 20:29	07:03 19:42	07:33 18:52	07:08 17:12	07:40 17:00
13	07:49 17:21	07:24 17:58	06:43 18:30	06:53 20:03	06:13 20:33	05:55 20:58	06:06 20:58	06:34 20:28	07:04 19:40	07:34 18:51	07:09 17:11	07:41 17:00
14	07:49 17:22	07:23 17:59	06:41 18:31	06:51 20:04	06:12 20:34	05:55 20:58	06:07 20:57	06:35 20:27	07:05 19:39	07:35 18:49	07:11 17:10	07:41 17:00
15	07:48 17:23	07:21 18:00	06:40 18:32	06:49 20:05	06:11 20:35	05:55 20:58	06:08 20:56	06:36 20:25	07:06 19:37	07:36 18:48	07:12 17:10	07:42 17:00
16	07:48 17:24	07:20 18:02	06:38 18:33	06:48 20:06	06:10 20:36	05:55 20:59	06:08 20:56	06:37 20:24	07:07 19:35	07:37 18:46	07:13 17:09	07:43 17:00
17	07:48 17:25	07:19 18:03	06:36 18:34	06:46 20:07	06:09 20:37	05:55 20:59	06:09 20:55	06:38 20:23	07:08 19:34	07:39 18:45	07:14 17:08	07:44 17:01
18	07:47 17:27	07:18 18:04	06:35 18:35	06:45 20:08	06:08 20:38	05:55 21:00	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43	07:15 17:07	07:44 17:01
19	07:47 17:28	07:16 18:05	06:33 18:37	06:43 20:09	06:07 20:39	05:55 21:00	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	07:16 17:06	07:45 17:01
20	07:46 17:29	07:15 18:06	06:32 18:38	06:42 20:10	06:06 20:40	05:55 21:00	06:12 20:53	06:41 20:18	07:11 19:29	07:42 18:40	07:18 17:06	07:45 17:02
21	07:46 17:30	07:13 18:08	06:30 18:39	06:40 20:11	06:05 20:41	05:56 21:00	06:13 20:53	06:42 20:17	07:12 19:27	07:43 18:39	07:19 17:05	07:46 17:02
22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:05 20:42	05:56 21:01	06:13 20:52	06:43 20:15	07:13 19:25	07:44 18:37	07:20 17:05	07:47 17:03
23	07:44 17:32	07:11 18:10	06:27 18:41	06:38 20:13	06:04 20:43	05:56 21:01	06:14 20:51	06:44 20:14	07:14 19:24	07:45 18:36	07:21 17:04	07:47 17:03
24	07:44 17:34	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01	06:15 20:50	06:45 20:12	07:15 19:22	07:46 18:35	07:22 17:03	07:48 17:04
25	07:43 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:02 20:45	05:57 21:01	06:16 20:49	06:46 20:11	07:16 19:20	07:47 17:33	07:23 17:03	07:48 17:04
26	07:42 17:36	07:06 18:13	06:22 18:44	06:33 20:16	06:02 20:45	05:57 21:01	06:17 20:48	06:47 20:09	07:17 19:19	07:48 17:32	07:24 17:02	07:48 17:05
27	07:41 17:37	07:05 18:15	06:20 18:45	06:32 20:17	06:01 20:46	05:57 21:01	06:18 20:47	06:48 20:08	07:18 19:17	07:49 17:31	07:25 17:02	07:49 16:30-16:31/1
28	07:41 17:38	07:03 18:16	06:18 18:46	06:31 20:18	06:00 20:47	05:58 21:01	06:19 20:47	06:49 20:06	07:19 19:15	07:50 17:29	07:27 17:01	07:49 17:06
29	07:40 17:40	07:17 19:47	06:29 20:19	06:00 20:48	05:58 21:01	05:58 20:46	06:20 20:46	06:50 20:05	07:20 19:14	06:52 17:28	07:28 17:01	07:49 17:07
30	07:39 17:41	07:15 19:48	06:28 20:20	05:59 20:49	05:58 21:01	05:58 20:45	06:21 20:45	06:51 20:03	07:21 19:12	06:53 17:27	07:29 17:01	07:50 17:08
31	07:38 17:42	07:38 19:49	07:13 19:49	07:13 20:49	05:59 20:49	05:59 20:44	06:22 20:44	06:52 20:02	07:22 17:25	06:54 17:25	07:30 17:09	07:50 16:31-16:35/4
Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	27	0	0	0	0	0	0	0	0	0	0	52

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali\WTG: ME_7 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (47)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:59 20:50	05:59 21:01	06:23 20:43	06:53 20:00	07:22 19:10	06:55 17:24	07:30 17:01
2	07:50 17:11	07:36 17:45	07:00 18:18	07:10 19:51	06:26 20:22	05:58 20:51	06:00 21:01	06:24 20:42	06:54 19:59	07:23 19:09	06:57 17:23	07:31 17:00
3	07:50 17:11	07:35 17:46	06:59 18:19	07:09 19:52	06:24 20:23	05:58 20:52	06:00 21:01	06:24 20:40	06:55 19:57	07:24 19:07	06:58 17:22	07:32 17:00
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24	05:57 20:52	06:01 21:01	06:25 20:39	06:56 19:55	07:25 19:05	06:59 17:21	07:33 17:00
5	07:50 17:13	07:33 17:48	06:56 18:21	07:05 19:54	06:22 20:25	05:57 20:53	06:01 21:00	06:26 20:38	06:57 19:54	07:26 19:04	07:00 17:20	07:34 17:00
6	07:50 17:14	07:32 17:50	06:54 18:23	07:04 19:55	06:21 20:27	05:57 20:54	06:02 21:00	06:27 20:37	06:58 19:52	07:27 19:02	07:01 17:19	07:35 17:00
7	07:50 17:15	07:31 17:51	06:53 18:24	07:02 19:56	06:19 20:28	05:56 20:54	06:02 21:00	06:28 20:36	06:59 19:50	07:28 19:01	07:02 17:17	07:36 17:00
8	07:50 17:16	07:30 17:52	06:51 18:25	07:01 19:58	06:18 20:29	05:56 20:55	06:03 21:00	06:29 20:35	06:59 19:49	07:29 18:59	07:04 17:16	07:37 16:59
9	07:50 17:17	07:29 17:53	06:49 18:26	06:59 19:59	06:17 20:30	05:56 20:56	06:04 20:59	06:30 20:33	07:00 19:47	07:30 18:57	07:05 17:15	07:37 16:59
10	07:50 17:18	07:28 17:55	06:48 18:27	06:57 20:00	06:16 20:31	05:56 20:56	06:04 20:59	06:31 20:32	07:01 19:45	07:31 18:56	07:06 17:14	07:38 17:00
11	07:50 17:19	07:26 17:56	06:46 18:28	06:56 20:01	06:15 20:32	05:56 20:57	06:05 20:59	06:32 20:31	07:02 19:44	07:32 18:54	07:07 17:13	07:39 17:00
12	07:49 17:20	07:25 17:57	06:45 18:29	06:54 20:02	06:14 20:33	05:55 20:57	06:06 20:58	06:33 20:30	07:03 19:42	07:33 18:53	07:08 17:12	07:40 17:00
13	07:49 17:21	07:24 17:58	06:43 18:30	06:53 20:03	06:13 20:34	05:55 20:58	06:06 20:58	06:34 20:28	07:04 19:40	07:34 18:51	07:10 17:12	07:41 17:00
14	07:49 17:22	07:23 17:59	06:41 18:31	06:51 20:04	06:12 20:35	05:55 20:58	06:07 20:57	06:35 20:27	07:05 19:39	07:35 18:49	07:11 17:11	07:42 17:00
15	07:49 17:23	07:22 18:01	06:40 18:32	06:50 20:05	06:11 20:35	05:55 20:59	06:08 20:57	06:36 20:26	07:06 19:37	07:36 18:48	07:12 17:10	07:42 17:00
16	07:48 17:24	07:20 18:02	06:38 18:33	06:48 20:06	06:10 20:36	05:55 20:59	06:09 20:56	06:37 20:24	07:07 19:35	07:38 18:46	07:13 17:09	07:43 17:01
17	07:48 17:26	07:19 18:03	06:37 18:34	06:47 20:07	06:09 20:37	05:55 20:59	06:09 20:55	06:38 20:23	07:08 19:34	07:39 18:45	07:14 17:08	07:44 17:01
18	07:47 17:27	07:18 18:04	06:35 18:36	06:45 20:08	06:08 20:38	05:55 21:00	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43	07:15 17:07	07:44 17:01
19	07:47 17:28	07:16 18:05	06:33 18:37	06:44 20:09	06:07 20:39	05:55 21:00	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	07:17 17:07	07:45 17:02
20	07:46 17:29	07:15 18:07	06:32 18:38	06:42 20:10	06:06 20:40	05:56 21:00	06:12 20:53	06:41 20:18	07:11 19:29	07:42 18:40	07:18 17:06	07:46 17:02
21	07:46 17:30	07:14 18:08	06:30 18:39	06:41 20:11	06:06 20:41	05:56 21:00	06:13 20:53	06:42 20:17	07:12 19:27	07:43 18:39	07:19 17:05	07:46 17:02
22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:05 20:42	05:56 21:01	06:14 20:52	06:43 20:16	07:13 19:25	07:44 18:38	07:20 17:05	07:47 17:03
23	07:44 17:33	07:11 18:10	06:27 18:41	06:38 20:13	06:04 20:43	05:56 21:01	06:14 20:51	06:44 20:14	07:14 19:24	07:45 18:36	07:21 17:04	07:47 17:03
24	07:44 17:34	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01	06:15 20:50	06:45 20:13	07:15 19:22	07:46 18:35	07:22 17:03	07:48 17:04
25	07:43 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:03 20:45	05:57 21:01	06:16 20:49	06:46 20:11	07:16 19:20	07:47 17:33	07:23 17:03	07:48 17:05
26	07:42 17:36	07:06 18:13	06:22 18:44	06:33 20:16	06:02 20:46	05:57 21:01	06:17 20:48	06:47 20:10	07:17 19:19	07:48 17:32	07:24 17:02	07:48 17:05
27	07:41 17:37	07:05 18:15	06:20 18:45	06:32 20:17	06:01 20:46	05:57 21:01	06:18 20:48	06:48 20:08	07:18 19:17	07:49 17:31	07:25 17:02	07:49 17:06
28	07:41 17:39	07:03 18:16	06:18 18:46	06:31 20:18	06:01 20:47	05:58 21:01	06:19 20:47	06:49 20:06	07:19 19:15	07:50 17:29	07:26 17:02	07:49 17:06
29	07:40 17:40		07:17 19:47	06:29 20:19	06:00 20:48	05:58 21:01	06:20 20:46	06:50 20:05	07:20 19:14	06:52 17:28	07:28 17:01	07:49 17:07
30	07:39 17:41		07:15 19:48	06:28 20:20	06:00 20:49	05:59 21:01	06:21 20:45	06:51 20:03	07:21 19:12	06:53 17:27	07:29 17:01	07:50 17:08
31	07:38 17:42		07:14 19:49		05:59 20:50		06:22 20:44	06:52 20:02		06:54 17:26		07:50 17:09
Potential sun hours	299	298	370	398	447	451	457	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali\WTG: ME_8 - VIND-SYSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (41)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50	07:37	07:02	07:12	06:27	05:58	05:59	06:22	06:52	07:22	06:55	07:30
	17:09	17:43	18:17	19:50	20:21	20:50	21:01	20:42	20:00	19:10	17:24	17:00
2	07:50	07:36	07:00	07:10	06:25	05:58	05:59	06:23	06:53	07:23	06:56	07:31
	17:10	17:44	18:18	19:51	20:22	20:51	21:01	20:41	19:58	19:08	17:23	17:00
3	07:50	07:35	06:59	07:08	06:24	05:57	06:00	06:24	06:54	07:24	06:58	07:32
	17:11	17:46	18:19	19:52	20:23	20:52	21:01	20:40	19:57	19:07	17:22	17:00
4	07:50	07:34	06:57	07:07	06:23	05:57	06:00	06:25	06:55	07:25	06:59	07:33
	17:12	17:47	18:20	19:53	20:24	20:52	21:01	20:39	19:55	19:05	17:21	17:00
5	07:50	07:33	06:56	07:05	06:22	05:57	06:01	06:26	06:56	07:26	07:00	07:34
	17:13	17:48	18:21	19:54	20:25	20:53	21:00	20:38	19:54	19:04	17:19	16:59
6	07:50	07:32	06:54	07:04	06:20	05:56	06:01	06:27	06:57	07:27	07:01	07:35
	17:14	17:49	18:22	19:55	20:26	20:54	21:00	20:37	19:52	19:02	17:18	16:59
7	07:50	07:31	06:52	07:02	06:19	05:56	06:02	06:28	06:58	07:28	07:02	07:36
	17:15	17:51	18:23	19:56	20:27	20:54	21:00	20:36	19:50	19:00	17:17	16:59
8	07:50	07:30	06:51	07:00	06:18	05:56	06:03	06:29	06:59	07:29	07:03	07:36
	17:16	17:52	18:25	19:57	20:28	20:55	21:00	20:34	19:49	18:59	17:16	16:59
9	07:50	07:29	06:49	06:59	06:17	05:56	06:03	06:30	07:00	07:30	07:05	07:37
	17:17	17:53	18:26	19:58	20:29	20:55	20:59	20:33	19:47	18:57	17:15	16:59
10	07:50	07:28	06:48	06:57	06:16	05:55	06:04	06:31	07:01	07:31	07:06	07:38
	17:18	17:54	18:27	19:59	20:30	20:56	20:59	20:32	19:45	18:55	17:14	16:59
11	07:50	07:26	06:46	06:56	06:15	05:55	06:05	06:32	07:02	07:32	07:07	07:39
	17:19	17:56	18:28	20:00	20:31	20:57	20:58	20:31	19:44	18:54	17:13	16:59
12	07:49	07:25	06:44	06:54	06:14	05:55	06:05	06:33	07:03	07:33	07:08	07:40
	17:20	17:57	18:29	20:01	20:32	20:57	20:58	20:29	19:42	18:52	17:12	16:59
13	07:49	07:24	06:43	06:52	06:13	05:55	06:06	06:34	07:04	07:34	07:09	07:41
	17:21	17:58	18:30	20:03	20:33	20:58	20:57	20:28	19:40	18:51	17:11	17:00
14	07:49	07:23	06:41	06:51	06:12	05:55	06:07	06:35	07:05	07:35	07:11	07:41
	17:22	17:59	18:31	20:04	20:34	20:58	20:57	20:27	19:39	18:49	17:10	17:00
15	07:48	07:21	06:40	06:49	06:11	05:55	06:08	06:36	07:06	07:36	07:12	07:42
	17:23	18:00	18:32	20:05	20:35	20:58	20:56	20:25	19:37	18:48	17:10	17:00
16	07:48	07:20	06:38	06:48	06:10	05:55	06:08	06:37	07:07	07:37	07:13	07:43
	17:24	18:02	18:33	20:06	20:36	20:59	20:56	20:24	19:35	18:46	17:09	17:00
17	07:48	07:19	06:36	06:46	06:09	05:55	06:09	06:38	07:08	07:38	07:14	07:44
	17:25	18:03	18:34	20:07	20:37	20:59	20:55	20:23	19:34	18:45	17:08	17:01
18	07:47	07:17	06:35	06:45	06:08	05:55	06:10	06:39	07:09	07:40	07:15	07:44
	17:26	18:04	18:35	20:08	20:38	20:59	20:55	20:21	19:32	18:43	17:07	17:01
19	07:47	07:16	06:33	06:43	06:07	05:55	06:11	06:40	07:10	07:41	07:16	07:45
	17:28	18:05	18:36	20:09	20:39	21:00	20:54	20:20	19:30	18:42	17:06	17:01
20	07:46	07:15	06:31	06:42	06:06	05:55	06:12	06:41	07:11	07:42	07:18	07:45
	17:29	18:06	18:37	20:10	20:40	21:00	20:53	20:18	19:29	18:40	17:06	17:02
21	07:45	07:13	06:30	06:40	06:05	05:56	06:12	06:42	07:12	07:43	07:19	07:46
	17:30	18:07	18:39	20:11	20:41	21:00	20:52	20:17	19:27	18:39	17:05	17:02
22	07:45	07:12	06:28	06:39	06:04	05:56	06:13	06:43	07:13	07:44	07:20	07:46
	17:31	18:09	18:40	20:12	20:42	21:01	20:52	20:15	19:25	18:37	17:04	17:03
23	07:44	07:11	06:26	06:37	06:04	05:56	06:14	06:44	07:14	07:45	07:21	07:47
	17:32	18:10	18:41	20:13	20:43	21:01	20:51	20:14	19:23	18:36	17:04	17:03
24	07:44	07:09	06:25	06:36	06:03	05:56	06:15	06:45	07:15	07:46	07:22	07:47
	17:34	18:11	18:42	20:14	20:44	21:01	20:50	20:12	19:22	18:35	17:03	17:04
25	07:43	07:08	06:23	06:35	06:02	05:56	06:16	06:46	07:16	06:47	07:23	07:48
	17:35	18:12	18:43	20:15	20:45	21:01	20:49	20:11	19:20	17:33	17:03	17:04
26	07:42	07:06	06:22	06:33	06:02	05:57	06:17	06:47	07:17	06:48	07:24	07:48
	17:36	18:13	18:44	20:16	20:45	21:01	20:48	20:09	19:18	17:32	17:02	17:05
27	07:41	07:05	06:20	06:32	06:01	05:57	06:18	06:48	07:18	06:50	07:25	07:49
	17:37	18:14	18:45	20:17	20:46	21:01	20:47	20:08	19:17	17:31	17:02	17:06
28	07:41	07:03	06:18	06:31	06:00	05:58	06:19	06:49	07:19	06:51	07:26	07:49
	17:38	18:16	18:46	20:18	20:47	21:01	20:46	20:06	19:15	17:29	17:01	17:06
29	07:40		07:17	06:29	06:00	05:58	06:20	06:50	07:20	06:52	07:28	07:49
	17:40		19:47	20:19	20:48	21:01	20:45	20:05	19:13	17:28	17:01	17:07
30	07:39		07:15	06:28	05:59	05:58	06:20	06:51	07:21	06:53	07:29	07:49
	17:41		19:48	20:20	20:49	21:01	20:45	20:03	19:12	17:27	17:01	17:08
31	07:38		07:13		05:59		06:21	06:52		06:54		07:50
	17:42		19:49		20:49		20:43	20:02		17:25		17:08
Potential sun hours	299	298	370	398	447	451	458	427	375	346	299	289
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

SHADOW - Calendar per WTG

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali\WTG: ME_9 - VIND-SYSSSEL 150 26.0 !#! hub: 30,0 m (TOT: 43,0 m) (48)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset

The rotor plane is always perpendicular to the line from the WTG to the sun

The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:50 17:10	07:37 17:43	07:02 18:17	07:12 19:50	06:27 20:21	05:58 20:50	05:59 21:01	06:23 20:43	06:53 20:00	07:22 19:10	06:55 17:24	07:30 17:01
2	07:50 17:11	07:36 17:45	07:00 18:18	07:10 19:51	06:25 20:22	05:58 20:51	06:00 21:01	06:24 20:42	06:54 19:59	07:23 19:09	06:57 17:23	07:31 17:00
3	07:50 17:11	07:35 17:46	06:59 18:19	07:09 19:52	06:24 20:23	05:58 20:52	06:00 21:01	06:24 20:40	06:55 19:57	07:24 19:07	06:58 17:22	07:32 17:00
4	07:50 17:12	07:34 17:47	06:57 18:20	07:07 19:53	06:23 20:24	05:57 20:52	06:01 21:01	06:25 20:39	06:56 19:55	07:25 19:05	06:59 17:21	07:33 17:00
5	07:50 17:13	07:33 17:48	06:56 18:21	07:05 19:54	06:22 20:25	05:57 20:53	06:01 21:01	06:26 20:38	06:57 19:54	07:26 19:04	07:00 17:20	07:34 17:00
6	07:50 17:14	07:32 17:50	06:54 18:23	07:04 19:55	06:21 20:27	05:57 20:54	06:02 21:00	06:27 20:37	06:58 19:52	07:27 19:02	07:01 17:19	07:35 17:00
7	07:50 17:15	07:31 17:51	06:53 18:24	07:02 19:56	06:19 20:28	05:56 20:54	06:02 21:00	06:28 20:36	06:59 19:50	07:28 19:00	07:02 17:17	07:36 17:00
8	07:50 17:16	07:30 17:52	06:51 18:25	07:01 19:57	06:18 20:29	05:56 20:55	06:03 21:00	06:29 20:35	06:59 19:49	07:29 18:59	07:04 17:16	07:37 16:59
9	07:50 17:17	07:29 17:53	06:49 18:26	06:59 19:59	06:17 20:30	05:56 20:56	06:04 20:59	06:30 20:33	07:00 19:47	07:30 18:57	07:05 17:15	07:37 16:59
10	07:50 17:18	07:28 17:55	06:48 18:27	06:57 20:00	06:16 20:31	05:56 20:56	06:04 20:59	06:31 20:32	07:01 19:45	07:31 18:56	16:44-16:47/3 17:14	07:38 17:00
11	07:50 17:19	07:26 17:56	06:46 18:28	06:56 20:01	06:15 20:32	05:56 20:57	06:05 20:59	06:32 20:31	07:02 19:44	07:32 18:54	16:43-16:48/5 17:13	07:39 17:00
12	07:49 17:20	07:25 17:57	06:45 18:29	06:54 20:02	06:14 20:33	05:55 20:57	06:06 20:58	06:33 20:30	07:03 19:42	07:33 18:53	16:43-16:49/6 17:12	07:40 17:00
13	07:49 17:21	07:24 17:58	06:43 18:30	06:53 20:03	06:13 20:34	05:55 20:58	06:06 20:58	06:34 20:28	07:04 19:40	07:34 18:51	16:44-16:48/4 17:12	07:41 17:00
14	07:49 17:22	07:23 17:59	06:41 18:31	06:51 20:04	06:12 20:35	05:55 20:58	06:07 20:57	06:35 20:27	07:05 19:39	07:35 18:49	16:44-16:47/3 17:11	07:42 17:00
15	07:49 17:23	07:22 18:01	06:40 18:32	06:50 20:05	06:11 20:35	05:55 20:59	06:08 20:57	06:36 20:26	07:06 19:37	07:36 18:48	07:12 17:10	07:42 17:00
16	07:48 17:24	07:20 18:02	06:38 18:33	06:48 20:06	06:10 20:36	05:55 20:59	06:09 20:56	06:37 20:24	07:07 19:35	07:38 18:46	07:13 17:09	07:43 17:01
17	07:48 17:26	07:19 18:03	06:37 18:34	06:47 20:07	06:09 20:37	05:55 20:59	06:09 20:55	06:38 20:23	07:08 19:34	07:39 18:45	07:14 17:08	07:44 17:01
18	07:47 17:27	07:18 18:04	06:35 18:36	06:45 20:08	06:08 20:38	05:55 21:00	06:10 20:55	06:39 20:21	07:09 19:32	07:40 18:43	07:15 17:07	07:44 17:01
19	07:47 17:28	07:16 18:05	06:33 18:37	06:44 20:09	06:07 20:39	05:55 21:00	06:11 20:54	06:40 20:20	07:10 19:30	07:41 18:42	07:17 17:07	07:45 17:02
20	07:46 17:29	07:15 18:07	06:32 18:38	06:42 20:10	06:06 20:40	05:56 21:00	06:12 20:53	06:41 20:18	07:11 19:29	07:42 18:40	07:18 17:06	07:46 17:02
21	07:46 17:30	07:14 18:08	06:30 18:39	06:41 20:11	06:05 20:41	05:56 21:00	06:13 20:53	06:42 20:17	07:12 19:27	07:43 18:39	07:19 17:05	07:46 17:02
22	07:45 17:31	07:12 18:09	06:28 18:40	06:39 20:12	06:05 20:42	05:56 21:01	06:14 20:52	06:43 20:16	07:13 19:25	07:44 18:38	07:20 17:05	07:47 17:03
23	07:44 17:33	07:11 18:10	06:27 18:41	06:38 20:13	06:04 20:43	05:56 21:01	06:14 20:51	06:44 20:14	07:14 19:24	07:45 18:36	07:21 17:04	07:47 17:03
24	07:44 17:34	07:09 18:11	06:25 18:42	06:36 20:14	06:03 20:44	05:56 21:01	06:15 20:50	06:45 20:13	07:15 19:22	07:46 18:35	07:22 17:03	07:48 17:04
25	07:43 17:35	07:08 18:12	06:23 18:43	06:35 20:15	06:03 20:45	05:57 21:01	06:16 20:49	06:46 20:11	07:16 19:20	07:47 18:33	07:23 17:03	07:48 17:04
26	07:42 17:36	07:06 18:13	06:22 18:44	06:33 20:16	06:02 20:46	05:57 21:01	06:17 20:48	06:47 20:10	07:17 19:19	07:48 18:32	07:24 17:02	07:48 17:05
27	07:41 17:37	07:05 18:15	06:20 18:45	06:32 20:17	06:01 20:46	05:57 21:01	06:18 20:48	06:48 20:08	07:18 19:17	07:50 18:31	06:50 17:22	07:49 17:06
28	07:41 17:39	17:12-17:15/3 18:16	07:03 18:16	06:18 20:18	06:31 20:47	05:58 21:01	06:19 20:47	06:49 20:06	07:19 19:15	06:51 17:29	07:27 17:02	07:49 17:06
29	07:40 17:40	17:12-17:16/4	07:00 18:16	06:29 20:19	06:00 20:48	05:58 21:01	06:20 20:46	06:50 20:05	07:20 19:14	06:52 17:28	07:28 17:01	07:49 17:07
30	07:39 17:41	17:12-17:17/5	06:59 18:17	06:28 20:20	05:59 20:49	05:59 21:01	06:21 20:45	06:51 20:03	07:21 19:12	06:53 17:27	07:29 17:01	07:50 17:08
31	07:38 17:42	17:12-17:17/5	06:58 18:18	06:27 20:21	05:59 20:50	05:59 21:01	06:22 20:44	06:52 20:02	07:22 17:26	06:54 17:26	07:30 17:09	07:50 17:09
Potential sun hours	299	298	370	398	447	451	457	427	375	346	299	289
Sum of minutes with flicker	17	3	0	0	0	0	0	0	0	0	21	0

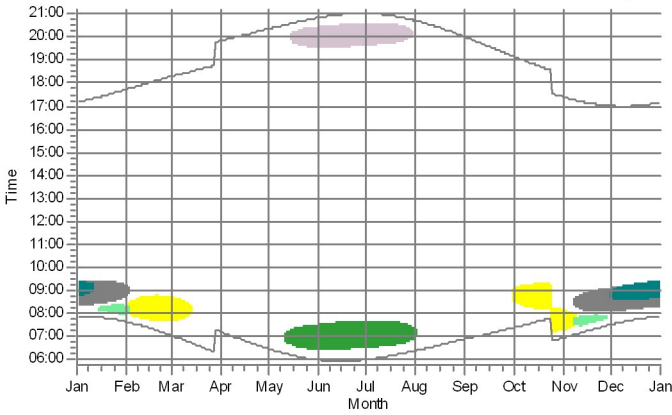
Table layout: For each day in each month the following matrix apply

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker	Last time (hh:mm) with flicker	Minutes with flicker

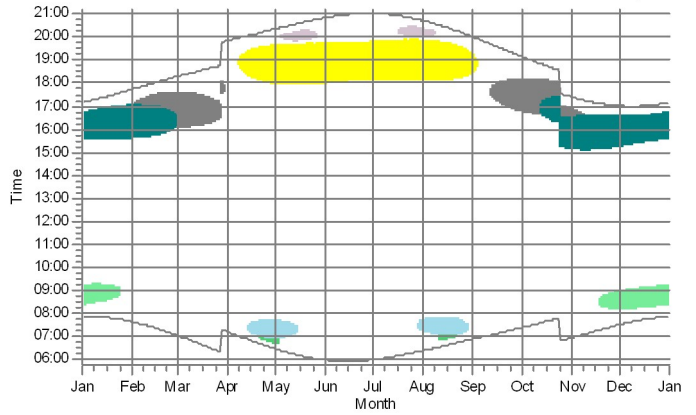
SHADOW - Calendar per WTG, graphical

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali

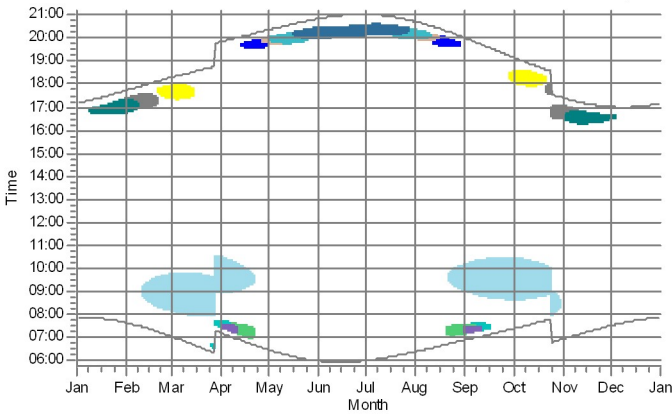
WTG01: Siemens Gamesa SG 6.0-170 6000 170.0 !O!hub: 115,0 m (TOT:



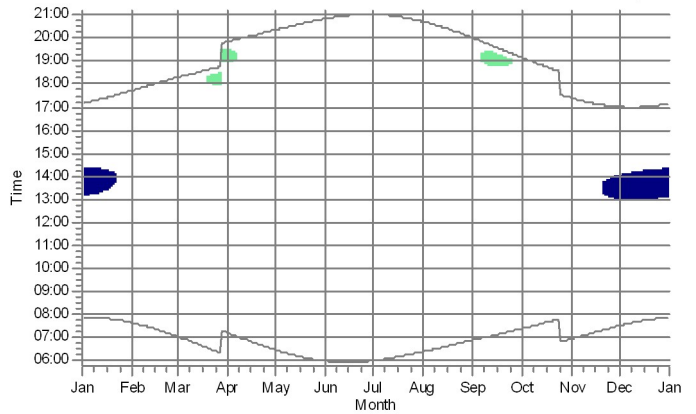
WTG02: Siemens Gamesa SG 6.0-170 6000 170.0 !O!hub: 115,0 m (TOT:



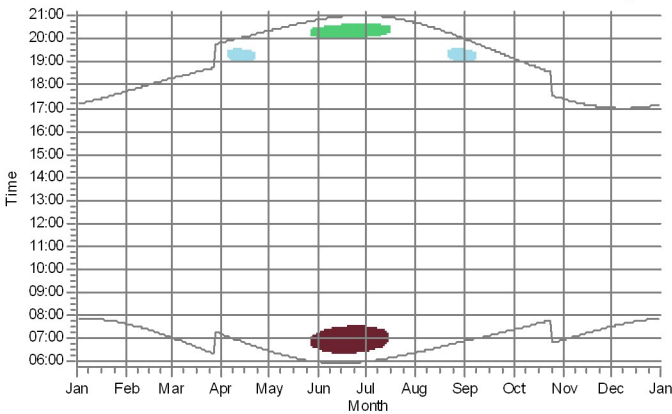
WTG03: Siemens Gamesa SG 6.0-170 6000 170.0 !O!hub: 115,0 m (TOT:



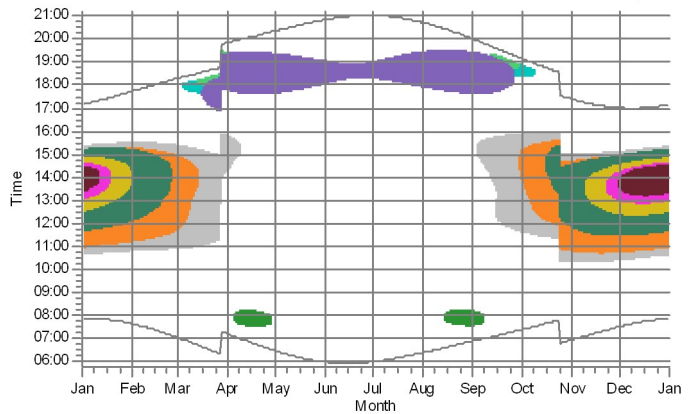
WTG04: Siemens Gamesa SG 6.0-170 6000 170.0 !O!hub: 115,0 m (TOT:

























WTG05: Siemens Gamesa SG 6.0-170 6000 170.0 !O!hub: 115,0 m (TOT:



WTG06: Siemens Gamesa SG 6.0-170 6000 170.0 !O!hub: 115,0 m (TOT:



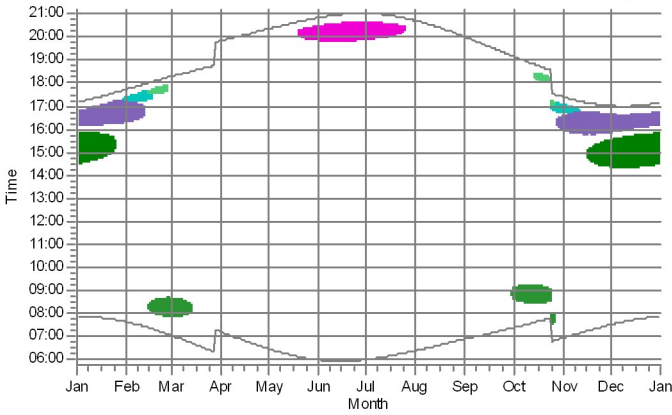
Shadow receptors

 RBP_10: NURAGHE CIROLO	 RBP_24: Struttura megalitica	 RBP_31: Turricola Su Crabione	 RBP_6: Mura del nuraghe Sos Muros
 RBP_11: Circolo megalitico	 RBP_26: Struttura megalitica circolare	 RBP_32: Turricola	 RBP_7: Torre nuragica
 RBP_12: Villaggio nuragico	 RBP_27: Nuraghe Majone	 RBP_33: Nuraghe S'Ozastrone	 RBP_8: Turricola
 RBP_14: Nuraghe Ciolo II	 RBP_28: Nuraghe Monte Alas	 RBP_34: Insediamento Monte Alas	 RBP_9: NURAGHE FRADES TALAS
 RBP_15: Circoli megalitici	 RBP_29: Struttura megalitica rettangolare	 RBP_4: Torre e cortine murarie	
 RBP_2: Torre e cortine murarie	 RBP_3: Torre e cortine murarie	 RBP_5: NURAGHE MUROS	

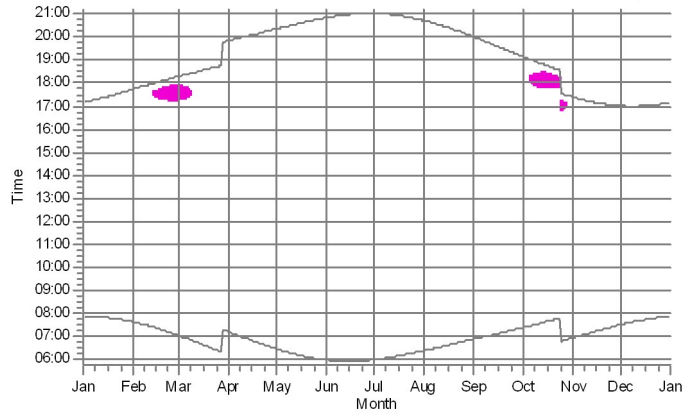
SHADOW - Calendar per WTG, graphical

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali

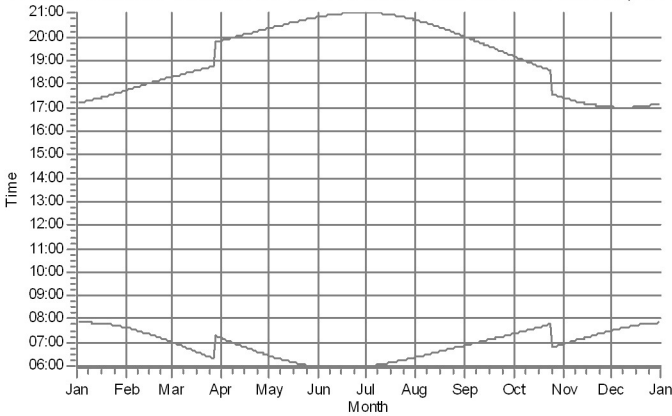
WTG07: Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT:



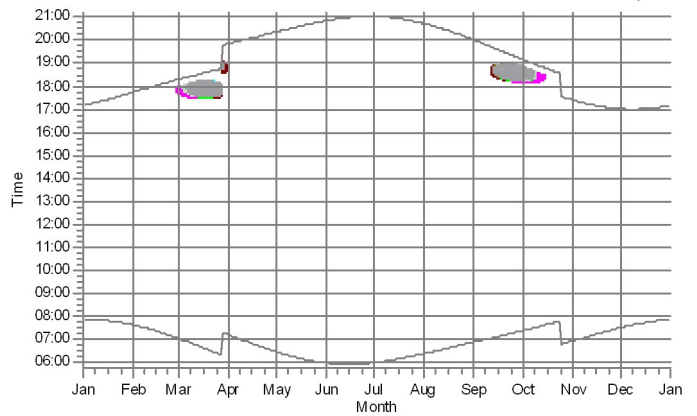
WTG08: Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT:



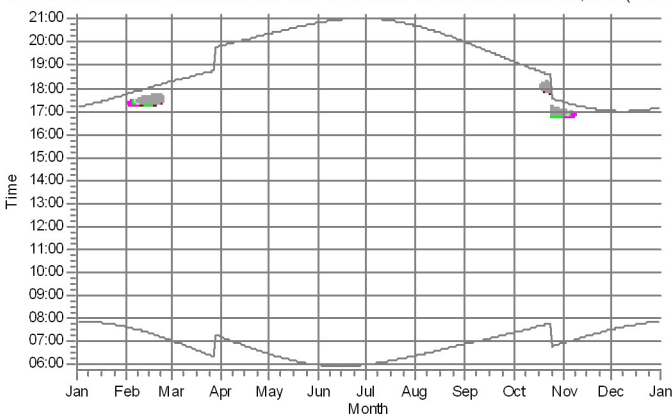
WTG09: Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT:



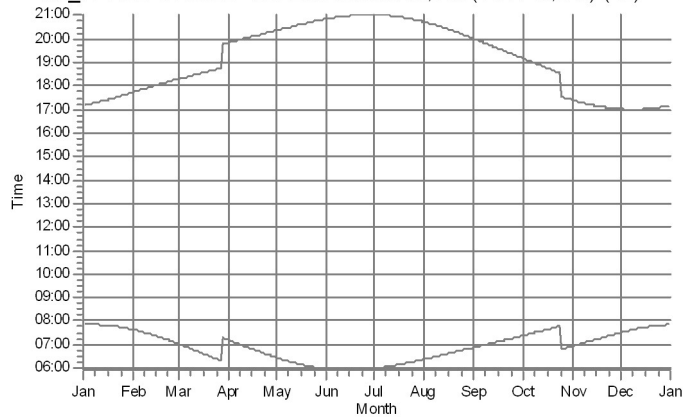
WTG10: Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT:

















WTG11: Siemens Gamesa SG 6.0-170 6000 170.0 !O! hub: 115,0 m (TOT:



ME_1: VIND-SYSEL 150 26.0 #! hub: 30,0 m (TOT: 43,0 m) (42)

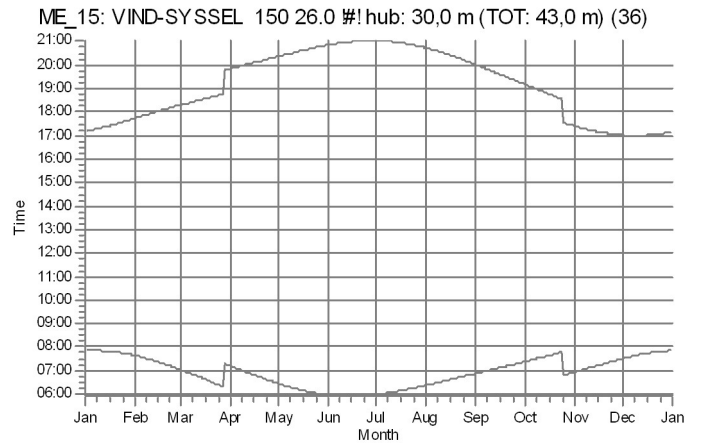
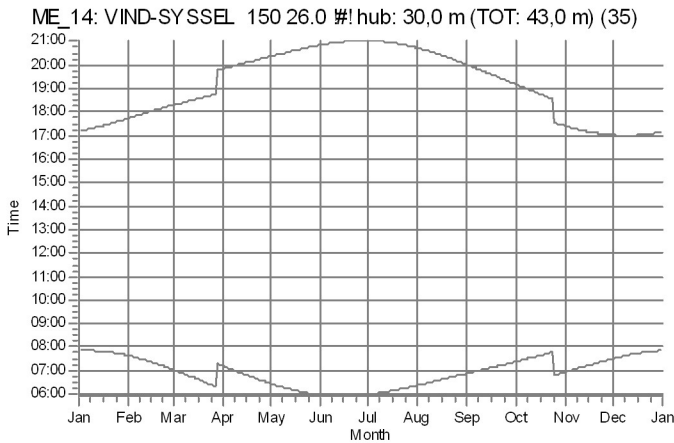
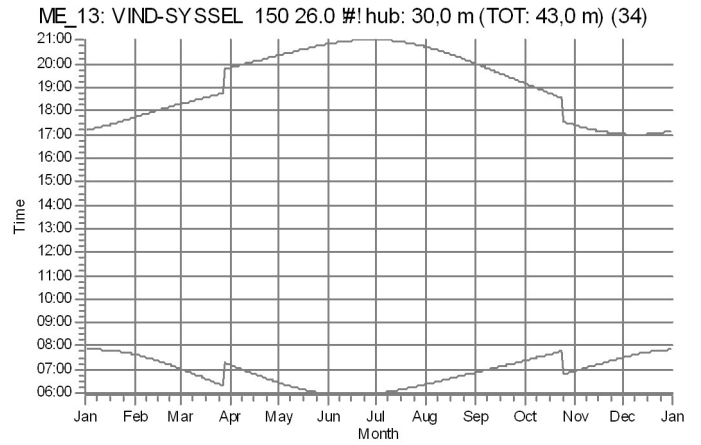
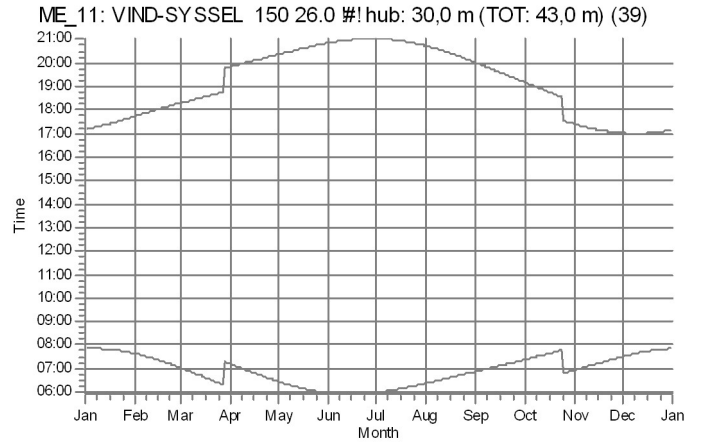


Shadow receptors

 RBP_1: Peso morto o pietra da trebbiatura	 RBP_18: Domus de Janas di Pubusattile I	 RBP_23: Riparo sotto roccia Pubusattile 2	 RBP_34: Insediamento Monte Alas
 RBP_13: Dolmen Pubusattile	 RBP_19: Domus de Janas Pubusattile II	 RBP_28: Nuraghe Monte Alas	 RBP_9: NURAGHE FRADES TALAS
 RBP_16: Coppelle Pubusattile	 RBP_20: Domus de Janas Pubusattile III	 RBP_30: Menhir Su Filighe	
 RBP_17: Rigugio sotto roccia di Pubusattile	 RBP_21: Domus de Janas Pubusattile IV	 RBP_33: Nuraghe S'Ozzastrone	

SHADOW - Calendar per WTG, graphical

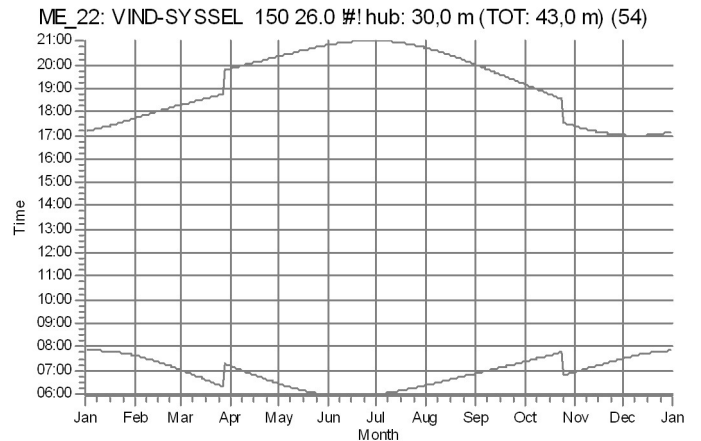
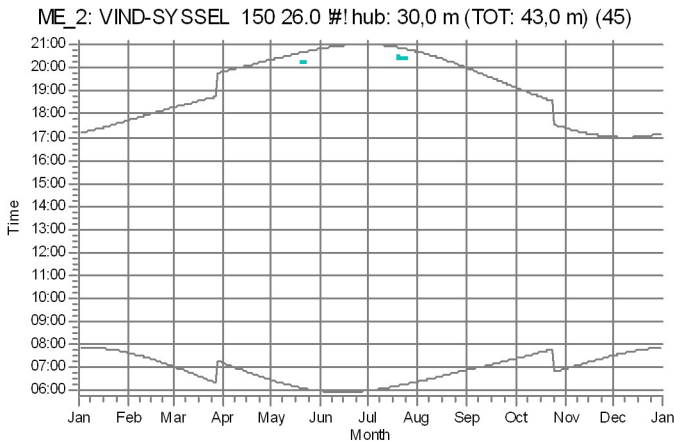
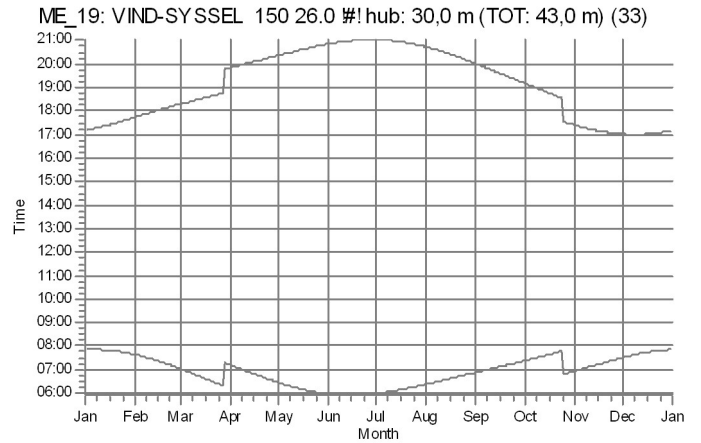
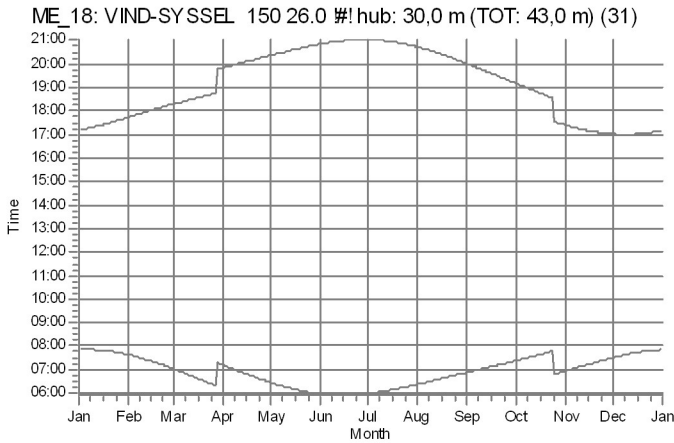
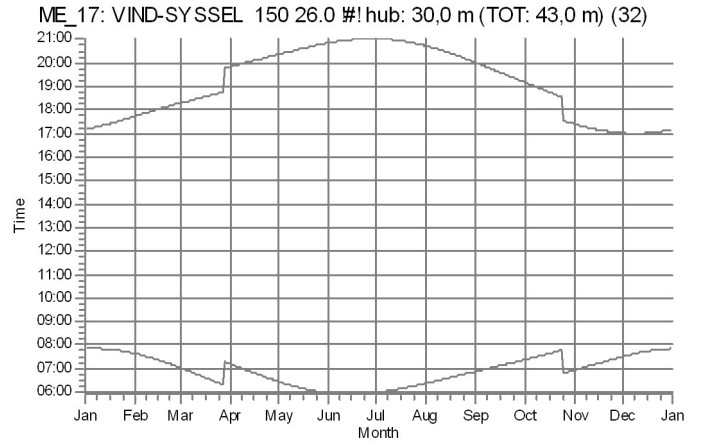
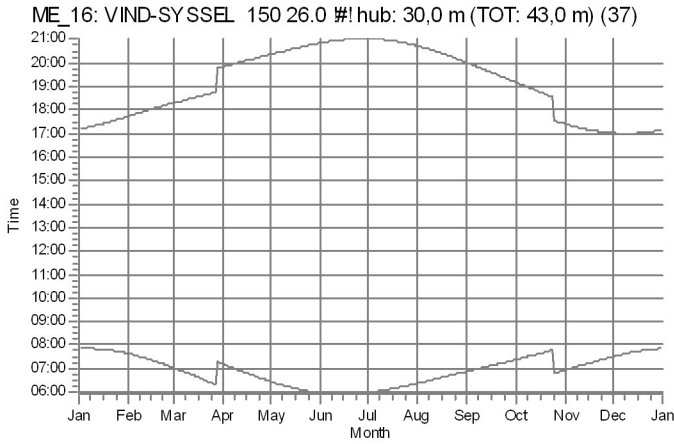
Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali



Shadow receptors

SHADOW - Calendar per WTG, graphical

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali

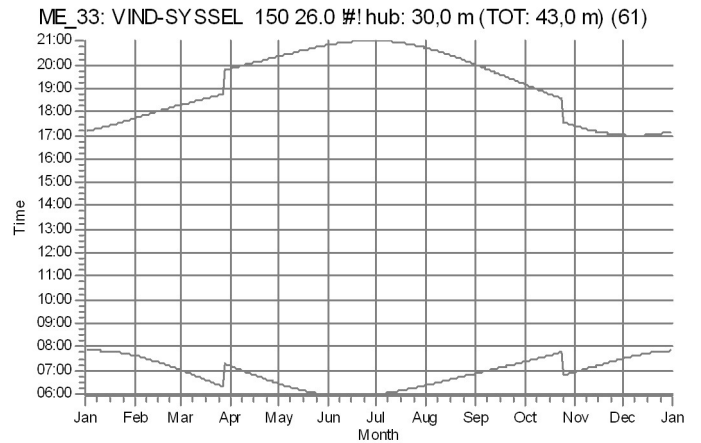
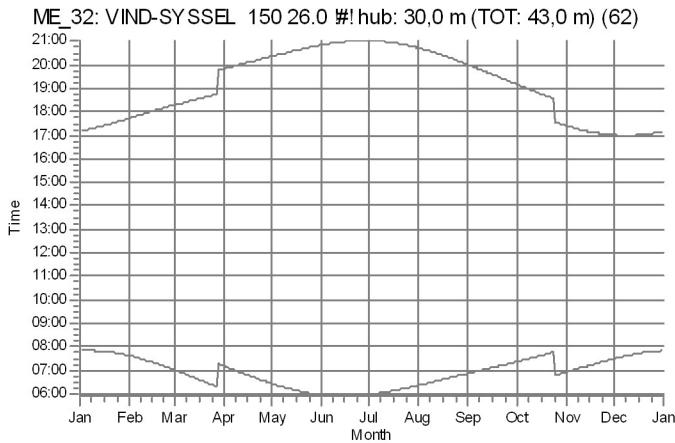
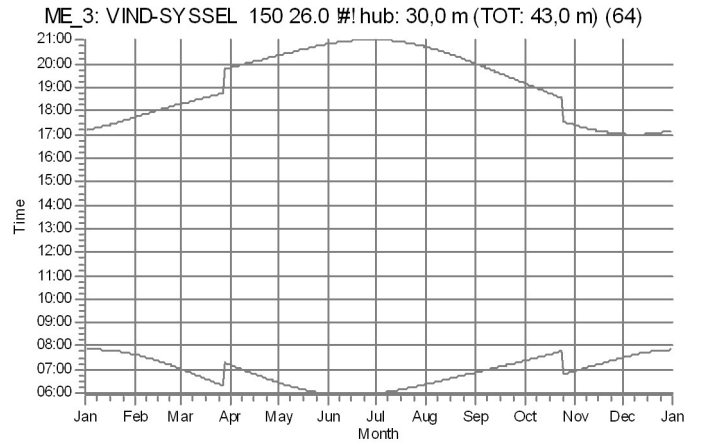
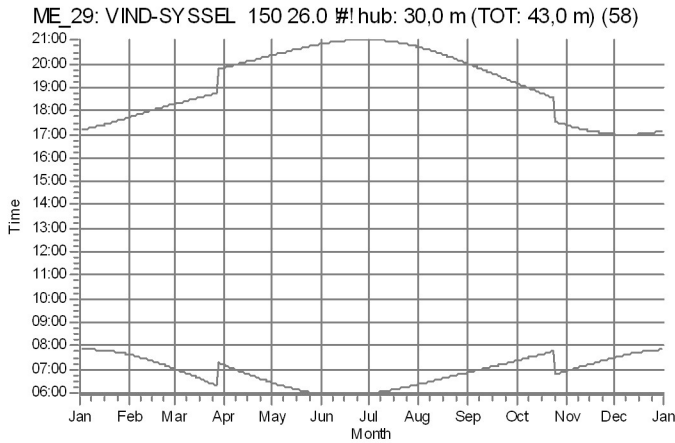
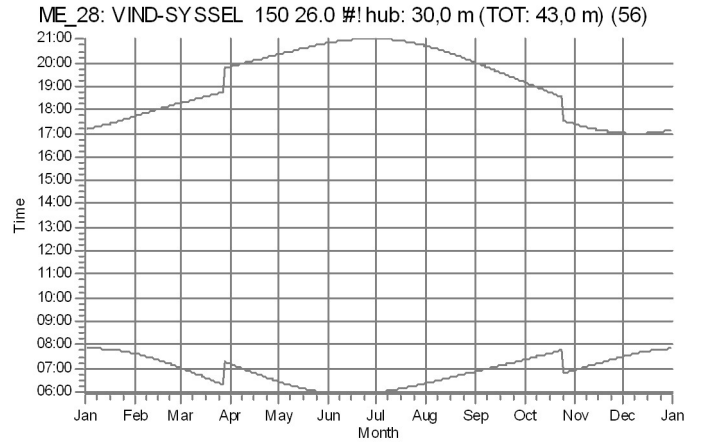
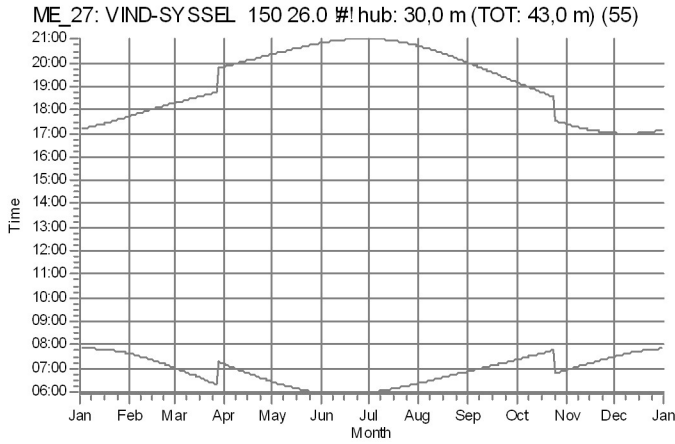


Shadow receptors

RBP_28: Nuraghe Monte Alas

SHADOW - Calendar per WTG, graphical

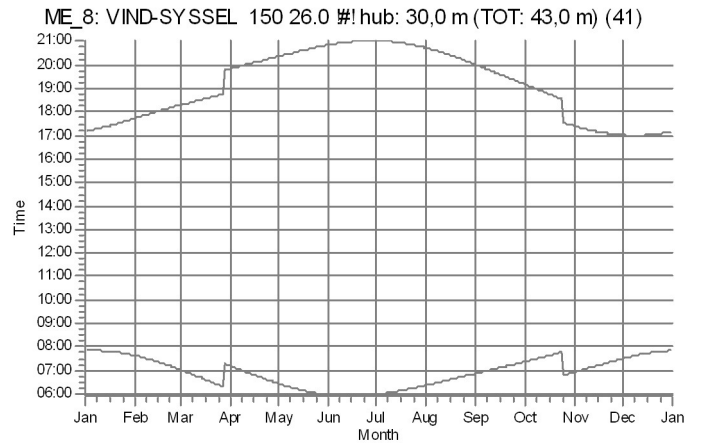
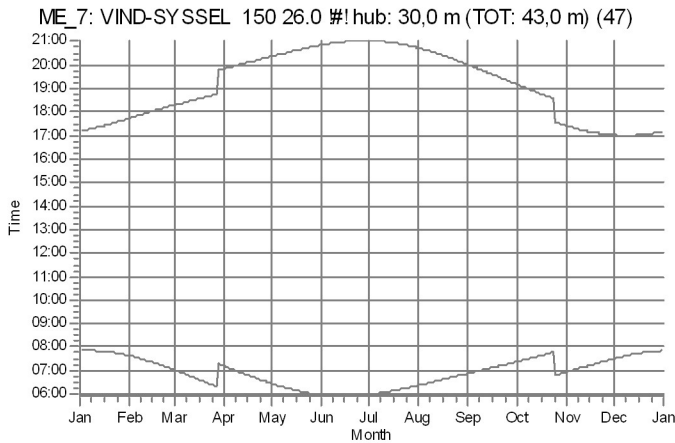
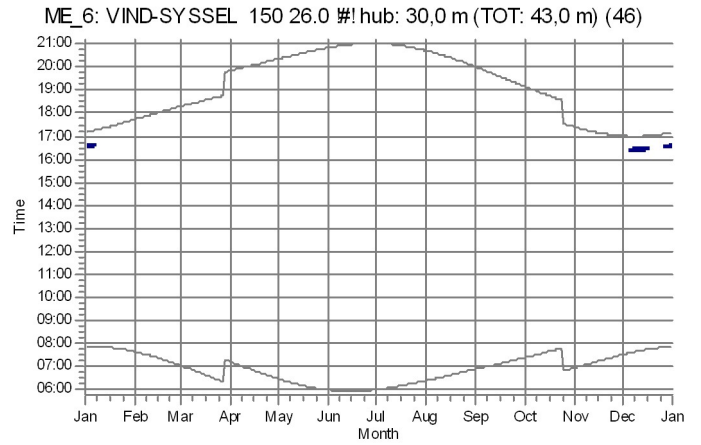
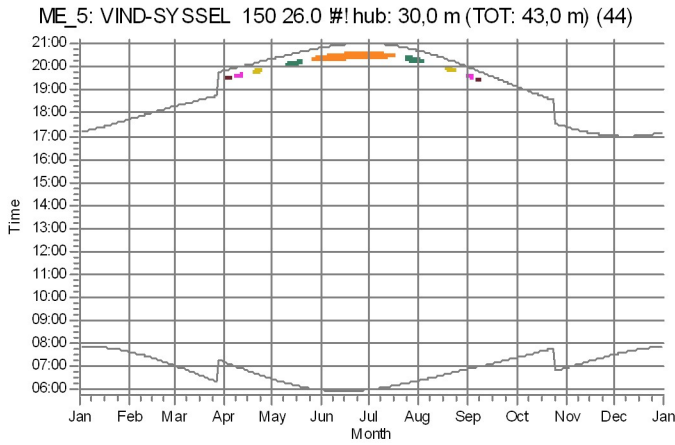
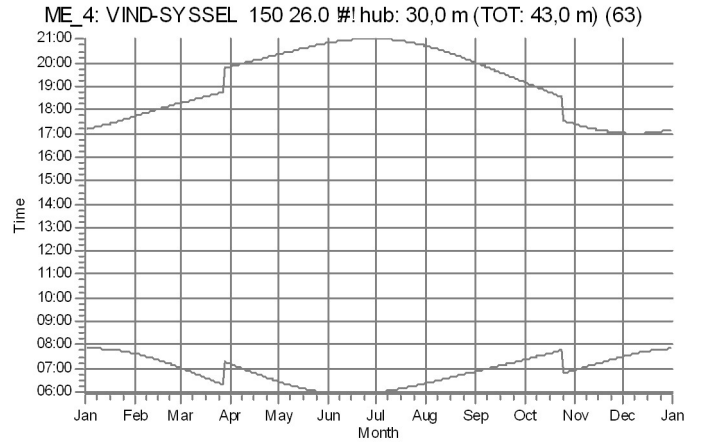
Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali









Shadow receptors

SHADOW - Calendar per WTG, graphical

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali



Shadow receptors

- | | | |
|--|--|---|
|  RBP_15: Circoli megalitici |  RBP_4: Torre e cortine murarie |  RBP_6: Mura del nuraghe Sos Muros |
|  RBP_3: Torre e cortine murarie |  RBP_5: NURAGHE MUROS |  RBP_7: Torre nuragica |

SHADOW - Calendar per WTG, graphical

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali

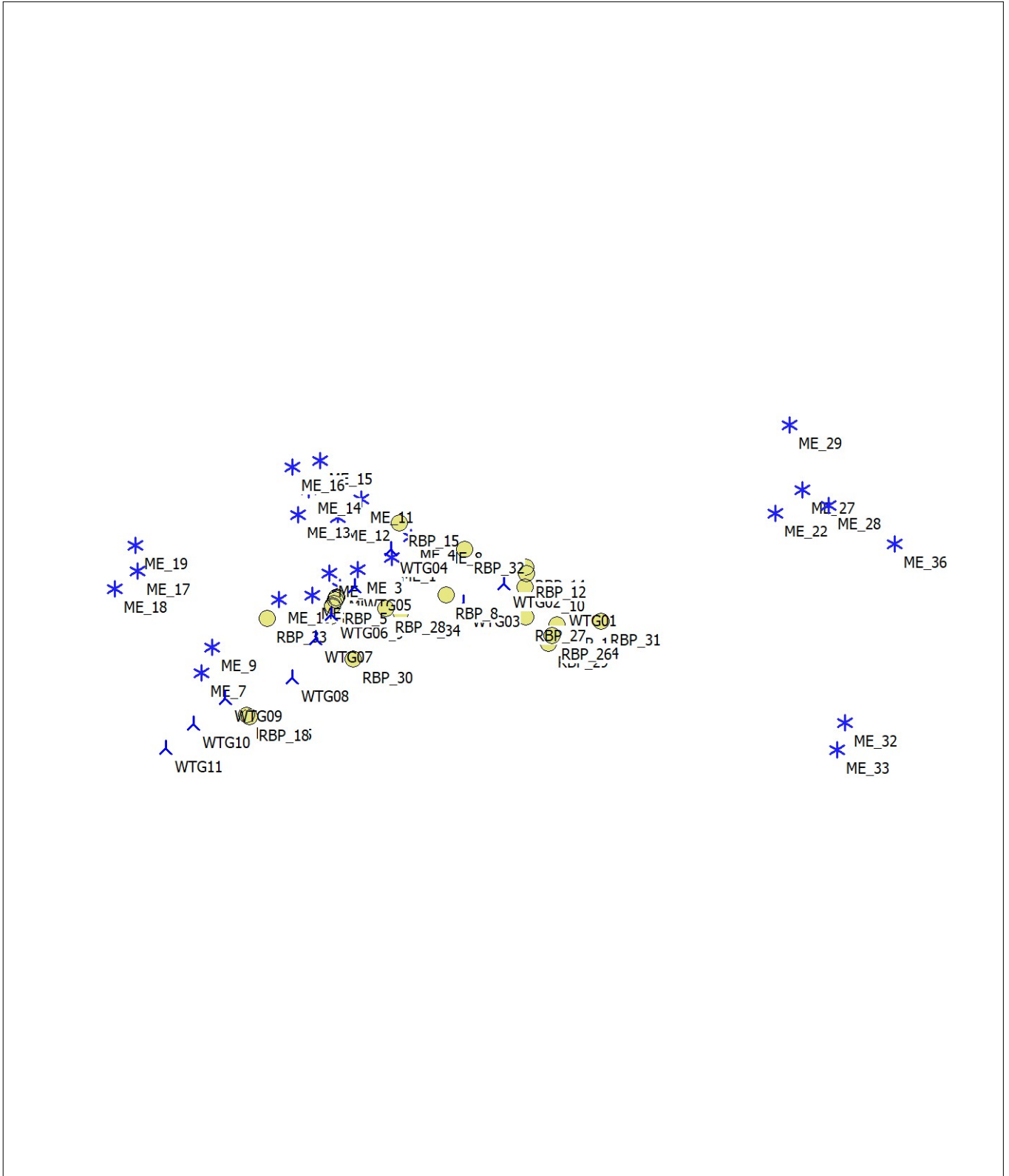


Shadow receptors

RBP_33: Nuraghe S'Ozzastrone

SHADOW - Map

Calculation: Ittiri_RWE_2021_06_22_Cumulativo_Beni culturali



Map: Blank map , Print scale 1:100.000, Map center Italian Gauss-Boaga west-ROMA40 (IT-peninsular $\pm 4m$) East: 1.462.740 North: 4.490.134
New WTG Existing WTG Shadow receptor

Flicker map level: Height Contours: TIN_RWE01.wpo (1)