



# AUTOSTRADA REGIONALE CISPADANA DAL CASELLO DI REGGIOLO-ROLO SULLA A22 AL CASELLO DI FERRARA SUD SULLA A13

CODICE C.U.P. E81B08000060009

## PROGETTO DEFINITIVO

### AUTOSTRADA REGIONALE CISPADANA - PARTE GENERALE

#### INDAGINI VIBRAZIONI

#### SCHEDE DI MISURA VIBROMETRICHE



IL PROGETTISTA

Ing. Matteo Bertoneri  
Albo Ing. Massa Carrara n°669



RESPONSABILE INTEGRAZIONE  
PRESTAZIONI SPECIALISTICHE

Ing. Emilio Salsi  
Albo Ing. Reggio Emilia n° 945



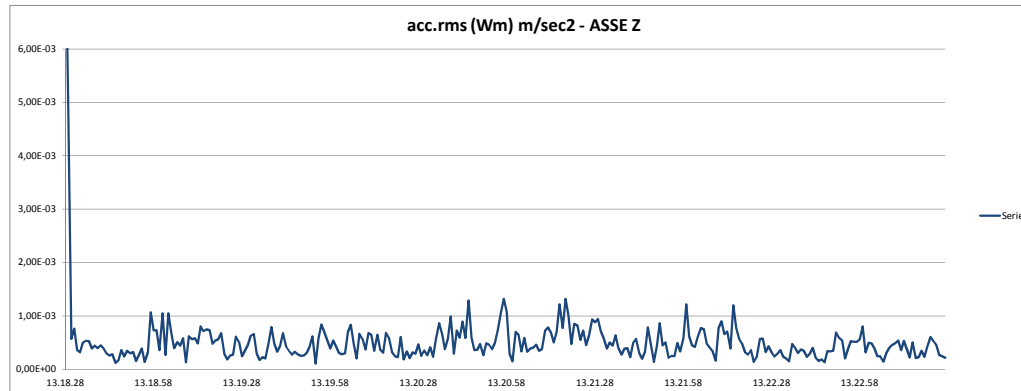
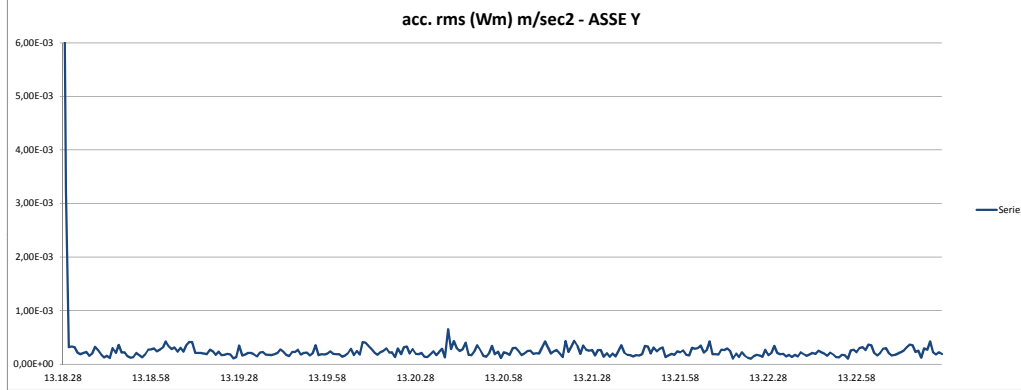
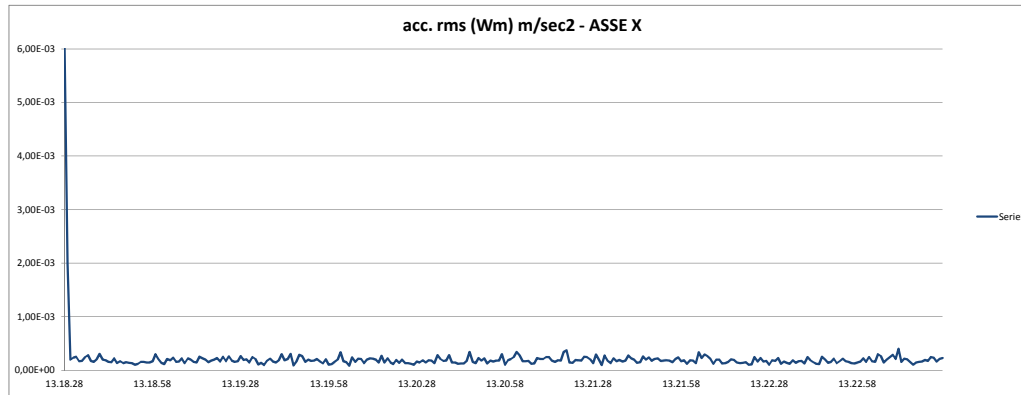
IL CONCESSIONARIO

Autostrade Regionali  
Cispadane S.p.A.  
IL PRESIDENTE  
Graziano Pattuzzi

*Graziano Pattuzzi*

G										
F										
E										
D										
C										
B										
A	17/04/2012	Emissione	Angeloni	Bertoneri	Salsi					
REV.	DATA	DESCRIZIONE	REDAZIONE	CONTROLLO	APPROVAZIONE					
IDENTIFICAZIONE ELABORATO										
NUM. PROGR.	FASE	LOTTO	GRUPPO	CODICE OPERA WBS	TRAITO OPERA	AMBITO	TIPO ELABORATO	PROGRESSIVO	REV.	DATA:
0076	PD	0	X00	X0000	0	AC	SH	04	A	Maggio 2012
SCALA: -										

ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
4,97E-03	73,9	4,32E-04	52,7

ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
4,01E-03	72,1	7,16E-04	57,1

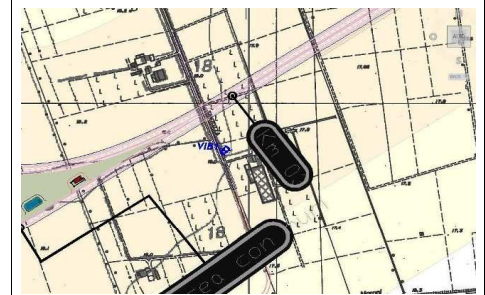
ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
5,21E-03	74,3	7,76E-04	57,8

LIVELLI LIMITE NORMA UNI 9614			
LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s <sup>2</sup>	7,2E-03	7,2E-03	1,0E-02

LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s <sup>2</sup>	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO



COORDINATE GEOGRAFICHE	
LATITUDINE	LONGITUDINE
44°54'26.83"N	10°51'38.39"E

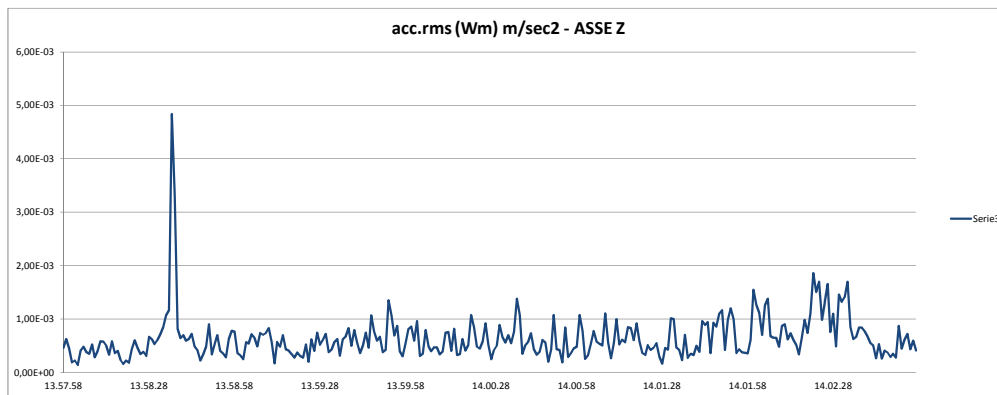
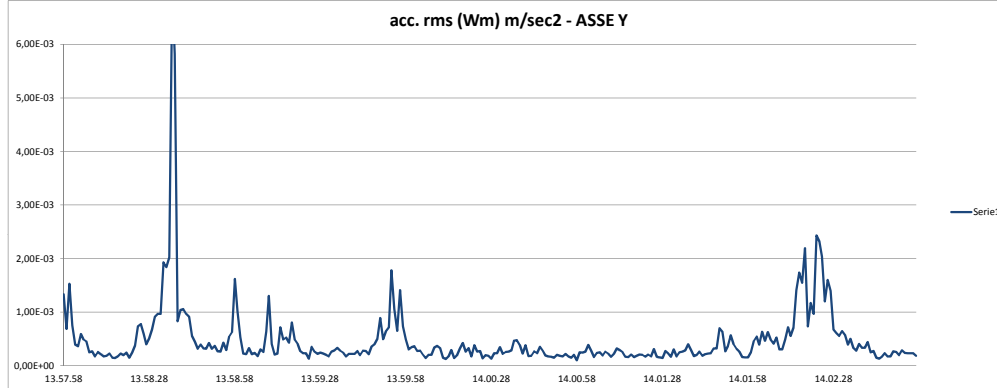
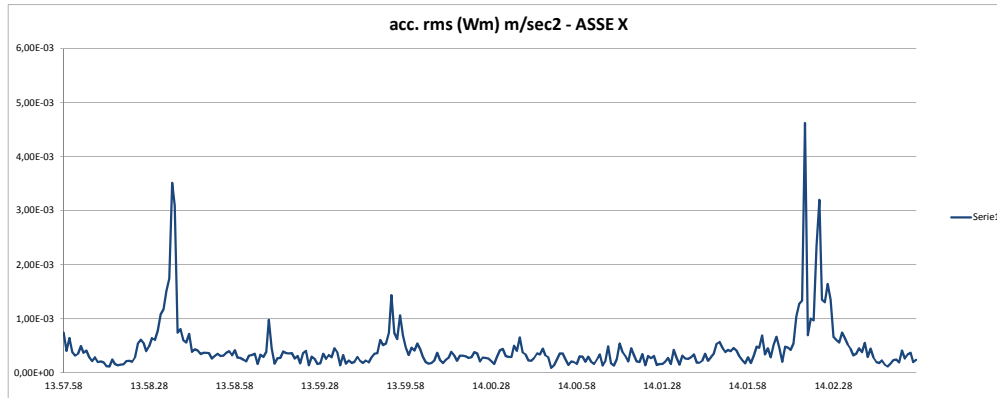
SORGENTE MONITORATA

Strada Fantozza - Comune di Reggiolo

RILIEVO FOTOGRAFICO



ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
2,74E-03	68,8	6,38E-04	56,1

ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
3,11E-03	69,9	7,85E-04	57,9

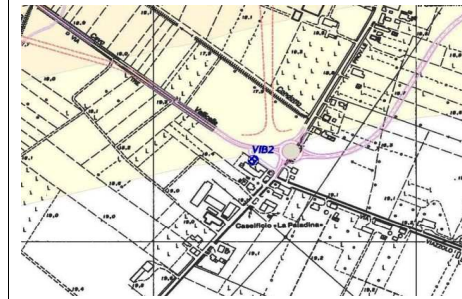
ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
4,36E-03	72,8	7,67E-04	57,7

LIVELLI LIMITE NORMA UNI 9614			
LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s2	7,2E-03	7,2E-03	1,0E-02

LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s2	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO



COORDINATE GEOGRAFICHE	
LATITUDINE	LONGITUDINE
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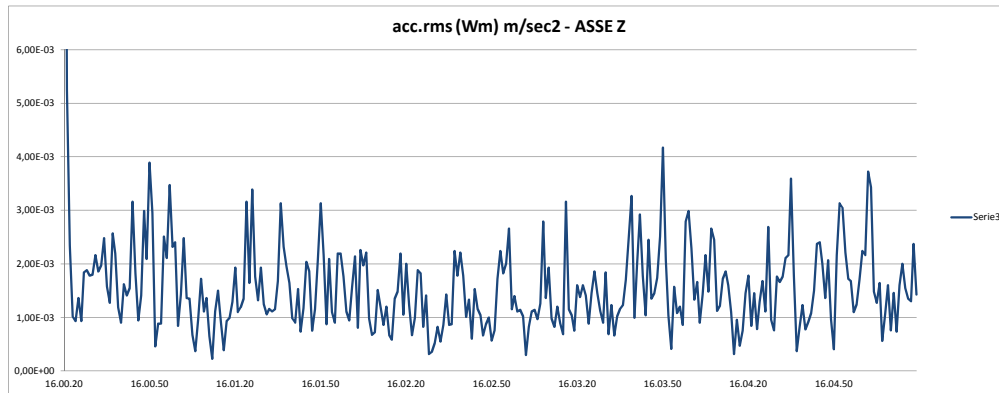
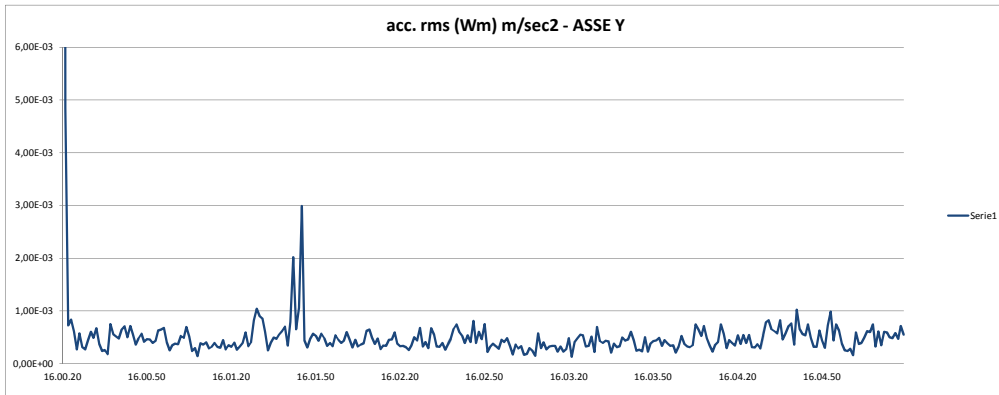
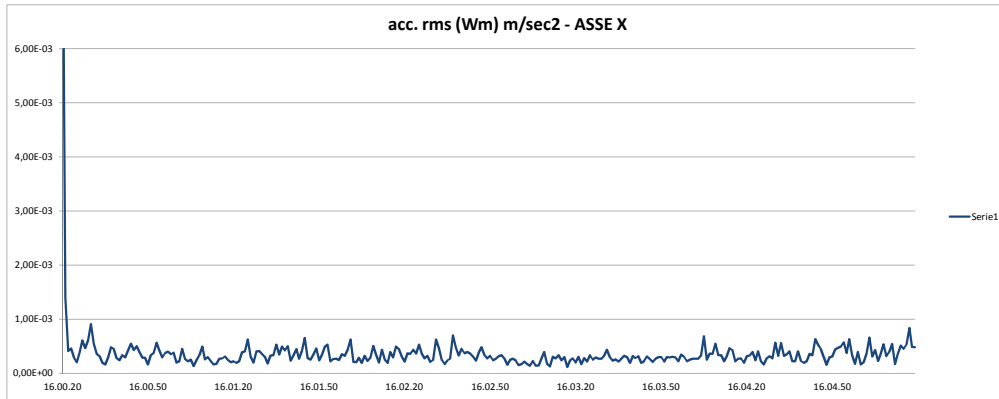
SORGENTE MONITORATA

Via Tre Ponti presso incrocio Via per Novi (SP8)

RILIEVO FOTOGRAFICO



ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
8,48E-03	78,6	6,38E-04	56,1

ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
9,86E-03	79,9	4,27E-03	72,6

ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
1,41E-02	83,0	1,95E-03	65,8

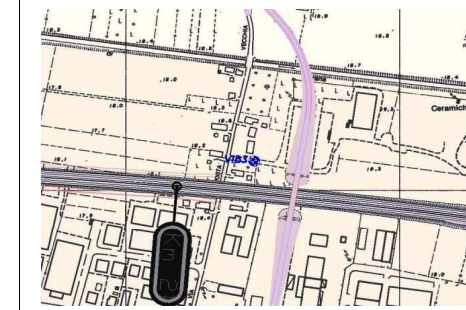
LIVELLI LIMITE NORMA UNI 9614

LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s2	7,2E-03	7,2E-03	1,0E-02

LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s2	5,0E-03	5,0E-03	7,0E-03

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COORDINATE GEOGRAFICHE

LATITUDINE	LONGITUDINE
44°52'11,19"N	11° 3'36,15"E

SORGENTE MONITORATA

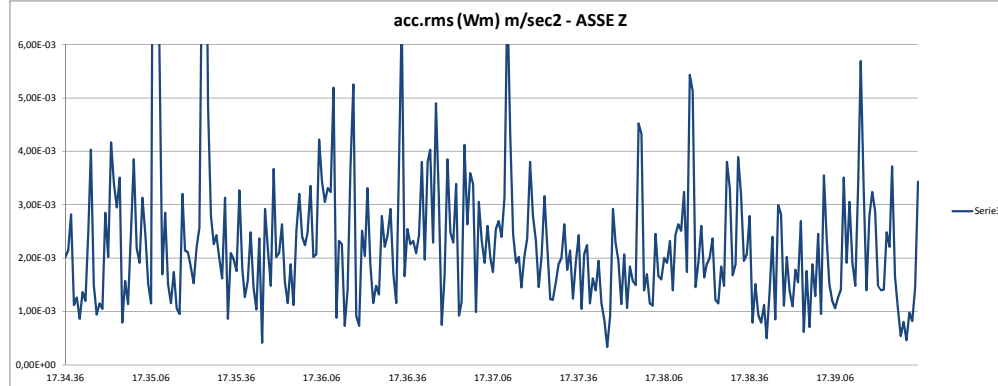
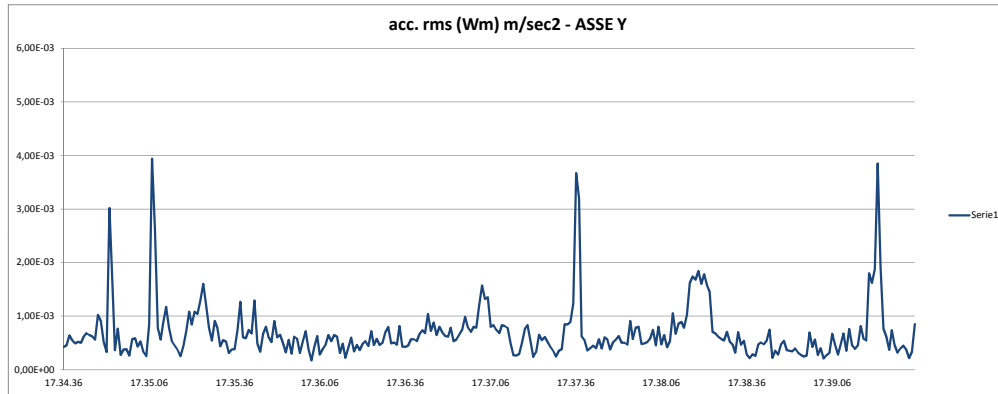
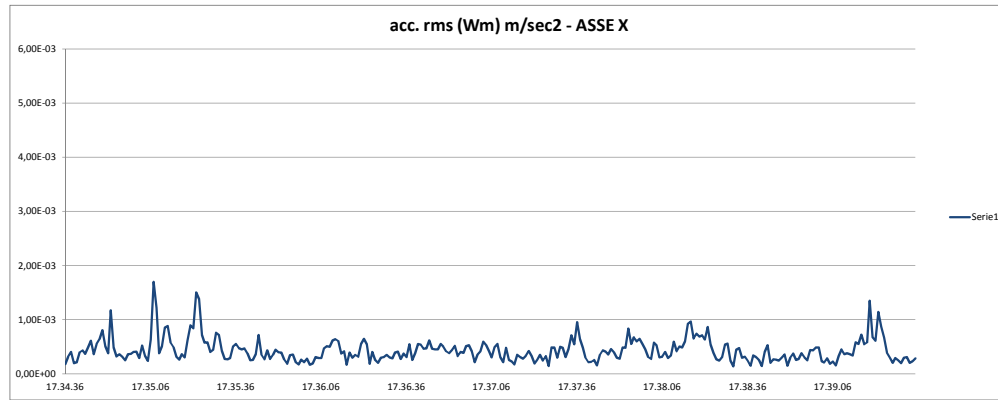
Via Posta Vecchia

RILIEVO FOTOGRAFICO





ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
3,13E-03	69,9	4,79E-04	53,6

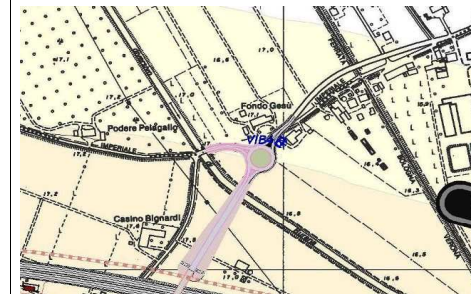
ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
4,02E-03	72,1	8,51E-04	58,6

ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
1,42E-02	83,0	2,75E-03	68,8

LIVELLI LIMITE NORMA UNI 9614			
LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s <sup>2</sup>	7,2E-03	7,2E-03	1,0E-02
LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s <sup>2</sup>	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO

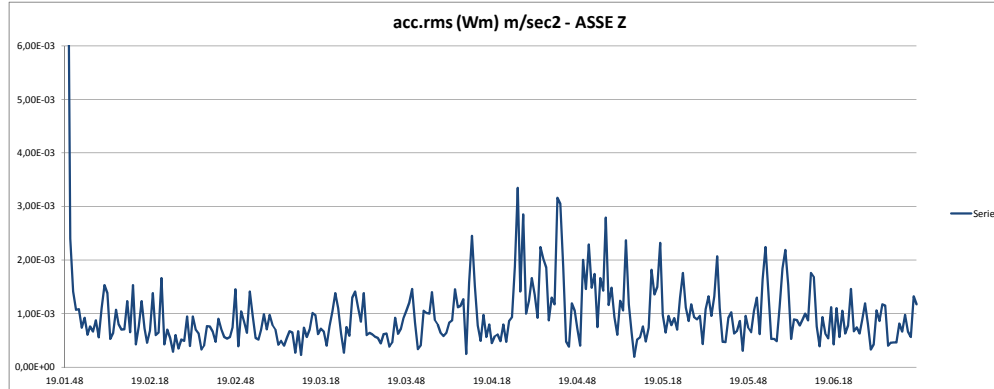
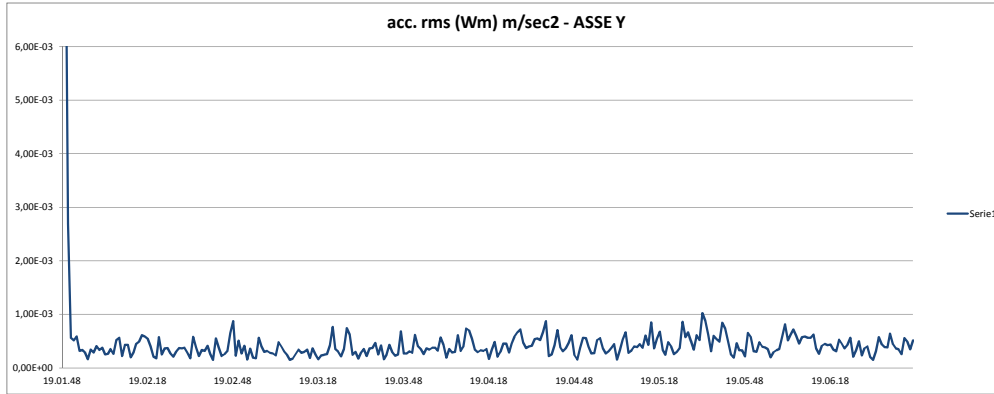
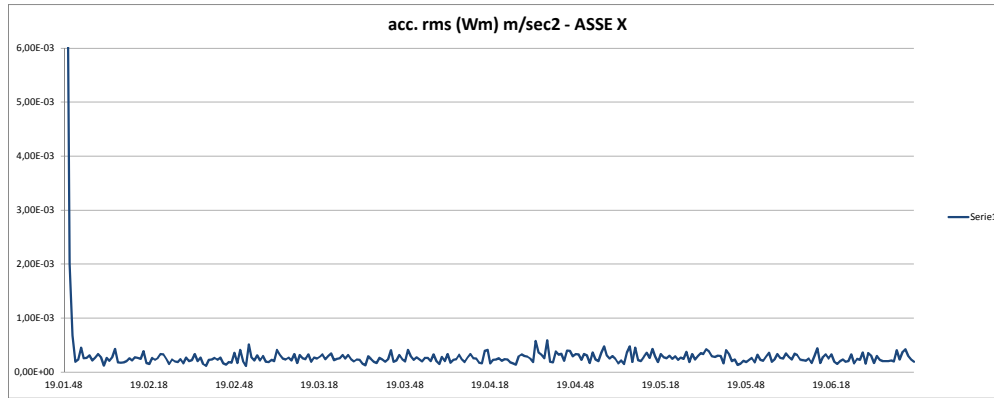


COORDINATE GEOGRAFICHE	
LATITUDINE	LONGITUDINE
44°52'11.89"N	11° 7'13.15"E
SORGENTE MONITORATA	
Via Imperiale	

RILIEVO FOTOGRAFICO



ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
2,13E-02	86,6	9,89E-04	59,9

ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
1,55E-02	83,8	1,55E-03	63,8

ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
1,98E-02	85,9	1,88E-03	65,5

LIVELLI LIMITE NORMA UNI 9614			
LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s2	7,2E-03	7,2E-03	1,0E-02

LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s2	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO

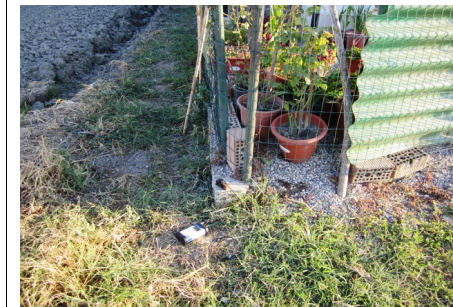


COORDINATE GEOGRAFICHE	
LATITUDINE	LONGITUDINE
44°50'9.17"N	11°12'2.71"E

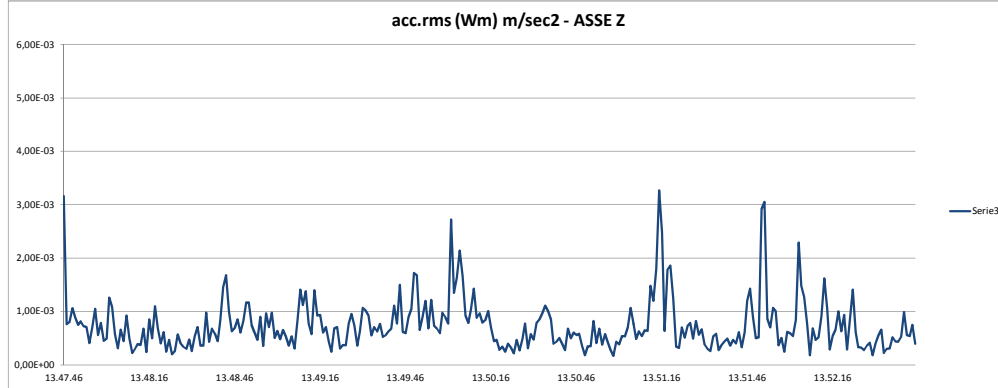
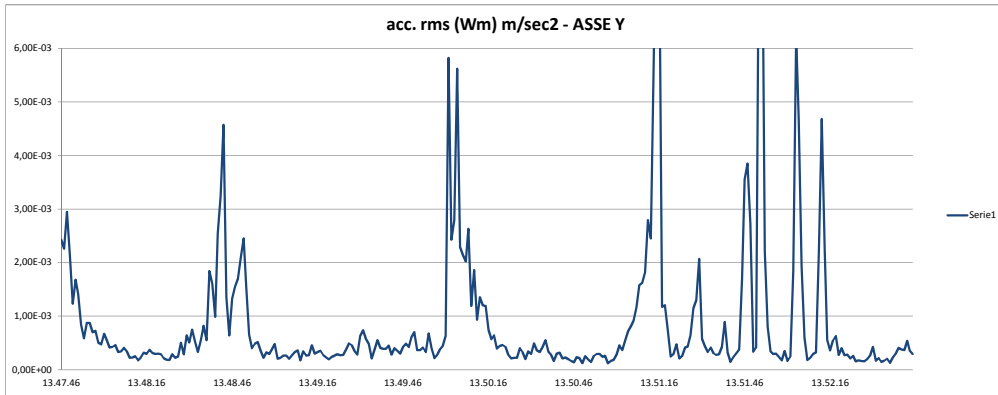
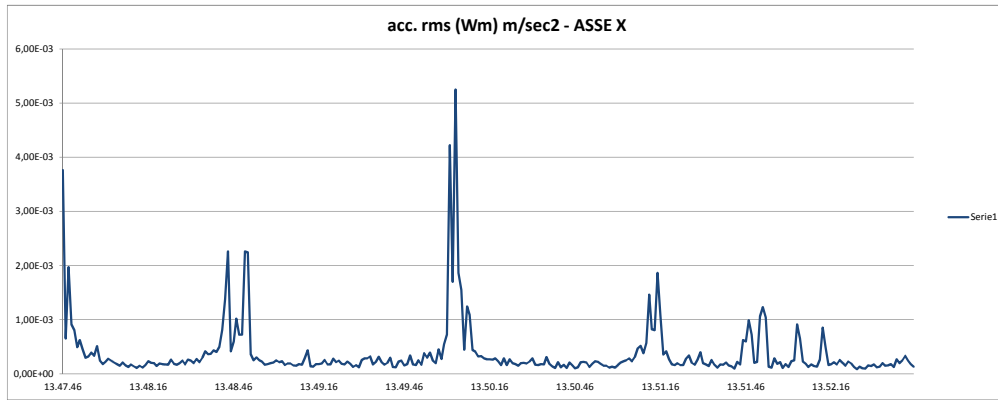
SORGENTE MONITORATA

Via Salde Entrà - Località Marchetta

RILIEVO FOTOGRAFICO



ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
5,06E-03	74,1	7,24E-04	57,2

ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
1,05E-02	80,4	1,62E-03	64,2

ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
7,42E-03	77,4	9,77E-04	59,8

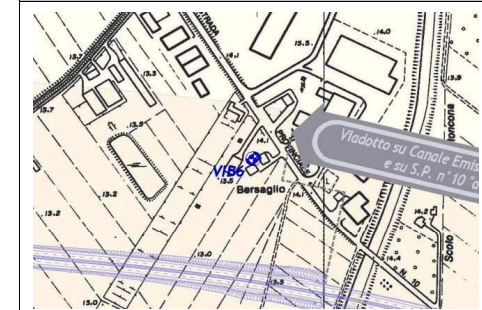
LIVELLI LIMITE NORMA UNI 9614

LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s <sup>2</sup>	7,2E-03	7,2E-03	1,0E-02

LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s <sup>2</sup>	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO



COORDINATE GEOGRAFICHE

LATITUDINE	LONGITUDINE
44°49'18.15"N	11°18'0.73"E

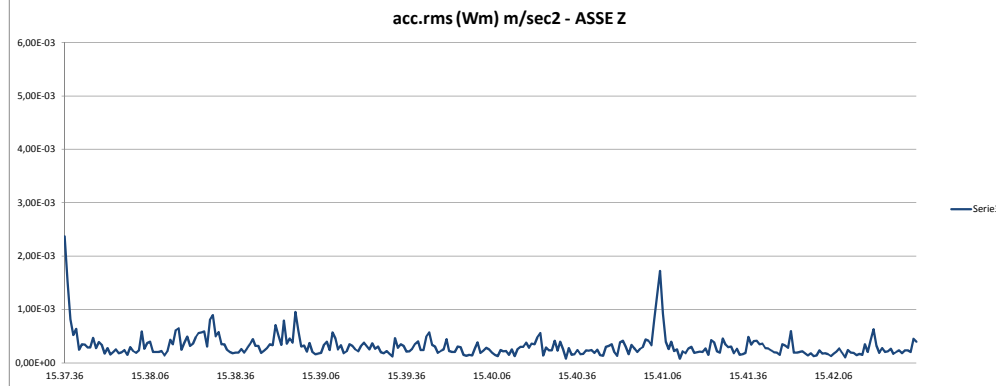
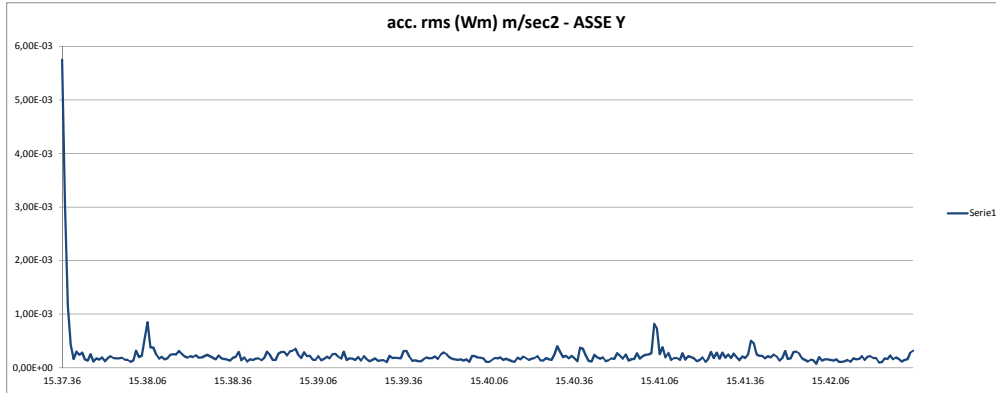
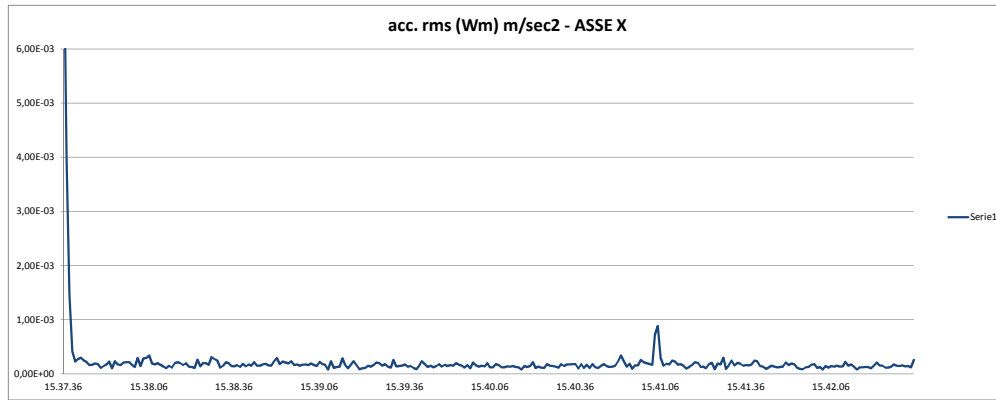
SORGENTE MONITORATA

Via per Cento

RILIEVO FOTOGRAFICO



ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
1,05E-02	80,4	5,19E-04	54,3

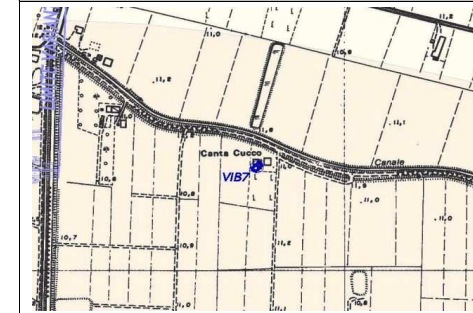
ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
8,15E-03	78,2	4,22E-04	52,5

ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
8,50E-03	78,6	4,07E-04	52,2

LIVELLI LIMITE NORMA UNI 9614			
LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s2	7,2E-03	7,2E-03	1,0E-02
LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s2	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO



COORDINATE GEOGRAFICHE	
LATITUDINE	44°48'55.79"N
LONGITUDINE	11°21'24.34"E

SORGENTE MONITORATA

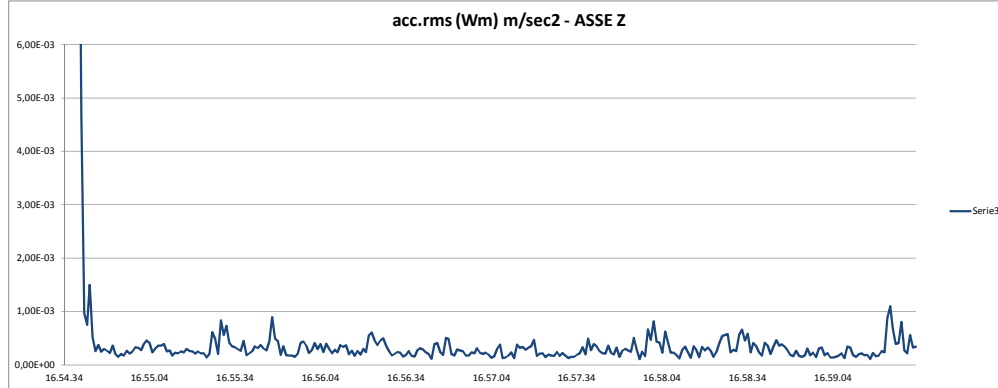
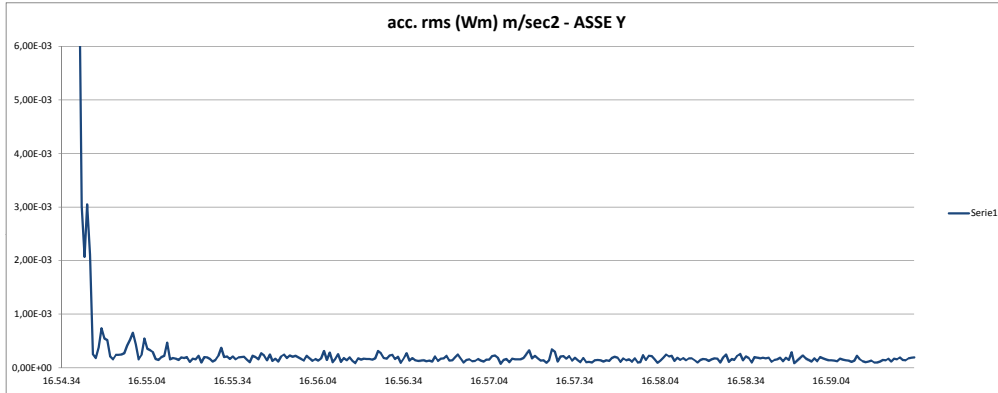
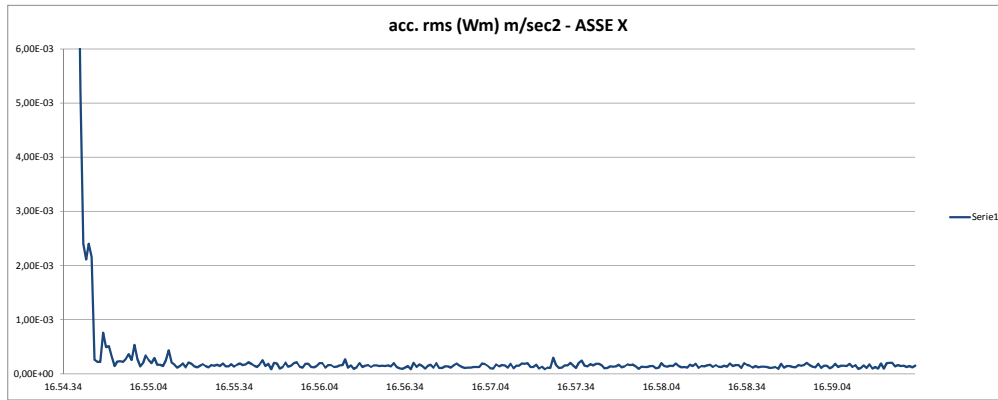
Via dei Pioppeti - Località Ponte Alto

RILIEVO FOTOGRAFICO





ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
1,73E-02	84,8	2,75E-03	68,8

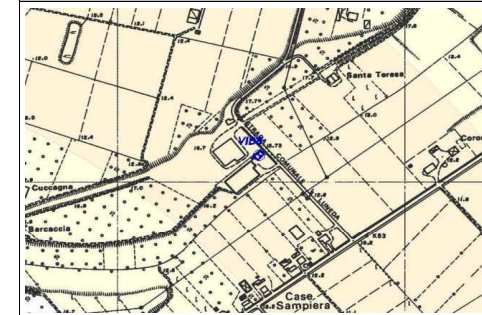
ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
1,58E-02	84,0	3,59E-03	71,1

ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
1,88E-02	85,5	3,63E-03	71,2

LIVELLI LIMITE NORMA UNI 9614			
LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s <sup>2</sup>	7,2E-03	7,2E-03	1,0E-02
LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s <sup>2</sup>	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO

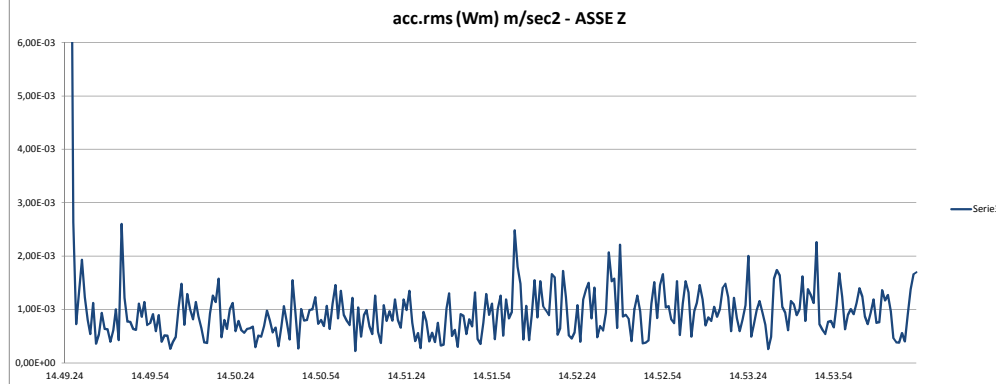
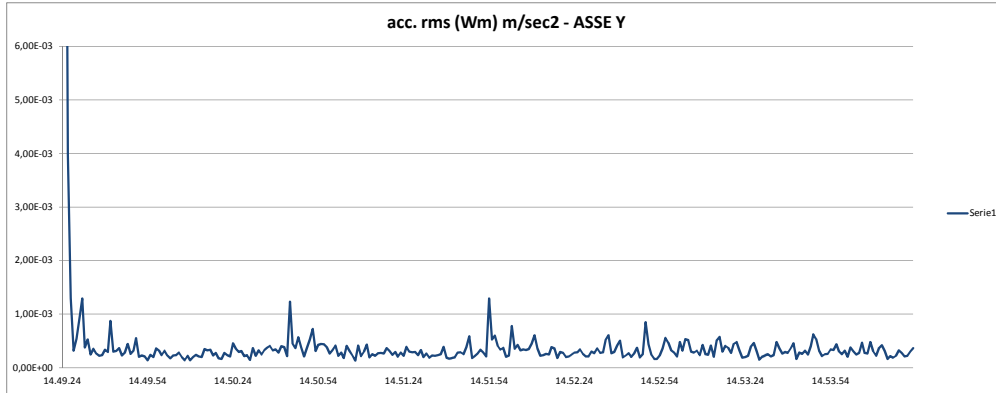
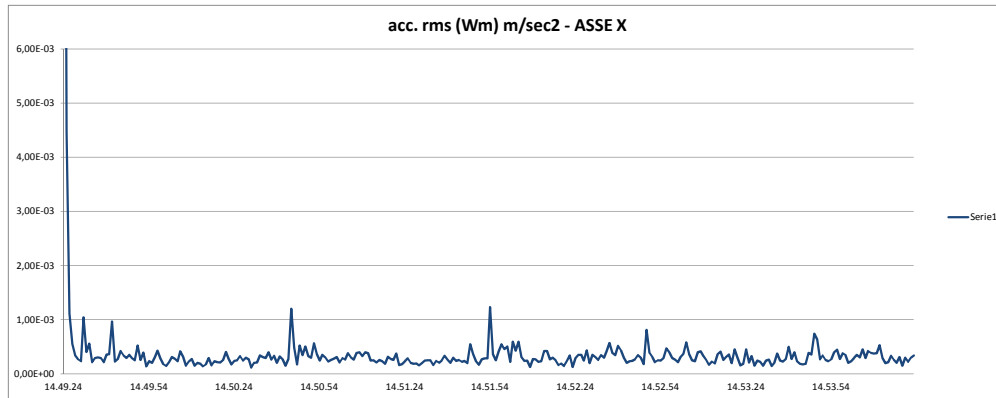


COORDINATE GEOGRAFICHE	
LATITUDINE	LONGITUDINE
44°48'30.58"N	11°25'28.59"E
SORGENTE MONITORATA	
Corso Italia (SP66) - Località San Carlo	

RILIEVO FOTOGRAFICO



ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
5,25E-03	74,4	1,06E-03	60,5

ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
1,81E-02	85,2	1,00E-03	60,0

ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
5,00E-02	94,0	2,57E-03	68,2

LIVELLI LIMITE NORMA UNI 9614

LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s2	7,2E-03	7,2E-03	1,0E-02

LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s2	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO



COORDINATE GEOGRAFICHE

LATITUDINE	LONGITUDINE
44°47'23.45"N	11°32'54.50"E

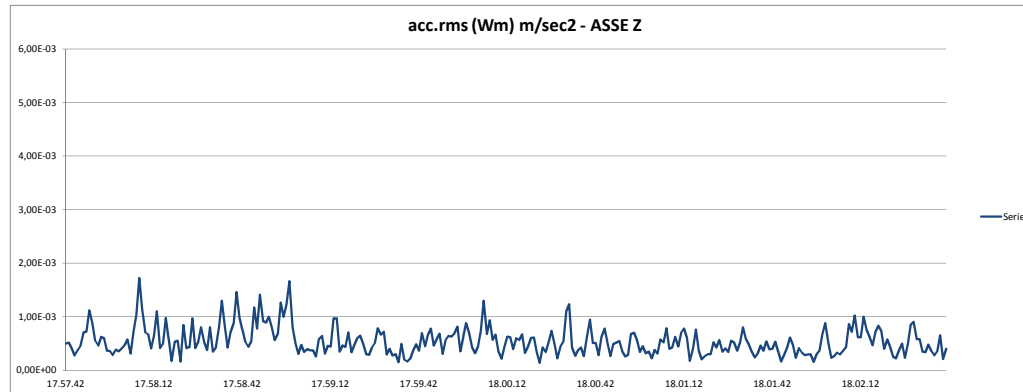
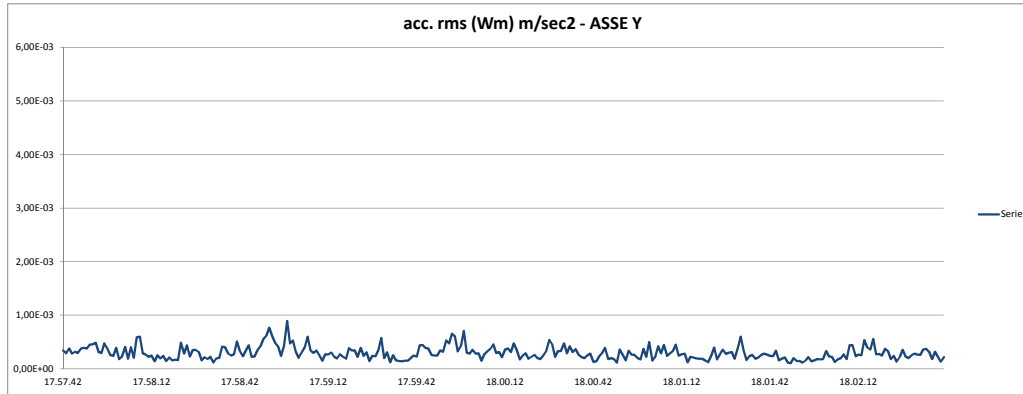
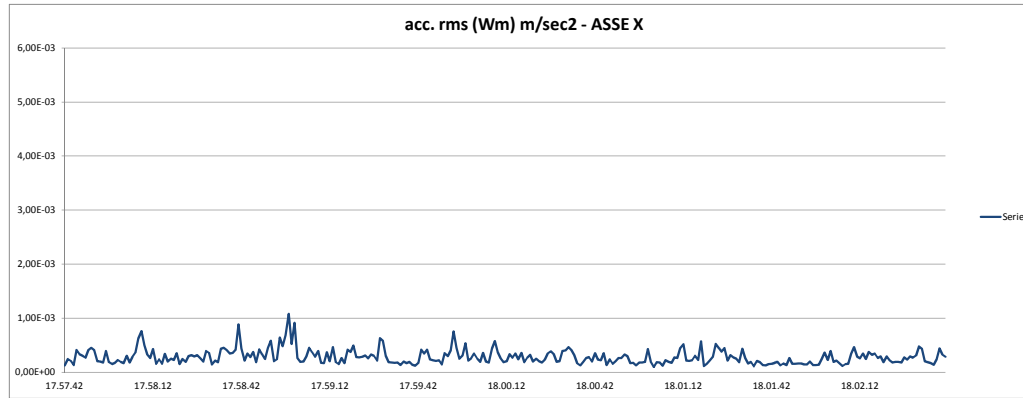
SORGENTE MONITORATA

Via Padusa in prossimità di Strada Cispadana

RILIEVO FOTOGRAFICO



ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
2,18E-03	66,8	3,05E-04	49,7

ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
4,24E-03	72,5	3,05E-04	49,7

ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
5,83E-03	75,3	5,75E-04	55,2

LIVELLI LIMITE NORMA UNI 9614			
LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s2	7,2E-03	7,2E-03	1,0E-02

LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s2	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO



COORDINATE GEOGRAFICHE	
LATITUDINE	LONGITUDINE
44°55'40.17"N	10°44'33.18"E

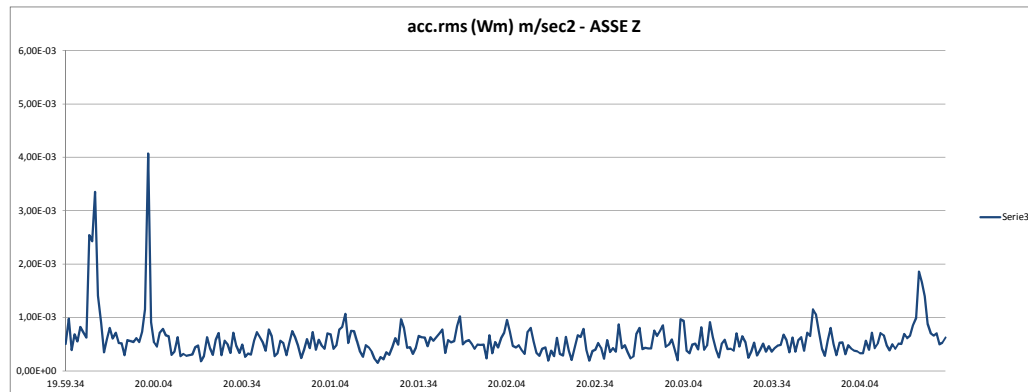
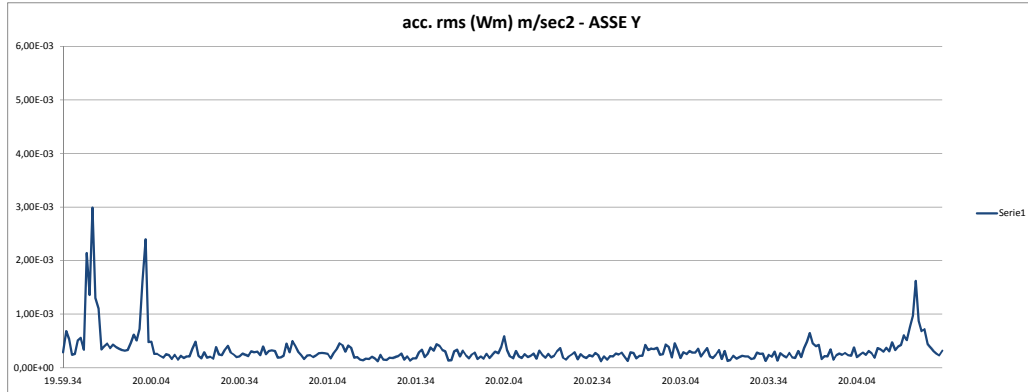
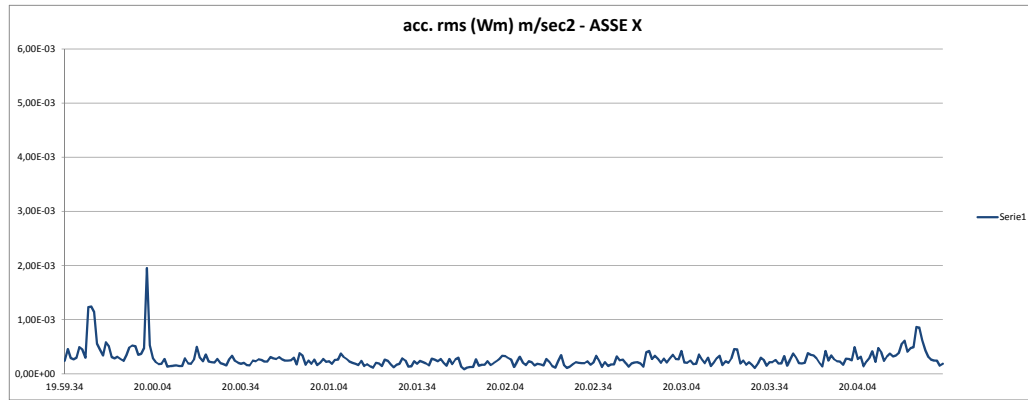
SORGENTE MONITORATA

Via Lanzoni - Località Villarotta

RILIEVO FOTOGRAFICO



ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
1,98E-03	65,9	3,20E-04	50,1

ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
2,19E-03	66,8	4,37E-04	52,8

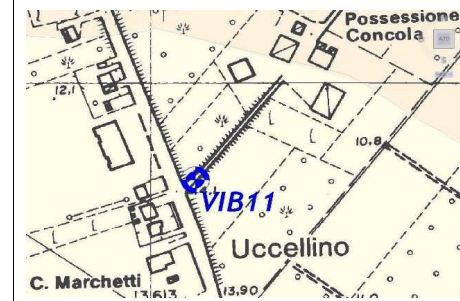
ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
3,64E-03	71,2	6,76E-04	56,6

LIVELLI LIMITE NORMA UNI 9614			
LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s <sup>2</sup>	7,2E-03	7,2E-03	1,0E-02

LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s <sup>2</sup>	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO



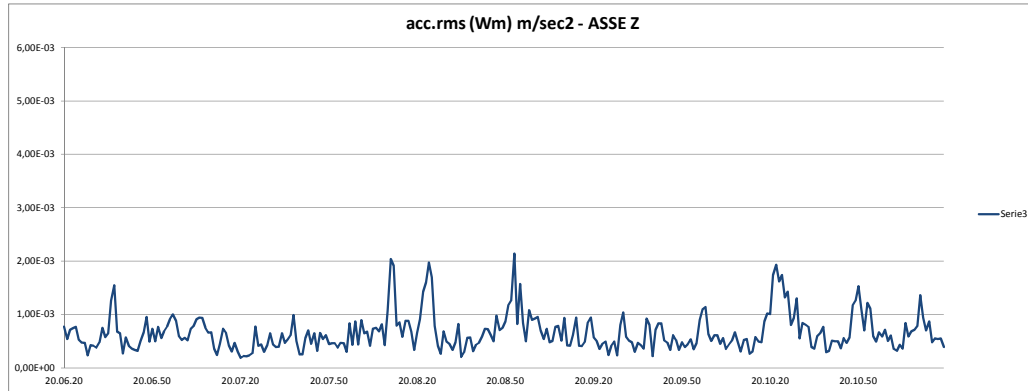
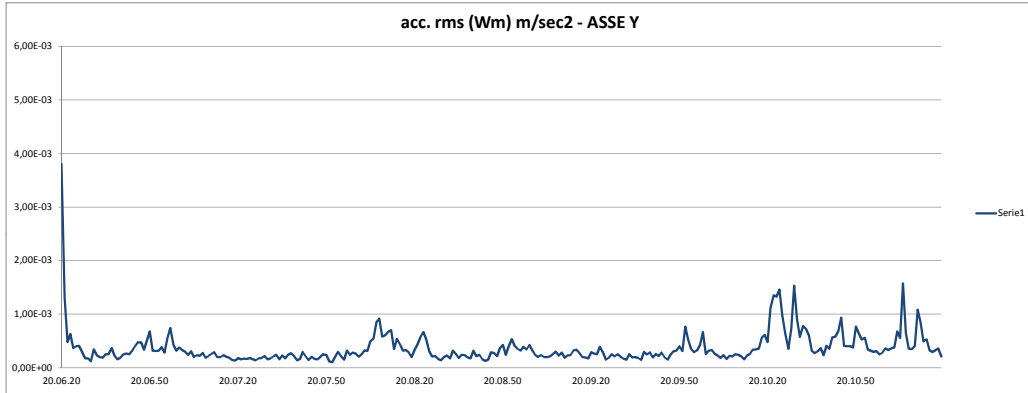
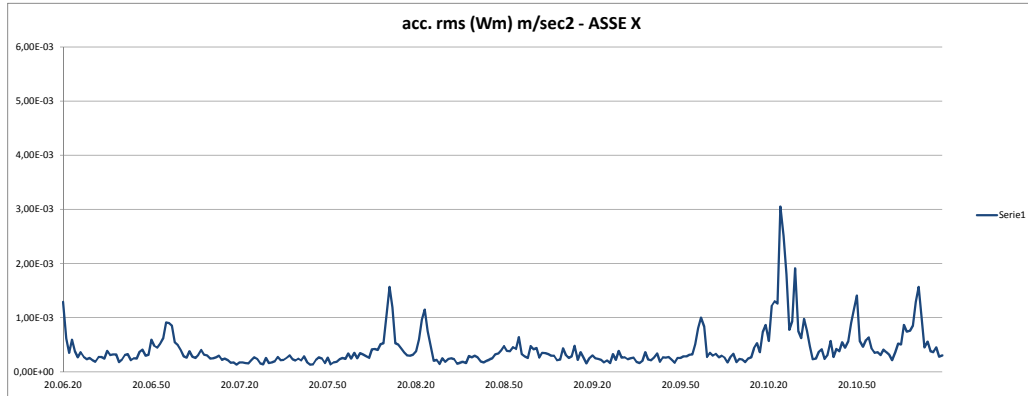
COORDINATE GEOGRAFICHE	
LATITUDINE 44°47'26.05"N	LONGITUDINE 11°34'21.02"E
SORGENTE MONITORATA	
10 metri dal reticolo stradale di Via Bologna (SS64) - Località Uccellino (Ferrara)	

RILIEVO FOTOGRAFICO





ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
4,30E-03	72,7	5,25E-04	54,4

ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
1,25E-02	81,9	4,68E-04	53,4

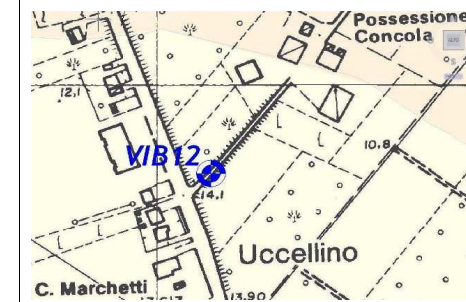
ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
5,73E-03	75,2	7,50E-04	57,5

LIVELLI LIMITE NORMA UNI 9614			
LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s2	7,2E-03	7,2E-03	1,0E-02

LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s2	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO



COORDINATE GEOGRAFICHE	
LATITUDINE	LONGITUDINE
44°47'26.29"N	11°34'21.29"E

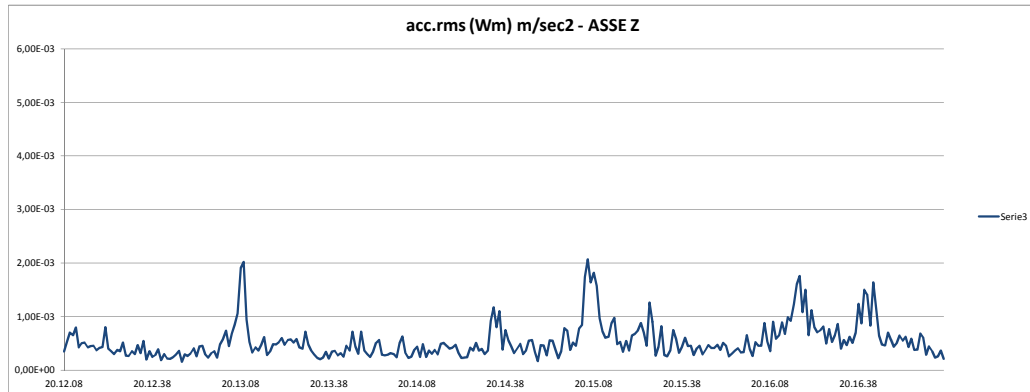
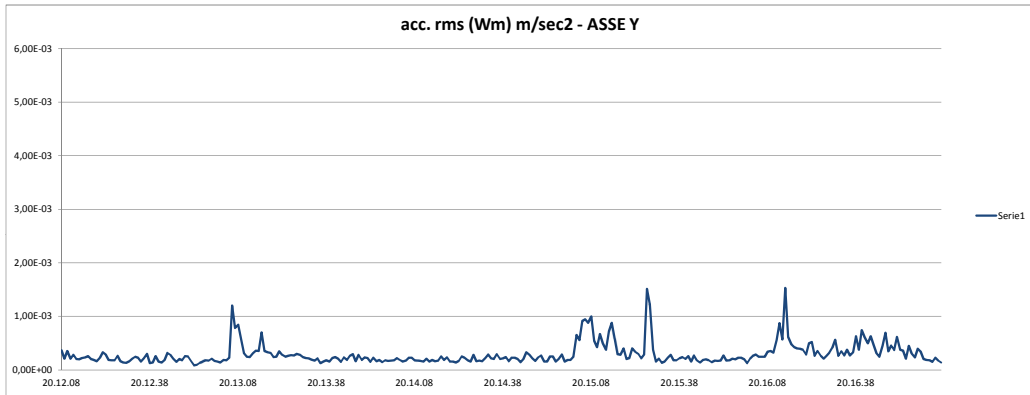
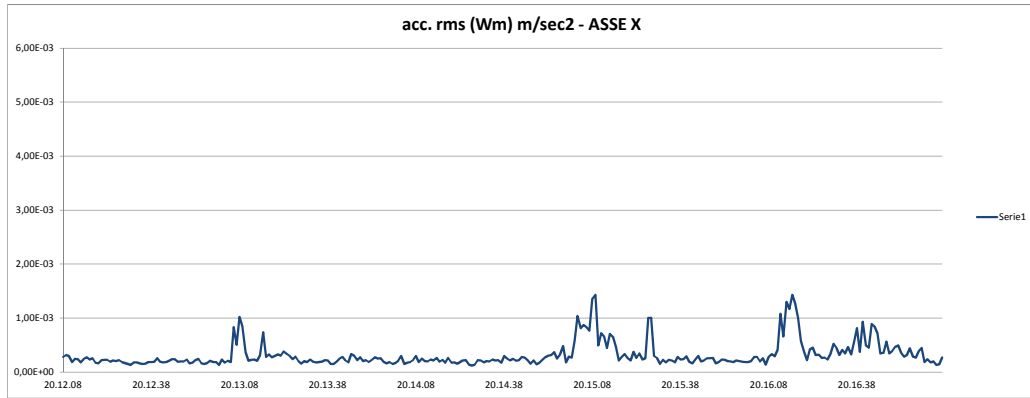
  

SORGENTE MONITORATA
20 metri dal reticolo stradale di Via Bologna (SS64) - Località Uccellino (Ferrara)

RILIEVO FOTOGRAFICO



ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
2,84E-03	69,1	4,22E-04	52,5

ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
2,47E-03	67,9	3,98E-04	52,0

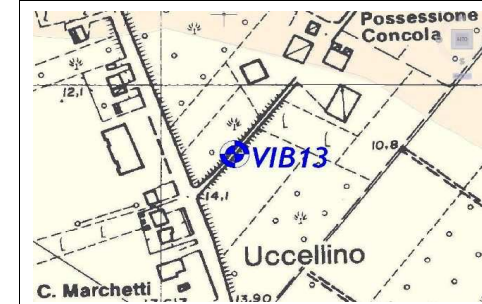
ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
1,43E-02	83,1	6,53E-04	56,3

LIVELLI LIMITE NORMA UNI 9614			
LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s2	7,2E-03	7,2E-03	1,0E-02

LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s2	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO



COORDINATE GEOGRAFICHE	
LATITUDINE	LONGITUDINE
44°47'26.81"N	11°34'21.88"E

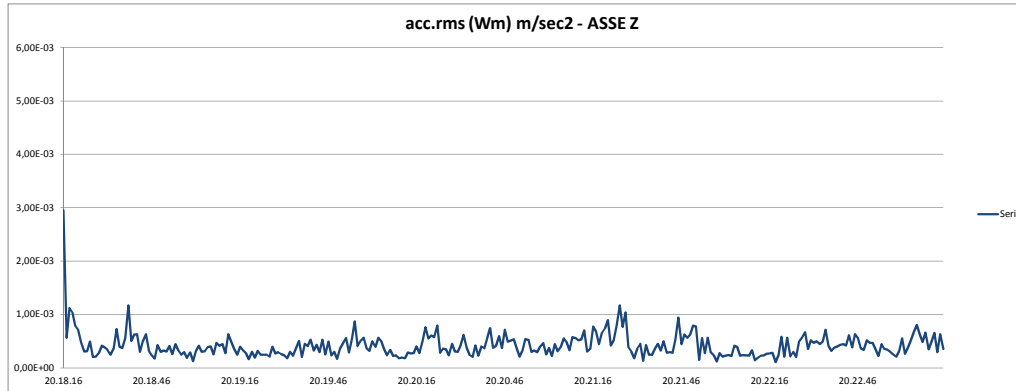
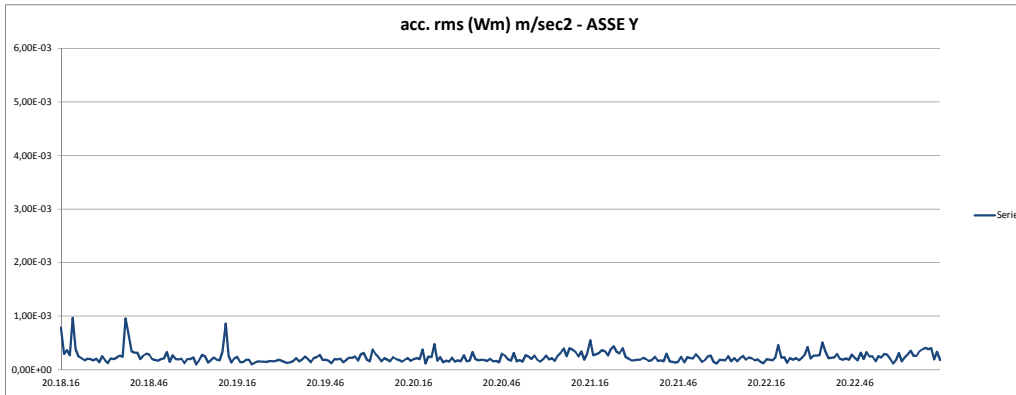
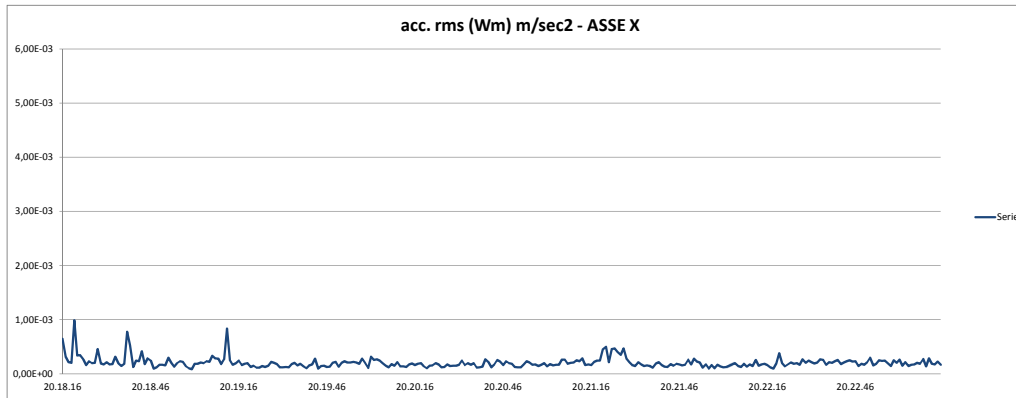
  

SORGENTE MONITORATA
40 metri dal reticolo stradale di Via Bologna (SS64) - Località Uccellino (Ferrara)

RILIEVO FOTOGRAFICO



ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
5,66E-03	75,1	2,26E-04	47,1

ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
6,46E-03	76,2	2,57E-04	48,2

ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
3,30E-02	90,4	4,84E-04	53,7

LIVELLI LIMITE NORMA UNI 9614			
LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s2	7,2E-03	7,2E-03	1,0E-02

LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s2	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO



COORDINATE GEOGRAFICHE	
LATITUDINE	LONGITUDINE
44°47'27.52"N	11°34'22.70"E

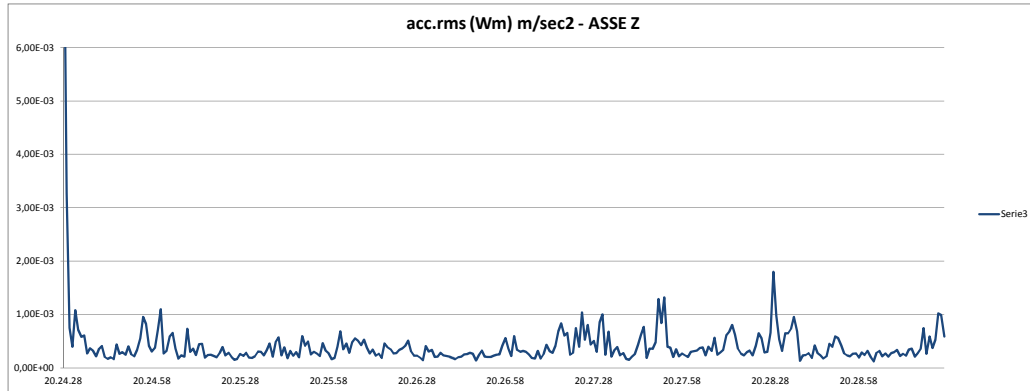
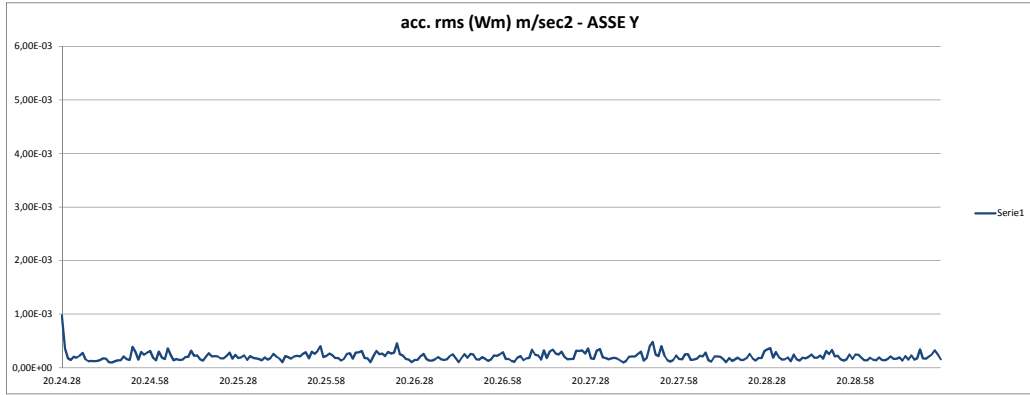
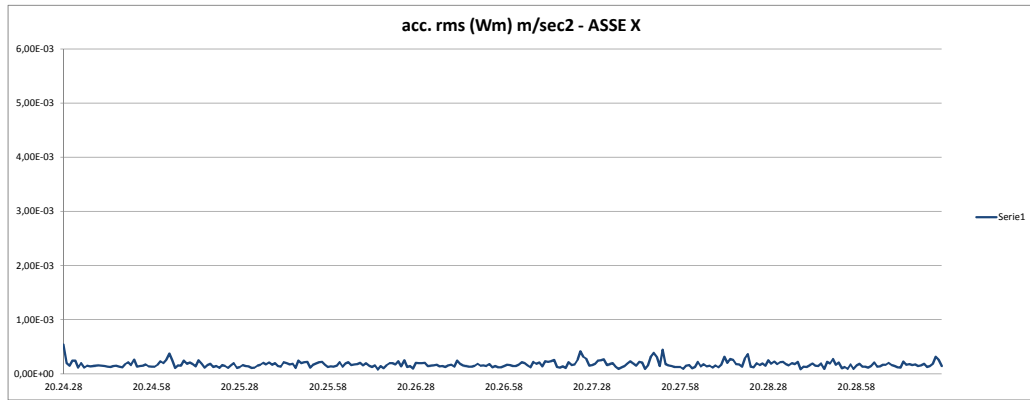
SORGENTE MONITORATA

70 metri dal reticolo stradale di Via Bologna (SS64) - Località Uccellino (Ferrara)

RILIEVO FOTOGRAFICO



ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
1,27E-03	62,1	1,84E-04	45,3

ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
3,85E-03	71,7	2,24E-04	47,0

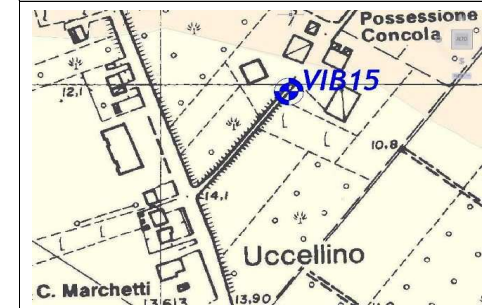
ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
3,29E-02	90,3	7,33E-04	57,3

LIVELLI LIMITE NORMA UNI 9614			
LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s2	7,2E-03	7,2E-03	1,0E-02

LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s2	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO



COORDINATE GEOGRAFICHE	
LATITUDINE	LONGITUDINE
44°47'28.24"N	11°34'23.51"E

SORGENTE MONITORATA

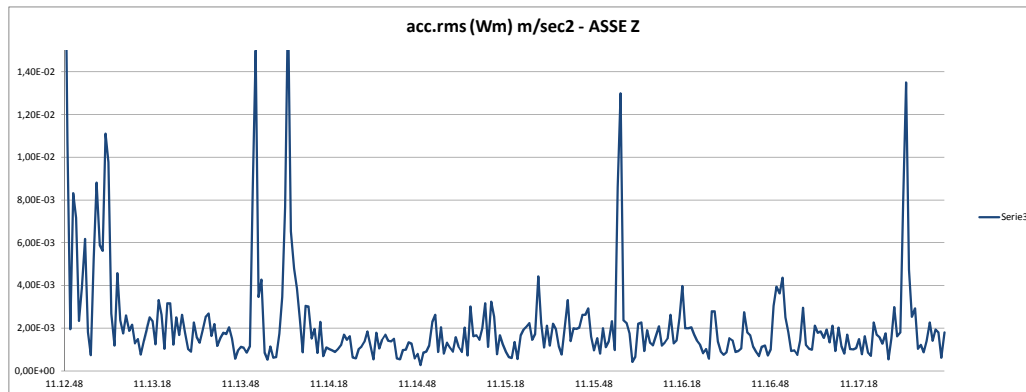
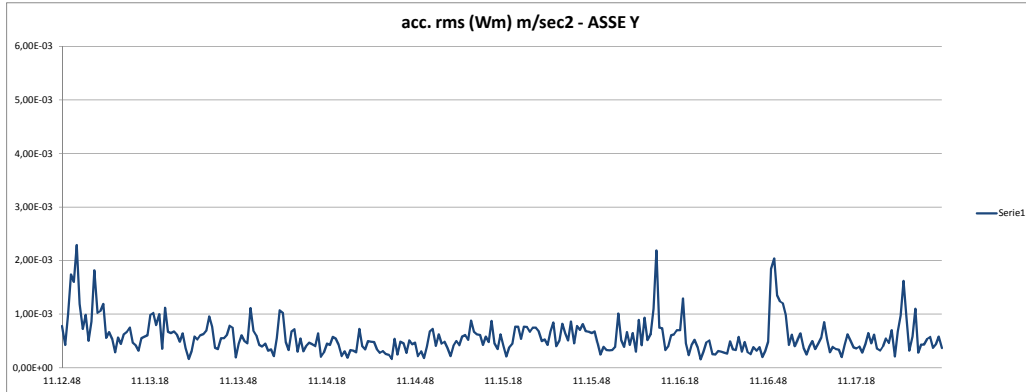
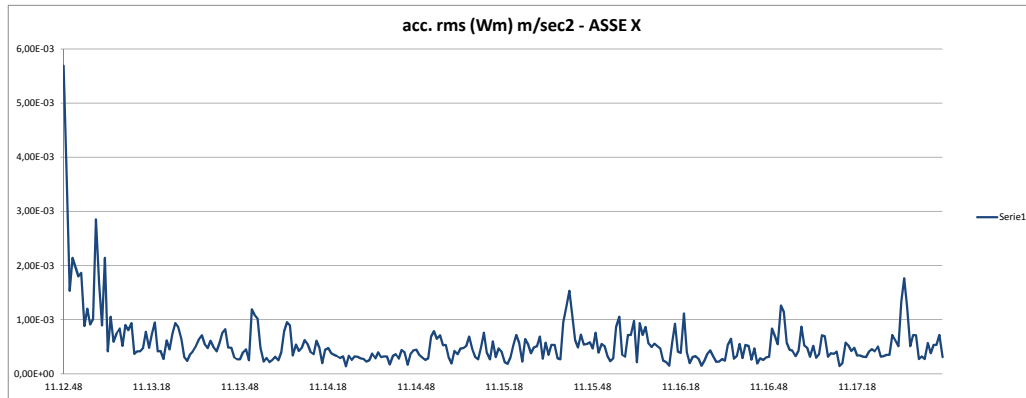
100 metri dal reticolo stradale di Via Bologna (SS64) - Località Uccellino (Ferrara)

RILIEVO FOTOGRAFICO





ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
9,63E-03	79,7	7,50E-04	57,5

ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
5,05E-03	74,1	6,53E-04	56,3

ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
6,72E-02	96,5	3,39E-03	70,6

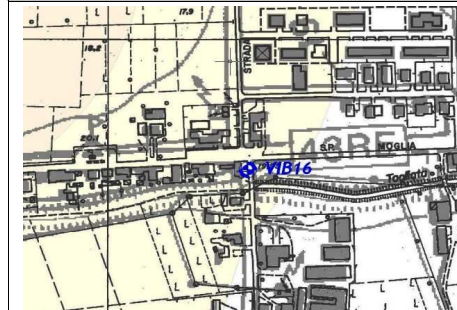
LIVELLI LIMITE NORMA UNI 9614

LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s2	7,2E-03	7,2E-03	1,0E-02

LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s2	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO



COORDINATE GEOGRAFICHE

LATITUDINE	LONGITUDINE
44°54'58,09"N	10°51'27,08"E

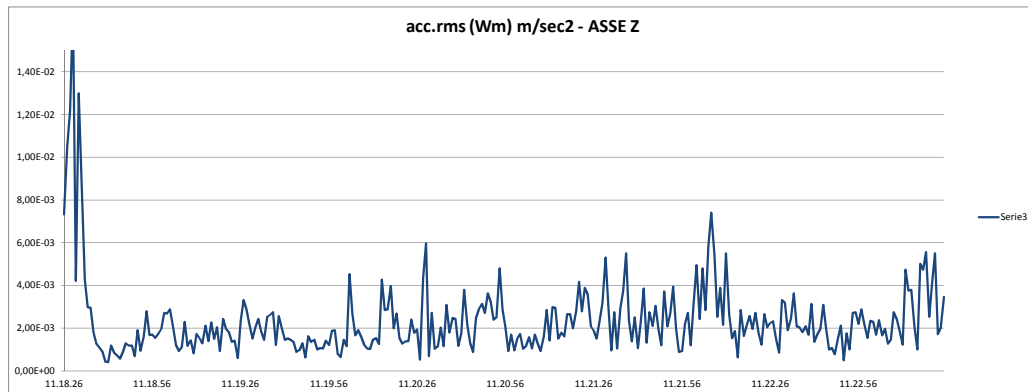
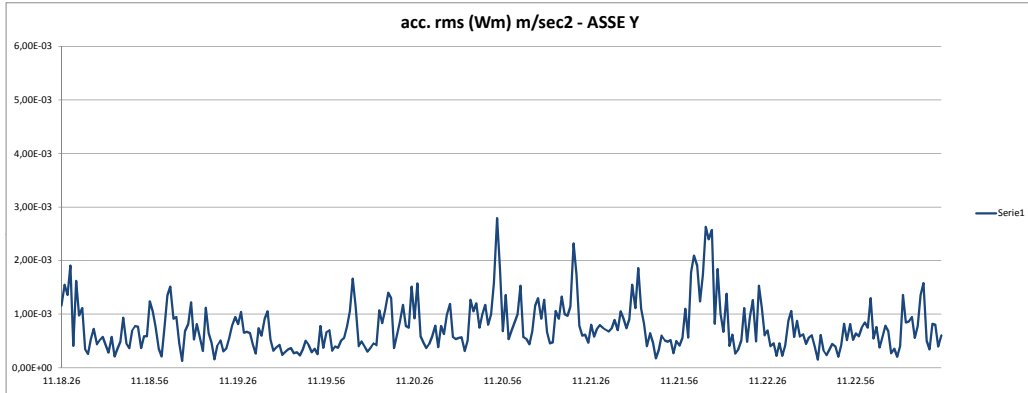
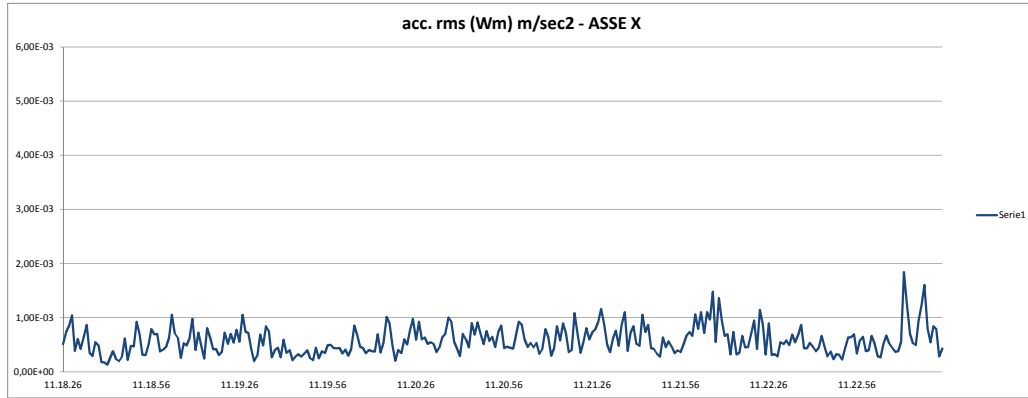
SORGENTE MONITORATA

10 metri dal resede stradale di Via Moglia (SP43) - Località Reggiolo

RILIEVO FOTOGRAFICO



ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
6,08E-03	75,7	6,46E-04	56,2

ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
5,12E-03	74,2	8,91E-04	59,0

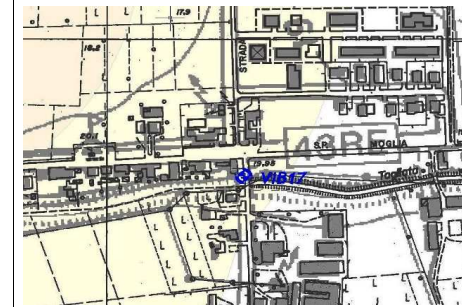
ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
3,42E-02	90,7	3,05E-03	69,7

LIVELLI LIMITE NORMA UNI 9614			
LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s <sup>2</sup>	7,2E-03	7,2E-03	1,0E-02

LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s <sup>2</sup>	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO



COORDINATE GEOGRAFICHE	
LATITUDINE	LONGITUDINE
44°54'57.70"N	10°51'27.10"E

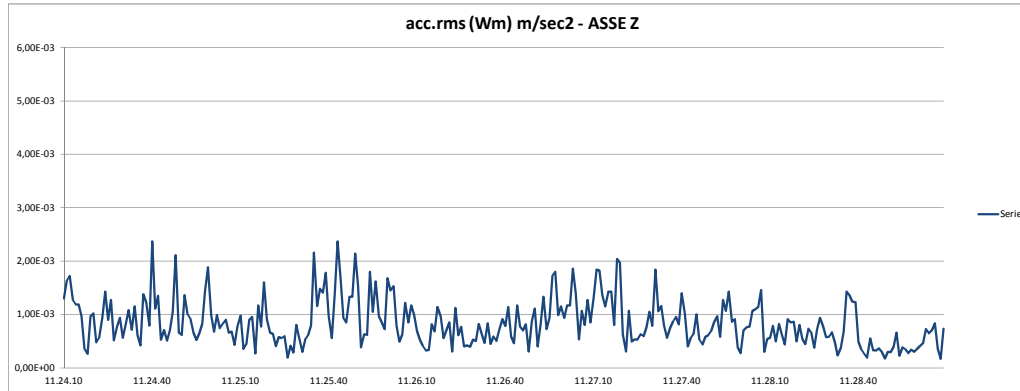
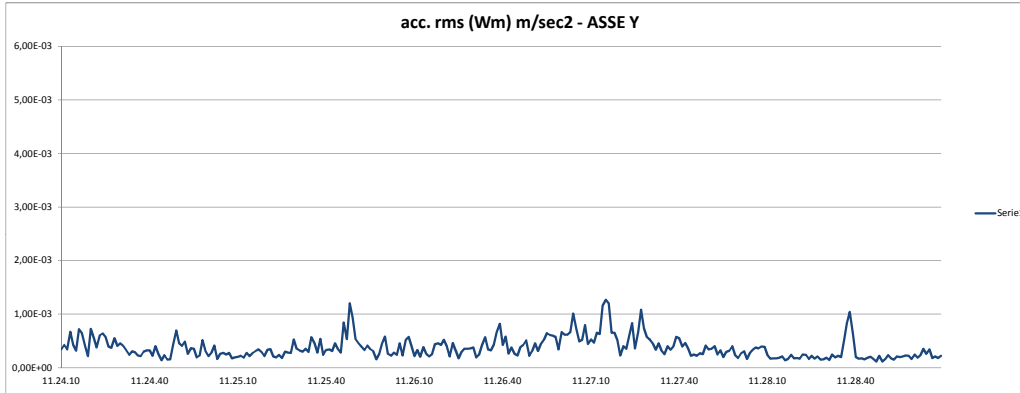
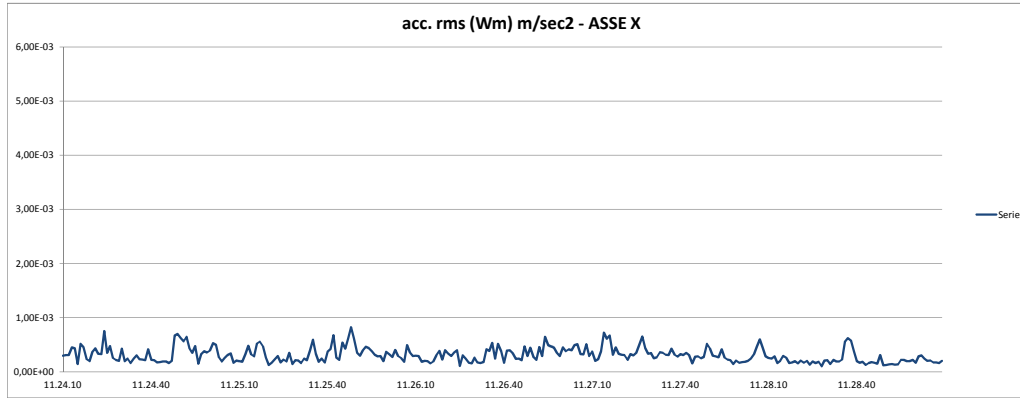
  

SORGENTE MONITORATA
20 metri dal resede stradale di Via Moglia (SP43) - Località Reggiolo

RILIEVO FOTOGRAFICO



ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
2,23E-03	67,0	3,31E-04	50,4

ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
3,49E-03	70,9	4,17E-04	52,4

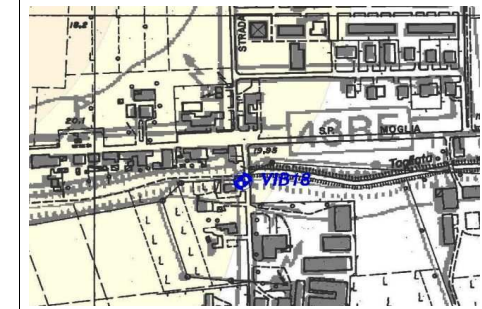
ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
2,33E-02	87,3	9,33E-04	59,4

LIVELLI LIMITE NORMA UNI 9614			
LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s2	7,2E-03	7,2E-03	1,0E-02

LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s2	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO



COORDINATE GEOGRAFICHE	
LATITUDINE	LONGITUDINE
44°54'57.01"N	10°51'27.15"E

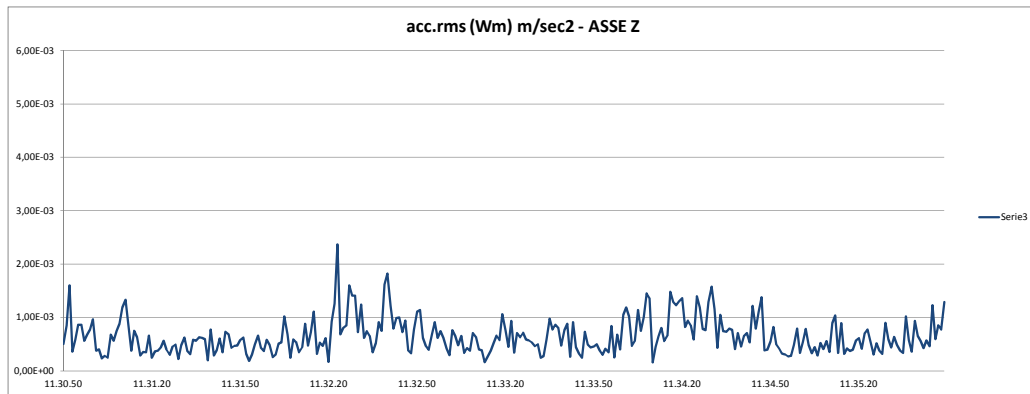
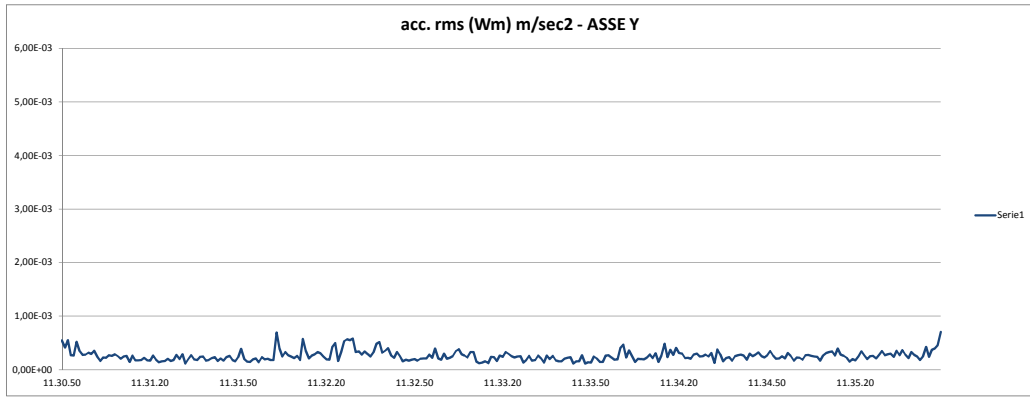
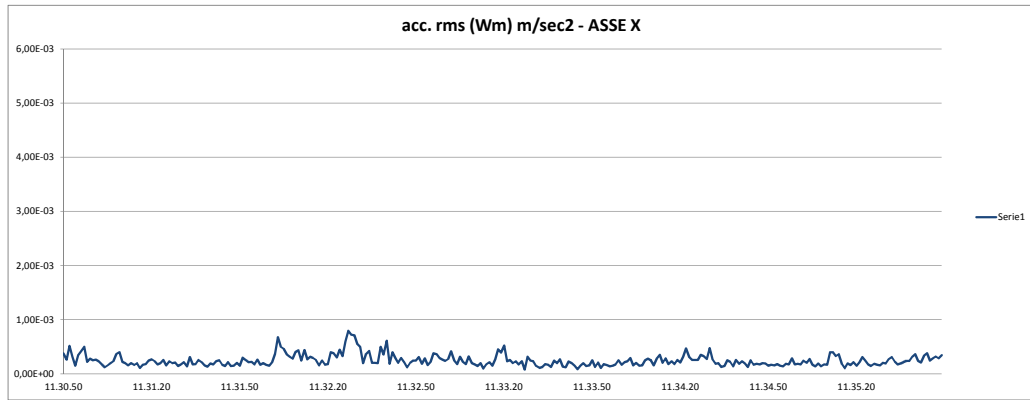
  

SORGENTE MONITORATA
40 metri dal resede stradale di Via Moglia (SP43) - Località Reggolia

RILIEVO FOTOGRAFICO



ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
2,84E-03	69,1	2,82E-04	49,0

ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
3,16E-03	70,0	2,92E-04	49,3

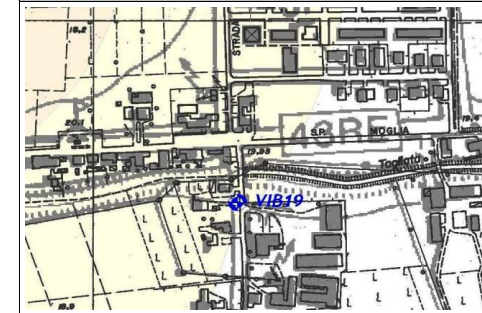
ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
1,43E-02	83,1	7,33E-04	57,3

LIVELLI LIMITE NORMA UNI 9614			
LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s2	7,2E-03	7,2E-03	1,0E-02

LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s2	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO



COORDINATE GEOGRAFICHE	
LATITUDINE	LONGITUDINE
44°54'56.09"N	10°51'27.36"E

SORGENTE MONITORATA

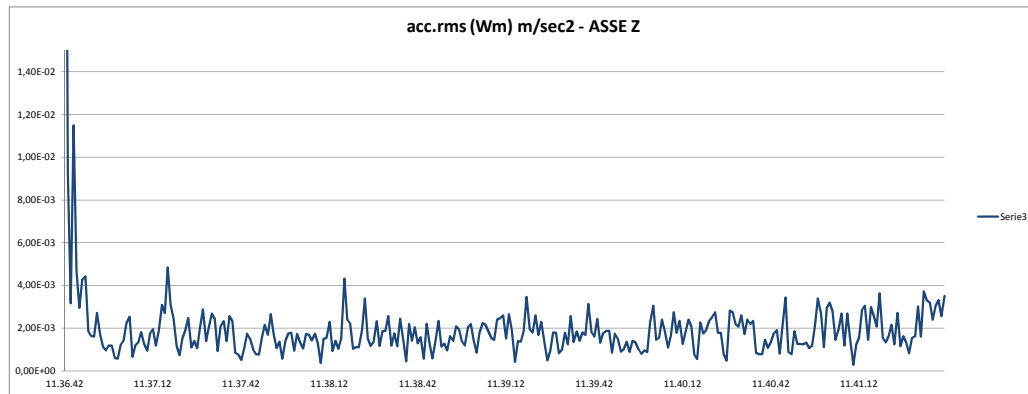
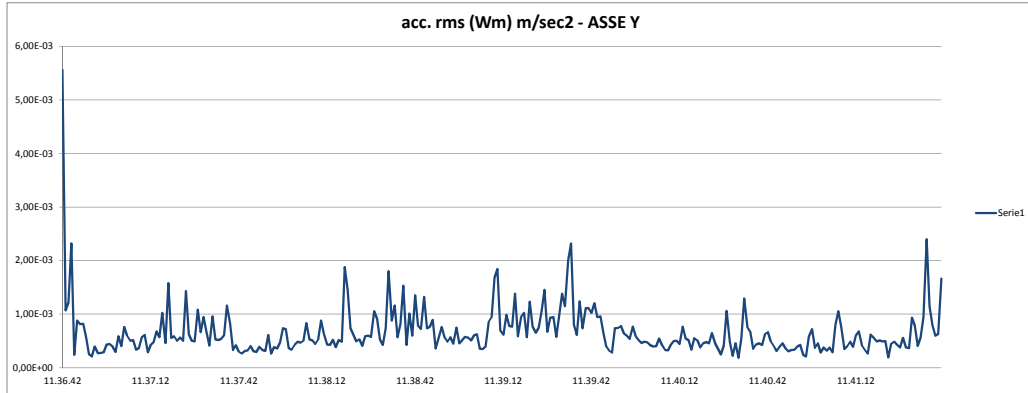
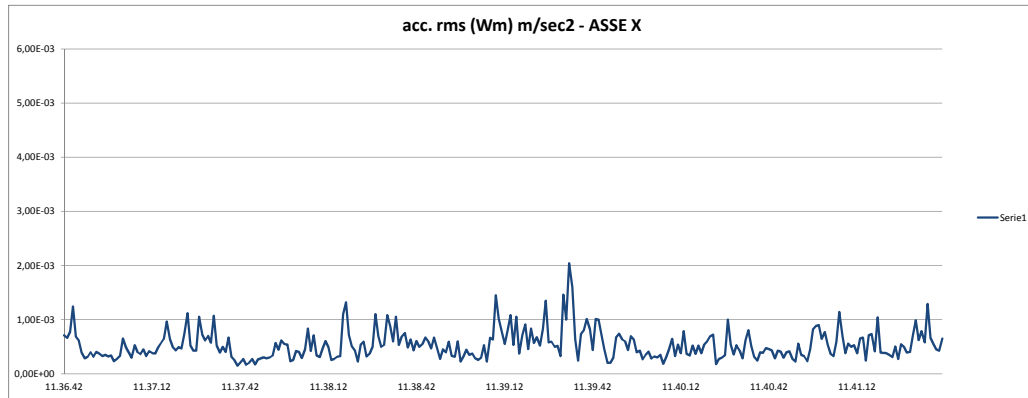
70 metri dal resede stradale di Via Moglia (SP43) - Località Reggiolo

RILIEVO FOTOGRAFICO





ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
1,67E-02	84,5	6,03E-04	55,6

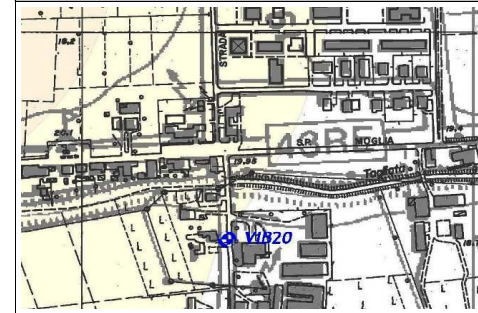
ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
4,83E-02	93,7	8,04E-04	58,1

ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s <sup>2</sup>	dB	m/s <sup>2</sup>	dB
1,84E-01	105,3	3,27E-03	70,3

LIVELLI LIMITE NORMA UNI 9614			
LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s <sup>2</sup>	7,2E-03	7,2E-03	1,0E-02
LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s <sup>2</sup>	5,0E-03	5,0E-03	7,0E-03

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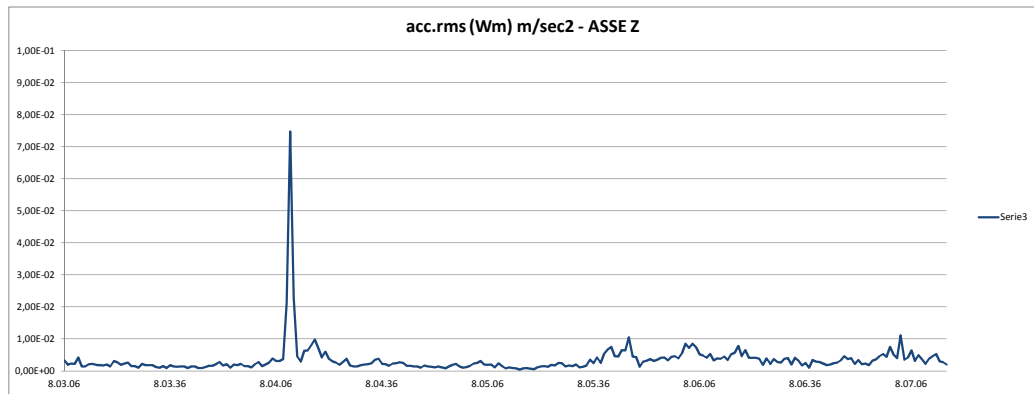
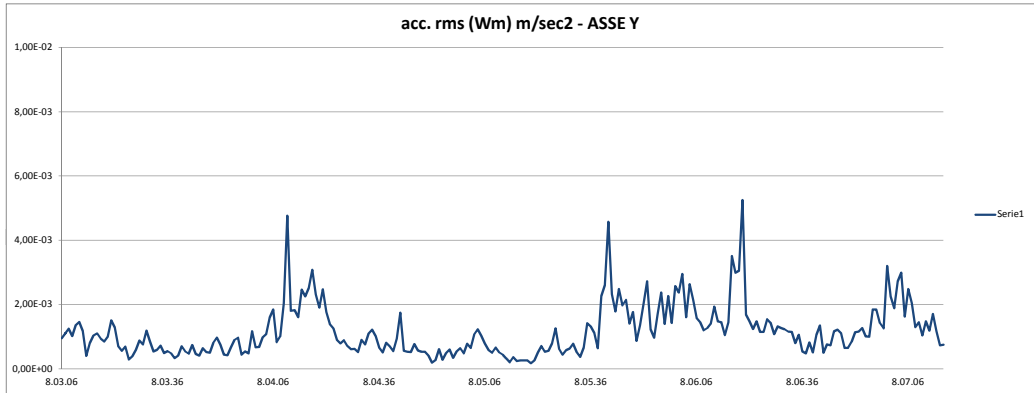
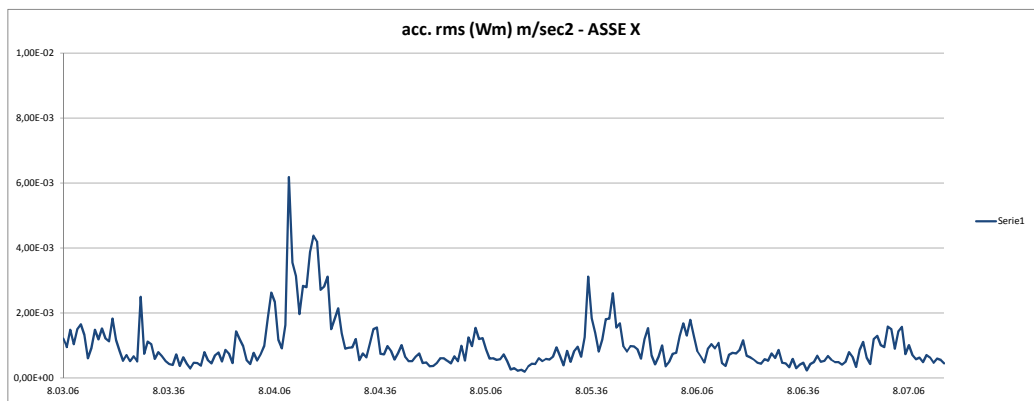


COORDINATE GEOGRAFICHE	
LATITUDINE	LONGITUDINE
44°54'55.09" N	10°51'27.38" E
SORGENTE MONITORATA	
100 metri dal reticolo stradale di Via Moglia (SP43) - Località Reggiolo evidenzia il passaggio di alcuni trattori agricoli in prossimità dello strumento di misura	

RILIEVO FOTOGRAFICO



ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
1,45E-02	83,2	1,40E-03	62,9

ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
1,1E-02	80,5	1,33E-03	62,5

ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
1,7E-02	84,4	7,00E-03	76,9

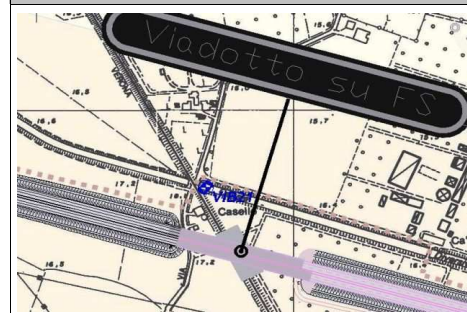
LIVELLI LIMITE NORMA UNI 9614

LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s2	7,2E-03	7,2E-03	1,0E-02

LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s2	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO



COORDINATE GEOGRAFICHE

LATITUDINE	LONGITUDINE
44°52'01.35"N	11°07'29.46"E

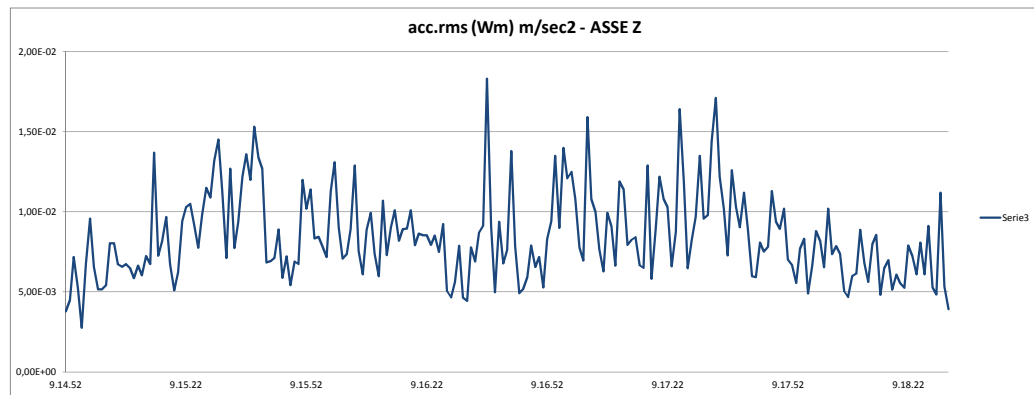
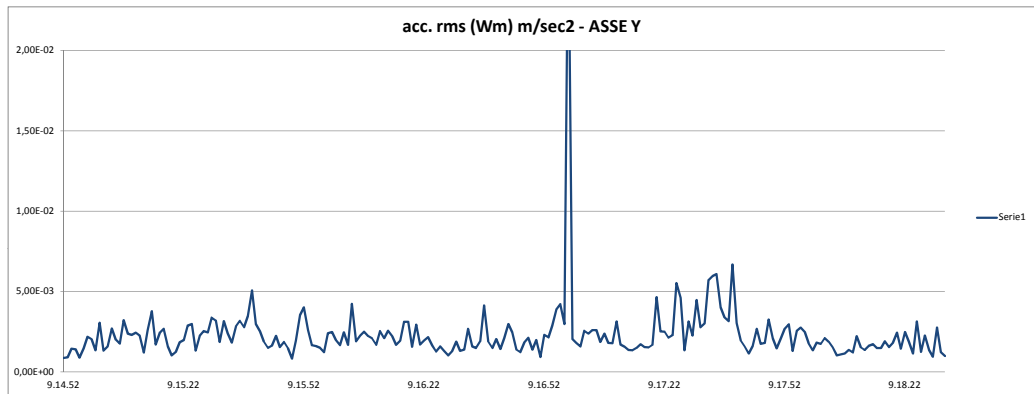
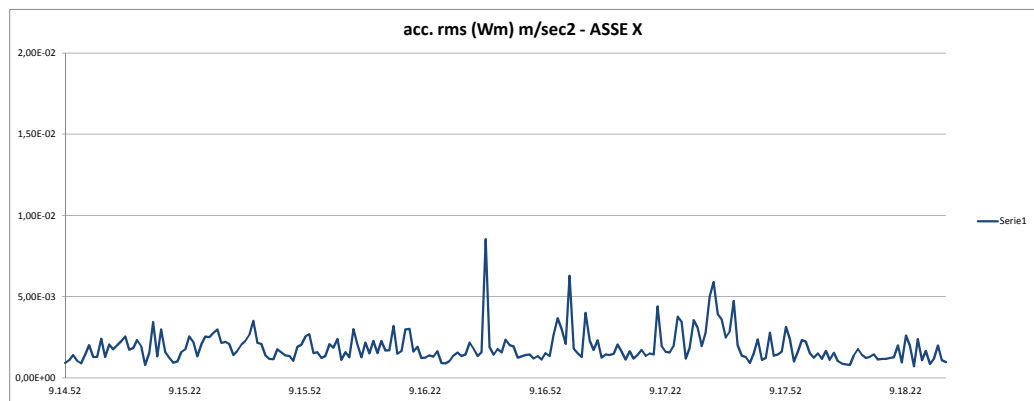
SORGENTE MONITORATA

Linea ferroviaria - Località San Felice sul Panaro (MO), presso via Suozzi

RILIEVO FOTOGRAFICO



ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
2,46E-02	87,8	2,11E-03	66,5

ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
2,83E-02	89,0	3,27E-03	70,3

ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
8,40E-02	98,5	9,02E-03	79,1

LIVELLI LIMITE NORMA UNI 9614

LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s2	7,2E-03	7,2E-03	1,0E-02
LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s2	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO

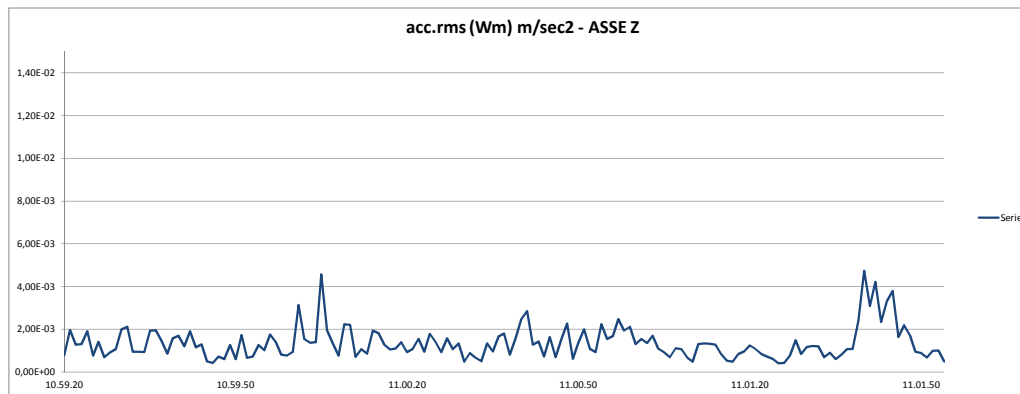
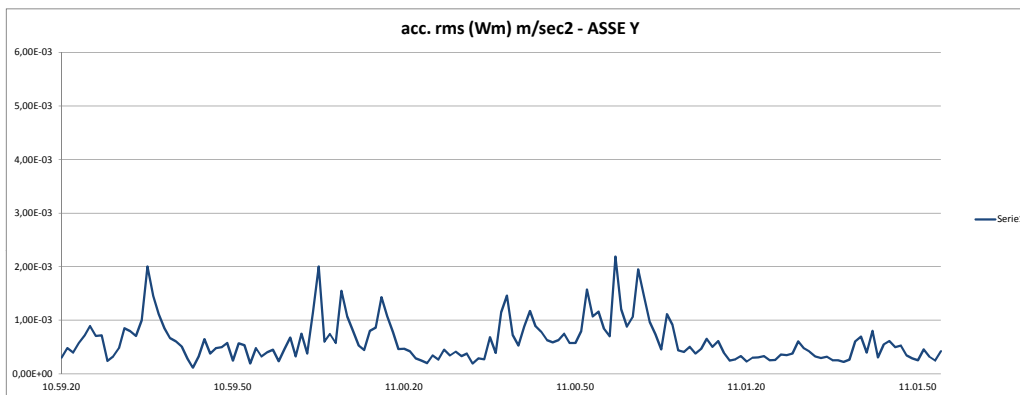
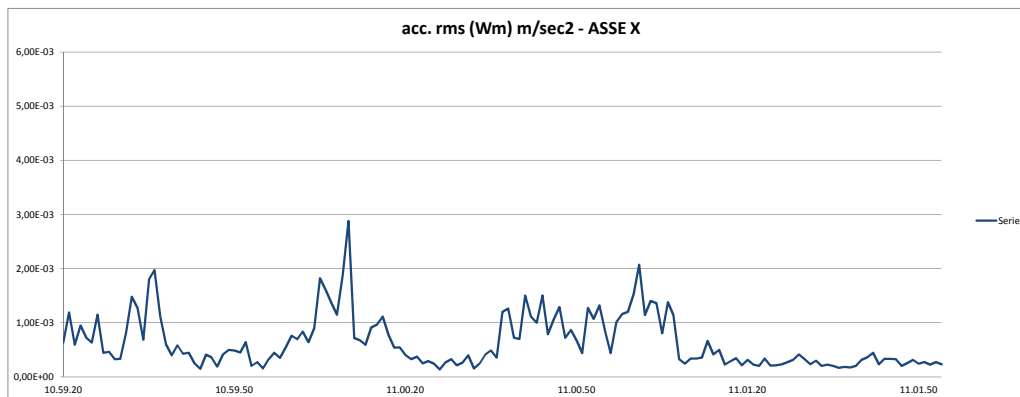


COORDINATE GEOGRAFICHE	
LATITUDINE	LONGITUDINE
44°53'44.74"N	10°51'52.25"E
SORGENTE MONITORATA	
Linea Ferroviaria - Località Rolo (RE) presso via Ponte Nuovo	

RILIEVO FOTOGRAFICO



ANDAMENTO GRAFICO DELLA TIME HISTORY



LIVELLI MEDI DELLA MISURA

ACCELERAZIONE LUNGO ASSE X			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
1,70E-03	64,6	6,17E-04	55,8

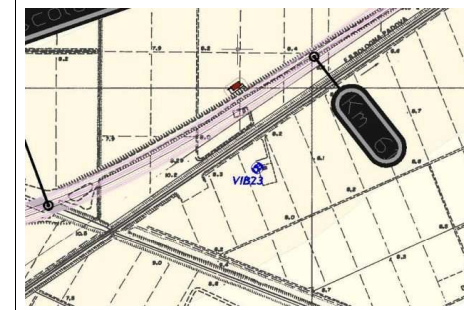
ACCELERAZIONE LUNGO ASSE Y			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
7,68E-03	77,7	7,41E-04	57,4

ACCELERAZIONE LUNGO ASSE Z			
Lineare (HP)		Pesato (Wm)	
m/s2	dB	m/s2	dB
1,84E-03	65,3	1,48E-03	63,4

LIVELLI LIMITE NORMA UNI 9614

LIMITE DIURNO			
	Asse X	Asse Y	Asse Z
dB	77,0	77,0	80,0
m/s2	7,2E-03	7,2E-03	1,0E-02
LIMITE NOTTURNO			
	Asse X	Asse Y	Asse Z
dB	74,0	74,0	77,0
m/s2	5,0E-03	5,0E-03	7,0E-03

RILIEVO PLANIMETRICO



COORDINATE GEOGRAFICHE

LATITUDINE	LONGITUDINE
44°46'40.84"N	11°30'26.48"E

SORGENTE MONITORATA

Linea ferroviaria - Località Poggio Renatico (FE) presso strada Cispadana

RILIEVO FOTOGRAFICO

