

Dispersion Report

Workspace: 72438-4FSRUInvioGNL-12R

Study: Invio GNL Water

Equipment Item: 12R Manichette GNL riempimento FSRU

72438-4FSRUInvioGNL-12R\Invio GNL Water\12R Manichette GNL riempimento FSRU

Material	GAS NATURALE	
East	0	m
North	0	m

Scenario (Leak) : 60mm

72438-4FSRUInvioGNL-12R\Invio GNL Water\12R Manichette GNL riempimento FSRU\60mm

Material to track	GAS NATURALE
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Weather: Category 2/F

Wind speed [m/s]	2
Pasquill stability	F stable - night with moderate clouds and light/moderate wind
Atmospheric temperature [degC]	25
Relative humidity [fraction]	0,75
Solar radiation flux [kW/m2]	0,5
Mixing layer height [m]	100

Observer Release Data and Observer Mass Data

Observer number	Release type	Start time [s]	Start downwind distance [m]	Unit	Masses or mass rates			
					Release	Rainout	Pool vapour pick-up	Final
1	Continuou	0	0	kg/s	36,6419	36,4419		0,20005

	s							2
2	Continuou s	0,22	-0,327613	kg/s	36,6419	36,4419		21,6796
3	Continuou s	240,84 6	-15,7101	kg/s	36,6419	36,4419		35,8555
4	Continuou s	475,75 5	-18,3413	kg/s	36,6419	36,4419		36,0964
5	Continuou s	709,71 9	-20,0255	kg/s	36,6419	36,4419		36,2336
6	Continuou s	943,20 5	-21,2821	kg/s	36,6419	36,4419		36,2952
7	Continuou s	1176,3 8	-22,283	kg/s	36,6419	36,4419		36,2766
8	Continuou s	1409,3 5	-23,1244	kg/s	36,6419	36,4419		36,3399
9	Continuou s	1642,1 6	-23,8508	kg/s	36,6419	36,4419		36,4263
10	Continuou s	1874,8 7	-24,4977	kg/s	36,6419	36,4419		36,3919
11	Continuou s	2054,1 5	-24,9207	kg/s	36,6419	36,4419		30,1127
12	Continuou s	2054,1 5	-24,9207	kg/s	0	0	29,912 7	29,9127
13	Continuou s	2107,6 1	-25,0406	kg/s	0	0		7,76758

Time-varying Observer Dispersion Data (before along-wind-diffusion effects)

Dispersion data correspond to an averaging time of: 18,75 s

Observer number	Time [s]	Down wind distance [m]	C/Li ne height [m]	C/Lin e conc [ppm]	Effecti ve width [m]	Effecti ve depth [m]	C/Line vapour temperature [degC]	C/Li ne liquid fraction	Centr oid velocity [m/s]	C/Lin e cloud density [kg/m ³]
1	0	0	0	999.89	0,1343	0,0651	-160,935	0	11,965	1,9107

				1,66	18	573			5	1
1	0,01	0,110929	0	953.921,85	0,144794	0,0799812	-151,798	0	10,3234	1,80988
1	0,02	0,208209	0	917.243,69	0,156169	0,0923503	-144,392	0	9,18628	1,74012
1	0,03	0,295604	0	886.879,60	0,168121	0,102724	-138,182	0	8,34026	1,68818
1	0,04	0,37548	0	861.091,30	0,180443	0,111511	-132,851	0	7,67913	1,64755
1	0,05	0,449432	0	838.764,55	0,193001	0,119057	-128,192	0	7,14301	1,61465
1	0,06	0,518528	0	819.156,17	0,205707	0,125609	-124,065	0	6,69688	1,58738
1	0,07	0,583553	0	801.733,36	0,2185	0,131355	-120,37	0	6,31807	1,56417
1	0,08	0,645071	0	786.108,39	0,231341	0,13643	-117,033	0	5,9917	1,54411
1	0,09	0,703521	0	771.986,28	0,244201	0,140937	-113,997	0	5,70712	1,52666
1	0,1	0,759285	0	759.128,21	0,257056	0,144976	-111,216	0	5,45607	1,51124
1	0,11	0,812687	0	747.343,02	0,26989	0,14863	-108,652	0	5,23232	1,49748
1	0,12	0,863986	0	736.479,28	0,282689	0,151964	-106,274	0	5,03115	1,48508
1	0,13	0,913381	0	726.417,75	0,295446	0,155025	-104,057	0	4,84908	1,47388
1	0,14	0,961039	0	717.060,58	0,308153	0,157852	-101,978	0	4,68339	1,46346
1	0,15	1,00711	0	708.325,14	0,320807	0,160474	-100,022	0	4,53182	1,45392
1	0,16	1,05175	0	700.134,55	0,333401	0,162926	-98,1742	0	4,39235	1,44507
1	0,17	1,09504	0	692.439,66	0,345935	0,165219	-96,4253	0	4,26368	1,43684
1	0,18	1,13714	0	685.174,46	0,358405	0,167393	-94,7622	0	4,14412	1,42913
1	0,19	1,17813	0	678.29	0,3708	0,1694	-93,1766	0	4,0326	1,4218

				7,67	09	63			3	9
1	0,2	1,21804	0	671.78 3,91	0,3831 48	0,1714 27	-91,6639	0	3,9286	1,4150 7
1	0,212	1,2646	0	664.40 3,70	0,3978 65	0,1736 52	-89,9362	0	3,8126	1,4073 8
1	0,226 4	1,31871	0	656.10 7,18	0,4153 98	0,1761 63	-87,9755	0	3,6845 3	1,3987 9
1	0,243 68	1,38129	0	646.86 5,14	0,4362 49	0,1789 75	-85,7665	0	3,5447 4	1,3892 7
1	0,264 416	1,45336	0	636.66 5,88	0,4609 99	0,1821 1	-83,2958	0	3,3939 7	1,3787 9
1	0,289 299	1,53589	0	625.53 0,54	0,4903 06	0,1855 72	-80,5544	0	3,2335 7	1,3673 7
1	0,319 159	1,62986	0	613.50 8,86	0,5249 06	0,1893 67	-77,537	0	3,0653 3	1,3550 3
1	0,354 991	1,73638	0	600.65 0,68	0,5656 11	0,1935 45	-74,2354	0	2,8909 4	1,3417 8
1	0,397 989	1,85669	0	587.01 1,15	0,6132 93	0,1982 14	-70,6399	0	2,7119 7	1,3276 2
1	0,449 587	1,99195	0	572.68 8,89	0,6688 55	0,2034 68	-66,7468	0	2,5306 5	1,3125 7
1	0,511 504	2,14306	0	557.84 4,23	0,7331 66	0,2093 27	-62,5622	0	2,3502 2	1,2966 9
1	0,585 805	2,31087	0	542.65 2,38	0,8069 23	0,2158 31	-58,0927	0	2,1738 5	1,2800 1
1	0,674 966	2,49655	0	527.25 9,54	0,8904 54	0,2231 72	-53,3452	0	2,0035 7	1,2626
1	0,781 959	2,70159	0	511.80 0,07	0,9834 63	0,2316 18	-48,3931	0	1,8407 7	1,2448 8
1	0,910 351	2,92749	0	496.44 5,95	1,0846 8	0,2414 43	-43,35	0	1,6871	1,2274 1
1	1,064 42	3,17582	0	481.28 6,70	1,1910 6	0,2531 82	-38,2862	0	1,5440 8	1,2104 9
1	1,249 31	3,44829	0	464.40 3,53	1,2956 7	0,2702 92	-32,9088	0	1,4089 6	1,1937 6
1	1,471 17	3,74638	0	445.46 3,70	1,3799 2	0,2968 31	-27,312	0	1,2847 5	1,1778 9
1	1,737	4,07221	0	420.47	1,4112	0,3465	-21,0737	0	1,1686	1,1631



	4			2,08	5	69			4	3
1	2,056 88	4,42685	0	383.51 7,15	1,4527 8	0,4199 21	-13,7628	0	1,0572 6	1,1507
1	2,440 26	4,81265	0	341.50 0,15	1,5159 3	0,5104 01	-6,91633	0	0,9615 45	1,1432 4
1	2,900 31	5,23597	0	298.52 2,27	1,6028 5	0,6149 22	-1,17114	0	0,8831 27	1,1408 1
1	3,452 37	5,7054	0	257.45 4,54	1,7149 8	0,7299 38	3,36892	0	0,8207 84	1,1422 1
1	4,114 84	6,23237	0	219.49 8,40	1,8548 3	0,8547 37	7,16646	0	0,7716 83	1,1448 6
1	4,909 81	6,82995	0	185.33 8,03	2,0246 4	0,9876 16	10,1813	0	0,7334 41	1,1486 1
1	5,863 77	7,51417	0	155.30 2,15	2,2257 7	1,1279	12,5641	0	0,7039 73	1,1528
1	7,008 53	8,30561	0	129.41 7,20	2,4586	1,2757 8	14,445	0	0,6814 03	1,1569 5
1	7,350 09	8,53735	0	123.20 4,93	2,5259	1,3164 9	14,8749	0	0,6763 6	1,1580 2
1	7,350 09	8,53735	0	123.20 4,93	2,5259	1,3164 9	14,8749	0	0,6763 6	1,1580 2
1	8,382 23	9,22771	0	108.03 0,69	2,7070 6	1,4319 3	15,8955	0	0,6645 55	1,1607
1	10,03 07	10,3122	0	91.405, 75	2,9411 3	1,5942 4	16,9729	0	0,6522 77	1,1637 4
1	12,00 88	11,6047	0	78.671, 15	3,1456 5	1,7226 7	17,7762	0	0,6580 11	1,1661 2
1	14,38 26	13,1851	0	68.912, 15	3,3158 9	1,8317 3	18,3881	0	0,6719 53	1,1679 3
1	17,23 11	15,1182	0	61.577, 39	3,4608 6	1,9302 9	18,8573	0	0,6850 78	1,1692 2
1	20,64 93	17,4768	0	56.374, 88	3,5937 1	2,0051 1	19,2138	0	0,6948 01	1,1700 2
1	24,75 12	20,3444	0	51.823, 26	3,7421 5	2,0721	19,535	0	0,7033 41	1,1706 6
1	29,67 34	23,8336	0	46.963, 92	3,9213 8	2,1511 7	19,8621	0	0,7144 19	1,1714 2
1	35,58	28,0946	0	52.023,	4,1390	2,2469	20,1887	0	0,7284	1,1722

	01			02	2	2			11	9
1	42,66 81	33,3205	0	45.535, 63	4,4037 5	2,3645 8	20,9395	0	0,7462 39	1,1717 4
1	48,49 63	39,7618	0	38.993, 45	4,7273 9	2,5092 6	21,8246	0	0,7683 49	1,1707 8
1	52,25 38	47,7415	0	32.582, 12	5,1246 8	2,687	22,5938	0	0,7953	1,1702 2
1	54,16 58	51,8022	0	29.879, 78	5,3254 4	2,777	22,8898	0	0,8087 64	1,1701
1	56,81 82	57,6873	0	26.486, 33	5,6148 4	2,9076 2	23,2376	0	0,8280 59	1,1700 3
1	61,67 96	70,1484	0	20.903, 23	6,2223 7	3,1824 2	23,7559	0	0,8675 84	1,1701 4
1	67,80 91	85,8702	0	15.972, 51	6,9798 6	3,5279 3	24,155	0	0,9152 58	1,1704 6
1	75,34 55	105,83	0	11.953, 66	7,9292 7	3,9301 8	24,4414	0	0,9681 23	1,1708 7
1	85,59 28	131,037	0	9.032,5 5	9,1118 6	4,3162 1	24,6304	0	1,0165	1,1712 4
1	85,90 71	131,724	0	8.968,9 0	9,1438 5	4,3263 7	24,6342	0	1,0177 6	1,1712 5
1	101,1 03	162,861	0	6.676,2 5	10,583	4,7746 8	24,7632	0	1,0714	1,1716 2
1	119,9 62	203,19	0	4.831,1 8	12,418 4	5,3192	24,853	0	1,1333 9	1,1719 7
1	143,6 49	254,479	0	3.425,8 7	14,714	5,9664 5	24,9115	0	1,2032 1	1,1722 7
1	173,7 14	319,934	0	2.383,3 4	17,592 4	6,7362 7	24,9483	0	1,2816 8	1,1725 2
1	232,0 32	397,073	0	1.674,5 9	20,924 2	7,5819 2	24,9693	0	1,3629 2	1,1727 1
2	0,22	- 0,32761 3	0	1,00	0,0017 7245	0,7824 28	24,6246	0	0,6148 73	1,1739
2	0,32	- 0,30883 7	0	915.29 7,45	0,4570 07	0,1146 51	-145,061	0	0,0984 012	1,7518 5



2	0,42	-	0	945.17	0,7158	0,1663	-150,787	0	0,0738	1,8041
		0,30047		5,99	63	66			189	
		9								
2	0,52	-	0	955.62	0,9568	0,1948	-152,766	0	0,0666	1,8234
		0,29351		9,19	98	33			085	
		6								
2	0,62	-	0	960.67	1,1888	0,2116	-153,695	0	0,0643	1,8325
		0,28699		9,53	4	97			714	7
		3								
2	0,72	-	0	963.21	1,4116	0,2238	-153,529	0	0,0643	1,8269
		0,28056		4,53	3	35			952	5
		8								
2	0,82	-	0	964.32	1,6265	0,2338	-152,503	0	0,0656	1,8092
		0,27407		2,53		63			658	5
		1								
2	0,92	-	0	964.60	1,8339	0,2429	-151,014	0	0,0676	1,7856
		0,26740		3,17	6	99			392	5
		7								
2	1,02	-	0	964.37	2,0379	0,2511	-149,321	0	0,0700	1,7601
		0,26052		3,65	3	78			441	9
		6								
2	1,12	-	0	963.80	2,2415	0,2585	-147,514	0	0,0727	1,7342
		0,25339		8,15	8	44			241	3
2	1,22	-	0	963.01	2,4447	0,2653	-145,677	0	0,0755	1,7089
		0,24597		8,62	4	73			864	1
		6								
2	1,32	-	0	962.07	2,6472	0,2717	-143,862	0	0,0785	1,6848
		0,23826		7,40	8	88			72	4
		9								
2	1,42	-	0	961.03	2,8491	0,2780	-142,087	0	0,0816	1,6621
		0,23026		5,96		03			261	5
2	1,52	-	0	959.93	3,0502	0,2840	-140,373	0	0,0847	1,6409
		0,22194		1,60	1	9			124	8
		3								
2	1,62	-	0	958.79	3,2506	0,2900	-138,737	0	0,0878	1,6214
		0,21331		0,07	4	43			093	3
		8								
2	1,72	-	0	957.62	3,4504	0,2959	-137,183	0	0,0908	1,6034
		0,20438		9,82	2	11			962	



		3								
2	1,82	-	0	956.46	3,6495	0,3017	-135,71	0	0,0939	1,5868
		0,19514		3,99	6	19			59	1
		1								
2	1,92	-	0	955.30	3,8481	0,3074	-134,319	0	0,0969	1,5715
		0,18559		1,73		64			892	4
		4								
2	2,02	-	0	954.14	4,0460	0,3131	-133,007	0	0,0999	1,5575
		0,17574		9,24	6	4			816	1
		6								
2	2,12	-	0	953.01	4,2434	0,3187	-131,768	0	0,1029	1,5445
		0,16560		1,15	8	68			3	7
		1								
2	2,22	-	0	951.89	4,4403	0,3243	-130,597	0	0,1058	1,5326
		0,15516		0,46	7	52			3	1
		4								
2	2,34	-	0	950.57	4,6759	0,3310	-129,275	0	0,1092	1,5194
		0,14226		1,57	8	02			46	2
2	2,484	-	0	949.02	4,9578	0,3388	-127,802	0	0,1132	1,5051
		0,12623		8,08	2	65			53	
		9								
2	2,656	-	0	947.23	5,2948	0,3481	-126,174	0	0,1179	1,4897
	8	0,10626		2,45	4	6			3	2
		4								
2	2,864	-	0	945.16	5,6976	0,3591	-124,393	0	0,1233	1,4734
	16	0,08124		1,56	7	59			49	1
		59								
2	3,112	-	0	942.79	6,1790	0,3720	-122,473	0	0,1296	1,4564
	99	0,04977		0,37	1	34				3
		34								
2	3,411	-	0	940.09	6,7537	0,3870	-120,41	0	0,1367	1,4388
	59	0,01000		3,78	8	96			64	4
		28								
2	3,484	2,46046	0	939.46	6,8932	0,3907	-119,942	0	0,1384	1,4349
	29	E-17		1,90	7	18			51	4
2	3,484	2,46046	0	968.68	4,9643	0,0260	-139,911	0	3,4216	1,6258
	29	E-17		3,41	8	953			2	8
2	3,769	0,46104	0	924.57	5,4504	0,1751	-139,754	0	1,0916	1,6698
	91	7		5,26	9	47			1	6



2	4,199 89	0,83993 5	0	937.44 7,40	6,3155 2	0,3101 29	-143,234	0	0,7427 02	1,7025 8
2	4,715 87	1,17837	0	946.11 9,94	7,5678 9	0,4105 45	-143,983	0	0,5898 65	1,7034 7
2	5,335 04	1,51264	0	951.19 6,76	9,2113 9	0,4874 43	-142,578	0	0,4991 5	1,6788 3
2	6,078 05	1,8593	0	952.63 0,47	11,260 9	0,5505 7	-139,027	0	0,4396 81	1,6309 8
2	6,969 66	2,23175	0	950.62 2,10	13,734 3	0,6063 44	-133,428	0	0,3998 94	1,5652 3
2	8,039 59	2,64403	0	945.84 1,15	16,639 9	0,6578 3	-126,1	0	0,3742 28	1,4894 7
2	9,323 51	3,11342	0	938.73 3,63	19,948 9	0,7074 12	-117,501	0	0,3595 44	1,4117 6
2	10,86 42	3,66167	0	929.77 5,61	23,567 6	0,7580 49	-108,229	0	0,3537 57	1,3388 3
2	12,71 31	4,31618	0	918.73 0,19	27,316 2	0,8148 15	-98,8392	0	0,3555 05	1,2750 2
2	14,93 17	5,11621	0	895.61 3,18	30,874 5	0,8941 96	-88,565	0	0,3673 88	1,2215 9
2	17,59 4	6,12447	0	846.72 9,67	33,590 2	1,0372 1	-76,4909	0	0,3914 86	1,1821 3
2	20,78 88	7,45056	0	699.46 9,38	33,969 7	1,4747 4	-53,5014	0	0,4462 04	1,1547 7
2	24,62 26	9,43639	0	490.29 5,77	33,969 6	2,1928	-25,6714	0	0,5999 35	1,1461 6
2	28,35 6	11,9806	0	348.26 6,21	33,969 6	3,0390 9	-7,18574	0	0,7636 37	1,1418 7
2	28,35 6	11,9806	0	348.26 6,21	33,969 6	3,0391	-7,18574	0	0,7636 35	1,1418 7
2	29,22 31	12,6622	0	315.29 7,60	34,328 2	3,2223 8	-3,03993	0	0,8002 73	1,1411 3
2	34,74 37	17,6445	0	182.41 0,05	36,634 9	4,4283	10,0072	0	0,9940 58	1,1513 7
2	34,74 37	17,6445	0	182.41 0,05	36,634 9	4,4283	10,0072	0	0,9940 58	1,1513 7
2	34,74 37	17,6445	0,02	182.40 9,67	36,634 9	4,4109 7	10,0126	0	0,9934 8	1,1513 4

2	36,948	19,8635	0,415709	153.616,76	37,4786	4,42852	12,2713	0	1,05993	1,15531
2	36,948	19,8635	0,415709	153.616,76	37,4786	4,42852	12,2713	0	1,05993	1,15531
2	41,3684	24,2582	2,84891	114.603,05	38,6264	2,80722	15,1004	0	1,27963	1,16108
2	42,1533	25,1288	3,40725	107.047,84	38,8009	2,74334	15,6018	0	1,35637	1,16236
2	42,1533	25,1288	3,40725	107.047,84	38,8009	2,74152	15,6018	0	1,35723	1,16236
2	49,3181	35,9574	8,45192	66.705,76	39,8478	3,00011	18,2101	0	1,93902	1,16932
2	58,8577	56,2167	14,1213	50.225,05	40,8517	3,0552	19,1498	0	2,4306	1,17137
2	70,3053	85,5603	17,8321	34.969,76	42,2739	3,70111	19,961	0	2,68611	1,17358
2	84,0423	121,941	15,6562	25.525,53	43,996	4,91713	20,4189	0	2,55134	1,17576
2	95,9233	147,896	7,32528	21.988,17	45,2032	7,40697	20,8311	0	2,02542	1,17685
2	95,9233	147,896	7,32528	21.988,17	45,2032	7,40697	20,8311	0	2,02542	1,17685
2	100,449	156,166	3,56181	21.270,06	45,5845	10,1924	20,9142	0	2,03967	1,17738
2	100,527	156,316	3,50894	21.258,91	45,5915	10,2377	20,9155	0	2,04141	1,17738
2	107,626	170,882	0,01	20.319,37	46,2596	13,28	20,944	0	2,16905	1,17823
2	107,626	170,882	0	20.319,39	46,2596	13,3452	20,9417	0	2,16009	1,17825
2	120,308	198,283	0	18.826,36	47,5044	13,7687	21,2523	0	2,16124	1,17762
2	144,046	249,659	0	16.467,67	49,8076	14,5097	21,7442	0	2,16777	1,17667
2	172,531	311,613	0	14.213,26	52,5386	15,3324	22,2175	0	2,18107	1,17587
2	206,713	386,547	0	12.813,77	55,7841	16,2468	22,663	0	2,20229	1,17503

2	211,486	397,069	0	12.659,53	56,2354	16,3693	22,7168	0	2,20558	1,17494
3	240,846	-15,7101	0	1,00	0,0017	0,7824	24,6246	0	0,614873	1,1739
3	240,946	-15,6613	0	529.695,96	1,88961	0,00758703	-79,4149	0	0,458817	1,4309
3	241,046	-15,6156	0	557.938,97	2,64292	0,0135632	-85,0334	0	0,456159	1,45225
3	241,146	-15,57	0	565.304,19	3,23404	0,0196105	-86,3534	0	0,456071	1,4569
3	241,246	-15,5244	0	568.163,99	3,73997	0,0256633	-86,833	0	0,456336	1,45846
3	241,346	-15,4788	0	571.644,94	4,19122	0,0315358	-87,5586	0	0,455937	1,46151
3	241,446	-15,4333	0	577.087,36	4,60405	0,0370687	-88,7858	0	0,45474	1,46707
3	241,546	-15,3879	0	583.320,29	4,98788	0,0422958	-90,2073	0	0,453279	1,47367
3	241,646	-15,3426	0	589.675,16	5,34935	0,0472532	-91,6541	0	0,451817	1,4805
3	241,746	-15,2975	0	595.902,87	5,69207	0,0519941	-93,0665	0	0,450425	1,48726
3	241,846	-15,2525	0	601.899,07	6,01815	0,0565625	-94,4204	0	0,449122	1,49382
3	241,946	-15,2076	0	607.617,06	6,33053	0,0609741	-95,705	0	0,447918	1,50013
3	242,046	-15,1629	0	613.046,41	6,63175	0,0652392	-96,9186	0	0,446813	1,50615
3	242,146	-15,1183	0	618.190,25	6,92445	0,0693595	-98,0628	0	0,445807	1,5119
3	242,246	-15,0737	0	623.055,36	7,20939	0,0733524	-99,1402	0	0,444896	1,51736
3	242,346	-15,0293	0	627.653,63	7,48692	0,0772357	-100,154	0	0,444071	1,52256
3	242,446	-14,9849	0	632.004,16	7,75766	0,0810212	-101,11	0	0,443324	1,5275
3	242,5	-	0	636.12	8,0222	0,0847	-102,012	0	0,4426	1,5322

	46	14,9406		3,47	4	174			49	1
3	242,6	-	0	640.02	8,2813	0,0883	-102,864	0	0,4420	1,5367
	46	14,8964		7,71	3	299			39	
3	242,7	-	0	643.73	8,5354	0,0918	-103,67	0	0,4414	1,5409
	46	14,8522		3,29	5	642			89	7
3	242,8	-	0	647.25	8,7851	0,0953	-104,433	0	0,4409	1,5450
	46	14,8081		5,10	4	246			91	6
3	242,9	-	0	651.25	9,0792	0,0993	-105,299	0	0,4404	1,5497
	66	14,7552		9,88	4	892			58	3
3	243,1	-	0	655.77	9,4249	0,1041	-106,272	0	0,4398	1,5550
	1	14,6918		4,06	5	49			99	3
3	243,2	-	0	660.82	9,8308	0,1096	-107,357	0	0,4393	1,5610
	83	14,6159		6,11	3	97			28	1
3	243,4	-	0	666.53	10,306	0,1161	-108,579	0	0,4387	1,5678
	91	14,5249		1,39	7	08			31	3
3	243,7	-	0	673.05	10,864	0,1234	-109,974	0	0,4380	1,5757
	39	14,4158		5,76	7	26			85	5
3	244,0	-	0	680.85	11,518	0,1316	-111,645	0	0,4372	1,5854
	38	14,2851		7,81	1	03			74	4
3	244,3	-	0	690.05	12,282	0,1406	-113,612	0	0,4363	1,5971
	96	14,1286		5,93	4	45			16	2
3	244,8	-	0	700.66	13,175	0,1505	-115,861	0	0,4352	1,6107
	26	13,9412		5,78	4	55			93	9
3	245,3	-	0	712.34	14,213	0,1619	-117,86	0	0,4344	1,6212
	42	13,7169		8,32		32			05	9
3	245,9	-	0	724.50	15,413	0,1755	-119,138	0	0,4339	1,6239
	61	13,4481		7,16	2	62			08	6
3	246,7	-	0	736.57	16,798	0,1921	-119,492	0	0,4340	1,6168
	04	13,1257		1,74	7	21			29	7
3	247,5	-	0	747.94	18,396	0,2124	-118,77	0	0,4349	1,5990
	96	12,7383		8,03	7	09			64	2
3	248,6	-12,272	0	758.03	20,252	0,2372	-116,889	0	0,4368	1,5706
	66			8,13	6				76	2
3	249,9	-	0	766.07	22,502	0,2665	-113,698	0	0,4400	1,5318
	5	11,7092		8,93	7	82			36	9
3	251,4	-	0	770.96	25,250	0,3015	-109,009	0	0,4448	1,4836
	91	11,0276		8,17	3	13			47	8
3	253,3	-	0	771.39	28,555	0,3439	-102,788	0	0,4515	1,4289

	39	10,1992		1,03	3	5			47	6
3	255,5 58	- 9,18798	0	765.74 6,21	32,452 2	0,3968 59	-95,1624	0	0,4601 61	1,3721 7
3	258,2 2	-7,9491	0	751.98 2,87	36,930 6	0,4651 07	-86,3427	0	0,4705 24	1,3179 8
3	261,4 15	- 6,42657	0	727.09 0,02	41,916 6	0,5574 86	-76,4321	0	0,4824 63	1,2699 1
3	265,2 49	- 4,55095	0	688.14 8,39	47,240 9	0,6893 86	-65,4775	0	0,4956 19	1,2301 5
3	269,8 49	- 2,24004	0	639.09 0,28	52,561 8	0,8783 76	-54,4123	0	0,5084 87	1,2005
3	274,2 07	1,77747 E-12	0	587.11 2,63	56,265 3	1,1118 6	-44,6068	0	0,5196 78	1,1819 4
3	274,2 07	1,77747 E-12	0	592.55 9,59	55,638 6	1,0037 3	-46,2122	0	0,5793 18	1,1867 1
3	275,3 7	0,66873 2	0	578.06 9,64	56,486 4	1,0917 5	-43,7999	0	0,5722 38	1,1833 4
3	281,9 95	4,41352	0	461.22 5,69	58,333 2	1,7825 3	-25,1309	0	0,5878 99	1,1619 1
3	289,9 44	10,0721	0	256.67 0,31	58,333 2	3,2419 6	0,136092	0	0,8330 52	1,1583 7
3	296,9 06	16,4847	0	182.28 2,63	58,333 2	4,5118 5	7,39338	0	1,0035 2	1,1636
3	296,9 06	16,4847	0	182.28 2,63	58,333 2	4,5118 5	7,39338	0	1,0035 2	1,1636
3	299,4 84	19,151	0	160.35 2,43	58,929 2	4,8835 8	9,68004	0	1,0529 8	1,1641 9
3	310,9 32	32,0321	0	119.06 1,79	60,185 7	5,8641 6	13,649	0	1,1720 5	1,1661 9
3	324,6 69	48,4295	0	106.44 7,23	60,996 4	6,2219 7	14,9068	0	1,2134 7	1,1660 3
3	341,1 53	68,8286	0	93.173, 15	61,995 7	6,6623 8	16,0868	0	1,2614 9	1,1663 8
3	360,9 35	94,3464	0	79.643, 89	63,222 2	7,2131 3	17,1747	0	1,3183 1	1,1672 3
3	384,6 72	126,246	0	68.852, 25	64,726	7,7183 3	18,0172	0	1,3681 7	1,1679 4
3	413,1	165,989	0	59.164,	66,564	8,2870	18,7599	0	1,4218	1,1688

	57			84	3	9			1	2
3	447,3 39	215,614	0	50.021, 61	68,815 9	8,9435 9	19,414	0	1,4809 5	1,1698 7
3	488,3 58	277,724	0	41.605, 99	71,579 9	9,7036 9	19,9816	0	1,5463 4	1,1710 5
3	537,5 8	355,651	0	34.019, 74	74,979 9	10,585 6	20,466	0	1,6187 4	1,1723 2
3	596,6 47	453,693	0	28.009, 62	79,172	11,625 4	21,5239	0	1,7001 6	1,1713 2
3	667,5 27	577,44	0	22.664, 91	84,354 4	12,839 4	22,5619	0	1,7903 7	1,1701 9
3	703,2 92	642,245	0	20.519, 59	87,027 7	13,437 2	22,9303	0	1,8332 2	1,1699 3
3	752,5 84	734,331	0	17.998, 77	90,779 9	14,255 5	23,3263	0	1,8903 8	1,1697 8
3	854,6 51	932,985	0	14.051, 61	98,742 1	15,889 4	23,879	0	1,9997 7	1,1698
3	977,1 32	1185,3	0	10.779, 45	108,62 6	17,778 4	24,2647	0	2,1195 4	1,1701 1
3	1124, 11	1506,52	0	8.130,1 6	120,91 3	19,957 4	24,5251	0	2,2500 9	1,1705 6
3	1179, 64	1632,76	0	7.370,6 7	125,66 5	20,757 8	24,5908	0	2,2962 6	1,1707 2
4	475,7 55	- 18,3413	0	1,00	0,0017 7245	0,7824 28	24,6246	0	0,6148 73	1,1739
4	475,8 55	-18,29	0	460.23 5,16	2,0814 9	0,0067 1293	-67,9401	0	0,4921 11	1,3996 4
4	475,9 55	- 18,2409	0	485.23 8,67	2,9229 7	0,0121 177	-73,1768	0	0,4906 62	1,4183 2
4	476,0 55	- 18,1918	0	491.70 1,66	3,578	0,0176 227	-74,386	0	0,4907 14	1,4222 7
4	476,1 55	- 18,1427	0	494.16 3,24	4,1373 1	0,0231 426	-74,8121	0	0,4909 43	1,4235 4
4	476,2 55	- 18,0936	0	495.20 4,07	4,6355 4	0,0286 586	-74,9781	0	0,4912 15	1,4239 8
4	476,3 55	- 18,0445	0	496.73 5,77	5,0901 4	0,0340 589	-75,32	0	0,4911 74	1,4253 3



4	476,4 55	- 17,9954	0	500.29 9,07	5,5123 9	0,0391 468	-76,202	0	0,4904 81	1,4291 4
4	476,5 55	- 17,9464	0	504.90 4,64	5,9089 6	0,0439 499	-77,3485	0	0,4895 31	1,4341 6
4	476,6 55	- 17,8975	0	509.90 4,93	6,2844 8	0,0485 177	-78,5885	0	0,4885 24	1,4396 4
4	476,7 55	- 17,8487	0	515.02 0,14	6,6421 8	0,0528 84	-79,8501	0	0,4875 27	1,4452 7
4	476,8 55	-17,8	0	520.11 3,44	6,9845 7	0,0570 769	-81,0992	0	0,4865 68	1,4509 1
4	476,9 55	- 17,7514	0	525.09 2,06	7,3152 8	0,0611 021	-82,3132	0	0,4856 69	1,4564 4
4	477,0 55	- 17,7029	0	529.92 4,47	7,6349 6	0,0649 875	-83,4855	0	0,4848 29	1,4618 3
4	477,1 55	- 17,6544	0	534.58 9,74	7,9448 9	0,0687 481	-84,6117	0	0,4840 49	1,4670 6
4	477,2 55	-17,606	0	539.08 2,34	8,2461	0,0723 97	-85,6912	0	0,4833 26	1,4721 2
4	477,3 55	- 17,5577	0	543.40 4,65	8,5394	0,0759 46	-86,7253	0	0,4826 57	1,4770 1
4	477,4 55	- 17,5095	0	547.55 8,07	8,8257 2	0,0794 017	-87,7149	0	0,4820 37	1,4817 3
4	477,5 55	- 17,4613	0	551.54 8,37	9,1057 5	0,0827 713	-88,6619	0	0,4814 64	1,4862 9
4	477,6 55	- 17,4132	0	555.37 9,66	9,3801 4	0,0860 602	-89,5677	0	0,4809 36	1,4906 8
4	477,7 55	- 17,3651	0	559.05 8,24	9,6495 7	0,0892 714	-90,4342	0	0,4804 5	1,4949 2
4	477,8 75	- 17,3075	0	563.28 0,32	9,9668	0,0930 318	-91,4251	0	0,4799 18	1,4998
4	478,0 19	- 17,2385	0	568.08 5,11	10,339 8	0,0974 169	-92,5481	0	0,4793 49	1,5053 9
4	478,1 92	- 17,1557	0	573.50 4,06	10,776 7	0,1025 22	-93,809	0	0,4787 53	1,5117 4
4	478,3 99	- 17,0565	0	579.55 2,09	11,287 7	0,1084 42	-95,2095	0	0,4781 5	1,5188 8
4	478,6 48	- 16,9376	0	586.22 5,47	11,884 3	0,1152 77	-96,7468	0	0,4775 64	1,5268 2



4	478,9 47	-16,795 0	0	593.47 3,32	12,581 4	0,1231 14	-98,4082 0	0	0,4770 37	1,5355 5
4	479,3 05	- 16,6242	0	601.79 3,46	13,393 1	0,1319 17	-100,313 0	0	0,4764 57	1,5457 7
4	479,7 35	- 16,4195	0	611.84 2,86	14,337 2	0,1415 17	-102,614 0	0	0,4756 9	1,5584 5
4	480,2 51	- 16,1742	0	623.69 5,79	15,435 2	0,1518 43	-105,316 0	0	0,4748	1,5737 8
4	480,8 7	- 15,8805	0	637.23 6,15	16,710 2	0,1630 74	-108,187 0	0	0,4739 11	1,5898 6
4	481,6 13	- 15,5287	0	651.73 1,03	18,182 6	0,1762 84	-110,334 0	0	0,4733 14	1,5986
4	482,5 05	- 15,1067	0	666.37 3,01	19,876 3	0,1923 45	-111,41 0	0	0,4732 67	1,5967 8
4	483,5 75	- 14,6001	0	680.34 6,50	21,821	0,2122 31	-111,196 0	0	0,4739 7	1,5827 4
4	484,8 58	- 13,9906	0	692.85 5,01	24,062 2	0,2369 54	-109,577 0	0	0,4755 65	1,5564 5
4	486,3 99	- 13,2559	0	702.96 0,12	26,731 7	0,2670 55	-106,437 0	0	0,4782 4	1,5186 7
4	488,2 48	- 12,3682	0	709.33 3,70	29,978	0,3035 49	-101,578 0	0	0,4823 01	1,4704 9
4	490,4 67	- 11,2919	0	710.26 9,32	33,886	0,3487 68	-94,9268 0	0	0,4879 96	1,4150 1
4	493,1 29	- 9,98302	0	703.65 9,98	38,478 1	0,4067 21	-86,6019 0	0	0,4953 29	1,3571 7
4	496,3 24	- 8,38635	0	686.81 4,25	43,714 5	0,4840 48	-76,8683 0	0	0,5041 28	1,3025 3
4	500,1 58	- 6,43393	0	655.81 7,68	49,476 6	0,5934 2	-65,7945 0	0	0,5142 8	1,2548 7
4	504,7 58	- 4,04254	0	610.29 1,00	55,489 1	0,7536 81	-53,9263 0	0	0,5249 96	1,2172 4
4	510,2 79	- 1,11194	0	554.64 9,81	61,189 4	0,9921 2	-42,1087 0	0	0,5353 21	1,1900 2
4	512,3 45	2,47578 E-14	0	530.69 2,48	62,774 3	1,1074 6	-37,6999 0	0	0,5392 58	1,1824 5
4	512,3 45	2,47578 E-14	0	536.23 1,05	62,082 8	1,0162	-39,2153 0	0	0,5909 31	1,1865 6



4	516,903	2,64813	0	483.327,50	64,7055	1,36381	-30,3987	0	0,574134	1,17481
4	524,853	7,58904	0	301.902,68	64,8799	2,45422	-4,94954	0	0,719779	1,15817
4	534,393	15,569	0	190.603,35	64,8799	3,97777	5,86042	0	0,93863	1,16665
4	537,784	18,8572	0	168.303,72	64,8799	4,45018	8,11763	0	1,00015	1,16758
4	537,784	18,8572	0	168.303,72	64,8799	4,45018	8,11763	0	1,00015	1,16758
4	545,84	27,381	0	127.562,52	66,1262	5,29108	12,3959	0	1,10805	1,16816
4	559,577	43,2188	0	106.566,18	67,0525	5,90616	14,5531	0	1,18081	1,16837
4	576,062	63,0747	0	94.551,50	68,0307	6,33272	15,8203	0	1,22847	1,16824
4	595,843	87,9402	0	82.119,16	69,2315	6,87205	16,9863	0	1,28552	1,16871
4	619,581	119,135	0	71.725,62	70,7083	7,41097	17,9151	0	1,33975	1,16926
4	648,066	158,08	0	62.543,36	72,5162	7,97815	18,6924	0	1,39421	1,16991
4	682,248	206,772	0	53.853,99	74,7329	8,63153	19,3711	0	1,45407	1,17075
4	723,267	267,779	0	45.727,11	77,4564	9,38817	19,9568	0	1,52021	1,17175
4	772,489	344,424	0	38.247,33	80,81	10,266	20,4537	0	1,59334	1,17285
4	831,556	440,982	0	31.481,99	84,9492	11,2986	21,4084	0	1,67517	1,17211
4	902,436	562,992	0	25.465,94	90,0708	12,5061	22,49	0	1,76631	1,17072
4	931,348	614,567	0	23.499,19	92,2051	12,9888	22,8055	0	1,80125	1,17043
4	987,492	717,933	0	20.227,56	96,4291	13,9182	23,2812	0	1,86711	1,17013
4	1089,56	914,433	0	15.781,53	104,318	15,5495	23,8503	0	1,97758	1,17003



4	1212,04	1164,08	0	12.107,61	114,116	17,433	24,2477	0	2,09818	1,17025
4	1359,02	1482,21	0	9.126,24	126,306	19,6068	24,5151	0	2,22961	1,17064
4	1394,74	1562,4	0	8.569,99	129,334	20,122	24,56	0	2,25968	1,17074
5	709,719	-	0	1,00	0,00177245	0,782428	24,6246	0	0,614873	1,1739
5	709,819	-	0	420.749,42	2,19396	0,00633123	-61,4355	0	0,50855	1,38366
5	709,919	-19,922	0	443.788,79	3,08581	0,0114885	-66,4409	0	0,507518	1,40107
5	710,019	-	0	449.688,87	3,78009	0,0167391	-67,586	0	0,507603	1,40474
5	710,119	-	0	451.922,04	4,371	0,0220137	-67,9875	0	0,50781	1,40591
5	710,219	-	0	452.874,22	4,89629	0,027291	-68,1465	0	0,508037	1,40633
5	710,319	-	0	453.487,32	5,3751	0,0325406	-68,2647	0	0,508204	1,40671
5	710,419	-	0	455.220,22	5,81971	0,0376026	-68,707	0	0,508005	1,40854
5	710,519	-	0	458.315,90	6,23728	0,0423931	-69,5221	0	0,507437	1,412
5	710,619	-	0	462.233,25	6,63252	0,0469304	-70,5536	0	0,506689	1,41642
5	710,719	-19,516	0	466.533,63	7,00916	0,051248	-71,6791	0	0,505894	1,42128
5	710,819	-	0	470.989,65	7,3695	0,0553818	-72,8383	0	0,505099	1,42633
5	710,919	-19,415	0	475.469,17	7,71636	0,059349	-73,9965	0	0,504331	1,43141
5	711,019	-	0	479.894,87	8,05228	0,0631614	-75,1344	0	0,503605	1,43645
5	711,119	-	0	484.228,87	8,37799	0,0668403	-76,2428	0	0,502922	1,44139
5	711,2	-19,264	0	488.46	8,6939	0,0704	-77,3203	0	0,5022	1,4462

	19			1,51	4	078			78	5
5	711,3	-	0	492.57	9,0015	0,0738	-78,3618	0	0,5016	1,4509
	19	19,2138		1,44	4	687			76	8
5	711,4	-	0	496.55	9,3016	0,0772	-79,3663	0	0,5011	1,4555
	19	19,1636		3,04	6	321			14	7
5	711,5	-	0	500.41	9,5946	0,0805	-80,336	0	0,5005	1,4600
	19	19,1135		2,15	6	102			89	5
5	711,6	-	0	504.14	9,8815	0,0837	-81,2701	0	0,5001	1,4644
	19	19,0635		4,24		059				
5	711,7	-	0	507.75	10,162	0,0868	-82,1705	0	0,4996	1,4686
	19	19,0135		4,97	6	261			43	2
5	711,8	-	0	511.93	10,493	0,0904	-83,2079	0	0,4991	1,4735
	39	18,9536		1,39	3	767			36	2
5	711,9	-	0	516.72	10,881	0,0947	-84,3925	0	0,4985	1,4791
	83	18,8817		1,55		344			84	8
5	712,1	-	0	522.16	11,335	0,0996	-85,7322	0	0,4979	1,4856
	56	18,7956		6,92	6	732			97	4
5	712,3	-	0	528.29	11,867	0,1053	-87,2316	0	0,4973	1,4929
	64	18,6924		5,04	4	78			9	7
5	712,6	-	0	535.11	12,489	0,1119	-88,8894	0	0,4967	1,5011
	12	18,5688		1,21	3	34			87	8
5	712,9	-	0	542.59	13,214	0,1194	-90,6996	0	0,4962	1,5103
	11	18,4205		8,32	6	45			2	
5	713,2	-	0	550.70	14,056	0,1280	-92,6488	0	0,4957	1,5203
	69	18,2428		6,08	6	47			22	
5	713,6	-	0	559.93	15,031	0,1376	-94,8618	0	0,4951	1,5319
	99	18,0297		1,06	8	66			87	2
5	714,2	-	0	571.15	16,164	0,1479	-97,5525	0	0,4944	1,5464
	15	17,7744		0,35	5	45			54	7
5	714,8	-	0	584.44	17,480	0,1587	-100,721	0	0,4936	1,5641
	34	17,4685		2,07	4	63			01	6
5	715,5	-	0	599.46	19,005	0,1705	-103,861	0	0,4928	1,5808
	77	17,1021		7,83	3	59			24	8
5	716,4	-	0	615.32	20,760	0,1846	-106,037	0	0,4924	1,5883
	69	16,6629		7,50	5	07			16	8
5	717,5	-16,136	0	631.07	22,773	0,2019	-106,917	0	0,4926	1,5837
	39			4,39	3	19			18	5
5	718,8	-15,503	0	645.76	25,077	0,2236	-106,292	0	0,4935	1,5656

	23			8,82	4	55			92	7
5	720,3 64	- 14,7412	0	658.46 5,25	27,738 8	0,2509 14	-104,07	0	0,4954 52	1,5347 5
5	722,2 12	- 13,8225	0	667.99 7,97	30,950 4	0,2841 77	-100,111	0	0,4983 93	1,4920 9
5	724,4 31	- 12,7122	0	672.63 8,14	34,846 7	0,3252 99	-94,2208	0	0,5027 18	1,4395 8
5	727,0 93	- 11,3661	0	670.26 9,04	39,479 6	0,3777 73	-86,4337	0	0,5085 5	1,3817 4
5	730,2 88	- 9,72982	0	658.28 1,53	44,835 6	0,4473 76	-76,9739	0	0,5157 83	1,3243 5
5	734,1 22	- 7,73599	0	633.24 4,48	50,821 6	0,5444 46	-66,0939	0	0,5242 33	1,2726 6
5	738,7 22	- 5,30238	0	591.91 5,56	57,213 7	0,6879 27	-53,9866	0	0,5336 62	1,2300 1
5	744,2 43	- 2,33091	0	540.25 6,87	63,557 5	0,8977 63	-42,0865	0	0,5427 08	1,1992 7
5	748,5 11	4,09225 E-15	0	496.95 5,55	67,265 7	1,1076 2	-33,7589	0	0,5491 34	1,1837 2
5	748,5 11	4,09225 E-15	0	502.49 0,38	66,528 3	1,0249 9	-35,208	0	0,5964 25	1,1874 5
5	750,8 68	1,39183	0	477.54 4,09	68,238	1,1844 2	-30,9321	0	0,5861 1	1,1812 9
5	758,8 18	6,07161	0	356.37 8,10	69,825 2	1,9513 7	-12,326	0	0,6358 21	1,1627 3
5	768,3 57	13,254	0	211.08 0,93	69,825 3	3,3491 2	3,63564	0	0,8574 52	1,1666 8
5	776,0 89	20,3924	0	164.75 8,75	69,825 3	4,3061 5	8,16055	0	0,9847 28	1,1693 8
5	776,0 89	20,3924	0	164.75 8,75	69,825 3	4,3061 4	8,16055	0	0,9847 31	1,1693 8
5	779,8 05	24,168	0	144.21 9,28	70,412 3	4,6834 3	10,4584	0	1,0353 7	1,1690 7
5	793,5 42	39,2919	0	108.72 8,16	71,615 7	5,5900 4	14,1223	0	1,1467 3	1,1694 6
5	810,0 26	58,6451	0	95.857, 30	72,571 2	6,0236 1	15,537	0	1,1967 3	1,1690 6
5	829,8	82,8852	0	83.126,	73,746	6,5497	16,7885	0	1,2537	1,1692

	08			29	2	6			9	6
5	853,5 45	113,397	0	71.751, 39	75,195 6	7,1270 1	17,8196	0	1,3129 9	1,1697 9
5	882,0 3	151,591	0	62.450, 74	76,974 2	7,6914 5	18,6325	0	1,3681 4	1,1703 1
5	916,2 13	199,402	0	53.699, 51	79,157	8,3407 9	19,3361	0	1,4286 1	1,1710 5
5	957,2 31	259,39	0	45.551, 46	81,841 6	9,0923 9	19,9384	0	1,4953	1,1719 7
5	1006, 45	334,828	0	38.074, 39	85,150 3	9,9648 9	20,447	0	1,5690 5	1,173
5	1065, 52	429,959	0	31.329, 47	89,237 4	10,989 7	21,3175	0	1,6512 4	1,1725 3
5	1136, 4	550,309	0	25.343, 10	94,299 9	12,192 3	22,4366	0	1,7428 6	1,1709 8
5	1164, 07	598,999	0	23.467, 50	96,319 1	12,650 5	22,7489	0	1,7767 7	1,1706 5
5	1221, 46	703,058	0	20.149, 66	100,58 5	13,589 1	23,2518	0	1,8442 3	1,1702 7
5	1323, 52	897,021	0	15.736, 53	108,39	15,208 7	23,8353	0	1,9550 9	1,1701
5	1446, 01	1144,02	0	12.083, 28	118,10 1	17,084 3	24,2398	0	2,0764	1,1702 8
5	1592, 98	1459,08	0	9.117,1 1	130,19 2	19,250 5	24,511	0	2,2086	1,1706 5
5	1621, 69	1522,83	0	8.668,4 6	132,60 4	19,664	24,5482	0	2,2329 6	1,1707 3
6	943,2 05	- 21,2821	0	1,00	0,0017 7245	0,7824 28	24,6246	0	0,6148 73	1,1739
6	943,3 05	- 21,2286	0	393.61 8,13	2,2775 8	0,0060 9676	-56,9954	0	0,5189 12	1,3734 8
6	943,4 05	- 21,1768	0	415.21 2,59	3,2042 2	0,0111 085	-61,8298	0	0,5181 2	1,3901 1
6	943,5 05	-21,125	0	420.75 2,65	3,9257 9	0,0162 119	-62,9336	0	0,5182 05	1,3936
6	943,6 05	- 21,0732	0	422.85 8,76	4,5391 9	0,0213 413	-63,323	0	0,5183 83	1,3947 3

6	943,7 05	- 21,0213	0	423.75 5,67	5,0851 8	0,0264 665	-63,4784	0	0,5185 8	1,3951 4
6	943,8 05	- 20,9694	0	424.11 7,01	5,5837 7	0,0315 771	-63,537	0	0,5187 83	1,3952 8
6	943,9 05	- 20,9176	0	424.92 1,11	6,0457 9	0,0365 911	-63,7455	0	0,5188 08	1,3961 2
6	944,0 05	- 20,8657	0	426.95 9,79	6,4782 7	0,0413 87	-64,3068	0	0,5185	1,3984 7
6	944,1 05	- 20,8139	0	430.03 2,85	6,8872 2	0,0459 312	-65,1546	0	0,5179 46	1,4020 5
6	944,2 05	- 20,7621	0	433.70 4,18	7,2769 3	0,0502 456	-66,1616	0	0,5172 83	1,4063 2
6	944,3 05	- 20,7104	0	437.65 7,40	7,6502 8	0,0543 636	-67,238	0	0,5165 96	1,4109 2
6	944,4 05	- 20,6588	0	441.72 4,54	8,0093 4	0,0583 123	-68,3377	0	0,5159 19	1,4156 5
6	944,5 05	- 20,6072	0	445.82 4,92	8,3556 1	0,0621 13	-69,4399	0	0,5152 61	1,4204 2
6	944,6 05	- 20,5557	0	449.90 1,18	8,6907	0,0657 801	-70,5296	0	0,5146 29	1,4251 8
6	944,7 05	- 20,5043	0	453.91 2,20	9,0161 6	0,0693 243	-71,5958	0	0,5140 33	1,4298 7
6	944,8 05	- 20,4529	0	457.83 9,88	9,3331 2	0,0727 551	-72,6346	0	0,5134 71	1,4344 8
6	944,9 05	- 20,4016	0	461.67 3,51	9,6423 9	0,0760 829	-73,6437	0	0,5129 44	1,4389 9
6	945,0 05	- 20,3503	0	465.40 5,16	9,9447 9	0,0793 15	-74,6217	0	0,5124 5	1,4434
6	945,1 05	- 20,2991	0	469.03 0,94	10,240 9	0,0824 601	-75,5681	0	0,5119 88	1,4476 9
6	945,2 05	- 20,2479	0	472.54 9,99	10,531 1	0,0855 248	-76,483	0	0,5115 56	1,4518 7
6	945,3 25	- 20,1866	0	476.63 2,38	10,872 5	0,0891 044	-77,5401	0	0,5110 76	1,4567 5
6	945,4 69	-20,113	0	481.33 4,18	11,273	0,0932 698	-78,7521	0	0,5105 52	1,4623 9
6	945,6 42	- 20,0248	0	486.70 3,29	11,742 1	0,0980 966	-80,1293	0	0,5099 91	1,4688 7



6	945,8 49	- 19,9191	0	492.77 5,65	12,290 1	0,1036 69	-81,6782	0	0,5094 05	1,4762 5
6	946,0 98	- 19,7925	0	499.57 0,00	12,928 1	0,1100 88	-83,4011	0	0,5088 11	1,4845 7
6	946,3 96	- 19,6406	0	507.08 4,16	13,669 8	0,1174 48	-85,2946	0	0,5082 34	1,4938 8
6	946,7 55	- 19,4586	0	515.29 3,03	14,530 7	0,1258 56	-87,3498	0	0,5077 01	1,5041 6
6	947,1 85	- 19,2404	0	524.21 2,69	15,529 6	0,1353 87	-89,5691	0	0,5072 35	1,5154 9
6	947,7 01	- 18,9789	0	534.59 9,47	16,689	0,1457 79	-92,1501	0	0,5066 87	1,5290 4
6	948,3 2	- 18,6654	0	547.45 9,72	18,035 3	0,1565 34	-95,3431	0	0,5058 94	1,5463 6
6	949,0 63	- 18,2898	0	562.44 5,47	19,597 7	0,1677 11	-98,954	0	0,5050 79	1,5664 2
6	949,9 54	- 17,8398	0	578.78 7,47	21,399 6	0,1805 12	-101,911	0	0,5045 12	1,5802 5
6	951,0 24	- 17,3001	0	595.48 5,10	23,465 6	0,1961 45	-103,608	0	0,5044 48	1,5824 9
6	952,3 08	- 16,6521	0	611.50 6,80	25,827 3	0,2158 09	-103,754	0	0,5050 74	1,5708 5
6	953,8 49	- 15,8729	0	625.83 6,85	28,525 6	0,2408 23	-102,211	0	0,5064 97	1,5451 7
6	955,6 98	- 14,9344	0	637.37 8,81	31,713 9	0,2719 07	-98,9128	0	0,5088 27	1,5069
6	957,9 16	- 13,8017	0	644.47 6,77	35,605 6	0,3102 02	-93,6095	0	0,5123 65	1,4571 8
6	960,5 79	- 12,4312	0	644.97 5,14	40,258 6	0,3590 97	-86,2403	0	0,5172 91	1,3998 3
6	963,7 74	- 10,7687	0	636.32 8,11	45,690 3	0,4236 63	-77,038	0	0,5235 39	1,3410 3
6	967,6 07	- 8,74731	0	615.23 2,19	51,830 4	0,5130 26	-66,2881	0	0,5309 69	1,2866 2
6	972,2 08	- 6,28496	0	577.70 2,29	58,485	0,6448 51	-54,1575	0	0,5394 36	1,2406
6	977,7 28	- 3,28318	0	528.52 0,92	65,264 4	0,8378 24	-42,0647	0	0,5477 37	1,2067 9



6	983,679	1,11215 E-14	0	473.206,57	70,8447	1,10675	-31,0621	0	0,555434	1,185
6	983,679	1,11215 E-14	0	478.715,43	70,0698	1,02981	-32,4594	0	0,59981	1,18846
6	984,353	0,402649	0	472.263,65	70,6142	1,07146	-31,3308	0	0,596463	1,18675
6	992,303	5,06163	0	389.815,30	74,1481	1,67971	-17,8879	0	0,587288	1,17021
6	1001,84	11,6577	0	229.762,35	74,1507	2,90348	1,6174	0	0,795737	1,16659
6	1013,05	21,6002	0	164.161,63	74,1507	4,14923	8,00702	0	0,966674	1,17057
6	1013,05	21,6002	0	164.161,63	74,1507	4,14924	8,00702	0	0,966672	1,17057
6	1013,29	21,8283	0	162.823,71	74,187	4,17086	8,16883	0	0,969723	1,1705
6	1027,03	36,217	0	114.010,54	75,654	5,22686	13,492	0	1,10625	1,16997
6	1043,51	55,014	0	98.131,95	76,6014	5,72739	15,2408	0	1,16551	1,16949
6	1063,29	78,634	0	84.985,82	77,7496	6,23935	16,585	0	1,22249	1,16946
6	1087,03	108,434	0	72.631,94	79,1696	6,84149	17,7187	0	1,28553	1,16996
6	1115,52	145,859	0	63.062,95	80,9173	7,4035	18,5722	0	1,34146	1,17041
6	1149,7	192,765	0	54.130,38	83,0644	8,04793	19,3034	0	1,40251	1,1711
6	1190,72	251,692	0	45.849,87	85,7079	8,7938	19,9242	0	1,46976	1,17198
6	1239,94	325,89	0	38.280,36	88,9695	9,65985	20,4446	0	1,54406	1,17298
6	1299,01	419,557	0	31.472,80	93,0025	10,6749	21,2311	0	1,6268	1,17281
6	1369,89	538,187	0	25.447,42	98,0026	11,8694	22,3908	0	1,71916	1,17111
6	1398,82	588,443	0	23.480,15	100,091	12,3467	22,7258	0	1,7547	1,17074



6	1454,94	688,931	0	20.232,74	104,217	13,2597	23,2286	0	1,821	1,17033
6	1557,01	880,56	0	15.807,57	111,942	14,8715	23,8246	0	1,93257	1,17012
6	1679,49	1124,85	0	12.142,10	121,563	16,7394	24,2364	0	2,05464	1,17027
6	1826,47	1436,77	0	9.166,82	133,553	18,8985	24,5112	0	2,18766	1,17063
6	1853,4	1496	0	8.743,50	135,798	19,2854	24,5465	0	2,21065	1,17075
7	1176,38	-22,283	0	1,00	0,00177245	0,782428	24,6245	0	0,614873	1,1739
7	1176,48	-22,2289	0	373.447,60	2,34085	0,00594198	-53,697	0	0,526195	1,36622
7	1176,58	-22,1763	0	393.933,21	3,29566	0,010855	-58,3948	0	0,525547	1,38228
7	1176,68	-22,1238	0	399.204,16	4,03812	0,0158571	-59,4719	0	0,525617	1,38567
7	1176,78	-22,0712	0	401.211,93	4,6687	0,0208861	-59,8536	0	0,525773	1,38679
7	1176,88	-22,0186	0	402.069,93	5,23013	0,0259096	-60,0075	0	0,525948	1,3872
7	1176,98	-21,966	0	402.411,18	5,74191	0,030925	-60,0648	0	0,526131	1,38734
7	1177,08	-21,9134	0	402.752,53	6,21629	0,0358966	-60,1501	0	0,52625	1,38767
7	1177,18	-21,8608	0	404.144,55	6,66034	0,0406867	-60,5473	0	0,526087	1,38932
7	1177,28	-21,8082	0	406.559,15	7,08009	0,0452432	-61,2376	0	0,525683	1,3922
7	1177,38	-21,7556	0	409.675,17	7,47996	0,0495697	-62,1234	0	0,525141	1,39592
7	1177,48	-21,7032	0	413.192,22	7,86293	0,053692	-63,116	0	0,524541	1,40011
7	1177,58	-21,6507	0	416.912,74	8,23124	0,0576365	-64,1585	0	0,523932	1,40453
7	1177,	-	0	420.71	8,5867	0,0614	-65,218	0	0,5233	1,4090



	68	21,5984		8,97	1	246			34	6
7	1177,78	-21,5461	0	424.54	8,9308	0,0650	-66,2757	0	0,5227	1,4136
				1,38	3	732			58	1
7	1177,88	-21,4938	0	428.33	9,2647	0,0685	-67,3208	0	0,5222	1,4181
				8,41	4	979			07	4
7	1177,98	-21,4416	0	432.08	9,5895	0,0720	-68,3463	0	0,5216	1,4226
				3,06	7	091			83	2
7	1178,08	-21,3895	0	435.75	9,9063	0,0753	-69,3478	0	0,5211	1,4270
				7,50		162			88	3
7	1178,18	-21,3374	0	439.35	10,215	0,0785	-70,3228	0	0,5207	1,4313
				1,12	9	256			22	5
7	1178,28	-21,2853	0	442.85	10,518	0,0816	-71,2703	0	0,5202	1,4355
				8,05	8	469			83	8
7	1178,38	-21,2333	0	446.27	10,815	0,0846	-72,1897	0	0,5198	1,4397
				4,54	8	846			72	1
7	1178,5	-21,171	0	450.25	11,164	0,0882	-73,2561	0	0,5194	1,4445
				3,22	9	304			12	5
7	1178,64	-21,0962	0	454.85	11,574	0,0923	-74,4839	0	0,5189	1,4501
				5,30	1	549			06	7
7	1178,82	-21,0066	0	460.13	12,052	0,0971	-75,8857	0	0,5183	1,4566
				5,94	5	371			58	6
7	1179,02	-20,8992	0	466.13	12,610	0,1026	-77,47	0	0,5177	1,4640
				7,85	5	57			78	8
7	1179,27	-20,7704	0	472.88	13,260	0,1089	-79,2403	0	0,5171	1,4724
				6,95	8	94			85	9
7	1179,57	-20,6161	0	480.39	14,017	0,1162	-81,1955	0	0,5166	1,4819
				0,64	2	4				3
7	1179,93	-20,4311	0	488.62	14,896	0,1244	-83,3262	0	0,5160	1,4924
				5,74		87			53	2
7	1180,36	-20,2093	0	497.54	15,915	0,1338	-85,6167	0	0,5155	1,5039
				0,47	4	4			79	2
7	1180,88	-19,9434	0	507.58	17,096	0,1441	-88,1881	0	0,5151	1,5171
				2,61	8	81			01	6
7	1181,49	-19,6247	0	519.71	18,466	0,1550	-91,2914	0	0,5144	1,5336
				8,48		59			56	6
7	1182,24	-19,2427	0	534.27	20,054	0,1661	-94,99	0	0,5136	1,5540
				7,96	8	53			86	4
7	1183,	-18,785	0	550.76	21,891	0,1781	-98,5239	0	0,5130	1,5723



	13			2,20	9	53			29	5
7	1184,2	-18,2363	0	567.994,81	23,9994	0,192626	-100,855	0	0,512794	1,57981
7	1185,48	-17,5777	0	584.872,27	26,4073	0,210808	-101,621	0	0,513188	1,57333
7	1187,02	-16,7862	0	600.307,17	29,153	0,234079	-100,62	0	0,51433	1,55196
7	1188,87	-15,8336	0	613.193,86	32,3447	0,263511	-97,7924	0	0,5163	1,51696
7	1191,09	-14,6849	0	622.011,38	36,2171	0,299945	-92,9541	0	0,519312	1,46976
7	1193,75	-13,2968	0	624.640,73	40,8806	0,346217	-85,9839	0	0,523598	1,41358
7	1196,95	-11,6152	0	618.554,52	46,3548	0,407187	-77,0445	0	0,529158	1,35424
7	1200,78	-9,57361	0	600.716,39	52,592	0,490903	-66,4935	0	0,535821	1,29819
7	1205,38	-7,09069	0	567.189,98	59,4332	0,613004	-54,5524	0	0,543474	1,25
7	1210,9	-4,06834	0	519.537,96	66,5268	0,794769	-42,1686	0	0,551369	1,213269
7	1217,53	-0,388868	0	462.683,42	73,223	1,06868	-30,3893	0	0,558942	1,18826
7	1218,22	3,63773 E-15	0	456.331,29	73,7894	1,10344	-29,2179	0	0,559727	1,18629
7	1218,22	3,63773 E-15	0	461.806,83	72,9834	1,03057	-30,5749	0	0,602083	1,18956
7	1225,48	4,28426	0	396.467,79	77,5804	1,51123	-19,5941	0	0,583761	1,17475
7	1235,02	10,4217	0	254.452,33	77,8584	2,52549	-0,899013	0	0,738996	1,16562
7	1246,46	20,0055	0	177.334,72	77,8584	3,75214	6,46212	0	0,915345	1,17124
7	1249,21	22,5664	0	164.998,86	77,8584	3,99891	7,84261	0	0,949029	1,1711
7	1249,21	22,5664	0	164.998,86	77,8584	3,99891	7,84261	0	0,949029	1,1711



7	1260,2	33,6791	0	120.916,72	79,1221	4,8759	12,7764	0	1,06582	1,17011
7	1276,69	52,0101	0	99.46610	80,1195	5,50913	15,0675	0	1,14227	1,16981
7	1296,47	75,1661	0	86.12409	81,2481	6,00805	16,4699	0	1,19887	1,16962
7	1320,2	104,404	0	73.56052	82,6449	6,59732	17,6468	0	1,26164	1,17001
7	1348,69	141,155	0	63.76888	84,3652	7,15472	18,5329	0	1,31802	1,1704
7	1382,87	187,275	0	54.66660	86,4807	7,79366	19,2856	0	1,37951	1,17106
7	1423,89	245,271	0	46.25565	89,0877	8,53392	19,9207	0	1,44719	1,17192
7	1473,11	318,371	0	38.58845	92,3073	9,39393	20,4502	0	1,52197	1,17292
7	1532,18	410,749	0	31.71089	96,2919	10,4007	21,1654	0	1,60508	1,17301
7	1603,06	527,854	0	25.63706	101,237	11,5883	22,3583	0	1,69803	1,17123
7	1633,11	579,445	0	23.58312	103,383	12,0811	22,7137	0	1,73517	1,17079
7	1688,12	676,819	0	20.38552	107,388	12,9713	23,2147	0	1,80042	1,17035
7	1790,18	866,381	0	15.93404	115,042	14,5758	23,8199	0	1,91262	1,17011
7	1912,66	1108,27	0	12.24775	124,582	16,4366	24,2362	0	2,03536	1,17026
7	2059,64	1417,41	0	9.256,24	136,482	18,589	24,5133	0	2,16908	1,17061
7	2085,2	1473,12	0	8.850,33	138,598	18,9553	24,547	0	2,19102	1,17068
8	1409,35	-23,1244	0	1,00	0,00177245	0,782427	24,6245	0	0,614873	1,1739
8	1409,45	-23,0699	0	357.401,26	2,39209	0,00582782	-51,0797	0	0,531748	1,36066
8	1409,	-	0	377.03	3,3708	0,0106	-55,6781	0	0,5311	1,3763



	55	23,0168		3,04	5	598			66	3
8	1409,65	-22,9637	0	382.047,07	4,13005	0,0155866	-56,7253	0	0,531248	1,37962
8	1409,75	-22,9105	0	383.942,33	4,77657	0,0205298	-57,095	0	0,531403	1,38071
8	1409,85	-22,8574	0	384.740,84	5,35092	0,0254741	-57,2428	0	0,531573	1,38112
8	1409,95	-22,8042	0	385.052,32	5,87354	0,0304173	-57,2969	0	0,531744	1,38125
8	1410,05	-22,751	0	385.126,11	6,35734	0,0353534	-57,3085	0	0,531908	1,38128
8	1410,15	-22,6979	0	385.814,74	6,81083	0,0401716	-57,5137	0	0,531896	1,38213
8	1410,25	-22,6447	0	387.773,50	7,23972	0,0447361	-58,0945	0	0,531575	1,38455
8	1410,35	-22,5915	0	390.558,95	7,64812	0,0490603	-58,9128	0	0,53109	1,38797
8	1410,45	-22,5385	0	393.770,24	8,03894	0,0531834	-59,8472	0	0,53055	1,39188
8	1410,55	-22,4854	0	397.223,70	8,41438	0,0571307	-60,8444	0	0,529989	1,39607
8	1410,65	-22,4324	0	400.792,78	8,77662	0,0609205	-61,8676	0	0,529435	1,400435
8	1410,75	-22,3795	0	404.407,85	9,12732	0,0645677	-62,8974	0	0,528897	1,40478
8	1410,85	-22,3267	0	408.024,32	9,46788	0,0680846	-63,9217	0	0,528381	1,40917
8	1410,95	-22,2738	0	411.610,86	9,7993	0,0714838	-64,9322	0	0,527888	1,41354
8	1411,05	-22,2211	0	415.146,89	10,1222	0,0747789	-65,9239	0	0,52742	1,41785
8	1411,15	-22,1684	0	418.619,08	10,4375	0,0779776	-66,8933	0	0,526976	1,422176
8	1411,25	-22,1157	0	422.019,12	10,7458	0,0810869	-67,8386	0	0,526557	1,42627
8	1411,35	-22,0631	0	425.342,49	11,0479	0,0841128	-68,7589	0	0,526162	1,43036
8	1411,	-	0	429.22	11,403	0,0876	-69,8294	0	0,5257	1,4351



	47	21,9999		4,66	2	378			19	5
8	1411,61	- 21,9243	0	433.72	11,819	0,0917	-71,0659	0	0,5252	1,4407
				9,32	6	347			29	4
8	1411,79	- 21,8336	0	438.91	12,307	0,0964	-72,4812	0	0,5246	1,4472
				2,95	1	701			98	1
8	1411,99	- 21,7248	0	444.82	12,876	0,1019	-74,0859	0	0,5241	1,4546
				3,14		26			36	3
8	1412,24	- 21,5945	0	451.49	13,538	0,1081	-75,8851	0	0,5235	1,4630
				0,68	6	85			57	8
8	1412,54	- 21,4382	0	458.92	14,308	0,1153	-77,8779	0	0,5229	1,4725
				4,52	9	33			82	8
8	1412,9	- 21,2509	0	467.10	15,203	0,1234	-80,0564	0	0,5224	1,4831
				8,78	3	58			41	7
8	1413,33	- 21,0264	0	476.00	16,239	0,1326	-82,407	0	0,5219	1,4948
				1,71	5	72			62	3
8	1413,84	- 20,7572	0	485.86	17,438	0,1429	-85,0004	0	0,5215	1,5080
				3,43	3	34			14	1
8	1414,46	- 20,4345	0	497.59	18,826	0,1538	-88,0805	0	0,5209	1,5241
				7,32	1	29			41	5
8	1415,21	- 20,0477	0	511.82	20,435	0,1649	-91,7969	0	0,5202	1,5443
				7,65	5	03			03	5
8	1416,1	- 19,5842	0	528.22	22,298	0,1764	-95,7	0	0,5195	1,5654
				8,53	9	41			17	
8	1417,17	- 19,0286	0	545.72	24,439	0,1900	-98,52	0	0,5191	1,5768
				0,23		97			76	
8	1418,45	- 18,3619	0	563.15	26,884	0,2071	-99,7907	0	0,5194	1,5745
				1,05	2	74			05	2
8	1419,99	-17,561	0	579.38	29,670	0,2290	-99,2548	0	0,5203	1,5569
				4,66	5	83			36	
8	1421,84	- 16,5976	0	593.32	32,873	0,2571	-96,8522	0	0,5220	1,5249
				4,90		15			31	6
8	1424,06	- 15,4366	0	603.47	36,728	0,2920	-92,42	0	0,5246	1,4801
				7,01	4	5			63	3
8	1426,72	- 14,0348	0	607.79	41,391	0,3363	-85,7961	0	0,5284	1,4251
				5,96	4	03			68	3
8	1429,92	- 12,3385	0	603.75	46,905	0,3944	-77,0859	0	0,5335	1,3654
				4,16	1	07			03	9
8	1433,-	-	0	588.38	53,227	0,4738	-66,6672	0	0,5396	1,3080



	75	10,2814		3,97	4	65			15	4
8	1438,35	-7,78243	0	557.976,08	60,219	0,588772	-54,8497	0	0,546664	1,25798
8	1443,87	-4,74338	0	512.143,52	67,563	0,761146	-42,3455	0	0,55416	1,21897
8	1450,5	-1,048	0	457.949,84	74,684	1,01622	-30,6091	0	0,561236	1,1924
8	1452,36	9,04611E-12	0	442.114,29	76,306	1,10315	-27,6194	0	0,563125	1,18715
8	1452,36	9,04611E-12	0	447.552,88	75,4735	1,03342	-28,9407	0	0,603818	1,19024
8	1458,45	3,61328	0	395.352,31	79,8913	1,40934	-20,0433	0	0,587254	1,17776
8	1467,99	9,48641	0	281.653,35	81,1315	2,22124	-4,17234	0	0,68972	1,16658
8	1479,43	18,519	0	189.075,68	81,1323	3,42021	5,15182	0	0,871352	1,17153
8	1484,82	23,3747	0	166.443,93	81,1323	3,87032	7,66589	0	0,933523	1,17138
8	1484,82	23,3747	0	166.443,93	81,1323	3,87029	7,66589	0	0,933532	1,17138
8	1493,17	31,5769	0	129.272,69	82,1435	4,55169	11,9204	0	1,0268	1,17016
8	1509,66	49,4582	0	100.744,35	83,2435	5,33062	14,91	0	1,1229	1,17005
8	1529,44	72,2728	0	86.954,09	84,3578	5,82881	16,3783	0	1,18025	1,16975
8	1553,17	101,081	0	73.912,17	85,7371	6,42528	17,6088	0	1,2446	1,17011
8	1581,66	137,357	0	63.960,37	87,4385	6,98217	18,5179	0	1,30158	1,17046
8	1615,84	182,914	0	54.767,80	89,5322	7,6189	19,2848	0	1,36348	1,17109
8	1656,86	240,258	0	46.302,79	92,1142	8,35608	19,928	0	1,43157	1,17194
8	1706,08	312,602	0	38.608,04	95,3052	9,21244	20,4615	0	1,50673	1,17292
8	1765,	404,092	0	31.719,	99,257	10,214	21,1219	0	1,5901	1,1732



	15			37	2	2			2	
8	1836,03	520,158	0	25.645,93	104,164	11,3975	22,3399	0	1,6835	1,17129
8	1865,44	570,22	0	23.631,65	106,25	11,8778	22,6934	0	1,72008	1,17087
8	1921,09	667,912	0	20.398,74	110,273	12,7759	23,2073	0	1,78636	1,1704
8	2023,15	856,063	0	15.954,46	117,879	14,3759	23,818	0	1,89903	1,17013
8	2145,63	1096,32	0	12.273,77	127,366	16,2324	24,2366	0	2,02226	1,17026
8	2292,61	1403,57	0	9.285,51	139,205	18,3807	24,5149	0	2,1565	1,17061
8	2313,9	1449,67	0	8.945,16	140,958	18,6854	24,5433	0	2,17488	1,17066
9	1642,16	-23,8508	0	1,00	0,00177245	0,782427	24,6244	0	0,614873	1,1739
9	1642,26	-23,7959	0	344.072,19	2,43971	0,00572754	-48,9176	0	0,536159	1,35622
9	1642,36	-23,7423	0	362.822,52	3,43797	0,0105002	-53,4035	0	0,535717	1,37151
9	1642,46	-23,6888	0	367.643,50	4,21233	0,0153637	-54,4296	0	0,535795	1,37474
9	1642,56	-23,6352	0	369.470,59	4,87147	0,0202394	-54,7929	0	0,535936	1,37581
9	1642,66	-23,5816	0	370.258,12	5,45507	0,0251296	-54,9414	0	0,536085	1,37622
9	1642,76	-23,528	0	370.587,51	5,98558	0,030026	-55,0001	0	0,536231	1,37637
9	1642,86	-23,4743	0	370.677,37	6,47777	0,0349094	-55,0142	0	0,536375	1,3764
9	1642,96	-23,4207	0	371.133,06	6,94024	0,0397004	-55,1533	0	0,536405	1,37698
9	1643,06	-23,3671	0	372.642,32	7,37711	0,0442781	-55,6132	0	0,536185	1,37889
9	1643,16	-23,3135	0	375.023,47	7,79253	0,0486211	-56,3305	0	0,535788	1,38186

9	1643,26	-23,2599	0	377.917,67	8,1901	0,0527535	-57,1932	0	0,535314	1,38545
9	1643,36	-23,2064	0	381.100,98	8,5721	0,0567056	-58,1349	0	0,534809	1,38938
9	1643,46	-23,153	0	384.436,28	8,94116	0,0604905	-59,1145	0	0,534302	1,39349
9	1643,56	-23,0995	0	387.848,18	9,29852	0,0641297	-60,1106	0	0,533803	1,397703
9	1643,66	-23,0462	0	391.278,46	9,64564	0,0676347	-61,1065	0	0,533322	1,40193
9	1643,76	-22,9929	0	394.704,94	9,98268	0,0710288	-62,0968	0	0,532858	1,40617
9	1643,86	-22,9396	0	398.095,50	10,3113	0,0743135	-63,072	0	0,532415	1,41038
9	1643,96	-22,8864	0	401.438,64	10,632	0,0775014	-64,0293	0	0,531994	1,41453
9	1644,06	-22,8332	0	404.726,03	10,9454	0,0806003	-64,9669	0	0,531593	1,41863
9	1644,16	-22,7801	0	407.948,82	11,2523	0,0836158	-65,8825	0	0,531214	1,42267
9	1644,28	-22,7163	0	411.727,91	11,6128	0,087133	-66,9518	0	0,530786	1,42741
9	1644,43	-22,6399	0	416.131,38	12,0352	0,0912178	-68,192	0	0,530309	1,43297
9	1644,6	-22,5484	0	421.216,80	12,5287	0,0959436	-69,6167	0	0,529788	1,43942
9	1644,81	-22,4386	0	427.036,25	13,1052	0,101376	-71,2373	0	0,529233	1,44684
9	1645,06	-22,3069	0	433.624,25	13,7775	0,107588	-73,06	0	0,528659	1,45531
9	1645,35	-22,1492	0	440.992,85	14,5606	0,114657	-75,0848	0	0,528088	1,46488
9	1645,71	-21,9601	0	449.129,24	15,4688	0,122692	-77,3057	0	0,527545	1,47556
9	1646,14	-21,7333	0	457.980,44	16,518	0,131813	-79,7048	0	0,527059	1,48735
9	1646,66	-21,4615	0	467.624,47	17,7313	0,142049	-82,302	0	0,526635	1,50042



9	1647,28	-21,1356	0	479.061,89	19,1352	0,152946	-85,376	0	0,526098	1,51636
9	1648,02	-20,7449	0	493.013,53	20,7614	0,164014	-89,1083	0	0,525389	1,53642
9	1648,91	-20,2768	0	509.271,03	22,6457	0,175292	-93,2394	0	0,524688	1,55902
9	1649,98	-19,7157	0	526.913,54	24,8128	0,188322	-96,4645	0	0,524267	1,5736
9	1651,27	-19,0426	0	544.749,06	27,2895	0,204519	-98,1665	0	0,524368	1,57487
9	1652,81	-18,2342	0	561.596,22	30,1108	0,225327	-98,0338	0	0,525137	1,56052
9	1654,66	-17,262	0	576.334,73	33,3332	0,252183	-95,9803	0	0,526631	1,53116
9	1656,87	-16,0911	0	587.534,32	37,1821	0,285875	-91,8845	0	0,528981	1,48838
9	1659,54	-14,6784	0	593.197,08	41,845	0,328513	-85,5607	0	0,53242	1,43457
9	1662,73	-12,9701	0	590.818,91	47,384	0,384366	-77,07	0	0,537041	1,37496
9	1666,56	-10,9003	0	577.476,15	53,7698	0,460487	-66,786	0	0,542717	1,31653
9	1671,17	-8,3882	0	549.704,82	60,8769	0,569734	-55,0981	0	0,549277	1,26505
9	1676,69	-5,33582	0	505.654,85	68,421	0,734476	-42,5138	0	0,556437	1,22411
9	1683,31	-1,62662	0	453.463,03	75,8847	0,9756	-30,801	0	0,563118	1,19623
9	1686,19	1,04901	0	430.491,93	78,5305	1,10219	-26,3755	0	0,565773	1,18815
9	1686,19	1,04901	0	435.894,03	77,6745	1,03501	-27,6661	0	0,605129	1,19111
9	1691,26	3,02276	0	395.795,59	81,697	1,32483	-20,7199	0	0,590321	1,18094
9	1700,8	8,75657	0	306.415,04	84,2296	1,99216	-7,52952	0	0,649826	1,16901
9	1712,25	17,3194	0	200.546,78	84,232	3,13485	3,92157	0	0,832181	1,17155



9	1719,97	24,0702	0	170.006,73	84,232	3,72482	7,22536	0	0,915028	1,17178
9	1719,97	24,0702	0	170.006,73	84,232	3,72474	7,22536	0	0,915049	1,17178
9	1725,98	29,7801	0	140.812,32	84,9688	4,2068	10,7052	0	0,983371	1,17027
9	1742,47	47,1281	0	103.270,33	86,1912	5,1306	14,6543	0	1,10066	1,17014
9	1762,25	69,4655	0	89.024,87	87,2855	5,61873	16,212	0	1,15793	1,16965
9	1785,99	97,7539	0	75.004,46	88,6431	6,23503	17,5366	0	1,22544	1,17003
9	1814,47	133,538	0	64.480,13	90,3248	6,81028	18,4935	0	1,285	1,17043
9	1848,66	178,537	0	55.134,68	92,3967	7,4446	19,277	0	1,34733	1,17104
9	1889,67	235,227	0	46.561,30	94,9536	8,17849	19,9303	0	1,41581	1,17188
9	1938,9	306,804	0	38.788,89	98,1157	9,0312	20,4695	0	1,49136	1,17287
9	1997,96	397,397	0	31.847,42	102,035	10,0277	21,077	0	1,57508	1,17334
9	2068,84	512,412	0	25.740,69	106,904	11,2069	22,3203	0	1,66888	1,17135
9	2098,9	563,141	0	23.679,70	109,02	11,696	22,6866	0	1,70642	1,17092
9	2153,9	658,94	0	20.471,28	112,97	12,5807	23,2001	0	1,7722	1,17041
9	2255,97	845,67	0	16.013,09	120,527	14,1762	23,8165	0	1,88534	1,17013
9	2378,45	1084,28	0	12.323,12	129,959	16,0282	24,2376	0	2,00908	1,17025
9	2525,43	1389,64	0	9.328,3	141,738	18,1725	24,5171	0	2,14385	1,17059
9	2544,96	1431,68	0	9.014,2	143,338	18,4517	24,5432	0	2,16078	1,17064
10	1874,	-	0	1,00	0,0017	0,7824	24,6244	0	0,6148	1,1739

	87	24,4977			7245	27			73	
10	1874,97	-24,4425	0	332.943,78	2,474	0,00566194	-47,1088	0	0,539787	1,35256
10	1875,07	-24,3886	0	351.163,29	3,48871	0,0103859	-51,5343	0	0,539341	1,36762
10	1875,17	-24,3347	0	355.808,04	4,27525	0,0152018	-52,5413	0	0,539423	1,3708
10	1875,27	-24,2807	0	357.563,13	4,94438	0,0200354	-52,898	0	0,53956	1,37186
10	1875,37	-24,2268	0	358.305,86	5,53828	0,0248722	-53,0424	0	0,539708	1,37227
10	1875,47	-24,1728	0	358.600,41	6,07834	0,0297095	-53,0976	0	0,539854	1,37242
10	1875,57	-24,1188	0	358.664,46	6,57823	0,0345412	-53,1088	0	0,539998	1,37244
10	1875,67	-24,0648	0	358.920,25	7,04658	0,0393171	-53,1938	0	0,540065	1,37281
10	1875,77	-24,0108	0	360.106,27	7,48911	0,0439047	-53,5663	0	0,539914	1,37435
10	1875,87	-23,9568	0	362.135,81	7,91024	0,048269	-54,1932	0	0,53959	1,37695
10	1875,97	-23,9029	0	364.721,70	8,31323	0,052426	-54,9839	0	0,539169	1,38023
10	1876,07	-23,849	0	367.667,83	8,70059	0,0563928	-55,877	0	0,538702	1,38394
10	1876,17	-23,7951	0	370.813,57	9,07413	0,0601957	-56,8238	0	0,53822	1,3879
10	1876,27	-23,7413	0	374.062,96	9,43564	0,0638507	-57,7954	0	0,537742	1,39198
10	1876,37	-23,6876	0	377.365,71	9,7864	0,0673706	-58,777	0	0,537276	1,39614
10	1876,47	-23,6338	0	380.679,28	10,1279	0,0707646	-59,7562	0	0,536828	1,4003
10	1876,57	-23,5802	0	383.974,62	10,461	0,0740443	-60,725	0	0,5364	1,40445
10	1876,67	-23,5266	0	387.232,92	10,7867	0,0772183	-61,6785	0	0,535995	1,40857
10	1876,	-23,473	0	390.44	11,105	0,0802	-62,6131	0	0,5356	1,4126

	77			0,00	5	972			12	3
10	1876,87	-23,4195	0	393.587,63	11,4178	0,0832903	-63,5269	0	0,535249	1,41662
10	1876,99	-23,3553	0	397.278,33	11,7845	0,0867793	-64,5941	0	0,534841	1,42133
10	1877,13	-23,2783	0	401.578,19	12,2137	0,0908331	-65,8319	0	0,534387	1,42683
10	1877,31	-23,186	0	406.544,24	12,7152	0,0955187	-67,2541	0	0,533892	1,43322
10	1877,51	-23,0753	0	412.236,81	13,2999	0,100912	-68,875	0	0,533362	1,4406
10	1877,76	-22,9427	0	418.692,41	13,9804	0,107088	-70,7019	0	0,53281	1,44903
10	1878,06	-22,7836	0	425.925,65	14,7714	0,114124	-72,7354	0	0,532256	1,45857
10	1878,42	-22,593	0	433.947,06	15,6881	0,122117	-74,975	0	0,53172	1,46927
10	1878,85	-22,3645	0	442.728,97	16,7488	0,131161	-77,4094	0	0,53123	1,48115
10	1879,36	-22,0905	0	452.315,06	17,9747	0,141315	-80,0482	0	0,530799	1,49432
10	1879,98	-21,762	0	463.356,89	19,3925	0,152287	-83,076	0	0,530325	1,50988
10	1880,73	-21,3682	0	476.906,23	21,0355	0,163411	-86,7796	0	0,529662	1,52961
10	1881,62	-20,8962	0	492.988,04	22,9399	0,174499	-91,0643	0	0,52895	1,55317
10	1882,69	-20,3306	0	510.696,25	25,132	0,186981	-94,6523	0	0,528476	1,57057
10	1883,97	-19,6521	0	528.827,62	27,638	0,202407	-96,743	0	0,528481	1,57501
10	1885,51	-18,8375	0	546.170,38	30,4913	0,222246	-96,9805	0	0,529122	1,56367
10	1887,36	-17,858	0	561.519,70	33,7428	0,248039	-95,2187	0	0,530467	1,53651
10	1889,58	-16,6788	0	573.544,99	37,5877	0,280687	-91,4032	0	0,532603	1,49548
10	1892,	-	0	580.28	42,260	0,3219	-85,3219	0	0,5357	1,4426



	24	15,2568		5,83	6	21			67	7
10	1895,44	-13,5384	0	579.237,86	47,8184	0,375968	-77,0119	0	0,540061	1,38312
10	1899,27	-11,4579	0	567.504,98	54,2588	0,449423	-66,8417	0	0,545382	1,32397
10	1903,87	-8,93471	0	541.479,19	61,4734	0,554688	-55,1647	0	0,55161	1,27103
10	1909,39	-5,87051	0	499.775,00	69,1803	0,712123	-42,6585	0	0,558361	1,22874
10	1916,02	-2,14903	0	448.899,65	76,9173	0,943121	-30,8957	0	0,564775	1,19961
10	1919,81	4,87617 E-14	0	420.052,30	80,5435	1,10245	-25,2608	0	0,568017	1,18904
10	1919,81	4,87617 E-14	0	425.418,43	79,6659	1,03742	-26,5232	0	0,606201	1,19188
10	1923,97	2,48885	0	394.616,19	83,1734	1,26176	-21,1214	0	0,593335	1,18372
10	1933,51	8,1618	0	324.328,52	87,2681	1,82963	-10,2925	0	0,620554	1,17227
10	1944,95	16,2819	0	213.507,40	87,2686	2,87101	2,56417	0	0,794387	1,17138
10	1954,86	24,6864	0	171.608,21	87,2686	3,61088	7,11349	0	0,901041	1,17167
10	1954,86	24,6864	0	171.608,21	87,2686	3,61085	7,11349	0	0,901047	1,17167
10	1958,69	28,2283	0	151.057,25	87,7572	3,92213	9,61074	0	0,946395	1,17041
10	1975,18	45,1334	0	104.005,17	89,1523	4,9838	14,5548	0	1,08432	1,17027
10	1994,96	67,2537	0	88.492,55	90,2394	5,50214	16,2131	0	1,14565	1,16985
10	2018,69	95,2509	0	74.356,63	91,5852	6,11167	17,5487	0	1,213	1,17017
10	2047,18	130,708	0	63.566,58	93,2542	6,69391	18,52	0	1,27374	1,17057
10	2081,36	175,333	0	54.179,22	95,3114	7,32519	19,3036	0	1,33619	1,17116
10	2122,	231,575	0	45.600,	97,851	8,0559	19,9556	0	1,4048	1,1719



	38			14	2	6			6	8
10	2171,6	302,62	0	37.852,01	100,993	8,90621	20,4929	0	1,48069	1,17295
10	2230,67	392,591	0	30.962,60	104,89	9,89993	21,084	0	1,56466	1,17345
10	2301,55	506,877	0	24.944,38	109,733	11,0753	22,3285	0	1,6589	1,17143
10	2328,21	551,553	0	23.142,93	111,599	11,5092	22,6565	0	1,69226	1,17102
10	2386,61	652,578	0	19.760,65	115,77	12,4471	23,208	0	1,76245	1,17047
10	2488,67	838,33	0	15.402,38	123,294	14,0396	23,8236	0	1,87594	1,17017
10	2611,15	1075,81	0	11.802,37	132,689	15,8888	24,2431	0	2,00003	1,17028
10	2758,13	1379,86	0	8.958,14	144,426	18,0304	24,5212	0	2,13518	1,17061
10	2768,58	1402,22	0	8.795,29	145,278	18,1797	24,5353	0	2,1443	1,17064
11	2054,15	-24,9207	0	1,00	0,00177245	0,782427	24,6243	0	0,614873	1,1739
11	2054,25	-24,8654	0	325.356,03	2,5034	0,00560413	-45,885	0	0,542167	1,35015
11	2054,35	-24,8112	0	343.066,76	3,52872	0,010299	-50,2459	0	0,541797	1,36502
11	2054,45	-24,757	0	347.590,86	4,32535	0,0150766	-51,2391	0	0,541879	1,36816
11	2054,55	-24,7028	0	349.302,29	5,00188	0,0198722	-51,5912	0	0,54201	1,36921
11	2054,65	-24,6486	0	350.034,67	5,6015	0,0246764	-51,7353	0	0,542148	1,36962
11	2054,75	-24,5944	0	350.337,64	6,14598	0,0294888	-51,7927	0	0,542282	1,36977
11	2054,85	-24,5401	0	350.420,81	6,64959	0,034301	-51,8078	0	0,542411	1,36981
11	2054,95	-24,4859	0	350.659,94	7,12196	0,039058	-51,8855	0	0,542476	1,37014



11	2055,05	-24,4316	0	351.577,27	7,56969	0,0436565	-52,1789	0	0,542381	1,37136
11	2055,15	-24,3774	0	353.351,81	7,99632	0,0480317	-52,7369	0	0,542106	1,37366
11	2055,25	-24,3232	0	355.795,83	8,40407	0,0521823	-53,4955	0	0,541715	1,3768
11	2055,35	-24,2691	0	358.606,28	8,79551	0,0561467	-54,36	0	0,541276	1,38038
11	2055,45	-24,215	0	361.628,31	9,17288	0,0599467	-55,2828	0	0,54082	1,38423
11	2055,55	-24,1609	0	364.768,87	9,53792	0,0635992	-56,2355	0	0,540364	1,38821
11	2055,65	-24,1069	0	367.969,45	9,89189	0,0671199	-57,201	0	0,539916	1,39228
11	2055,75	-24,0529	0	371.190,44	10,2361	0,0705197	-58,1675	0	0,539482	1,39638
11	2055,85	-23,999	0	374.403,08	10,5714	0,0738086	-59,1268	0	0,539064	1,40047
11	2055,95	-23,9451	0	377.588,61	10,8991	0,0769924	-60,0734	0	0,538666	1,40454
11	2056,05	-23,8913	0	380.732,14	11,2196	0,0800805	-61,0035	0	0,538287	1,40856
11	2056,15	-23,8375	0	383.824,57	11,534	0,0830766	-61,9146	0	0,537929	1,41252
11	2056,27	-23,7729	0	387.458,64	11,9031	0,0865676	-62,981	0	0,537525	1,4172
11	2056,41	-23,6956	0	391.700,13	12,3356	0,0906169	-64,2199	0	0,537075	1,42269
11	2056,58	-23,6028	0	396.612,68	12,8411	0,0952942	-65,6474	0	0,536584	1,42907
11	2056,79	-23,4916	0	402.246,89	13,4308	0,100669	-67,2753	0	0,536059	1,43644
11	2057,04	-23,3583	0	408.621,36	14,1183	0,10681	-69,1058	0	0,535517	1,44484
11	2057,34	-23,1984	0	415.788,82	14,9162	0,11381	-71,1509	0	0,53497	1,45439
11	2057,7	-23,0068	0	423.759,15	15,8399	0,121764	-73,4098	0	0,534435	1,46513



11	2058,13	-22,7771	0	432.499,14	16,9083	0,13076	-75,8692	0	0,533943	1,47707
11	2058,64	-22,5017	0	441.989,93	18,1431	0,140877	-78,5205	0	0,533519	1,49024
11	2059,26	-22,1715	0	452.885,59	19,5706	0,151832	-81,5518	0	0,533059	1,50574
11	2060	-21,7757	0	466.210,96	21,2236	0,162979	-85,2472	0	0,532422	1,52531
11	2060,9	-21,3012	0	482.102,76	23,1398	0,174022	-89,5849	0	0,53172	1,54915
11	2061,97	-20,7326	0	499.817,75	25,3478	0,186175	-93,4044	0	0,531214	1,56831
11	2063,25	-20,0507	0	518.107,14	27,8728	0,201118	-95,7494	0	0,531161	1,57486
11	2064,79	-19,232	0	535.733,58	30,7475	0,220344	-96,2294	0	0,531724	1,56545
11	2066,64	-18,2478	0	551.471,30	34,0156	0,245456	-94,6739	0	0,532974	1,53987
11	2068,86	-17,0632	0	564.014,72	37,861	0,277413	-91,0399	0	0,534984	1,50001
11	2071,52	-15,6351	0	571.472,54	42,5226	0,317821	-85,1488	0	0,537954	1,44815
11	2074,72	-13,9101	0	571.373,39	48,0927	0,370561	-77,0038	0	0,542022	1,38889
11	2078,55	-11,8223	0	560.856,10	54,5615	0,442123	-66,9346	0	0,54711	1,32929
11	2083,15	-9,29149	0	536.671,95	61,8231	0,543903	-55,4156	0	0,553035	1,27578
11	2088,67	-6,21996	0	495.983,52	69,6376	0,697136	-42,8473	0	0,559631	1,23224
11	2095,3	-2,49145	0	446.136,86	77,5577	0,920987	-31,0459	0	0,565865	1,20214
11	2099,68	1,32034 E-11	0	414.048,96	81,8782	1,0985	-24,6837	0	0,569405	1,18989
11	2099,68	1,32034 E-11	0	419.400,99	80,9848	1,03484	-25,9314	0	0,606982	1,19267
11	2103,25	2,13851	0	393.926,48	84,1094	1,22029	-21,4139	0	0,595496	1,18566



11	2112,78	7,80384	0	317.501,07	88,742	1,78131	-9,3346	0	0,615645	1,17186
11	2124,23	15,9154	0	193.503,64	88,7454	2,77851	4,7709	0	0,789684	1,17195
11	2135,21	25,0406	0	157.702,33	90,675	3,2739	8,44626	0	0,865238	1,17311
11	2135,21	25,0406	0	157.702,33	90,675	3,27377	8,44626	0	0,865273	1,17311
11	2137,97	27,4619	0	146.492,17	90,929	3,43615	9,86656	0	0,8896	1,17206
11	2154,45	43,3128	0	100.056,22	92,2158	4,39837	14,8293	0	1,01983	1,17123
11	2174,24	64,1781	0	83.438,39	93,245	4,92019	16,5755	0	1,08385	1,17071
11	2197,97	90,6956	0	69.382,90	94,5235	5,49933	17,8919	0	1,15033	1,17094
11	2226,46	124,425	0	58.347,18	96,1163	6,08397	18,8569	0	1,21359	1,17137
11	2260,64	166,996	0	49.200,46	98,0857	6,69698	19,6066	0	1,27653	1,17193
11	2301,66	220,798	0	40.961,78	100,524	7,40787	20,2209	0	1,34576	1,17276
11	2350,88	288,95	0	33.632,89	103,549	8,23601	20,7196	0	1,4223	1,17362
11	2409,95	375,502	0	27.211,88	107,311	9,21039	21,5177	0	1,50755	1,17321
11	2469,41	467,559	0	22.428,11	111,234	10,1774	22,5135	0	1,58784	1,17158
11	2480,83	485,805	0	21.675,38	112,003	10,3612	22,6587	0	1,60266	1,17139
11	2565,88	626,69	0	16.994,23	117,863	11,7044	23,4534	0	1,70736	1,17056
11	2667,95	806,883	0	13.090,72	125,189	13,2701	23,9982	0	1,82208	1,17034
11	2790,43	1037,87	0	9.928,31	134,359	15,0934	24,364	0	1,94766	1,17049
11	2866,45	1188,7	0	8.469,46	140,238	16,1979	24,507	0	2,0201	1,17066

12	2054, 15	- 24,9207	0	0,99	0,0017 7245	0,7824 27	24,6243	0	0,6148 73	1,1739
12	2054, 25	- 24,8654	0	323.19 4,56	2,5034	0,0056 0413	-45,885	0	0,5421 67	1,3501 5
12	2054, 35	- 24,8112	0	340.78 7,62	3,5287 2	0,0102 99	-50,2459	0	0,5417 97	1,3650 2
12	2054, 45	-24,757	0	345.28 1,66	4,3253 5	0,0150 766	-51,2391	0	0,5418 79	1,3681 6
12	2054, 55	- 24,7028	0	346.98 1,73	5,0018 8	0,0198 722	-51,5912	0	0,5420 1	1,3692 1
12	2054, 65	- 24,6486	0	347.70 9,24	5,6015	0,0246 764	-51,7353	0	0,5421 48	1,3696 2
12	2054, 75	- 24,5944	0	348.01 0,20	6,1459 8	0,0294 888	-51,7927	0	0,5422 82	1,3697 7
12	2054, 85	- 24,5401	0	348.09 2,82	6,6495 9	0,0343 01	-51,8078	0	0,5424 11	1,3698 1
12	2054, 95	- 24,4859	0	348.33 0,36	7,1219 6	0,0390 58	-51,8855	0	0,5424 76	1,3701 4
12	2055, 05	- 24,4316	0	349.24 1,59	7,5696 9	0,0436 565	-52,1789	0	0,5423 81	1,3713 6
12	2055, 15	- 24,3774	0	351.00 4,34	7,9963 2	0,0480 317	-52,7369	0	0,5421 06	1,3736 6
12	2055, 25	- 24,3232	0	353.43 2,13	8,4040 7	0,0521 823	-53,4955	0	0,5417 15	1,3768
12	2055, 35	- 24,2691	0	356.22 3,91	8,7955 1	0,0561 467	-54,36	0	0,5412 76	1,3803 8
12	2055, 45	-24,215	0	359.22 5,86	9,1728 8	0,0599 467	-55,2828	0	0,5408 2	1,3842 3
12	2055, 55	- 24,1609	0	362.34 5,55	9,5379 2	0,0635 992	-56,2355	0	0,5403 64	1,3882 1
12	2055, 65	- 24,1069	0	365.52 4,87	9,8918 9	0,0671 199	-57,201	0	0,5399 16	1,3922 8
12	2055, 75	- 24,0529	0	368.72 4,47	10,236 1	0,0705 197	-58,1675	0	0,5394 82	1,3963 8
12	2055, 85	-23,999	0	371.91 5,76	10,571 4	0,0738 086	-59,1268	0	0,5390 64	1,4004 7
12	2055, 95	-	0	375.08	10,899	0,0769	-60,0734	0	0,5386	1,4045



	95	23,9451		0,12	1	924			66	4
12	2056, 05	- 23,8913	0	378.20 2,78	11,219 6	0,0800 805	-61,0035	0	0,5382 87	1,4085 6
12	2056, 15	- 23,8375	0	381.27 4,66	11,534	0,0830 766	-61,9146	0	0,5379 29	1,4125 2
12	2056, 27	- 23,7729	0	384.88 4,58	11,903 1	0,0865 676	-62,981	0	0,5375 25	1,4172
12	2056, 41	- 23,6956	0	389.09 7,90	12,335 6	0,0906 169	-64,2199	0	0,5370 75	1,4226 9
12	2056, 58	- 23,6028	0	393.97 7,81	12,841 1	0,0952 942	-65,6474	0	0,5365 84	1,4290 7
12	2056, 79	- 23,4916	0	399.57 4,59	13,430 8	0,1006 69	-67,2753	0	0,5360 59	1,4364 4
12	2057, 04	- 23,3583	0	405.90 6,72	14,118 3	0,1068 1	-69,1058	0	0,5355 17	1,4448 4
12	2057, 34	- 23,1984	0	413.02 6,56	14,916 2	0,1138 1	-71,1509	0	0,5349 7	1,4543 9
12	2057, 7	- 23,0068	0	420.94 3,94	15,839 9	0,1217 64	-73,4098	0	0,5344 35	1,4651 3
12	2058, 13	- 22,7771	0	429.62 5,86	16,908 3	0,1307 6	-75,8692	0	0,5339 43	1,4770 7
12	2058, 64	- 22,5017	0	439.05 3,61	18,143 1	0,1408 77	-78,5205	0	0,5335 19	1,4902 4
12	2059, 26	- 22,1715	0	449.87 6,88	19,570 6	0,1518 32	-81,5518	0	0,5330 59	1,5057 4
12	2060, 01	- 21,7757	0	463.11 3,72	21,223 6	0,1629 79	-85,2472	0	0,5324 22	1,5253 1
12	2060, 9	- 21,3012	0	478.89 9,95	23,139 8	0,1740 22	-89,5849	0	0,5317 2	1,5491 5
12	2061, 97	- 20,7326	0	496.49 7,25	25,347 8	0,1861 75	-93,4044	0	0,5312 14	1,5683 1
12	2063, 25	- 20,0507	0	514.66 5,13	27,872 8	0,2011 18	-95,7494	0	0,5311 61	1,5748
12	2064, 79	-19,232	0	532.17 4,48	30,747 5	0,2203 44	-96,2294	0	0,5317 24	1,5654 5
12	2066, 64	- 18,2478	0	547.80 7,64	34,015 6	0,2454 56	-94,6739	0	0,5329 74	1,5398 7
12	2068, -		0	560.26	37,861	0,2774	-91,0399	0	0,5349	1,5000



	86	17,0632		7,73		13		84	1	
12	2071,52	-15,6351	0	567.676,00	42,5226	0,317821	-85,1488	0	0,537954	1,4481
12	2074,72	-13,9101	0	567.577,52	48,0927	0,370561	-77,0038	0	0,542022	1,38889
12	2078,55	-11,8223	0	557.130,10	54,5615	0,442123	-66,9346	0	0,54711	1,32929
12	2083,15	-9,29149	0	533.106,61	61,8231	0,543903	-55,4156	0	0,553035	1,27578
12	2088,67	-6,21996	0	492.688,50	69,6376	0,697136	-42,8473	0	0,559631	1,23224
12	2095,3	-2,49145	0	443.172,98	77,5577	0,920987	-31,0459	0	0,565865	1,20214
12	2099,68	1,32034 E-11	0	411.298,26	81,8782	1,0985	-24,6837	0	0,569405	1,18989
12	2099,68	1,32034 E-11	0	416.614,73	80,9848	1,03484	-25,9314	0	0,606982	1,19267
12	2103,25	2,13851	0	391.309,46	84,1094	1,22029	-21,4139	0	0,595496	1,18566
12	2112,79	7,80384	0	315.391,77	88,742	1,78131	-9,3346	0	0,615645	1,17186
12	2124,23	15,9154	0	192.218,11	88,7454	2,77851	4,7709	0	0,789684	1,17195
12	2135,21	25,0406	0	156.654,65	90,675	3,2739	8,44626	0	0,865238	1,17311
12	2135,21	25,0406	0	156.654,65	90,675	3,27377	8,44626	0	0,865273	1,17311
12	2137,97	27,4619	0	143.113,59	90,929	3,43615	9,86656	0	0,8896	1,17206
12	2154,45	43,3128	0	87.730,71	92,2158	4,39837	14,8293	0	1,01983	1,17123
12	2174,24	64,1781	0	65.285,84	93,245	4,92019	16,5755	0	1,08385	1,17071
12	2197,97	90,6956	0	48.908,93	94,5235	5,49933	17,8919	0	1,15033	1,17094
12	2226,46	124,425	0	37.460,53	96,1163	6,08397	18,8569	0	1,21359	1,17137
12	2260,	166,996	0	28.883,	98,085	6,6969	19,6066	0	1,2765	1,1719



	64			93	7	8				3
12	2301,66	220,798	0	22.050,69	100,524	7,40787	20,2209	0	1,34576	1,1727
12	2350,88	288,95	0	16.730,35	103,549	8,23601	20,7196	0	1,4223	1,17362
12	2409,95	375,502	0	12.535,05	107,311	9,21039	21,5177	0	1,50755	1,17321
12	2469,41	467,559	0	9.722,63	111,234	10,1774	22,5135	0	1,58784	1,17158
12	2480,83	485,805	0	9.274,81	112,003	10,3612	22,6587	0	1,60266	1,17139
12	2565,89	626,69	0	6.778,74	117,863	11,7044	23,4534	0	1,7073	1,17056
12	2667,95	806,883	0	4.906,28	125,189	13,2701	23,9982	0	1,82208	1,17034
12	2790,43	1037,87	0	3.506,02	134,359	15,0934	24,364	0	1,94766	1,17049
12	2866,45	1188,7	0	2.892,30	140,238	16,1979	24,507	0	2,0201	1,17066
13	2107,61	-25,0406	0	1,00	0,00177245	0,782427	24,6243	0	0,614873	1,1739
13	2107,71	-24,9847	0	299.652,66	2,51502	0,0054775	-41,6229	0	0,549839	1,34154
13	2107,81	-24,9297	0	315.832,66	3,54876	0,0100584	-45,8392	0	0,549719	1,35606
13	2107,91	-24,8747	0	319.578,38	4,34833	0,0147288	-46,7348	0	0,549975	1,35902
13	2108,01	-24,8197	0	320.691,50	5,02653	0,0194201	-47,0008	0	0,550263	1,3599
13	2108,11	-24,7646	0	320.888,18	5,62775	0,0241121	-47,0629	0	0,550553	1,36015
13	2108,21	-24,7096	0	320.668,94	6,17512	0,0287948	-47,0377	0	0,550844	1,36014
13	2108,31	-24,6545	0	320.232,85	6,68126	0,0334693	-46,9689	0	0,551135	1,36001
13	2108,41	-24,5993	0	319.685,74	7,1546	0,0381341	-46,8799	0	0,551421	1,35983



13	2108,51	-24,5442	0	319.341,75	7,60158	0,0427374	-46,8654	0	0,551648	1,35996
13	2108,61	-24,489	0	319.891,30	8,02671	0,047129	-47,1425	0	0,551683	1,36128
13	2108,71	-24,4339	0	321.169,46	8,43324	0,0512941	-47,6539	0	0,55158	1,36355
13	2108,81	-24,3787	0	322.855,10	8,82367	0,0552694	-48,2928	0	0,551421	1,36634
13	2108,91	-24,3236	0	324.789,39	9,20012	0,0590746	-49,0072	0	0,551243	1,36945
13	2109,01	-24,2685	0	326.884,54	9,56414	0,0627255	-49,7693	0	0,551056	1,37277
13	2109,11	-24,2134	0	329.078,93	9,91693	0,0662369	-50,5593	0	0,55087	1,37621
13	2109,21	-24,1583	0	331.325,20	10,2598	0,0696192	-51,3626	0	0,550692	1,37974
13	2109,31	-24,1032	0	333.592,37	10,5939	0,0728818	-52,1696	0	0,550527	1,38329
13	2109,41	-24,0482	0	335.856,66	10,92	0,0760343	-52,9732	0	0,550376	1,38686
13	2109,51	-23,9932	0	338.101,24	11,2385	0,0790888	-53,7684	0	0,55024	1,39041
13	2109,61	-23,9381	0	340.314,32	11,5501	0,0820519	-54,5519	0	0,55012	1,39393
13	2109,73	-23,8721	0	342.916,58	11,9158	0,0854944	-55,4731	0	0,549997	1,39811
13	2109,87	-23,7929	0	345.955,04	12,3439	0,0894755	-56,5494	0	0,549879	1,40303
13	2110,05	-23,6979	0	349.464,32	12,8445	0,0940474	-57,7945	0	0,549779	1,40879
13	2110,25	-23,5839	0	353.469,95	13,4276	0,0992796	-59,2209	0	0,549714	1,41549
13	2110,5	-23,4472	0	357.974,06	14,1062	0,105224	-60,8347	0	0,549709	1,4232
13	2110,8	-23,283	0	362.951,88	14,8935	0,111946	-62,6361	0	0,549798	1,43199
13	2111,16	-23,086	0	368.346,52	15,805	0,119504	-64,6176	0	0,550018	1,44189



13	2111,59	-22,8494	0	374.064,25	16,8596	0,127947	-66,7631	0	0,550418	1,45291
13	2112,1	-22,5652	0	379.963,03	18,0778	0,137328	-69,0476	0	0,551051	1,46505
13	2112,72	-22,2238	0	385.898,68	19,4823	0,147687	-71,4519	0	0,55197	1,47834
13	2113,47	-21,8132	0	392.276,22	21,1031	0,158649	-74,14	0	0,553135	1,49377
13	2114,36	-21,3194	0	400.225,17	22,9782	0,169171	-77,5132	0	0,554428	1,51379
13	2115,43	-20,7253	0	409.578,14	25,1511	0,178889	-81,4604	0	0,556047	1,53813
13	2116,71	-20,01	0	419.118,86	27,6535	0,189376	-84,4286	0	0,558281	1,55543
13	2118,25	-19,1476	0	427.159,07	30,5121	0,202435	-85,3704	0	0,561346	1,55771
13	2120,1	-18,1061	0	431.969,45	33,7632	0,219689	-83,775	0	0,5653	1,54183
13	2122,32	-16,8466	0	431.718,33	37,4759	0,242721	-79,3968	0	0,570091	1,50831
13	2124,98	-15,3214	0	424.249,62	41,8749	0,272777	-72,0891	0	0,575635	1,46022
13	2128,18	-13,4724	0	406.960,66	47,1198	0,313027	-61,7731	0	0,581755	1,40236
13	2132,01	-11,2295	0	377.492,41	53,2259	0,369258	-48,9538	0	0,588094	1,34284
13	2136,61	-8,50938	0	335.017,66	60,1654	0,450332	-34,78	0	0,594203	1,29016
13	2142,13	-5,21312	0	282.517,40	67,9106	0,567341	-21,1251	0	0,599658	1,25098
13	2148,76	-1,22514	0	231.084,80	76,6619	0,713796	-10,6869	0	0,604036	1,22912
13	2156,71	3,59117	0	185.836,71	86,9638	0,88019	-3,23853	0	0,607504	1,21817
13	2166,25	9,40044	0	147.269,31	99,5448	1,05893	2,15787	0	0,610231	1,21283
13	2177,69	16,3987	0	114.188,57	114,885	1,26022	7,15523	0	0,612293	1,20602



13	2191,43	24,8207	0	85.114,50	132,6	1,52465	12,3019	0	0,613754	1,19554
13	2191,79	25,0406	0	84.452,35	133,033	1,53264	12,4407	0	0,613783	1,19518
13	2191,79	25,0406	0	84.452,35	133,033	1,53264	12,4407	0	0,613783	1,19518
13	2196,69	28,0662	0	73.986,51	137,069	1,64869	14,1424	0	0,614146	1,19082
13	2196,69	28,0662	0	73.986,51	137,069	1,64783	14,1424	0	0,614469	1,19082
13	2207,92	35,18	0	55.025,75	147,43	1,8483	16,7088	0	0,652809	1,18524
13	2227,7	48,7439	0	36.227,24	157,188	2,21034	18,8982	0	0,716866	1,18147
13	2251,43	66,5404	0	25.408,91	159,112	2,608	20,058	0	0,781527	1,17977
13	2279,92	89,8854	0	17.537,79	160,234	3,11765	20,8284	0	0,857687	1,17917
13	2286,53	95,6174	0	16.163,09	160,505	3,24206	20,9539	0	0,875597	1,17915
13	2314,1	120,58	0	12.459,79	161,683	3,65082	21,3247	0	0,931473	1,17891
13	2355,12	160,327	0	8.983,9	163,526	4,22917	21,8115	0	1,00568	1,17831
13	2404,34	211,913	0	6.424,51	165,871	4,9285	23,0797	0	1,08921	1,17491
13	2432,39	243,098	0	5.414,65	167,268	5,32482	23,5077	0	1,134	1,17389
13	2463,41	279,065	0	4.559,82	168,86	5,76258	23,8436	0	1,18163	1,17323
13	2534,29	366,476	0	3.213,45	172,669	6,75687	24,3091	0	1,28367	1,17242
13	2619,35	480,515	0	2.250,35	177,527	7,94291	24,5905	0	1,39626	1,17215
13	2721,41	629,443	0	1.562,51	183,723	9,35503	24,7599	0	1,52011	1,17214
13	2843,89	824,064	0	1.076,66	191,626	11,0309	24,8609	0	1,65576	1,17226



13	2990,87	1078,47	0	738,18	201,69	13,010	24,9204	0	1,8036	1,1724
13	3051,06	1188,73	0	660,29	205,98	13,810	24,9352	0	1,8601	1,1724

Weather: Category 5/D

Wind speed [m/s]	5
Pasquill stability	D neutral - little sun and high wind or overcast/windy night
Atmospheric temperature [degC]	25
Relative humidity [fraction]	0,75
Solar radiation flux [kW/m2]	0,5
Mixing layer height [m]	800

Observer Release Data and Observer Mass Data

Observer number	Release type	Start time [s]	Start downwind distance [m]	Unit	Masses or mass rates			Final
					Release	Rainout	Pool vapour pick-up	
1	Continuou s	0	0	kg/s	36,6419	36,4419		0,2005 2
2	Continuou s	0,22	-0,327613	kg/s	36,6419	36,4419		1,54058
3	Continuou s	240,26 1	-15,2038	kg/s	36,6419	36,4419		36,0438
4	Continuou s	474,70 7	-17,5555	kg/s	36,6419	36,4419		36,2396
5	Continuou s	708,26	-19,013	kg/s	36,6419	36,4419		36,343
6	Continuou s	941,37 7	-20,0816	kg/s	36,6419	36,4419		36,4041
7	Continuou s	1174,2 1	-20,9145	kg/s	36,6419	36,4419		36,4289
8	Continuou s	1406,8 6	-21,6049	kg/s	36,6419	36,4419		36,45
9	Continuou s	1639,3 7	-22,1937	kg/s	36,6419	36,4419		36,4856
10	Continuou s	1871,7 9	-22,7136	kg/s	36,6419	36,4419		36,5095

11	Continuou s	2091,9 9	-23,1271	kg/s	36,6419	36,4419		36,2655
12	Continuou s	2091,9 9	-23,1271	kg/s	0	0	36,065 4	36,0654
13	Continuou s	2104,1 2	-23,1499	kg/s	0	0		26,3568

Time-varying Observer Dispersion Data (before along-wind-diffusion effects)

Dispersion data correspond to an averaging time of: 18,75 s

Observer number	Time [s]	Down wind distance [m]	C/Line height [m]	C/Line conc [ppm]	Effective width [m]	Effective depth [m]	C/Line vapour temperature [degC]	C/Line liquid fraction	Centroid velocity [m/s]	C/Line cloud density [kg/m ³]
1	0	0	0	999.89 1,66	0,13438 7	0,0651 237	-160,935	0	11,965 5	1,9107 1
1	0,01	0,11524	0	962.13 9,20	0,14517 3	0,0731 836	-152,187	0	11,114 2	1,8065 4
1	0,02	0,22292 2	0	929.40 9,84	0,15575	0,0804 442	-144,416	0	10,427 2	1,7272 1
1	0,03	0,32433 2	0	900.70 5,83	0,16651 1	0,0868 077	-137,443	0	9,8601 1	1,6643 2
1	0,04	0,42046 8	0	875.27 6,95	0,17739 7	0,0924 015	-131,129	0	9,3828 7	1,6129
1	0,05	0,51213 8	0	852.54 4,18	0,18832 7	0,0973 622	-125,363	0	8,9745 5	1,5698 3
1	0,06	0,59991 6	0	832.06 5,92	0,19923 3	0,1018	-120,062	0	8,6207 8	1,5330 4
1	0,07	0,68436 1	0	813.48 3,08	0,21005 7	0,1058 18	-115,157	0	8,3103 1	1,5011 2
1	0,08	0,76595 7	0	796.50 5,27	0,22075 5	0,1095 06	-110,59	0	8,0345 7	1,4730 2
1	0,09	0,84492 7	0	780.92 4,38	0,23130 3	0,1129 09	-106,322	0	7,7881 9	1,4480 5



1	0,1	0,92158	0	766.55	0,24167	0,1160	-102,316	0	7,5662	1,4256
		7		1,18	2	81			1	3
1	0,11	0,99616	0	753.23	0,25184	0,1190	-98,5419	0	7,3649	1,4053
		3		4,96	6	62			5	5
1	0,12	1,06883	0	740.85	0,26181	0,1218	-94,9759	0	7,1815	1,3868
				4,11	2	79			5	9
1	0,13	1,13975	0	729.30	0,27155	0,1245	-91,5969	0	7,0135	1,3699
				1,43	7	59			7	8
1	0,14	1,20908	0	718.48	0,28107	0,1271	-88,3872	0	6,8590	1,3544
				7,44	3	23			4	
1	0,15	1,27693	0	708.33	0,29035	0,1295	-85,3315	0	6,7163	1,34
				5,99	2	91			3	
1	0,16	1,34344	0	698.78	0,29938	0,1319	-82,4165	0	6,5840	1,3266
				0,30	6	78			2	3
1	0,17	1,4087	0	689.76	0,30817	0,1342	-79,6307	0	6,4609	1,3141
				3,91	1	98			6	6
1	0,18	1,47277	0	681.23	0,3167	0,1365	-76,9646	0	6,3462	1,3025
				9,35		61			1	1
1	0,19	1,53574	0	673.16	0,32497	0,1387	-74,4098	0	6,2389	1,2915
				5,86		74			7	9
1	0,2	1,59765	0	665.50	0,33297	0,1409	-71,9593	0	6,1385	1,2813
				7,91	6	46			7	3
1	0,212	1,67066	0	656.81	0,34222	0,1435	-69,1456	0	6,0261	1,2698
				5,49	5	11			3	1
1	0,226	1,75649	0	647.04	0,35279	0,1465	-65,9404	0	5,9017	1,2569
	4			3,79	8	41			5	9
1	0,243	1,85722	0	636.01	0,36469	0,1502	-62,2932	0	5,7648	1,2428
	68			5,27	1	2			5	5
1	0,264	1,97511	0	623.48	0,37779	0,1548	-58,1467	0	5,6149	1,2273
	416			0,85	6	28			9	8
1	0,289	2,11275	0	609.02	0,39211	0,1607	-53,4265	0	5,4514	1,2106
	299			4,27	2	13			1	3
1	0,319	2,27299	0	592.24	0,40815	0,1680	-48,0834	0	5,2744	1,1928
	159			4,16	7	38			7	3
1	0,354	2,45867	0	573.10	0,42684	0,1765	-42,1639	0	5,0883	1,1744
	991			4,13	2	93			1	3
1	0,397	2,67314	0	549.70	0,44873	0,1874	-35,4867	0	4,8890	1,1558
	989			3,07	7	75			2	8



1	0,449 587	2,92	0	521.28 5,98	0,47402 4	0,2014 42	-28,2234	0	4,6798 4	1,1385 6
1	0,511 504	3,20315	0	488.42 5,39	0,50304 4	0,2185 2	-20,803	0	4,4699 5	1,1239 5
1	0,585 805	3,5274	0	451.83 1,06	0,53628 1	0,2386 93	-13,6934	0	4,2674	1,1133 5
1	0,674 966	3,89892	0	412.51 9,21	0,57435 9	0,2618 44	-7,31058	0	4,0788	1,1074 4
1	0,781 959	4,32536	0	371.58 7,83	0,61806 4	0,2879 41	-1,87238	0	3,9088 5	1,1061 2
1	0,910 351	4,81674	0	330.27 7,67	0,66842 3	0,3168 96	2,55307	0	3,7600 2	1,1088 3
1	1,064 42	5,38584	0	289.61 2,06	0,72674 8	0,3493 93	6,43246	0	3,6326 7	1,1131 1
1	1,249 31	6,04752	0	250.48 4,20	0,79456 1	0,3855 75	9,62868	0	3,5265	1,1190 4
1	1,471 17	6,81963	0	213.68 6,79	0,87369 2	0,4258 78	12,2316	0	3,4404 1	1,1259 3
1	1,737 4	7,72573	0	179.85 2,18	0,96655 4	0,4708 33	14,3398	0	3,372	1,1331 8
1	2,056 88	8,79409	0	149.39 9,02	1,07605	0,5210 95	16,0377	0	3,3187 8	1,1403 3
1	2,440 26	10,0582	0	122.54 2,13	1,2056	0,5774 55	17,3966	0	3,2784 1	1,1470 6
1	2,900 31	11,5589	0	99.317, 72	1,3594	0,6407 92	18,4757	0	3,2484 6	1,1531 9
1	3,127 44	12,2955	0	90.349, 75	1,43483	0,6706 86	18,8695	0	3,2381 5	1,1556 2
1	3,127 44	12,2955	0	90.349, 75	1,43483	0,6706 86	18,8695	0	3,2381 5	1,1556 2
1	3,452 37	13,3457	0	79.401, 19	1,54224	0,7140 64	19,3307	0	3,2266	1,1586 7
1	4,114 84	15,4779	0	61.830, 64	1,75978	0,8102 2	20,0221	0	3,2106 4	1,1637 3
1	4,909 81	18,0257	0	46.714, 78	2,01905	0,9406 08	20,6529	0	3,1994 7	1,1679 7
1	5,863 77	21,074	0	33.965, 41	2,33654	1,1263	22,1176	0	3,1919 5	1,1683 2



1	6,971 63	24,6072	0	24.106, 68	2,70376	1,3890 2	23,1311	0	3,1872 1	1,1691 4
1	7,008 53	24,7248	0	23.851, 06	2,71559	1,3988 6	23,1565	0	3,1870 9	1,1691 7
1	8,382 23	29,125	0	16.788, 17	3,15695	1,7366 3	23,8365	0	3,2475 7	1,1701
1	10,03 07	34,5845	0	11.696, 20	3,70151	2,1179 2	24,2721	0	3,3748 7	1,1709
1	11,10 37	38,2462	0	9.428,8 9	4,06495	2,3735 2	24,4444	0	3,4507 1	1,1712 9
1	12,00 88	41,3968	0	8.027,9 9	4,37658	2,5930 7	24,5497	0	3,5107 7	1,1715 5
1	14,38 26	49,9038	0	5.442,7 3	5,21337	3,1869 3	24,7242	0	3,6553 7	1,1720 5
1	17,23 11	60,5374	0	3.671,6 7	6,25073	3,9283 1	24,8325	0	3,8084 1	1,1724 1
1	20,35 04	72,6531	0	2.451,3 9	7,42232	4,7715 6	24,8946	0	3,9565 1	1,1726 6
2	0,22	- 0,32761 3	0	1,00	0,00177 245	0,1512 76	24,6246	0	3,1802 3	1,1739
2	0,32	- 0,25077	0	909.80 8,11	0,54931 2	0,0821 702	-144,682	0	0,6202 01	1,7525 3
2	0,42	- 0,18695 3	0	906.24 4,78	0,82608 6	0,1238 6	-143,973	0	0,6624 06	1,7463 2
2	0,52	- 0,11801 5	0	899.60 9,22	1,06834	0,1559 47	-142,779	0	0,7148 71	1,7367 5
2	0,62	- 0,04416 75	0	893.90 3,09	1,29313	0,1826 23	-141,763	0	0,7612 48	1,7288 3
2	0,677 081	5,30699 E-15	0	890.80 2,33	1,41516	0,1964 03	-141,041	0	0,7862 11	1,7222 7
2	0,677 081	5,30699 E-15	0	956.47 9,84	0,97256 1	0,0639 972	-153,115	0	4,8440 7	1,8281
2	0,72	0,17222	0	935.48	1,18103	0,1103	-149,153	0	3,4479	1,7899



				3,48		34				6
2	0,82	0,45982	0	913.72	1,43085	0,1934	-145,106	0	2,5109	1,7542
		1		9,57		36				9
2	0,92	0,69288	0	901.13	1,62244	0,2486	-141,747	0	2,1937	1,7207
		2		3,80					4	8
2	1,02	0,90468	0	888.37	1,82254	0,2793	-137,215	0	2,0639	1,6742
		1		0,40		07			8	
2	1,119	1,10804	0	871.14	2,01834	0,2890	-130,282	0	2,0529	1,607
	3			7,45		43				
2	1,119	1,10804	0	871.14	2,01834	0,2890	-130,282	0	2,0529	1,607
	3			7,45		43				
2	1,12	1,10947	0	870.96	2,01964	0,2890	-130,189	0	2,0535	1,6061
				9,65		17			5	1
2	1,22	1,31987	0	843.03	2,19795	0,2871	-116,773	0	2,1499	1,4901
				8,72		79			7	8
2	1,32	1,53985	0	810.98	2,36107	0,2887	-103,283	0	2,2496	1,3968
				9,03		72			1	
2	1,42	1,76962	0	777.47	2,50422	0,2932	-90,3467	0	2,3455	1,3232
				5,69		08			8	5
2	1,52	2,00865	0	743.87	2,62402	0,3003	-78,262	0	2,4346	1,2655
				8,40		62			4	9
2	1,62	2,25622	0	710.85	2,71748	0,3104	-67,1472	0	2,5155	1,2203
				6,72		06			6	5
2	1,72	2,51147	0	678.98	2,77822	0,3239	-57,0822	0	2,5877	1,1849
				1,03		91				2
2	1,82	2,77363	0	645.89	2,80949	0,3425	-47,6802	0	2,6541	1,1569
				1,71		46			2	1
2	1,92	3,04217	0	609.37	2,83615	0,3653	-38,6241	0	2,7170	1,1349
				0,95		63			5	6
2	2,02	3,31666	0	572.24	2,86687	0,3902	-30,373	0	2,7735	1,1186
				2,24		86			9	6
2	2,12	3,59654	0	536.36	2,90054	0,4163	-23,1823	0	2,8228	1,1072
				7,21		89			2	7
2	2,22	3,88095	0	502.51	2,936	0,4432	-17,1006	0	2,8651	1,0999
				6,58		23			5	8
2	2,34	4,22716	0	465.09	2,98018	0,4758	-11,1735	0	2,9079	1,0954
				7,76		51				1
2	2,484	4,64871	0	424.85	3,03488	0,5152	-5,7116	0	2,9496	1,0941



				0,06		57				5
2	2,656 8	5,16161	0	382.90 1,55	3,10189	0,5625 61	-0,923327	0	2,9887 9	1,0962 2
2	2,864 16	5,78499	0	340.58 5,99	3,18301	0,6189 21	3,09213	0	3,0243	1,1012 7
2	3,112 99	6,54161	0	299.06 8,20	3,2806	0,6866 77	6,66111	0	3,0554 4	1,1073 4
2	3,411 59	7,45823	0	259.44 7,30	3,39718	0,7670 29	9,62664	0	3,0819 9	1,1145 5
2	3,769 91	8,56685	0	222.58 4,80	3,53557	0,8616 51	12,0626	0	3,1040 2	1,1222 6
2	4,199 89	9,90562	0	189.05 5,81	3,69897	0,9722 43	14,0474	0	3,1219 2	1,1299 6
2	4,715 87	11,5203	0	159.14 6,27	3,89107	1,1005 8	15,6551	0	3,1361 5	1,1373 1
2	5,335 04	13,4657	0	132.92 5,41	4,11595	1,2483 7	16,9519	0	3,1473	1,1440 8
2	6,078 05	15,8073	0	110.27 4,77	4,37803	1,4174 3	17,9928	0	3,1558 9	1,1501 6
2	6,969 66	18,6271	0	90.948, 44	4,68186	1,6030 7	18,8256	0	3,1757 9	1,1555 2
2	6,989 96	18,6917	0	90.579, 02	4,68865	1,6066 1	18,8411	0	3,1773 5	1,1556 2
2	6,989 96	18,6917	0	90.579, 02	4,68865	1,6069	18,8411	0	3,1767 7	1,1556 2
2	8,039 59	22,0732	0	74.143, 35	5,03653	1,7915	19,5056	0	3,2505 5	1,1603 2
2	9,323 51	26,3033	0	59.389, 61	5,46634	2,0159 8	20,0672	0	3,3310 7	1,1646 5
2	10,86 42	31,5053	0	46.290, 08	5,99854	2,3002 6	20,6027	0	3,4215 1	1,1683 7
2	12,71 31	37,9359	0	34.428, 81	6,65151	2,7114 7	21,9601	0	3,5361 7	1,1687 1
2	14,93 17	45,9314	0	24.685, 98	7,4418	3,2678 7	22,9673	0	3,6701 2	1,1694 2
2	15,15 74	46,761	0	23.915, 28	7,52338	3,3258 3	23,0431	0	3,6829 2	1,1694 9
2	17,59	55,9087	0	17.332,	8,41844	3,9688	23,6634	0	3,8140	1,1702



	4			64		9			9	
2	20,78 88	68,3386	0	11.987, 52	9,62445	4,8356 7	24,1326	0	3,9656 9	1,1709 1
2	21,87 03	72,6524	0	10.694, 27	10,0404	5,1366 1	24,2406	0	4,0131 8	1,1711 1
3	240,2 61	- 15,2038	0	1,00	0,00177 245	0,1512 76	24,6245	0	3,1802 3	1,1739
3	240,3 61	-14,926	0	316.13 7,96	4,36631	0,0146 155	-53,035	0	2,7682 1	1,4004 5
3	240,4 61	- 14,6492	0	316.27 4,81	6,16683	0,0290 888	-53,0384	0	2,7693	1,4003 8
3	240,5 61	- 14,3722	0	315.90 2,46	7,54727	0,0435 596	-52,9723	0	2,7703 9	1,4002 1
3	240,6 61	- 14,0951	0	315.43 5,13	8,70755	0,0580 357	-52,8956	0	2,7714 7	1,4000 3
3	240,7 61	- 13,8179	0	314.93 5,32	9,72924	0,0724 928	-52,8157	0	2,7725 5	1,3998 6
3	240,8 61	- 13,5406	0	314.41 5,99	10,6507	0,0869 468	-52,7336	0	2,7736 3	1,3996 8
3	240,9 61	- 13,2632	0	313.88 8,23	11,4956	0,1014 02	-52,6508	0	2,7747 2	1,3995
3	241,0 61	- 12,9856	0	313.35 4,61	12,2808	0,1158 43	-52,5673	0	2,7758 1	1,3993 3
3	241,1 61	-12,708	0	312.81 5,57	13,0175	0,1302 67	-52,4833	0	2,7769	1,3991 5
3	241,2 61	- 12,4303	0	312.27 2,14	13,7129	0,1446 82	-52,3986	0	2,778	1,3989 8
3	241,3 61	- 12,1524	0	311.72 3,78	14,3725	0,1590 95	-52,3133	0	2,7791 1	1,3988
3	241,4 61	- 11,8744	0	311.17 1,77	15,001	0,1735 05	-52,2274	0	2,7802 2	1,3986 2
3	241,5 61	- 11,5964	0	310.61 6,79	15,602	0,1879 12	-52,1412	0	2,7813 4	1,3984 4
3	241,6 61	- 11,3182	0	310.05 9,10	16,1789	0,2023 11	-52,0546	0	2,7824 6	1,3982 6
3	241,7 61	- 11,0399	0	309.49 8,04	16,7345	0,2166 99	-51,9675	0	2,7835 8	1,3980 8



3	241,861	-10,7615	0	308.933,27	17,2708	0,231074	-51,8798	0	2,78471	1,3979
3	241,961	-10,4829	0	308.365,28	17,7897	0,245435	-51,7916	0	2,78585	1,39772
3	242,061	-10,2043	0	307.794,07	18,2923	0,259788	-51,7029	0	2,78699	1,39754
3	242,161	-9,92553	0	307.219,61	18,7796	0,274139	-51,6137	0	2,78814	1,39735
3	242,261	-9,64666	0	306.641,42	19,2533	0,288477	-51,5239	0	2,78929	1,39717
3	242,381	-9,31186	0	305.942,91	19,8041	0,305685	-51,4154	0	2,79068	1,39695
3	242,525	-8,9099	0	305.178,28	20,4423	0,32621	-51,3121	0	2,79226	1,39686
3	242,698	-8,4273	0	304.443,26	21,1778	0,350516	-51,2534	0	2,79391	1,39692
3	242,905	-7,84783	0	303.966,46	22,0218	0,37887	-51,3275	0	2,79535	1,39775
3	243,154	-7,15205	0	303.961,55	22,9854	0,411506	-51,6185	0	2,79636	1,39955
3	243,453	-6,31684	0	304.505,66	24,0791	0,448798	-52,1605	0	2,79698	1,40264
3	243,811	-5,3145	0	305.588,24	25,3131	0,491191	-52,9607	0	2,79743	1,40704
3	244,241	-4,11154	0	307.124,49	26,6939	0,539675	-53,8304	0	2,79802	1,41163
3	244,757	-2,66753	0	308.906,64	28,2235	0,595834	-54,475	0	2,79926	1,41466
3	245,376	-0,93355	0	310.593,78	29,8966	0,661453	-54,7054	0	2,80187	1,41517
3	245,709	2,48792 E-14	0	311.209,65	30,7437	0,696038	-54,5945	0	2,80387	1,41402
3	245,709	2,48792 E-14	0	315.995,53	30,4069	0,69285	-55,4147	0	2,82561	1,41613
3	246,119	1,15809	0	316.239,64	31,4393	0,734788	-55,0954	0	2,82479	1,41396
3	247,011	3,67791	0	315.222,65	33,7552	0,820078	-53,4271	0	2,82853	1,40403



3	248,081	6,71063	0	310.548,73	36,6111	0,917273	-49,5683	0	2,84205	1,38304
3	249,365	10,3764	0	298.872,93	40,0369	1,03553	-42,1859	0	2,87058	1,34645
3	250,905	14,8381	0	272.710,53	43,921	1,19433	-28,6335	0	2,92641	1,28762
3	251,079	15,3477	0	268.141,18	44,3257	1,2145	-26,4815	0	2,93582	1,27908
3	251,079	15,3477	0	268.141,18	44,3257	1,2145	-26,4815	0	2,93582	1,27908
3	252,754	20,3436	0	217.572,18	47,3532	1,47961	-4,83431	0	3,02335	1,20245
3	253,413	22,3432	0	201.053,89	48,1676	1,58575	-0,42084	0	3,05263	1,19082
3	253,413	22,3432	0	201.053,89	48,1676	1,58568	-0,42084	0	3,05273	1,19082
3	254,973	27,2148	0	167.892,54	49,3826	1,82379	6,25414	0	3,18144	1,17734
3	257,635	35,9578	0	123.667,37	50,3461	2,34004	12,4953	0	3,38538	1,17056
3	260,83	47,1282	0	87.407,66	51,4484	3,09162	16,1318	0	3,60196	1,17097
3	264,664	61,364	0	61.488,39	52,8383	4,07428	18,2294	0	3,81719	1,17322
3	269,264	79,4305	0	43.425,02	54,5806	5,31965	19,4954	0	4,03074	1,17555
3	274,785	102,291	0	30.773,03	56,7563	6,88119	20,2904	0	4,24436	1,17754
3	280,27	126,011	0	23.895,32	58,9849	8,24593	20,9306	0	4,40061	1,17789
3	281,409	131,047	0	22.787,78	59,4546	8,52846	21,1723	0	4,43009	1,17746
3	289,359	167,032	0	16.915,69	62,7815	10,4872	22,3844	0	4,61549	1,17546
3	295,465	195,595	0	13.873,17	65,3891	11,9819	22,9629	0	4,73873	1,17462
4	474,7	-	0	1,00	0,00177	0,1512	24,6241	0	3,1802	1,1739

	07	17,5555			245	76			3	
4	474,8	-	0	258.80	4,76139	0,0139	-44,961	0	2,8610	1,3877
	07	17,2687		2,47		55			4	2
4	474,9	-	0	258.91	6,72732	0,0277	-44,9736	0	2,8618	1,3877
	07	16,9826		0,47		927			3	3
4	475,0	-	0	258.63	8,23081	0,0416	-44,9271	0	2,8625	1,3876
	07	16,6963		6,20		546			6	2
4	475,1	-	0	258.29	9,49753	0,0555	-44,8717	0	2,8632	1,3875
	07	16,4101		1,35		059			9	1
4	475,2	-	0	257.90	10,6135	0,0693	-44,811	0	2,8640	1,3873
	07	16,1237		7,75		379			4	8
4	475,3	-	0	257.50	11,6203	0,0831	-44,7476	0	2,8648	1,3872
	07	15,8372		3,22		675			2	6
4	475,4	-	0	257.09	12,5428	0,0970	-44,6835	0	2,8655	1,3871
	07	15,5507		1,59		09			9	3
4	475,5	-	0	256.67	13,3993	0,1108	-44,6196	0	2,8663	1,3870
	07	15,2641		8,86		52			5	1
4	475,6	-	0	256.26	14,2025	0,1246	-44,5556	0	2,8671	1,3868
	07	14,9775		4,69		88			2	9
4	475,7	-	0	255.84	14,9614	0,1385	-44,4913	0	2,8678	1,3867
	07	14,6907		7,75		13			8	6
4	475,8	-	0	255.42	15,6824	0,1523	-44,4264	0	2,8686	1,3866
	07	14,4039		7,10		27			5	4
4	475,9	-14,117	0	255.00	16,3692	0,1661	-44,361	0	2,8694	1,3865
	07			2,79		46			3	2
4	476,0	-13,83	0	254.57	17,0264	0,1799	-44,2952	0	2,8702	1,3863
	07			5,73		64			1	9
4	476,1	-	0	254.14	17,6565	0,1937	-44,2291	0	2,8709	1,3862
	07	13,5429		6,64		88			9	7
4	476,2	-	0	253.71	18,2629	0,2076	-44,1629	0	2,8717	1,3861
	07	13,2558		6,17		13			7	4
4	476,3	-	0	253.28	18,848	0,2214	-44,0964	0	2,8725	1,3860
	07	12,9686		4,29		37			6	2
4	476,4	-	0	252.85	19,4139	0,2352	-44,0298	0	2,8733	1,3858
	07	12,6813		1,04		57			4	9
4	476,5	-	0	252.41	19,9622	0,2490	-43,9629	0	2,8741	1,3857
	07	12,3939		5,93		71			3	6
4	476,6	-	0	251.97	20,4943	0,2628	-43,8956	0	2,8749	1,3856



	07	12,1065		8,61		8			3	4
4	476,7 07	- 11,8189	0	251.53 8,94	21,0114	0,2766 84	-43,828	0	2,8757 2	1,3855 1
4	476,8 27	- 11,4738	0	251.00 8,65	21,6139	0,2932 4	-43,7464	0	2,8766 8	1,3853 6
4	476,9 71	- 11,0595	0	250.36 7,97	22,3123	0,3131 08	-43,6478	0	2,8778 5	1,3851 7
4	477,1 44	- 10,5621	0	249.64 2,06	23,1185	0,3368 51	-43,5481	0	2,8791 9	1,3850 3
4	477,3 51	- 9,96489	0	248.89 1,76	24,0432	0,3650 83	-43,4788	0	2,8806 6	1,3851
4	477,6	- 9,24798	0	248.43 3,77	25,0987	0,3979 08	-43,5751	0	2,8818 8	1,3859 7
4	477,8 99	- 8,38727	0	248.47 7,58	26,2972	0,4355 1	-43,9324	0	2,8826 5	1,3881 2
4	478,2 57	-7,3542	0	249.11 2,47	27,6503	0,4781 8	-44,5949	0	2,8830 1	1,3917 5
4	478,6 87	- 6,11448	0	250.33 0,88	29,1694	0,5262 73	-45,5746	0	2,8831 7	1,3969 8
4	479,2 03	- 4,62677	0	252.01 3,95	30,8603	0,5808 81	-46,6509	0	2,8834 4	1,4025 7
4	479,8 22	- 2,84118	0	253.93 0,89	32,723	0,6438 81	-47,4629	0	2,8843 4	1,4064 3
4	480,5 65	- 0,69734 6	0	255.71 6,31	34,7467	0,7174 4	-47,7902	0	2,8865 5	1,4074
4	480,8 07	9,51345 E-15	0	256.13 3,86	35,3663	0,7409 85	-47,7516	0	2,8875 6	1,4069 2
4	480,8 07	9,51345 E-15	0	260.36 4,04	34,981	0,7384 08	-48,4699	0	2,9047 4	1,4086 6
4	481,4 57	1,88789	0	260.79 7,33	36,658	0,7998 72	-48,0838	0	2,9039 8	1,4060 5
4	482,5 27	4,99695	0	259.61 6,11	39,5146	0,8945 64	-46,1356	0	2,9084 5	1,3949 1
4	483,8 11	8,73927	0	254.46 0,04	43,0238	1,0050 9	-41,6182	0	2,9221 1	1,3711 7
4	485,3 51	13,2611	0	241.88 0,12	47,2004	1,1444 7	-33,1113	0	2,9498 1	1,3304 7



4	486,8 28	17,6441	0	219.92 3,31	50,9461	1,2984 6	-21,0649	0	2,9926 5	1,2795 4
4	486,8 28	17,6441	0	219.92 3,31	50,9461	1,2984 6	-21,0649	0	2,9926 5	1,2795 4
4	487,2	18,7627	0	211.17 4,42	51,7982	1,3502 6	-15,7621	0	3,0089 5	1,2581 4
4	489,4 19	25,5437	0	163.18 5,75	55,6675	1,6777 6	1,94955	0	3,1211 7	1,1999 3
4	490,3 44	28,4623	0	147.66 2,37	56,8548	1,8043 8	5,64217	0	3,1856 7	1,1908 2
4	490,3 44	28,4623	0	147.66 2,37	56,8548	1,8043 8	5,64217	0	3,1856 7	1,1908 2
4	492,0 81	34,0927	0	123.46 9,30	58,5264	2,0624 4	10,184	0	3,2967 6	1,1818 7
4	495,2 76	44,9327	0	90.087, 03	60,4299	2,6368 4	14,7619	0	3,4878 7	1,1766 1
4	499,1 1	58,7271	0	62.719, 73	61,9671	3,5163 4	17,5337	0	3,7072 8	1,1763 2
4	503,7 1	76,3337	0	42.998, 85	63,6632	4,7322 4	19,1694	0	3,9392 4	1,1775 7
4	509,2 31	98,7332	0	29.784, 12	65,8012	6,2732 9	20,1319	0	4,1682 5	1,1789 4
4	513,6 82	117,594	0	23.891, 64	67,5737	7,3844 4	20,5415	0	4,3061 6	1,1796 3
4	515,8 56	127,044	0	21.723, 56	68,4572	7,9135	20,7237	0	4,3657 6	1,1797 7
4	523,8 05	162,593	0	15.992, 11	71,7486	9,8635 5	22,121	0	4,5604 9	1,1769 5
4	528,1 37	182,545	0	13.831, 53	73,5761	10,918 4	22,6091	0	4,6530 1	1,1760 5
5	708,2 6	-19,013	0	1,00	0,00177 245	0,1512 76	24,6236	0	3,1802 3	1,1739
5	708,3 6	- 18,7221	0	229.90 4,56	4,99143	0,0136 454	-40,9805	0	2,9042 1	1,3822 1
5	708,4 6	- 18,4316	0	229.99 4,54	7,05209	0,0271 963	-40,998	0	2,9048 5	1,3822 5
5	708,5	-	0	229.74	8,62982	0,0407	-40,958	0	2,9054	1,3821

	6	18,1411		7,48		604			7	7
5	708,6	-	0	229.44	9,95906	0,0543	-40,9097	0	2,9060	1,3820
	6	17,8505		1,94		158			8	8
5	708,7	-	0	229.11	11,127	0,0678	-40,8581	0	2,9067	1,3819
	6	17,5599		1,06		789			8	8
5	708,8	-	0	228.77	12,1806	0,0814	-40,8055	0	2,9073	1,3818
	6	17,2692		1,98		435			1	8
5	708,9	-	0	228.42	13,1488	0,0949	-40,7523	0	2,9079	1,3817
	6	16,9784		6,58		96			2	8
5	709,0	-	0	228.07	14,0486	0,1085	-40,6985	0	2,9085	1,3816
	6	16,6876		6,87		46			4	8
5	709,1	-	0	227.72	14,8913	0,1221	-40,6441	0	2,9091	1,3815
	6	16,3967		3,00		02			6	8
5	709,2	-	0	227.36	15,6861	0,1356	-40,5895	0	2,9097	1,3814
	6	16,1058		6,97		63			9	8
5	709,3	-	0	227.00	16,4406	0,1492	-40,5347	0	2,9104	1,3813
	6	15,8147		9,50		24			1	8
5	709,4	-	0	226.64	17,1604	0,1627	-40,4796	0	2,9110	1,3812
	6	15,5237		9,90		77			4	8
5	709,5	-	0	226.28	17,8499	0,1763	-40,4242	0	2,9116	1,3811
	6	15,2325		8,01		23			7	8
5	709,6	-	0	225.92	18,5123	0,1898	-40,3685	0	2,9123	1,3810
	6	14,9413		4,45		64				8
5	709,7	-	0	225.55	19,1499	0,2034	-40,3126	0	2,9129	1,3809
	6	14,6501		9,01		08			3	8
5	709,8	-	0	225.19	19,7653	0,2169	-40,2564	0	2,9135	1,3808
	6	14,3588		1,41		49			7	8
5	709,9	-	0	224.82	20,3598	0,2304	-40,1998	0	2,9142	1,3807
	6	14,0674		1,83		98			1	8
5	710,0	-	0	224.45	20,9358	0,2440	-40,143	0	2,9148	1,3806
	6	13,7759		0,62		47			6	7
5	710,1	-	0	224.07	21,4942	0,2576	-40,086	0	2,9155	1,3805
	6	13,4844		7,86		02				7
5	710,2	-	0	223.70	22,0368	0,2711	-40,0287	0	2,9161	1,3804
	6	13,1928		3,60		57			5	7
5	710,3	-	0	223.25	22,6687	0,2874	-39,9597	0	2,9169	1,3803
	8	12,8428		2,57		23			3	4
5	710,5	-	0	222.70	23,4017	0,3069	-39,8764	0	2,9178	1,3801



	24	12,4227		7,96		36			8	9
5	710,6 97	- 11,9184	0	222.04 9,19	24,2483	0,3303 43	-39,7757	0	2,9190 2	1,3800 1
5	710,9 05	-11,313	0	221.36 0,94	25,2217	0,3581 82	-39,7006	0	2,9202 7	1,38
5	711,1 53	- 10,5863	0	220.85 0,03	26,3341	0,3907 76	-39,7489	0	2,9214	1,3806 1
5	711,4 52	- 9,71383	0	220.69 4,74	27,5971	0,4284 41	-40,0077	0	2,9222 5	1,3822 5
5	711,8 1	- 8,66662	0	221.09 0,22	29,0236	0,4712 6	-40,5742	0	2,9226 7	1,3853 8
5	712,2 4	- 7,40979	0	222.08 8,25	30,6258	0,5194 74	-41,4856	0	2,9227 4	1,3902 3
5	712,7 56	- 5,90171	0	223.62 7,47	32,4135	0,5735 77	-42,6961	0	2,9227 6	1,3965 8
5	713,3 75	- 4,09194	0	225.52 8,15	34,3899	0,6353 54	-43,7891	0	2,9231	1,4020 7
5	714,1 18	- 1,91965	0	227.49 2,57	36,5482	0,7068 9	-44,4928	0	2,9243 3	1,4052
5	714,7 75	1,12642 E-13	0	228.75 0,10	38,29	0,7687 71	-44,6002	0	2,9262 9	1,4051 4
5	714,7 75	1,12642 E-13	0	232.65 8,46	37,8738	0,7664 71	-45,2594	0	2,9413 5	1,4066 8
5	715,0 1	0,69224 1	0	232.90 6,10	38,4843	0,7882 86	-45,2132	0	2,9408 2	1,4062 7
5	716,0 8	3,83892	0	232.97 3,63	41,3357	0,8820 33	-44,1519	0	2,9419 5	1,3998 6
5	717,3 64	7,62091	0	230.21 3,50	44,875	0,9890 3	-40,9352	0	2,9501 9	1,3824 1
5	718,9 05	12,1795	0	222.12 1,10	49,1597	1,12	-34,3878	0	2,9688 7	1,3497
5	720,7 53	17,6995	0	203.34 3,57	54,0967	1,2974 9	-22,4897	0	3,0055 2	1,2966 1
5	721,2 12	19,0818	0	196.15 7,13	55,2385	1,3478 2	-18,5972	0	3,0187 4	1,2807 7
5	721,2 12	19,0818	0	196.15 7,13	55,2385	1,3478 2	-18,5972	0	3,0187 4	1,2807 7
5	722,9	24,4479	0	161.78	58,8882	1,5998	-1,82691	0	3,0845	1,2185

	72			2,68		4			6	4
5	725,6 32	32,8984	0	122.05 1,76	62,7989	1,9585 2	8,47095	0	3,2599 8	1,1908 2
5	725,6 32	32,8984	0	122.05 1,76	62,7989	1,9585 2	8,47095	0	3,2599 8	1,1908 2
5	725,6 34	32,9045	0	122.02 9,40	62,8013	1,9587 8	8,47548	0	3,2600 8	1,1908 1
5	728,8 29	43,6124	0	90.123, 19	65,8205	2,4532 4	13,8013	0	3,4366 3	1,1814
5	732,6 63	57,1754	0	63.848, 75	68,1539	3,2015 4	16,9571	0	3,6384 6	1,1787 8
5	737,2 63	74,4632	0	43.312, 05	70,0065	4,3517 1	18,8864	0	3,8744 9	1,1789 6
5	742,7 84	96,5402	0	29.502, 72	72,1123	5,8696 3	19,9979	0	4,1143 8	1,1798 4
5	746,8 95	113,735	0	23.903, 24	73,7376	6,8778 4	20,4241	0	4,2463 9	1,1803
5	749,4 09	124,529	0	21.326, 51	74,7483	7,4846 6	20,6126	0	4,3181 9	1,1805 3
5	757,3 58	159,747	0	15.579, 99	78,0123	9,4204 5	21,9098	0	4,5195 8	1,1779 9
5	761,0 45	176,562	0	13.728, 87	79,5549	10,313 9	22,3751	0	4,6012 4	1,1770 3
6	941,3 77	- 20,0816	0	1,00	0,00177	0,1512 76	24,6232	0	3,1802 3	1,1739
6	941,4 77	- 19,7881	0	211.43 7,70	5,1494	0,0134 646	-38,4821	0	2,9306 1	1,3790 5
6	941,5 77	-19,495	0	211.55 2,25	7,27249	0,0268 58	-38,5079	0	2,9311 1	1,3791 4
6	941,6 77	- 19,2019	0	211.35 3,12	8,9018	0,0402 447	-38,4765	0	2,9316 2	1,3790 7
6	941,7 77	- 18,9087	0	211.08 5,24	10,2721	0,0536 385	-38,4345	0	2,9321 5	1,379
6	941,8 77	- 18,6154	0	210.78 9,88	11,4795	0,0670 174	-38,3885	0	2,9326 9	1,3789 1
6	941,9 77	- 18,3221	0	210.47 8,90	12,5692	0,0803 935	-38,3405	0	2,9332 4	1,3788 2



6	942,0 77	- 18,0288	0	210.15 9,70	13,5702	0,0937 642	-38,2913	0	2,9337 9	1,3787 3
6	942,1 77	- 17,7354	0	209.83 7,14	14,4993	0,1071 42	-38,2419	0	2,9343 5	1,3786 4
6	942,2 77	- 17,4419	0	209.51 3,43	15,3697	0,1205 26	-38,1923	0	2,9349	1,3785 6
6	942,3 77	- 17,1484	0	209.18 9,47	16,1911	0,1339 12	-38,1429	0	2,9354 5	1,3784 7
6	942,4 77	- 16,8548	0	208.86 5,14	16,971	0,1472 98	-38,0934	0	2,936	1,3783 8
6	942,5 77	- 16,5612	0	208.54 0,55	17,7142	0,1606 9	-38,044	0	2,9365 5	1,3782 9
6	942,6 77	- 16,2675	0	208.21 6,03	18,425	0,1740 92	-37,9946	0	2,9370 9	1,3782 1
6	942,7 77	- 15,9738	0	207.89 1,07	19,1071	0,1874 98	-37,9451	0	2,9376 4	1,3781 2
6	942,8 77	-15,68	0	207.56 5,23	19,7647	0,2008 95	-37,8955	0	2,9381 8	1,3780 3
6	942,9 77	- 15,3861	0	207.23 8,28	20,3994	0,2142 92	-37,8458	0	2,9387 3	1,3779 5
6	943,0 77	- 15,0922	0	206.90 9,88	21,0139	0,2276 79	-37,7958	0	2,9392 9	1,3778 6
6	943,1 77	- 14,7983	0	206.57 9,92	21,6094	0,2410 66	-37,7456	0	2,9398 4	1,3777 7
6	943,2 77	- 14,5043	0	206.24 8,13	22,1877	0,2544 47	-37,6951	0	2,9404	1,3776 8
6	943,3 77	- 14,2102	0	205.91 4,65	22,7497	0,2678 29	-37,6444	0	2,9409 6	1,3775 9
6	943,4 97	- 13,8572	0	205.51 2,00	23,4044	0,2838 84	-37,5831	0	2,9416 3	1,3774 9
6	943,6 41	- 13,4336	0	205.02 5,23	24,1642	0,3031 47	-37,5089	0	2,9424 5	1,3773 6
6	943,8 14	-12,925	0	204.43 5,74	25,0421	0,3262 5	-37,4191	0	2,9434 5	1,3772
6	944,0 21	- 12,3146	0	203.78 7,76	26,0516	0,3538 13	-37,3405	0	2,9445 7	1,3771 4
6	944,2 7	- 11,5818	0	203.22 7,09	27,2039	0,3863 23	-37,3477	0	2,9456 7	1,3775 4



6	944,569	-10,7021	0	202.989,34	28,5125	0,423957	-37,5579	0	2,94652	1,37892
6	944,927	-9,64621	0	203.270,10	29,9908	0,466793	-38,0732	0	2,94694	1,38179
6	945,357	-8,37896	0	204.156,26	31,6532	0,51496	-38,948	0	2,94696	1,38641
6	945,873	-6,85833	0	205.590,11	33,5112	0,568869	-40,1745	0	2,94685	1,39284
6	946,492	-5,0337	0	207.436,21	35,5685	0,629897	-41,4432	0	2,94694	1,39934
6	947,235	-2,84388	0	209.453,98	37,8229	0,700157	-42,3827	0	2,94768	1,40383
6	948,127	-0,214876	0	211.258,02	40,2602	0,782262	-42,735	0	2,94973	1,40493
6	948,2	7,01691 E-14	0	211.368,24	40,4512	0,788857	-42,728	0	2,94995	1,40483
6	948,2	7,01691 E-14	0	215.056,16	40,012	0,786727	-43,3468	0	2,96375	1,40625
6	949,197	2,95455	0	215.637,46	42,6702	0,873434	-42,8049	0	2,96337	1,40277
6	950,481	6,76218	0	214.125,37	46,2242	0,978422	-40,3752	0	2,96867	1,38921
6	952,022	11,3458	0	208.358,79	50,5676	1,1045	-34,9725	0	2,98268	1,36147
6	953,87	16,8839	0	194.526,39	55,6716	1,27052	-25,0421	0	3,01026	1,31525
6	954,946	20,1333	0	181.142,52	58,4543	1,38211	-17,1454	0	3,03462	1,28206
6	954,946	20,1333	0	181.142,52	58,4543	1,38211	-17,1454	0	3,03462	1,28206
6	956,089	23,6222	0	161.043,31	61,0275	1,53929	-5,63664	0	3,06773	1,23709
6	958,751	32,0112	0	121.114,91	65,5703	1,89575	6,94934	0	3,23635	1,19856
6	960,145	36,5743	0	105.930,55	67,4543	2,08497	10,214	0	3,31326	1,19082
6	960,1	36,5743	0	105.93	67,4543	2,0849	10,214	0	3,3132	1,1908



	45			0,55		7			5	2
6	961,9 46	42,6263	0	89.960, 36	69,4722	2,3462 3	13,0191	0	3,4051 6	1,1853 7
6	965,7 8	56,0446	0	64.500, 09	72,5689	3,0119 9	16,49	0	3,5942 1	1,1808 9
6	970,3 8	73,0986	0	44.067, 26	74,9502	4,0537 9	18,6189	0	3,8203 6	1,1800 4
6	975,9 01	94,9019	0	29.516, 13	77,039	5,5579	19,8805	0	4,0705 4	1,1805
6	979,7 04	110,649	0	23.907, 87	78,5408	6,5310 9	20,3312	0	4,2034 3	1,1808 2
6	982,5 26	122,653	0	20.966, 24	79,6665	7,2075 8	20,5611	0	4,2865	1,1810 2
6	990,4 75	157,57	0	15.254, 79	82,9074	9,1228 7	21,7597	0	4,4912 9	1,1787 5
6	993,6 14	171,775	0	13.669, 67	84,2125	9,8809 6	22,1904	0	4,5626 5	1,1778
7	1174, 21	- 20,9145	0	1,00	0,00177 245	0,1512 75	24,6229	0	3,1802 3	1,1739
7	1174, 31	- 20,6192	0	198.31 6,31	5,27261	0,0133 361	-36,7336	0	2,9488 5	1,3770 2
7	1174, 41	- 20,3243	0	198.40 9,01	7,44972	0,0265 911	-36,7587	0	2,9493 2	1,3771
7	1174, 51	- 20,0293	0	198.21 5,91	9,11839	0,0398 506	-36,7291	0	2,9498	1,3770 5
7	1174, 61	- 19,7343	0	197.96 4,52	10,5221	0,0531 179	-36,6902	0	2,9502 8	1,3769 8
7	1174, 71	- 19,4392	0	197.69 5,58	11,7569	0,0663 838	-36,6488	0	2,9507 6	1,3769 1
7	1174, 81	- 19,1441	0	197.41 6,84	12,8728	0,0796 409	-36,606	0	2,9512 4	1,3768 3
7	1174, 91	-18,849	0	197.13 1,31	13,8962	0,0929 057	-36,5624	0	2,9517 2	1,3767 5
7	1175, 01	- 18,5538	0	196.84 3,14	14,8462	0,1061 79	-36,5184	0	2,9522	1,3766 8
7	1175, 11	- 18,2586	0	196.55 3,33	15,737	0,1194 49	-36,4743	0	2,9526 9	1,3766



7	1175,21	-17,9633	0	196.261,03	16,5789	0,132712	-36,4298	0	2,95317	1,37652
7	1175,31	-17,6679	0	195.967,09	17,3788	0,145968	-36,3851	0	2,95366	1,37645
7	1175,41	-17,3725	0	195.671,24	18,1417	0,159226	-36,3401	0	2,95415	1,37637
7	1175,51	-17,0771	0	195.373,31	18,8714	0,172491	-36,2949	0	2,95465	1,37629
7	1175,61	-16,7816	0	195.073,98	19,572	0,185758	-36,2494	0	2,95514	1,37621
7	1175,71	-16,4861	0	194.773,54	20,2461	0,199033	-36,2038	0	2,95564	1,37613
7	1175,81	-16,1905	0	194.472,24	20,8967	0,212308	-36,158	0	2,95613	1,37605
7	1175,91	-15,8948	0	194.169,84	21,5262	0,225583	-36,1121	0	2,95663	1,37597
7	1176,01	-15,5991	0	193.866,13	22,1363	0,238854	-36,066	0	2,95713	1,37589
7	1176,11	-15,3034	0	193.560,90	22,7288	0,252123	-36,0197	0	2,95764	1,37582
7	1176,21	-15,0076	0	193.254,37	23,3051	0,265386	-35,9732	0	2,95814	1,37574
7	1176,33	-14,6526	0	192.884,93	23,9767	0,281299	-35,9171	0	2,95875	1,37564
7	1176,47	-14,2265	0	192.439,20	24,7555	0,300403	-35,8495	0	2,95949	1,37552
7	1176,65	-13,715	0	191.900,23	25,6554	0,323322	-35,7677	0	2,96037	1,37538
7	1176,85	-13,101	0	191.269,33	26,6884	0,350798	-35,6789	0	2,96142	1,37526
7	1177,1	-12,364	0	190.680,21	27,8689	0,383313	-35,6544	0	2,96257	1,37548
7	1177,4	-11,4794	0	190.377,94	29,211	0,421013	-35,8219	0	2,96333	1,37665
7	1177,76	-10,4174	0	190.612,07	30,7295	0,4638	-36,3138	0	2,96369	1,37938
7	1178,19	-9,14294	0	191.422,46	32,4376	0,511965	-37,1597	0	2,96369	1,38384



7	1178,71	-7,61377	0	192.778,42	34,3486	0,565843	-38,3649	0	2,96352	1,39013
7	1179,32	-5,77888	0	194.583,49	36,4681	0,626364	-39,754	0	2,96344	1,39731
7	1180,07	-3,57689	0	196.625,57	38,7961	0,695709	-40,8654	0	2,96388	1,40277
7	1180,96	-0,933669	0	198.559,10	41,318	0,776415	-41,445	0	2,96541	1,40515
7	1181,27	3,91014 E-11	0	199.065,47	42,1555	0,804431	-41,4644	0	2,96623	1,40499
7	1181,27	3,91014 E-11	0	202.590,40	41,6982	0,802418	-42,0535	0	2,97908	1,40633
7	1182,03	2,24918	0	203.182,00	43,7199	0,867206	-41,7979	0	2,97839	1,40449
7	1183,31	6,07508	0	202.425,99	47,2823	0,970918	-39,9063	0	2,98199	1,39376
7	1184,85	10,6771	0	198.093,72	51,6632	1,09371	-35,2823	0	2,99311	1,36957
7	1186,7	16,2302	0	187.067,68	56,8706	1,25255	-26,5324	0	3,01562	1,32768
7	1188,26	20,9596	0	170.436,51	61,0074	1,40898	-16,1005	0	3,04567	1,28293
7	1188,26	20,9596	0	170.436,51	61,0074	1,40898	-16,1005	0	3,04567	1,28293
7	1188,92	22,9681	0	159.792,34	62,5754	1,49572	-9,15564	0	3,06377	1,25474
7	1191,58	31,3098	0	120.777,74	67,6087	1,84582	5,54675	0	3,21696	1,20544
7	1194,12	39,657	0	94.871,16	71,241	2,18985	11,3933	0	3,35333	1,19082
7	1194,12	39,657	0	94.871,16	71,241	2,1897	11,3933	0	3,35355	1,19082
7	1194,78	41,8708	0	89.528,21	72,0462	2,28188	12,3636	0	3,38542	1,18882
7	1198,61	55,2047	0	64.704,91	75,7924	2,8949	16,0991	0	3,56555	1,18285
7	1203,	72,0998	0	44.688,	78,8109	3,8409	18,3821	0	3,7798	1,1810



	21			47		6			4	2
7	1208,73	93,6771	0	29.685,84	81,0143	5,3047	19,7694	0	4,03328	1,18105
7	1212,53	109,263	0	23.910,34	82,4831	6,27074	20,2583	0	4,16997	1,18124
7	1215,36	121,209	0	20.894,15	83,6041	6,94551	20,5061	0	4,25543	1,18137
7	1223,31	155,895	0	15.110,85	86,8257	8,84923	21,6067	0	4,46458	1,17943
7	1226,36	169,627	0	13.558,84	88,0882	9,58389	22,0545	0	4,5354	1,17839
8	1406,86	-21,6049	0	1,00	0,00177245	0,151275	24,6225	0	3,18023	1,1739
8	1406,96	-21,3083	0	188.319,94	5,37063	0,0132411	-35,4181	0	2,96246	1,37558
8	1407,06	-21,012	0	188.406,39	7,58859	0,0264046	-35,4446	0	2,9629	1,37568
8	1407,16	-20,7157	0	188.225,75	9,28854	0,0395732	-35,4177	0	2,96334	1,37563
8	1407,26	-20,4193	0	187.990,54	10,7188	0,0527489	-35,3816	0	2,96378	1,37557
8	1407,36	-20,1229	0	187.739,08	11,9769	0,0659248	-35,3431	0	2,96422	1,37552
8	1407,46	-19,8265	0	187.478,55	13,1139	0,0790915	-35,3033	0	2,96466	1,37543
8	1407,56	-19,53	0	187.211,64	14,1569	0,0922654	-35,2627	0	2,9651	1,37536
8	1407,66	-19,2335	0	186.942,18	15,125	0,105448	-35,2217	0	2,96555	1,37529
8	1407,76	-18,9369	0	186.671,36	16,0329	0,11863	-35,1806	0	2,96599	1,37522
8	1407,86	-18,6403	0	186.398,26	16,8909	0,131804	-35,1392	0	2,96644	1,37515
8	1407,96	-18,3436	0	186.123,66	17,7063	0,144971	-35,0975	0	2,96689	1,37508
8	1408,06	-18,0469	0	185.847,37	18,4839	0,15814	-35,0557	0	2,96734	1,37501



8	1408,16	-17,7501	0	185.569,14	19,2279	0,171316	-35,0135	0	2,96779	1,37494
8	1408,26	-17,4533	0	185.289,58	19,9423	0,184494	-34,9712	0	2,96825	1,37487
8	1408,36	-17,1565	0	185.009,02	20,6296	0,19768	-34,9287	0	2,96871	1,37479
8	1408,46	-16,8596	0	184.727,64	21,2931	0,210868	-34,8861	0	2,96916	1,37472
8	1408,56	-16,5627	0	184.445,38	21,935	0,224055	-34,8434	0	2,96962	1,37465
8	1408,66	-16,2657	0	184.161,96	22,5572	0,23724	-34,8005	0	2,97008	1,37458
8	1408,76	-15,9686	0	183.877,20	23,1615	0,250422	-34,7574	0	2,97054	1,37454
8	1408,86	-15,6716	0	183.591,17	23,7492	0,2636	-34,7142	0	2,97101	1,37443
8	1408,98	-15,315	0	183.246,55	24,4344	0,27941	-34,662	0	2,97157	1,37434
8	1409,12	-14,8871	0	182.830,86	25,229	0,298389	-34,5991	0	2,97224	1,37424
8	1409,3	-14,3734	0	182.328,41	26,1473	0,32116	-34,5231	0	2,97306	1,37411
8	1409,5	-13,7568	0	181.731,63	27,2017	0,348481	-34,4367	0	2,97403	1,37398
8	1409,75	-13,0167	0	181.153,53	28,4071	0,380879	-34,403	0	2,97504	1,37414
8	1410,05	-12,1282	0	180.815,45	29,7777	0,418568	-34,5419	0	2,97587	1,37516
8	1410,41	-11,0618	0	180.995,52	31,3289	0,461357	-35,0044	0	2,97623	1,37773
8	1410,84	-9,78194	0	181.744,38	33,0746	0,509505	-35,8264	0	2,97622	1,38206
8	1411,35	-8,24631	0	183.038,47	35,0288	0,563338	-37,0154	0	2,97601	1,38825
8	1411,97	-6,40371	0	184.795,88	37,1988	0,623538	-38,4716	0	2,97584	1,39581
8	1412,72	-4,19259	0	186.836,01	39,5865	0,692196	-39,7128	0	2,97607	1,40201



8	1413,61	-1,53864	0	188.841,30	42,1796	0,771795	-40,4634	0	2,97725	1,40536
8	1414,13	3,29476 E-13	0	189.699,65	43,5751	0,817054	-40,5552	0	2,97843	1,40543
8	1414,13	3,29476 E-13	0	193.096,12	43,1026	0,81513	-41,1208	0	2,99059	1,40671
8	1414,68	1,65425	0	193.598,35	44,5893	0,862088	-41,0157	0	2,98991	1,40582
8	1415,96	5,49415	0	193.352,50	48,1573	0,964897	-39,5265	0	2,99227	1,39719
8	1417,5	10,1106	0	189.994,50	52,5644	1,08534	-35,4769	0	3,00141	1,37568
8	1419,35	15,6761	0	180.830,96	57,8446	1,23894	-27,5838	0	3,02056	1,33711
8	1421,32	21,644	0	162.326,57	63,1521	1,43021	-15,3527	0	3,05391	1,28379
8	1421,32	21,644	0	162.326,57	63,1521	1,43021	-15,3527	0	3,05391	1,28379
8	1421,57	22,4165	0	158.485,84	63,7796	1,46281	-12,5671	0	3,06059	1,27214
8	1424,23	30,7234	0	120.804,40	69,2249	1,80325	4,16233	0	3,19975	1,21203
8	1427,43	41,232	0	89.158,29	74,0535	2,23491	11,7856	0	3,37071	1,19186
8	1427,76	42,3534	0	86.655,22	74,4963	2,27985	12,2592	0	3,38605	1,19082
8	1427,76	42,3534	0	86.655,22	74,4963	2,27985	12,2592	0	3,38605	1,19082
8	1431,26	54,4872	0	64.883,74	78,3954	2,80608	15,7653	0	3,54328	1,18443
8	1435,86	71,2573	0	45.240,28	81,949	3,67882	18,17	0	3,74756	1,18189
8	1441,38	92,636	0	30.036,61	84,4969	5,07182	19,6585	0	3,99772	1,18152
8	1445,23	108,325	0	23.911,93	85,9826	6,05806	20,1988	0	4,14179	1,18159
8	1448,01	119,955	0	20.891,78	87,0746	6,71615	20,4571	0	4,22745	1,18166



8	1455,96	154,436	0	15.020,65	90,2791	8,60987	21,4716	0	4,44051	1,18002
8	1459,03	168,172	0	13.449,31	91,5427	9,34594	21,9474	0	4,51317	1,17887
9	1639,37	-22,1937	0	1,00	0,00177245	0,151275	24,6222	0	3,18023	1,17391
9	1639,47	-21,896	0	180.418,09	5,44959	0,0131697	-34,3895	0	2,97306	1,37452
9	1639,57	-21,5987	0	180.482,43	7,70163	0,0262632	-34,4151	0	2,97349	1,37463
9	1639,67	-21,3013	0	180.310,76	9,42522	0,0393757	-34,3904	0	2,97399	1,37459
9	1639,77	-21,0039	0	180.092,45	10,8784	0,0524769	-34,3574	0	2,97433	1,37453
9	1639,87	-20,7065	0	179.849,55	12,1574	0,0655724	-34,3204	0	2,97472	1,37447
9	1639,97	-20,409	0	179.595,23	13,3125	0,0786653	-34,2817	0	2,97515	1,37445
9	1640,07	-20,1114	0	179.336,71	14,372	0,0917658	-34,2424	0	2,97558	1,37434
9	1640,17	-19,8138	0	179.077,01	15,356	0,104872	-34,203	0	2,9767	1,37427
9	1640,27	-19,5162	0	178.816,91	16,2786	0,11798	-34,1637	0	2,97642	1,37422
9	1640,37	-19,2186	0	178.556,66	17,1493	0,131094	-34,1244	0	2,97684	1,37414
9	1640,47	-18,9209	0	178.296,80	17,9751	0,144219	-34,0852	0	2,97726	1,37406
9	1640,57	-18,6231	0	178.036,66	18,7627	0,157347	-34,0459	0	2,97767	1,37401
9	1640,67	-18,3253	0	177.775,86	19,5175	0,170465	-34,0066	0	2,97809	1,37394
9	1640,77	-18,0275	0	177.513,99	20,2431	0,183578	-33,9671	0	2,97851	1,37388
9	1640,87	-17,7296	0	177.250,81	20,942	0,196692	-33,9274	0	2,97893	1,37381
9	1640,	-	0	176.98	21,6173	0,2097	-33,8874	0	2,9793	1,3737



	97	17,4317		6,09		99			6	4
9	1641,07	-17,1338	0	176.719,90	22,2706	0,222907	-33,8473	0	2,97978	1,37367
9	1641,17	-16,8358	0	176.452,11	22,904	0,236013	-33,8069	0	2,98021	1,37361
9	1641,27	-16,5377	0	176.182,70	23,5192	0,249115	-33,7662	0	2,98065	1,37354
9	1641,37	-16,2396	0	175.911,64	24,1176	0,262212	-33,7253	0	2,98108	1,37347
9	1641,49	-15,8819	0	175.584,41	24,8151	0,277926	-33,6758	0	2,98161	1,37339
9	1641,64	-15,4525	0	175.189,33	25,6241	0,296791	-33,6162	0	2,98224	1,37329
9	1641,81	-14,9371	0	174.712,12	26,5574	0,319451	-33,5441	0	2,98301	1,37317
9	1642,02	-14,3184	0	174.135,31	27,6299	0,346657	-33,4571	0	2,98393	1,37302
9	1642,27	-13,5758	0	173.555,82	28,8558	0,378992	-33,4116	0	2,98491	1,37312
9	1642,56	-12,6844	0	173.199,31	30,2506	0,41664	-33,5325	0	2,98572	1,37404
9	1642,92	-11,6145	0	173.342,21	31,8299	0,459399	-33,9741	0	2,98608	1,37658
9	1643,35	-10,3304	0	174.050,57	33,6078	0,507485	-34,7815	0	2,98605	1,38075
9	1643,87	-8,78971	0	175.292,18	35,5983	0,561273	-35,9561	0	2,98581	1,38685
9	1644,49	-6,94106	0	177.004,17	37,8109	0,621255	-37,4501	0	2,98558	1,39462
9	1645,23	-4,72274	0	179.031,69	40,2486	0,689366	-38,7953	0	2,98568	1,40141
9	1646,12	-2,06033	0	181.079,05	42,9018	0,768074	-39,6821	0	2,98661	1,40554
9	1646,81	2,90182 E-13	0	182.247,05	44,7811	0,827805	-39,8678	0	2,988	1,40601
9	1646,81	2,90182 E-13	0	185.538,60	44,2958	0,825951	-40,4143	0	2,99963	1,40723
9	1647,	1,14041	0	185.91	45,321	0,8579	-40,3871	0	2,9990	1,4068



	19			7,59		19			7	7
9	1648,48	4,99149	0	186.038,78	48,8931	0,960023	-39,2154	0	3,00052	1,39992
9	1650,02	9,61962	0	183.398,11	53,3206	1,07859	-35,6196	0	3,00819	1,38058
9	1651,87	15,1955	0	175.598,36	58,6569	1,22811	-28,3838	0	3,0249	1,34463
9	1654,08	21,94	0	157.087,27	64,7444	1,43816	-15,4974	0	3,0582	1,28754
9	1654,18	22,2273	0	155.933,15	64,9858	1,44828	-14,8108	0	3,06019	1,28472
9	1654,18	22,2273	0	155.933,15	64,9858	1,44828	-14,8108	0	3,06019	1,28472
9	1656,75	30,2187	0	121.023,31	70,5423	1,76706	2,799	0	3,18467	1,21842
9	1659,94	40,6826	0	88.990,95	75,6816	2,19625	11,2381	0	3,35824	1,19464
9	1661,14	44,7395	0	80.365,38	77,3409	2,35797	12,9178	0	3,41278	1,19082
9	1661,14	44,7395	0	80.365,38	77,3409	2,35796	12,9178	0	3,41279	1,19082
9	1663,78	53,8845	0	64.971,60	80,481	2,74165	15,4627	0	3,52663	1,18594
9	1668,38	70,5616	0	45.591,91	84,5368	3,56205	17,9902	0	3,72367	1,18268
9	1673,9	91,7852	0	30.432,99	87,5354	4,8729	19,5532	0	3,96626	1,1819
9	1677,89	107,959	0	23.914,22	89,0779	5,88512	20,1494	0	4,11829	1,18188
9	1680,52	118,914	0	20.990,15	90,1068	6,50561	20,4078	0	4,20106	1,18191
9	1688,47	153,2	0	15.003,40	93,2949	8,3891	21,34	0	4,41791	1,18056
9	1691,7	167,605	0	13.335,73	94,6205	9,16198	21,8656	0	4,49552	1,17926
10	1871,79	-22,7136	0	1,00	0,00177245	0,151275	24,6219	0	3,18023	1,17391



10	1871,89	-22,415	0	173.64 4,63	5,52351	0,0131 052	-33,5167	0	2,9820 2	1,3736 7
10	1871,99	-22,1168	0	173.72 2,32	7,80525	0,0261 372	-33,5452	0	2,9824	1,3737 9
10	1872,09	-21,8186	0	173.55 8,05	9,55474	0,0391 725	-33,5218	0	2,9827 9	1,3737 5
10	1872,19	-21,5203	0	173.34 7,81	11,0258	0,0522 192	-33,4901	0	2,9831 8	1,3737
10	1872,29	-21,2219	0	173.12 1,15	12,3219	0,0652 553	-33,4558	0	2,9835 6	1,3736 4
10	1872,39	-20,9236	0	172.88 5,21	13,4911	0,0782 978	-33,42	0	2,9839 5	1,3735 8
10	1872,49	-20,6251	0	172.64 5,92	14,5634	0,0913 503	-33,3838	0	2,9843 4	1,3735 2
10	1872,59	-20,3267	0	172.40 4,48	15,5604	0,1043 98	-33,3473	0	2,9847 3	1,3734 6
10	1872,69	-20,0282	0	172.16 0,67	16,4965	0,1174 37	-33,3105	0	2,9851 2	1,3734
10	1872,79	-19,7297	0	171.91 5,16	17,3806	0,1304 76	-33,2734	0	2,9855 2	1,3733 4
10	1872,89	-19,4311	0	171.66 7,50	18,2196	0,1435 21	-33,2361	0	2,9859 1	1,3732 7
10	1872,99	-19,1325	0	171.41 8,50	19,0196	0,1565 69	-33,1985	0	2,9863 1	1,3732 1
10	1873,09	-18,8338	0	171.16 8,65	19,7849	0,1696 26	-33,1608	0	2,9867 1	1,3731 5
10	1873,19	-18,5351	0	170.91 8,26	20,52	0,1826 84	-33,1231	0	2,9871 1	1,3730 9
10	1873,29	-18,2364	0	170.66 6,94	21,2283	0,1957 4	-33,0852	0	2,9875	1,3730 2
10	1873,39	-17,9376	0	170.41 4,46	21,9124	0,2087 92	-33,0472	0	2,9879 1	1,3729 6
10	1873,49	-17,6388	0	170.16 0,83	22,5748	0,2218 4	-33,009	0	2,9883 1	1,3729
10	1873,59	-17,34	0	169.90 6,34	23,2172	0,2348 84	-32,9707	0	2,9887 1	1,3728 3
10	1873,69	-17,0411	0	169.65 0,91	23,8406	0,2479 33	-32,9322	0	2,9891 2	1,3727 7



10	1873,79	-16,7422	0	169.394,34	24,447	0,260981	-32,8936	0	2,98952	1,37271
10	1873,91	-16,3834	0	169.084,90	25,1533	0,276641	-32,847	0	2,99001	1,37263
10	1874,06	-15,9528	0	168.711,50	25,9721	0,295448	-32,7907	0	2,99061	1,37254
10	1874,23	-15,4359	0	168.260,84	26,9177	0,318026	-32,7229	0	2,99132	1,37242
10	1874,44	-14,8156	0	167.716,48	28,0045	0,345135	-32,6409	0	2,99218	1,37229
10	1874,69	-14,0709	0	167.150,11	29,2476	0,377411	-32,59	0	2,99312	1,37234
10	1874,99	-13,1771	0	166.816,16	30,6629	0,414943	-32,7129	0	2,99386	1,37326
10	1875,34	-12,1042	0	166.915,82	32,2648	0,457778	-33,1246	0	2,99425	1,37557
10	1875,77	-10,8167	0	167.540,17	34,0694	0,506057	-33,8885	0	2,99427	1,3796
10	1876,29	-9,2717	0	168.710,28	36,089	0,560028	-35,0347	0	2,99403	1,38555
10	1876,91	-7,41793	0	170.383,78	38,3375	0,619943	-36,5499	0	2,99372	1,39343
10	1877,65	-5,19361	0	172.412,85	40,8202	0,687524	-37,9936	0	2,99369	1,40078
10	1878,54	-2,52415	0	174.502,49	43,5263	0,76542	-39,0046	0	2,99441	1,4056
10	1879,39	6,21621 E-11	0	175.954,29	45,8588	0,837335	-39,2989	0	2,99594	1,40656
10	1879,39	6,21621 E-11	0	179.155,93	45,3619	0,835538	-39,8292	0	3,00712	1,40774
10	1879,61	0,683088	0	179.395,11	45,9769	0,854494	-39,8308	0	3,00676	1,40762
10	1880,9	4,54356	0	179.795,62	49,5534	0,956077	-38,9144	0	3,00752	1,40203
10	1882,44	9,18163	0	177.710,48	53,9967	1,07316	-35,6939	0	3,01404	1,38452
10	1884,29	14,7667	0	170.947,01	59,3762	1,21946	-28,9925	0	3,02887	1,35078



10	1886,51	21,516	0	154.937,47	65,5786	1,42203	-17,0889	0	3,05791	1,29692
10	1886,91	22,742	0	150.559,11	66,6293	1,46395	-14,361	0	3,06542	1,28552
10	1886,91	22,742	0	150.559,11	66,6293	1,46395	-14,361	0	3,06542	1,28552
10	1889,17	29,774	0	121.076,70	71,6776	1,7375	1,49226	0	3,1721	1,22463
10	1892,36	40,1998	0	88.847,63	77,0935	2,16326	10,713	0	3,34742	1,19728
10	1894,34	46,8925	0	75.212,47	79,9193	2,42873	13,4531	0	3,43601	1,19082
10	1894,34	46,8925	0	75.212,47	79,9193	2,42873	13,4531	0	3,43601	1,19082
10	1896,2	53,3581	0	64.932,55	82,2611	2,69244	15,1937	0	3,5137	1,18734
10	1900,8	69,9611	0	45.848,50	86,742	3,46982	17,8215	0	3,70421	1,18346
10	1906,32	91,0524	0	30.802,59	90,2118	4,70499	19,4498	0	3,93885	1,18229
10	1910,42	107,559	0	23.915,35	91,8255	5,73957	20,101	0	4,09801	1,18216
10	1912,94	118,024	0	21.055,90	92,8088	6,33283	20,3615	0	4,17887	1,18214
10	1920,89	152,148	0	14.973,79	95,9832	8,20772	21,2186	0	4,39902	1,18106
10	1924,23	166,984	0	13.238,89	97,349	9,00475	21,7855	0	4,48028	1,17962
11	2091,99	-23,1271	0	1,00	0,00177245	0,151275	24,6217	0	3,18023	1,17391
11	2092,09	-22,8279	0	168.393,34	5,5773	0,0130598	-32,8463	0	2,98889	1,37305
11	2092,19	-22,529	0	168.462,79	7,88221	0,0260466	-32,8752	0	2,98927	1,37317
11	2092,29	-22,2301	0	168.319,28	9,64465	0,0390607	-32,8556	0	2,98961	1,37315
11	2092,	-	0	168.12	11,1328	0,0520	-32,8266	0	2,9899	1,3731

	39	21,9311		5,20		518			7	
11	2092, 49	- 21,6321	0	167.90 9,78	12,4393	0,0650 63	-32,7941	0	2,9903 4	1,3730 5
11	2092, 59	-21,333	0	167.68 5,78	13,6199	0,0780 651	-32,7602	0	2,9907	1,3729 9
11	2092, 69	- 21,0339	0	167.45 5,42	14,7053	0,0910 582	-32,7253	0	2,9910 8	1,3729 3
11	2092, 79	- 20,7348	0	167.21 9,78	15,7145	0,1040 48	-32,6897	0	2,9914 6	1,3728 7
11	2092, 89	- 20,4356	0	166.98 0,52	16,6606	0,1170 39	-32,6536	0	2,9918 4	1,3728 1
11	2092, 99	- 20,1364	0	166.73 8,66	17,5547	0,1300 26	-32,6171	0	2,9922 3	1,3727 5
11	2093, 09	- 19,8372	0	166.49 5,29	18,4035	0,1430 15	-32,5804	0	2,9926 2	1,3726 9
11	2093, 19	- 19,5379	0	166.25 1,08	19,2126	0,1560 11	-32,5436	0	2,993	1,3726 3
11	2093, 29	- 19,2386	0	166.00 6,40	19,987	0,1690 12	-32,5067	0	2,9933 9	1,3725 7
11	2093, 39	- 18,9392	0	165.76 1,44	20,7307	0,1820 16	-32,4699	0	2,9937 8	1,3725 1
11	2093, 49	- 18,6398	0	165.51 6,26	21,4468	0,1950 24	-32,433	0	2,9941 6	1,3724 5
11	2093, 59	- 18,3404	0	165.27 0,77	22,1383	0,2080 33	-32,3961	0	2,9945 5	1,3723 9
11	2093, 69	- 18,0409	0	165.02 4,81	22,8074	0,2210 42	-32,3592	0	2,9949 3	1,3723 3
11	2093, 79	- 17,7414	0	164.77 8,54	23,4556	0,2340 59	-32,3222	0	2,9953 2	1,3722 7
11	2093, 89	- 17,4419	0	164.53 2,02	24,0845	0,2470 83	-32,2852	0	2,9957 1	1,3722 1
11	2093, 99	- 17,1423	0	164.28 5,17	24,6955	0,2601 14	-32,2481	0	2,9960 9	1,3721 5
11	2094, 11	- 16,7827	0	163.98 8,24	25,4073	0,2757 56	-32,2035	0	2,9965 6	1,3720 7
11	2094, 25	- 16,3512	0	163.63 0,61	26,2339	0,2945 21	-32,1498	0	2,9971 2	1,3719 9
11	2094,	-	0	163.19	27,1895	0,3170	-32,0851	0	2,9977	1,3718



	42	15,8332		9,30		35			9	8
11	2094,63	-15,2115	0	162.681,87	28,2896	0,344029	-32,0088	0	2,99861	1,37176
11	2094,88	-14,4652	0	162.129,92	29,549	0,376198	-31,9561	0	2,99951	1,3718
11	2095,18	-13,5695	0	161.779,78	30,9834	0,413671	-32,0626	0	3,00026	1,37262
11	2095,54	-12,4945	0	161.884,76	32,6076	0,45631	-32,4765	0	3,00062	1,37494
11	2095,97	-11,2042	0	162.516,75	34,436	0,504338	-33,2496	0	3,0006	1,37901
11	2096,48	-9,65603	0	163.674,48	36,484	0,558037	-34,3996	0	3,00034	1,38497
11	2097,1	-7,79839	0	165.307,30	38,7631	0,617754	-35,9203	0	3,00003	1,39288
11	2097,85	-5,5694	0	167.294,90	41,2794	0,685048	-37,419	0	2,99996	1,40056
11	2098,74	-2,89439	0	169.376,97	44,0256	0,762435	-38,5074	0	3,00056	1,40584
11	2099,7	6,03347 E-11	0	171.030,44	46,7177	0,844011	-38,8907	0	3,00218	1,40721
11	2099,7	6,03347 E-11	0	174.166,13	46,2107	0,842258	-39,409	0	3,01304	1,40836
11	2099,81	0,31801	0	174.280,57	46,4969	0,851011	-39,4178	0	3,01286	1,40835
11	2101,09	4,18601	0	174.850,85	50,0751	0,952299	-38,683	0	3,01313	1,40374
11	2102,63	8,83212	0	173.143,37	54,529	1,06835	-35,7363	0	3,01882	1,38759
11	2104,48	14,4248	0	167.111,44	59,9398	1,21232	-29,4267	0	3,0323	1,35551
11	2106,7	21,1797	0	152.274,39	66,2214	1,40897	-18,1134	0	3,05952	1,30374
11	2107,34	23,1515	0	145.610,37	67,932	1,47479	-13,8878	0	3,07091	1,28595
11	2107,34	23,1515	0	145.610,37	67,932	1,47479	-13,8878	0	3,07091	1,28595
11	2109,	29,4271	0	120.27	72,548	1,7145	0,47574	0	3,1633	1,2299



	36			6,16		1			9	2
11	2112,56	39,8226	0	88.263,77	78,179	2,135	10,3071	0	3,33864	1,19957
11	2115,21	48,8564	0	70.619,65	82,0637	2,49231	13,9255	0	3,45644	1,19082
11	2115,21	48,8564	0	70.619,65	82,0637	2,49229	13,9255	0	3,45647	1,19082
11	2116,39	52,95	0	64.465,26	83,612	2,65522	14,9902	0	3,50408	1,18861
11	2120,99	69,4964	0	45.730,03	88,4916	3,399	17,6978	0	3,68925	1,18418
11	2126,51	90,4865	0	30.913,61	92,3893	4,57113	19,3715	0	3,91656	1,18267
11	2130,67	107,124	0	23.915,46	94,1397	5,58869	20,0563	0	4,07679	1,18242
11	2133,14	117,297	0	21.069,69	95,0959	6,16614	20,3229	0	4,15704	1,18236
11	2141,09	151,262	0	14.903,86	98,2566	8,0327	21,1196	0	4,38043	1,18149
11	2144,49	166,31	0	13.127,69	99,6423	8,84191	21,7188	0	4,46428	1,17994
12	2091,99	-23,1271	0	0,99	0,00177	0,151275	24,6217	0	3,18023	1,17391
12	2092,09	-22,8279	0	167.464,43	5,5773	0,0130598	-32,8463	0	2,98889	1,37305
12	2092,19	-22,529	0	167.533,50	7,88221	0,0260466	-32,8752	0	2,98927	1,37317
12	2092,29	-22,2301	0	167.390,78	9,64465	0,0390607	-32,8556	0	2,98961	1,37315
12	2092,39	-21,9311	0	167.197,77	11,1328	0,0520518	-32,8266	0	2,98997	1,37317
12	2092,49	-21,6321	0	166.983,53	12,4393	0,065063	-32,7941	0	2,99034	1,37305
12	2092,59	-21,333	0	166.760,77	13,6199	0,0780651	-32,7602	0	2,9907	1,37299
12	2092,69	-21,0339	0	166.531,68	14,7053	0,0910582	-32,7253	0	2,99108	1,37293

12	2092, 79	- 20,7348	0	166.29 7,35	15,7145	0,1040 48	-32,6897	0	2,9914 6	1,3728 7
12	2092, 89	- 20,4356	0	166.05 9,40	16,6606	0,1170 39	-32,6536	0	2,9918 4	1,3728 1
12	2092, 99	- 20,1364	0	165.81 8,87	17,5547	0,1300 26	-32,6171	0	2,9922 3	1,3727 5
12	2093, 09	- 19,8372	0	165.57 6,85	18,4035	0,1430 15	-32,5804	0	2,9926 2	1,3726 9
12	2093, 19	- 19,5379	0	165.33 3,99	19,2126	0,1560 11	-32,5436	0	2,993 3	1,3726 3
12	2093, 29	- 19,2386	0	165.09 0,66	19,987	0,1690 12	-32,5067	0	2,9933 9	1,3725 7
12	2093, 39	- 18,9392	0	164.84 7,05	20,7307	0,1820 16	-32,4699	0	2,9937 8	1,3725 1
12	2093, 49	- 18,6398	0	164.60 3,22	21,4468	0,1950 24	-32,433	0	2,9941 6	1,3724 5
12	2093, 59	- 18,3404	0	164.35 9,08	22,1383	0,2080 33	-32,3961	0	2,9945 5	1,3723 9
12	2093, 69	- 18,0409	0	164.11 4,48	22,8074	0,2210 42	-32,3592	0	2,9949 3	1,3723 3
12	2093, 79	- 17,7414	0	163.86 9,57	23,4556	0,2340 59	-32,3222	0	2,9953 2	1,3722 7
12	2093, 89	- 17,4419	0	163.62 4,41	24,0845	0,2470 83	-32,2852	0	2,9957 1	1,3722 1
12	2093, 99	- 17,1423	0	163.37 8,92	24,6955	0,2601 14	-32,2481	0	2,9960 9	1,3721 5
12	2094, 11	- 16,7827	0	163.08 3,63	25,4073	0,2757 56	-32,2035	0	2,9965 6	1,3720 7
12	2094, 25	- 16,3512	0	162.72 7,98	26,2339	0,2945 21	-32,1498	0	2,9971 2	1,3719 9
12	2094, 43	- 15,8332	0	162.29 9,04	27,1895	0,3170 35	-32,0851	0	2,9977 9	1,3718 8
12	2094, 63	- 15,2115	0	161.78 4,47	28,2896	0,3440 29	-32,0088	0	2,9986 1	1,3717 6
12	2094, 88	- 14,4652	0	161.23 5,56	29,549	0,3761 98	-31,9561	0	2,9995 1	1,3718 1
12	2095, 18	- 13,5695	0	160.88 7,35	30,9834	0,4136 71	-32,0626	0	3,0002 6	1,3726 2



12	2095, 54	- 12,4945	0	160.99 1,76	32,6076	0,4563 1	-32,4765	0	3,0006 2	1,3749 4
12	2095, 97	- 11,2042	0	161.62 0,26	34,436	0,5043 38	-33,2496	0	3,0006	1,3790 1
12	2096, 48	- 9,65603	0	162.77 1,60	36,484	0,5580 37	-34,3996	0	3,0003 4	1,3849 7
12	2097, 1	- 7,79839	0	164.39 5,41	38,7631	0,6177 54	-35,9203	0	3,0000 3	1,3928 8
12	2097, 85	-5,5694	0	166.37 2,05	41,2794	0,6850 48	-37,419	0	2,9999 6	1,4005 6
12	2098, 74	- 2,89439	0	168.44 2,63	44,0256	0,7624 35	-38,5074	0	3,0005 6	1,4058 4
12	2099, 7	6,03347 E-11	0	170.08 6,98	46,7177	0,8440 11	-38,8907	0	3,0021 8	1,4072 1
12	2099, 7	6,03347 E-11	0	173.20 5,38	46,2107	0,8422 58	-39,409	0	3,0130 4	1,4083 6
12	2099, 81	0,31801	0	173.31 9,18	46,4969	0,8510 11	-39,4178	0	3,0128 6	1,4083 5
12	2101, 09	4,18601	0	173.88 6,32	50,0751	0,9522 99	-38,683	0	3,0131 3	1,4037 4
12	2102, 63	8,83212	0	172.18 8,26	54,529	1,0683 5	-35,7363	0	3,0188 2	1,3875 9
12	2104, 48	14,4248	0	166.18 9,60	59,9398	1,2123 2	-29,4267	0	3,0323	1,3555 1
12	2106, 7	21,1797	0	151.43 4,40	66,2214	1,4089 7	-18,1134	0	3,0595 2	1,3037 4
12	2107, 34	23,1515	0	144.80 7,14	67,932	1,4747 9	-13,8878	0	3,0709 1	1,2859 5
12	2107, 34	23,1515	0	144.80 7,14	67,932	1,4747 9	-13,8878	0	3,0709 1	1,2859 5
12	2109, 36	29,4271	0	119.76 7,84	72,548	1,7145 1	0,47574	0	3,1633 9	1,2299 2
12	2112, 56	39,8226	0	87.939, 01	78,179	2,135	10,3071	0	3,3386 4	1,1995 7
12	2115, 21	48,8564	0	70.429, 17	82,0637	2,4923 1	13,9255	0	3,4564 4	1,1908 2
12	2115, 21	48,8564	0	70.429, 17	82,0637	2,4922 9	13,9255	0	3,4564 7	1,1908 2

12	2116,39	52,95	0	64.194,76	83,612	2,6552	14,9902	0	3,5040	1,1886
12	2120,99	69,4964	0	45.430,99	88,4916	3,399	17,6978	0	3,6892	1,1841
12	2126,51	90,4865	0	30.515,98	92,3893	4,5711	19,3715	0	3,9165	1,1826
12	2130,67	107,124	0	23.532,28	94,1397	5,5886	20,0563	0	4,0767	1,1824
12	2133,14	117,297	0	20.574,06	95,0959	6,1661	20,3229	0	4,1570	1,1823
12	2141,09	151,262	0	14.381,91	98,2566	8,0327	21,1196	0	4,3804	1,1814
12	2144,49	166,31	0	12.612,50	99,6423	8,8419	21,7188	0	4,4642	1,1799
13	2104,12	-23,1499	0	1,00	0,00177	0,1512	24,6217	0	3,1802	1,1739
13	2104,22	-22,8506	0	168.10	5,58039	0,0130	-32,8098	0	2,9892	1,3730
13	2104,32	-22,5517	0	168.17	7,88658	0,0260	-32,8387	0	2,9896	1,3731
13	2104,42	-22,2527	0	168.03	9,65002	0,0390	-32,8192	0	2,9899	1,3731
13	2104,52	-21,9537	0	167.83	11,139	0,0520	-32,7903	0	2,9903	1,3730
13	2104,62	-21,6547	0	167.62	12,4463	0,0650	-32,7578	0	2,9907	1,3730
13	2104,72	-21,3556	0	167.40	13,6276	0,0780	-32,724	0	2,9910	1,3729
13	2104,82	-21,0564	0	167.17	14,7136	0,0910	-32,6892	0	2,9914	1,3729
13	2104,92	-20,7573	0	166.93	15,7233	0,1040	-32,6537	0	2,9918	1,3728
13	2105,02	-20,4581	0	166.67	16,6692	0,1170	-32,6135	0	2,9922	1,3727
13	2105,12	-20,1588	0	166.30	17,5595	0,1300	-32,5563	0	2,9929	1,3726
13	2105,	-	0	165.86	18,4011	0,1430	-32,4888	0	2,9936	1,3725



	22	19,8595		7,09		23			9	5
13	2105,32	-19,5601	0	165.376,38	19,2014	0,15604	-32,4126	0	2,99456	1,37242
13	2105,42	-19,2606	0	164.846,71	19,9664	0,169051	-32,3307	0	2,99549	1,37227
13	2105,52	-18,961	0	164.293,77	20,7007	0,182053	-32,2455	0	2,99644	1,37213
13	2105,62	-18,6613	0	163.726,55	21,4073	0,19505	-32,1584	0	2,99741	1,37198
13	2105,72	-18,3615	0	163.150,17	22,0887	0,208046	-32,0702	0	2,99837	1,37182
13	2105,82	-18,0616	0	162.568,20	22,7467	0,221045	-31,9815	0	2,99934	1,37167
13	2105,92	-17,7616	0	161.983,03	23,3838	0,234043	-31,8925	0	3,00029	1,37152
13	2106,02	-17,4616	0	161.395,97	24,002	0,247037	-31,8034	0	3,00125	1,37138
13	2106,12	-17,1614	0	160.808,04	24,6034	0,260016	-31,7144	0	3,00223	1,37123
13	2106,24	-16,8011	0	160.102,01	25,3045	0,275576	-31,6077	0	3,00332	1,37105
13	2106,38	-16,3685	0	159.254,54	26,118	0,294235	-31,4799	0	3,00467	1,37084
13	2106,55	-15,8492	0	158.237,94	27,0587	0,316595	-31,327	0	3,00627	1,37059
13	2106,76	-15,2256	0	157.018,90	28,1408	0,343397	-31,1439	0	3,00817	1,37029
13	2107,01	-14,4768	0	155.569,88	29,379	0,375492	-30,9312	0	3,01043	1,36997
13	2107,31	-13,5775	0	154.132,69	30,7879	0,412922	-30,8423	0	3,01279	1,37034
13	2107,67	-12,4974	0	152.928,07	32,3825	0,455504	-31,0247	0	3,01505	1,37212
13	2108,1	-11,2005	0	152.021,88	34,1779	0,503244	-31,5425	0	3,01729	1,37564
13	2108,61	-9,64299	0	151.324,27	36,1902	0,556488	-32,3893	0	3,01972	1,38094
13	2109,	-	0	150.72	38,4311	0,6155	-33,5605	0	3,0225	1,3881



	23	7,77236		3,39		36			9	
13	2109,98	-5,52522	0	150.046,65	40,915	0,681176	-34,825	0	3,02623	1,39595
13	2110,87	-2,82489	0	148.997,92	43,6441	0,756006	-35,6161	0	3,03106	1,40133
13	2111,94	0,421571	0	147.163,56	46,6159	0,84298	-35,6041	0	3,03761	1,40251
13	2113,22	4,32727	0	143.924,23	50,1226	0,941725	-34,2741	0	3,04663	1,39686
13	2114,76	9,03068	0	138.285,00	54,4894	1,05544	-30,7738	0	3,05922	1,38029
13	2116,61	14,7024	0	128.900,42	59,7865	1,19795	-24,0929	0	3,07661	1,34891
13	2118,83	21,5542	0	113.648,16	65,9401	1,39522	-13,1645	0	3,10073	1,30032
13	2119,34	23,1515	0	109.128,02	67,2926	1,44838	-10,0235	0	3,1075	1,28694
13	2119,34	23,1515	0	109.128,02	67,2926	1,44838	-10,0235	0	3,1075	1,28694
13	2121,49	29,886	0	88.924,43	72,2669	1,69998	3,0483	0	3,18325	1,23421
13	2124,69	40,3215	0	65.305,65	78,2529	2,10548	11,4872	0	3,34327	1,20559
13	2128,52	53,4477	0	47.483,13	84,4129	2,60828	15,68	0	3,49952	1,19369
13	2130,4	60,0968	0	41.343,20	87,2335	2,85229	16,833	0	3,5649	1,19082
13	2130,4	60,0968	0	41.343,20	87,2335	2,85229	16,833	0	3,5649	1,19082
13	2133,12	69,9109	0	34.363,76	90,9641	3,22711	18,026	0	3,65579	1,18813
13	2138,64	90,6161	0	23.791,39	96,9896	4,15774	19,5225	0	3,8464	1,18535
13	2138,68	90,7582	0	23.732,54	97,0234	4,16485	19,5298	0	3,84771	1,18534
13	2145,27	116,878	0	16.110,28	101,526	5,51077	20,4332	0	4,06747	1,18411
13	2151,	140,927	0	12.058,	103,864	6,8296	20,9502	0	4,2435	1,1833



DNV

	05			44		4			7	6
13	2153, 22	150,178	0	10.997, 46	104,721	7,3355 2	21,4216	0	4,3037 9	1,182
13	2156, 92	166,311	0	9.505,3 2	106,207	8,2034 1	22,053	0	4,3997 1	1,1802 1

Scenario (User defined source) : 60mm-Q36,6 Disp F2

72438-4FSRUInvioGNL-12R\Invio GNL Water\12R Manichette GNL riempimento FSRU\60mm-Q36,6 Disp F2

Material to track **GAS NATURALE**

Weather: Category 2/F

Wind speed [m/s]	2
Pasquill stability	F stable - night with moderate clouds and light/moderate wind
Atmospheric temperature [degC]	25
Relative humidity [fraction]	0,75
Solar radiation flux [kW/m2]	0,5
Mixing layer height [m]	100

Observer Release Data and Observer Mass Data

Observer number	Release type	Start time [s]	Start downwind distance [m]	Unit	Masses or mass rates		
					Release	Rainout	Final
1	Continuous	0	0	kg/s	33,6	0	33,6
2	Continuous	3600	0	kg/s	33,6	0	33,6

Time-varying Observer Dispersion Data (before along-wind-diffusion effects)

Dispersion data correspond to an averaging time of: 18,75 s

Observer number	Time [s]	Down wind distance [m]	C/Li ne height [m]	C/Li ne conc [ppm]	Effect ive width [m]	Effect ive depth [m]	C/Li ne vapour temperature [degC]	C/Li ne liquid fraction	Centr oid velocity [m/s]	C/Li ne cloud density [kg/m3]
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1	0	0	0	999.99 9,41	1,7413 8	0,8438 56	-160,955	0	11,965 5	1,9109 5
1	0,01	0,11881 5	0	996.01 4,48	1,7808 8	0,8457 16	-160,169	0	11,811 5	1,9015 1
1	0,02	0,23617 8	0	992.11 2,01	1,8202 9	0,8476 47	-159,398	0	11,661 8	1,8924
1	0,03	0,35207 5	0	988.29 0,52	1,8596 1	0,8496 35	-158,641	0	11,516 1	1,8835 9
1	0,04	0,46653 8	0	984.54 7,21	1,8988 4	0,8516 7	-157,898	0	11,374 3	1,8750 8
1	0,05	0,57963 5	0	980.87 7,83	1,9379 9	0,8537 54	-157,169	0	11,236 2	1,8668 4
1	0,06	0,69136 8	0	977.28 1,00	1,9770 6	0,8558 76	-156,452	0	11,101 7	1,8588 7
1	0,07	0,80178 9	0	973.75 3,39	2,0160 5	0,8580 33	-155,748	0	10,970 7	1,8511 4
1	0,08	0,91090 9	0	970.29 3,35	2,0549 7	0,8602 18	-155,055	0	10,843	1,8436 5
1	0,09	1,01876	0	966.89 8,61	2,0938 2	0,8624 27	-154,375	0	10,718 5	1,8363 8
1	0,1	1,1254	0	963.56 5,91	2,1326	0,8646 62	-153,706	0	10,597	1,8293 2
1	0,11	1,23081	0	960.29 4,75	2,1713 2	0,8669 12	-153,048	0	10,478 6	1,8224 7
1	0,12	1,33508	0	957.08 1,02	2,2099 7	0,8691 83	-152,401	0	10,363	1,8158 1
1	0,13	1,43817	0	953.92 5,13	2,2485 6	0,8714 63	-151,764	0	10,250 2	1,8093 3
1	0,14	1,54015	0	950.82 3,82	2,2870 9	0,8737 56	-151,137	0	10,14	1,8030 3
1	0,15	1,64104	0	947.77 5,88	2,3255 7	0,8760 58	-150,52	0	10,032 4	1,7969
1	0,16	1,74085	0	944.77 9,70	2,3639 8	0,8783 66	-149,912	0	9,9273 4	1,7909 3
1	0,17	1,83961	0	941.83 3,68	2,4023 5	0,8806 79	-149,313	0	9,8246 5	1,7851 2
1	0,18	1,93734	0	938.93 6,19	2,4406 6	0,8829 96	-148,724	0	9,7242 7	1,7794 5



1	0,19	2,03407	0	936.08 5,66	2,4789 2	0,8853 15	-148,143	0	9,6261 3	1,7739 2
1	0,2	2,12984	0	933.28 0,60	2,5171 4	0,8876 37	-147,57	0	9,5301 5	1,7685 3
1	0,212	2,2435	0	929.97 2,51	2,5629 3	0,8904 25	-146,894	0	9,4177 2	1,7622 2
1	0,226 4	2,37813	0	926.08 3,99	2,6177 9	0,8937 69	-146,098	0	9,2866 1	1,7549
1	0,243 68	2,53718	0	921.53 1,49	2,6835	0,8977 69	-145,163	0	9,1345 5	1,7464 3
1	0,264 416	2,7246	0	916.22 2,86	2,7621 8	0,9025 54	-144,07	0	8,9592 2	1,7366 9
1	0,289 299	2,94479	0	910.06 1,65	2,8563 6	0,9082 69	-142,798	0	8,7584 1	1,7255 8
1	0,319 159	3,2026	0	902.94 9,36	2,9690 6	0,9150 82	-141,324	0	8,5302 1	1,7129 9
1	0,354 991	3,50315	0	894.79 1,83	3,1038 5	0,9231 64	-139,627	0	8,2733	1,6988 7
1	0,397 989	3,85233	0	885.48 9,46	3,2650 2	0,9327 69	-137,682	0	7,9866 1	1,6831 4
1	0,449 587	4,25562	0	874.97 3,93	3,4576 1	0,9440 57	-135,472	0	7,6706 2	1,6658 4
1	0,511 504	4,71935	0	863.17 2,70	3,6876 4	0,9573 25	-132,976	0	7,3261 4	1,6469 8
1	0,585 805	5,24931	0	850.05 2,94	3,9621 9	0,9727 73	-130,183	0	6,9557 5	1,6266 9
1	0,674 966	5,8513	0	835.60 5,31	4,2896 4	0,9906 23	-127,083	0	6,5630 7	1,6051
1	0,781 959	6,53094	0	819.85 0,46	4,6798 5	1,0111	-123,674	0	6,1527 8	1,5824
1	0,910 351	7,29341	0	802.84 5,59	5,1443 6	1,0344 2	-119,96	0	5,7305 2	1,5588 2
1	1,064 42	8,14314	0	784.68 7,72	5,6966 3	1,0606 8	-115,954	0	5,3027 6	1,5346 1
1	1,249 31	9,08373	0	765.51 0,64	6,3522 3	1,0899 5	-111,669	0	4,8764 5	1,5099 8
1	1,471 17	10,1178	0	745.47 6,37	7,1289 5	1,1223 4	-107,101	0	4,4585 3	1,4849 4



1	1,737 4	11,2485	0	724.74 5,72	8,0468 7	1,1581 5	-102,25	0	4,0544 8	1,4594 9
1	2,056 88	12,4793	0	703.48 8,84	9,1283 6	1,1977 8	-97,1194	0	3,6687 2	1,4337 1
1	2,440 26	13,8121	0	681.91 4,36	10,397 6	1,2412 2	-91,7202	0	3,3058 8	1,4076 7
1	2,900 31	15,2507	0	660.21 2,01	11,866 1	1,2888 5	-86,0518	0	2,9686 6	1,3813 7
1	3,452 37	16,8022	0	638.55 1,46	13,529 1	1,3416 8	-80,1044	0	2,6578 8	1,3547 4
1	4,114 84	18,4715	0	617.13 2,40	15,395 1	1,4004 1	-73,87	0	2,3746 8	1,3277 4
1	4,909 81	20,2652	0	596.14 3,86	17,467 5	1,4663 3	-67,3382	0	2,1191 6	1,3003 1
1	5,863 77	22,1883	0	575.80 6,45	19,739 2	1,5401 8	-60,5685	0	1,8917	1,2728 3
1	7,008 53	24,2509	0	556.29 8,46	22,192 5	1,6233 2	-53,782	0	1,6908 4	1,2464 9
1	8,382 23	26,4709	0	537.73 4,17	24,787 4	1,7059	-47,1122	0	1,5270 9	1,2218 3
1	10,03 07	28,8816	0	520.12 5,89	27,404 8	1,7980 4	-40,5844	0	1,3937 6	1,1987 7
1	11,61 47	31,0172	0	505.15 9,21	29,188 3	1,9024 9	-35,2011	0	1,3055 6	1,1809 9
1	11,61 47	31,0172	0	505.15 9,21	29,188 3	1,9023 8	-35,2011	0	1,3056 3	1,1809 9
1	12,00 88	31,5287	0	500.45 9,37	29,214 2	1,9525 2	-33,7784	0	1,2905 2	1,1768 6
1	14,38 26	34,4979	0	424.19 9,53	29,677 1	2,5553 4	-18,7247	0	1,2182 9	1,1504 7
1	17,23 11	37,9391	0	310.80 7,11	30,803 4	3,6094 9	-2,57533	0	1,2104 6	1,1405
1	20,64 93	42,15	0	222.15 0,48	32,384 1	4,7976 3	6,49005	0	1,2584 9	1,1464 3
1	24,75 12	47,4662	0	161.66 6,92	34,246 2	6,0171 5	11,5977	0	1,3335 2	1,1539 4
1	24,75 12	47,4662	0	161.66 6,92	34,246 2	6,0171 5	11,5977	0	1,3335 2	1,1539 4



1	24,75 12	47,4662	0,02	161.66 6,58	34,246 2	5,9996 8	11,603	0	1,3329 9	1,1539 1
1	29,67 34	54,0309	1,576 95	121.13 4,89	36,179 2	5,5337 7	14,6217	0	1,4250 7	1,1598 9
1	35,02 95	61,3771	5,290 21	85.593, 66	38,059 7	4,2591 2	16,9899	0	1,7037 8	1,1656 9
1	35,02 95	61,3771	5,290 21	85.593, 66	38,059 7	4,2587 2	16,9899	0	1,7039 2	1,1656 9
1	35,58 01	62,2356	5,693 7	81.788, 50	38,277	4,3064 1	17,2274	0	1,7419 7	1,1663 6
1	42,66 81	75,2531	10,07 8	49.192, 06	40,894	5,4807 2	19,1903	0	2,1063 5	1,1721 6
1	50,93 33	93,39	12,67 22	34.343, 72	43,186 8	6,8658 3	20,0443	0	2,2963 3	1,1748 1
1	50,93 33	93,39	12,67 22	34.343, 72	43,186 8	6,8663 6	20,0443	0	2,2961 6	1,1748 1
1	51,17 37	93,9416	12,70 43	34.104, 18	43,236 9	6,9011 5	20,0577	0	2,2985 5	1,1748 5
1	61,38 05	117,398	11,81 83	26.876, 15	45,065 6	8,8134 4	20,6816	0	2,2741 7	1,1757
1	64,27 73	123,866	10,81 38	25.035, 82	45,677 1	9,8270 8	20,9838	0	2,2464 2	1,1755 2
1	64,27 73	123,866	10,81 38	25.035, 82	45,677 1	9,8270 8	20,9838	0	2,2464 2	1,1755 2
1	66,51 02	128,745	9,893 81	23.921, 22	49,236 7	10,004 7	21,1665	0	2,2018 8	1,1754 6
1	73,62 86	143,824	6,991 94	21.649, 43	56,977 1	11,372 8	21,5377	0	2,1303 3	1,1754 9
1	88,32 63	174,948	2,569 25	19.583, 36	64,511 4	14,611 8	21,8646	0	2,1685 3	1,1758 2
1	100,0 69	200,708	0,01	18.670, 27	66,11	17,023 3	21,9187	0	2,2393 2	1,1764 8
1	100,0 69	200,708	0	18.670, 29	66,11	17,031	21,9164	0	2,2396 2	1,1764 9
1	105,9 64	213,933	0	18.262, 09	66,705 8	17,215 8	22,0067	0	2,2459 1	1,1763 2
1	127,1 28	261,772	0	16.917, 76	68,836 3	17,855 7	22,2985	0	2,2685 9	1,1758 1



1	152,526	319,74	0	15.520,03	71,3827	18,5789	22,5943	0	2,29553	1,17531
1	155,781	327,219	0	15.355,01	71,7086	18,6687	22,6286	0	2,29898	1,17525
2	3600	0	0	999.999,41	1,74138	0,843856	-160,955	0	11,9655	1,91095
2	3600,01	0,118815	0	996.014,48	1,78088	0,845716	-160,169	0	11,8115	1,90151
2	3600,02	0,236178	0	992.112,01	1,82029	0,847647	-159,398	0	11,6618	1,89248
2	3600,03	0,352075	0	988.290,52	1,85961	0,849635	-158,641	0	11,5161	1,88359
2	3600,04	0,466538	0	984.547,21	1,89884	0,85167	-157,898	0	11,3743	1,87508
2	3600,05	0,579635	0	980.877,83	1,93799	0,853754	-157,169	0	11,2362	1,86684
2	3600,06	0,691368	0	977.281,00	1,97706	0,855876	-156,452	0	11,1017	1,85887
2	3600,07	0,801789	0	973.753,39	2,01605	0,858033	-155,748	0	10,9707	1,85114
2	3600,08	0,910909	0	970.293,35	2,05497	0,860218	-155,055	0	10,843	1,84365
2	3600,09	1,01876	0	966.898,61	2,09382	0,862427	-154,375	0	10,7185	1,83638
2	3600,1	1,1254	0	963.565,91	2,1326	0,864662	-153,706	0	10,597	1,82932
2	3600,11	1,23081	0	960.294,75	2,17132	0,866912	-153,048	0	10,4786	1,82247
2	3600,12	1,33508	0	957.081,02	2,20997	0,869183	-152,401	0	10,363	1,81581
2	3600,13	1,43817	0	953.925,13	2,24856	0,871463	-151,764	0	10,2502	1,80933
2	3600,14	1,54015	0	950.823,82	2,28709	0,873756	-151,137	0	10,14	1,80303
2	3600,15	1,64104	0	947.775,88	2,32557	0,876058	-150,52	0	10,0324	1,79694
2	3600,	1,74085	0	944.77	2,3639	0,8783	-149,912	0	9,9273	1,7909



	16			9,70	8	66			4	3
2	3600,17	1,83961	0	941.83 3,68	2,4023 5	0,8806 79	-149,313	0	9,8246 5	1,7851 2
2	3600,18	1,93734	0	938.93 6,19	2,4406 6	0,8829 96	-148,724	0	9,7242 7	1,7794 5
2	3600,19	2,03407	0	936.08 5,66	2,4789 2	0,8853 15	-148,143	0	9,6261 3	1,7739 2
2	3600,2	2,12984	0	933.28 0,60	2,5171 4	0,8876 37	-147,57	0	9,5301 5	1,7685 3
2	3600,21	2,2435	0	929.97 2,51	2,5629 3	0,8904 25	-146,894	0	9,4177 2	1,7622 2
2	3600,23	2,37813	0	926.08 3,99	2,6177 9	0,8937 69	-146,098	0	9,2866 1	1,7549
2	3600,24	2,53718	0	921.53 1,49	2,6835	0,8977 69	-145,163	0	9,1345 5	1,7464 3
2	3600,26	2,7246	0	916.22 2,86	2,7621 8	0,9025 54	-144,07	0	8,9592 2	1,7366 9
2	3600,29	2,94479	0	910.06 1,65	2,8563 6	0,9082 69	-142,798	0	8,7584 1	1,7255 8
2	3600,32	3,2026	0	902.94 9,36	2,9690 6	0,9150 82	-141,324	0	8,5302 1	1,7129 9
2	3600,35	3,50315	0	894.79 1,83	3,1038 5	0,9231 64	-139,627	0	8,2733	1,6988 7
2	3600,4	3,85233	0	885.48 9,46	3,2650 2	0,9327 69	-137,682	0	7,9866 1	1,6831 4
2	3600,45	4,25562	0	874.97 3,93	3,4576 1	0,9440 57	-135,472	0	7,6706 2	1,6658 4
2	3600,51	4,71935	0	863.17 2,70	3,6876 4	0,9573 25	-132,976	0	7,3261 4	1,6469 8
2	3600,59	5,24931	0	850.05 2,94	3,9621 9	0,9727 73	-130,183	0	6,9557 5	1,6266 9
2	3600,67	5,8513	0	835.60 5,31	4,2896 4	0,9906 23	-127,083	0	6,5630 7	1,6051
2	3600,78	6,53094	0	819.85 0,46	4,6798 5	1,0111	-123,674	0	6,1527 8	1,5824
2	3600,91	7,29341	0	802.84 5,59	5,1443 6	1,0344 2	-119,96	0	5,7305 2	1,5588 2
2	3601,	8,14314	0	784.68	5,6966	1,0606	-115,954	0	5,3027	1,5346



	06			7,72	3	8			6	1
2	3601, 25	9,08373	0	765.51 0,64	6,3522 3	1,0899 5	-111,669	0	4,8764 5	1,5099 8
2	3601, 47	10,1178	0	745.47 6,37	7,1289 5	1,1223 4	-107,101	0	4,4585 3	1,4849 4
2	3601, 74	11,2485	0	724.74 5,72	8,0468 7	1,1581 5	-102,25	0	4,0544 8	1,4594 9
2	3602, 06	12,4793	0	703.48 8,84	9,1283 6	1,1977 8	-97,1194	0	3,6687 2	1,4337 1
2	3602, 44	13,8121	0	681.91 4,36	10,397 6	1,2412 2	-91,7202	0	3,3058 8	1,4076 7
2	3602, 9	15,2507	0	660.21 2,01	11,866 1	1,2888 5	-86,0518	0	2,9686 6	1,3813 7
2	3603, 45	16,8022	0	638.55 1,46	13,529 1	1,3416 8	-80,1044	0	2,6578 8	1,3547 4
2	3604, 11	18,4715	0	617.13 2,40	15,395 1	1,4004 1	-73,87	0	2,3746 8	1,3277 4
2	3604, 91	20,2652	0	596.14 3,86	17,467 5	1,4663 3	-67,3382	0	2,1191 6	1,3003 1
2	3605, 86	22,1883	0	575.80 6,45	19,739 2	1,5401 8	-60,5685	0	1,8917	1,2728 3
2	3607, 01	24,2509	0	556.29 8,46	22,192 5	1,6233 2	-53,782	0	1,6908 4	1,2464 9
2	3608, 38	26,4709	0	537.73 4,17	24,787 4	1,7059	-47,1122	0	1,5270 9	1,2218 3
2	3610, 03	28,8816	0	520.12 5,89	27,404 8	1,7980 4	-40,5844	0	1,3937 6	1,1987 7
2	3611, 61	31,0172	0	505.15 9,21	29,188 3	1,9024 9	-35,2011	0	1,3055 6	1,1809 9
2	3611, 61	31,0172	0	505.15 9,21	29,188 3	1,9023 8	-35,2011	0	1,3056 3	1,1809 9
2	3612, 01	31,5287	0	500.45 9,37	29,214 2	1,9525 2	-33,7784	0	1,2905 2	1,1768 6
2	3614, 38	34,4979	0	424.19 9,53	29,677 1	2,5553 4	-18,7247	0	1,2182 9	1,1504 7
2	3617, 23	37,9391	0	310.80 7,11	30,803 4	3,6094 9	-2,57533	0	1,2104 6	1,1405
2	3620, 42,15		0	222.15	32,384	4,7976	6,49005	0	1,2584	1,1464



	65			0,48	1	3			9	3
2	3624,75	47,4662	0	161.666,92	34,2462	6,01715	11,5977	0	1,33352	1,15394
2	3624,75	47,4662	0	161.666,92	34,2462	6,01715	11,5977	0	1,33352	1,15394
2	3624,75	47,4662	0,02	161.666,58	34,2462	5,99968	11,603	0	1,33299	1,15391
2	3629,67	54,0309	1,57695	121.134,89	36,1792	5,53377	14,6217	0	1,42507	1,15989
2	3635,03	61,3771	5,29021	85.593,66	38,0597	4,25912	16,9899	0	1,70378	1,16569
2	3635,03	61,3771	5,29021	85.593,66	38,0597	4,25872	16,9899	0	1,70392	1,16569
2	3635,58	62,2356	5,6937	81.788,50	38,277	4,30641	17,2274	0	1,74197	1,16636
2	3642,67	75,2531	10,078	49.192,06	40,894	5,48072	19,1903	0	2,10635	1,17216
2	3650,93	93,39	12,6722	34.343,72	43,1868	6,86583	20,0443	0	2,29633	1,17481
2	3650,93	93,39	12,6722	34.343,72	43,1868	6,86636	20,0443	0	2,29616	1,17481
2	3651,17	93,9416	12,7043	34.104,18	43,2369	6,90115	20,0577	0	2,29855	1,17485
2	3661,38	117,398	11,8183	26.876,15	45,0656	8,81344	20,6816	0	2,27417	1,17577
2	3664,28	123,866	10,8138	25.035,82	45,6771	9,82708	20,9838	0	2,24642	1,17552
2	3664,28	123,866	10,8138	25.035,82	45,6771	9,82708	20,9838	0	2,24642	1,17552
2	3666,51	128,745	9,89381	23.921,22	49,2367	10,0047	21,1665	0	2,20188	1,17546
2	3673,63	143,824	6,99194	21.649,43	56,9771	11,3728	21,5377	0	2,13033	1,17549
2	3688,33	174,948	2,56925	19.583,36	64,5114	14,6118	21,8646	0	2,16853	1,17582
2	3700,07	200,708	0,01	18.670,27	66,11	17,0233	21,9187	0	2,23932	1,17648
2	3700,	200,708	0	18.670,	66,11	17,031	21,9164	0	2,2396	1,1764



	07			29					2	9
2	3705,96	213,933	0	18.262,09	66,7058	17,2158	22,0067	0	2,24591	1,17632
2	3727,13	261,772	0	16.917,76	68,8363	17,8557	22,2985	0	2,26859	1,17581
2	3752,53	319,74	0	15.520,03	71,3827	18,5789	22,5943	0	2,29553	1,17531
2	3755,78	327,219	0	15.355,01	71,7086	18,6687	22,6286	0	2,29898	1,17525

Weather: Category 5/D

Wind speed [m/s]	5
Pasquill stability	D neutral - little sun and high wind or overcast/windy night
Atmospheric temperature [degC]	25
Relative humidity [fraction]	0,75
Solar radiation flux [kW/m2]	0,5
Mixing layer height [m]	800

Observer Release Data and Observer Mass Data

Observer number	Release type	Start time [s]	Start downwind distance [m]	Unit	Masses or mass rates		
					Release	Rainout	Final
1	Continuous	0	0	kg/s	33,6	0	33,6
2	Continuous	3600	0	kg/s	33,6	0	33,6

Time-varying Observer Dispersion Data (before along-wind-diffusion effects)

Dispersion data correspond to an averaging time of: 18,75 s

Observer number	Time [s]	Down wind distance [m]	C/Li ne height [m]	C/Li ne conc [ppm]	Effect ive width [m]	Effect ive depth [m]	C/Line vapour temperature [degC]	C/Li ne liquid fraction	Centr oid velocity [m/s]	C/Li ne cloud density [kg/m3]
1	0	0	0	999.99	1,7413	0,8438	-160,955	0	11,965	1,9109
				9,41	8	53			5	5
1	0,01	0,11925	0	996.87	1,7808	0,8386	-160,239	0	11,892	1,9017
		8		7,47	3	75			3	1
1	0,02	0,23781	0	993.79	1,82	0,8339	-159,528	0	11,82	1,8926
		7		1,08		21				6



1	0,03	0,35566 1	0	990.73 9,46	1,8589 1	0,8295 61	-158,822	0	11,748 6	1,8837 9
1	0,04	0,4728	0	987.72 1,18	1,8975 6	0,8255 64	-158,12	0	11,678 1	1,8751
1	0,05	0,58924 2	0	984.73 5,20	1,9359 6	0,8219 03	-157,422	0	11,608 5	1,8665 7
1	0,06	0,70499 3	0	981.78 0,81	1,9741 3	0,8185 54	-156,729	0	11,539 7	1,8582
1	0,07	0,82006 4	0	978.85 6,89	2,0120 8	0,8154 94	-156,04	0	11,471 7	1,8499 8
1	0,08	0,93445 4	0	975.96 3,16	2,0498	0,8127 06	-155,355	0	11,404 6	1,8419 2
1	0,09	1,04818	0	973.09 8,09	2,0873 2	0,8101 66	-154,675	0	11,338 3	1,834
1	0,1	1,16125	0	970.26 1,79	2,1246 3	0,8078 63	-153,998	0	11,272 7	1,8262 2
1	0,11	1,27367	0	967.45 2,77	2,1617 5	0,8057 75	-153,325	0	11,208	1,8185 8
1	0,12	1,38543	0	964.67 1,13	2,1986 8	0,8038 93	-152,656	0	11,144	1,8110 7
1	0,13	1,49657	0	961.91 6,10	2,2354 3	0,8022 03	-151,991	0	11,080 8	1,8036 9
1	0,14	1,60707	0	959.18 7,13	2,272	0,8006 91	-151,329	0	11,018 4	1,7964 3
1	0,15	1,71695	0	956.48 3,77	2,3084	0,7993 47	-150,672	0	10,956 7	1,7892 9
1	0,16	1,82621	0	953.80 5,51	2,3446 4	0,7981 61	-150,018	0	10,895 7	1,7822 8
1	0,17	1,93487	0	951.15 1,90	2,3807 2	0,7971 22	-149,367	0	10,835 4	1,7753 7
1	0,18	2,04292	0	948.52 2,51	2,4166 4	0,7962 22	-148,72	0	10,775 9	1,7685 8
1	0,19	2,15038	0	945.91 6,84	2,4524 2	0,7954 53	-148,077	0	10,717	1,7619
1	0,2	2,25726	0	943.33 4,45	2,4880 6	0,7948 06	-147,437	0	10,658 9	1,7553 2
1	0,212	2,38475	0	940.26 5,78	2,5306 4	0,7941 8	-146,674	0	10,590 1	1,7475 7



1	0,226 4	2,53665	0	936.62 6,47	2,5814 9	0,7936 34	-145,764	0	10,508 7	1,7384 5
1	0,243 68	2,71741	0	932.31 9,48	2,6421 5	0,7932 46	-144,682	0	10,412 9	1,7277 7
1	0,264 416	2,93215	0	927.23 6,29	2,7144 7	0,7931 31	-143,397	0	10,300 6	1,7153 3
1	0,289 299	3,1868	0	921.25 7,16	2,8005 7	0,7934 49	-141,873	0	10,169 3	1,7008 9
1	0,319 159	3,48812	0	914.25 0,16	2,9029 6	0,7943 97	-140,072	0	10,016 7	1,6842 6
1	0,354 991	3,84381	0	906.07 4,39	3,0246 1	0,7962 29	-137,949	0	9,8406	1,6652
1	0,397 989	4,2625	0	896.58 1,63	3,1689 6	0,7992 43	-135,453	0	9,6387 5	1,6435 6
1	0,449 587	4,7538	0	885.62 7,37	3,3399 9	0,8038 03	-132,534	0	9,4094 4	1,6192
1	0,511 504	5,32823	0	873.07 7,54	3,5422 2	0,8103 33	-129,134	0	9,1515 2	1,5920 3
1	0,585 805	5,9972	0	858.81 8,61	3,7807 8	0,8192 97	-125,199	0	8,8647 6	1,5620 8
1	0,674 966	6,77303	0	842.77 1,99	4,0613 9	0,8311 84	-120,675	0	8,5501 6	1,5294 5
1	0,781 959	7,66896	0	824.90 6,04	4,3901 6	0,8465 07	-115,514	0	8,2101 2	1,4943 7
1	0,910 351	8,69892	0	805.25 5,75	4,7731 6	0,8658 3	-109,678	0	7,8484 5	1,4571 4
1	1,064 42	9,8776	0	783.92 6,96	5,2157 9	0,8897 72	-103,143	0	7,4703 8	1,4182 1
1	1,249 31	11,2207	0	761.10 9,33	5,7216 3	0,9190 58	-95,9053	0	7,0822 5	1,3780 7
1	1,471 17	12,7465	0	737.07 1,28	6,2906 3	0,9545 82	-87,9884	0	6,6913	1,3373 2
1	1,737 4	14,4749	0	712.14 0,82	6,9157 1	0,9977 38	-79,4436	0	6,3048 5	1,2965 8
1	2,056 88	16,4255	0	685.20 9,03	7,5766 3	1,0558 7	-70,1034	0	5,9227 2	1,2559 8
1	2,440 26	18,6191	0	652.54 1,92	8,2223 5	1,1498 4	-59,4707	0	5,5358 5	1,2156 5

1	2,900 31	21,0778	0	616.18 1,28	8,7140 5	1,2941 5	-48,2277	0	5,1708 2	1,1785 1
1	3,452 37	23,8268	0	564.59 7,44	8,9986 9	1,5593 3	-35,1838	0	4,7966 6	1,1455 6
1	4,114 84	26,9193	0	495.38 3,77	9,3124 8	1,9126 2	-21,3223	0	4,5584 7	1,1223
1	4,909 81	30,4702	0	421.55 0,40	9,7335 1	2,3403 3	-9,5853	0	4,3880 9	1,1121 7
1	5,863 77	34,5916	0	350.88 6,30	10,294 3	2,8207	-1,04039	0	4,2775 8	1,1132 7
1	7,008 53	39,4491	0	288.52 8,18	10,986 9	3,3381 7	4,87926	0	4,2168 7	1,1201 3
1	8,382 23	45,2237	0	234.97 3,17	11,818 5	3,8982 6	9,24622	0	4,1954 8	1,1282 6
1	10,03 07	52,1447	0	190.05 5,57	12,794 1	4,5018 6	12,3973	0	4,2034 3	1,1366 6
1	12,00 88	60,4867	0	152.99 8,94	13,919 9	5,1532 9	14,7014	0	4,2334 8	1,1444 8
1	14,38 26	70,5907	0	122.83 3,75	15,200 2	5,8571 8	16,4076	0	4,2798 9	1,1513 4
1	16,38 26	79,1932	0	104.78 6,32	16,221 3	6,3990 4	17,363	0	4,3210 5	1,1556 2
1	16,38 26	79,1932	0	104.78 6,32	16,221 3	6,399	17,363	0	4,3210 8	1,1556 2
1	17,23 11	82,8698	0	98.508, 79	16,636 8	6,6191 8	17,6839	0	4,3386 8	1,1571 5
1	20,64 93	97,8497	0	78.746, 15	18,223 1	7,4704 7	18,6563	0	4,4093 8	1,1620 6
1	24,75 12	116,097	0	62.962, 56	20,014 8	8,3892 3	19,3971	0	4,4860 2	1,1660 9
1	29,67 34	138,394	0	49.686, 15	22,127	9,4575 1	19,9882	0	4,5734 6	1,1695 8
1	35,58 01	165,727	0	38.068, 25	24,665 9	10,847 4	20,7366	0	4,6828 1	1,1718 2
1	42,66 81	199,384	0	28.449, 14	27,737 1	12,614 9	21,9987	0	4,8126 7	1,1714 5
1	47,34 41	222,074	0	23.921, 22	29,787 2	13,772 3	22,5597	0	4,8913 5	1,1714



1	51,17 37	240,951	0	20.930, 80	31,480 7	14,726 2	22,9166	0	4,9530 1	1,1714 3
1	61,38 05	292,282	0	15.215, 33	36,042 4	17,217 1	23,57	0	5,1018	1,1715 9
1	71,47 82	344,455	0	11.547, 99	40,618 2	19,652 3	23,9647	0	5,2328 1	1,1717 8
2	3600	0	0	999.99 9,41	1,7413 8	0,8438 53	-160,955	0	11,965 5	1,9109 5
2	3600, 01	0,11925 8	0	996.87 7,47	1,7808 3	0,8386 75	-160,239	0	11,892 3	1,9017 1
2	3600, 02	0,23781 7	0	993.79 1,08	1,82	0,8339 21	-159,528	0	11,82	1,8926 6
2	3600, 03	0,35566 1	0	990.73 9,46	1,8589 1	0,8295 61	-158,822	0	11,748 6	1,8837 9
2	3600, 04	0,4728	0	987.72 1,18	1,8975 6	0,8255 64	-158,12	0	11,678 1	1,8751
2	3600, 05	0,58924 2	0	984.73 5,20	1,9359 6	0,8219 03	-157,422	0	11,608 5	1,8665 7
2	3600, 06	0,70499 3	0	981.78 0,81	1,9741 3	0,8185 54	-156,729	0	11,539 7	1,8582
2	3600, 07	0,82006 4	0	978.85 6,89	2,0120 8	0,8154 94	-156,04	0	11,471 7	1,8499 8
2	3600, 08	0,93445 4	0	975.96 3,16	2,0498	0,8127 06	-155,355	0	11,404 6	1,8419 2
2	3600, 09	1,04818	0	973.09 8,09	2,0873 2	0,8101 66	-154,675	0	11,338 3	1,834
2	3600, 1	1,16125	0	970.26 1,79	2,1246 3	0,8078 63	-153,998	0	11,272 7	1,8262 2
2	3600, 11	1,27367	0	967.45 2,77	2,1617 5	0,8057 75	-153,325	0	11,208	1,8185 8
2	3600, 12	1,38543	0	964.67 1,13	2,1986 8	0,8038 93	-152,656	0	11,144	1,8110 7
2	3600, 13	1,49657	0	961.91 6,10	2,2354 3	0,8022 03	-151,991	0	11,080 8	1,8036 9
2	3600, 14	1,60707	0	959.18 7,13	2,272	0,8006 91	-151,329	0	11,018 4	1,7964 3
2	3600,	1,71695	0	956.48	2,3084	0,7993	-150,672	0	10,956	1,7892



	15			3,77		47			7	9
2	3600, 16	1,82621	0	953.80 5,51	2,3446 4	0,7981 61	-150,018	0	10,895 7	1,7822 8
2	3600, 17	1,93487	0	951.15 1,90	2,3807 2	0,7971 22	-149,367	0	10,835 4	1,7753 7
2	3600, 18	2,04292	0	948.52 2,51	2,4166 4	0,7962 22	-148,72	0	10,775 9	1,7685 8
2	3600, 19	2,15038	0	945.91 6,84	2,4524 2	0,7954 53	-148,077	0	10,717	1,7619
2	3600, 2	2,25726	0	943.33 4,45	2,4880 6	0,7948 06	-147,437	0	10,658 9	1,7553 2
2	3600, 21	2,38475	0	940.26 5,78	2,5306 4	0,7941 8	-146,674	0	10,590 1	1,7475 7
2	3600, 23	2,53665	0	936.62 6,47	2,5814 9	0,7936 34	-145,764	0	10,508 7	1,7384 5
2	3600, 24	2,71741	0	932.31 9,48	2,6421 5	0,7932 46	-144,682	0	10,412 9	1,7277 7
2	3600, 26	2,93215	0	927.23 6,29	2,7144 7	0,7931 31	-143,397	0	10,300 6	1,7153 3
2	3600, 29	3,1868	0	921.25 7,16	2,8005 7	0,7934 49	-141,873	0	10,169 3	1,7008 9
2	3600, 32	3,48812	0	914.25 0,16	2,9029 6	0,7943 97	-140,072	0	10,016 7	1,6842 6
2	3600, 35	3,84381	0	906.07 4,39	3,0246 1	0,7962 29	-137,949	0	9,8406	1,6652
2	3600, 4	4,2625	0	896.58 1,63	3,1689 6	0,7992 43	-135,453	0	9,6387 5	1,6435 6
2	3600, 45	4,7538	0	885.62 7,37	3,3399 9	0,8038 03	-132,534	0	9,4094 4	1,6192
2	3600, 51	5,32823	0	873.07 7,54	3,5422 2	0,8103 33	-129,134	0	9,1515 2	1,5920 3
2	3600, 59	5,9972	0	858.81 8,61	3,7807 8	0,8192 97	-125,199	0	8,8647 6	1,5620 8
2	3600, 67	6,77303	0	842.77 1,99	4,0613 9	0,8311 84	-120,675	0	8,5501 6	1,5294 5
2	3600, 78	7,66896	0	824.90 6,04	4,3901 6	0,8465 07	-115,514	0	8,2101 2	1,4943 7
2	3600,	8,69892	0	805.25	4,7731	0,8658	-109,678	0	7,8484	1,4571



	91			5,75	6	3			5	4
2	3601,06	9,8776	0	783.926,96	5,21579	0,889772	-103,143	0	7,47038	1,41821
2	3601,25	11,2207	0	761.109,33	5,72163	0,919058	-95,9053	0	7,08225	1,37807
2	3601,47	12,7465	0	737.071,28	6,29063	0,954582	-87,9884	0	6,6913	1,33732
2	3601,74	14,4749	0	712.140,82	6,91571	0,997738	-79,4436	0	6,30485	1,29658
2	3602,06	16,4255	0	685.209,03	7,57663	1,05587	-70,1034	0	5,92272	1,25598
2	3602,44	18,6191	0	652.541,92	8,22235	1,14984	-59,4707	0	5,53585	1,21565
2	3602,9	21,0778	0	616.181,28	8,71405	1,29415	-48,2277	0	5,17082	1,17851
2	3603,45	23,8268	0	564.597,44	8,99869	1,55933	-35,1838	0	4,79666	1,14556
2	3604,11	26,9193	0	495.383,77	9,31248	1,91262	-21,3223	0	4,55847	1,1223
2	3604,91	30,4702	0	421.550,40	9,73351	2,34033	-9,5853	0	4,38809	1,11217
2	3605,86	34,5916	0	350.886,30	10,2943	2,8207	-1,04039	0	4,27758	1,11327
2	3607,01	39,4491	0	288.528,18	10,9869	3,33817	4,87926	0	4,21687	1,12013
2	3608,38	45,2237	0	234.973,17	11,8185	3,89826	9,24622	0	4,19548	1,12826
2	3610,03	52,1447	0	190.055,57	12,7941	4,50186	12,3973	0	4,20343	1,13666
2	3612,01	60,4867	0	152.998,94	13,9199	5,15329	14,7014	0	4,23348	1,14448
2	3614,38	70,5907	0	122.833,75	15,2002	5,85718	16,4076	0	4,27989	1,15134
2	3616,38	79,1932	0	104.786,32	16,2213	6,39904	17,363	0	4,32105	1,15562
2	3616,38	79,1932	0	104.786,32	16,2213	6,399	17,363	0	4,32108	1,15562
2	3617,	82,8698	0	98.508,	16,636	6,6191	17,6839	0	4,3386	1,1571



	23			79	8	8			8	5
2	3620,65	97,8497	0	78.746,15	18,2231	7,47047	18,6563	0	4,40938	1,16206
2	3624,75	116,097	0	62.962,56	20,0148	8,38923	19,3971	0	4,48602	1,16609
2	3629,67	138,394	0	49.686,15	22,127	9,45751	19,9882	0	4,57346	1,16958
2	3635,58	165,727	0	38.068,25	24,6659	10,8474	20,7366	0	4,68281	1,17182
2	3642,67	199,384	0	28.449,14	27,7371	12,6149	21,9987	0	4,81267	1,17145
2	3647,34	222,074	0	23.921,22	29,7872	13,7723	22,5597	0	4,89135	1,1714
2	3651,17	240,951	0	20.930,80	31,4807	14,7262	22,9166	0	4,95301	1,17143
2	3661,38	292,282	0	15.215,33	36,0424	17,2171	23,57	0	5,1018	1,17159
2	3671,48	344,455	0	11.547,99	40,6182	19,6523	23,9647	0	5,23281	1,17178

Scenario (User defined source) : 60mm-Q36,6 Disp D5

72438-4FSRUInvioGNL-12R\Invio GNL Water\12R Manichette GNL riempimento FSRU\60mm-Q36,6 Disp D5

Material to track

GAS NATURALE

Weather: Category 2/F

Wind speed [m/s]	2
Pasquill stability	F stable - night with moderate clouds and light/moderate wind
Atmospheric temperature [degC]	25
Relative humidity [fraction]	0,75
Solar radiation flux [kW/m2]	0,5
Mixing layer height [m]	100

Observer Release Data and Observer Mass Data

Observer number	Release type	Start time [s]	Start downwind distance [m]	Unit	Masses or mass rates		
					Release	Rainout	Final
1	Continuous	0	0	kg/s	34,3	0	34,3
2	Continuous	3600	0	kg/s	34,3	0	34,3

Time-varying Observer Dispersion Data (before along-wind-diffusion effects)

Dispersion data correspond to an averaging time of: 18,75 s

Observer number	Time [s]	Down wind distance [m]	C/Li ne height [m]	C/Li ne conc [ppm]	Effect ive width [m]	Effect ive depth [m]	C/Li ne vapour temperature [degC]	C/Li ne liquid fraction	Centr oid velocity [m/s]	C/Li ne cloud density [kg/m3]
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1	0	0	0	999.99 9,41	1,7594 3	0,8525 98	-160,955	0	11,965 5	1,9109 5
1	0,01	0,11882 4	0	996.05 4,84	1,7991 4	0,8543 58	-160,177	0	11,813 1	1,9016 1
1	0,02	0,23621 1	0	992.19 1,09	1,8387 6	0,8561 95	-159,414	0	11,664 8	1,8925 8
1	0,03	0,35214 5	0	988.40 6,75	1,8782 9	0,8580 93	-158,664	0	11,520 5	1,8838 6
1	0,04	0,46665 7	0	984.69 9,09	1,9177 3	0,8600 44	-157,928	0	11,38	1,8754 3
1	0,05	0,57981 7	0	981.06 3,86	1,9570 8	0,8620 48	-157,206	0	11,243 1	1,8672 6
1	0,06	0,69162 1	0	977.49 9,94	1,9963 5	0,8640 92	-156,495	0	11,109 7	1,8593 5
1	0,07	0,80212 8	0	974.00 3,83	2,0355 4	0,8661 77	-155,797	0	10,979 8	1,8516 8
1	0,08	0,91134	0	970.57 4,24	2,0746 6	0,8682 93	-155,112	0	10,853 1	1,8442 5
1	0,09	1,0193	0	967.20 8,51	2,1137 1	0,8704 38	-154,437	0	10,729 5	1,8370 4
1	0,1	1,12605	0	963.90 3,98	2,1526 8	0,8726 1	-153,774	0	10,609	1,8300 3
1	0,11	1,23158	0	960.65 9,65	2,1915 9	0,8748 02	-153,121	0	10,491 4	1,8232 3
1	0,12	1,33598	0	957.47 2,00	2,2304 4	0,8770 17	-152,479	0	10,376 6	1,8166 1
1	0,13	1,43921	0	954.34 1,17	2,2692 2	0,8792 44	-151,848	0	10,264 6	1,8101 8
1	0,14	1,54134	0	951.26 3,94	2,3079 4	0,8814 86	-151,226	0	10,155 1	1,8039 2
1	0,15	1,64238	0	948.23 9,23	2,3466	0,8837 4	-150,613	0	10,048 2	1,7978 3
1	0,16	1,74234	0	945.26 5,44	2,3852 1	0,8860 03	-150,01	0	9,9437 6	1,7918 9
1	0,17	1,84127	0	942.34 1,00	2,4237 6	0,8882 73	-149,416	0	9,8416 6	1,7861 1
1	0,18	1,93917	0	939.46 4,29	2,4622 6	0,8905 48	-148,831	0	9,7418 4	1,7804 7



1	0,19	2,03609	0	936.63 3,79	2,5007 1	0,8928 29	-148,254	0	9,6442 3	1,7749 7
1	0,2	2,13203	0	933.84 8,06	2,5391	0,8951 15	-147,686	0	9,5487 4	1,7696 1
1	0,212	2,24593	0	930.56 2,24	2,5851 1	0,8978 61	-147,014	0	9,4368 7	1,7633 4
1	0,226 4	2,38083	0	926.69 9,61	2,6402 4	0,9011 57	-146,223	0	9,3063 9	1,7560 4
1	0,243 68	2,54022	0	922.17 6,26	2,7062 6	0,9051 05	-145,295	0	9,1550 1	1,7476 1
1	0,264 416	2,72808	0	916.90 0,36	2,7853 1	0,9098 33	-144,209	0	8,9803 9	1,7379 2
1	0,289 299	2,94882	0	910.77 5,41	2,8799 3	0,9154 9	-142,945	0	8,7803 3	1,7268 5
1	0,319 159	3,20729	0	903.70 3,27	2,9931 6	0,9222 41	-141,48	0	8,5529	1,7143
1	0,354 991	3,5087	0	895.58 8,52	3,1285 8	0,9302 63	-139,792	0	8,2967 1	1,7002 2
1	0,397 989	3,85893	0	886.33 1,68	3,2904 9	0,9398 09	-137,857	0	8,0107	1,6845 3
1	0,449 587	4,26349	0	875.86 4,23	3,4839 7	0,9510 42	-135,658	0	7,6952 9	1,6672 7
1	0,511 504	4,72878	0	864.11 2,19	3,7150 6	0,9642 61	-133,174	0	7,3512 7	1,6484 5
1	0,585 805	5,26064	0	851.04 1,27	3,9908 7	0,9796 74	-130,392	0	6,9811 4	1,6281 7
1	0,674 966	5,86492	0	836.64 0,77	4,3198 4	0,9975 06	-127,304	0	6,5885	1,6066
1	0,781 959	6,5473	0	820.93 0,09	4,7118 5	1,0179 9	-123,906	0	6,178	1,5839
1	0,910 351	7,31298	0	803.96 5,47	5,1785 2	1,0413 2	-120,203	0	5,7552 9	1,5603 2
1	1,064 42	8,16646	0	785.84 2,06	5,7333 8	1,0676 4	-116,207	0	5,3268 1	1,5360 9
1	1,249 31	9,11137	0	766.69 2,86	6,3921	1,0969 9	-111,931	0	4,8995 4	1,5114 4
1	1,471 17	10,1503	0	746.67 9,07	7,1725 9	1,1294 6	-107,373	0	4,4804 7	1,4863 7



1	1,737 4	11,2867	0	725.95 8,82	8,0950 7	1,1654 1	-102,53	0	4,0750 1	1,4609 1
1	2,056 88	12,5239	0	704.70 4,54	9,1821	1,2052 1	-97,4092	0	3,6877 5	1,4351 1
1	2,440 26	13,8636	0	683.12 6,17	10,458 1	1,2488	-92,0192	0	3,3234 1	1,4090 6
1	2,900 31	15,3099	0	661.40 9,36	11,934 8	1,2966 5	-86,3598	0	2,9845 7	1,3827 4
1	3,452 37	16,8698	0	639.72 7,14	13,607 4	1,3497	-80,4217	0	2,6721 9	1,3561
1	4,114 84	18,5482	0	618.27 9,35	15,484 7	1,4086 7	-74,1973	0	2,3874 4	1,3290 9
1	4,909 81	20,3518	0	597.25 5,42	17,570 6	1,4748	-67,676	0	2,1304 5	1,3016 7
1	5,863 77	22,2851	0	576.87 8,00	19,858	1,5488 1	-60,9069	0	1,9017 2	1,2741 2
1	7,008 53	24,3591	0	557.31 6,30	22,330 3	1,6322 9	-54,1104	0	1,6995 2	1,2476 8
1	8,382 23	26,5938	0	538.67 0,95	24,949 6	1,7132 9	-47,4271	0	1,5362 7	1,2229 2
1	10,03 07	29,0215	0	520.96 6,13	27,6	1,8056 5	-40,8757	0	1,4015 6	1,1997 4
1	11,70 48	31,2868	0	505.28 1,65	29,514 6	1,9145	-35,2158	0	1,3084 9	1,1809 8
1	11,70 48	31,2868	0	505.28 1,65	29,514 6	1,9145	-35,2158	0	1,3084 9	1,1809 8
1	12,00 88	31,6821	0	501.66 4,57	29,534 7	1,9530 7	-34,1215	0	1,2969 1	1,1778
1	14,38 26	34,6647	0	429.57 3,30	29,966 2	2,5290 2	-19,6198	0	1,2236 6	1,1515
1	17,23 11	38,1167	0	315.19 4,46	31,080 7	3,5841 8	-3,08711	0	1,2128 2	1,1404 3
1	20,64 93	42,3337	0	224.95 8,03	32,663 1	4,7818 9	6,23243	0	1,2598 2	1,1461 5
1	24,75 12	47,6551	0	163.30 0,38	34,538 8	6,0147 6	11,4689	0	1,3352 3	1,1537 1
1	24,75 12	47,6551	0	163.30 0,38	34,538 8	6,0147 6	11,4689	0	1,3352 3	1,1537 1

1	24,75 12	47,6551	0,02	163.30 0,03	34,538 8	5,9974 8	11,4742	0	1,3346 5	1,1536 9
1	29,67 34	54,224	1,594 22	122.15 8,23	36,483 4	5,5200 8	14,5484	0	1,4279	1,1597 3
1	34,94 89	61,4561	5,287 3	86.518, 66	38,349	4,2567 7	16,9288	0	1,7066 6	1,1655 3
1	34,94 89	61,4561	5,287 3	86.518, 66	38,349	4,2552 4	16,9288	0	1,7072	1,1655 3
1	35,58 01	62,4428	5,753 99	82.105, 99	38,598 9	4,3112 2	17,2049	0	1,7511 9	1,1663 1
1	42,66 81	75,5338	10,17 55	49.287, 40	41,227 5	5,5069 8	19,1835	0	2,1168 7	1,1721 3
1	51,01 87	93,9415	12,80 84	34.342, 18	43,547 8	6,9096 3	20,044	0	2,3084 1	1,1747 9
1	51,01 87	93,9415	12,80 84	34.342, 18	43,547 8	6,9096 4	20,044	0	2,3084 1	1,1747 9
1	51,17 37	94,2988	12,82 97	34.186, 96	43,580 5	6,9321 9	20,0528	0	2,3099 8	1,1748 2
1	61,38 05	117,888	11,98 68	26.982, 34	45,403 9	8,8213 3	20,6622	0	2,2870 1	1,1757
1	64,49 47	124,877	10,90 25	25.007, 65	46,061 4	9,9103 9	20,9867	0	2,2565	1,1755 1
1	64,49 47	124,877	10,90 25	25.007, 65	46,061 4	9,9103 9	20,9867	0	2,2565	1,1755 1
1	66,67 73	129,667	9,993 22	23.921, 22	49,596 9	10,079 2	21,1647	0	2,2123 4	1,1754 5
1	73,62 86	144,458	7,124 01	21.688, 03	57,318 1	11,409 4	21,5294	0	2,1399	1,1754 8
1	88,32 63	175,695	2,638 04	19.604, 32	65,050 6	14,670 4	21,859	0	2,1761 5	1,1758 2
1	100,2 72	201,996	0,01	18.677, 88	66,703 3	17,141 5	21,9143	0	2,2483 3	1,1764 9
1	100,2 72	201,996	0	18.677, 90	66,703 3	17,148 8	21,9119	0	2,2486 6	1,1765
1	105,9 64	214,817	0	18.285, 49	67,280 7	17,327 7	21,9987	0	2,2547 1	1,1763 5
1	127,1 28	262,838	0	16.946, 03	69,418 8	17,969 3	22,2896	0	2,2772 8	1,1758 3



1	152,5 26	321,023	0	15.552, 55	71,974 1	18,694 3	22,5846	0	2,3041	1,1753 3
1	156,2 27	329,559	0	15.365, 67	72,345 9	18,796 7	22,6235	0	2,308	1,1752 6
2	3600	0	0	999.99 9,41	1,7594 3	0,8525 98	-160,955	0	11,965 5	1,9109 5
2	3600, 01	0,11882 4	0	996.05 4,84	1,7991 4	0,8543 58	-160,177	0	11,813 1	1,9016 1
2	3600, 02	0,23621 1	0	992.19 1,09	1,8387 6	0,8561 95	-159,414	0	11,664 8	1,8925 8
2	3600, 03	0,35214 5	0	988.40 6,75	1,8782 9	0,8580 93	-158,664	0	11,520 5	1,8838 6
2	3600, 04	0,46665 7	0	984.69 9,09	1,9177 3	0,8600 44	-157,928	0	11,38	1,8754 3
2	3600, 05	0,57981 7	0	981.06 3,86	1,9570 8	0,8620 48	-157,206	0	11,243 1	1,8672 6
2	3600, 06	0,69162 1	0	977.49 9,94	1,9963 5	0,8640 92	-156,495	0	11,109 7	1,8593 5
2	3600, 07	0,80212 8	0	974.00 3,83	2,0355 4	0,8661 77	-155,797	0	10,979 8	1,8516 8
2	3600, 08	0,91134	0	970.57 4,24	2,0746 6	0,8682 93	-155,112	0	10,853 1	1,8442 5
2	3600, 09	1,0193	0	967.20 8,51	2,1137 1	0,8704 38	-154,437	0	10,729 5	1,8370 4
2	3600, 1	1,12605	0	963.90 3,98	2,1526 8	0,8726 1	-153,774	0	10,609	1,8300 3
2	3600, 11	1,23158	0	960.65 9,65	2,1915 9	0,8748 02	-153,121	0	10,491 4	1,8232 3
2	3600, 12	1,33598	0	957.47 2,00	2,2304 4	0,8770 17	-152,479	0	10,376 6	1,8166 1
2	3600, 13	1,43921	0	954.34 1,17	2,2692 2	0,8792 44	-151,848	0	10,264 6	1,8101 8
2	3600, 14	1,54134	0	951.26 3,94	2,3079 4	0,8814 86	-151,226	0	10,155 1	1,8039 2
2	3600, 15	1,64238	0	948.23 9,23	2,3466 15	0,8837 4	-150,613	0	10,048 2	1,7978 3
2	3600,	1,74234	0	945.26	2,3852	0,8860	-150,01	0	9,9437	1,7918



	16			5,44	1	03			6	9
2	3600,17	1,84127	0	942.341,00	2,42376	0,888273	-149,416	0	9,84166	1,78611
2	3600,18	1,93917	0	939.464,29	2,46226	0,890548	-148,831	0	9,74184	1,78047
2	3600,19	2,03609	0	936.633,79	2,50071	0,892829	-148,254	0	9,64423	1,77497
2	3600,2	2,13203	0	933.848,06	2,5391	0,895115	-147,686	0	9,54874	1,76961
2	3600,21	2,24593	0	930.562,24	2,58511	0,897861	-147,014	0	9,43687	1,76334
2	3600,23	2,38083	0	926.699,61	2,64024	0,901157	-146,223	0	9,30639	1,75604
2	3600,24	2,54022	0	922.176,26	2,70626	0,905105	-145,295	0	9,15501	1,74761
2	3600,26	2,72808	0	916.900,36	2,78531	0,909833	-144,209	0	8,98039	1,73792
2	3600,29	2,94882	0	910.775,41	2,87993	0,91549	-142,945	0	8,78033	1,72685
2	3600,32	3,20729	0	903.703,27	2,99316	0,922241	-141,48	0	8,5529	1,7143
2	3600,35	3,5087	0	895.588,52	3,12858	0,930263	-139,792	0	8,29671	1,70022
2	3600,4	3,85893	0	886.331,68	3,29049	0,939809	-137,857	0	8,0107	1,68453
2	3600,45	4,26349	0	875.864,23	3,48397	0,951042	-135,658	0	7,69529	1,66727
2	3600,51	4,72878	0	864.112,19	3,71506	0,964261	-133,174	0	7,35127	1,64845
2	3600,59	5,26064	0	851.041,27	3,99087	0,979674	-130,392	0	6,98114	1,62817
2	3600,67	5,86492	0	836.640,77	4,31984	0,997506	-127,304	0	6,5885	1,6066
2	3600,78	6,5473	0	820.930,09	4,71185	1,01799	-123,906	0	6,178	1,5839
2	3600,91	7,31298	0	803.965,47	5,17852	1,04132	-120,203	0	5,75529	1,56032
2	3601,	8,16646	0	785.84	5,7333	1,0676	-116,207	0	5,3268	1,5360



	06			2,06	8	4			1	9
2	3601, 25	9,11137	0	766.69 2,86	6,3921	1,0969 9	-111,931	0	4,8995 4	1,5114 4
2	3601, 47	10,1503	0	746.67 9,07	7,1725 9	1,1294 6	-107,373	0	4,4804 7	1,4863 7
2	3601, 74	11,2867	0	725.95 8,82	8,0950 7	1,1654 1	-102,53	0	4,0750 1	1,4609 1
2	3602, 06	12,5239	0	704.70 4,54	9,1821	1,2052 1	-97,4092	0	3,6877 5	1,4351 1
2	3602, 44	13,8636	0	683.12 6,17	10,458 1	1,2488	-92,0192	0	3,3234 1	1,4090 6
2	3602, 9	15,3099	0	661.40 9,36	11,934 8	1,2966 5	-86,3598	0	2,9845 7	1,3827 4
2	3603, 45	16,8698	0	639.72 7,14	13,607 4	1,3497	-80,4217	0	2,6721 9	1,3561
2	3604, 11	18,5482	0	618.27 9,35	15,484 7	1,4086 7	-74,1973	0	2,3874 4	1,3290 9
2	3604, 91	20,3518	0	597.25 5,42	17,570 6	1,4748	-67,676	0	2,1304 5	1,3016 7
2	3605, 86	22,2851	0	576.87 8,00	19,858	1,5488 1	-60,9069	0	1,9017 2	1,2741 2
2	3607, 01	24,3591	0	557.31 6,30	22,330 3	1,6322 9	-54,1104	0	1,6995 2	1,2476 8
2	3608, 38	26,5938	0	538.67 0,95	24,949 6	1,7132 9	-47,4271	0	1,5362 7	1,2229 2
2	3610, 03	29,0215	0	520.96 6,13	27,6	1,8056 5	-40,8757	0	1,4015 6	1,1997 4
2	3611, 7	31,2868	0	505.28 1,65	29,514 6	1,9145	-35,2158	0	1,3084 9	1,1809 8
2	3611, 7	31,2868	0	505.28 1,65	29,514 6	1,9145	-35,2158	0	1,3084 9	1,1809 8
2	3612, 01	31,6821	0	501.66 4,57	29,534 7	1,9530 7	-34,1215	0	1,2969 1	1,1778
2	3614, 38	34,6647	0	429.57 3,30	29,966 2	2,5290 2	-19,6198	0	1,2236 6	1,1515
2	3617, 23	38,1167	0	315.19 4,46	31,080 7	3,5841 8	-3,08711	0	1,2128 2	1,1404 3
2	3620,	42,3337	0	224.95	32,663	4,7818	6,23243	0	1,2598	1,1461



	65			8,03	1	9			2	5
2	3624,75	47,6551	0	163.300,38	34,5388	6,01476	11,4689	0	1,33523	1,15371
2	3624,75	47,6551	0	163.300,38	34,5388	6,01476	11,4689	0	1,33523	1,15371
2	3624,75	47,6551	0,02	163.300,03	34,5388	5,99748	11,4742	0	1,33465	1,15369
2	3629,67	54,224	1,59422	122.158,23	36,4834	5,52008	14,5484	0	1,4279	1,15973
2	3634,95	61,4561	5,2873	86.518,66	38,349	4,25677	16,9288	0	1,70666	1,16553
2	3634,95	61,4561	5,2873	86.518,66	38,349	4,25524	16,9288	0	1,7072	1,16553
2	3635,58	62,4428	5,75399	82.105,99	38,5989	4,31122	17,2049	0	1,75119	1,16631
2	3642,67	75,5338	10,1755	49.287,40	41,2275	5,50698	19,1835	0	2,11687	1,17213
2	3651,02	93,9415	12,8084	34.342,18	43,5478	6,90963	20,044	0	2,30841	1,17479
2	3651,02	93,9415	12,8084	34.342,18	43,5478	6,90964	20,044	0	2,30841	1,17479
2	3651,17	94,2988	12,8297	34.186,96	43,5805	6,93219	20,0528	0	2,30998	1,17482
2	3661,38	117,888	11,9868	26.982,34	45,4039	8,82133	20,6622	0	2,28701	1,1757
2	3664,49	124,877	10,9025	25.007,65	46,0614	9,91039	20,9867	0	2,2565	1,17551
2	3664,49	124,877	10,9025	25.007,65	46,0614	9,91039	20,9867	0	2,2565	1,17551
2	3666,68	129,667	9,99322	23.921,22	49,5969	10,0792	21,1647	0	2,21234	1,17545
2	3673,63	144,458	7,12401	21.688,03	57,3181	11,4094	21,5294	0	2,1399	1,17548
2	3688,33	175,695	2,63804	19.604,32	65,0506	14,6704	21,859	0	2,17615	1,17582
2	3700,27	201,996	0,01	18.677,88	66,7033	17,1415	21,9143	0	2,24833	1,17649
2	3700,	201,996	0	18.677,	66,703	17,148	21,9119	0	2,2486	1,1765



	27			90	3	8			6	
2	3705,96	214,817	0	18.285,49	67,2807	17,3277	21,9987	0	2,25471	1,17635
2	3727,13	262,838	0	16.946,03	69,4188	17,9693	22,2896	0	2,27728	1,17583
2	3752,53	321,023	0	15.552,55	71,9741	18,6943	22,5846	0	2,30413	1,17533
2	3756,23	329,559	0	15.365,67	72,3459	18,7967	22,6235	0	2,308	1,17526

Weather: Category 5/D

Wind speed [m/s]	5
Pasquill stability	D neutral - little sun and high wind or overcast/windy night
Atmospheric temperature [degC]	25
Relative humidity [fraction]	0,75
Solar radiation flux [kW/m2]	0,5
Mixing layer height [m]	800

Observer Release Data and Observer Mass Data

Observer number	Release type	Start time [s]	Start downwind distance [m]	Unit	Masses or mass rates		
					Release	Rainout	Final
1	Continuous	0	0	kg/s	34,3	0	34,3
2	Continuous	3600	0	kg/s	34,3	0	34,3

Time-varying Observer Dispersion Data (before along-wind-diffusion effects)

Dispersion data correspond to an averaging time of: 18,75 s

Observer number	Time [s]	Down wind distance [m]	C/Li ne height [m]	C/Li ne conc [ppm]	Effect ive width [m]	Effect ive depth [m]	C/Line vapour temperature [degC]	C/Li ne liquid fraction	Centr oid velocity [m/s]	C/Li ne cloud density [kg/m3]
1	0	0	0	999.99 9,41	1,7594 3	0,8525 97	-160,955	0	11,965 5	1,9109 5
1	0,01	0,11926 2	0	996.90 9,28	1,7990 9	0,8473 18	-160,247	0	11,893	1,9018 1
1	0,02	0,23783 3	0	993.85 3,98	1,8384 7	0,8424 67	-159,543	0	11,821 5	1,8928 5



1	0,03	0,35569 4	0	990.83 2,75	1,8775 9	0,8380 13	-158,843	0	11,750 8	1,8840 6
1	0,04	0,47285 9	0	987.84 4,15	1,9164 4	0,8339 25	-158,148	0	11,681	1,8754 5
1	0,05	0,58933 3	0	984.88 7,23	1,9550 6	0,8301 76	-157,458	0	11,612	1,867
1	0,06	0,70512 2	0	981.96 1,22	1,9934 3	0,8267 42	-156,771	0	11,543 8	1,8587
1	0,07	0,82023 7	0	979.06 5,12	2,0315 8	0,8236	-156,089	0	11,476 5	1,8505 6
1	0,08	0,93467 7	0	976.19 8,53	2,0695 1	0,8207 32	-155,411	0	11,41	1,8425 7
1	0,09	1,04846	0	973.36 0,08	2,1072 3	0,8181 17	-154,737	0	11,344 2	1,8347 1
1	0,1	1,16159	0	970.54 9,76	2,1447 4	0,8157 39	-154,066	0	11,279 3	1,827
1	0,11	1,27407	0	967.76 6,22	2,1820 6	0,8135 81	-153,4	0	11,215 1	1,8194 2
1	0,12	1,38592	0	965.00 9,54	2,2191 9	0,8116 3	-152,737	0	11,151 7	1,8119 7
1	0,13	1,49713	0	962.27 8,86	2,2561 3	0,8098 73	-152,078	0	11,089	1,8046 4
1	0,14	1,60771	0	959.57 3,76	2,2929	0,8082 97	-151,422	0	11,027	1,7974 4
1	0,15	1,71768	0	956.89 3,76	2,3295	0,8068 91	-150,77	0	10,965 8	1,7903 5
1	0,16	1,82704	0	954.23 8,36	2,3659 3	0,8056 45	-150,122	0	10,905 3	1,7833 9
1	0,17	1,93579	0	951.60 7,12	2,4022	0,8045 48	-149,477	0	10,845 5	1,7765 3
1	0,18	2,04395	0	948.99 9,61	2,4383 2	0,8035 92	-148,836	0	10,786 4	1,7697 9
1	0,19	2,15152	0	946.41 5,35	2,4742 9	0,8027 69	-148,198	0	10,728	1,7631 5
1	0,2	2,2585	0	943.85 3,89	2,5101 2	0,8020 69	-147,564	0	10,670 3	1,7566 2
1	0,212	2,38613	0	940.80 9,83	2,5529 3	0,8013 83	-146,807	0	10,601 9	1,7489 1



1	0,226 4	2,53821	0	937.19 9,17	2,6040 5	0,8007 67	-145,905	0	10,521 1	1,7398 5
1	0,243 68	2,71918	0	932.92 5,36	2,6650 4	0,8002 99	-144,832	0	10,426 3	1,7292 3
1	0,264 416	2,93421	0	927.88 0,67	2,7377 4	0,8000 96	-143,557	0	10,314 3	1,7168 6
1	0,289 299	3,1892	0	921.94 5,46	2,8243	0,8003 14	-142,046	0	10,183 8	1,7025
1	0,319 159	3,49098	0	914.98 8,18	2,9272 4	0,8011 53	-140,259	0	10,032 2	1,6859 5
1	0,354 991	3,84724	0	906.86 7,78	3,0495 3	0,8028 66	-138,151	0	9,8569 6	1,6669 8
1	0,397 989	4,26666	0	897.43 6,01	3,1946 5	0,8057 54	-135,674	0	9,6561	1,6454 3
1	0,449 587	4,75888	0	886.54 8,03	3,3665 9	0,8101 86	-132,775	0	9,4277 7	1,6211 5
1	0,511 504	5,33449	0	874.06 8,44	3,5699 2	0,8165 85	-129,398	0	9,1708 2	1,5940 7
1	0,585 805	6,00492	0	859.88 2,37	3,8097 8	0,8254 25	-125,488	0	8,8849 4	1,5642
1	0,674 966	6,78259	0	843.90 8,69	4,0919 6	0,8371 94	-120,99	0	8,5711	1,5316 3
1	0,781 959	7,6808	0	826.11 3,22	4,4226 3	0,8524 13	-115,856	0	8,2316 1	1,4965 9
1	0,910 351	8,71356	0	806.52 7,68	4,8079 7	0,8716 46	-110,048	0	7,8702 4	1,4594
1	1,064 42	9,89559	0	785.25 4,51	5,2534 9	0,8955 18	-103,541	0	7,4921 7	1,4204 6
1	1,249 31	11,2428	0	762.48 0,06	5,7629 6	0,9247 52	-96,3303	0	7,1037 3	1,3803
1	1,471 17	12,7733	0	738.46 9,96	6,3365 8	0,9602 31	-88,4378	0	6,7121 4	1,3395
1	1,737 4	14,507	0	713.55 2,48	6,9676 3	1,0033 2	-79,9139	0	6,3247 7	1,2986 9
1	2,056 88	16,4641	0	686.91 4,29	7,6364 5	1,0603 5	-70,6395	0	5,9429 3	1,2580 9
1	2,440 26	18,6653	0	654.52 1,59	8,2937 2	1,1529 4	-60,0553	0	5,5554 2	1,2176 4



1	2,900 31	21,1326	0	618.27 9,40	8,8065 9	1,2950 4	-48,8146	0	5,1883 2	1,1802 2
1	3,452 37	23,8906	0	568.10 6,75	9,0966 3	1,5536 5	-35,9207	0	4,8165 8	1,1469 7
1	4,114 84	26,9935	0	498.94 9,14	9,4113 4	1,9073 5	-21,9458	0	4,5728	1,1230 5
1	4,909 81	30,5544	0	424.81 6,09	9,8307 6	2,3371	-10,0338	0	4,3993 9	1,1123 2
1	5,863 77	34,6854	0	353.64 6,95	10,391 8	2,8210 1	-1,33187	0	4,2865 6	1,1130 7
1	7,008 53	39,5521	0	290.78 2,10	11,085 9	3,3425 6	4,67791	0	4,2242 7	1,1198 4
1	8,382 23	45,3361	0	236.78 0,11	11,920 2	3,9072 3	9,10828	0	4,2018 9	1,1279 6
1	10,03 07	52,2672	0	191.49 1,55	12,899 8	4,5157 6	12,3004	0	4,2092 3	1,1363 9
1	12,00 88	60,6203	0	154.13 6,37	14,030 7	5,1723 9	14,6315	0	4,2389 4	1,1442 4
1	14,38 26	70,7371	0	123.73 4,98	15,317 2	5,8817 6	16,3561	0	4,2851 7	1,1511 4
1	16,47 44	79,7476	0	104.83 0,90	16,389 5	6,4519 8	17,3583	0	4,3280 8	1,1556 2
1	16,47 44	79,7476	0	104.83 0,90	16,389 5	6,4518	17,3583	0	4,3281 9	1,1556 2
1	17,23 11	83,0305	0	99.228, 45	16,761 7	6,6490 6	17,6451	0	4,3438 4	1,1569 8
1	20,64 93	98,0225	0	79.389, 91	18,354 3	7,5012 9	18,6241	0	4,4139 9	1,1619 1
1	24,75 12	116,287	0	63.510, 50	20,149 8	8,4239	19,371	0	4,4904 7	1,1659 5
1	29,67 34	138,605	0	50.112, 70	22,268 9	9,5007 7	19,9686	0	4,5781 6	1,1694 7
1	35,58 01	165,969	0	38.415, 70	24,812 4	10,895 3	20,6849	0	4,6876 3	1,1718 6
1	42,66 81	199,654	0	28.753, 73	27,887 1	12,660 5	21,9549	0	4,8166 1	1,1714 7
1	47,66 41	223,927	0	23.921, 22	30,079 5	13,898	22,5554	0	4,8999 5	1,1714 2



1	51,17 37	241,257	0	21.173, 47	31,633 3	14,777 2	22,8839	0	4,9563 9	1,1714 4
1	61,38 05	292,721	0	15.364, 90	36,202 9	17,307 7	23,5483	0	5,1072 6	1,1716
1	71,92 95	347,325	0	11.541, 76	40,989 7	19,850 9	23,9611	0	5,2432 2	1,1718
2	3600	0	0	999.99 9,41	1,7594 3	0,8525 97	-160,955	0	11,965 5	1,9109 5
2	3600, 01	0,11926 2	0	996.90 9,28	1,7990 9	0,8473 18	-160,247	0	11,893	1,9018 1
2	3600, 02	0,23783 3	0	993.85 3,98	1,8384 7	0,8424 67	-159,543	0	11,821 5	1,8928 5
2	3600, 03	0,35569 4	0	990.83 2,75	1,8775 9	0,8380 13	-158,843	0	11,750 8	1,8840 6
2	3600, 04	0,47285 9	0	987.84 4,15	1,9164 4	0,8339 25	-158,148	0	11,681	1,8754 5
2	3600, 05	0,58933 3	0	984.88 7,23	1,9550 6	0,8301 76	-157,458	0	11,612	1,867
2	3600, 06	0,70512 2	0	981.96 1,22	1,9934 3	0,8267 42	-156,771	0	11,543 8	1,8587
2	3600, 07	0,82023 7	0	979.06 5,12	2,0315 8	0,8236	-156,089	0	11,476 5	1,8505 6
2	3600, 08	0,93467 7	0	976.19 8,53	2,0695 1	0,8207 32	-155,411	0	11,41	1,8425 7
2	3600, 09	1,04846	0	973.36 0,08	2,1072 3	0,8181 17	-154,737	0	11,344 2	1,8347 1
2	3600, 1	1,16159	0	970.54 9,76	2,1447 4	0,8157 39	-154,066	0	11,279 3	1,827
2	3600, 11	1,27407	0	967.76 6,22	2,1820 6	0,8135 81	-153,4	0	11,215 1	1,8194 2
2	3600, 12	1,38592	0	965.00 9,54	2,2191 9	0,8116 3	-152,737	0	11,151 7	1,8119 7
2	3600, 13	1,49713	0	962.27 8,86	2,2561 3	0,8098 73	-152,078	0	11,089	1,8046 4
2	3600, 14	1,60771	0	959.57 3,76	2,2929	0,8082 97	-151,422	0	11,027	1,7974 4
2	3600,	1,71768	0	956.89	2,3295	0,8068	-150,77	0	10,965	1,7903



	15			3,76		91			8	5
2	3600,16	1,82704	0	954.238,36	2,36593	0,805645	-150,122	0	10,9053	1,78339
2	3600,17	1,93579	0	951.607,12	2,4022	0,804548	-149,477	0	10,8455	1,77653
2	3600,18	2,04395	0	948.999,61	2,43832	0,803592	-148,836	0	10,7864	1,76979
2	3600,19	2,15152	0	946.415,35	2,47429	0,802769	-148,198	0	10,728	1,76315
2	3600,2	2,2585	0	943.853,89	2,51012	0,802069	-147,564	0	10,6703	1,75662
2	3600,21	2,38613	0	940.809,83	2,55293	0,801383	-146,807	0	10,6019	1,74891
2	3600,23	2,53821	0	937.199,17	2,60405	0,800767	-145,905	0	10,5211	1,73985
2	3600,24	2,71918	0	932.925,36	2,66504	0,800299	-144,832	0	10,426	1,72923
2	3600,26	2,93421	0	927.880,67	2,73774	0,800096	-143,557	0	10,3143	1,71686
2	3600,29	3,1892	0	921.945,46	2,8243	0,800314	-142,046	0	10,1838	1,70258
2	3600,32	3,49098	0	914.988,18	2,92724	0,801153	-140,259	0	10,0322	1,68595
2	3600,35	3,84724	0	906.867,78	3,04953	0,802866	-138,151	0	9,85696	1,66698
2	3600,4	4,26666	0	897.436,01	3,19465	0,805754	-135,674	0	9,6561	1,64543
2	3600,45	4,75888	0	886.548,03	3,36659	0,810186	-132,775	0	9,42777	1,62115
2	3600,51	5,33449	0	874.068,44	3,56992	0,816585	-129,398	0	9,17082	1,59407
2	3600,59	6,00492	0	859.882,37	3,80978	0,825425	-125,488	0	8,88494	1,56424
2	3600,67	6,78259	0	843.908,69	4,09196	0,837194	-120,99	0	8,5711	1,53163
2	3600,78	7,6808	0	826.113,22	4,42263	0,852413	-115,856	0	8,23161	1,49659
2	3600,	8,71356	0	806.52	4,8079	0,8716	-110,048	0	7,8702	1,4594



	91			7,68	7	46			4	
2	3601,06	9,89559	0	785.254,51	5,25349	0,895518	-103,541	0	7,49217	1,42046
2	3601,25	11,2428	0	762.480,06	5,76296	0,924752	-96,3303	0	7,10373	1,3803
2	3601,47	12,7733	0	738.469,96	6,33658	0,960231	-88,4378	0	6,71214	1,3395
2	3601,74	14,507	0	713.552,48	6,96763	1,00332	-79,9139	0	6,32477	1,29869
2	3602,06	16,4641	0	686.914,29	7,63645	1,06035	-70,6395	0	5,94293	1,25809
2	3602,44	18,6653	0	654.521,59	8,29372	1,15294	-60,0553	0	5,55542	1,21764
2	3602,9	21,1326	0	618.279,40	8,80659	1,29504	-48,8146	0	5,18832	1,18022
2	3603,45	23,8906	0	568.106,75	9,09663	1,55365	-35,9207	0	4,81658	1,14697
2	3604,11	26,9935	0	498.949,14	9,41134	1,90735	-21,9458	0	4,5728	1,12305
2	3604,91	30,5544	0	424.816,09	9,83076	2,3371	-10,0338	0	4,39939	1,11232
2	3605,86	34,6854	0	353.646,95	10,3918	2,82101	-1,33187	0	4,28656	1,11307
2	3607,01	39,5521	0	290.782,10	11,0859	3,34256	4,67791	0	4,22427	1,11984
2	3608,38	45,3361	0	236.780,11	11,9202	3,90723	9,10828	0	4,20189	1,12796
2	3610,03	52,2672	0	191.491,55	12,8998	4,51576	12,3004	0	4,20923	1,13639
2	3612,01	60,6203	0	154.136,37	14,0307	5,17239	14,6315	0	4,23894	1,14424
2	3614,38	70,7371	0	123.734,98	15,3172	5,88176	16,3561	0	4,28517	1,15114
2	3616,47	79,7476	0	104.830,90	16,3895	6,45198	17,3583	0	4,32808	1,15562
2	3616,47	79,7476	0	104.830,90	16,3895	6,4518	17,3583	0	4,32819	1,15562
2	3617,	83,0305	0	99.228,	16,761	6,6490	17,6451	0	4,3438	1,1569



	23			45	7	6			4	8
2	3620,65	98,0225	0	79.389,91	18,3543	7,50129	18,6241	0	4,41399	1,16191
2	3624,75	116,287	0	63.510,50	20,1498	8,4239	19,371	0	4,49047	1,16595
2	3629,67	138,605	0	50.112,70	22,2689	9,50077	19,9686	0	4,57816	1,16947
2	3635,58	165,969	0	38.415,70	24,8124	10,8953	20,6849	0	4,68763	1,17186
2	3642,67	199,654	0	28.753,73	27,8871	12,6605	21,9549	0	4,81661	1,17147
2	3647,66	223,927	0	23.921,22	30,0795	13,898	22,5554	0	4,89995	1,17142
2	3651,17	241,257	0	21.173,47	31,6333	14,7772	22,8839	0	4,95639	1,17144
2	3661,38	292,721	0	15.364,90	36,2029	17,3077	23,5483	0	5,10726	1,1716
2	3671,93	347,325	0	11.541,76	40,9897	19,8509	23,9611	0	5,24322	1,1718



Scenario (Leak) : 300mm

72438-4FSRUInvioGNL-12R\Invio GNL Water\12R Manichette GNL riempimento FSRU\300mm

Material to track

GAS NATURALE

Weather: Category 2/F

Wind speed [m/s]	2
Pasquill stability	F stable - night with moderate clouds and light/moderate wind
Atmospheric temperature [degC]	25
Relative humidity [fraction]	0,75
Solar radiation flux [kW/m2]	0,5
Mixing layer height [m]	100

Observer Release Data and Observer Mass Data

Observer number	Release type	Start time [s]	Start downwind distance [m]	Unit	Masses or mass rates		
					Release	Rainout	Final
1	Continuous	-162,467	44,3984	kg/s	0	0	38,2854
2	Continuous	-144,415	33,2988	kg/s	0	0	104,719
3	Continuous	-126,363	22,1992	kg/s	0	0	185,539
4	Continuous	-108,311	11,0996	kg/s	0	0	274,506
5	Continuous	-90,2593	1E-05	kg/s	0	0	367,722
6	Continuous	-72,2074	-11,0996	kg/s	0	0	460,307
7	Continuous	-54,1556	-22,1992	kg/s	0	0	549,582
8	Continuous	-	-33,2988	kg/s	0	0	446,903

Audit Number: 35030

Date: 30/05/2023 Time: 15:15

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		36,1037						
9	Continuous	-18,0519	-44,3984	kg/s	0	0	402,948	
10	Continuous	0	-55,498	kg/s	0	0	304,041	
11	Continuous	11,4699	-55,498	kg/s	0	0	245,9	
12	Continuous	22,9398	-55,498	kg/s	0	0	192,887	
13	Continuous	34,4098	-55,498	kg/s	0	0	146,288	
14	Continuous	45,8797	-55,498	kg/s	0	0	107,335	
15	Continuous	57,3496	-55,498	kg/s	0	0	75,3849	
16	Continuous	68,8195	-55,498	kg/s	0	0	48,1695	
17	Continuous	80,2895	-55,498	kg/s	0	0	25,8993	
18	Continuous	91,7594	-55,498	kg/s	0	0	9,49655	
19	Continuous	103,229	-55,498	kg/s	0	0	0,266307	

Time-varying Observer Dispersion Data (before along-wind-diffusion effects)

Dispersion data correspond to an averaging time of: 18,75 s

Observer number	Time [s]	Down wind distance [m]	C/Line height [m]	C/Line conc [ppm]	Effective width [m]	Effective depth [m]	C/Line vapour temperature [degC]	C/Line liquid fraction	Centroid velocity [m/s]	C/Line cloud density [kg/m ³]
1	-162,467	44,3984	0	1.687,56	0,00177245	0,782428	24,6246	0	0,614873	1,1739
1	0	44,3984	0	1.687,56	0,00177245	0,782428	24,6246	0	0,614873	1,1739
1	5,66808	48,3575	0	791.557,26	82,2461	0,595316	-91,1881	0	0,40645	1,32167
1	10,7968	55,498	0	334.889,17	94,7064	2,29331	-2,6735	0	0,677201	1,13026
1	10,7968	55,498	0	334.889,17	94,7064	2,29334	-2,6735	0	0,677194	1,13026
1	14,3	62,1978	0	135.49	97,7954	4,09831	14,2629	0	0,9728	1,1556



	665			7,17					13	2
1	14,3 665	62,1978	0	135.49 7,17	97,7954	4,09831	14,2629	0	0,9728 13	1,1556 2
1	20,9 377	74,5312	0	75.401, 55	100,633	5,93601	17,9515	0	1,1920 5	1,1673 2
1	49,4 454	129,566	0	44.593, 93	104,226	8,21703	19,8038	0	1,4175 1	1,1730 9
1	85,3 763	201,535	0	36.399, 20	107,528	9,21106	20,4001	0	1,5055 9	1,1740 7
1	129, 458	293,306	0	29.476, 69	111,613	10,3527	21,6695	0	1,6007 5	1,1722 6
1	180, 296	403,25	0	23.921, 22	116,374	11,5808	22,6734	0	1,6970 7	1,1709 5
1	183, 589	410,451	0	23.625, 23	116,681	11,6571	22,7221	0	1,7028 8	1,1709
1	250, 12	560,268	0	18.701, 19	122,986	13,1544	23,463	0	1,8133 1	1,1703 4
1	331, 69	751,488	0	14.619, 18	130,825	14,8709	23,9819	0	1,9324 3	1,1702 5
1	431, 412	996,177	0	11.274, 08	140,59	16,8439	24,337	0	2,0611 9	1,1704 5
1	443, 102	1025,22	0	10.965, 44	141,733	17,0647	24,3663	0	2,0751 3	1,1704 8
1	553, 72	1309,5	0	8.575,7 5	152,763	19,1084	24,5729	0	2,2001 3	1,1708 1
1	703, 04	1710,95	0	6.436,1 9	167,939	21,6994	24,7274	0	2,3495	1,1712 2
1	824, 434	2001,95	0	5.391,9 7	178,702	23,4114	24,7922	0	2,4434 2	1,1714 7
2	- 144, 415	33,2988	0	1.687,5 6	0,00177 245	0,78242 8	24,6246	0	0,6148 73	1,1739
2	0	33,2988	0	1.687,5 6	0,00177 245	0,78242 8	24,6246	0	0,6148 73	1,1739
2	11,2 712	44,6484	0	769.48 5,77	138,936	1,35846	-67,7241	0	0,4515 23	1,1866 7
2	19,0	55,498	0	214.97	140,067	4,61815	6,48941	0	1,0070	1,1510



	64			4,64					2	9
2	19,064	55,498	0	214.974,64	140,067	4,61815	6,48941	0	1,00702	1,15109
2	20,8733	58,8938	0	169.070,01	141,37	5,38464	10,5898	0	1,10646	1,15562
2	20,8733	58,8938	0	169.070,01	141,37	5,38462	10,5898	0	1,10646	1,15562
2	31,2966	78,4571	0	88.260,17	145,428	8,12218	16,6307	0	1,39698	1,16712
2	63,7033	141,157	0	59.586,24	149,029	10,3197	18,6472	0	1,59062	1,17113
2	103,691	221,796	0	49.748,70	152,699	11,4031	19,4229	0	1,6782	1,17202
2	152,18	323,678	0	41.295,51	157,199	12,6153	20,0482	0	1,7706	1,17298
2	211,182	452,718	0	33.884,45	162,738	13,9923	20,7535	0	1,86976	1,17328
2	283,029	616,411	0	27.518,17	169,573	15,5813	22,001	0	1,97793	1,17138
2	355,122	787,471	0	23.276,47	176,541	17,0837	22,7817	0	2,07503	1,17052
2	370,529	824,4	0	22.049,40	178,025	17,3917	22,9072	0	2,09439	1,17042
2	477,238	1089,48	0	17.577,39	188,5	19,4658	23,5503	0	2,22051	1,17013
2	606,795	1425,82	0	13.371,00	201,455	21,8165	24,0079	0	2,35559	1,17019
2	763,794	1854,14	0	19.045,12	217,51	24,4882	24,3284	0	2,50043	1,17047
2	816,552	2001,93	0	17.652,02	222,955	25,3438	24,4027	0	2,54517	1,17058
3	-126,363	22,1992	0	1.687,56	0,00177245	0,782428	24,6246	0	0,614873	1,1739
3	0	22,1992	0	1.687,56	0,00177245	0,782428	24,6246	0	0,614873	1,1739
3	9,38	29,0004	0	835.67	137,453	0,93074	-96,5125	0	0,3968	1,3262



	985			8,01		3			84	3
3	19,3 207	42,8267	0	375.23 9,06	171,514	3,33341	-9,80716	0	0,8120 9	1,1396 6
3	28,4 219	55,498	0	178.50 3,78	171,514	6,67746	8,69652	0	1,2253 8	1,1592 6
3	28,4 219	55,498	0	178.50 3,78	171,514	6,67738	8,69652	0	1,2254	1,1592 6
3	45,1 245	86,8467	0	91.143, 17	176,459	10,1913	16,0384	0	1,5667 5	1,1682 9
3	79,9 043	154,46	0	71.989, 32	179,764	11,7346	17,643	0	1,6942 1	1,1698 6
3	122, 021	240,025	0	61.285, 49	183,639	12,8566	18,5754	0	1,7810 4	1,1705 6
3	173, 018	347,979	0	51.786, 06	188,379	14,1089	19,3377	0	1,8724 6	1,1714 3
3	234, 842	484,239	0	43.330, 41	194,191	15,5214	19,9634	0	1,9699 9	1,1724 1
3	309, 782	656,365	0	35.903, 27	201,336	17,1258	20,5268	0	2,0749 3	1,1732 8
3	400, 633	874,128	0	29.308, 75	210,135	18,9834	21,7941	0	2,19	1,1713 9
3	510, 753	1149,99	0	23.689, 56	220,991	21,0961	22,7235	0	2,3135 3	1,1704 3
3	526, 671	1190,25	0	22.645, 98	222,552	21,3862	22,8225	0	2,3300 2	1,1703 6
3	644, 521	1500,51	0	18.877, 35	234,41	23,4997	23,3951	0	2,4468 2	1,1701 2
3	806, 118	1944,77	0	15.210, 51	250,977	26,2141	23,8817	0	2,5892 7	1,1701 6
3	1001 ,55	2509,11	0	11.908, 00	271,452	29,2745	24,2288	0	2,7413	1,1704 1
3	1171 ,84	3025,77	0	9.851,3 0	289,751	31,7902	24,4188	0	2,8604 4	1,1706 8
4	- 108, 311	11,0996	0	1.687,5 6	0,00177 245	0,78242 8	24,6246	0	0,6148 73	1,1739
4	0	11,0996	0	1.687,5	0,00177	0,78242	24,6246	0	0,6148	1,1739



				6	245	8				73	
4	11,1 212	15,6602	0	829.89 3,89	131,248	0,70870 5	-106,388	0	0,3815 32	1,4100 5	
4	19,1 526	25,2785	0	820.29 9,60	184,117	1,59014	-77,617	0	0,4320 67	1,2093 9	
4	34,6 33	46,8313	0	204.45 5,38	192,916	6,84298	5,86168	0	1,228	1,1588 9	
4	40,8 579	55,498	0	163.26 3,40	192,916	8,49957	9,41797	0	1,3891	1,1634 6	
4	40,8 579	55,498	0	163.26 3,40	192,916	8,49931	9,41797	0	1,3891 4	1,1634 6	
4	64,2 215	99,3485	0	91.077, 23	198,104	12,2299	15,7738	0	1,7184 6	1,1694 4	
4	101, 262	171,948	0	77.720, 86	201,475	13,4117	17,0519	0	1,8105 2	1,1698 7	
4	145, 767	263,22	0	67.137, 28	205,577	14,5722	18,0282	0	1,8959 1	1,1703 6	
4	199, 475	377,925	0	57.533, 46	210,577	15,8641	18,8439	0	1,9858 3	1,1710 6	
4	264, 327	522,156	0	48.833, 83	216,689	17,3196	19,5239	0	2,0817 8	1,1719 3	
4	342, 632	703,69	0	41.006, 63	224,176	18,9672	20,083	0	2,1848 2	1,1729 4	
4	437, 181	932,471	0	34.033, 55	233,364	20,8492	20,8053	0	2,2961 9	1,1730 9	
4	551, 394	1221,33	0	28.328, 95	244,661	23,0079	21,9389	0	2,4179	1,1715 4	
4	673, 556	1544,4	0	23.463, 81	256,984	25,1817	22,7106	0	2,5345	1,1708	
4	689, 342	1586,53	0	22.635, 39	258,569	25,4507	22,7877	0	2,5484 8	1,1707 5	
4	856, 759	2050,7	0	17.935, 83	275,741	28,2339	23,4162	0	2,6895 9	1,1704 8	
4	1057 ,53	2636,07	0	14.168, 40	296,86	31,3364	23,8807	0	2,8385 6	1,1705	
4	1298 ,56	3377,16	0	11.122, 25	322,872	34,8022	24,2188	0	2,9966 3	1,1707	
4	1469	3925,95	0	9.537,1	341,708	37,1151	24,3768	0	3,0977	1,1708	



	,58		0					4	8	
5	-90,2593	1E-05	0	1.687,56	0,00177245	0,782428	24,6246	0	0,614873	1,1739
5	0	1E-05	0	1.687,56	0,00177245	0,782428	24,6246	0	0,614873	1,1739
5	10,0475	3,8927	0	826.042,74	129,439	0,630181	-109,472	0	0,377341	1,44014
5	26,8438	11,6862	0	841.731,48	178,641	1,38031	-87,7605	0	0,412149	1,25894
5	36,7027	23,0028	0	596.926,28	207,268	2,57194	-40,428	0	0,651916	1,15408
5	60,0426	55,498	0	158.458,29	207,268	10,0355	9,37469	0	1,51153	1,16595
5	60,0426	55,498	0	158.458,29	207,268	10,0355	9,37469	0	1,51153	1,16595
5	60,1423	55,6759	0	157.845,78	207,309	10,0591	9,43541	0	1,51375	1,16597
5	91,392	114,34	0	94.347,59	212,791	13,8184	15,3374	0	1,82622	1,16979
5	130,019	190,925	0	82.972,25	216,319	14,8857	16,5299	0	1,90614	1,16984
5	176,367	286,844	0	72.423,15	220,6	16,0705	17,5442	0	1,99008	1,17014
5	232,174	407,029	0	62.700,32	225,808	17,392	18,4026	0	2,07879	1,17073
5	299,396	557,777	0	53.786,12	232,16	18,8776	19,1231	0	2,17339	1,17154
5	380,358	747,032	0	45.660,29	239,921	20,5564	19,7259	0	2,27488	1,17251
5	477,843	984,871	0	38.322,21	249,422	22,4582	20,2274	0	2,38417	1,17357
5	595,258	1284,25	0	31.796,28	261,072	24,6377	21,1743	0	2,50329	1,17279
5	736,708	1661,74	0	26.034,29	275,38	27,116	22,1881	0	2,63191	1,17154
5	823,	1902,57	0	23.445,	284,326	28,5663	22,6248	0	2,7043	1,1711

	358			37					1	4
5	907,259	2138,91	0	21.128,92	292,978	29,9134	22,9542	0	2,76984	1,17092
5	1112,5	2741,06	0	16.718,42	314,605	33,0443	23,5298	0	2,91658	1,17071
5	1357,95	3501,78	0	13.338,01	341,192	36,5349	23,9562	0	3,07205	1,17075
5	1649,79	4448,14	0	10.496,93	373,356	40,3456	24,2631	0	3,23347	1,17094
5	1765,53	4836,33	0	9.626,39	386,307	41,7746	24,3497	0	3,29202	1,17103
6	-72,2074	-11,0996	0	1,00	0,00177245	0,782428	24,6246	0	0,614873	1,1739
6	0	-11,0996	0	1.687,56	0,00177245	0,782428	24,6246	0	0,614873	1,1739
6	11,6149	-6,62307	0	832.400,61	131,217	0,701281	-109,025	0	0,37791	1,43073
6	28,0994	-0,165338	0	844.006,76	173,673	1,32123	-91,1052	0	0,406264	1,28028
6	45,3461	8,4487	0	790.953,65	209,994	1,91321	-70,4851	0	0,493062	1,18761
6	60,0251	25,2981	0	299.013,11	215,009	5,5575	-3,43402	0	1,07609	1,15162
6	81,3654	55,498	0	160.282,78	215,009	11,2758	8,91987	0	1,6022	1,16703
6	81,3654	55,498	0	160.282,78	215,009	11,2757	8,91987	0	1,6022	1,16703
6	87,2961	66,088	0	136.249,71	216,862	12,4316	11,2804	0	1,70134	1,16786
6	120,448	129,02	0	99.024,08	221,066	15,1409	14,8866	0	1,91108	1,16959
6	160,388	209,052	0	87.763,90	224,734	16,2326	16,0963	0	1,98977	1,16952
6	208,339	309,052	0	77.172,23	229,169	17,4365	17,1319	0	2,0723	1,16978



6	265,957	434,064	0	67.319,52	234,555	18,7792	18,0156	0	2,1597	1,17034
6	335,211	590,516	0	58.185,84	241,111	20,2876	18,7685	0	2,25299	1,17113
6	418,447	786,511	0	49.770,44	249,109	21,99	19,4077	0	2,35316	1,17208
6	518,478	1032,33	0	42.094,99	258,88	23,9153	19,9467	0	2,46091	1,17313
6	638,684	1341,02	0	35.179,75	270,836	26,0947	20,4424	0	2,57707	1,17408
6	783,146	1729,23	0	29.133,44	285,487	28,6011	21,6024	0	2,7041	1,17243
6	956,752	2218,26	0	23.674,76	303,463	31,4183	22,499	0	2,83983	1,17147
6	970,786	2258,06	0	23.081,13	304,906	31,6337	22,5545	0	2,84997	1,17142
6	1165,83	2835,88	0	18.994,29	325,545	34,5815	23,1789	0	2,985	1,17102
6	1415,15	3613,71	0	15.184,61	352,629	38,0929	23,6912	0	3,1383	1,17089
6	1711,38	4579,41	0	12.094,87	385,337	41,9189	24,0657	0	3,29739	1,17097
6	2008,3	5590,19	0	9.854,09	418,699	45,4514	24,3036	0	3,43789	1,17114
6	2051,95	5739,89	0	9.584,66	423,575	45,9408	24,3306	0	3,45693	1,17116
7	-54,1556	-22,1992	0	1,00	0,00177245	0,782428	24,6246	0	0,614873	1,1739
7	0	-22,1992	0	1.687,56	0,00177245	0,782428	24,6246	0	0,614873	1,1739
7	4,48215	-20,408	0	777.471,83	107,847	0,338554	-110,202	0	0,380225	1,48837
7	15,9297	-16,0888	0	840.808,30	135,521	0,88007	-104,892	0	0,383569	1,38827
7	29,6667	-10,6562	0	844.946,71	170,823	1,35965	-90,6479	0	0,40713	1,27634



7	46,1 512	- 3,60083	0	815.24 1,05	203,363	1,82237	-75,5118	0	0,4679 03	1,2001 8
7	65,9 326	7,50439	0	543.06 3,49	216,202	3,18646	-33,9158	0	0,7433 23	1,1548 2
7	89,6 702	34,7517	0	196.61 1,75	216,202	9,73618	5,28741	0	1,4656 3	1,1651 8
7	102, 775	55,498	0	161.15 8,68	216,202	12,5992	8,40782	0	1,6901 5	1,1688 5
7	102, 775	55,498	0	161.15 8,68	216,202	12,5992	8,40782	0	1,6901 5	1,1688 5
7	118, 155	82,9626	0	123.66 8,63	219,491	14,7993	12,2677	0	1,8666 8	1,1695 9
7	152, 338	149,386	0	104.11 0,58	222,833	16,4165	14,3632	0	1,9862 3	1,1696 2
7	193, 356	232,464	0	92.320, 93	226,605	17,509	15,5963	0	2,0633 1	1,1694 2
7	242, 579	336,054	0	81.072, 13	231,165	18,7178	16,6615	0	2,1443 5	1,1696
7	301, 645	465,311	0	70.429, 12	236,697	20,0684	17,5835	0	2,2303 8	1,1700 8
7	372, 526	626,741	0	60.434, 10	243,423	21,588	18,3805	0	2,3224 3	1,1708 2
7	457, 582	828,573	0	51.160, 00	251,617	23,3048	19,0662	0	2,4213 8	1,1717 3
7	559, 649	1081,25	0	42.695, 32	261,616	25,2464	19,6514	0	2,5279	1,1727 6
7	682, 13	1398,01	0	35.128, 19	273,833	27,4407	20,1453	0	2,6425 2	1,1738 5
7	829, 107	1795,65	0	28.441, 39	288,778	29,9413	20,9803	0	2,7668 5	1,1734 8
7	1005 ,48	2295,72	0	23.081, 07	307,088	32,7756	22,0132	0	2,9010 9	1,1721 7
7	1119 ,22	2630,23	0	20.224, 44	319,089	34,5069	22,4835	0	2,9800 4	1,1717
7	1217 ,13	2926,22	0	17.959, 38	329,546	35,9586	22,8058	0	3,0443 6	1,1714 6
7	1471 ,1	3721,93	0	13.614, 38	357,103	39,512	23,4071	0	3,1972 2	1,1711 6



7	1771,1	4704,94	0	10.831,23	390,288	43,3476	23,8533	0	3,35423	1,1711
7	2071,1	5731,9	0	8.854,37	424,086	46,8831	24,1403	0	3,49286	1,17118
7	2339,97	6685,84	0	7.528,31	454,819	49,8344	24,3177	0	3,60453	1,17129
8	-36,1037	-33,2988	0	1,00	0,00177245	0,782428	24,6246	0	0,614873	1,1739
8	0	-33,2988	0	1.687,56	0,00177245	0,782428	24,6246	0	0,614873	1,1739
8	5,0447	-31,2965	0	788.527,02	96,0894	0,36802	-111,815	0	0,377094	1,49381
8	12,9944	-28,3172	0	837.318,38	115,008	0,746224	-108,719	0	0,378147	1,42382
8	22,534	-24,6345	0	845.553,60	140,189	1,09978	-98,1861	0	0,39441	1,33093
8	33,9816	-20,0104	0	844.769,71	168,091	1,46169	-87,4871	0	0,412994	1,25474
8	47,7186	-14,0521	0	814.368,22	193,775	1,83211	-75,4988	0	0,469513	1,20072
8	64,2031	-5,35275	0	718.488,80	211,57	2,4488	-60,3129	0	0,588478	1,1796
8	87,2818	7,46342	0	652.819,93	230,598	3,24849	-52,9554	0	0,694204	1,18274
8	104,272	22,3783	0	608.020,63	250,287	4,01291	-45,9033	0	0,787067	1,17435
8	104,272	22,3783	0	608.020,63	250,287	4,01291	-45,9033	0	0,787067	1,17435
8	107,722	25,2453	0	511.311,68	251,307	4,51334	-28,2553	0	0,894245	1,14667
8	124,307	46,2818	0	144.093,84	261,403	10,3717	13,3067	0	1,57279	1,15562
8	124,307	46,2818	0	144.093,84	261,403	10,3716	13,3067	0	1,57279	1,15562
8	136,207	66,5377	0	96.213,19	265,609	13,3198	16,387	0	1,80595	1,164



8	170,389	131,789	0	74.368,61	269,162	15,4366	17,779	0	1,95606	1,16724
8	211,408	213,575	0	65.655,42	272,913	16,549	18,4375	0	2,03084	1,16823
8	260,63	315,496	0	57.485,64	277,428	17,7745	19,0166	0	2,10993	1,16927
8	319,697	442,654	0	49.842,80	282,896	19,1359	19,5241	0	2,1942	1,17035
8	390,577	601,468	0	42.726,82	289,539	20,6614	19,968	0	2,28475	1,17147
8	475,634	800,074	0	36.168,16	297,628	22,3781	20,3537	0	2,38257	1,17261
8	577,701	1048,81	0	30.271,90	307,499	24,3403	21,1286	0	2,48939	1,17218
8	700,182	1360,9	0	24.919,88	319,57	26,5699	22,0319	0	2,60547	1,17114
8	847,159	1753,1	0	19.516,48	334,352	29,0806	22,7508	0	2,73055	1,17058
8	852,223	1766,93	0	19.435,32	334,866	29,1644	22,7707	0	2,73462	1,17057
8	1023,53	2247,52	0	15.143,18	352,483	31,9088	23,3134	0	2,86493	1,17037
8	1235,18	2869,18	0	11.480,84	374,699	35,0654	23,7523	0	3,00803	1,17038
8	1489,16	3652,7	0	8.438,63	401,946	38,5785	24,0884	0	3,15993	1,17056
8	1748,84	4491,58	0	6.951,32	430,374	41,9099	24,3112	0	3,29772	1,17078
9	-18,0519	-44,3984	0	1,00	0,00177	0,78242	24,6246	0	0,614873	1,1739
9	0	-44,3984	0	1.687,56	0,00177	0,78242	24,6246	0	0,614873	1,1739
9	2,51694	-43,3684	0	730.336,19	69,586	0,21389	-104,599	0	0,3923	1,47761
9	6,3507	-41,9145	0	808.695,80	76,9451	0,42799	-114,451	0	0,372022	1,50108



9	10,9 512	- 40,2038	0	835.07 2,10	87,8674	0,63598	-112,186	0	0,3734 92	1,4567 4
9	16,4 718	- 38,1188	0	844.85 4,81	102,18	0,84541 1	-106,173	0	0,3822 27	1,3955 3
9	23,0 966	- 35,5471	0	847.81 7,02	119,495	1,0653	-98,4455	0	0,3941 34	1,3310 6
9	31,0 462	- 32,3612	0	847.75 9,49	139,037	1,30486	-90,8557	0	0,4070 49	1,2755 8
9	40,5 859	- 28,4101	0	840.31 6,19	159,585	1,59451	-83,2319	0	0,4214 45	1,23
9	52,0 334	- 23,2824	0	804.58 0,04	178,821	1,88488	-73,8655	0	0,4812 92	1,1979
9	65,7 705	- 16,0875	0	743.40 9,47	196,021	2,34358	-64,604	0	0,5640 02	1,1867
9	84,2 4	- 6,14069	0	701.60 2,19	216,748	2,89366	-59,7012	0	0,6368 54	1,1874
9	108, 204	7,12609	0	673.46 1,98	243,506	3,47187	-55,6869	0	0,7035 62	1,1839 7
9	110, 229	8,70785	0	669.94 8,46	246,319	3,53754	-55,0924	0	0,7114 6	1,1830 5
9	110, 229	8,70785	0	669.94 8,46	246,319	3,53754	-55,0924	0	0,7114 6	1,1830 5
9	135, 35	32,9796	0	138.74 2,22	258,581	10,0033	13,8849	0	1,5472 9	1,1556 2
9	135, 35	32,9796	0	138.74 2,22	258,581	10,0036	13,8849	0	1,5472 5	1,1556 2
9	135, 377	33,0139	0	138.58 4,65	258,593	10,0109	13,8953	0	1,5478 8	1,1556 5
9	166, 314	82,9103	0	82.575, 43	263,764	13,6758	17,3548	0	1,8359 8	1,1654 1
9	199, 685	147,273	0	71.821, 93	266,784	14,7596	18,0994	0	1,9132 2	1,1667 2
9	239, 63	227,432	0	63.692, 71	270,421	15,8255	18,7123	0	1,9861 6	1,1678
9	287, 558	327,116	0	56.347, 88	274,82	17,008	19,2574	0	2,0638 6	1,1689
9	345, 168	451,483	0	49.496, 39	280,158	18,3304	19,7368	0	2,1472 4	1,1700 5



9	414,436	606,905	0	42.636,33	286,654	19,8183	20,1553	0	2,23717	1,17123
9	497,719	801,428	0	33.314,20	294,574	21,4983	20,5169	0	2,3346	1,17242
9	597,788	1045,3	0	25.227,79	304,254	23,4359	21,5229	0	2,44197	1,17117
9	718,234	1351,61	0	18.837,07	316,109	25,6266	22,347	0	2,55816	1,17046
9	836,531	1660,32	0	14.679,00	327,781	27,6271	22,893	0	2,66019	1,17008
9	865,211	1737,05	0	14.116,05	330,644	28,1033	22,9998	0	2,68323	1,17004
9	1041,58	2223,7	0	10.350,50	348,499	30,901	23,5094	0	2,81827	1,17
9	1253,23	2835,46	0	7.549,22	370,389	34,0231	23,9044	0	2,96188	1,17013
9	1507,21	3607,15	0	5.411,07	397,266	37,5054	24,2053	0	3,11454	1,17039
9	1700,92	4220,58	0	4.661,80	418,152	39,9946	24,3605	0	3,2194	1,1706
10	0	-55,498	0	1,00	0,00177	0,78242	24,6246	0	0,614873	1,1739
10	0,1	-55,4562	0	662.867,41	3,24102	0,00895	-102,214	0	0,38754	1,51128
10	0,2	-55,4176	0	680.502,43	4,51105	0,01649	-105,321	0	0,384925	1,5246
10	0,3	-55,3791	0	686.225,61	5,50428	0,02398	-106,305	0	0,384161	1,52881
10	0,4	-55,3409	0	694.532,58	6,34946	0,03113	-107,981	0	0,381473	1,53739
10	0,5	-55,3029	0	703.757,83	7,09897	0,03790	-109,881	0	0,378223	1,54751
10	0,6	-55,2652	0	712.653,55	7,77849	0,04438	-111,711	0	0,375074	1,5575
10	0,7	-55,2278	0	720.906,05	8,40642	0,05059	-113,399	0	0,372188	1,566988
10	0,8	-	0	728.46	8,99464	0,05659	-114,935	0	0,3695	1,5756

		55,1907		9,13		27			86	1
10	0,9	-	0	735.37	9,55058	0,06239	-116,329	0	0,3672	1,5836
		55,1539		5,44		57			55	3
10	1	-	0	741.68	10,0794	0,06803	-117,596	0	0,3651	1,5910
		55,1173		9,88		56			65	2
10	1,1	-	0	747.48	10,5847	0,07353	-118,752	0	0,3632	1,5978
		55,0809		4,15		82			82	6
10	1,2	-	0	752.81	11,0701	0,07891	-119,81	0	0,3615	1,6041
		55,0446		7,70		52			82	9
10	1,3	-	0	757.74	11,5391	0,08417	-120,783	0	0,3600	1,6100
		55,0086		1,38		04			44	7
10	1,4	-	0	762.30	11,9932	0,08931	-121,68	0	0,3586	1,6155
		54,9726		6,44		91			47	5
10	1,5	-	0	766.55	12,4348	0,09436	-122,51	0	0,3573	1,6206
		54,9368		1,21		25			75	8
10	1,6	-	0	770.53	12,8647	0,09931	-123,287	0	0,3562	1,6255
		54,9012		6,53		18			01	1
10	1,7	-	0	774.32	13,2846	0,10416	-124,024	0	0,3550	1,6301
		54,8656		7,85		1			99	5
10	1,8	-	0	778.10	13,695	0,10889	-124,76	0	0,3539	1,6348
		54,8302		5,77		2			83	3
10	1,9	-	0	781.87	14,097	0,11350	-125,495	0	0,3528	1,6395
		54,7948		6,65		4			54	6
10	2	-	0	785.62	14,4912	0,11800	-126,226	0	0,3517	1,6443
		54,7596		6,47		7			19	3
10	2,12	-	0	790.06	14,9549	0,12327	-127,09	0	0,3503	1,6500
		54,7175		1,53		4			72	3
10	2,26	-	0	795.24	15,499	0,12941	-128,099	0	0,3488	1,6567
	4	54,6672		9,52		3			01	7
10	2,43	-54,607	0	801.23	16,1361	0,13654	-129,257	0	0,3470	1,6646
	68			2,43		2			11	1
10	2,64	-	0	808.02	16,8804	0,14479	-130,565	0	0,3450	1,6736
	416	54,5353		6,01		1			21	1
10	2,89	-	0	815.61	17,7472	0,15430	-132,017	0	0,3428	1,6837
	299	54,4497		7,37		9			67	7
10	3,19	-	0	823.94	18,7556	0,16524	-133,594	0	0,3406	1,695
	159	54,3477		2,78		6			13	
10	3,54	-54,226	0	832.87	19,9278	0,17776	-135,267	0	0,3383	1,7071

	991			2,52		5			59	4
10	3,97 989	-54,081	0	841.80 8,00	21,2888	0,19217 9	-136,91	0	0,3364 28	1,7192 3
10	4,49 587	- 53,9077	0	849.92 6,80	22,8674	0,20894 5	-138,359	0	0,3352 45	1,7299 3
10	5,11 504	- 53,7002	0	856.95 4,46	24,7003	0,22848	-139,57	0	0,3349 27	1,7388
10	5,85 805	- 53,4511	0	862.93 5,03	26,8358	0,25112 5	-140,565	0	0,3354 38	1,7460 3
10	6,74 966	- 53,1515	0	867.78 0,95	29,309	0,27836 4	-140,968	0	0,3367 94	1,7464 2
10	7,81 959	-52,79	0	871.38 6,46	32,167	0,31260 5	-140,183	0	0,3390 05	1,7319 6
10	9,10 351	- 52,3528	0	873.81 2,23	35,4845	0,35522 1	-138,266	0	0,3420 41	1,7039 8
10	10,6 442	- 51,8229	0	875.15 6,18	39,3525	0,40760 6	-135,34	0	0,3458 64	1,6652 9
10	12,4 931	- 51,1792	0	875.53 2,12	43,9427	0,47050 5	-131,563	0	0,3504 5	1,6192 6
10	14,7 117	- 50,3956	0	874.96 8,43	49,6295	0,54298 2	-126,955	0	0,3559 75	1,5675 2
10	17,3 74	- 49,4389	0	873.46 8,93	56,6507	0,62614 3	-121,477	0	0,3626 64	1,5111 8
10	20,5 688	- 48,2677	0	871.17 7,25	65,1705	0,72150 1	-115,399	0	0,3705 41	1,4541
10	24,4 026	- 46,8302	0	868.32 9,15	75,3439	0,83113 5	-109,057	0	0,3793 5	1,3997 2
10	29,0 031	- 45,0631	0	865.15 9,40	87,2889	0,95816 2	-102,755	0	0,3887 54	1,3502
10	34,5 237	- 42,8896	0	861.85 8,08	101,036	1,10774	-96,6469	0	0,3983 82	1,3059 4
10	41,1 484	- 40,2176	0	858.26 6,94	116,464	1,28678	-90,9248	0	0,4079 75	1,2677
10	49,0 981	- 36,9309	0	849.21 7,67	133,252	1,5148	-85,0729	0	0,4187 96	1,2351 5
10	58,6 377	- 32,8131	0	827.39 3,50	150,682	1,75882	-78,5771	0	0,4516 24	1,2100 1
10	70,0	-	0	788.85	168,32	2,05876	-71,8865	0	0,5105	1,1972



	853	27,3051		1,17					64	
10	83,8 223	- 19,8706	0	753.80 3,27	188,608	2,44978	-67,3166	0	0,5684 6	1,1949 5
10	100, 307	-10,07	0	733.30 2,88	214,298	2,87084	-64,505	0	0,6188 07	1,1928 8
10	104, 561	- 7,59373	0	728.90 2,92	220,468	2,96751	-63,7456	0	0,6302 48	1,1915 6
10	104, 561	- 7,59373	0	728.90 2,92	220,468	2,96751	-63,7456	0	0,6302 48	1,1915 6
10	130, 983	6,99307	0	195.82 1,03	230,038	7,12042	10,1508	0	1,2855 7	1,1445 3
10	139, 919	15,1531	0	134.08 0,86	233,317	9,09186	14,3855	0	1,4761	1,1556 2
10	139, 919	15,1531	0	134.08 0,86	233,317	9,09188	14,3855	0	1,4761	1,1556 2
10	164, 971	43,6199	0	99.205, 92	236,153	11,0291	16,6478	0	1,6408 1	1,162
10	193, 893	91,7058	0	86.168, 29	238,485	12,0791	17,6128	0	1,7238 4	1,1639 4
10	225, 013	151,908	0	75.224, 08	241,305	13,0255	18,3352	0	1,7953 1	1,1653 4
10	262, 464	227,062	0	66.324, 83	244,718	14,0219	18,9514	0	1,8674	1,1666 3
10	307, 598	320,92	0	58.208, 48	248,861	15,135	19,4956	0	1,9445 7	1,1679 4
10	362, 078	438,296	0	48.642, 17	253,906	16,391	19,9744	0	2,0280 2	1,1692 6
10	427, 834	585,319	0	34.221, 78	260,067	17,8141	20,3878	0	2,1184 7	1,1705 9
10	511, 737	769,798	0	24.220, 37	267,605	19,4469	21,1175	0	2,2176	1,1706 1
10	613, 805	1001,77	0	17.175, 09	276,851	21,3184	22,0735	0	2,3262 6	1,1696 4
10	736, 286	1293,97	0	12.137, 02	288,208	23,4444	22,819	0	2,4438 6	1,1692 2
10	806, 644	1468,13	0	10.388, 22	294,851	24,6155	23,1255	0	2,5063 4	1,1691 6
10	883,	1663,2	0	8.943,4	302,186	25,8605	23,3914	0	2,5711	1,1691



	263			8					3	9
10	1059,64	2129,03	0	6.391,68	319,379	28,5865	23,8289	0	2,70782	1,1694
10	1271,28	2717,76	0	4.575,04	340,543	31,6531	24,1583	0	2,85406	1,16975
10	1525,26	3462,77	0	3.631,73	366,608	35,0855	24,402	0	3,00963	1,17019
10	1613,99	3732,08	0	3.373,23	375,866	36,2285	24,4635	0	3,05974	1,17032
11	11,4699	-55,498	0	1,00	0,00177245	0,782428	24,6246	0	0,614873	1,1739
11	11,5699	-55,4562	0	662,867,41	3,24102	0,00895011	-102,214	0	0,38754	1,51128
11	11,6699	-55,4176	0	680,502,43	4,51105	0,0164937	-105,321	0	0,384925	1,5246
11	11,7699	-55,3791	0	686,225,61	5,50428	0,0239888	-106,305	0	0,384161	1,52881
11	11,8699	-55,3409	0	694,532,58	6,34946	0,0311331	-107,981	0	0,381473	1,53739
11	11,9699	-55,3029	0	703,757,83	7,09897	0,0379044	-109,881	0	0,378223	1,54751
11	12,0699	-55,2652	0	712,653,55	7,77849	0,0443806	-111,711	0	0,375074	1,5575
11	12,1699	-55,2278	0	720,906,05	8,40642	0,0505984	-113,399	0	0,372188	1,5669
11	12,2699	-55,1907	0	728,469,13	8,99464	0,0565927	-114,935	0	0,369586	1,57561
11	12,3699	-55,1539	0	735,375,44	9,55058	0,0623957	-116,329	0	0,367255	1,58363
11	12,4699	-55,1173	0	741,689,88	10,0794	0,0680356	-117,596	0	0,365165	1,59102
11	12,5699	-55,0809	0	747,484,15	10,5847	0,0735382	-118,752	0	0,363282	1,59786
11	12,6699	-55,0446	0	752,817,70	11,0701	0,0789152	-119,81	0	0,361582	1,60419
11	12,7699	-55,0086	0	757,741,38	11,5391	0,0841704	-120,783	0	0,360044	1,61007

11	12,8 699	- 54,9726	0	762.30 6,44	11,9932	0,08931 91	-121,68	0	0,3586 47	1,6155 5
11	12,9 699	- 54,9368	0	766.55 1,21	12,4348	0,09436 25	-122,51	0	0,3573 75	1,6206 8
11	13,0 699	- 54,9012	0	770.53 6,53	12,8647	0,09931 18	-123,287	0	0,3562 01	1,6255 1
11	13,1 699	- 54,8656	0	774.32 7,85	13,2846	0,10416 1	-124,024	0	0,3550 99	1,6301 5
11	13,2 699	- 54,8302	0	778.10 5,77	13,695	0,10889 2	-124,76	0	0,3539 83	1,6348 3
11	13,3 699	- 54,7948	0	781.87 6,65	14,097	0,11350 4	-125,495	0	0,3528 54	1,6395 6
11	13,4 699	- 54,7596	0	785.62 6,47	14,4912	0,11800 7	-126,226	0	0,3517 19	1,6443 3
11	13,5 899	- 54,7175	0	790.06 1,53	14,9549	0,12327 4	-127,09	0	0,3503 72	1,6500 3
11	13,7 339	- 54,6672	0	795.24 9,52	15,499	0,12941 3	-128,099	0	0,3488 01	1,6567 7
11	13,9 067	-54,607	0	801.23 2,43	16,1361	0,13654 2	-129,257	0	0,3470 11	1,6646 1
11	14,1 141	- 54,5353	0	808.02 6,01	16,8804	0,14479 1	-130,565	0	0,3450 21	1,6736 1
11	14,3 629	- 54,4497	0	815.61 7,37	17,7472	0,15430 9	-132,017	0	0,3428 67	1,6837 7
11	14,6 615	- 54,3477	0	823.94 2,78	18,7556	0,16524 6	-133,594	0	0,3406 13	1,695
11	15,0 198	-54,226	0	832.87 2,52	19,9278	0,17776 5	-135,267	0	0,3383 59	1,7071 4
11	15,4 498	-54,081	0	841.80 8,00	21,2888	0,19217 9	-136,91	0	0,3364 28	1,7192 3
11	15,9 658	- 53,9077	0	849.92 6,80	22,8674	0,20894 5	-138,359	0	0,3352 45	1,7299 3
11	16,5 85	- 53,7002	0	856.95 4,46	24,7003	0,22848	-139,57	0	0,3349 27	1,7388
11	17,3 28	- 53,4511	0	862.93 5,03	26,8358	0,25112 5	-140,565	0	0,3354 38	1,7460 3
11	18,2 196	- 53,1515	0	867.78 0,95	29,309	0,27836 4	-140,968	0	0,3367 94	1,7464 2

11	19,2 895	-52,79	0	871.38 6,46	32,167	0,31260 5	-140,183	0	0,3390 05	1,7319 6
11	20,5 734	- 52,3528	0	873.81 2,23	35,4845	0,35522 1	-138,266	0	0,3420 41	1,7039 8
11	22,1 141	- 51,8229	0	875.15 6,18	39,3525	0,40760 6	-135,34	0	0,3458 64	1,6652 9
11	23,9 63	- 51,1792	0	875.53 2,12	43,9427	0,47050 5	-131,563	0	0,3504 5	1,6192 6
11	26,1 816	- 50,3956	0	874.96 8,43	49,6295	0,54298 2	-126,955	0	0,3559 75	1,5675 2
11	28,8 439	- 49,4389	0	873.46 8,93	56,6507	0,62614 3	-121,477	0	0,3626 64	1,5111 8
11	32,0 387	- 48,2677	0	871.17 7,25	65,1705	0,72150 1	-115,399	0	0,3705 41	1,4541
11	35,8 725	- 46,8302	0	868.32 9,15	75,3439	0,83113 5	-109,057	0	0,3793 5	1,3997 2
11	40,4 73	- 45,0631	0	865.15 9,40	87,2889	0,95816 2	-102,755	0	0,3887 54	1,3502
11	45,9 936	- 42,8896	0	861.85 8,08	101,036	1,10774	-96,6469	0	0,3983 82	1,3059 4
11	52,6 183	- 40,2176	0	858.26 6,94	116,464	1,28678	-90,9248	0	0,4079 75	1,2677
11	60,5 68	- 36,9309	0	849.21 7,67	133,252	1,5148	-85,0729	0	0,4187 96	1,2351 5
11	70,1 077	- 32,8131	0	827.39 3,50	150,682	1,75882	-78,5771	0	0,4516 24	1,2100 1
11	81,5 552	- 27,3051	0	788.85 1,17	168,32	2,05876	-71,8865	0	0,5105 64	1,1972
11	95,2 923	- 19,8706	0	753.80 3,27	188,608	2,44978	-67,3166	0	0,5684 6	1,1949 5
11	104, 272	- 14,6334	0	741.39 0,90	202,509	2,68472	-65,7188	0	0,5971 74	1,1942 9
11	104, 272	- 14,6334	0	741.39 0,90	202,509	2,68472	-65,7188	0	0,5971 74	1,1942 9
11	111, 777	-9,4564	0	444.15 6,25	206,878	3,79254	-14,4639	0	0,8656 04	1,1227 5
11	138, 681	6,49367	0	132.77 9,11	214,699	8,40234	14,5262	0	1,4183 8	1,1556 2



11	138,681	6,49367	0	132.779,11	214,699	8,40264	14,5262	0	1,41833	1,15562
11	148,934	15,6223	0	114.960,47	215,883	9,21862	15,6817	0	1,4924	1,15892
11	178,584	51,9496	0	100.783,86	217,715	10,0105	16,7694	0	1,56166	1,16076
11	205,541	97,5973	0	81.967,83	219,923	10,9927	17,7518	0	1,64289	1,16284
11	235,143	154,973	0	69.132,15	222,604	11,8742	18,4796	0	1,7124	1,16436
11	270,883	226,693	0	60.780,31	225,861	12,8288	19,1052	0	1,78442	1,16583
11	314,037	316,423	0	52.436,40	229,827	13,9004	19,6525	0	1,86179	1,16739
11	367,271	428,882	0	40.795,63	234,67	15,1131	20,1291	0	1,94545	1,16877
11	438,151	570,06	0	26.152,41	240,599	16,4916	20,5396	0	2,03638	1,17022
11	523,207	747,613	0	19.346,56	247,873	18,0878	21,5174	0	2,1368	1,16946
11	625,275	971,389	0	14.440,32	256,818	19,9129	22,4214	0	2,24634	1,16875
11	747,756	1253,9	0	10.644,83	267,831	21,996	23,1103	0	2,36462	1,16858
11	785,558	1343,94	0	9.909,36	271,286	22,615	23,2688	0	2,39914	1,16864
11	894,733	1612,18	0	8.520,82	281,428	24,372	23,63	0	2,4939	1,16876
11	1071,11	2064,78	0	6.856,01	298,183	27,0569	24,0195	0	2,63237	1,16914
11	1282,75	2637,63	0	5.454,04	318,847	30,0843	24,3078	0	2,78043	1,16962
11	1536,73	3363,9	0	4.290,22	344,344	33,482	24,5173	0	2,9381	1,17014
11	1554,57	3416,41	0	4.223,41	346,162	33,7121	24,5284	0	2,94849	1,17017
12	22,9	-55,498	0	1,00	0,00177	0,78242	24,6246	0	0,6148	1,1739



	398				245	8			73	
12	23,0	-	0	662.86	3,24102	0,00895	-102,214	0	0,3875	1,5112
	398	55,4562		7,41		011			4	8
12	23,1	-	0	680.50	4,51105	0,01649	-105,321	0	0,3849	1,5246
	398	55,4176		2,43		37			25	
12	23,2	-	0	686.22	5,50428	0,02398	-106,305	0	0,3841	1,5288
	398	55,3791		5,61		88			61	1
12	23,3	-	0	694.53	6,34946	0,03113	-107,981	0	0,3814	1,5373
	398	55,3409		2,58		31			73	9
12	23,4	-	0	703.75	7,09897	0,03790	-109,881	0	0,3782	1,5475
	398	55,3029		7,83		44			23	1
12	23,5	-	0	712.65	7,77849	0,04438	-111,711	0	0,3750	1,5575
	398	55,2652		3,55		06			74	
12	23,6	-	0	720.90	8,40642	0,05059	-113,399	0	0,3721	1,5669
	398	55,2278		6,05		84			88	
12	23,7	-	0	728.46	8,99464	0,05659	-114,935	0	0,3695	1,5756
	398	55,1907		9,13		27			86	1
12	23,8	-	0	735.37	9,55058	0,06239	-116,329	0	0,3672	1,5836
	398	55,1539		5,44		57			55	3
12	23,9	-	0	741.68	10,0794	0,06803	-117,596	0	0,3651	1,5910
	398	55,1173		9,88		56			65	2
12	24,0	-	0	747.48	10,5847	0,07353	-118,752	0	0,3632	1,5978
	398	55,0809		4,15		82			82	6
12	24,1	-	0	752.81	11,0701	0,07891	-119,81	0	0,3615	1,6041
	398	55,0446		7,70		52			82	9
12	24,2	-	0	757.74	11,5391	0,08417	-120,783	0	0,3600	1,6100
	398	55,0086		1,38		04			44	7
12	24,3	-	0	762.30	11,9932	0,08931	-121,68	0	0,3586	1,6155
	398	54,9726		6,44		91			47	5
12	24,4	-	0	766.55	12,4348	0,09436	-122,51	0	0,3573	1,6206
	398	54,9368		1,21		25			75	8
12	24,5	-	0	770.53	12,8647	0,09931	-123,287	0	0,3562	1,6255
	398	54,9012		6,53		18			01	1
12	24,6	-	0	774.32	13,2846	0,10416	-124,024	0	0,3550	1,6301
	398	54,8656		7,85		1			99	5
12	24,7	-	0	778.10	13,695	0,10889	-124,76	0	0,3539	1,6348
	398	54,8302		5,77		2			83	3
12	24,8	-	0	781.87	14,097	0,11350	-125,495	0	0,3528	1,6395

	398	54,7948		6,65		4			54	6
12	24,9	-	0	785.62	14,4912	0,11800	-126,226	0	0,3517	1,6443
	398	54,7596		6,47		7			19	3
12	25,0	-	0	790.06	14,9549	0,12327	-127,09	0	0,3503	1,6500
	598	54,7175		1,53		4			72	3
12	25,2	-	0	795.24	15,499	0,12941	-128,099	0	0,3488	1,6567
	038	54,6672		9,52		3			01	7
12	25,3	-54,607	0	801.23	16,1361	0,13654	-129,257	0	0,3470	1,6646
	766			2,43		2			11	1
12	25,5	-	0	808.02	16,8804	0,14479	-130,565	0	0,3450	1,6736
	84	54,5353		6,01		1			21	1
12	25,8	-	0	815.61	17,7472	0,15430	-132,017	0	0,3428	1,6837
	328	54,4497		7,37		9			67	7
12	26,1	-	0	823.94	18,7556	0,16524	-133,594	0	0,3406	1,695
	314	54,3477		2,78		6			13	
12	26,4	-54,226	0	832.87	19,9278	0,17776	-135,267	0	0,3383	1,7071
	898			2,52		5			59	4
12	26,9	-54,081	0	841.80	21,2888	0,19217	-136,91	0	0,3364	1,7192
	197			8,00		9			28	3
12	27,4	-	0	849.92	22,8674	0,20894	-138,359	0	0,3352	1,7299
	357	53,9077		6,80		5			45	3
12	28,0	-	0	856.95	24,7003	0,22848	-139,57	0	0,3349	1,7388
	549	53,7002		4,46					27	
12	28,7	-	0	862.93	26,8358	0,25112	-140,565	0	0,3354	1,7460
	979	53,4511		5,03		5			38	3
12	29,6	-	0	867.78	29,309	0,27836	-140,968	0	0,3367	1,7464
	895	53,1515		0,95		4			94	2
12	30,7	-52,79	0	871.38	32,167	0,31260	-140,183	0	0,3390	1,7319
	594			6,46		5			05	6
12	32,0	-	0	873.81	35,4845	0,35522	-138,266	0	0,3420	1,7039
	434	52,3528		2,23		1			41	8
12	33,5	-	0	875.15	39,3525	0,40760	-135,34	0	0,3458	1,6652
	841	51,8229		6,18		6			64	9
12	35,4	-	0	875.53	43,9427	0,47050	-131,563	0	0,3504	1,6192
	329	51,1792		2,12		5			5	6
12	37,6	-	0	874.96	49,6295	0,54298	-126,955	0	0,3559	1,5675
	515	50,3956		8,43		2			75	2
12	40,3	-	0	873.46	56,6507	0,62614	-121,477	0	0,3626	1,5111

	138	49,4389		8,93		3			64	8
12	43,5 086	- 48,2677	0	871.17 7,25	65,1705	0,72150 1	-115,399	0	0,3705 41	1,4541
12	47,3 424	- 46,8302	0	868.32 9,15	75,3439	0,83113 5	-109,057	0	0,3793 5	1,3997 2
12	51,9 429	- 45,0631	0	865.15 9,40	87,2889	0,95816 2	-102,755	0	0,3887 54	1,3502
12	57,4 635	- 42,8896	0	861.85 8,08	101,036	1,10774	-96,6469	0	0,3983 82	1,3059 4
12	64,0 883	- 40,2176	0	858.26 6,94	116,464	1,28678	-90,9248	0	0,4079 75	1,2677
12	72,0 38	- 36,9309	0	849.21 7,67	133,252	1,5148	-85,0729	0	0,4187 96	1,2351 5
12	81,5 776	- 32,8131	0	827.39 3,50	150,682	1,75882	-78,5771	0	0,4516 24	1,2100 1
12	93,0 251	- 27,3051	0	788.85 1,17	168,32	2,05876	-71,8865	0	0,5105 64	1,1972
12	104, 272	- 21,2751	0	758.36 7,47	184,842	2,38128	-67,8776	0	0,5594 75	1,1950 4
12	104, 272	- 21,2751	0	758.36 7,47	184,842	2,38128	-67,8776	0	0,5594 75	1,1950 4
12	106, 762	- 19,8493	0	724.76 3,30	186,598	2,43325	-58,7923	0	0,5917 75	1,1670 4
12	130, 345	- 3,54808	0	140.42 8,69	195,099	7,33647	14,125	0	1,3214 2	1,1537 7
12	132, 936	- 2,01177	0	131.00 6,48	195,653	7,67123	14,7172	0	1,3542 9	1,1556 2
12	132, 936	- 2,01177	0	131.00 6,48	195,653	7,67098	14,7172	0	1,3543 3	1,1556 2
12	166, 915	27,1131	0	65.865, 15	197,189	12,0703	18,494	0	1,7271 9	1,1692 3
12	198, 384	70,9109	0	43.927, 93	199,36	14,8589	19,4932	0	1,9266 8	1,1730 9
12	229, 319	127,011	0	36.718, 68	202,018	15,9222	19,8353	0	1,9978 9	1,1739 3
12	264, 441	196,503	0	32.791, 44	205,202	16,8233	20,1088	0	2,0563 9	1,1744 9
12	306,	281,997	0	29.702,	209,018	17,6957	20,3529	0	2,1115	1,1749



	083			56					4	
12	356,28	387,489	0	26.515,84	213,603	18,768	20,9572	0	2,17731	1,17419
12	421,393	519,548	0	22.050,29	219,197	20,8567	21,8558	0	2,29999	1,17314
12	441,471	559,539	0	21.043,18	220,865	21,9986	22,1667	0	2,36437	1,17296
12	505,922	693,573	0	14.831,55	226,38	26,9469	23,0447	0	2,62604	1,17271
12	617,473	935,424	0	9.307,33	236,097	36,1699	23,8472	0	3,05694	1,17271
12	763,785	1271,59	0	5.842,83	249,214	47,4947	24,299	0	3,51734	1,17281
12	826,142	1422,52	0	4.974,60	254,985	52,0378	24,409	0	3,6863	1,17285
13	34,4098	-55,498	0	1,00	0,00177245	0,782428	24,6246	0	0,614873	1,1739
13	34,5098	-55,4562	0	662.867,41	3,24102	0,00895011	-102,214	0	0,38754	1,51128
13	34,6098	-55,4176	0	680.502,43	4,51105	0,0164937	-105,321	0	0,384925	1,5246
13	34,7098	-55,3791	0	686.225,61	5,50428	0,0239888	-106,305	0	0,384161	1,52881
13	34,8098	-55,3409	0	694.532,58	6,34946	0,0311331	-107,981	0	0,381473	1,53739
13	34,9098	-55,3029	0	703.757,83	7,09897	0,0379044	-109,881	0	0,378223	1,54751
13	35,0098	-55,2652	0	712.653,55	7,77849	0,0443806	-111,711	0	0,375074	1,5575
13	35,1098	-55,2278	0	720.906,05	8,40642	0,0505984	-113,399	0	0,372188	1,5669
13	35,2098	-55,1907	0	728.469,13	8,99464	0,0565927	-114,935	0	0,369586	1,57561
13	35,3098	-55,1539	0	735.375,44	9,55058	0,0623957	-116,329	0	0,367255	1,58363
13	35,4098	-55,1173	0	741.689,88	10,0794	0,0680356	-117,596	0	0,365165	1,59102



13	35,5 098	- 55,0809	0	747.48 4,15	10,5847	0,07353 82	-118,752	0	0,3632 82	1,5978 6
13	35,6 098	- 55,0446	0	752.81 7,70	11,0701	0,07891 52	-119,81	0	0,3615 82	1,6041 9
13	35,7 098	- 55,0086	0	757.74 1,38	11,5391	0,08417 04	-120,783	0	0,3600 44	1,6100 7
13	35,8 098	- 54,9726	0	762.30 6,44	11,9932	0,08931 91	-121,68	0	0,3586 47	1,6155 5
13	35,9 098	- 54,9368	0	766.55 1,21	12,4348	0,09436 25	-122,51	0	0,3573 75	1,6206 8
13	36,0 098	- 54,9012	0	770.53 6,53	12,8647	0,09931 18	-123,287	0	0,3562 01	1,6255 1
13	36,1 098	- 54,8656	0	774.32 7,85	13,2846	0,10416 1	-124,024	0	0,3550 99	1,6301 5
13	36,2 098	- 54,8302	0	778.10 5,77	13,695	0,10889 2	-124,76	0	0,3539 83	1,6348 3
13	36,3 098	- 54,7948	0	781.87 6,65	14,097	0,11350 4	-125,495	0	0,3528 54	1,6395 6
13	36,4 098	- 54,7596	0	785.62 6,47	14,4912	0,11800 7	-126,226	0	0,3517 19	1,6443 3
13	36,5 298	- 54,7175	0	790.06 1,53	14,9549	0,12327 4	-127,09	0	0,3503 72	1,6500 3
13	36,6 738	- 54,6672	0	795.24 9,52	15,499	0,12941 3	-128,099	0	0,3488 01	1,6567 7
13	36,8 466	-54,607	0	801.23 2,43	16,1361	0,13654 2	-129,257	0	0,3470 11	1,6646 1
13	37,0 539	- 54,5353	0	808.02 6,01	16,8804	0,14479 1	-130,565	0	0,3450 21	1,6736 1
13	37,3 028	- 54,4497	0	815.61 7,37	17,7472	0,15430 9	-132,017	0	0,3428 67	1,6837 7
13	37,6 014	- 54,3477	0	823.94 2,78	18,7556	0,16524 6	-133,594	0	0,3406 13	1,695
13	37,9 597	-54,226	0	832.87 2,52	19,9278	0,17776 5	-135,267	0	0,3383 59	1,7071 4
13	38,3 897	-54,081	0	841.80 8,00	21,2888	0,19217 9	-136,91	0	0,3364 28	1,7192 3
13	38,9 056	- 53,9077	0	849.92 6,80	22,8674	0,20894 5	-138,359	0	0,3352 45	1,7299 3



13	39,5 248	- 53,7002	0	856.95 4,46	24,7003	0,22848	-139,57	0	0,3349 27	1,7388
13	40,2 678	- 53,4511	0	862.93 5,03	26,8358	0,25112 5	-140,565	0	0,3354 38	1,7460 3
13	41,1 594	- 53,1515	0	867.78 0,95	29,309	0,27836 4	-140,968	0	0,3367 94	1,7464 2
13	42,2 294	-52,79	0	871.38 6,46	32,167	0,31260 5	-140,183	0	0,3390 05	1,7319 6
13	43,5 133	- 52,3528	0	873.81 2,23	35,4845	0,35522 1	-138,266	0	0,3420 41	1,7039 8
13	45,0 54	- 51,8229	0	875.15 6,18	39,3525	0,40760 6	-135,34	0	0,3458 64	1,6652 9
13	46,9 028	- 51,1792	0	875.53 2,12	43,9427	0,47050 5	-131,563	0	0,3504 5	1,6192 6
13	49,1 214	- 50,3956	0	874.96 8,43	49,6295	0,54298 2	-126,955	0	0,3559 75	1,5675 2
13	51,7 838	- 49,4389	0	873.46 8,93	56,6507	0,62614 3	-121,477	0	0,3626 64	1,5111 8
13	54,9 786	- 48,2677	0	871.17 7,25	65,1705	0,72150 1	-115,399	0	0,3705 41	1,4541
13	58,8 123	- 46,8302	0	868.32 9,15	75,3439	0,83113 5	-109,057	0	0,3793 5	1,3997 2
13	63,4 128	- 45,0631	0	865.15 9,40	87,2889	0,95816 2	-102,755	0	0,3887 54	1,3502
13	68,9 335	- 42,8896	0	861.85 8,08	101,036	1,10774	-96,6469	0	0,3983 82	1,3059 4
13	75,5 582	- 40,2176	0	858.26 6,94	116,464	1,28678	-90,9248	0	0,4079 75	1,2677
13	83,5 079	- 36,9309	0	849.21 7,67	133,252	1,5148	-85,0729	0	0,4187 96	1,2351 5
13	93,0 475	- 32,8131	0	827.39 3,50	150,682	1,75882	-78,5771	0	0,4516 24	1,2100 1
13	104, 272	- 27,4188	0	789.56 4,39	167,993	2,05242	-71,9741	0	0,5094 36	1,1972 2
13	104, 272	- 27,4188	0	789.56 4,39	167,993	2,05242	-71,9741	0	0,5094 36	1,1972 2
13	104, 495	- 27,3048	0	787.73 4,97	168,124	2,05244	-71,2564	0	0,5114 76	1,1942 7



13	120,366	-16,3923	0	188.994,18	175,337	5,37408	11,0361	0	1,11677	1,14402
13	129,42	-10,1335	0	128.618,68	177,851	6,89352	14,9727	0	1,28273	1,15562
13	129,42	-10,1335	0	128.618,68	177,851	6,89359	14,9727	0	1,28272	1,15562
13	150,745	5,87957	0	77.386,35	178,722	9,64429	17,9233	0	1,53633	1,16646
13	184,002	38,9221	0	50.971,82	180,426	12,651	19,3435	0	1,77265	1,17224
13	213,312	82,3826	0	43.485,01	182,552	13,9615	19,7876	0	1,86673	1,17367
13	242,789	136,641	0	37.614,63	185,103	14,8329	20,074	0	1,92688	1,17433
13	276,447	203,491	0	33.813,29	188,162	15,6502	20,3242	0	1,98174	1,17483
13	316,587	285,992	0	30.355,41	191,838	16,5779	20,8523	0	2,04227	1,17432
13	365,64	389,026	0	25.532,16	196,311	18,2965	21,7348	0	2,14962	1,17321
13	389,054	436,513	0	22.716,60	198,338	19,6845	22,1766	0	2,23268	1,17292
13	432,089	523,717	0	17.647,12	202,01	23,0634	22,8904	0	2,42352	1,17269
13	521,608	708,932	0	11.372,24	209,645	30,5332	23,7282	0	2,80127	1,17265
13	639,026	965,179	0	7.236,88	219,914	39,907	24,2185	0	3,21599	1,17275
13	701,961	1109,78	0	5.957,07	225,589	44,6344	24,3652	0	3,40694	1,17284
14	45,8797	-55,498	0	1,00	0,00177245	0,782428	24,6246	0	0,614873	1,1739
14	45,9797	-55,4562	0	662.867,41	3,24102	0,00895011	-102,214	0	0,38754	1,51128
14	46,0797	-55,4176	0	680.502,43	4,51105	0,0164937	-105,321	0	0,384925	1,5246
14	46,1	-	0	686.22	5,50428	0,02398	-106,305	0	0,3841	1,5288

	797	55,3791		5,61		88			61	1
14	46,2	-	0	694.53	6,34946	0,03113	-107,981	0	0,3814	1,5373
	797	55,3409		2,58		31			73	9
14	46,3	-	0	703.75	7,09897	0,03790	-109,881	0	0,3782	1,5475
	797	55,3029		7,83		44			23	1
14	46,4	-	0	712.65	7,77849	0,04438	-111,711	0	0,3750	1,5575
	797	55,2652		3,55		06			74	
14	46,5	-	0	720.90	8,40642	0,05059	-113,399	0	0,3721	1,5669
	797	55,2278		6,05		84			88	
14	46,6	-	0	728.46	8,99464	0,05659	-114,935	0	0,3695	1,5756
	797	55,1907		9,13		27			86	1
14	46,7	-	0	735.37	9,55058	0,06239	-116,329	0	0,3672	1,5836
	797	55,1539		5,44		57			55	3
14	46,8	-	0	741.68	10,0794	0,06803	-117,596	0	0,3651	1,5910
	797	55,1173		9,88		56			65	2
14	46,9	-	0	747.48	10,5847	0,07353	-118,752	0	0,3632	1,5978
	797	55,0809		4,15		82			82	6
14	47,0	-	0	752.81	11,0701	0,07891	-119,81	0	0,3615	1,6041
	797	55,0446		7,70		52			82	9
14	47,1	-	0	757.74	11,5391	0,08417	-120,783	0	0,3600	1,6100
	797	55,0086		1,38		04			44	7
14	47,2	-	0	762.30	11,9932	0,08931	-121,68	0	0,3586	1,6155
	797	54,9726		6,44		91			47	5
14	47,3	-	0	766.55	12,4348	0,09436	-122,51	0	0,3573	1,6206
	797	54,9368		1,21		25			75	8
14	47,4	-	0	770.53	12,8647	0,09931	-123,287	0	0,3562	1,6255
	797	54,9012		6,53		18			01	1
14	47,5	-	0	774.32	13,2846	0,10416	-124,024	0	0,3550	1,6301
	797	54,8656		7,85		1			99	5
14	47,6	-	0	778.10	13,695	0,10889	-124,76	0	0,3539	1,6348
	797	54,8302		5,77		2			83	3
14	47,7	-	0	781.87	14,097	0,11350	-125,495	0	0,3528	1,6395
	797	54,7948		6,65		4			54	6
14	47,8	-	0	785.62	14,4912	0,11800	-126,226	0	0,3517	1,6443
	797	54,7596		6,47		7			19	3
14	47,9	-	0	790.06	14,9549	0,12327	-127,09	0	0,3503	1,6500
	997	54,7175		1,53		4			72	3
14	48,1	-	0	795.24	15,499	0,12941	-128,099	0	0,3488	1,6567

	437	54,6672		9,52		3			01	7
14	48,3 165	-54,607	0	801.23 2,43	16,1361	0,13654 2	-129,257	0	0,3470 11	1,6646 1
14	48,5 239	- 54,5353	0	808.02 6,01	16,8804	0,14479 1	-130,565	0	0,3450 21	1,6736 1
14	48,7 727	- 54,4497	0	815.61 7,37	17,7472	0,15430 9	-132,017	0	0,3428 67	1,6837 7
14	49,0 713	- 54,3477	0	823.94 2,78	18,7556	0,16524 6	-133,594	0	0,3406 13	1,695
14	49,4 296	-54,226	0	832.87 2,52	19,9278	0,17776 5	-135,267	0	0,3383 59	1,7071 4
14	49,8 596	-54,081	0	841.80 8,00	21,2888	0,19217 9	-136,91	0	0,3364 28	1,7192 3
14	50,3 756	- 53,9077	0	849.92 6,80	22,8674	0,20894 5	-138,359	0	0,3352 45	1,7299 3
14	50,9 947	- 53,7002	0	856.95 4,46	24,7003	0,22848	-139,57	0	0,3349 27	1,7388
14	51,7 377	- 53,4511	0	862.93 5,03	26,8358	0,25112 5	-140,565	0	0,3354 38	1,7460 3
14	52,6 294	- 53,1515	0	867.78 0,95	29,309	0,27836 4	-140,968	0	0,3367 94	1,7464 2
14	53,6 993	-52,79	0	871.38 6,46	32,167	0,31260 5	-140,183	0	0,3390 05	1,7319 6
14	54,9 832	- 52,3528	0	873.81 2,23	35,4845	0,35522 1	-138,266	0	0,3420 41	1,7039 8
14	56,5 239	- 51,8229	0	875.15 6,18	39,3525	0,40760 6	-135,34	0	0,3458 64	1,6652 9
14	58,3 728	- 51,1792	0	875.53 2,12	43,9427	0,47050 5	-131,563	0	0,3504 5	1,6192 6
14	60,5 914	- 50,3956	0	874.96 8,43	49,6295	0,54298 2	-126,955	0	0,3559 75	1,5675 2
14	63,2 537	- 49,4389	0	873.46 8,93	56,6507	0,62614 3	-121,477	0	0,3626 64	1,5111 8
14	66,4 485	- 48,2677	0	871.17 7,25	65,1705	0,72150 1	-115,399	0	0,3705 41	1,4541
14	70,2 823	- 46,8302	0	868.32 9,15	75,3439	0,83113 5	-109,057	0	0,3793 5	1,3997 2
14	74,8	-	0	865.15	87,2889	0,95816	-102,755	0	0,3887	1,3502



	828	45,0631		9,40		2			54	
14	80,4 034	- 42,8896	0	861.85 8,08	101,036	1,10774	-96,6469	0	0,3983 82	1,3059 4
14	87,0 281	- 40,2176	0	858.26 6,94	116,464	1,28678	-90,9248	0	0,4079 75	1,2677
14	94,9 778	- 36,9309	0	849.21 7,67	133,252	1,5148	-85,0729	0	0,4187 96	1,2351 5
14	104, 272	- 32,9235	0	828.11 3,23	150,27	1,75298	-78,7346	0	0,4504 37	1,2104 6
14	104, 272	- 32,9235	0	828.11 3,23	150,27	1,75298	-78,7346	0	0,4504 37	1,2104 6
14	104, 517	- 32,8124	0	826.26 3,42	150,326	1,75122	-77,8669	0	0,4527 1	1,2064 3
14	116, 325	- 25,0854	0	232.11 5,81	156,638	4,10468	8,09607	0	0,9645 93	1,1356 8
14	127, 543	-17,372	0	126.17 7,81	159,948	6,10199	15,2293	0	1,2050 8	1,1556 2
14	127, 543	-17,372	0	126.17 7,81	159,948	6,10199	15,2293	0	1,2050 8	1,1556 2
14	139, 865	- 8,75035	0	88.428, 21	160,418	7,72175	17,3877	0	1,3678 3	1,1637 2
14	169, 585	16,051	0	54.930, 96	161,753	10,5416	19,1757	0	1,6125 6	1,1711 7
14	199, 635	49,346	0	44.452, 79	163,437	12,0492	19,7524	0	1,7299 1	1,1733 6
14	226, 767	91,315	0	39.591, 52	165,466	12,8913	20,0545	0	1,7920 8	1,1741 6
14	254, 686	143,186	0	34.788, 23	167,903	13,669	20,3105	0	1,8478 7	1,1747 5
14	286, 915	207,326	0	31.070, 74	170,833	14,5131	20,8075	0	1,9065 1	1,1743 9
14	325, 868	287,417	0	26.431, 60	174,398	15,9451	21,669	0	2,0022	1,1732 6
14	347, 568	332,998	0	22.956, 88	176,39	17,328	22,1847	0	2,0904 4	1,1728 9
14	375, 367	391,307	0	18.629, 55	178,905	19,6895	22,7804	0	2,2335 4	1,1726 7
14	445,	533,053	0	12.216,	184,898	25,7483	23,636	0	2,5656	1,1725

	204			63					7	9
14	539,094	728,317	0	7.885,21	192,931	33,4562	24,1526	0	2,9369	1,1726
14	593,305	846,626	0	6.436,04	197,698	37,6567	24,319	0	3,1216	1,1727
15	57,3496	-55,498	0	1,00	0,00177	0,78242	24,6246	0	0,6148	1,1739
15	57,4496	-55,4562	0	662.867,41	3,24102	0,00895	-102,214	0	0,3875	1,5112
15	57,5496	-55,4176	0	680.502,43	4,51105	0,01649	-105,321	0	0,3849	1,5246
15	57,6496	-55,3791	0	686.225,61	5,50428	0,02398	-106,305	0	0,3841	1,5288
15	57,7496	-55,3409	0	694.532,58	6,34946	0,03113	-107,981	0	0,3814	1,5373
15	57,8496	-55,3029	0	703.757,83	7,09897	0,03790	-109,881	0	0,3782	1,5475
15	57,9496	-55,2652	0	712.653,55	7,77849	0,04438	-111,711	0	0,3750	1,5575
15	58,0496	-55,2278	0	720.906,05	8,40642	0,05059	-113,399	0	0,3721	1,5669
15	58,1496	-55,1907	0	728.469,13	8,99464	0,05659	-114,935	0	0,3695	1,5756
15	58,2496	-55,1539	0	735.375,44	9,55058	0,06239	-116,329	0	0,3672	1,5836
15	58,3496	-55,1173	0	741.689,88	10,0794	0,06803	-117,596	0	0,3651	1,5910
15	58,4496	-55,0809	0	747.484,15	10,5847	0,07353	-118,752	0	0,3632	1,5978
15	58,5496	-55,0446	0	752.817,70	11,0701	0,07891	-119,81	0	0,3615	1,6041
15	58,6496	-55,0086	0	757.741,38	11,5391	0,08417	-120,783	0	0,3600	1,6100
15	58,7496	-54,9726	0	762.306,44	11,9932	0,08931	-121,68	0	0,3586	1,6155
15	58,8496	-54,9368	0	766.551,21	12,4348	0,09436	-122,51	0	0,3573	1,6206



15	58,9 496	- 54,9012	0	770.53 6,53	12,8647	0,09931 18	-123,287	0	0,3562 01	1,6255 1
15	59,0 496	- 54,8656	0	774.32 7,85	13,2846	0,10416 1	-124,024	0	0,3550 99	1,6301 5
15	59,1 496	- 54,8302	0	778.10 5,77	13,695	0,10889 2	-124,76	0	0,3539 83	1,6348 3
15	59,2 496	- 54,7948	0	781.87 6,65	14,097	0,11350 4	-125,495	0	0,3528 54	1,6395 6
15	59,3 496	- 54,7596	0	785.62 6,47	14,4912	0,11800 7	-126,226	0	0,3517 19	1,6443 3
15	59,4 696	- 54,7175	0	790.06 1,53	14,9549	0,12327 4	-127,09	0	0,3503 72	1,6500 3
15	59,6 136	- 54,6672	0	795.24 9,52	15,499	0,12941 3	-128,099	0	0,3488 01	1,6567 7
15	59,7 864	-54,607	0	801.23 2,43	16,1361	0,13654 2	-129,257	0	0,3470 11	1,6646 1
15	59,9 938	- 54,5353	0	808.02 6,01	16,8804	0,14479 1	-130,565	0	0,3450 21	1,6736 1
15	60,2 426	- 54,4497	0	815.61 7,37	17,7472	0,15430 9	-132,017	0	0,3428 67	1,6837 7
15	60,5 412	- 54,3477	0	823.94 2,78	18,7556	0,16524 6	-133,594	0	0,3406 13	1,695
15	60,8 995	-54,226	0	832.87 2,52	19,9278	0,17776 5	-135,267	0	0,3383 59	1,7071 4
15	61,3 295	-54,081	0	841.80 8,00	21,2888	0,19217 9	-136,91	0	0,3364 28	1,7192 3
15	61,8 455	- 53,9077	0	849.92 6,80	22,8674	0,20894 5	-138,359	0	0,3352 45	1,7299 3
15	62,4 647	- 53,7002	0	856.95 4,46	24,7003	0,22848	-139,57	0	0,3349 27	1,7388
15	63,2 077	- 53,4511	0	862.93 5,03	26,8358	0,25112 5	-140,565	0	0,3354 38	1,7460 3
15	64,0 993	- 53,1515	0	867.78 0,95	29,309	0,27836 4	-140,968	0	0,3367 94	1,7464 2
15	65,1 692	-52,79	0	871.38 6,46	32,167	0,31260 5	-140,183	0	0,3390 05	1,7319 6
15	66,4 531	- 52,3528	0	873.81 2,23	35,4845	0,35522 1	-138,266	0	0,3420 41	1,7039 8



15	67,9 938	- 51,8229	0	875.15 6,18	39,3525	0,40760 6	-135,34	0	0,3458 64	1,6652 9
15	69,8 427	- 51,1792	0	875.53 2,12	43,9427	0,47050 5	-131,563	0	0,3504 5	1,6192 6
15	72,0 613	- 50,3956	0	874.96 8,43	49,6295	0,54298 2	-126,955	0	0,3559 75	1,5675 2
15	74,7 236	- 49,4389	0	873.46 8,93	56,6507	0,62614 3	-121,477	0	0,3626 64	1,5111 8
15	77,9 184	- 48,2677	0	871.17 7,25	65,1705	0,72150 1	-115,399	0	0,3705 41	1,4541
15	81,7 522	- 46,8302	0	868.32 9,15	75,3439	0,83113 5	-109,057	0	0,3793 5	1,3997 2
15	86,3 527	- 45,0631	0	865.15 9,40	87,2889	0,95816 2	-102,755	0	0,3887 54	1,3502
15	91,8 733	- 42,8896	0	861.85 8,08	101,036	1,10774	-96,6469	0	0,3983 82	1,3059 4
15	98,4 98	- 40,2176	0	858.26 6,94	116,464	1,28678	-90,9248	0	0,4079 75	1,2677
15	104, 272	- 37,8389	0	852.43 9,43	128,853	1,44981	-86,6157	0	0,4158 61	1,2428 9
15	104, 272	- 37,8389	0	852.43 9,43	128,853	1,44981	-86,6157	0	0,4158 61	1,2428 9
15	106, 448	- 36,8896	0	832.12 7,95	129,102	1,42103	-77,0215	0	0,4446 12	1,1967 2
15	116, 182	- 30,8087	0	240.93 2,39	133,55	3,47177	7,57755	0	0,8831 33	1,1334 8
15	126, 969	-23,682	0	124.25 9,47	136,658	5,3421	15,4229	0	1,1250 6	1,1556 2
15	126, 969	-23,682	0	124.25 9,47	136,658	5,34195	15,4229	0	1,1250 9	1,1556 2
15	134, 547	- 18,4714	0	95.293, 18	136,942	6,36914	17,0693	0	1,2369 4	1,1619
15	159, 259	0,25493	0	58.310, 15	137,962	8,78895	19,0377	0	1,4672 2	1,1702 2
15	186, 893	25,6962	0	45.121, 24	139,305	10,3535	19,7345	0	1,5994 4	1,1731 2
15	213, 864	58,0504	0	39.151, 74	140,916	11,1323	20,0464	0	1,6609 1	1,1740 3



15	239,059	98,1698	0	33.756,29	142,85	11,8486	20,3061	0	1,7161	1,1746
15	265,629	147,842	0	29.774,04	145,176	12,6056	20,8106	0	1,7726	1,1743
15	296,758	209,875	0	25.353,04	148,004	13,8387	21,6525	0	1,8605	1,1732
15	315,771	248,968	0	21.998,02	149,753	15,092	22,1941	0	1,9462	1,1728
15	335,69	289,98	0	18.451,14	151,565	16,8391	22,7174	0	2,0601	1,1726
15	387,548	398,569	0	12.030,79	156,271	21,7536	23,5722	0	2,3519	1,1725
15	460,719	547,429	0	7.880,58	162,553	28,057	24,1026	0	2,6823	1,1726
15	501,856	632,984	0	6.524,67	166,093	31,3488	24,2689	0	2,8402	1,1726
16	68,8195	-55,498	0	1,00	0,00177	0,78242	24,6246	0	0,6148	1,1739
16	68,9195	-55,4562	0	662.867,41	3,24102	0,00895	-102,214	0	0,3875	1,5112
16	69,0195	-55,4176	0	680.502,43	4,51105	0,01649	-105,321	0	0,3849	1,5246
16	69,1195	-55,3791	0	686.225,61	5,50428	0,02398	-106,305	0	0,3841	1,5288
16	69,2195	-55,3409	0	694.532,58	6,34946	0,03113	-107,981	0	0,3814	1,5373
16	69,3195	-55,3029	0	703.757,83	7,09897	0,03790	-109,881	0	0,3782	1,5475
16	69,4195	-55,2652	0	712.653,55	7,77849	0,04438	-111,711	0	0,3750	1,5575
16	69,5195	-55,2278	0	720.906,05	8,40642	0,05059	-113,399	0	0,3721	1,5669
16	69,6195	-55,1907	0	728.469,13	8,99464	0,05659	-114,935	0	0,3695	1,5756
16	69,7195	-55,1539	0	735.375,44	9,55058	0,06239	-116,329	0	0,3672	1,5836
16	69,8	-	0	741.68	10,0794	0,06803	-117,596	0	0,3651	1,5910

	195	55,1173		9,88		56			65	2
16	69,9	-	0	747.48	10,5847	0,07353	-118,752	0	0,3632	1,5978
	195	55,0809		4,15		82			82	6
16	70,0	-	0	752.81	11,0701	0,07891	-119,81	0	0,3615	1,6041
	195	55,0446		7,70		52			82	9
16	70,1	-	0	757.74	11,5391	0,08417	-120,783	0	0,3600	1,6100
	195	55,0086		1,38		04			44	7
16	70,2	-	0	762.30	11,9932	0,08931	-121,68	0	0,3586	1,6155
	195	54,9726		6,44		91			47	5
16	70,3	-	0	766.55	12,4348	0,09436	-122,51	0	0,3573	1,6206
	195	54,9368		1,21		25			75	8
16	70,4	-	0	770.53	12,8647	0,09931	-123,287	0	0,3562	1,6255
	195	54,9012		6,53		18			01	1
16	70,5	-	0	774.32	13,2846	0,10416	-124,024	0	0,3550	1,6301
	195	54,8656		7,85		1			99	5
16	70,6	-	0	778.10	13,695	0,10889	-124,76	0	0,3539	1,6348
	195	54,8302		5,77		2			83	3
16	70,7	-	0	781.87	14,097	0,11350	-125,495	0	0,3528	1,6395
	195	54,7948		6,65		4			54	6
16	70,8	-	0	785.62	14,4912	0,11800	-126,226	0	0,3517	1,6443
	195	54,7596		6,47		7			19	3
16	70,9	-	0	790.06	14,9549	0,12327	-127,09	0	0,3503	1,6500
	395	54,7175		1,53		4			72	3
16	71,0	-	0	795.24	15,499	0,12941	-128,099	0	0,3488	1,6567
	835	54,6672		9,52		3			01	7
16	71,2	-54,607	0	801.23	16,1361	0,13654	-129,257	0	0,3470	1,6646
	563			2,43		2			11	1
16	71,4	-	0	808.02	16,8804	0,14479	-130,565	0	0,3450	1,6736
	637	54,5353		6,01		1			21	1
16	71,7	-	0	815.61	17,7472	0,15430	-132,017	0	0,3428	1,6837
	125	54,4497		7,37		9			67	7
16	72,0	-	0	823.94	18,7556	0,16524	-133,594	0	0,3406	1,695
	111	54,3477		2,78		6			13	
16	72,3	-54,226	0	832.87	19,9278	0,17776	-135,267	0	0,3383	1,7071
	695			2,52		5			59	4
16	72,7	-54,081	0	841.80	21,2888	0,19217	-136,91	0	0,3364	1,7192
	994			8,00		9			28	3
16	73,3	-	0	849.92	22,8674	0,20894	-138,359	0	0,3352	1,7299

	154	53,9077		6,80		5			45	3
16	73,9 346	- 53,7002	0	856.95 4,46	24,7003	0,22848	-139,57	0	0,3349 27	1,7388
16	74,6 776	- 53,4511	0	862.93 5,03	26,8358	0,25112	-140,565	0	0,3354 38	1,7460 3
16	75,5 692	- 53,1515	0	867.78 0,95	29,309	0,27836	-140,968	0	0,3367 94	1,7464 2
16	76,6 391	-52,79	0	871.38 6,46	32,167	0,31260	-140,183	0	0,3390 05	1,7319 6
16	77,9 231	- 52,3528	0	873.81 2,23	35,4845	0,35522	-138,266	0	0,3420 41	1,7039 8
16	79,4 638	- 51,8229	0	875.15 6,18	39,3525	0,40760	-135,34	0	0,3458 64	1,6652 9
16	81,3 126	- 51,1792	0	875.53 2,12	43,9427	0,47050	-131,563	0	0,3504 5	1,6192 6
16	83,5 312	- 50,3956	0	874.96 8,43	49,6295	0,54298	-126,955	0	0,3559 75	1,5675 2
16	86,1 935	- 49,4389	0	873.46 8,93	56,6507	0,62614	-121,477	0	0,3626 64	1,5111 8
16	89,3 883	- 48,2677	0	871.17 7,25	65,1705	0,72150	-115,399	0	0,3705 41	1,4541
16	93,2 221	- 46,8302	0	868.32 9,15	75,3439	0,83113	-109,057	0	0,3793 5	1,3997 2
16	97,8 226	- 45,0631	0	865.15 9,40	87,2889	0,95816	-102,755	0	0,3887 54	1,3502
16	103, 343	- 42,8896	0	861.85 8,08	101,036	1,10774	-96,6469	0	0,3983 82	1,3059 4
16	104, 272	- 42,5189	0	861.35 9,42	103,273	1,13276	-95,7549	0	0,3998 39	1,2997 6
16	104, 272	- 42,5189	0	861.35 9,42	103,273	1,13276	-95,7549	0	0,3998 39	1,2997 6
16	109, 968	- 39,9097	0	685.03 0,83	106,324	1,31999	-48,4298	0	0,5127 36	1,1382 9
16	119, 155	- 34,3252	0	189.14 9,76	109,805	3,44061	11,4001	0	0,8869 21	1,1421 5
16	126, 239	- 29,8475	0	122.80 5,77	111,637	4,549	15,5598	0	1,0351 9	1,1556 2
16	126, 239	- 29,8475	0	122.80 5,77	111,637	4,54905	15,5598	0	1,0351 9	1,1556 2



	239	29,8475		5,77					8	2
16	134,381	-24,4682	0	89.923,35	111,93	5,591	17,405	0	1,15671	1,16285
16	154,25	-10,0592	0	58.052,73	112,715	7,44631	19,0823	0	1,34633	1,17009
16	177,76	9,36833	0	45.124,26	113,769	8,74897	19,7571	0	1,46544	1,17298
16	202,454	34,0439	0	39.934,98	115,041	9,42104	20,0678	0	1,5234	1,17394
16	226,716	64,8173	0	34.142,82	116,561	10,0644	20,3295	0	1,577	1,17468
16	250,201	102,917	0	29.492,69	118,389	10,7835	20,9471	0	1,63493	1,17405
16	275,663	150,696	0	24.857,08	120,621	11,947	21,7962	0	1,72465	1,17308
16	286,857	173,002	0	22.156,77	121,645	12,7999	22,205	0	1,78722	1,17281
16	306,797	212,83	0	17.939,32	123,45	14,6165	22,825	0	1,91486	1,17256
16	347,46	296,612	0	12.103,71	127,169	18,615	23,6109	0	2,17019	1,17247
16	402,092	410,658	0	8.091,72	132,102	23,7129	24,1116	0	2,45946	1,17256
16	416,415	439,797	0	7.436,39	133,342	24,9249	24,1903	0	2,52363	1,17259
17	80,2895	-55,498	0	1,00	0,00177245	0,782428	24,6246	0	0,614873	1,1739
17	80,3895	-55,4562	0	662.867,41	3,24102	0,00895011	-102,214	0	0,38754	1,51128
17	80,4895	-55,4176	0	680.502,43	4,51105	0,0164937	-105,321	0	0,384925	1,5246
17	80,5895	-55,3791	0	686.225,61	5,50428	0,0239888	-106,305	0	0,384161	1,52881
17	80,6895	-55,3409	0	694.532,58	6,34946	0,0311331	-107,981	0	0,381473	1,53739
17	80,7895	-55,3029	0	703.757,83	7,09897	0,0379044	-109,881	0	0,378223	1,54751

17	80,8 895	- 55,2652	0	712.65 3,55	7,77849	0,04438 06	-111,711	0	0,3750 74	1,5575
17	80,9 895	- 55,2278	0	720.90 6,05	8,40642	0,05059 84	-113,399	0	0,3721 88	1,5669
17	81,0 895	- 55,1907	0	728.46 9,13	8,99464	0,05659 27	-114,935	0	0,3695 86	1,5756 1
17	81,1 895	- 55,1539	0	735.37 5,44	9,55058	0,06239 57	-116,329	0	0,3672 55	1,5836 3
17	81,2 895	- 55,1173	0	741.68 9,88	10,0794	0,06803 56	-117,596	0	0,3651 65	1,5910 2
17	81,3 895	- 55,0809	0	747.48 4,15	10,5847	0,07353 82	-118,752	0	0,3632 82	1,5978 6
17	81,4 895	- 55,0446	0	752.81 7,70	11,0701	0,07891 52	-119,81	0	0,3615 82	1,6041 9
17	81,5 895	- 55,0086	0	757.74 1,38	11,5391	0,08417 04	-120,783	0	0,3600 44	1,6100 7
17	81,6 895	- 54,9726	0	762.30 6,44	11,9932	0,08931 91	-121,68	0	0,3586 47	1,6155 5
17	81,7 895	- 54,9368	0	766.55 1,21	12,4348	0,09436 25	-122,51	0	0,3573 75	1,6206 8
17	81,8 895	- 54,9012	0	770.53 6,53	12,8647	0,09931 18	-123,287	0	0,3562 01	1,6255 1
17	81,9 895	- 54,8656	0	774.32 7,85	13,2846	0,10416 1	-124,024	0	0,3550 99	1,6301 5
17	82,0 895	- 54,8302	0	778.10 5,77	13,695	0,10889 2	-124,76	0	0,3539 83	1,6348 3
17	82,1 895	- 54,7948	0	781.87 6,65	14,097	0,11350 4	-125,495	0	0,3528 54	1,6395 6
17	82,2 895	- 54,7596	0	785.62 6,47	14,4912	0,11800 7	-126,226	0	0,3517 19	1,6443 3
17	82,4 095	- 54,7175	0	790.06 1,53	14,9549	0,12327 4	-127,09	0	0,3503 72	1,6500 3
17	82,5 535	- 54,6672	0	795.24 9,52	15,499	0,12941 3	-128,099	0	0,3488 01	1,6567 7
17	82,7 263	-54,607	0	801.23 2,43	16,1361	0,13654 2	-129,257	0	0,3470 11	1,6646 1
17	82,9 336	- 54,5353	0	808.02 6,01	16,8804	0,14479 1	-130,565	0	0,3450 21	1,6736 1

17	83,1 825	- 54,4497	0	815.61 7,37	17,7472	0,15430 9	-132,017	0	0,3428 67	1,6837 7
17	83,4 811	- 54,3477	0	823.94 2,78	18,7556	0,16524 6	-133,594	0	0,3406 13	1,695
17	83,8 394	-54,226	0	832.87 2,52	19,9278	0,17776 5	-135,267	0	0,3383 59	1,7071 4
17	84,2 694	-54,081	0	841.80 8,00	21,2888	0,19217 9	-136,91	0	0,3364 28	1,7192 3
17	84,7 853	- 53,9077	0	849.92 6,80	22,8674	0,20894 5	-138,359	0	0,3352 45	1,7299 3
17	85,4 045	- 53,7002	0	856.95 4,46	24,7003	0,22848	-139,57	0	0,3349 27	1,7388
17	86,1 475	- 53,4511	0	862.93 5,03	26,8358	0,25112 5	-140,565	0	0,3354 38	1,7460 3
17	87,0 391	- 53,1515	0	867.78 0,95	29,309	0,27836 4	-140,968	0	0,3367 94	1,7464 2
17	88,1 091	-52,79	0	871.38 6,46	32,167	0,31260 5	-140,183	0	0,3390 05	1,7319 6
17	89,3 93	- 52,3528	0	873.81 2,23	35,4845	0,35522 1	-138,266	0	0,3420 41	1,7039 8
17	90,9 337	- 51,8229	0	875.15 6,18	39,3525	0,40760 6	-135,34	0	0,3458 64	1,6652 9
17	92,7 825	- 51,1792	0	875.53 2,12	43,9427	0,47050 5	-131,563	0	0,3504 5	1,6192 6
17	95,0 011	- 50,3956	0	874.96 8,43	49,6295	0,54298 2	-126,955	0	0,3559 75	1,5675 2
17	97,6 635	- 49,4389	0	873.46 8,93	56,6507	0,62614 3	-121,477	0	0,3626 64	1,5111 8
17	100, 858	- 48,2677	0	871.17 7,25	65,1705	0,72150 1	-115,399	0	0,3705 41	1,4541
17	104, 272	- 46,9892	0	868.62 4,18	74,238	0,8193	-109,686	0	0,3784 5	1,4049
17	104, 272	- 46,9892	0	868.62 4,18	74,238	0,8193	-109,686	0	0,3784 5	1,4049
17	104, 692	- 46,8265	0	865.07 4,98	74,2403	0,80777 4	-106,357	0	0,3877 5	1,3794 5
17	109, 293	- 44,6986	0	771.14 6,18	75,4692	0,81096 5	-65,0013	0	0,4933 05	1,1686 2



17	115,135	-41,4835	0	263.882,38	77,4344	2,22125	5,98922	0	0,697095	1,1285
17	124,889	-36,069	0	120.755,70	79,8834	3,68932	15,75	0	0,928715	1,15562
17	124,889	-36,069	0	120.755,70	79,8834	3,68935	15,75	0	0,928708	1,15562
17	124,955	-36,0288	0	120.315,20	79,8856	3,69831	15,7753	0	0,929929	1,15572
17	137,861	-27,8526	0	73.160,21	80,3312	5,13418	18,3474	0	1,1085	1,16634
17	153,826	-16,6056	0	52.524,60	80,9443	6,36858	19,406	0	1,24194	1,17112
17	172,803	-1,83668	0	43.073,39	81,7493	7,22008	19,9036	0	1,3267	1,17321
17	193,741	16,7416	0	38.295,90	82,7429	7,75006	20,1871	0	1,37651	1,1741
17	215,654	39,8758	0	33.953,98	83,9216	8,32319	20,5983	0	1,4292	1,17437
17	237,774	68,8004	0	29.372,93	85,3462	9,07119	21,4058	0	1,49488	1,17334
17	257,482	100,773	0	24.062,75	86,8793	10,298	22,2286	0	1,59696	1,17272
17	260,228	105,59	0	23.024,20	87,1072	10,5287	22,344	0	1,61546	1,17266
17	286,116	154,384	0	16.350,36	89,3813	13,0099	23,2174	0	1,80303	1,17242
17	318,804	219,844	0	11.295,55	92,3562	16,2933	23,832	0	2,0259	1,17242
17	336,386	256,07	0	9.550,98	93,9726	18,0142	24,0335	0	2,13389	1,17246
18	91,7594	-55,498	0	1,00	0,00177245	0,782428	24,6246	0	0,614873	1,1739
18	91,8594	-55,4562	0	662.867,41	3,24102	0,00895011	-102,214	0	0,38754	1,51128
18	91,9594	-55,4176	0	680.502,43	4,51105	0,0164937	-105,321	0	0,384925	1,5246
18	92,0	-	0	686.22	5,50428	0,02398	-106,305	0	0,3841	1,5288

	594	55,3791		5,61		88			61	1
18	92,1	-	0	694.53	6,34946	0,03113	-107,981	0	0,3814	1,5373
	594	55,3409		2,58		31			73	9
18	92,2	-	0	703.75	7,09897	0,03790	-109,881	0	0,3782	1,5475
	594	55,3029		7,83		44			23	1
18	92,3	-	0	712.65	7,77849	0,04438	-111,711	0	0,3750	1,5575
	594	55,2652		3,55		06			74	
18	92,4	-	0	720.90	8,40642	0,05059	-113,399	0	0,3721	1,5669
	594	55,2278		6,05		84			88	
18	92,5	-	0	728.46	8,99464	0,05659	-114,935	0	0,3695	1,5756
	594	55,1907		9,13		27			86	1
18	92,6	-	0	735.37	9,55058	0,06239	-116,329	0	0,3672	1,5836
	594	55,1539		5,44		57			55	3
18	92,7	-	0	741.68	10,0794	0,06803	-117,596	0	0,3651	1,5910
	594	55,1173		9,88		56			65	2
18	92,8	-	0	747.48	10,5847	0,07353	-118,752	0	0,3632	1,5978
	594	55,0809		4,15		82			82	6
18	92,9	-	0	752.81	11,0701	0,07891	-119,81	0	0,3615	1,6041
	594	55,0446		7,70		52			82	9
18	93,0	-	0	757.74	11,5391	0,08417	-120,783	0	0,3600	1,6100
	594	55,0086		1,38		04			44	7
18	93,1	-	0	762.30	11,9932	0,08931	-121,68	0	0,3586	1,6155
	594	54,9726		6,44		91			47	5
18	93,2	-	0	766.55	12,4348	0,09436	-122,51	0	0,3573	1,6206
	594	54,9368		1,21		25			75	8
18	93,3	-	0	770.53	12,8647	0,09931	-123,287	0	0,3562	1,6255
	594	54,9012		6,53		18			01	1
18	93,4	-	0	774.32	13,2846	0,10416	-124,024	0	0,3550	1,6301
	594	54,8656		7,85		1			99	5
18	93,5	-	0	778.10	13,695	0,10889	-124,76	0	0,3539	1,6348
	594	54,8302		5,77		2			83	3
18	93,6	-	0	781.87	14,097	0,11350	-125,495	0	0,3528	1,6395
	594	54,7948		6,65		4			54	6
18	93,7	-	0	785.62	14,4912	0,11800	-126,226	0	0,3517	1,6443
	594	54,7596		6,47		7			19	3
18	93,8	-	0	790.06	14,9549	0,12327	-127,09	0	0,3503	1,6500
	794	54,7175		1,53		4			72	3
18	94,0	-	0	795.24	15,499	0,12941	-128,099	0	0,3488	1,6567

	234	54,6672		9,52		3			01	7
18	94,1 962	-54,607	0	801.23 2,43	16,1361	0,13654 2	-129,257	0	0,3470 11	1,6646 1
18	94,4 036	- 54,5353	0	808.02 6,01	16,8804	0,14479 1	-130,565	0	0,3450 21	1,6736 1
18	94,6 524	- 54,4497	0	815.61 7,37	17,7472	0,15430 9	-132,017	0	0,3428 67	1,6837 7
18	94,9 51	- 54,3477	0	823.94 2,78	18,7556	0,16524 6	-133,594	0	0,3406 13	1,695
18	95,3 093	-54,226	0	832.87 2,52	19,9278	0,17776 5	-135,267	0	0,3383 59	1,7071 4
18	95,7 393	-54,081	0	841.80 8,00	21,2888	0,19217 9	-136,91	0	0,3364 28	1,7192 3
18	96,2 553	- 53,9077	0	849.92 6,80	22,8674	0,20894 5	-138,359	0	0,3352 45	1,7299 3
18	96,8 744	- 53,7002	0	856.95 4,46	24,7003	0,22848	-139,57	0	0,3349 27	1,7388
18	97,6 174	- 53,4511	0	862.93 5,03	26,8358	0,25112 5	-140,565	0	0,3354 38	1,7460 3
18	98,5 091	- 53,1515	0	867.78 0,95	29,309	0,27836 4	-140,968	0	0,3367 94	1,7464 2
18	99,5 79	-52,79	0	871.38 6,46	32,167	0,31260 5	-140,183	0	0,3390 05	1,7319 6
18	100, 863	- 52,3528	0	873.81 2,23	35,4845	0,35522 1	-138,266	0	0,3420 41	1,7039 8
18	102, 404	- 51,8229	0	875.15 6,18	39,3525	0,40760 6	-135,34	0	0,3458 64	1,6652 9
18	104, 252	- 51,1792	0	875.53 3,24	43,9461	0,47046 6	-131,565	0	0,3504 48	1,6192 8
18	104, 272	- 51,1723	0	875.48 9,62	43,9944	0,47099 1	-131,485	0	0,3505 97	1,6183 7
18	104, 272	- 51,1723	0	875.48 9,62	43,9944	0,47099 1	-131,485	0	0,3505 97	1,6183 7
18	106, 471	- 50,2693	0	840.29 7,24	44,0783	0,44795 5	-98,4857	0	0,4313 89	1,3355 9
18	109, 133	- 48,9439	0	676.48 7,09	45,8718	0,55303 6	-49,0471	0	0,5304 87	1,1454 2
18	112, -	-	0	287.22	46,8463	1,42319	4,25538	0	0,5942	1,1237



	536	47,1158		1,89					9	9
18	118,041	-44,6185	0	151.899,72	48,1302	2,26438	14,0239	0	0,717611	1,14821
18	121,107	-42,9311	0	117.717,16	48,7961	2,66353	16,0318	0	0,784201	1,15562
18	121,107	-42,9311	0	117.717,16	48,7961	2,66352	16,0318	0	0,784204	1,15562
18	124,587	-41,0118	0	95.252,12	48,9007	3,06353	17,2678	0	0,845517	1,16072
18	133,568	-36,022	0	66.814,84	49,1727	3,86529	18,7494	0	0,956793	1,16736
18	144,088	-29,3575	0	51.063,17	49,536	4,59954	19,5408	0	1,04877	1,17109
18	156,574	-20,7302	0	42.403,31	50,0062	5,17323	19,9858	0	1,11557	1,17307
18	171,066	-9,88364	0	37.727,28	50,5975	5,55016	20,254	0	1,15754	1,17399
18	187,574	3,63644	0	33.243,62	51,3333	5,9877	20,8899	0	1,20448	1,17355
18	206,019	20,6214	0	27.834,15	52,229	6,67203	21,7445	0	1,27455	1,17275
18	226,324	42,5792	0	21.196,85	53,3414	7,89643	22,6533	0	1,39152	1,17234
18	236,272	55,5868	0	18.246,05	53,9851	8,66024	23,0316	0	1,45999	1,17226
18	248,143	71,6661	0	16.099,80	54,7681	9,59999	23,3801	0	1,54032	1,17224
18	271,318	110,278	0	11.400,29	56,6113	11,7391	23,8968	0	1,70978	1,17238
18	287,729	141,211	0	9.191,49	58,0568	13,3307	24,1377	0	1,82626	1,17237
19	103,229	-55,498	0	1,00	0,00177245	0,782428	24,6246	0	0,614873	1,1739
19	103,329	-55,4562	0	662.867,41	3,24102	0,00895011	-102,214	0	0,38754	1,51128
19	103,429	-55,4176	0	680.502,43	4,51105	0,0164937	-105,321	0	0,384925	1,5246



19	103,529	-55,3791	0	686.225,61	5,50428	0,023988	-106,305	0	0,384161	1,52881
19	103,629	-55,3409	0	694.532,58	6,34946	0,0311331	-107,981	0	0,381473	1,53739
19	103,729	-55,3029	0	703.757,83	7,09897	0,0379044	-109,881	0	0,378223	1,54751
19	103,829	-55,2652	0	712.653,55	7,77849	0,0443806	-111,711	0	0,375074	1,5575
19	103,929	-55,2278	0	720.906,05	8,40642	0,0505984	-113,399	0	0,372188	1,5669
19	104,029	-55,1907	0	728.469,13	8,99464	0,0565927	-114,935	0	0,369586	1,57561
19	104,129	-55,1539	0	735.375,44	9,55058	0,0623957	-116,329	0	0,367255	1,58363
19	104,229	-55,1173	0	741.686,00	10,0796	0,0680328	-117,595	0	0,365168	1,59102
19	104,272	-55,1017	0	744.213,65	10,2984	0,0703957	-118,099	0	0,364346	1,59398
19	104,272	-55,1017	0	744.213,65	10,2984	0,0703957	-118,099	0	0,364346	1,59398
19	104,329	-55,0803	0	731.220,02	10,3206	0,0716825	-110,362	0	0,38161	1,52846
19	104,429	-55,0407	0	706.288,46	10,3714	0,0740252	-97,2341	0	0,410939	1,43356
19	104,529	-54,9981	0	678.403,89	10,4273	0,0768135	-84,5939	0	0,438678	1,35823
19	104,629	-54,9529	0	647.656,59	10,4848	0,0803329	-72,4751	0	0,464284	1,29818
19	104,729	-54,9053	0	614.576,05	10,5399	0,084757	-60,9775	0	0,487285	1,25045
19	104,829	-54,8556	0	582.062,79	10,5873	0,089797	-50,5908	0	0,506906	1,21343
19	104,929	-54,804	0	551.669,38	10,619	0,0952236	-41,5049	0	0,523187	1,18507
19	105,029	-54,751	0	519.653,90	10,6329	0,101867	-33,0391	0	0,537341	1,16277
19	105,129	-54,6966	0	482.573,51	10,6431	0,110746	-24,7374	0	0,550125	1,14556



19	105,229	-54,6411	0	444.960,12	10,6548	0,121172	-17,4227	0	0,560898	1,13391
19	105,349	-54,5732	0	402.653,46	10,6702	0,135013	-10,3679	0	0,571187	1,12626
19	105,493	-54,4903	0	357.962,64	10,6902	0,152872	-4,15623	0	0,58041	1,12335
19	105,666	-54,3892	0	313.624,85	10,7153	0,175177	0,792347	0	0,588217	1,12517
19	105,873	-54,2665	0	271.643,49	10,746	0,202918	5,02692	0	0,594558	1,12845
19	106,122	-54,1179	0	233.013,49	10,7836	0,236988	8,41374	0	0,599576	1,13319
19	106,421	-53,9383	0	198.425,09	10,8289	0,278413	11,0939	0	0,603443	1,13859
19	106,779	-53,7215	0	168.119,29	10,8831	0,328281	13,2066	0	0,606366	1,14407
19	107,209	-53,4603	0	142.020,58	10,9474	0,387675	14,8737	0	0,608565	1,14925
19	107,725	-53,1458	0	119.800,78	11,0233	0,4578	16,1925	0	0,610202	1,15396
19	107,948	-53,0096	0	112.255,40	11,0556	0,487656	16,6207	0	0,610707	1,15562
19	107,948	-53,0096	0	112.255,40	11,0556	0,487656	16,6207	0	0,610707	1,15562
19	108,344	-52,7676	0	101.077,70	11,0687	0,541783	17,237	0	0,611405	1,15814
19	109,581	-52,313	0	85.437,92	11,0935	0,640946	18,0672	0	0,612297	1,16175
19	111,167	-51,7667	0	72.454,95	11,1233	0,755193	18,7286	0	0,612957	1,16483
19	113,025	-51,1106	0	61.735,84	11,1591	0,884887	19,2569	0	0,613442	1,16743
19	114,943	-50,3228	0	52.948,38	11,202	1,02918	19,6794	0	0,613798	1,16958
19	116,866	-49,3769	0	45.829,08	11,2536	1,18494	20,0176	0	0,614062	1,17133
19	119,044	-48,2414	0	40.208,88	11,3155	1,34442	20,2862	0	0,614258	1,17275

19	121,662	-46,8784	0	35.807,63	11,3898	1,50212	20,7532	0	0,614403	1,17285
19	125,281	-45,2365	0	31.061,03	11,4793	1,69573	21,4693	0	0,624103	1,17229
19	129,248	-43,1846	0	26.166,44	11,5911	1,8888	22,154	0	0,660296	1,17193
19	133,986	-40,5692	0	21.486,15	11,7337	2,1357	22,7673	0	0,704063	1,17175
19	140,029	-37,2117	0	17.270,96	11,9167	2,44324	23,2871	0	0,755305	1,17172
19	147,132	-32,879	0	13.646,19	12,1528	2,8186	23,7093	0	0,813788	1,17179
19	155,714	-27,2681	0	10.635,98	12,4587	3,26894	24,0413	0	0,879274	1,17192
19	166,169	-19,9872	0	8.200,15	12,8555	3,8017	24,2963	0	0,951331	1,17208
19	178,802	-10,5319	0	6.266,68	13,3709	4,42337	24,4884	0	1,0295	1,17225
19	193,863	1,74201	0	4.753,69	14,0399	5,13926	24,6313	0	1,11321	1,17241
19	211,403	17,6582	0	3.582,07	14,8885	5,95795	24,7364	0	1,20238	1,17255
19	230,944	38,2729	0	2.683,06	15,9337	6,89395	24,8129	0	1,29695	1,17268
19	244,807	55,4987	0	2.200,56	16,7882	7,59137	24,8522	0	1,36336	1,17275
19	251,805	64,9746	0	1.996,51	17,251	7,94893	24,8684	0	1,39679	1,17279
19	273,436	99,4751	0	1.476,18	18,9071	9,13076	24,9082	0	1,50116	1,17288
19	296,285	141,123	0	1.103,91	20,8597	10,3659	24,9352	0	1,60324	1,17295

Weather: Category 5/D

Wind speed [m/s]	5
Pasquill stability	D neutral - little sun and high wind or overcast/windy night
Atmospheric temperature [degC]	25
Relative humidity [fraction]	0,75
Solar radiation flux [kW/m2]	0,5
Mixing layer height [m]	800

Observer Release Data and Observer Mass Data

Observer number	Release type	Start time [s]	Start downwind distance [m]	Unit	Masses or mass rates			
					Release	Rainout	Pool vapour pick-up	Final
1	Continuou s	0	0	kg/s	916,049	911,047		5,0012 9
2	Continuou s	0,22	-0,732564	kg/s	916,049	911,047		16,390 2
3	Continuou s	38,888 1	-35,508	kg/s	916,049	911,047		639,65 9
4	Continuou s	54,686 5	-45,8374	kg/s	916,049	911,047		847,41 6
5	Continuou s	63,317 6	-51,1496	kg/s	916,049	911,047		937,92 1
6	Continuou s	63,318 6	-51,1496	kg/s	0	0	932,91 9	932,91 9
7	Continuou s	66,888 8	-53,3233	kg/s	0	0		965,26 1
8	Continuou s	67,738	-53,8402	kg/s	0	0		968,72 2
9	Continuou s	76,918 8	-59,1896	kg/s	0	0		894,83 9
10	Continuou s	86,206 6	-64,14	kg/s	0	0		684,80 2

11	Continuou s	94,590 3	-67,1859	kg/s	0	0	477,04 5
12	Continuou s	102,59 2	-69,9694	kg/s	0	0	287,67 3
13	Continuou s	110,27 3	-72,5415	kg/s	0	0	131,57 4
14	Continuou s	127,01 4	-73,0847	kg/s	0	0	12,875 7

Time-varying Observer Dispersion Data (before along-wind-diffusion effects)

Dispersion data correspond to an averaging time of: 18,75 s

Observer number	Time [s]	Down wind distance [m]	C/Line height [m]	C/Line conc [ppm]	Effective width [m]	Effective depth [m]	C/Line vapour temperature [degC]	C/Line liquid fraction	Centroid velocity [m/s]	C/Line cloud density [kg/m ³]
1	0	0	0	999.89 1,66	0,67193 6	0,3256 19	-160,935	0	11,965 5	1,9107 1
1	0,01	0,11868 1	0	991.87 7,40	0,69589	0,3277 77	-159,093	0	11,778 5	1,8872 4
1	0,02	0,23556 6	0	984.10 2,50	0,71971 2	0,3299 69	-157,292	0	11,598 9	1,8650 8
1	0,03	0,35071 6	0	976.55 5,09	0,74340 8	0,3321 87	-155,528	0	11,426 3	1,8441 1
1	0,04	0,46418 1	0	969.22 4,54	0,76698 4	0,3344 23	-153,802	0	11,260 3	1,8242 4
1	0,05	0,57601 2	0	962.10 0,85	0,79044 7	0,3366 69	-152,111	0	11,100 6	1,8053 7
1	0,06	0,68629 2	0	955.17 2,93	0,81380 1	0,3389 24	-150,453	0	10,946 7	1,7874 1
1	0,07	0,79508 1	0	948.43 1,42	0,83705 1	0,3411 82	-148,828	0	10,798 3	1,7703
1	0,08	0,90246 9	0	941.86 6,05	0,86019 9	0,3434 43	-147,233	0	10,655 2	1,7539 7



1	0,09	1,00843	0	935.47 2,97	0,88325	0,3456 99	-145,669	0	10,517 1	1,7383 6
1	0,1	1,11307	0	929.24 1,60	0,90620 5	0,3479 52	-144,134	0	10,383 7	1,7234 2
1	0,11	1,2164	0	923.16 6,94	0,92906 7	0,3501 96	-142,626	0	10,254 8	1,7091
1	0,12	1,31838	0	917.24 5,94	0,95183 7	0,3524 27	-141,146	0	10,130 2	1,6953 7
1	0,13	1,41922	0	911.46 5,46	0,97451 5	0,3546 52	-139,691	0	10,009 6	1,6821 8
1	0,14	1,51885	0	905.82 4,18	0,99710 3	0,3568 65	-138,262	0	9,8928 7	1,6694 9
1	0,15	1,61726	0	900.31 8,84	1,0196	0,3590 6	-136,857	0	9,7799	1,6572 8
1	0,16	1,71465	0	894.93 7,31	1,04201	0,3612 49	-135,475	0	9,6703 7	1,6455 1
1	0,17	1,81092	0	889.68 0,45	1,06433	0,3634 22	-134,116	0	9,5642 2	1,6341 6
1	0,18	1,90609	0	884.54 4,28	1,08656	0,3655 77	-132,779	0	9,4613 1	1,6232 1
1	0,19	2,00026	0	879.52 1,23	1,1087	0,3677 2	-131,464	0	9,3614 5	1,6126 3
1	0,2	2,09343	0	874.60 8,85	1,13075	0,3698 48	-130,169	0	9,2645 1	1,6024
1	0,212	2,20395	0	868.85 4,58	1,15708	0,3723 82	-128,642	0	9,1518 9	1,5905 6
1	0,226 4	2,33478	0	862.14 3,31	1,18851	0,3753 94	-126,846	0	9,0218	1,5769 4
1	0,243 68	2,48932	0	854.35 4,68	1,22598	0,3789 69	-124,742	0	8,8725 3	1,5613 8
1	0,264 416	2,67143	0	845.36 6,65	1,27055	0,3832 05	-122,287	0	8,7025 2	1,5437 4
1	0,289 299	2,88549	0	835.06 0,02	1,32349	0,3882 18	-119,435	0	8,5105 7	1,5239 2
1	0,319 159	3,13628	0	823.33 0,59	1,3862	0,3941 34	-116,139	0	8,2959 7	1,5018 4
1	0,354 991	3,42931	0	810.08 6,47	1,46023	0,4011 13	-112,354	0	8,0585 7	1,4775 1



1	0,397 989	3,77037	0	795.27 5,28	1,54726	0,4093 21	-108,034	0	7,7991 7	1,4509 8
1	0,449 587	4,16584	0	778.88 2,10	1,64898	0,4189 6	-103,143	0	7,5194 6	1,4224
1	0,511 504	4,62268	0	760.93 9,28	1,76699	0,4302 79	-97,651	0	7,2220 3	1,3919 9
1	0,585 805	5,14812	0	741.55 0,22	1,90251	0,4435 54	-91,5408	0	6,9108 3	1,3600 4
1	0,674 966	5,75035	0	720.87 2,28	2,05596	0,4591 76	-84,8123	0	6,5905 1	1,3269 1
1	0,781 959	6,43801	0	698.83 4,39	2,22626	0,4781 54	-77,4345	0	6,2647 5	1,2929 3
1	0,910 351	7,22114	0	674.03 8,61	2,4092	0,5042 07	-69,1797	0	5,9306 4	1,2580 8
1	1,064 42	8,11031	0	646.10 3,82	2,59385	0,5408 2	-60,0755	0	5,5947 3	1,2233 5
1	1,249 31	9,11535	0	615.31 8,90	2,75444	0,5935 07	-50,3404	0	5,2689 1	1,1900 8
1	1,471 17	10,2497	0	579.29 3,27	2,88134	0,6709 23	-39,8953	0	4,9522 6	1,1594 2
1	1,737 4	11,5238	0	530.06 8,56	3,01215	0,7876 13	-28,2618	0	4,6289 8	1,1336 5
1	2,056 88	12,9533	0	473.79 8,40	3,15842	0,9379 35	-17,2706	0	4,3345 7	1,1166 5
1	2,440 26	14,5643	0	415.67 7,28	3,32562	1,1170 2	-8,14696	0	4,0841	1,1092 5
1	2,900 31	16,3933	0	359.06 7,50	3,53743	1,3155 7	-1,17695	0	3,8790 4	1,1096 4
1	3,452 37	18,4873	0	306.35 4,00	3,79875	1,5302 5	3,99095	0	3,7153 3	1,1149 1
1	4,114 84	20,9231	0	258.23 6,07	4,11433	1,7354 3	8,10742	0	3,6483 2	1,1216 3
1	4,909 81	23,8123	0	215.03 3,13	4,48778	1,9496 1	11,2842	0	3,6223 4	1,1293 2
1	5,863 77	27,2652	0	177.10 9,56	4,92363	2,1823	13,7379	0	3,6182 3	1,1371 1
1	7,008 53	31,4139	0	144.48 3,27	5,427	2,4368 7	15,6322	0	3,6328 1	1,1444 6



1	8,382 23	36,4243	0	116.93 1,91	6,00277	2,7172 4	17,0951	0	3,6627 3	1,1510 7
1	9,640 44	41,0538	0	98.725, 85	6,50491	2,9558 5	17,9989	0	3,6948 4	1,1556 2
1	9,640 44	41,0538	0	98.725, 85	6,50491	2,9558 5	17,9989	0	3,6948 4	1,1556 2
1	10,03 07	42,4977	0	94.032, 88	6,6565	3,0272 5	18,2239	0	3,7052	1,1568 2
1	12,00 88	49,8809	0	74.747, 16	7,41401	3,3829	19,1116	0	3,7599 3	1,1618 6
1	14,38 26	58,8875	0	58.224, 74	8,32185	3,8117 8	19,8213	0	3,8288 3	1,1663 5
1	17,23 11	69,9183	0	43.920, 45	9,43277	4,3685 5	20,3907	0	3,9176 4	1,1704
1	20,64 93	83,519	0	32.414, 34	10,7783	5,2155 3	21,8849	0	4,0444 4	1,1705
1	23,53 16	95,3378	0	25.547, 07	11,9082	6,0376 3	22,7361	0	4,1566 8	1,1707
1	24,75 12	100,441	0	23.259, 90	12,3917	6,3810 8	22,9969	0	4,2003 2	1,1708 1
1	29,67 34	121,506	0	17.049, 86	14,3733	7,6053 5	23,6804	0	4,3432 3	1,1712
1	35,58 01	147,6	0	12.420, 11	16,8013	9,0509 2	24,1367	0	4,4913	1,1716
1	35,67 59	148,03	0	12.365, 72	16,8411	9,0743 5	24,1422	0	4,4935 4	1,1716
1	42,66 81	179,992	0	9.181,5 5	19,7782	10,778 9	24,4397	0	4,6463 3	1,1719 6
1	51,17 37	220,203	0	6.615,1 6	23,4252	12,842 8	24,6389	0	4,8079 4	1,1722 7
1	51,84 3	223,424	0	6.437,7 0	23,7152	13,004 7	24,6501	0	4,8197 3	1,1722 9
2	0,22	- 0,73256 4	0	1,00	0,00177 245	0,1512 76	24,6246	0	3,1802 3	1,1739
2	0,32	- 0,66333	0	917.47 5,78	1,03833	0,0794 122	-146,007	0	0,5814 97	1,7632 2



		2								
2	0,42	-	0	912.80	1,56573	0,1259	-145,107	0	0,6244	1,7553
		0,60321		6,70		03			15	2
		5								
2	0,52	-	0	907.83	2,01561	0,1644	-144,226	0	0,6654	1,7481
		0,53863		1,92		17			56	8
		2								
2	0,62	-	0	904.30	2,42907	0,1976	-143,64	0	0,6980	1,7437
		0,47039		7,82		18			56	3
		3								
2	0,72	-	0	901.36	2,81858	0,2266	-143,166	0	0,7266	1,7402
		0,39913		0,96		69			71	7
		4								
2	0,82	-	0	898.66	3,19176	0,2524	-142,738	0	0,7531	1,7372
		0,32512		1,45		23			23	2
		3								
2	0,92	-	0	896.09	3,55308	0,2755	-142,333	0	0,7781	1,7343
		0,24853		2,36		13			52	7
		8								
2	1,02	-	0	893.58	3,90595	0,2963	-141,939	0	0,8022	1,7316
		0,16950		5,28		09			56	2
		1								
2	1,12	-	0	891.14	4,25103	0,3154	-141,557	0	0,8254	1,7289
		0,08811		5,85		16			35	9
		29								
2	1,22	-	0	888.75	4,58937	0,3331	-141,183	0	0,8478	1,7264
		0,00443		2,12		09			83	3
		609								
2	1,225	1,78323	0	888.62	4,60691	0,3339	-141,163	0	0,8490	1,7263
	23	E-14		7,88		97			4	
2	1,225	1,78323	0	990.81	0,92697	0,4499	-159,353	0	8,8267	1,8932
	23	E-14		0,31	4	41			9	1
2	1,32	0,70317	0	970.69	2,2356	0,3605	-155,511	0	6,3940	1,8508
		6		7,12		34			7	2
2	1,42	1,27944	0	961.71	2,99275	0,4011	-153,839	0	5,2499	1,8337
				2,77		53			5	1
2	1,52	1,76939	0	955.78	3,51318	0,4473	-152,773	0	4,6009	1,8233
				7,23		69			5	2
2	1,62	2,20787	0	950.43	3,92117	0,4895	-151,818	0	4,181	1,8142



				6,66	5				8	
2	1,72	2,61094	0	945.42 2,47	4,26162	0,5254 03	-150,901	0	3,8920 5	1,8056
2	1,82	2,98936	0	940.47 7,71	4,56988	0,5544 77	-149,649	0	3,6864 4	1,7918 3
2	1,92	3,35025	0	935.32 1,97	4,87796	0,5746 98	-147,946	0	3,5399 2	1,7718 2
2	2,02	3,69892	0	929.63 9,93	5,1832	0,5868 05	-145,699	0	3,4412 1	1,7451 3
2	2,102 59	3,98107	0	924.12 8,73	5,42928	0,5894 44	-143,199	0	3,3984 3	1,7157 6
2	2,102 59	3,98107	0	924.12 8,73	5,42928	0,5894 44	-143,199	0	3,3984 3	1,7157 6
2	2,12	4,04022	0	922.64 7,06	5,47777	0,5901 29	-142,189	0	3,3970 6	1,7035 1
2	2,22	4,37949	0	913.74 4,47	5,7521	0,5948 3	-136,405	0	3,3891 1	1,6376
2	2,34	4,7856	0	902.27 0,58	6,0735	0,6018 2	-129,515	0	3,3794 7	1,5675 7
2	2,484	5,2714	0	887.25 7,53	6,44552	0,6123 48	-121,34	0	3,3678 4	1,4947 9
2	2,656 8	5,85217	0	867.44 8,52	6,86775	0,6283 27	-111,7	0	3,3539 6	1,4210 7
2	2,864 16	6,54596	0	841.10 5,36	7,33064	0,6530 63	-100,425	0	3,3376 7	1,3486 7
2	3,112 99	7,37415	0	805.86 2,36	7,81	0,6922 11	-87,3711	0	3,3190 1	1,2802 2
2	3,411 59	8,36221	0	762.77 9,12	8,25395	0,7495 32	-73,104	0	3,2992 6	1,2195 3
2	3,597 86	8,97579	0	737.30 0,09	8,44019	0,7906 93	-65,1992	0	3,2887	1,1908 2
2	3,597 86	8,97579	0	737.30 0,09	8,44019	0,7906 93	-65,1992	0	3,2887	1,1908 2
2	3,769 91	9,54084	0	714.00 7,79	8,5282	0,8365 03	-58,4212	0	3,2798 7	1,1689 5
2	4,199 89	10,9464	0	640.17 7,03	8,6745	0,9972 15	-41,183	0	3,2585 4	1,1283 3
2	4,715	12,6225	0	555.70	8,86753	1,2112	-24,6474	0	3,2394	1,1025



	87			1,99		6			5	9
2	5,335 04	14,6233	0	476.36 8,86	9,09851	1,4560 4	-11,8366	0	3,2246 4	1,0919 9
2	6,078 05	17,0253	0	408.91 5,38	9,35547	1,6888	-3,2068	0	3,2587 9	1,0920 7
2	6,969 66	19,9633	0	351.23 9,12	9,65397	1,9081 2	2,57728	0	3,3295 9	1,0979
2	8,039 59	23,5676	0	296.55 4,46	10,0179	2,1685 2	7,2479	0	3,4072 7	1,1060 8
2	9,323 51	27,9978	0	245.48 1,00	10,463	2,4829 7	10,8666	0	3,4935 3	1,1161 1
2	10,86 42	33,4539	0	199.10 5,87	11,0079	2,8658 5	13,6589	0	3,5890 8	1,1267 4
2	12,71 31	40,1876	0	158.18 6,92	11,676	3,3346 8	15,7999	0	3,6943 1	1,1370 9
2	14,93 17	48,514	0	123.09 2,02	12,496	3,9112 4	17,4291	0	3,8095 7	1,1466
2	17,59 4	58,8261	0	93.817, 21	13,5033	4,6231 3	18,6593	0	3,9351 2	1,1549 1
2	20,78 88	71,6183	0	70.061, 19	14,7415	5,5044 6	19,5765	0	4,0712 1	1,1619
2	24,62 26	87,5122	0	51.195, 67	16,2648	6,5978 4	20,2491	0	4,2179 6	1,1676
2	29,22 31	107,277	0	37.145, 22	18,1387	7,8763 8	21,3818	0	4,3666 1	1,1695 9
2	34,74 37	131,782	0	27.233, 10	20,4351	9,2688	22,5051	0	4,5084 5	1,1699 4
2	37,42 66	143,961	0	23.740, 63	21,5665	9,9404 6	22,8785	0	4,5706 8	1,1701 4
2	41,36 84	162,187	0	19.667, 77	23,2474	10,941	23,3007	0	4,6575 2	1,1704 4
2	49,31 81	199,844	0	14.053, 87	26,6854	12,914 5	23,8535	0	4,8116 6	1,1709
2	54,17 64	223,421	0	11.733, 46	28,8154	14,110 9	24,0739	0	4,8960 9	1,1712 2
3	38,88 81	-35,508	0	1,00	0,00177 245	0,1512 76	24,6246	0	3,1802 3	1,1739



3	38,98 81	-35,27	0	509.00 7,05	7,02165	0,0177 479	-81,0835	0	2,3661 2	1,4592 5
3	39,08 81	- 35,0333	0	508.98 6,76	9,93142	0,0353 061	-81,0451	0	2,3677 2	1,4589 7
3	39,18 81	- 34,7965	0	508.57 5,49	12,1727	0,0528 281	-80,9692	0	2,3692 8	1,4587
3	39,28 81	- 34,5595	0	508.08 3,27	14,0697	0,0703 014	-80,8862	0	2,3708 6	1,4584 4
3	39,38 81	- 34,3223	0	507.53 6,24	15,7397	0,0877 591	-80,7964	0	2,3725 4	1,4581 7
3	39,48 81	-34,085	0	506.98 4,04	17,2522	0,1051 75	-80,707	0	2,3741 8	1,4579
3	39,58 81	- 33,8475	0	506.44 6,20	18,6483	0,1225 39	-80,6209	0	2,3757 5	1,4576 5
3	39,68 81	- 33,6098	0	505.91 9,34	19,9516	0,1398 61	-80,5371	0	2,3772 6	1,4574 1
3	39,78 81	-33,372	0	505.39 9,77	21,1789	0,1571 44	-80,4546	0	2,3787 5	1,4571 7
3	39,88 81	- 33,1341	0	504.88 5,69	22,3434	0,1743 84	-80,3731	0	2,3802 2	1,4569 4
3	39,98 81	-32,896	0	504.37 6,44	23,4542	0,1915 86	-80,2925	0	2,3816 7	1,4567 1
3	40,08 81	- 32,6578	0	503.87 1,80	24,5182	0,2087 54	-80,2128	0	2,3831 1	1,4564 8
3	40,18 81	- 32,4194	0	503.36 9,86	25,5418	0,2258 83	-80,1334	0	2,3845 3	1,4562 6
3	40,28 81	- 32,1809	0	502.88 7,12	26,5312	0,2429 39	-80,0589	0	2,3859 2	1,4560 5
3	40,38 81	- 31,9422	0	502.51 7,33	27,489	0,2598 74	-80,0135	0	2,3870 9	1,4559 9
3	40,48 81	- 31,7035	0	502.32 7,68	28,4194	0,2766 09	-80,0145	0	2,3879 2	1,4561 4
3	40,58 81	- 31,4648	0	502.46 2,90	29,3241	0,2930 18	-80,0993	0	2,3881 4	1,4566 8
3	40,68 81	-31,226	0	502.87 1,12	30,2055	0,3090 97	-80,2541	0	2,3878 6	1,4575 6
3	40,78 81	- 30,9872	0	503.53 4,61	31,0656	0,3248 26	-80,4741	0	2,3871 2	1,4587 4



3	40,88 81	- 30,7485	0	504.37 7,48	31,9054	0,3402 43	-80,7387	0	2,3860 8	1,4601 3
3	41,00 81	- 30,4622	0	505.59 6,93	32,889	0,3583 2	-81,1071	0	2,3844 8	1,4620 3
3	41,15 21	-30,119	0	507.25 7,41	34,0372	0,3794 59	-81,5952	0	2,3822 9	1,4645 3
3	41,32 49	- 29,7075	0	509.43 2,88	35,3732	0,4040 77	-82,2211	0	2,3794 5	1,4677 3
3	41,53 23	- 29,2145	0	512.19 5,91	36,9216	0,4326 63	-83,0028	0	2,3759 1	1,4717 1
3	41,78 11	- 28,6238	0	515.58 5,06	38,717	0,4656 14	-83,9493	0	2,3717 3	1,4765 5
3	42,07 97	- 27,9163	0	519.65 3,11	40,7869	0,5035 28	-85,0733	0	2,3669 2	1,4823 2
3	42,43 8	- 27,0691	0	524.42 3,94	43,1627	0,5470 24	-86,3804	0	2,3615 8	1,4891
3	42,86 8	- 26,0548	0	529.87 9,26	45,8834	0,5966 64	-87,8657	0	2,3559 1	1,4969
3	43,38 4	- 24,8406	0	535.97 4,06	48,9929	0,6530 36	-89,5186	0	2,3502	1,5057 1
3	44,00 32	- 23,3872	0	542.61 6,06	52,5432	0,7166 7	-91,3184	0	2,3448 1	1,5155
3	44,74 62	- 21,6468	0	549.63 8,80	56,6009	0,7879 03	-93,2288	0	2,3403 5	1,5261 4
3	45,63 78	- 19,5616	0	556.82 9,16	61,2486	0,8669 26	-95,2067	0	2,3375 2	1,5374 8
3	46,70 77	- 17,0611	0	563.94 5,43	66,5269	0,9551 58	-97,1494	0	2,3370 2	1,5488 4
3	47,99 17	- 14,0592	0	570.62 3,37	72,5163	1,0561 9	-98,5256	0	2,3398	1,5557 4
3	49,53 24	- 10,4492	0	576.40 8,09	79,2897	1,1734 4	-99,0889	0	2,3469 4	1,5561 4
3	51,38 12	-6,1001	0	581.57 3,10	86,9424	1,3075 7	-98,883	0	2,3582 7	1,5501 5
3	53,59 98	- 0,85041 3	0	586.08 8,10	96,074	1,4520 4	-97,7997	0	2,3748 2	1,5369 5
3	53,95	1,46648	0	586.58	97,5722	1,4737	-97,53	0	2,3779	1,5341



	77	E-12		5,55		4			5	8
3	53,95 77	1,46648 E-12	0	596.57 1,97	95,6053	1,4401	-99,1658	0	2,4695	1,5404 8
3	56,26 21	5,68221	0	597.15 5,81	105,409	1,5865	-96,9076	0	2,4693	1,5202 3
3	59,45 69	13,6865	0	592.33 8,79	119,146	1,7435	-91,7473	0	2,5442	1,4806 4
3	63,29 07	23,6528	0	576.10 3,11	135,397	1,9460	-82,5843	0	2,6572	1,4214 7
3	67,89 12	36,2483	0	542.40 0,39	153,957	2,2246	-68,4755	0	2,8215	1,3471 8
3	73,41 18	52,4594	0	482.05 1,33	173,33	2,6334	-47,1364	0	3,0598	1,2586 7
3	75,26 64	58,229	0	452.18 9,54	178,525	2,8091	-37,5313	0	3,1644	1,2257 9
3	75,26 64	58,229	0	452.18 9,54	178,525	2,8091	-37,5313	0	3,1644	1,2257 9
3	76,49 23	62,1663	0	424.57 6,33	181,025	2,9876	-27,1747	0	3,2602	1,1908 2
3	76,49 23	62,1663	0	424.57 6,33	181,025	2,9876	-27,1747	0	3,2602	1,1908 2
3	80,03 66	74,3126	0	312.09 5,72	182,962	3,9862	-3,25458	0	3,6123	1,1439 6
3	87,98 62	105,498	0	164.54 6,78	186,372	6,8001	12,2998	0	4,1590	1,1494 4
3	97,52 59	146,716	0	112.00 8,87	190,222	9,2271	16,1987	0	4,4567	1,1570 9
3	108,9 73	199,244	0	79.991, 67	195,033	11,971	18,1984	0	4,7112	1,1631 5
3	122,7 1	265,686	0	58.277, 23	200,997	15,243	19,4054	0	4,9522	1,1679 3
3	139,1 95	349,324	0	42.928, 40	208,352	19,126	20,1775	0	5,1853	1,1716 2
3	158,9 76	454,246	0	31.850, 39	217,388	23,744	21,1822	0	5,4151	1,1727 2
3	182,7 14	585,585	0	23.726, 32	228,46	29,219	22,3731	0	5,6434	1,1719 9
3	183,8	592,242	0	23.413,	229,015	29,488	22,4164	0	5,6536	1,1719



	92			99		1			8	7
3	211,1 99	749,878	0	17.691, 11	242,003	35,657 3	23,1742	0	5,8706 6	1,1717 8
3	239,2 54	917,238	0	13.866, 66	255,53	41,813 3	23,6457	0	6,0584 6	1,1717 9
4	54,68 65	- 45,8374	0	1,00	0,00177 245	0,1512 76	24,6246	0	3,1802 3	1,1739
4	54,78 65	- 45,5899	0	468.94 5,16	8,02375	0,0168 831	-75,1637	0	2,4640 4	1,4447 7
4	54,88 65	- 45,3435	0	468.97 8,97	11,3515	0,0336 221	-75,1389	0	2,4651 7	1,4445 6
4	54,98 65	- 45,0969	0	468.63 0,66	13,9134	0,0503 17	-75,0745	0	2,4664 1	1,4443 4
4	55,08 65	- 44,8502	0	468.23 9,84	16,0763	0,0670 038	-75,0088	0	2,4675 7	1,4441 5
4	55,18 65	- 44,6034	0	467.85 3,73	17,9832	0,0837 005	-74,946	0	2,4686 4	1,4439 7
4	55,28 65	- 44,3565	0	467.46 8,03	19,718	0,1003 29	-74,8841	0	2,4696 9	1,4438
4	55,38 65	- 44,1094	0	467.06 6,24	21,3199	0,1169 12	-74,8199	0	2,4707 9	1,4436 2
4	55,48 65	- 43,8623	0	466.65 4,95	22,8143	0,1334 63	-74,7543	0	2,4719	1,4434 5
4	55,58 65	- 43,6151	0	466.24 1,69	24,2213	0,1499 75	-74,6887	0	2,4730 1	1,4432 7
4	55,68 65	- 43,3677	0	465.82 8,41	25,5546	0,1664 65	-74,6232	0	2,4741 1	1,4430 9
4	55,78 65	- 43,1202	0	465.40 9,93	26,8294	0,1828 84	-74,557	0	2,4752 3	1,4429 2
4	55,88 65	- 42,8727	0	464.98 9,48	28,051	0,1992 67	-74,4905	0	2,4763 4	1,4427 4
4	55,98 65	-42,625	0	464.56 9,57	29,2243	0,2156 41	-74,4242	0	2,4774 6	1,4425 6
4	56,08 65	- 42,3772	0	464.14 9,21	30,3564	0,2319 78	-74,3578	0	2,4785 7	1,4423 9
4	56,18 65	- 42,1292	0	463.72 9,96	31,4508	0,2482 95	-74,2917	0	2,4796 8	1,4422 1



4	56,28 65	- 41,8812	0	463.34 6,40	32,5108	0,2645 77	-74,2351	0	2,4807 2	1,4420 8
4	56,38 65	- 41,6331	0	463.13 7,73	33,5407	0,2806 89	-74,2257	0	2,4814 4	1,4421 6
4	56,48 65	-41,385	0	463.13 5,43	34,5431	0,2965 86	-74,2721	0	2,4818	1,4425
4	56,58 65	- 41,1368	0	463.37 7,84	35,5203	0,3121 93	-74,3843	0	2,4817 3	1,4431 5
4	56,68 65	- 40,8887	0	463.84 9,64	36,4748	0,3274 86	-74,5578	0	2,4812 7	1,4440 7
4	56,80 65	- 40,5909	0	464.67 2,42	37,5925	0,3454 2	-74,8338	0	2,4803	1,4455
4	56,95 05	- 40,2338	0	465.93 9,12	38,8964	0,3663 79	-75,2374	0	2,4787	1,4475 4
4	57,12 33	- 39,8056	0	467.74 9,97	40,4121	0,3907 74	-75,7945	0	2,4763 7	1,4503 2
4	57,33 07	- 39,2923	0	470.17 4,84	42,1668	0,4190 71	-76,5215	0	2,4732 9	1,4539 3
4	57,57 95	- 38,6774	0	473.29 8,43	44,188	0,4518 1	-77,4396	0	2,4694 1	1,4584 9
4	57,87 81	- 37,9407	0	477.18 1,76	46,5132	0,4894 58	-78,5629	0	2,4647 3	1,4640 8
4	58,23 64	- 37,0584	0	481.84 6,81	49,1918	0,5324 1	-79,895	0	2,4593 6	1,4707 5
4	58,66 64	- 36,0022	0	487.31 7,01	52,2564	0,5813 66	-81,441	0	2,4534	1,4785 7
4	59,18 24	- 34,7379	0	493.56 6,72	55,753	0,6369 24	-83,1928	0	2,4470 6	1,4875 5
4	59,80 16	- 33,2247	0	500.54 2,06	59,7343	0,6996 97	-85,1363	0	2,4406	1,4976 9
4	60,54 46	- 31,4137	0	508.13 5,98	64,267	0,7701 88	-87,245	0	2,4344 3	1,5089 3
4	61,43 62	- 29,2458	0	516.16 8,29	69,4362	0,8487 13	-89,477	0	2,4291 3	1,5211 2
4	62,50 61	- 26,6491	0	524.41 6,42	75,3225	0,9358 42	-91,7858	0	2,4253 2	1,5341 2
4	63,79	- 23,5366	0	532.63 0,98	82,0078	1,0324 9	-94,0862	0	2,4236 9	1,5474 3



4	65,33 07	- 19,8017	0	540.43 3,39	89,5874	1,1428 2	-95,8037	0	2,4251 7	1,5562 8
4	67,17 96	- 15,3138	0	547.87 4,69	98,1647	1,2688 7	-96,7836	0	2,4299 6	1,5590 4
4	69,39 82	- 9,91503	0	555.85 1,58	107,859	1,4084 3	-97,2055	0	2,4371 1	1,5564 5
4	72,06 05	- 3,41116	0	563.20 6,20	119,335	1,5596 3	-96,6131	0	2,4495 9	1,5453 8
4	73,44 5	2,02809 E-12	0	565.64 7,56	125,433	1,6210 1	-95,7608	0	2,4773 2	1,5360 1
4	73,44 5	2,02809 E-12	0	572.87 4,72	123,619	1,6056 1	-96,9233	0	2,5261 5	1,5403 1
4	75,25 53	4,60291	0	574.12 6,83	131,655	1,6884 7	-95,338	0	2,5577 2	1,5255 7
4	79,08 91	14,5559	0	570.90 7,53	148,737	1,8641 9	-90,0517	0	2,6361 4	1,4839 5
4	83,68 96	26,9449	0	556.29 7,18	168,987	2,0916 8	-80,7695	0	2,7515 9	1,4231 3
4	89,21 02	42,5895	0	522.30 8,66	192,153	2,4145 4	-66,0537	0	2,9219 3	1,3456
4	95,83 49	62,7427	0	458.46 9,64	216,183	2,9052 5	-43,1846	0	3,1741 5	1,2521 2
4	97,53 96	68,2253	0	433.97 6,56	221,063	3,0708 1	-35,0225	0	3,2605 5	1,2241 9
4	97,53 96	68,2253	0	433.97 6,56	221,063	3,0708 3	-35,0225	0	3,2605 3	1,2241 9
4	98,88 19	72,6629	0	407.68 1,05	223,892	3,2679 2	-25,0817	0	3,3525 8	1,1908 2
4	98,88 19	72,6629	0	407.68 1,05	223,892	3,2679 2	-25,0817	0	3,3525 8	1,1908 2
4	103,7 85	90,1235	0	270.34 1,51	226,545	4,7412 5	1,11648	0	3,7857 3	1,1455 5
4	113,3 24	129,1	0	144.35 8,02	230,558	7,9770 1	13,5801	0	4,3085 6	1,1530 3
4	124,7 72	180,246	0	98.673, 87	235,277	10,803 4	16,9072	0	4,6064 6	1,1600 2
4	138,5 09	245,403	0	70.229, 16	241,162	14,071 9	18,6616	0	4,8693 3	1,1655 4



4	154,993	327,779	0	50.918,03	248,445	17,9578	19,7197	0	5,11811	1,1698
4	174,775	431,446	0	37.398,49	257,414	22,5536	20,3924	0	5,35852	1,17307
4	198,512	561,549	0	27.691,43	268,426	28,0263	21,6547	0	5,59604	1,17271
4	215,439	657,525	0	23.046,79	276,405	31,8683	22,3409	0	5,74077	1,17227
4	226,997	724,577	0	20.595,22	281,91	34,4776	22,6897	0	5,83091	1,17211
4	261,18	928,44	0	15.382,75	298,38	42,0285	23,3873	0	6,06425	1,17195
4	275,871	1018,17	0	13.784,63	305,526	45,1829	23,5902	0	6,15156	1,17194
5	63,3176	-51,1496	0	1,00	0,00177245	0,151276	24,6246	0	3,18023	1,1739
5	63,4176	-50,8984	0	452.204,11	8,48071	0,0165745	-72,7019	0	2,50246	1,43909
5	63,5176	-50,648	0	452.200,41	11,9977	0,0330119	-72,6738	0	2,50357	1,43889
5	63,6176	-50,3976	0	451.906,85	14,7064	0,0494211	-72,6193	0	2,50461	1,43871
5	63,7176	-50,1471	0	451.561,28	16,9931	0,0658179	-72,5612	0	2,50567	1,43854
5	63,8176	-49,8965	0	451.204,75	19,0155	0,082174	-72,5032	0	2,50656	1,43838
5	63,9176	-49,6458	0	450.838,44	20,8491	0,0985019	-72,4444	0	2,50754	1,43822
5	64,0176	-49,395	0	450.468,69	22,5378	0,114812	-72,3854	0	2,50851	1,43807
5	64,1176	-49,1441	0	450.099,32	24,1139	0,131093	-72,3268	0	2,50947	1,43791
5	64,2176	-48,8931	0	449.728,44	25,5994	0,147336	-72,2681	0	2,51043	1,43776
5	64,3176	-48,642	0	449.357,39	27,0089	0,163546	-72,2095	0	2,51139	1,43761
5	64,41	-	0	448.98	28,3532	0,1797	-72,1508	0	2,5123	1,4374

	76	48,3908		5,07		25			5	5
5	64,51 76	- 48,1396	0	448.61 1,78	29,6399	0,1958 86	-72,0919	0	2,5133 1	1,4373
5	64,61 76	- 47,8882	0	448.23 8,59	30,8764	0,2120 25	-72,0331	0	2,5142 7	1,4371 5
5	64,71 76	- 47,6367	0	447.86 5,93	32,069	0,2281 37	-71,9745	0	2,5152 2	1,437
5	64,81 76	- 47,3851	0	447.49 3,65	33,2227	0,2442 21	-71,9159	0	2,5161 8	1,4368 5
5	64,91 76	- 47,1335	0	447.12 1,25	34,3419	0,2602 71	-71,8573	0	2,5171 3	1,4367
5	65,01 76	- 46,8817	0	446.75 9,63	35,4298	0,2762 81	-71,8018	0	2,5180 6	1,4365 6
5	65,11 76	- 46,6299	0	446.65 7,30	36,488	0,2920 47	-71,8181	0	2,5185 4	1,4367 5
5	65,21 76	- 46,3781	0	446.75 8,02	37,5201	0,3075 68	-71,8907	0	2,5186 7	1,4372
5	65,31 76	- 46,1262	0	447.06 1,10	38,5272	0,3228 25	-72,0183	0	2,5184 6	1,4379
5	65,43 76	-45,824	0	447.70 9,22	39,7062	0,3407 15	-72,2488	0	2,5177 5	1,4390 9
5	65,58 16	- 45,4615	0	448.77 0,35	41,0816	0,3616 54	-72,601	0	2,5164 5	1,4408 7
5	65,75 44	- 45,0268	0	450.38 6,33	42,6814	0,3860 03	-73,1134	0	2,5143 9	1,4434 1
5	65,96 17	- 44,5056	0	452.65 0,32	44,5355	0,4142 07	-73,8097	0	2,5115 4	1,4468
5	66,21 06	- 43,8811	0	455.64 4,35	46,6769	0,4467 37	-74,7101	0	2,5077 5	1,4512 6
5	66,50 92	- 43,1329	0	459.43 0,44	49,141	0,4841 12	-75,8291	0	2,5031 5	1,4567 6
5	66,86 75	- 42,2369	0	464.04 8,40	51,9663	0,5268 85	-77,1749	0	2,4977 5	1,4634 1
5	67,29 75	- 41,1642	0	469.50 7,72	55,1998	0,5755 62	-78,747	0	2,4917 2	1,4712 6
5	67,81 35	- 39,8802	0	475.78 5,29	58,8931	0,6306 75	-80,5375	0	2,4852 5	1,4803 2
5	68,43	-	0	482.82	63,1002	0,6928	-82,53	0	2,4786	1,4905



	26	38,3435		1,16		29			2	6
5	69,17	-	0	490.52	67,8748	0,7627	-84,7008	0	2,4721	1,5019
	56	36,5044		1,62		41			6	6
5	70,06	-	0	498.74	73,3012	0,8408	-87,0138	0	2,4663	1,5144
	72	34,3031		0,75		22			2	1
5	71,13	-	0	507.29	79,4704	0,9275	-89,4286	0	2,4616	1,5277
	72	31,6671		7,01		54			5	7
5	72,42	-	0	515.95	86,4849	1,0234	-91,8969	0	2,4587	1,5418
	11	28,5088		7,43		3			8	9
5	73,96	-	0	524.40	94,4447	1,1308	-94,1002	0	2,4585	1,5542
	18	24,7212		7,09		3				7
5	75,81	-	0	532.61	103,451	1,2536	-95,5693	0	2,4611	1,5606
	06	20,1737		3,44		8				8
5	78,02	-14,709	0	541.68	113,625	1,3890	-96,5492	0	2,4653	1,5621
	93			3,47		2				7
5	80,69	-	0	550.74	125,293	1,5378	-96,7069	0	2,4735	1,5563
	16	8,13562		9,59		3			1	8
5	83,88	-	0	557.48	139,527	1,6762	-95,2352	0	2,5295	1,5381
	64	0,15662		9,17					2	8
		4								
5	83,94	3,71534	0	557.56	139,806	1,6787	-95,188	0	2,5308	1,5377
	83	E-15		8,18		4			2	
5	83,94	3,71534	0	563.83	138,055	1,6658	-96,1885	0	2,5720	1,5413
	83	E-15		9,93		8			4	5
5	87,72	9,82539	0	564.37	155,113	1,8317	-92,149	0	2,6391	1,5064
	01			3,97		4			7	9
5	92,32	22,199	0	554.83	175,798	2,0456	-84,0525	0	2,7419	1,4491
	07			9,43		3			9	1
5	97,84	37,7454	0	528.09	199,775	2,3449	-70,7199	0	2,8949	1,3726
	13			5,05		6			7	1
5	104,4	57,6411	0	475.11	225,701	2,7973	-50,6834	0	3,1177	1,2835
	66			2,78		9			4	2
5	108,9	72,1136	0	421.38	239,783	3,2055	-32,8812	0	3,3116	1,2209
	75			6,87		7			3	5
5	108,9	72,1136	0	421.38	239,783	3,2055	-32,8812	0	3,3116	1,2209
	75			6,87		6			4	5
5	110,2	76,5147	0	395.80	242,557	3,4000	-23,8001	0	3,3964	1,1908
	88			6,01		3			2	2



5	110,288	76,5147	0	395.806,01	242,5572	3,4000	-23,8001	0	3,39643	1,19082
5	112,416	83,9034	0	345.258,74	244,0637	3,8733	-10,9967	0	3,55887	1,15957
5	121,955	121,398	0	165.676,50	248,1556	7,2446	11,6508	0	4,21207	1,15109
5	133,403	171,816	0	107.837,75	252,829	10,28	16,2131	0	4,55598	1,15886
5	147,14	236,353	0	75.937,49	258,675	13,5457	18,2895	0	4,83014	1,16463
5	163,624	318,148	0	54.676,91	265,924	17,4319	19,5014	0	5,0868	1,16912
5	183,406	421,297	0	40.008,34	274,867	22,0325	20,2552	0	5,33307	1,17256
5	207,143	550,859	0	29.568,14	285,852	27,4926	21,326	0	5,57446	1,17315
5	230,085	681,064	0	23.206,58	296,668	32,6949	22,299	0	5,7694	1,17243
5	235,629	713,209	0	22.002,64	299,307	33,9374	22,4729	0	5,81265	1,17234
5	269,811	916,514	0	16.370,86	315,753	41,498	23,2394	0	6,04884	1,17206
5	292,384	1054,56	0	13.878,70	326,734	46,3336	23,5631	0	6,18203	1,17202
6	63,3186	-51,1496	0	0,99	0,00177245	0,151276	24,6246	0	3,18023	1,1739
6	63,4186	-50,8984	0	449.792,82	8,48071	0,0165745	-72,7019	0	2,50246	1,43909
6	63,5186	-50,648	0	449.789,13	11,9977	0,0330119	-72,6738	0	2,50357	1,43889
6	63,6186	-50,3976	0	449.497,14	14,7064	0,0494211	-72,6193	0	2,5046	1,43871
6	63,7186	-50,1471	0	449.153,42	16,9931	0,0658179	-72,5612	0	2,5056	1,43854
6	63,8186	-49,8965	0	448.798,78	19,0155	0,082174	-72,5032	0	2,50656	1,43838
6	63,91	-	0	448.43	20,8491	0,0985	-72,4444	0	2,5075	1,4382

	86	49,6458		4,43		019			4	2
6	64,01 86	-49,395	0	448.06 6,65	22,5378	0,1148 12	-72,3854	0	2,5085 1	1,4380 7
6	64,11 86	- 49,1441	0	447.69 9,25	24,1139	0,1310 93	-72,3268	0	2,5094 7	1,4379 1
6	64,21 86	- 48,8931	0	447.33 0,35	25,5994	0,1473 36	-72,2681	0	2,5104 3	1,4377 6
6	64,31 86	-48,642	0	446.96 1,28	27,0089	0,1635 46	-72,2095	0	2,5113 9	1,4376 1
6	64,41 86	- 48,3908	0	446.59 0,94	28,3532	0,1797 25	-72,1508	0	2,5123 5	1,4374 5
6	64,51 86	- 48,1396	0	446.21 9,64	29,6399	0,1958 86	-72,0919	0	2,5133 1	1,4373
6	64,61 86	- 47,8882	0	445.84 8,44	30,8764	0,2120 25	-72,0331	0	2,5142 7	1,4371 5
6	64,71 86	- 47,6367	0	445.47 7,77	32,069	0,2281 37	-71,9745	0	2,5152 2	1,437
6	64,81 86	- 47,3851	0	445.10 7,47	33,2227	0,2442 21	-71,9159	0	2,5161 8	1,4368 5
6	64,91 86	- 47,1335	0	444.73 7,06	34,3419	0,2602 71	-71,8573	0	2,5171 3	1,4367
6	65,01 86	- 46,8817	0	444.37 7,37	35,4298	0,2762 81	-71,8018	0	2,5180 6	1,4365 6
6	65,11 86	- 46,6299	0	444.27 5,58	36,488	0,2920 47	-71,8181	0	2,5185 4	1,4367 5
6	65,21 86	- 46,3781	0	444.37 5,77	37,5201	0,3075 68	-71,8907	0	2,5186 7	1,4372
6	65,31 86	- 46,1262	0	444.67 7,22	38,5272	0,3228 25	-72,0183	0	2,5184 6	1,4379
6	65,43 86	-45,824	0	445.32 1,89	39,7062	0,3407 15	-72,2488	0	2,5177 5	1,4390 9
6	65,58 26	- 45,4615	0	446.37 7,36	41,0816	0,3616 54	-72,601	0	2,5164 5	1,4408 7
6	65,75 54	- 45,0268	0	447.98 4,73	42,6814	0,3860 03	-73,1134	0	2,5143 9	1,4434 1
6	65,96 27	- 44,5056	0	450.23 6,65	44,5355	0,4142 07	-73,8097	0	2,5115	1,4468 4
6	66,21	-	0	453.21	46,6769	0,4467	-74,7101	0	2,5077	1,4512



	16	43,8811		4,71		37			5	6
6	66,51 02	- 43,1329	0	456.98 0,61	49,141	0,4841 12	-75,8291	0	2,5031 5	1,4567 6
6	66,86 85	- 42,2369	0	461.57 3,95	51,9663	0,5268 85	-77,1749	0	2,4977 5	1,4634 1
6	67,29 85	- 41,1642	0	467.00 4,16	55,1998	0,5755 62	-78,747	0	2,4917 2	1,4712 6
6	67,81 45	- 39,8802	0	473.24 8,25	58,8931	0,6306 75	-80,5375	0	2,4852 5	1,4803 2
6	68,43 36	- 38,3435	0	480.24 6,60	63,1002	0,6928 29	-82,53	0	2,4786 2	1,4905 6
6	69,17 66	- 36,5044	0	487.90 6,00	67,8748	0,7627 41	-84,7008	0	2,4721 6	1,5019 6
6	70,06 82	- 34,3031	0	496.08 1,31	73,3012	0,8408 22	-87,0138	0	2,4663 2	1,5144 1
6	71,13 82	- 31,6671	0	504.59 1,95	79,4704	0,9275 54	-89,4286	0	2,4616 5	1,5277 7
6	72,42 21	- 28,5088	0	513.20 6,18	86,4849	1,0234 3	-91,8969	0	2,4587 8	1,5418 9
6	73,96 28	- 24,7212	0	521.61 0,79	94,4447	1,1308 3	-94,1002	0	2,4585	1,5542 7
6	75,81 16	- 20,1737	0	529.77 3,38	103,451	1,2536 8	-95,5693	0	2,4611	1,5606 8
6	78,03 03	-14,709	0	538.79 5,04	113,625	1,3890 2	-96,5492	0	2,4653	1,5621 7
6	80,69 26	- 8,13562	0	547.81 2,82	125,293	1,5378 3	-96,7069	0	2,4735 1	1,5563 8
6	83,88 74	- 0,15662	0	554.51 6,47	139,527	1,6762	-95,2352	0	2,5295 2	1,5381 8
		4								
6	83,94 93	3,71534 E-15	0	554.59 5,05	139,806	1,6787 4	-95,188	0	2,5308 2	1,5377
6	83,94 93	3,71534 E-15	0	560.83 3,36	138,055	1,6658 8	-96,1885	0	2,5720 4	1,5413 5
6	87,72 11	9,82539	0	561.36 4,55	155,113	1,8317 4	-92,149	0	2,6391 7	1,5064 9
6	92,32 17	22,199	0	551.88 0,85	175,798	2,0456 3	-84,0525	0	2,7419 9	1,4491 1



6	97,84 23	37,7454	0	525.27 9,08	199,775	2,3449 6	-70,7199	0	2,8949 7	1,3726 1
6	104,4 67	57,6411	0	472.57 9,33	225,701	2,7973 9	-50,6834	0	3,1177 4	1,2835 2
6	108,9 76	72,1136	0	419.13 9,91	239,783	3,2055 7	-32,8812	0	3,3116 3	1,2209 5
6	108,9 76	72,1136	0	419.13 9,91	239,783	3,2055 6	-32,8812	0	3,3116 4	1,2209 5
6	110,2 89	76,5147	0	395.37 1,37	242,557	3,4000 3	-23,8001	0	3,3964 2	1,1908 2
6	110,2 89	76,5147	0	395.37 1,37	242,557	3,4000 2	-23,8001	0	3,3964 3	1,1908 2
6	112,4 17	83,9034	0	349.19 2,61	244,063	3,8733 7	-10,9967	0	3,5588 7	1,1595 7
6	121,9 56	121,398	0	167.95 8,38	248,155	7,2446 6	11,6508	0	4,2120 7	1,1510 9
6	133,4 04	171,816	0	108.90 8,91	252,829	10,28	16,2131	0	4,5559 8	1,1588 6
6	147,1 41	236,353	0	76.744, 89	258,675	13,545 7	18,2895	0	4,8301 4	1,1646 3
6	163,6 25	318,148	0	55.333, 84	265,924	17,431 9	19,5014	0	5,0868	1,1691 2
6	183,4 07	421,297	0	40.463, 04	274,867	22,032 5	20,2552	0	5,3330 7	1,1725 6
6	207,1 44	550,859	0	29.857, 37	285,852	27,492 6	21,326	0	5,5744 6	1,1731 5
6	230,0 86	681,064	0	23.360, 37	296,668	32,694 9	22,299	0	5,7694	1,1724 3
6	235,6 3	713,209	0	22.187, 10	299,307	33,937 4	22,4729	0	5,8126 5	1,1723 4
6	269,8 12	916,514	0	16.401, 67	315,753	41,498	23,2394	0	6,0488 4	1,1720 6
6	292,3 85	1054,56	0	13.871, 52	326,734	46,333 6	23,5631	0	6,1820 3	1,1720 2
7	66,88 88	- 53,3233	0	1,00	0,00177 245	0,1512 76	24,6246	0	3,1802 3	1,1739
7	66,98	-	0	445.49	8,68231	0,0164	-71,7189	0	2,5174	1,4368



	88	53,0705		5,28		471		6	9	
7	67,08	-	0	445.53	12,2804	0,0327	-71,698	0	2,5184	1,4367
	88	52,8187		4,71		699		2	1	
7	67,18	-	0	445.26	15,0484	0,0490	-71,6474	0	2,5193	1,4365
	88	52,5668		5,87		768		7	4	
7	67,28	-	0	444.94	17,3913	0,0653	-71,5927	0	2,5203	1,4363
	88	52,3149		2,42		446			8	
7	67,38	-	0	444.59	19,4592	0,0815	-71,5362	0	2,5212	1,4362
	88	52,0628		6,31		947		4	2	
7	67,48	-	0	444.24	21,3326	0,0978	-71,4797	0	2,5221	1,4360
	88	51,8106		5,16		234		6	7	
7	67,58	-	0	443.88	23,062	0,1140	-71,423	0	2,5230	1,4359
	88	51,5584		9,63		11		9	3	
7	67,68	-51,306	0	443.53	24,6768	0,1301	-71,3662	0	2,5240	1,4357
	88			1,63		66		1	8	
7	67,78	-	0	443.17	26,1963	0,1463	-71,309	0	2,5249	1,4356
	88	51,0536		0,46		02		4	3	
7	67,88	-50,801	0	442.80	27,6358	0,1624	-71,2518	0	2,5258	1,4354
	88			8,64		19		6	8	
7	67,98	-	0	442.44	29,0081	0,1785	-71,1949	0	2,5267	1,4353
	88	50,5484		7,54		12		8	4	
7	68,08	-	0	442.08	30,323	0,1945	-71,138	0	2,5277	1,4351
	88	50,2957		6,52		74			9	
7	68,18	-	0	441.72	31,5881	0,2106	-71,081	0	2,5286	1,4350
	88	50,0428		4,67		02		1	4	
7	68,28	-	0	441.36	32,8089	0,2265	-71,0238	0	2,5295	1,4349
	88	49,7899		0,93		97		4		
7	68,38	-	0	440.99	33,9883	0,2425	-70,966	0	2,5304	1,4347
	88	49,5369		4,14		75		7	5	
7	68,48	-	0	440.62	35,1313	0,2585	-70,9081	0	2,5314	1,4346
	88	49,2838		5,97		28				
7	68,58	-	0	440.25	36,2404	0,2744	-70,85	0	2,5323	1,4344
	88	49,0307		7,01		64		3	5	
7	68,68	-	0	440.00	37,3184	0,2902	-70,8238	0	2,5330	1,4344
	88	48,7774		2,77		84		7	5	
7	68,78	-	0	439.98	38,3683	0,3058	-70,8635	0	2,5334	1,4347
	88	48,5242		5,31		52		1	5	
7	68,88	-	0	440.20	39,3925	0,3211	-70,9698	0	2,5333	1,4353



	88	48,2709		7,88		34			3	5
7	69,00	-	0	440.75	40,5913	0,3390	-71,1749	0	2,5327	1,4364
	88	47,9669		3,50		78			7	2
7	69,15	-	0	441.75	41,9896	0,3600	-71,5163	0	2,5315	1,4381
	28	47,6022		9,03		27			3	5
7	69,32	-	0	443.32	43,6155	0,3843	-72,0206	0	2,5295	1,4406
	56	47,1648		8,15		8			1	4
7	69,53	-	0	445.55	45,5007	0,4125	-72,714	0	2,5266	1,4440
	29	46,6405		9,77		64			4	4
7	69,78	-	0	448.52	47,6781	0,4450	-73,6127	0	2,5229	1,4484
	18	46,0122		2,66		71				3
7	70,08	-	0	452.27	50,1834	0,4824	-74,7296	0	2,5183	1,4538
	04	45,2596		4,91		28			2	9
7	70,43	-	0	456.86	53,0551	0,5251	-76,0761	0	2,5129	1,4605
	87	44,3582		6,94		61			3	1
7	70,86	-43,279	0	462.32	56,3347	0,5738	-77,6576	0	2,5068	1,4683
	87			9,66		56			2	5
7	71,38	-	0	468.61	60,0927	0,6288	-79,4586	0	2,5002	1,4774
	46	41,9871		4,61		25			6	
7	72,00	-	0	475.69	64,3726	0,6908	-81,4708	0	2,4934	1,4876
	38	40,4411		1,92		34			6	8
7	72,74	-	0	483.46	69,2377	0,7604	-83,6693	0	2,4867	1,4991
	68	38,5909		6,29		87			5	4
7	73,63	-	0	491.81	74,7632	0,8383	-86,0248	0	2,4805	1,5117
	84	36,3766		8,14		72			4	1
7	74,70	-	0	500.54	81,0471	0,9248	-88,4912	0	2,4754	1,5252
	84	33,7256		9,70		71				5
7	75,99	-	0	509.40	88,1993	1,0203	-91,0147	0	2,4720	1,5395
	23	30,5499		7,47		8			2	6
7	77,53	-	0	518.10	96,3101	1,1267	-93,3835	0	2,4710	1,5530
	3	26,7424		9,85		9			8	9
7	79,38	-	0	526.59	105,493	1,2481	-95,0522	0	2,4729	1,5609
	18	22,1723		2,20		5			7	9
7	81,60	-	0	536.02	115,875	1,3814	-96,2517	0	2,4762	1,5641
	04	16,6823		1,68		7			8	3
7	84,26	-	0	545.56	127,708	1,5287	-96,6444	0	2,4832	1,5600
	28	10,0804		7,01					9	5
7	87,45	-	0	552.90	141,957	1,6688	-95,3353	0	2,5354	1,5427



	76	2,07327		7,67		4			2	6
7	91,29 13	7,80476	0	554.56 3,76	159,292	1,8288 3	-91,1909	0	2,6189 1	1,5063 1
7	95,89 18	20,1049	0	546.43 5,98	179,978	2,0378 6	-83,3403	0	2,7307 5	1,4500 8
7	101,4 12	35,599	0	521.88 8,29	204,007	2,3336 1	-70,5843	0	2,8865 1	1,3761 8
7	108,0 37	55,4296	0	472.82 8,35	230,253	2,7792 9	-51,6671	0	3,1042 8	1,2907 9
7	113,5 37	73,0847	0	411.93 2,99	247,759	3,2669	-31,4732	0	3,3299 4	1,2195 9
7	113,5 37	73,0847	0	411.93 2,99	247,759	3,2669	-31,4732	0	3,3299 4	1,2195 9
7	114,8 48	77,5053	0	388.47 2,74	250,522	3,4609 4	-22,7431	0	3,4127	1,1908 2
7	114,8 48	77,5053	0	388.47 2,74	250,522	3,4609 4	-22,7431	0	3,4127	1,1908 2
7	115,9 87	81,4339	0	367.17 4,76	251,711	3,6625 5	-16,2238	0	3,4871 8	1,1727 5
7	125,5 27	118,307	0	175.29 5,90	255,723	6,9402 8	10,7819	0	4,1679 2	1,1509 2
7	136,9 74	168,389	0	111.41 1,47	260,38	10,069 8	15,962	0	4,5350 3	1,1588 1
7	150,7 11	232,69	0	78.149, 44	266,212	13,338 7	18,1631	0	4,8141 4	1,1645 7
7	167,1 96	314,281	0	56.172, 64	273,45	17,224 9	19,4291	0	5,0740 7	1,1690 9
7	186,9 77	417,205	0	41.007, 29	282,381	21,826 7	20,2116	0	5,3227 8	1,1725 4
7	210,7 15	546,523	0	30.250, 26	293,353	27,283	21,2136	0	5,5655 9	1,1734 3
7	234,8 14	683,195	0	23.484, 23	304,709	32,744 4	22,2614	0	5,7714	1,1725 8
7	239,2	708,608	0	22.520, 50	306,795	33,728 1	22,4017	0	5,8054 1	1,1725
7	273,3 82	911,497	0	16.657, 40	323,226	41,272 1	23,1913	0	6,0422 5	1,1721 6
7	297,3	1057,85	0	13.989,	334,87	46,401	23,5415	0	6,1837	1,1720



	25			64		3			6	9
8	67,73 8	- 53,8402	0	1,00	0,00177 245	0,1512 76	24,6246	0	3,1802 3	1,1739
8	67,83 8	- 53,5871	0	444.02 4,26	8,72609	0,0164 228	-71,5024	0	2,5207 4	1,4364
8	67,93 8	-53,335	0	444.01 9,89	12,3443	0,0327 176	-71,4753	0	2,5217 9	1,4362 1
8	68,03 8	- 53,0828	0	443.73 3,28	15,1304	0,0489 866	-71,4221	0	2,5227 8	1,4360 3
8	68,13 8	- 52,8304	0	443.40 2,39	17,4828	0,0652 415	-71,3666	0	2,5237 1	1,4358 7
8	68,23 8	-52,578	0	443.04 9,12	19,5622	0,0814 598	-71,3091	0	2,5246 6	1,4357 2
8	68,33 8	- 52,3255	0	442.66 7,94	21,4415	0,0976 712	-71,2477	0	2,5256 8	1,4355 5
8	68,43 8	- 52,0729	0	442.28 4,90	23,1695	0,1138 73	-71,1865	0	2,5266 7	1,4353 9
8	68,53 8	- 51,8202	0	441.90 7,92	24,781	0,1300 47	-71,1268	0	2,5276 4	1,4352 4
8	68,63 8	- 51,5674	0	441.54 0,41	26,2998	0,1461 83	-71,0688	0	2,5285 7	1,4350 9
8	68,73 8	- 51,3145	0	441.18 1,53	27,7407	0,1622 88	-71,0125	0	2,5294 7	1,4349 5
8	68,83 8	- 51,0615	0	440.82 5,72	29,1137	0,1783 71	-70,9566	0	2,5303 6	1,4348 1
8	68,93 8	- 50,8084	0	440.47 2,82	30,4281	0,1944 33	-70,9013	0	2,5312 5	1,4346 7
8	69,03 8	- 50,5552	0	440.12 2,34	31,6915	0,2104 72	-70,8464	0	2,5321 2	1,4345 3
8	69,13 8	-50,302	0	439.77 4,02	32,9101	0,2264 85	-70,7918	0	2,5329 9	1,4343 9
8	69,23 8	- 50,0486	0	439.42 7,73	34,0887	0,2424 73	-70,7376	0	2,5338 6	1,4342 5
8	69,33 8	- 49,7952	0	439.08 3,64	35,2303	0,2584 47	-70,6838	0	2,5347 2	1,4341 2
8	69,43 8	- 49,5417	0	438.74 1,51	36,3389	0,2744 01	-70,6302	0	2,5355 7	1,4339 8



8	69,53	-	0	438.59	37,4177	0,2901	-70,6299	0	2,5361	1,4340
	8	49,2881		0,85		63				9
8	69,63	-	0	438.66	38,4699	0,3056	-70,692	0	2,5362	1,4344
	8	49,0346		4,80		64			5	8
8	69,73	-48,781	0	438.95	39,4987	0,3208	-70,814	0	2,5360	1,4351
	8			4,27		7			4	4
8	69,85	-	0	439.52	40,7023	0,3387	-71,023	0	2,5354	1,4362
	8	48,4768		9,92		66			2	2
8	70,00	-	0	440.55	42,1083	0,3596	-71,3644	0	2,5341	1,4379
	2	48,1118		2,39		52			6	3
8	70,17	-47,674	0	442.09	43,7435	0,3839	-71,8584	0	2,5321	1,4403
	48			7,18		82			8	7
8	70,38	-	0	444.29	45,6384	0,4121	-72,5385	0	2,5293	1,4436
	22	47,1491		1,41		65			5	9
8	70,63	-	0	447.22	47,8269	0,4446	-73,4283	0	2,5256	1,4480
	1	46,5201		8,69		61			4	3
8	70,92	-	0	450.97	50,3453	0,4819	-74,5428	0	2,5210	1,4534
	96	45,7666		5,11		78			4	7
8	71,28	-	0	455.57	53,2326	0,5246	-75,8913	0	2,5156	1,4600
	79	44,8642		4,19		7			1	9
8	71,71	-	0	461.04	56,5355	0,5732	-77,4747	0	2,5094	1,4679
	79	43,7838		1,68		61			8	3
8	72,23	-	0	467.35	60,3068	0,6282	-79,2854	0	2,5028	1,4770
	39	42,4907		9,61		73			5	1
8	72,85	-	0	474.47	64,6045	0,6902	-81,3072	0	2,4959	1,4873
	31	40,9432		1,74		74			7	3
8	73,59	-	0	482.28	69,487	0,7599	-83,5165	0	2,4891	1,4988
	61	39,0913		5,69		43			8	2
8	74,48	-	0	490.65	75,0382	0,8377	-85,8769	0	2,4829	1,5114
	77	36,8749		5,90		23			4	1
8	75,55	-	0	499.39	81,3525	0,9240	-88,3463	0	2,4777	1,5249
	76	34,2214		6,74		76			9	5
8	76,84	-	0	508.27	88,5347	1,0195	-90,8755	0	2,4743	1,5392
	15	31,0428		4,48					6	8
8	78,38	-	0	516.99	96,6925	1,1254	-93,2777	0	2,4734	1,5530
	22	27,2317		5,33		5				6
8	80,23	-	0	525.51	105,927	1,2461	-94,9972	0	2,4752	1,5613
	11	22,6574		7,75		8			1	8



8	82,44 97	- 17,1625	0	534.98 9,49	116,364 9	1,3788 9	-96,2412	0	2,4784 2	1,5648 8
8	85,11 2	-10,556	0	544.62 8,27	128,171	1,5262 9	-96,6791	0	2,4852 5	1,5611 3
8	88,30 68	- 2,55091	0	552.06 7,88	142,432	1,6661	-95,386	0	2,5366 7	1,5438 9
8	92,14 06	7,33124	0	553.84 5,78	159,781	1,8259 8	-91,2726	0	2,6197 3	1,5075 7
8	96,74 11	19,6345	0	545.95 5,72	180,493	2,0345 3	-83,4979	0	2,7308 5	1,4516 6
8	102,2 62	35,1257	0	521.91 2,70	204,576	2,3280 7	-70,944	0	2,8850 6	1,3786 1
8	108,8 86	54,9337	0	473.95 9,91	231,003	2,7679 8	-52,3463	0	3,0997 2	1,2939 9
8	114,5 45	73,0847	0	411.45 0,28	249,207	3,2614	-31,5088	0	3,3315 5	1,2200 5
8	114,5 45	73,0847	0	411.45 0,28	249,207	3,2614	-31,5088	0	3,3315 5	1,2200 5
8	115,8 75	77,5724	0	388.94 8,97	252,019	3,4587 5	-22,6443	0	3,4153 3	1,1908 2
8	115,8 75	77,5724	0	388.94 8,97	252,019	3,4587 5	-22,6443	0	3,4153 4	1,1908 2
8	116,8 36	80,8846	0	372.83 1,48	253,101	3,6247 3	-17,1239	0	3,4771 9	1,1752 7
8	126,3 76	117,643	0	181.39 8,20	257,136	6,8703 7	10,6179	0	4,1591 7	1,1508 1
8	137,8 23	167,656	0	114.41 2,58	261,791	10,020 3	15,925	0	4,5307 3	1,1587 7
8	151,5 6	231,901	0	80.014, 92	267,619	13,283 4	18,1452	0	4,8102 9	1,1645 4
8	168,0 45	313,437	0	57.271, 71	274,854	17,171	19,4207	0	5,0710 3	1,1690 7
8	187,8 26	416,312	0	41.682, 04	283,782	21,773 2	20,2073	0	5,3202 7	1,1725 3
8	211,5 64	545,582	0	30.655, 52	294,752	27,228 6	21,2071	0	5,5637 1	1,1734 4
8	235,7 57	682,757	0	23.742, 42	306,151	32,712 7	22,2592	0	5,7703 5	1,1725 9



8	240,049	707,617	0	22.797,43	308,192	33,6753	22,3967	0	5,80365	1,17251
8	274,231	910,439	0	16.867,74	324,62	41,2186	23,1883	0	6,04073	1,17216
8	298,242	1057,17	0	14.159,79	336,295	46,3626	23,5401	0	6,18277	1,17209
9	76,9188	-59,1896	0	1,00	0,00177245	0,151276	24,6246	0	3,18023	1,1739
9	77,0188	-58,9335	0	429.744,95	9,15342	0,0161711	-69,413	0	2,55188	1,43182
9	77,1188	-58,6783	0	429.750,58	12,949	0,0322251	-69,3893	0	2,55282	1,43165
9	77,2188	-58,423	0	429.493,59	15,8712	0,0482558	-69,3415	0	2,55368	1,43149
9	77,3188	-58,1675	0	429.195,00	18,3379	0,0642759	-69,2913	0	2,55451	1,43135
9	77,4188	-57,9121	0	428.884,17	20,5194	0,0802591	-69,2408	0	2,55532	1,43122
9	77,5188	-57,6565	0	428.563,83	22,4955	0,0962243	-69,1895	0	2,55614	1,43109
9	77,6188	-57,4008	0	428.242,18	24,3154	0,112175	-69,1383	0	2,55695	1,43095
9	77,7188	-57,1451	0	427.919,90	26,0143	0,128095	-69,0873	0	2,55775	1,43083
9	77,8188	-56,8893	0	427.596,64	27,6155	0,14398	-69,0363	0	2,55856	1,43076
9	77,9188	-56,6334	0	427.272,69	29,1338	0,159842	-68,9852	0	2,55936	1,43057
9	78,0188	-56,3774	0	426.947,18	30,5805	0,175685	-68,934	0	2,56016	1,43044
9	78,1188	-56,1213	0	426.621,44	31,9652	0,19151	-68,8828	0	2,56097	1,43031
9	78,2188	-55,8652	0	426.296,07	33,296	0,207316	-68,8317	0	2,56177	1,43019
9	78,3188	-55,609	0	425.971,30	34,5794	0,223098	-68,7807	0	2,56257	1,43006
9	78,41	-	0	425.64	35,8212	0,2388	-68,7297	0	2,5633	1,4299

	88	55,3527		6,44		51		6	3	
9	78,51 88	- 55,0963	0	425.32 1,07	37,0255	0,2545 76	-68,6787	0	2,5641 6	1,4298 1
9	78,61 88	- 54,8399	0	425.04 5,34	38,1964	0,2702 27	-68,6417	0	2,5648 8	1,4297 4
9	78,71 88	- 54,5834	0	424.83 3,23	39,3361	0,2857 92	-68,6229	0	2,5654 8	1,4297 6
9	78,81 88	- 54,3268	0	424.72 6,54	40,4466	0,3012 26	-68,6339	0	2,5659 2	1,4299 2
9	78,91 88	- 54,0703	0	424.80 6,99	41,5312	0,3164 2	-68,6981	0	2,5660 5	1,4303 1
9	79,03 88	- 53,7624	0	425.20 2,39	42,7992	0,3342 64	-68,8599	0	2,5657 2	1,4311 7
9	79,18 28	-53,393	0	425.97 8,01	44,2784	0,3551 69	-69,1385	0	2,5648 4	1,4325 9
9	79,35 56	- 52,9498	0	427.33 8,83	45,997	0,3794 51	-69,5923	0	2,5631 3	1,4348 3
9	79,56 29	- 52,4184	0	429.34 5,36	47,9875	0,4075 8	-70,2344	0	2,5605 9	1,4379 6
9	79,81 17	- 51,7816	0	432.11 4,35	50,2863	0,4399 79	-71,0959	0	2,5571 2	1,4421 3
9	80,11 03	- 51,0187	0	435.70 6,21	52,933	0,4771 37	-72,1904	0	2,5527 6	1,4474 4
9	80,46 87	- 50,1049	0	440.15 6,91	55,9687	0,5196 04	-73,5249	0	2,5475 8	1,4539 3
9	80,89 86	- 49,0108	0	445.49 0,19	59,4382	0,5679 17	-75,1029	0	2,5416 6	1,4616 8
9	81,41 46	-47,701	0	451.69 2,33	63,3957	0,6225 89	-76,9182	0	2,5352	1,4707 1
9	82,03 38	- 46,1332	0	458.70 1,43	67,9112	0,6840 69	-78,9524	0	2,5284 8	1,4809 8
9	82,77 68	-44,257	0	466.45 4,99	73,031	0,7531 84	-81,1893	0	2,5217 5	1,4925 2
9	83,66 84	- 42,0113	0	474.82 6,84	78,8307	0,8305 14	-83,5961	0	2,5154 2	1,5052 2
9	84,73 83	- 39,3231	0	483.67 0,29	85,3931	0,9166 83	-86,1388	0	2,5099 4	1,5190 2
9	86,02	-	0	492.65	92,7787	1,0123	-88,7493	0	2,5062	1,5336

	23	36,1033		4,96		3			5	7
9	87,56 3	- 32,2431	0	501.43 9,51	101,06	1,1187 7	-91,2591	0	2,5052 1	1,5480 7
9	89,41 18	-27,61	0	509.86 0,72	110,358	1,2410 1	-93,0317	0	2,5070 7	1,5567 7
9	91,63 04	- 22,0446	0	519.24 8,32	120,814	1,3758 4	-94,3194	0	2,5100 3	1,5606 4
9	94,29 28	- 15,3552	0	529.12 3,48	132,617	1,5245 8	-94,9056	0	2,5157 2	1,5580 3
9	97,48 76	- 7,25568	0	537.47 0,00	146,898	1,6646 4	-94,0712	0	2,5634 1	1,5442 4
9	101,3 21	2,718	0	541.22 3,16	164,313	1,8217 2	-90,7971	0	2,6398 4	1,5136 2
9	105,9 22	15,0914	0	536.74 4,25	185,214	2,0226 9	-84,2044	0	2,7404 9	1,4641 9
9	111,4 42	30,5924	0	518.80 7,21	209,784	2,2972 4	-73,3445	0	2,8777 3	1,3975 2
9	118,0 67	50,3881	0	462.67 4,64	237,014	2,6541 8	-53,087	0	3,1158 9	1,3059 5
9	125,0 13	73,0847	0	369.07 7,25	258,809	3,2331 6	-24,5326	0	3,4278	1,2107 5
9	125,0 13	73,0847	0	369.07 7,25	258,809	3,2332 2	-24,5326	0	3,4277 4	1,2107 5
9	126,0 17	76,554	0	352.40 5,20	260,791	3,3922	-18,3663	0	3,4854 4	1,1913 3
9	126,0 47	76,6603	0	351.88 2,21	260,84	3,3973 8	-18,1916	0	3,4872 3	1,1908 2
9	126,0 47	76,6603	0	351.88 2,21	260,84	3,3973 8	-18,1916	0	3,4872 3	1,1908 2
9	135,5 56	112,878	0	178.19 0,04	265,512	6,2898 3	10,2064	0	4,1041 3	1,1539 2
9	147,0 04	162,329	0	108.82 1,74	270,126	9,4322 9	15,9766	0	4,4876 7	1,1608 5
9	160,7 41	226,026	0	74.573, 54	275,916	12,686 4	18,254	0	4,7738	1,1661 9
9	177,2 26	307,002	0	52.530, 18	283,113	16,57	19,5267	0	5,0401 7	1,1703 8
9	197,0	409,314	0	37.753,	292,005	21,167	20,2962	0	5,2938	1,1735

	07			28		5			9	6
9	220,7 45	538,019	0	27.527, 86	302,941	26,627 3	21,388	0	5,5413 7	1,1738 6
9	236,6 58	627,346	0	23.058, 66	310,398	30,246 5	22,1133	0	5,6830 9	1,1731 7
9	249,2 3	699,58	0	20.252, 46	316,352	33,082 4	22,5338	0	5,7848 3	1,1728 5
9	283,4 12	901,535	0	15.103, 50	332,736	40,601 3	23,2905	0	6,0237 9	1,1724 3
9	294,9 63	971,514	0	13.840, 26	338,33	43,089 9	23,4657	0	6,0949 4	1,1723 7
10	86,20 66	-64,14	0	1,00	0,00177 245	0,1512 76	24,6246	0	3,1802 3	1,1739
10	86,30 66	- 63,8811	0	416.32 4,05	9,25043	0,0159 484	-67,4554	0	2,5802 6	1,4276 5
10	86,40 66	- 63,6231	0	416.36 2,53	13,0845	0,0317 872	-67,4378	0	2,5810 7	1,4275
10	86,50 66	- 63,3649	0	416.13 8,74	16,0338	0,0476 1	-67,3956	0	2,5818 2	1,4273 7
10	86,60 66	- 63,1067	0	415.86 0,00	18,5261	0,0634 135	-67,3485	0	2,5825 9	1,4272 4
10	86,70 66	- 62,8484	0	415.56 7,86	20,7258	0,0791 999	-67,3009	0	2,5833 3	1,4271 1
10	86,80 66	-62,59	0	415.26 9,79	22,7214	0,0949 523	-67,2532	0	2,5840 8	1,4269 9
10	86,90 66	- 62,3316	0	414.96 6,97	24,5604	0,1106 86	-67,205	0	2,5848 2	1,4268 7
10	87,00 66	- 62,0731	0	414.66 2,56	26,2742	0,1264 08	-67,1568	0	2,5855 7	1,4267 5
10	87,10 66	- 61,8145	0	414.35 8,42	27,8872	0,1421 08	-67,1089	0	2,5863	1,4266 3
10	87,20 66	- 61,5558	0	414.05 2,70	29,4174	0,1577 79	-67,0608	0	2,5870 4	1,4265 2
10	87,30 66	- 61,2971	0	413.74 6,51	30,8773	0,1734 19	-67,0126	0	2,5877 8	1,4264
10	87,40 66	- 61,0382	0	413.43 9,85	32,2752	0,1890 4	-66,9645	0	2,5885 2	1,4262 8



10	87,50 66	- 60,7794	0	413.13 2,25	33,6186 4	0,2046	-66,9162	0	2,5892 6	1,4261 6
10	87,60 66	- 60,5204	0	412.82 4,31	34,9132	0,2202 26	-66,8679	0	2,59 7	1,4260 5
10	87,70 66	- 60,2614	0	412.51 6,67	36,1643	0,2357 96	-66,8197	0	2,5907 4	1,4259 3
10	87,80 66	- 60,0022	0	412.20 9,43	37,3767	0,2513 47	-66,7716	0	2,5914 7	1,4258 1
10	87,90 66	- 59,7431	0	411.91 9,26	38,5538	0,2668 67	-66,7283	0	2,5921 8	1,4257 2
10	88,00 66	- 59,4838	0	411.68 3,22	39,6986	0,2823 23	-66,7007	0	2,5927 9	1,4256 9
10	88,10 66	- 59,2245	0	411.50 4,62	40,8146	0,2976 93	-66,6896	0	2,5933 1	1,4257 4
10	88,20 66	- 58,9652	0	411.54 6,84	41,9032	0,3128 1	-66,7421	0	2,5934 8	1,4260 8
10	88,32 66	- 58,6541	0	411.86 8,69	43,1778	0,3305 74	-66,8833	0	2,5932 5	1,4268 3
10	88,47 06	- 58,2807	0	412.54 0,18	44,6645	0,3514 08	-67,1341	0	2,5925 3	1,4281 1
10	88,64 34	- 57,8328	0	413.70 5,66	46,3937	0,3756 81	-67,5366	0	2,5911 3	1,4300 9
10	88,85 08	- 57,2957	0	415.51 5,53	48,3969	0,4037 8	-68,1323	0	2,5889 4	1,4329 9
10	89,09 96	- 56,6518	0	418.07 9,50	50,7097	0,4361 45	-68,9506	0	2,5857 4	1,4369 4
10	89,39 82	- 55,8802	0	421.49 0,43	53,3706	0,4732 27	-70,0148	0	2,5816 3	1,4420 6
10	89,75 65	- 54,9561	0	425.79 5,02	56,421	0,5155 41	-71,3339	0	2,5766 5	1,4484 4
10	90,18 65	- 53,8495	0	431.01 6,23	59,9068	0,5636 21	-72,911	0	2,5709 4	1,4561 3
10	90,70 25	- 52,5247	0	437.13 3,35	63,8778	0,6180 88	-74,7378	0	2,5645 4	1,4651 4
10	91,32 16	-50,939	0	444.11 1,40	68,395	0,6794 41	-76,8017	0	2,5577 9	1,4754 8
10	92,06 46	- 49,0411	0	451.87 7,56	73,5243	0,7482 4	-79,0812	0	2,5509 6	1,4871 3

10	92,95 63	- 46,7697	0	460.31 5,51	79,3359	0,8251 24	-81,5458	0	2,5444	1,5000 2
10	94,02 62	- 44,0508	0	469.25 4,77	85,9332	0,9104 33	-84,1522	0	2,5386 2	1,5140 2
10	95,31 01	- 40,7946	0	478.48 3,19	93,4239	1,0046 5	-86,8523	0	2,5341 6	1,5289 8
10	96,85 08	- 36,8926	0	487.74 0,47	101,923	1,1084 4	-89,5819	0	2,5316 9	1,5446 3
10	98,69 97	- 32,2122	0	496.72 6,77	111,531	1,2262	-91,7712	0	2,5318 7	1,5563 4
10	100,9 18	- 26,5939	0	506.76 1,31	122,373	1,3558 1	-93,4848	0	2,5329 8	1,5633 7
10	103,5 81	- 19,8463	0	517.56 4,43	134,56	1,4987 7	-94,5517	0	2,5363 4	1,5642 5
10	106,7 75	- 11,7011	0	527.39 9,18	148,852	1,6412 6	-94,3524	0	2,5714 1	1,5548 1
10	110,6 09	- 1,70408	0	533.47 2,36	166,385	1,7911 1	-91,9122	0	2,6424 5	1,5291 7
10	115,2 1	10,6988	0	522.89 5,23	187,395	1,9486 7	-84,558	0	2,7606 7	1,4776
10	120,7 3	26,5124	0	472.97 6,38	211,356	2,1302 8	-67,6604	0	2,9761 8	1,3912 6
10	127,3 55	47,1493	0	388.02 8,70	236,757	2,4867 1	-42,4902	0	3,2498 4	1,2932 6
10	134,9 9	73,0847	0	286.71 1,02	258,978	3,2103 9	-13,7476	0	3,5469 7	1,2063 1
10	134,9 9	73,0847	0	286.71 1,02	258,978	3,2103 6	-13,7476	0	3,547 7	1,2063 1
10	135,3 05	74,2046	0	282.43 0,11	259,632	3,2587 1	-12,2064	0	3,5613 8	1,2015 7
10	136,1 55	77,2491	0	270.57 8,66	261,172	3,3972 1	-8,44014	0	3,6008 2	1,1908 2
10	136,1 55	77,2491	0	270.57 8,66	261,172	3,3972 1	-8,44014	0	3,6008 2	1,1908 2
10	144,8 44	110,384	0	156.89 4,79	265,824	5,5264 2	10,5641	0	4,0315 2	1,1627 6
10	156,2 92	158,926	0	91.563, 32	270,341	8,4921	16,3837	0	4,4119 9	1,1663 3



10	170,0 29	221,673	0	59.821, 71	276,052	11,712 1	18,6211	0	4,7093 4	1,1703 5
10	186,5 13	301,646	0	40.643, 74	283,17	15,563	19,8175	0	4,9847 7	1,1735 6
10	206,2 95	402,933	0	28.361, 81	291,985	20,133 9	20,5194	0	5,2462 2	1,176
10	226,4 33	510,85	0	21.118, 97	301,182	24,767	21,6773	0	5,4655 7	1,1749 1
10	230,0 32	530,606	0	20.179, 59	302,846	25,591 2	21,8608	0	5,5010 3	1,1746 7
10	258,5 18	690,998	0	14.824, 82	316,179	32,013 8	22,8789	0	5,7495 3	1,1735 5
10	275,7 81	791,373	0	12.641, 92	324,38	35,827 1	23,2627	0	5,8784 8	1,1732 1
11	94,59 03	- 67,1859	0	1,00	0,00177 245	0,1512 76	24,6246	0	3,1802 3	1,1739
11	94,69 03	- 66,9249	0	405.72 4,75	9,4808	0,0157 762	-65,9133	0	2,6021	1,4244 6
11	94,79 03	- 66,6647	0	405.83 8,18	13,4095	0,0314 53	-65,9081	0	2,6027	1,4243 4
11	94,89 03	- 66,4044	0	405.63 2,04	16,4345	0,0470 891	-65,8683	0	2,6034 1	1,4242 1
11	94,99 03	-66,144	0	405.37 8,19	18,9837	0,0627 458	-65,8251	0	2,6041	1,4240 9
11	95,09 03	- 65,8836	0	405.12 1,88	21,2347	0,0783 907	-65,7834	0	2,6047 4	1,4239 8
11	95,19 03	-65,623	0	404.84 1,74	23,286	0,0939 559	-65,7382	0	2,6054 4	1,4238 7
11	95,29 03	- 65,3625	0	404.53 8,66	25,1731	0,1095 11	-65,6897	0	2,6061 8	1,4237 5
11	95,39 03	- 65,1018	0	404.23 8,07	26,9275	0,1250 73	-65,642	0	2,6069 1	1,4236 3
11	95,49 03	- 64,8411	0	403.93 7,44	28,5821	0,1405 83	-65,5946	0	2,6076 3	1,4235 2
11	95,59 03	- 64,5803	0	403.63 7,20	30,1511	0,1560 66	-65,5473	0	2,6083 4	1,4234
11	95,69	-	0	403.33	31,6444	0,1715	-65,5006	0	2,6090	1,4232

	03	64,3194		9,32		5			4	9
11	95,79	-	0	403.04	33,0727	0,1870	-65,4543	0	2,6097	1,4231
	03	64,0585		3,99		26			4	8
11	95,89	-	0	402.75	34,4445	0,2024	-65,4085	0	2,6104	1,4230
	03	63,7975		1,39		94			2	7
11	95,99	-	0	402.46	35,7661	0,2179	-65,3632	0	2,6111	1,4229
	03	63,5364		1,35		55				6
11	96,09	-	0	402.17	37,0434	0,2334	-65,3184	0	2,6117	1,4228
	03	63,2752		3,93		1			7	6
11	96,19	-63,014	0	401.88	38,2807	0,2488	-65,2738	0	2,6124	1,4227
	03			8,65		53			4	5
11	96,29	-	0	401.60	39,4827	0,2642	-65,2296	0	2,6131	1,4226
	03	62,7528		5,04		75				5
11	96,39	-	0	401.35	40,6535	0,2796	-65,1942	0	2,6137	1,4225
	03	62,4914		1,71		37			1	8
11	96,49	-	0	401.20	41,7944	0,2948	-65,19	0	2,6141	1,4226
	03	62,2301		5,01		74			5	6
11	96,59	-	0	401.14	42,91	0,3099	-65,2122	0	2,6144	1,4228
	03	61,9686		7,65		62			5	5
11	96,71	-61,655	0	401.29	44,2162	0,3277	-65,3028	0	2,6144	1,4233
	03			7,00		6			7	7
11	96,85	-	0	401.78	45,7435	0,3485	-65,5022	0	2,6140	1,4244
	43	61,2786		5,72		93			2	
11	97,02	-60,827	0	402.80	47,5169	0,3728	-65,8653	0	2,6128	1,4262
	71			0,57		38			4	
11	97,23	-	0	404.51	49,5703	0,4008	-66,4398	0	2,6107	1,4289
	44	60,2855		0,54		06			5	8
11	97,48	-	0	406.97	51,9371	0,4330	-67,2399	0	2,6077	1,4328
	32	59,6362		3,05		38			5	2
11	97,78	-	0	410.26	54,6563	0,4700	-68,2839	0	2,6038	1,4378
	18	58,8582		1,08		4			3	2
11	98,14	-57,926	0	414.43	57,7714	0,5123	-69,5855	0	2,5990	1,4440
	02			5,91		06			2	8
11	98,57	-	0	419.54	61,3282	0,5603	-71,1551	0	2,5933	1,4516
	01	56,8097		5,65		8			7	9
11	99,08	-	0	425.59	65,3833	0,6147	-72,9894	0	2,5870	1,4606
	61	55,4732		4,99		26			6	8
11	99,70	-	0	432.54	70,0029	0,6757	-75,0731	0	2,5803	1,4710

	53	53,8736		1,70		79			1	5
11	100,4 48	-51,959	0	440.29 9,38	75,2478	0,7441 76	-77,3814	0	2,5734 4	1,4827 5
11	101,3 4	- 49,6676	0	448.75 1,61	81,1955	0,8204 73	-79,8822	0	2,5668	1,4957 3
11	102,4 1	- 46,9246	0	457.73 8,62	87,9367	0,9052 19	-82,5348	0	2,5608 4	1,5098 7
11	103,6 94	- 43,6398	0	467.04 9,53	95,577	0,9989 44	-85,2901	0	2,5560 9	1,5250 1
11	105,2 34	- 39,7037	0	476.44 5,51	104,241	1,1021 5	-88,0969	0	2,5531 4	1,541
11	107,0 83	- 34,9844	0	485.70 5,13	114,032	1,2184 3	-90,5232	0	2,5525 4	1,5543 6
11	109,3 02	-29,321	0	495.92 6,42	125,083	1,3467 5	-92,4453	0	2,5529 2	1,5629 8
11	111,9 64	- 22,5219	0	507.06 7,34	137,512	1,4867 5	-93,7722	0	2,5554 6	1,5658 5
11	115,1 59	- 14,2923	0	505.92 4,41	151,71	1,5969 8	-91,9519	0	2,6150 2	1,5512
11	118,9 93	- 4,00099	0	481.01 2,44	168,52	1,6772 5	-84,3875	0	2,7583 2	1,5081 2
11	123,5 93	9,12151	0	431.92 2,93	187,965	1,8074 5	-70,498	0	2,9471 1	1,4399 6
11	129,1 14	26,013	0	361.32 9,46	209,919	2,0572 9	-50,8487	0	3,1613 8	1,3592 3
11	135,7 39	47,7358	0	281.96 3,26	233,636	2,4817 3	-28,5939	0	3,3779 8	1,2831 7
11	143,0 06	73,0847	0	209.16 0,17	255,225	3,1412 1	-7,92955	0	3,5936 8	1,2218 2
11	143,0 06	73,0847	0	209.16 0,17	255,225	3,1412 1	-7,92955	0	3,5936 9	1,2218 2
11	143,6 88	75,5458	0	202.88 6,12	256,908	3,2277 1	-5,48448	0	3,6164 4	1,2137 9
11	146,9 72	87,607	0	172.06 8,49	263,522	3,7036 2	2,89374	0	3,7297 7	1,1908 2
11	146,9 72	87,607	0	172.06 8,49	263,522	3,7036	2,89374	0	3,7297 9	1,1908 2
11	153,2	111,592	0	126.52	270,471	4,7600	10,9562	0	3,9344	1,1760



	28			9,15		1			5	2
11	164,676	158,55	0	76.145,74	275,373	7,05075	16,4778	0	4,26232	1,1731
11	178,413	219,417	0	46.307,53	280,961	10,1643	18,8984	0	4,58542	1,17504
11	194,897	297,552	0	29.791,41	287,919	13,9384	20,0812	0	4,88131	1,17704
11	214,678	396,938	0	19.961,33	296,578	18,4408	20,7739	0	5,15864	1,17848
11	214,894	398,053	0	19.891,68	296,674	18,4905	20,7933	0	5,16136	1,17844
11	238,416	522,745	0	14.216,84	307,292	23,8512	22,291	0	5,42692	1,17574
11	255,504	616,88	0	11.615,98	315,165	27,6842	22,9095	0	5,5885	1,17479
12	102,592	-69,9694	0	1,00	0,00177245	0,151276	24,6246	0	3,18023	1,1739
12	102,692	-69,7067	0	396.966,35	9,67448	0,0156455	-64,6391	0	2,61983	1,42186
12	102,792	-69,4447	0	397.025,72	13,6878	0,0311815	-64,6269	0	2,62051	1,42173
12	102,892	-69,1826	0	396.812,04	16,7714	0,0467141	-64,5867	0	2,62121	1,4216
12	102,992	-68,9204	0	396.559,19	19,381	0,0622148	-64,5441	0	2,62188	1,42149
12	103,092	-68,6582	0	396.286,99	21,6821	0,0777086	-64,4998	0	2,62255	1,42138
12	103,192	-68,3959	0	396.012,70	23,7657	0,0931884	-64,456	0	2,62321	1,42127
12	103,292	-68,1336	0	395.734,56	25,6871	0,10864	-64,4119	0	2,62387	1,42116
12	103,392	-67,8711	0	395.452,88	27,4793	0,124071	-64,3674	0	2,62454	1,42106
12	103,492	-67,6086	0	395.170,19	29,1646	0,139491	-64,3228	0	2,6252	1,42095
12	103,592	-67,3461	0	394.889,27	30,7606	0,154899	-64,2787	0	2,62585	1,42084



12	103,6 92	- 67,0835	0	394.61 0,76	32,2816	0,1702 89	-64,2351	0	2,6265	1,4207 4
12	103,7 92	- 66,8208	0	394.33 3,38	33,7387	0,1856 54	-64,1918	0	2,6271 4	1,4206 4
12	103,8 92	-66,558	0	394.05 6,07	35,14	0,2009 92	-64,1484	0	2,6277 8	1,4205 4
12	103,9 92	- 66,2952	0	393.77 9,47	36,4921	0,2163 05	-64,1052	0	2,6284 2	1,4204 4
12	104,0 92	- 66,0324	0	393.50 3,01	37,799	0,2316 04	-64,0621	0	2,6290 6	1,4203 4
12	104,1 92	- 65,7694	0	393.22 6,28	39,066	0,2468 79	-64,0188	0	2,6296 9	1,4202 3
12	104,2 92	- 65,5064	0	392.94 9,29	40,2951	0,2621 47	-63,9756	0	2,6303 3	1,4201 3
12	104,3 92	- 65,2434	0	392.67 2,55	41,4911	0,2773 94	-63,9324	0	2,6309 7	1,4200 3
12	104,4 92	- 64,9802	0	392.41 1,79	42,6557	0,2926 15	-63,8939	0	2,6315 8	1,4199 5
12	104,5 92	- 64,7171	0	392.28 3,96	43,7923	0,3076 76	-63,895	0	2,6319 8	1,4200 5
12	104,7 12	- 64,4013	0	392.35 1,98	45,1219	0,3254 58	-63,9622	0	2,6321 2	1,4204 6
12	104,8 56	- 64,0223	0	392.77 6,15	46,6735	0,3462 84	-64,1453	0	2,6317 4	1,4214 2
12	105,0 29	- 63,5676	0	393.72 4,30	48,4769	0,3704 99	-64,4938	0	2,6306 3	1,4231 4
12	105,2 36	- 63,0223	0	395.34 0,97	50,5661	0,3984 79	-65,0488	0	2,6286 4	1,4258 2
12	105,4 85	- 62,3684	0	397.71 8,48	52,9781	0,4306 74	-65,835	0	2,6257 2	1,4295 9
12	105,7 83	- 61,5849	0	400.91 5,29	55,7519	0,4675 97	-66,8653	0	2,6219 2	1,4345 1
12	106,1 42	- 60,6463	0	404.99 5,37	58,9293	0,5097 5	-68,155	0	2,6172 4	1,4406 8
12	106,5 72	- 59,5221	0	409.99 9,92	62,5603	0,5576	-69,7124	0	2,6117 7	1,4481 9
12	107,0 88	-58,176	0	415.93 4,06	66,7054	0,6116 08	-71,536	0	2,6056 4	1,4570 9



12	107,7 07	- 56,5647	0	422.77 7,27	71,4149	0,6724 16	-73,6172	0	2,5990 4	1,4673 9
12	108,4 5	- 54,6361	0	430.47 7,82	76,7534	0,7406 13	-75,9392	0	2,5922 1	1,4791
12	109,3 42	-52,328	0	438.93 5,89	82,8029	0,8167 05	-78,4728	0	2,5854 8	1,4921 7
12	110,4 11	- 49,5652	0	447.98 0,26	89,6702	0,9010 1	-81,1716	0	2,5793 3	1,5064 7
12	111,6 95	- 46,2572	0	457.41 3,21	97,4503	0,9942 46	-83,9884	0	2,5742 6	1,5218 5
12	113,2 36	- 42,2858	0	462.62 6,92	105,927	1,0898 1	-86,213	0	2,5852 1	1,5360 9
12	115,0 85	- 37,4675	0	457.17 1,97	114,901	1,1788 9	-86,492	0	2,6302 8	1,5427 3
12	117,3 04	- 31,5536	0	441.34 6,09	124,762	1,2673 2	-84,517	0	2,7014	1,5388
12	119,9 66	- 24,2439	0	416.04 3,23	135,873	1,3593 6	-80,4661	0	2,7892 7	1,5255 7
12	123,1 61	-15,178	0	381.52 7,81	148,768	1,4664 5	-74,1084	0	2,8838 8	1,5021 8
12	126,9 94	- 3,93342	0	338.31 9,23	164,288	1,6014 9	-64,9489	0	2,9862 5	1,4666
12	131,5 95	10,1414	0	287.39 8,19	182,744	1,7778 4	-52,5077	0	3,1291	1,4180 4
12	137,1 16	27,8223	0	233.36 9,34	204,3	2,0414 6	-37,4247	0	3,2744 2	1,3613 3
12	143,7 4	50,0298	0	180.46 4,82	228,716	2,4373 1	-20,4828	0	3,4289 6	1,3007 1
12	150,3 22	73,0847	0	139.12 3,42	250,502	2,9427 3	-5,42157	0	3,5773 5	1,2483 8
12	150,3 22	73,0847	0	139.12 3,42	250,502	2,9427 3	-5,42157	0	3,5773 6	1,2483 8
12	151,6 9	78,0015	0	131.09 2,50	254,495	3,0836 8	-1,3536	0	3,6130 8	1,2330 7
12	161,2 3	113,665	0	83.950, 75	276,073	4,2755	12,1096	0	3,8641 2	1,1922 3
12	162,1 49	117,227	0	80.306, 91	277,783	4,4071 3	12,7463	0	3,8878	1,1908 2

12	162,1 49	117,227	0	80.306, 91	277,783	4,4071 3	12,7463	0	3,8878 1	1,1908 2
12	172,6 77	159,536	0	50.864, 88	293,323	6,0738 1	17,0885	0	4,1449 6	1,1832 6
12	186,4 14	218,576	0	30.375, 37	305,52	8,6656 3	19,3118	0	4,4468 2	1,1814 3
12	199,7 24	279,563	0	19.817, 48	311,282	11,612 4	20,2736	0	4,7108 8	1,1813 7
12	202,8 99	294,638	0	18.383, 32	312,613	12,324 8	20,4197	0	4,7664 7	1,1814 1
12	222,6 8	392,034	0	12.417, 66	321,105	16,769 1	21,46	0	5,0642 1	1,1800 7
12	230,7 83	433,483	0	10.870, 50	324,666	18,595 2	22,0364	0	5,1683 4	1,1786 7
13	110,2 73	- 72,5415	0	1,00	0,00177 245	0,1512 76	24,6246	0	3,1802 3	1,1739
13	110,3 73	- 72,2772	0	389.06 1,36	9,85159	0,0155 228	-63,4942	0	2,6355 5	1,4195 7
13	110,4 73	- 72,0137	0	389.13 4,20	13,9361	0,0309 476	-63,4854	0	2,6361 6	1,4194 6
13	110,5 73	-71,75	0	388.92 5,47	17,077	0,0463 606	-63,4462	0	2,6368 3	1,4193 4
13	110,6 73	- 71,4863	0	388.68 7,95	19,732	0,0617 531	-63,4065	0	2,6374 5	1,4192 4
13	110,7 73	- 71,2225	0	388.43 0,15	22,0773	0,0771 234	-63,3648	0	2,6380 8	1,4191 3
13	110,8 73	- 70,9587	0	388.16 7,64	24,1987	0,0924 901	-63,3231	0	2,6387 1	1,4190 3
13	110,9 73	- 70,6948	0	387.90 7,71	26,1541	0,1078 36	-63,2822	0	2,6393 1	1,4189 4
13	111,0 73	- 70,4308	0	387.64 6,72	27,9796	0,1231 55	-63,2413	0	2,6399 1	1,4188 4
13	111,1 73	- 70,1668	0	387.38 4,54	29,6984	0,1384 52	-63,2003	0	2,6405 2	1,4187 5
13	111,2 73	- 69,9027	0	387.12 0,51	31,3265	0,1537 36	-63,1591	0	2,6411 3	1,4186 5
13	111,3	-	0	386.85	32,8771	0,1690	-63,1179	0	2,6417	1,4185

	73	69,6386		6,26		09			3	6
13	111,4 73	- 69,3744	0	386.59 2,72	34,3611	0,1842 68	-63,0769	0	2,6423 4	1,4184 6
13	111,5 73	- 69,1101	0	386.32 9,85	35,7875	0,1995 07	-63,0361	0	2,6429 4	1,4183 7
13	111,6 73	- 68,8458	0	386.06 6,85	37,1634	0,2147 23	-62,9952	0	2,6435 3	1,4182 7
13	111,7 73	- 68,5814	0	385.75 7,76	38,4923	0,2299 08	-62,9465	0	2,6442 6	1,4181 6
13	111,8 73	- 68,3169	0	385.29 7,75	39,7726	0,2450 48	-62,872	0	2,6454 2	1,4179 7
13	111,9 73	- 68,0522	0	384.66 3,24	41,0028	0,2601 6	-62,7677	0	2,6470 7	1,4177 1
13	112,0 73	- 67,7874	0	384.01 7,50	42,1902	0,2752 91	-62,6618	0	2,6487 3	1,4174 4
13	112,1 73	- 67,5224	0	383.30 2,83	43,3339	0,2904 26	-62,5452	0	2,6505 6	1,4171 5
13	112,2 73	- 67,2572	0	382.52 0,37	44,4298	0,3054 03	-62,4345	0	2,6527 3	1,4169 5
13	112,3 93	- 66,9387	0	381.50 4,37	45,6844	0,3231 54	-62,3102	0	2,6557 1	1,4168 1
13	112,5 37	-66,556	0	380.31 0,45	47,1261	0,3438 87	-62,2065	0	2,6595 6	1,4169 4
13	112,7 1	- 66,0961	0	378.94 3,83	48,7776	0,3678 66	-62,1479	0	2,6644	1,4175
13	112,9 17	- 65,5431	0	377.44 3,56	50,6685	0,3953 85	-62,1619	0	2,6702 4	1,4186 4
13	113,1 66	- 64,8778	0	375.78 1,74	52,8197	0,4268 29	-62,2583	0	2,6772	1,4204 5
13	113,4 65	- 64,0772	0	373.87 9,84	55,2582	0,4625 53	-62,4368	0	2,6855 6	1,4229 9
13	113,8 23	-63,113	0	371.56 2,57	58,0401	0,5026 34	-62,6774	0	2,6957 6	1,4262 5
13	114,2 53	- 61,9512	0	368.67 0,88	61,1925	0,5473 88	-62,9698	0	2,7082 1	1,4302 7
13	114,7 69	- 60,5499	0	364.95 9,28	64,754	0,5969 78	-63,2873	0	2,7234 5	1,4350 5
13	115,3	-	0	360.11	68,7683	0,6514	-63,594	0	2,7421	1,4405



	88	58,8578		2,73		54				7
13	116,1 31	-56,812	0	353.81 1,10	73,289	0,7107 9	-63,8579	0	2,7646 5	1,4468 3
13	117,0 23	- 54,3351	0	345.60 2,81	78,3834	0,7747 34	-64,0266	0	2,7916 7	1,4537 8
13	118,0 93	- 51,3311	0	335.05 0,58	84,1472	0,8428 75	-64,0592	0	2,8234 4	1,4614 3
13	119,3 77	- 47,6824	0	321.71 6,81	90,646	0,9152 71	-63,9277	0	2,8599 9	1,4698 9
13	120,9 17	- 43,2443	0	305.32 5,33	97,9626	0,9920 68	-63,6428	0	2,9006 8	1,4793 9
13	122,7 66	- 37,8407	0	285.75 2,84	106,271	1,0727 5	-63,2516	0	2,9443 2	1,4903 5
13	124,9 85	- 31,2576	0	263.05 7,95	115,8	1,1568	-62,8404	0	2,9892 8	1,5033 2
13	127,6 47	- 23,2383	0	237.59 2,46	126,865	1,2463 2	-62,1179	0	3,0333 1	1,5159 7
13	130,8 42	- 13,4795	0	209.91 9,88	139,848	1,354	-59,5737	0	3,0738 7	1,5171 4
13	134,6 76	- 1,62477	0	181.58 3,61	155,358	1,4836 8	-54,9074	0	3,1082 6	1,5041 7
13	139,2 76	12,7759	0	152.83 9,13	174,267	1,6416 2	-47,0371	0	3,1639 7	1,4711 1
13	144,7 97	30,5185	0	123.22 8,11	196,834	1,8685 5	-34,641	0	3,2656 5	1,4135 5
13	151,4 22	52,568	0	94.620, 62	222,931	2,2212 2	-18,727	0	3,3916 6	1,3416 6
13	157,3 68	73,0847	0	74.584, 67	244,56	2,6222	-5,10458	0	3,5101 5	1,2826 7
13	157,3 68	73,0847	0	74.584, 67	244,56	2,6221 9	-5,10458	0	3,5101 6	1,2826 7
13	159,3 71	80,1624	0	68.362, 08	251,112	2,8008 3	0,635994	0	3,5576 4	1,2577 2
13	168,9 11	115,154	0	44.771, 62	276,905	3,7784	13,0292	0	3,7765 2	1,2089 5
13	180,3 58	159,759	0	28.410, 09	302,654	5,1135 5	17,5155	0	4,0096 3	1,1939 2
13	185,8	181,918	0	23.431,	314,234	5,7676	18,5426	0	4,1054	1,1908



	18			12		5			7	2
13	185,8 18	181,918	0	23.431, 12	314,234	5,7673 9	18,5426	0	4,1056 6	1,1908 2
13	187,0 2	186,863	0	22.518, 86	316,73	5,9123 8	18,7214	0	4,1257 9	1,1903
13	194,0 95	216,473	0	17.966, 13	330,239	6,8188 3	19,5547	0	4,2433 2	1,1879 8
13	210,5 8	288,614	0	11.063, 18	354,373	9,2713 2	20,6252	0	4,5077 1	1,1853 3
13	210,8 66	289,906	0	10.975, 22	354,701	9,3186 9	20,6374	0	4,5122 3	1,1853 1
14	127,0 14	- 73,0847	0	1,00	0,00177 245	0,1512 76	24,6246	0	3,1802 3	1,1739
14	127,1 14	- 72,7728	0	59.252, 53	10,1185	0,0122 299	-17,68	0	3,1189 7	1,3540 5
14	127,2 14	- 72,4609	0	58.713, 57	14,297	0,0244 297	-17,631	0	3,1197 6	1,3541
14	127,3 14	- 72,1488	0	58.139, 07	17,4948	0,0366 293	-17,5584	0	3,1205 4	1,3540 4
14	127,4 14	- 71,8368	0	57.562, 27	20,18	0,0488 379	-17,4826	0	3,1213 1	1,3539 7
14	127,5 14	- 71,5246	0	57.033, 20	22,5467	0,0610 279	-17,4129	0	3,1219 9	1,3539
14	127,6 14	- 71,2124	0	56.557, 50	24,6872	0,0732 068	-17,3505	0	3,1225 8	1,3538 4
14	127,7 14	- 70,9001	0	56.112, 49	26,6523	0,0853 889	-17,2921	0	3,1231 4	1,3537 8
14	127,8 14	- 70,5877	0	55.682, 52	28,4797	0,0975 675	-17,2354	0	3,1236 8	1,3537 3
14	127,9 14	- 70,2753	0	55.261, 67	30,1942	0,1097 41	-17,1799	0	3,1242 1	1,3536 7
14	128,0 14	- 69,9629	0	54.846, 83	31,8135	0,1219 13	-17,125	0	3,1247 5	1,3536 2
14	128,1 14	- 69,6504	0	54.436, 16	33,3506	0,1340 87	-17,0706	0	3,1252 7	1,3535 6
14	128,2 14	- 69,3378	0	54.029, 08	34,8154	0,1462 66	-17,0166	0	3,1258 1	1,3535 1



14	128,3	-	0	53.624,	36,2169	0,1584	-16,9629	0	3,1263	1,3534
	14	69,0252		78		49			2	5
14	128,4	-	0	53.222,	37,562	0,1706	-16,9096	0	3,1268	1,3534
	14	68,7126		79		37			4	
14	128,5	-	0	52.822,	38,8571	0,1828	-16,8564	0	3,1273	1,3533
	14	68,3999		62		26			6	4
14	128,6	-	0	52.423,	40,1074	0,1950	-16,8035	0	3,1278	1,3532
	14	68,0871		83		14			7	9
14	128,7	-	0	52.026,	41,317	0,2071	-16,7507	0	3,1283	1,3532
	14	67,7743		08		99			9	4
14	128,8	-	0	51.629,	42,4894	0,2193	-16,698	0	3,1289	1,3531
	14	67,4614		19		83			1	8
14	128,9	-	0	51.233,	43,6275	0,2315	-16,6454	0	3,1294	1,3531
	14	67,1485		07		65			2	3
14	129,0	-	0	50.837,	44,733	0,2437	-16,5929	0	3,1299	1,3530
	14	66,8355		65		53			4	7
14	129,1	-	0	50.363,	46,0205	0,2583	-16,53	0	3,1305	1,3530
	34	66,4599		82		8			5	1
14	129,2	-	0	49.796,	47,5126	0,2759	-16,4547	0	3,1312	1,3529
	78	66,0091		15		42			9	3
14	129,4	-	0	49.116,	49,2336	0,2970	-16,3645	0	3,1321	1,3528
	51	65,4679		16		31			8	4
14	129,6	-	0	48.301,	51,2087	0,3223	-16,2567	0	3,1332	1,3527
	58	64,8183		80		61			4	3
14	129,9	-	0	47.326,	53,4641	0,3527	-16,1281	0	3,1345	1,3526
	07	64,0385		89		78			1	1
14	130,2	-	0	46.166,	56,026	0,3892	-15,9844	0	3,1360	1,3525
	05	63,1023		50		24			2	1
14	130,5	-	0	44.832,	58,9207	0,4324	-15,8774	0	3,1377	1,3527
	64	61,9783		70		26			7	
14	130,9	-	0	43.464,	62,1929	0,4818	-15,9895	0	3,1395	1,3541
	94	60,6287		99		05			9	
14	131,5	-	0	42.158,	65,9027	0,5368	-16,4327	0	3,1413	1,3572
	1	59,0083		64		32			9	4
14	132,1	-	0	40.884,	70,0868	0,5974	-17,2447	0	3,1432	1,3623
	29	57,0626		68		56			2	8
14	132,8	-	0	39.563,	74,7723	0,6638	-18,4396	0	3,1452	1,3696
	72	54,7264		99		02			6	6

14	133,7 63	- 51,9209	0	38.075, 64	79,9655	0,7361 67	-20,0228	0	3,1476 6	1,3792 5
14	134,8 33	- 48,5516	0	36.317, 41	85,6997	0,8144 06	-22,0103	0	3,1505 6	1,3913 6
14	136,1 17	- 44,5046	0	34.406, 17	92,161	0,8970 3	-24,4578	0	3,1536 3	1,4063 6
14	137,6 58	- 39,6432	0	32.323, 96	99,3997	0,9837 86	-27,3948	0	3,1568 4	1,4245 9
14	139,5 07	- 33,8033	0	29.884, 81	107,557	1,0733 7	-30,8178	0	3,1604 9	1,4463 4
14	141,7 25	- 26,7873	0	27.256, 58	116,975	1,1633 8	-34,7583	0	3,1641	1,4720 1
14	144,3 88	- 18,3586	0	24.426, 99	127,989	1,2528 6	-39,063	0	3,1676 8	1,5009 7
14	147,5 83	- 8,23281	0	21.436, 53	141,037	1,3530 3	-41,7203	0	3,1710 3	1,5203 2
14	151,4 16	3,92993	0	18.511, 11	156,777	1,4658 1	-41,8238	0	3,1739	1,5233
14	156,0 17	18,5492	0	15.610, 19	176,118	1,6056 3	-37,8892	0	3,1902	1,5003 2
14	161,5 37	36,36	0	12.653, 05	199,271	1,8045 6	-28,3217	0	3,2658 6	1,4441 4
14	168,1 62	58,3623	0	9.693,4 2	226,161	2,1416 8	-13,5917	0	3,3786 3	1,3634 7
14	172,4 68	73,0847	0	8.134,5 3	242,597	2,4150 7	-3,94866	0	3,4600 1	1,3137 4
14	172,4 68	73,0847	0	8.134,5 3	242,597	2,4150 7	-3,94866	0	3,4600 1	1,3137 4
14	172,4 69	73,0855	0	8.134,4 6	242,597	2,4150 8	-3,94789	0	3,4600 2	1,3137 4
14	176,1 12	85,8379	0	6.928,0 2	255,194	2,7123	5,24554	0	3,5400 9	1,2683 9
14	183,7 54	113,51	0	4.991,5 8	278,111	3,3951 8	13,5141	0	3,7000 7	1,2277 4
14	185,6 51	120,567	0	4.608,4 6	283,358	3,5754 1	14,6003	0	3,7379 3	1,2223 1
14	197,0 99	164,582	0	3.006,0 7	313,053	4,7146 2	18,242	0	3,9468 6	1,2037 4



14	210,8 36	220,28	0	1.963,2 6	346,429	6,1230 4	19,9543	0	4,1549 6	1,1947 1
14	222,9 44	271,532	0	1.427,5 3	375,224	7,3455 2	20,6768	0	4,3063 1	1,1908 2
14	222,9 44	271,532	0	1.427,5 3	375,224	7,3455 2	20,6768	0	4,3063 1	1,1908 2
14	227,1 82	289,909	0	1.299,1 9	384,941	7,7850 3	20,849	0	4,3557 6	1,1898 8

Scenario (User defined source) : 300mm-Q63,6

72438-4FSRUInvioGNL-12R\Invio GNL Water\12R Manichette GNL riempimento FSRU\300mm-Q63,6

Material to track **GAS NATURALE**

Weather: Category 2/F

Wind speed [m/s]	2
Pasquill stability	F stable - night with moderate clouds and light/moderate wind
Atmospheric temperature [degC]	25
Relative humidity [fraction]	0,75
Solar radiation flux [kW/m2]	0,5
Mixing layer height [m]	100

Observer Release Data and Observer Mass Data

Observer number	Release type	Start time [s]	Start downwind distance [m]	Unit	Masses or mass rates		
					Release	Rainout	Final
1	Continuous	0,22	-0,376552	kg/s	0	0	42,3309
2	Continuous	404,633	-23,4026	kg/s	0	0	62,6
3	Continuous	801,55	-27,1706	kg/s	0	0	62,9481
4	Continuous	1197,32	-29,6135	kg/s	0	0	62,9844
5	Continuous	1592,47	-31,4029	kg/s	0	0	63,2065
6	Continuous	1987,22	-32,8135	kg/s	0	0	63,2289
7	Continuous	2381,71	-33,9917	kg/s	0	0	63,2424
8	Continuous	2776,01	-35,0069	kg/s	0	0	63,2516
9	Continuous	3170,16	-35,9009	kg/s	0	0	63,2985
10	Continuous	3564,18	-36,6717	kg/s	0	0	13,6922

Time-varying Observer Dispersion Data (before along-wind-diffusion effects)

Dispersion data correspond to an averaging time of: 18,75 s

Observer number	Time [s]	Downwind distance [m]	C/Line height [m]	C/Line conc [ppm]	Effective width [m]	Effective depth [m]	C/Line vapour temperature [degC]	C/Line liquid fraction	Centroid velocity [m/s]	C/Line cloud density [kg/m ³]
1	0,22	- 0,37655	0	1,00	0,00177	0,78242	24,6246	0	0,6148	1,1739
		2			245	8			73	
1	0,32	- 0,35852	0	920.35	0,50956	0,11507	-146,031	0	0,0937	1,7603
		5		8,85	4	4			474	1
1	0,42	- 0,35059	0	948.42	0,79350	0,16864	-151,397	0	0,0705	1,8099
		5		7,81	9	5			082	3
1	0,52	- 0,34396	0	958.22	1,05622	0,19882	-153,246	0	0,0637	1,8281
				1,14		2			227	4
1	0,62	- 0,33772	0	962.93	1,30876	0,21699	-154,131	0	0,0616	1,8370
		3		4,19					415	7
1	0,72	- 0,33158	0	965.47	1,5528	0,22894	-154,603	0	0,0615	1,8418
				3,74		7			794	7
1	0,82	- 0,32537	0	966.72	1,78912	0,23810	-154,432	0	0,0626	1,8376
		5		7,81		6			609	
1	0,92	- 0,31901	0	967.11	2,01713	0,24657	-153,549	0	0,0644	1,8227
		9		3,56		9			754	7
1	1,02	- 0,31246	0	966.99	2,2392	0,25440	-152,362	0	0,0667	1,8039
		2		1,55		2			006	6
1	1,12	- 0,30566	0	966.53	2,45544	0,26209	-150,979	0	0,0691	1,7829
		8		3,37		8			843	3
1	1,22	- 0,29861	0	965.86	2,66753	0,26964	-149,52	0	0,0718	1,7615
		7		0,02		5			205	1
1	1,32	-	0	965.04	2,87889	0,27675	-148,051	0	0,0745	1,7406

		0,29129 9		3,78		4			524	8
1	1,42	- 0,28370 4	0	964.12 6,49	3,09017	0,28361 7	-146,573	0	0,0773 357	1,7203 6
1	1,52	- 0,27583	0	963.13 8,95	3,30136	0,29028	-145,107	0	0,0801 5	1,7008 2
1	1,62	- 0,26767 4	0	962.10 5,15	3,51245	0,29672 5	-143,679	0	0,0829 811	1,6823 2
1	1,72	- 0,25923 5	0	961.04 2,04	3,72341	0,30300 4	-142,293	0	0,0858 138	1,6648 8
1	1,82	- 0,25051 2	0	959.96 2,61	3,93418	0,30920 1	-140,949	0	0,0886 324	1,6483 9
1	1,92	- 0,24150 9	0	958.87 6,16	4,14476	0,31531 1	-139,652	0	0,0914 306	1,6328 7
1	2,02	- 0,23222 8	0	957.78 9,29	4,35516	0,32130 1	-138,409	0	0,0942 078	1,6183 6
1	2,12	- 0,22267	0	956.70 5,84	4,56534	0,32718 9	-137,215	0	0,0969 613	1,6047 5
1	2,22	- 0,21284	0	955.63 1,92	4,7753	0,33302 1	-136,069	0	0,0996 794	1,5919 5
1	2,34	- 0,20068 5	0	954.36 2,96	5,02698	0,33998	-134,756	0	0,1028 81	1,5776 2
1	2,48 4	- 0,18559 5	0	952.87 0,88	5,32859	0,34822 4	-133,269	0	0,1066 45	1,5618
1	2,65 68	- 0,16677 6	0	951.12 6,11	5,68995	0,35791 9	-131,607	0	0,1110 54	1,5446 2
1	2,86 416	- 0,14320 1	0	949.09 8,82	6,12272	0,36935 6	-129,755	0	0,1161 91	1,5260 9
1	3,11	-	0	946.76	6,64086	0,38275	-127,732	0	0,1221	1,5065

	299	0,11353		7,04		3			36	3
1	3,41 159	- 0,07601 5	0	944.10 4,99	7,26089	0,39832 8	-125,546	0	0,1289 8	1,4862
1	3,76 991	- 0,02836 98	0	941.09 7,09	8,00241	0,41647 6	-123,203	0	0,1367 9	1,4652 7
1	4,19 989	0,03238 1	0	937.72 7,08	8,88869	0,43736 1	-120,73	0	0,1456 52	1,4441
1	4,71 587	0,11014 6	0	933.99 5,35	9,94682	0,46151 3	-118,132	0	0,1555 98	1,4228 3
1	5,33 504	0,20997 0	0	929.89 0,67	11,2089	0,48911 4	-115,424	0	0,1667 05	1,4016 6
1	6,07 805	0,33842 3	0	925.42 2,89	12,7119	0,52058 4	-112,623	0	0,1790 03	1,3807 7
1	6,96 966	0,504 0	0	920.60 0,06	14,4977	0,55642	-109,723	0	0,1925 12	1,3601 2
1	8,03 959	0,71781 7	0	915.45 3,16	16,6136	0,59733 2	-106,734	0	0,2071 81	1,3397 9
1	9,32 351	0,99406 9	0	910.01 2,76	19,1118	0,64390 4	-103,672	0	0,2229 72	1,3199 1
1	10,8 642	1,35084 0	0	904.32 0,32	22,0471	0,69705	-100,533	0	0,2398 02	1,3003 9
1	12,7 131	1,8107 0	0	898.42 0,00	25,471	0,75763 5	-97,3167	0	0,2575 99	1,2812 3
1	14,9 317	2,40305 0	0	892.08 5,57	29,4262	0,82730 7	-94,0152	0	0,2763 43	1,2625 5
1	17,5 94	3,16735 0	0	882.00 5,06	33,9306	0,90946 1	-90,2102	0	0,2976 21	1,2440 5
1	20,7 888	4,15746 0	0	865.60 3,48	38,9632	1,01236	-85,6858	0	0,3219 17	1,2264 5
1	24,6 226	5,44383 0	0	840.96 9,88	44,459	1,14927	-80,3216	0	0,3487 62	1,2105 6
1	29,2 231	7,11242 0	0	810.10 5,27	50,2842	1,33531	-74,4642	0	0,3757 08	1,1971 1
1	34,7 437	9,26347 0	0	771.95 1,02	56,1126	1,59504	-67,8961	0	0,4022 9	1,1854 9
1	41,3	12,1985	0	635.10	58,9977	1,98228	-45,4057	0	0,5250	1,1549



	684			6,38					35	8
1	48,6 597	17,3005	0	290.86 7,36	58,9984	3,67829	0,30922	0	0,8742 5	1,1396 5
1	48,6 597	17,3005	0	290.86 7,36	58,9984	3,67889	0,30922	0	0,8741 07	1,1396 5
1	49,3 181	17,8881	0	270.75 2,29	59,3017	3,84547	2,40001	0	0,9013 17	1,1408 6
1	56,4 127	25,1716	0	147.14 8,48	62,402	5,57587	12,9753	0	1,1352 1	1,1556 2
1	56,4 127	25,1716	0	147.14 8,48	62,402	5,57573	12,9753	0	1,1352 4	1,1556 2
1	58,8 577	28,0365	0	127.24 3,02	63,2448	6,08672	14,3758	0	1,1936 7	1,1589 1
1	70,3 053	42,7323	0	88.380, 10	65,2482	7,59288	16,967	0	1,35	1,1656 3
1	84,0 423	61,7109	0	78.214, 55	66,2212	8,14125	17,6962	0	1,4028	1,1669 8
1	100, 527	85,3255	0	69.913, 42	67,3604	8,65666	18,2895	0	1,4506 5	1,1680 7
1	120, 308	114,544	0	62.356, 21	68,7464	9,19688	18,8192	0	1,4990 2	1,1690 8
1	144, 046	150,68	0	55.744, 84	70,4291	9,73071	19,2812	0	1,5452 3	1,1699 6
1	172, 531	195,418	0	49.276, 43	72,4741	10,3403	19,7149	0	1,5962	1,1709 1
1	206, 713	250,941	0	43.005, 14	74,9647	11,041	20,1163	0	1,6527	1,1719 1
1	247, 732	320,024	0	37.010, 96	78,0045	11,8487	20,4813	0	1,7153 8	1,1729 5
1	296, 954	406,228	0	31.370, 31	81,724	12,7998	21,5078	0	1,7862 6	1,1715 7
1	356, 021	514,089	0	26.155, 13	86,2858	13,8986	22,3801	0	1,8647 6	1,1706 2
1	399, 92	597,161	0	23.057, 17	89,7414	14,6902	22,8455	0	1,9193 5	1,1702 7
1	426, 901	649,539	0	21.420, 91	91,8949	15,172	23,0775	0	1,9518 1	1,1701 5
1	511,	820,013	0	17.206,	98,804	16,646	23,6218	0	2,0481	1,1700

	957			48					6	4
1	614,025	1034,45	0	13.626,78	107,314	18,3379	24,0325	0	2,15346	1,17018
1	736,506	1305,3	0	10.586,32	117,821	20,2857	24,3335	0	2,26894	1,17049
1	828,688	1518,16	0	8.887,38	125,922	21,6999	24,4815	0	2,34936	1,17074
1	883,483	1648,57	0	8.072,81	130,82	22,5333	24,5488	0	2,39532	1,17088
1	1059,86	2084,61	0	6.031,76	146,923	25,1157	24,6995	0	2,53362	1,1713
1	1090,44	2162,44	0	5.767,33	149,761	25,5454	24,7184	0	2,55597	1,17136
2	404,633	-23,4026	0	1,00	0,00177245	0,782428	24,6246	0	0,614873	1,1739
2	404,733	-23,352	0	480.955,90	2,34296	0,00675646	-71,6149	0	0,484647	1,41033
2	404,833	-23,3036	0	503.918,92	3,28843	0,0123109	-76,2722	0	0,48326	1,42696
2	404,933	-23,2553	0	509.801,41	4,02485	0,017948	-77,3375	0	0,483301	1,43041
2	405,033	-23,2069	0	512.029,37	4,65286	0,0236002	-77,709	0	0,483519	1,43149
2	405,133	-23,1586	0	513.134,90	5,21165	0,0292357	-77,8929	0	0,483725	1,43203
2	405,233	-23,1102	0	515.613,97	5,72205	0,0346679	-78,4662	0	0,483365	1,43443
2	405,333	-23,0619	0	519.909,43	6,19543	0,0397867	-79,5081	0	0,482441	1,439
2	405,433	-23,0137	0	525.016,80	6,63923	0,0446357	-80,749	0	0,481326	1,44451
2	405,533	-22,9656	0	530.415,91	7,05887	0,0492583	-82,0554	0	0,480174	1,45037
2	405,633	-22,9177	0	535.853,14	7,45866	0,0536833	-83,3631	0	0,479052	1,45631
2	405,733	-22,8698	0	541.208,75	7,84157	0,0579361	-84,6435	0	0,477985	1,46218



2	405,833	-22,8221	0	546.419,20	8,20959	0,0620413	-85,8822	0	0,47698	1,46792
2	405,933	-22,7744	0	551.452,87	8,56488	0,0660122	-87,0721	0	0,476041	1,47348
2	406,033	-22,7269	0	556.295,54	8,90941	0,0698573	-88,2106	0	0,47517	1,47886
2	406,133	-22,6794	0	560.943,90	9,24441	0,0735885	-89,2979	0	0,474363	1,48404
2	406,233	-22,632	0	565.399,47	9,57092	0,0772161	-90,335	0	0,473616	1,48903
2	406,333	-22,5847	0	569.667,74	9,88976	0,0807492	-91,324	0	0,472926	1,49383
2	406,433	-22,5374	0	573.755,08	10,2016	0,0841956	-92,2671	0	0,47229	1,49844
2	406,533	-22,4902	0	577.670,60	10,5071	0,0875631	-93,1669	0	0,471702	1,50288
2	406,633	-22,4431	0	581.422,14	10,8067	0,090857	-94,0257	0	0,47116	1,50715
2	406,753	-22,3866	0	585.720,32	11,1592	0,0947191	-95,0059	0	0,470565	1,51206
2	406,897	-22,3189	0	590.604,35	11,5732	0,0992323	-96,1147	0	0,469924	1,51767
2	407,07	-22,2377	0	596.103,05	12,0585	0,104487	-97,3568	0	0,469249	1,52403
2	407,277	-22,1405	0	602.231,99	12,6255	0,110592	-98,734	0	0,468556	1,53116
2	407,526	-22,024	0	609.004,58	13,2861	0,117663	-100,248	0	0,467863	1,53916
2	407,824	-21,8844	0	616.496,49	14,0549	0,125785	-101,914	0	0,467173	1,54873
2	408,183	-21,7172	0	625.321,23	14,9492	0,134856	-103,876	0	0,466333	1,55872
2	408,613	-21,5168	0	635.973,10	15,9896	0,144737	-106,245	0	0,465245	1,57203
2	409,129	-21,2771	0	648.487,21	17,1995	0,155371	-109,01	0	0,464007	1,58802
2	409,748	-20,9902	0	662.598,58	18,6063	0,166772	-112,09	0	0,462803	1,60639



2	410,491	-20,6467	0	677.837,54	20,2363	0,179396	-115,102	0	0,461842	1,62384
2	411,382	-20,2352	0	693.448,05	22,1113	0,194694	-117,093	0	0,461377	1,63089
2	412,452	-19,7414	0	708.619,49	24,2624	0,213717	-117,772	0	0,46164	1,62456
2	413,736	-19,1481	0	722.585,15	26,7299	0,237593	-116,993	0	0,462795	1,604
2	415,277	-18,4335	0	734.647,87	29,5809	0,267384	-114,737	0	0,46494	1,57041
2	417,126	-17,571	0	743.912,69	33,0086	0,303501	-110,924	0	0,468269	1,52533
2	419,344	-16,5269	0	749.145,74	37,1835	0,347198	-105,429	0	0,473087	1,4708
2	422,007	-15,259	0	748.809,26	42,1936	0,40115	-98,2968	0	0,479556	1,41103
2	425,202	-13,7143	0	740.993,24	48,0568	0,469853	-89,7314	0	0,48759	1,35131
2	429,035	-11,8269	0	723.217,03	54,7073	0,560897	-80,0064	0	0,496961	1,29669
2	433,636	-9,51597	0	691.720,78	61,9772	0,688698	-69,1827	0	0,507524	1,25039
2	439,156	-6,6815	0	643.446,11	69,5203	0,879426	-57,3032	0	0,518936	1,21411
2	445,781	-3,20503	0	584.391,56	76,6639	1,1648	-45,5801	0	0,529787	1,18923
2	453,731	1,06384	0	492.861,54	80,7166	1,7055	-30,5298	0	0,555293	1,16977
2	463,27	7,61096	0	265.322,93	80,7159	3,20035	-1,19258	0	0,822227	1,16021
2	474,718	18,3899	0	188.655,81	80,7159	4,90712	5,26653	0	1,03825	1,17008
2	480,239	24,3194	0	170.180,46	80,7159	5,51639	7,14167	0	1,10851	1,17084
2	480,239	24,3194	0	170.180,46	80,7159	5,51632	7,14167	0	1,10852	1,17084
2	488,455	33,815	0	138.514,49	81,8649	6,26771	10,8393	0	1,19956	1,16977



2	504,94	54,486	0	113.466,25	83,0806	7,07467	13,5944	0	1,28952	1,16927
2	524,721	80,577	0	99.344,43	84,3474	7,63618	15,1365	0	1,34833	1,16886
2	548,459	113,358	0	86.491,59	85,9058	8,25459	16,4219	0	1,40943	1,16895
2	576,944	154,318	0	75.862,83	87,812	8,85616	17,4382	0	1,46597	1,16918
2	611,126	205,479	0	65.777,69	90,144	9,54509	18,3249	0	1,52745	1,16972
2	652,144	269,526	0	56.305,44	93,0029	10,3382	19,0903	0	1,59469	1,17051
2	701,367	349,856	0	47.523,66	96,5146	11,2543	19,7438	0	1,66855	1,17155
2	760,434	450,846	0	39.511,34	100,837	12,3144	20,2935	0	1,74979	1,17269
2	831,314	578,105	0	32.339,58	106,167	13,5511	21,0804	0	1,83983	1,17261
2	916,37	738,92	0	25.998,78	112,756	15,0004	22,2719	0	1,94	1,17095
2	973,025	850,608	0	22.743,35	117,253	15,9368	22,8064	0	2,00212	1,17042
2	1018,44	942,857	0	20.549,91	120,92	16,6785	23,1355	0	2,04997	1,17027
2	1140,92	1201,43	0	15.968,70	131,036	18,6088	23,7454	0	2,16974	1,17005
2	1287,9	1530	0	12.211,97	143,585	20,8263	24,1676	0	2,29991	1,17025
2	1464,27	1948,29	0	9.160,47	159,166	23,3655	24,4544	0	2,44076	1,17064
2	1550,85	2162,42	0	8.092,79	167,001	24,5685	24,5473	0	2,50484	1,17082
3	801,55	-27,1706	0	1,00	0,00177245	0,782428	24,6246	0	0,614873	1,1739
3	801,65	-27,1178	0	413.186,08	2,56519	0,00611456	-60,4892	0	0,512914	1,38268
3	801,	-	0	433.09	3,60871	0,01124	-64,7819	0	0,5121	1,3973

	75	27,0665		3,38					79	6
3	801,85	-27,0153	0	438.167,06	4,41886	0,016451	-65,7551	0	0,512251	1,40038
3	801,95	-26,9641	0	440.087,46	5,10964	0,0216716	-66,0961	0	0,512417	1,40135
3	802,05	-26,9128	0	440.893,19	5,72349	0,02689	-66,2287	0	0,51261	1,40168
3	802,15	-26,8616	0	441.253,12	6,28288	0,0320955	-66,2869	0	0,512795	1,40182
3	802,25	-26,8103	0	442.472,95	6,80057	0,0371636	-66,6015	0	0,512694	1,40311
3	802,35	-26,759	0	445.164,80	7,2856	0,0419707	-67,3228	0	0,512197	1,40615
3	802,45	-26,7078	0	448.821,30	7,74438	0,0465186	-68,302	0	0,511484	1,41031
3	802,55	-26,6567	0	452.930,26	8,1811	0,050849	-69,3947	0	0,510707	1,41499
3	802,65	-26,6057	0	457.238,81	8,59889	0,0549929	-70,5322	0	0,509926	1,41989
3	802,75	-26,5547	0	461.623,84	9,00009	0,0589742	-71,6826	0	0,509157	1,42488
3	802,85	-26,5039	0	465.997,68	9,38698	0,0628099	-72,8228	0	0,508418	1,42987
3	802,95	-26,4531	0	470.311,93	9,76165	0,0665114	-73,9407	0	0,507717	1,4348
3	803,05	-26,4023	0	474.540,51	10,1254	0,0700925	-75,0303	0	0,507053	1,43964
3	803,15	-26,3516	0	478.665,50	10,4794	0,0735636	-76,0877	0	0,506429	1,44438
3	803,25	-26,301	0	482.677,17	10,8247	0,0769344	-77,111	0	0,505842	1,44901
3	803,35	-26,2505	0	486.572,35	11,1616	0,0802177	-78,1001	0	0,505291	1,45351
3	803,45	-26,2	0	490.348,89	11,491	0,0834193	-79,0548	0	0,504774	1,45789
3	803,55	-26,1495	0	494.007,05	11,8137	0,0865445	-79,9758	0	0,504289	1,46215
3	803,	-26,089	0	498.24	12,1927	0,09020	-81,0383	0	0,5037	1,4671



	67			5,87			08			47		
3	803,814	-26,0165	0	503.118,64	12,6375	0,094458	-82,2534	0	0,503153	1,47282		
3	803,987	-25,9297	0	508.676,00	13,1578	0,0994016	-83,6316	0	0,502512	1,47937		
3	804,194	-25,8255	0	514.951,80	13,7655	0,105115	-85,1782	0	0,501836	1,48682		
3	804,443	-25,7008	0	521.965,09	14,4733	0,111701	-86,8951	0	0,501143	1,495243		
3	804,742	-25,5512	0	529.709,58	15,2962	0,11926	-88,7772	0	0,500458	1,50454		
3	805,1	-25,372	0	538.211,12	16,2514	0,127882	-90,8285	0	0,499798	1,514998		
3	805,53	-25,1573	0	547.705,95	17,3594	0,137563	-93,1069	0	0,499133	1,52666		
3	806,046	-24,9	0	559.083,86	18,6413	0,148017	-95,8347	0	0,498279	1,54116		
3	806,665	-24,5918	0	572.646,38	20,1261	0,159035	-99,0697	0	0,497247	1,55893		
3	807,408	-24,2227	0	588.280,27	21,8476	0,170524	-102,755	0	0,496178	1,579978		
3	808,3	-23,7807	0	605.570,32	23,8415	0,182676	-106,622	0	0,495289	1,60224		
3	809,37	-23,2511	0	623.585,40	26,1313	0,197208	-109,445	0	0,494838	1,61472		
3	810,653	-22,6157	0	641.261,59	28,7482	0,21555	-110,7	0	0,495057	1,61222		
3	812,194	-21,8523	0	657.599,57	31,7352	0,239075	-110,191	0	0,496087	1,59334		
3	814,043	-20,9334	0	671.666,30	35,1637	0,26912	-107,897	0	0,497993	1,55942		
3	816,262	-19,8255	0	682.412,13	39,2502	0,306376	-103,803	0	0,500894	1,51293		
3	818,924	-18,4865	0	688.273,60	44,223	0,352345	-97,7831	0	0,505053	1,45646		
3	822,119	-16,8643	0	687.294,41	50,1566	0,410639	-89,912	0	0,510582	1,39497		
3	825,	-14,894	0	677.09	57,0519	0,48708	-80,4665	0	0,5173	1,3346		



	952			6,22		1			59	
3	830,553	-12,4957	0	654.648,00	64,796	0,591998	-69,7604	0	0,525181	1,28071
3	836,074	-9,57168	0	615.363,42	73,1371	0,746435	-57,7899	0	0,534019	1,23628
3	842,698	-6,00284	0	561.101,73	81,5752	0,97982	-45,4047	0	0,542952	1,20377
3	850,648	-1,6498	0	495.165,77	89,0987	1,34772	-33,1571	0	0,551782	1,18206
3	860,188	3,85029	0	364.893,39	91,5236	2,09714	-13,4946	0	0,649059	1,163659
3	871,635	12,8178	0	214.310,57	91,5235	3,69149	2,68178	0	0,89592	1,16937
3	885,372	26,0314	0	192.370,47	94,3681	4,5572	4,01868	0	0,998297	1,17428
3	887,137	27,7993	0	189.406,67	95,0642	4,61164	4,48219	0	1,00578	1,17369
3	887,137	27,7993	0	189.406,67	95,0642	4,61164	4,48219	0	1,00578	1,17369
3	901,857	43,5888	0	137.315,31	96,677	5,65393	11,1109	0	1,14175	1,16949
3	921,638	67,1931	0	112.499,78	97,9166	6,39296	13,939	0	1,22763	1,16845
3	945,376	97,1822	0	95.671,83	99,3561	7,04253	15,7274	0	1,29753	1,16817
3	973,861	135,038	0	82.909,33	101,135	7,64385	17,0115	0	1,35844	1,16819
3	1008,04	182,57	0	71.404,33	103,321	8,30875	18,066	0	1,42197	1,16861
3	1049,06	242,339	0	60.759,79	106,011	9,07522	18,9475	0	1,49117	1,16947
3	1098,28	317,635	0	51.020,38	109,329	9,96257	19,6793	0	1,56701	1,17044
3	1157,35	412,693	0	42.237,02	113,429	10,9921	20,2801	0	1,65035	1,17164
3	1228,23	532,971	0	34.444,55	118,504	12,1884	20,8106	0	1,74212	1,17276
3	1313	685,581	0	27.642,	124,801	13,6043	22,1433	0	1,8447	1,1707

	,29			54					4	7
3	1392,48	835,197	0	22.966,73	130,85	14,8805	22,9159	0	1,93272	1,16999
3	1415,35	879,786	0	21.838,29	132,63	15,2446	23,0857	0	1,95711	1,16988
3	1537,84	1127,32	0	16.946,28	142,375	17,143	23,7398	0	2,07985	1,16968
3	1684,81	1442,9	0	12.948,98	154,502	19,328	24,1809	0	2,21305	1,16991
3	1861,19	1846,14	0	9.736,51	169,612	21,8376	24,4727	0	2,35714	1,17035
3	1976,6	2123,24	0	8.263,86	179,789	23,4197	24,5912	0	2,44381	1,17063
4	1197,32	- 29,6135	0	1,00	0,00177	0,78242	24,6245	0	0,614873	1,1739
4	1197,42	- 29,5595	0	374.884,52	2,69887	0,00582427	-54,2376	0	0,526884	1,36865
4	1197,52	- 29,5068	0	392.882,14	3,80379	0,0107441	-58,3037	0	0,526402	1,38241
4	1197,62	- 29,4542	0	397.413,44	4,66041	0,0157471	-59,2149	0	0,526501	1,38523
4	1197,72	- 29,4015	0	399.133,36	5,3875	0,0207734	-59,5353	0	0,526645	1,38614
4	1197,82	- 29,3489	0	399.878,71	6,03207	0,0258062	-59,6651	0	0,526792	1,38647
4	1197,92	- 29,2962	0	400.183,26	6,61959	0,0308302	-59,7135	0	0,526941	1,38658
4	1198,02	- 29,2435	0	400.409,67	7,16415	0,0358231	-59,7648	0	0,527056	1,38676
4	1198,12	- 29,1908	0	401.702,97	7,6742	0,0406334	-60,1329	0	0,52689	1,38828
4	1198,22	- 29,1381	0	404.171,70	8,15601	0,0451919	-60,8385	0	0,526448	1,39122
4	1198,32	- 29,0855	0	407.329,83	8,61445	0,0495243	-61,7352	0	0,525879	1,39497
4	1198,42	- 29,0329	0	410.868,48	9,05299	0,0536587	-62,7321	0	0,525262	1,39916

4	1198	-	0	414.60	9,47412	0,05762	-63,7783	0	0,5246	1,4035
	,52	28,9804		8,36		09			33	8
4	1198	-28,928	0	418.44	9,88014	0,06142	-64,8432	0	0,5240	1,4081
	,62			0,49		88			13	1
4	1198	-	0	422.29	10,2728	0,06509	-65,9083	0	0,5234	1,4126
	,72	28,8756		7,05		86			12	7
4	1198	-	0	426.13	10,6534	0,06864	-66,9624	0	0,5228	1,4172
	,82	28,8233		4,74		68			34	2
4	1198	-	0	429.92	11,0234	0,07208	-67,998	0	0,5222	1,4217
	,92	28,7711		6,03		1			82	3
4	1199	-	0	433.65	11,3838	0,07541	-69,0107	0	0,5217	1,4261
	,02	28,7188		1,95		27			58	6
4	1199	-	0	437.30	11,736	0,07864	-69,9976	0	0,5212	1,4305
	,12	28,6667		1,54		45			63	2
4	1199	-	0	440.86	12,0807	0,08178	-70,9575	0	0,5207	1,4347
	,22	28,6146		7,81		49			97	8
4	1199	-	0	444.34	12,4182	0,08484	-71,8899	0	0,5203	1,4389
	,32	28,5625		6,34		49			56	5
4	1199	-	0	448.40	12,8153	0,08841	-72,9719	0	0,5198	1,4438
	,44	28,5001		1,90		09			63	4
4	1199	-	0	453.09	13,2803	0,09256	-74,2185	0	0,5193	1,4495
	,59	28,4253		7,55		13			16	1
4	1199	-	0	458.48	13,8243	0,09736	-75,6416	0	0,5187	1,4560
	,76	28,3356		8,68		69			22	6
4	1199	-	0	464.62	14,4584	0,10291	-77,2503	0	0,5180	1,4635
	,97	28,2281		1,40		4			89	5
4	1200	-	0	471.52	15,1959	0,10929	-79,0488	0	0,5174	1,4720
	,22	28,0993		4,81		5			32	5
4	1200	-	0	479.20	16,052	0,11660	-81,0358	0	0,5167	1,4815
	,52	27,9449		9,81		1			7	9
4	1200	-	0	487.66	17,0446	0,12493	-83,2049	0	0,5161	1,4921
	,87	27,7598		6,78		2			29	9
4	1201	-27,538	0	496.87	18,1928	0,13439	-85,5472	0	0,5155	1,5038
	,3			5,27		5			33	7
4	1201	-	0	507.36	19,5204	0,14483	-88,2022	0	0,5148	1,5174
	,82	27,2722		1,27		7			9	5
4	1202	-	0	520.02	21,0557	0,15584	-91,4008	0	0,5140	1,5343
	,44	26,9537		2,55		1			49	5



4	1203 ,18	- 26,5721	0	535.19 5,87	22,8333	0,16709 6	-95,2048	0	0,5130 42	1,5552
4	1204 ,07	- 26,1151	0	552.50 1,12	24,8917	0,17859 4	-99,4716	0	0,5120 94	1,5795
4	1205 ,14	- 25,5676	0	571.28 6,75	27,2661	0,19109 5	-103,531	0	0,5114 22	1,6019 5
4	1206 ,43	- 24,9111	0	590.45 8,89	29,9809	0,20664 3	-106,097	0	0,5112 67	1,6107 3
4	1207 ,97	- 24,1231	0	608.85 9,71	33,0732	0,22673	-106,809	0	0,5118 08	1,6024 1
4	1209 ,82	- 23,1757	0	625.39 1,44	36,594	0,25291	-105,535	0	0,5131 3	1,5766 6
4	1212 ,04	-22,035	0	638.99 4,76	40,6661	0,28645 6	-102,323	0	0,5152 66	1,5361
4	1214 ,7	- 20,6591	0	648.27 9,66	45,6034	0,32809 5	-97,103	0	0,5183 94	1,4834 5
4	1217 ,89	- 18,9962	0	651.26 0,00	51,5523	0,38083 7	-89,8074	0	0,5227 28	1,4225 6
4	1221 ,73	- 16,9818	0	645.59 8,06	58,5526	0,44969 3	-80,6883	0	0,5282 21	1,3599 4
4	1226 ,33	- 14,5367	0	628.50 5,18	66,5372	0,54315 2	-70,1423	0	0,5346 96	1,3020 3
4	1231 ,85	- 11,5644	0	596.31 3,86	75,3088	0,67746 2	-58,4131	0	0,5420 18	1,2531 1
4	1238 ,47	- 7,94656	0	546.56 7,43	84,4688	0,88241 1	-45,7721	0	0,5499 25	1,2154 5
4	1246 ,42	- 3,54375	0	487.17 4,94	93,2809	1,19131	-33,7687	0	0,5573 51	1,1904 7
4	1255 ,96	1,82755	0	409.50 5,31	99,557	1,71358	-20,9677	0	0,5789 82	1,174
4	1267 ,41	9,52081	0	253.46 3,75	99,7276	2,87411	-1,15692	0	0,7845 74	1,1672 7
4	1281 ,15	21,4328	0	210.88 8,63	102,523	3,82992	1,67536	0	0,9109 29	1,1759 4
4	1290 ,51	30,0928	0	199.89 5,61	108,796	4,05846	3,24592	0	0,9414 22	1,1744 5
4	1290 ,51	30,0928	0	199.89 5,61	108,796	4,05846	3,24592	0	0,9414 24	1,1744 5



4	1297,63	37,0027	0	169.196,90	109,921	4,51166	7,61419	0	1,00767	1,17012
4	1317,41	58,7476	0	115.549,47	111,531	5,76618	13,612	0	1,16428	1,16886
4	1341,15	87,2278	0	97.931,51	112,905	6,38562	15,5737	0	1,2341	1,1682
4	1369,64	123,382	0	83.807,40	114,615	7,01211	17,0072	0	1,30001	1,16821
4	1403,82	168,939	0	71.951,28	116,722	7,66613	18,1142	0	1,36475	1,16856
4	1444,84	226,385	0	61.093,56	119,322	8,41988	19,0225	0	1,4351	1,16932
4	1494,06	298,952	0	51.241,09	122,536	9,29303	19,7644	0	1,51212	1,17036
4	1553,13	390,805	0	42.413,73	126,516	10,3072	20,3653	0	1,5967	1,17156
4	1624,01	507,324	0	34.620,88	131,455	11,4871	20,8687	0	1,68972	1,17275
4	1709,06	655,542	0	27.842,70	137,596	12,8848	22,2126	0	1,79382	1,17069
4	1781,45	788,39	0	23.538,49	142,993	14,0397	22,9267	0	1,87558	1,16995
4	1811,13	844,693	0	22.061,00	145,251	14,5085	23,1481	0	1,90774	1,16979
4	1933,61	1086,56	0	17.180,90	154,805	16,3931	23,791	0	2,03245	1,16961
4	2080,59	1395,29	0	13.197,13	166,711	18,562	24,2218	0	2,16736	1,16984
4	2256,96	1790,58	0	9.986,77	181,572	21,0573	24,5035	0	2,31333	1,17029
4	2347,95	2004,26	0	8.775,29	189,457	22,3026	24,5957	0	2,38298	1,17052
5	1592,47	-31,4029	0	1,00	0,00177245	0,782427	24,6244	0	0,614873	1,1739
5	1592,57	-31,3481	0	349.133,16	2,79647	0,00564398	-50,0607	0	0,535542	1,35987
5	1592	-	0	365.84	3,94367	0,01044	-53,9708	0	0,5351	1,3730



	,67	31,2946		6,99		48			96	5
5	1592 ,77	- 31,2411	0	370.05 7,42	4,83173	0,01532 38	-54,8471	0	0,5352 88	1,3757 6
5	1592 ,87	- 31,1876	0	371.67 7,33	5,58327	0,02023 9	-55,1593	0	0,5354 06	1,3766 5
5	1592 ,97	-31,134	0	372.39 4,29	6,25183	0,02514 84	-55,2897	0	0,5355 24	1,3769 9
5	1593 ,07	- 31,0805	0	372.67 4,19	6,86357	0,03003 66	-55,3372	0	0,5356 59	1,3771 1
5	1593 ,17	- 31,0269	0	372.72 8,30	7,42709	0,03492 92	-55,3435	0	0,5357 99	1,3771 1
5	1593 ,27	- 30,9733	0	373.29 8,80	7,95373	0,03972 8	-55,5159	0	0,5357 89	1,3778 2
5	1593 ,37	- 30,9197	0	374.97 5,73	8,45081	0,04430 85	-56,0201	0	0,5355 19	1,3799 1
5	1593 ,47	- 30,8662	0	377.44 3,97	8,92345	0,04866 79	-56,7553	0	0,5350 92	1,3829 5
5	1593 ,57	- 30,8127	0	380.40 3,37	9,37552	0,05282 51	-57,6292	0	0,5345 87	1,3865 7
5	1593 ,67	- 30,7593	0	383.66 6,21	9,81023	0,05679 54	-58,585	0	0,5340 51	1,3905 6
5	1593 ,77	- 30,7059	0	387.09 8,25	10,2299	0,06059 83	-59,5832	0	0,5335 1	1,3947 4
5	1593 ,87	- 30,6526	0	390.60 7,71	10,6361	0,06425 42	-60,5977	0	0,5329 79	1,3990 2
5	1593 ,97	- 30,5993	0	394.13 6,50	11,0301	0,06778 14	-61,612	0	0,5324 65	1,4033 2
5	1594 ,07	- 30,5461	0	397.64 6,88	11,4129	0,07119 17	-62,6156	0	0,5319 72	1,4076 1
5	1594 ,17	- 30,4929	0	401.12 1,58	11,7855	0,07449 66	-63,6042	0	0,5315 01	1,4118 6
5	1594 ,27	- 30,4398	0	404.54 6,58	12,1492	0,07770 36	-64,574	0	0,5310 51	1,4160 7
5	1594 ,37	- 30,3867	0	407.90 8,96	12,5048	0,08081 84	-65,5218	0	0,5306 25	1,4202
5	1594 ,47	- 30,3337	0	411.19 7,01	12,8535	0,08384 43	-66,4446	0	0,5302 24	1,4242 6
5	1594	-	0	415.05	13,2627	0,08737	-67,5217	0	0,5297	1,4290

	,59	30,2701		1,37		5		69	3	
5	1594,73	-30,1938	0	419.533,53	13,7422	0,0914764	-68,7681	0	0,529264	1,4346
5	1594,9	-30,1024	0	424.713,28	14,3018	0,0962267	-70,2007	0	0,528707	1,44106
5	1595,11	-29,9928	0	430.645,63	14,9535	0,101705	-71,8313	0	0,528108	1,44852
5	1595,36	-29,8615	0	437.376,98	15,7106	0,107996	-73,6689	0	0,527475	1,45704
5	1595,66	-29,7041	0	444.936,50	16,5884	0,11519	-75,7171	0	0,526824	1,46668
5	1596,02	-29,5154	0	453.323,48	17,6047	0,123376	-77,9707	0	0,526178	1,47749
5	1596,45	-29,2893	0	462.496,24	18,7819	0,132637	-80,4129	0	0,525571	1,48944
5	1596,96	-29,0183	0	472.589,76	20,1441	0,14298	-83,0791	0	0,524997	1,50289
5	1597,58	-28,6935	0	484.454,30	21,7167	0,154052	-86,2041	0	0,524306	1,51894
5	1598,33	-28,3042	0	498.983,19	23,5344	0,165282	-90,0124	0	0,523398	1,53934
5	1599,22	-27,838	0	515.901,23	25,6363	0,176608	-94,3808	0	0,522474	1,56367
5	1600,29	-27,2794	0	534.797,70	28,065	0,188227	-99,0349	0	0,521708	1,59032
5	1601,57	-26,6099	0	554.657,85	30,8487	0,202088	-102,519	0	0,521348	1,60668
5	1603,11	-25,8065	0	574.207,25	34,0184	0,219991	-104,137	0	0,521605	1,60614
5	1604,96	-24,8413	0	592.243,74	37,6206	0,243574	-103,651	0	0,522583	1,58695
5	1607,18	-23,6801	0	607.632,94	41,7279	0,274462	-101,075	0	0,524305	1,55099
5	1609,84	-22,2809	0	619.112,25	46,6277	0,313365	-96,457	0	0,52685	1,50172
5	1613,04	-20,5921	0	624.761,28	52,5812	0,362447	-89,6534	0	0,53046	1,44223
5	1616	-	0	622.22	59,6385	0,42642	-80,841	0	0,5351	1,3787



	,87	18,5496		4,41		7			69	
5	1621 ,47	- 16,0745	0	608.81 2,70	67,7724	0,51272 9	-70,4507	0	0,5408 21	1,3182 7
5	1626 ,99	- 13,0709	0	581.08 5,58	76,8264	0,63536 2	-58,8211	0	0,5472 75	1,2660 8
5	1633 ,62	- 9,42154	0	535.82 5,64	86,4544	0,82114 2	-46,1877	0	0,5543 94	1,2248 9
5	1641 ,57	- 4,98636	0	479.72 0,25	96,039	1,09958	-34,1003	0	0,5611 65	1,1970 5
5	1651 ,11	0,40082 6	0	412.04 1,30	104,336	1,55485	-22,2763	0	0,5682 3	1,1792 2
5	1662 ,55	7,38013	0	325.63 0,91	107,133	2,17635	-10,2508	0	0,6702 15	1,1711 1
5	1676 ,29	17,9585	0	229.16 1,02	107,837	3,30492	0,051286 5	0	0,8456 14	1,1744 6
5	1692 ,03	31,7767	0	204.89 7,12	117,17	3,79957	3,00117	0	0,9125 45	1,1734 6
5	1692 ,03	31,7767	0	204.89 7,12	117,17	3,79951	3,00117	0	0,9125 61	1,1734 6
5	1692 ,77	32,4561	0	202.12 4,36	117,253	3,8332	3,46165	0	0,9179 66	1,1728
5	1712 ,56	52,8319	0	119.24 1,58	119,367	5,41068	13,2564	0	1,1267 4	1,1690 2
5	1736 ,29	80,7944	0	96.774, 09	120,759	6,17908	15,643	0	1,2143 4	1,1687 5
5	1764 ,78	116,487	0	81.656, 57	122,454	6,86328	17,1492	0	1,2866 7	1,1688 8
5	1798 ,96	161,605	0	70.119, 49	124,548	7,51919	18,2359	0	1,3518 1	1,1691 9
5	1839 ,98	218,534	0	59.568, 90	127,132	8,27562	19,1253	0	1,4228 4	1,1698 9
5	1889 ,2	290,511	0	50.028, 17	130,327	9,15081	19,8488	0	1,5004 6	1,1708 6
5	1948 ,27	381,69	0	41.497, 04	134,287	10,1663	20,433	0	1,5856 2	1,1719 9
5	2019 ,15	497,444	0	33.968, 84	139,202	11,3473	20,9378	0	1,6793	1,1730 6
5	2104	644,792	0	27.420,	145,317	12,7463	22,264	0	1,7838	1,1709



	,2			57					2	5
5	2161,32	748,559	0	24.051,16	149,547	13,6597	22,8406	0	1,8492	1,17029
5	2206,27	833,036	0	21.806,22	152,945	14,371	23,1832	0	1,89851	1,17001
5	2328,75	1073,35	0	17.084,56	162,456	16,2493	23,8154	0	2,02324	1,16977
5	2475,73	1380,78	0	13.198,27	174,325	18,4186	24,2374	0	2,15873	1,16997
5	2652,1	1774,66	0	10.052,33	189,147	20,9146	24,5125	0	2,30524	1,17038
5	2707,26	1903,01	0	9.292,33	193,899	21,6731	24,5703	0	2,34804	1,17052
6	1987,22	- 32,8135	0	1,00	0,00177	0,78242	24,6243	0	0,614873	1,173973
6	1987,32	- 32,7583	0	330.809,59	2,86584	0,00553397	-47,0958	0	0,541421	1,35387
6	1987,42	- 32,7042	0	346.595,98	4,04291	0,010258	-50,8957	0	0,541127	1,36669
6	1987,52	-32,65	0	350.569,23	4,95473	0,0150626	-51,7462	0	0,541216	1,36933
6	1987,62	- 32,5959	0	352.077,92	5,72771	0,0198903	-52,0475	0	0,54133	1,37023
6	1987,72	- 32,5418	0	352.737,13	6,41208	0,0247261	-52,1724	0	0,541444	1,37054
6	1987,82	- 32,4876	0	353.011,83	7,03567	0,0295534	-52,222	0	0,541558	1,37067
6	1987,92	- 32,4335	0	353.080,06	7,61326	0,0343709	-52,233	0	0,541675	1,37069
6	1988,02	- 32,3793	0	353.202,57	8,15404	0,0391539	-52,2754	0	0,541755	1,37087
6	1988,12	- 32,3251	0	354.230,40	8,66455	0,0437588	-52,6007	0	0,541623	1,37222
6	1988,22	-32,271	0	356.209,94	9,14987	0,0481286	-53,2161	0	0,541292	1,37476
6	1988,32	- 32,2169	0	358.773,26	9,61397	0,0522882	-54,0042	0	0,540862	1,37801



6	1988	-	0	361.68	10,0598	0,05626	-54,8903	0	0,5403	1,3816
	,42	32,1628		2,52		27			92	8
6	1988	-	0	364.79	10,4897	0,06007	-55,83	0	0,5399	1,3855
	,52	32,1088		2,25		12			11	9
6	1988	-	0	368.01	10,9058	0,06372	-56,7956	0	0,5394	1,3896
	,62	32,0548		0,22		77			34	3
6	1988	-	0	371.27	11,3095	0,06724	-57,7709	0	0,5389	1,3937
	,72	32,0009		9,81		97			69	3
6	1988	-31,947	0	374.56	11,7015	0,07065	-58,746	0	0,5385	1,3978
	,82			6,17		45			17	5
6	1988	-	0	377.84	12,0831	0,07395	-59,7132	0	0,5380	1,4019
	,92	31,8932		1,71		11			82	7
6	1989	-	0	381.08	12,4556	0,07714	-60,6664	0	0,5376	1,4060
	,02	31,8394		5,73		59			65	6
6	1989	-	0	384.29	12,8192	0,08025	-61,6039	0	0,5372	1,4101
	,12	31,7857		0,10		11			67	1
6	1989	-31,732	0	387.44	13,1751	0,08327	-62,523	0	0,5368	1,4141
	,22			4,55		13			87	1
6	1989	-	0	391.15	13,5927	0,08679	-63,6	0	0,5364	1,4188
	,34	31,6676		7,55		16			55	3
6	1989	-	0	395.49	14,0816	0,09087	-64,8526	0	0,5359	1,4243
	,48	31,5903		7,88		8			71	6
6	1989	-	0	400.53	14,6531	0,09559	-66,2972	0	0,5354	1,4308
	,65	31,4978		3,42		56			37	1
6	1989	-	0	406.32	15,3197	0,10101	-67,9466	0	0,5348	1,4382
	,86	31,3868		0,50		6			62	6
6	1990	-	0	412.90	16,0944	0,10722	-69,81	0	0,5342	1,4468
	,11	31,2538		4,06		7			54	
6	1990	-	0	420.30	16,9924	0,11431	-71,8899	0	0,5336	1,4564
	,41	31,0944		8,79		5			3	8
6	1990	-	0	428.53	18,0319	0,12236	-74,1813	0	0,5330	1,4673
	,77	30,9033		4,36		5			12	4
6	1991	-	0	437.52	19,2357	0,13145	-76,6632	0	0,5324	1,4793
	,2	30,6742		2,42		6			32	5
6	1991	-	0	447.27	20,6244	0,14171	-79,3315	0	0,5319	1,4925
	,71	30,3996		1,95		4			13	5
6	1992	-	0	458.84	22,226	0,15265	-82,4877	0	0,5312	1,5086
	,33	30,0704		5,03		3			72	4



6	1993 ,07	-29,676	0	472.87 4,62	24,0746	0,16385	-86,293	0	0,5304 5	1,5287 3
6	1993 ,97	- 29,2034	0	489.36 6,33	26,2098	0,1751	-90,7077	0	0,5295 66	1,5529 9
6	1995 ,04	- 28,6373	0	508.05 7,17	28,6789	0,18635 5	-95,6028	0	0,5287 83	1,5810 4
6	1996 ,32	- 27,9587	0	528.15 7,04	31,5162	0,19908 6	-99,764	0	0,5283 18	1,6028 7
6	1997 ,86	- 27,1447	0	548.33 2,15	34,7476	0,21545 5	-102,076	0	0,5284 05	1,6082 9
6	1999 ,71	- 26,1672	0	567.30 8,25	38,4158	0,23716 9	-102,218	0	0,5291 64	1,5944 2
6	2001 ,93	- 24,9916	0	583.87 4,64	42,5818	0,26596 5	-100,139	0	0,5306 27	1,5622 3
6	2004 ,59	- 23,5761	0	596.79 6,96	47,473	0,30287 2	-95,9372	0	0,5328 29	1,5154
6	2007 ,79	-21,869	0	604.28 7,42	53,4014	0,34952 1	-89,5352	0	0,5359 54	1,4574 1
6	2011 ,62	- 19,8065	0	604.03 4,26	60,4902	0,40998 8	-81,0269	0	0,5401 05	1,3938 1
6	2016 ,22	- 17,3101	0	593.38 7,34	68,7302	0,49114 8	-70,7878	0	0,5451 9	1,3316 6
6	2021 ,74	- 14,2839	0	569.27 9,12	77,9787	0,60522 9	-59,2906	0	0,5510 15	1,2770 9
6	2028 ,36	- 10,6116	0	527.71 7,21	87,9441	0,77702 7	-46,716	0	0,5575 47	1,2332 4
6	2036 ,31	- 6,15225	0	473.29 3,50	98,0925	1,03664	-34,4063	0	0,5639 4	1,2028 1
6	2045 ,85	- 0,74186 8	0	412.64 7,54	107,549	1,43067	-23,2511	0	0,5700 2	1,1839 1
6	2057 ,3	6,04496	0	338.61 7,34	113,685	1,96553	-12,3294	0	0,6349 63	1,1740 6
6	2071 ,04	15,474	0	284.00 7,28	117,778	2,56409	-6,07531	0	0,7347 38	1,1744 9
6	2087 ,52	28,4623	0	232.14 0,74	121,953	3,31683	0,236477	0	0,8490 45	1,1726
6	2092	33,1486	0	198.31	121,897	3,77704	4,67192	0	0,9173	1,1696



	,84			3,93					83	9
6	2092,84	33,1486	0	198.313,93	121,897	3,77705	4,67192	0	0,917381	1,16969
6	2107,3	47,9137	0	120.502,62	123,955	5,23783	13,2186	0	1,10925	1,16884
6	2131,04	76,0192	0	90.292,21	125,516	6,3076	16,1194	0	1,22941	1,16975
6	2159,53	112,152	0	75.930,59	127,241	7,02163	17,5052	0	1,30343	1,17
6	2193,71	157,838	0	65.205,80	129,366	7,69221	18,4978	0	1,36885	1,17032
6	2234,73	215,456	0	55.429,81	131,985	8,46267	19,3153	0	1,44005	1,17096
6	2283,95	288,272	0	46.600,73	135,221	9,3514	19,9839	0	1,51782	1,17183
6	2343,02	380,484	0	38.709,38	139,227	10,3801	20,5263	0	1,60306	1,17284
6	2413,9	497,48	0	31.742,25	144,195	11,5771	21,1156	0	1,69691	1,17338
6	2498,95	646,328	0	25.665,26	150,372	12,9881	22,3629	0	1,80148	1,17135
6	2529,06	701,086	0	23.938,97	152,61	13,4764	22,6732	0	1,8363	1,17095
6	2601,02	836,314	0	20.456,24	158,069	14,6255	23,2373	0	1,91589	1,17039
6	2723,5	1078,7	0	16.071,36	167,658	16,5164	23,8432	0	2,04039	1,17019
6	2870,48	1388,68	0	12.445,98	179,619	18,6981	24,2485	0	2,1756	1,17024
6	3045,48	1782,34	0	9.522,15	194,425	21,1871	24,5145	0	2,3207	1,17059
7	2381,71	-33,9917	0	1,00	0,00177245	0,782427	24,6242	0	0,614873	1,1739
7	2381,81	-33,9361	0	316.090,69	2,92712	0,00544275	-44,7319	0	0,545939	1,34928
7	2381,91	-33,8816	0	331.109,49	4,13031	0,0101074	-48,4355	0	0,545707	1,3618



7	2382 ,01	-33,827	0	334.89 9,44	5,0607	0,01485 34	-49,2671	0	0,5457 86	1,3643 9
7	2382 ,11	- 33,7724	0	336.34 4,49	5,85056	0,01961 67	-49,5633	0	0,5458 89	1,3652 6
7	2382 ,21	- 33,7178	0	336.96 8,09	6,55085	0,02438 34	-49,6854	0	0,5459 96	1,3655 9
7	2382 ,31	- 33,6632	0	337.22 5,08	7,18693	0,02915 13	-49,7339	0	0,5461 04	1,3657 2
7	2382 ,41	- 33,6086	0	337.29 1,08	7,7756	0,03391 18	-49,7458	0	0,5462 11	1,3657 5
7	2382 ,51	-33,554	0	337.37 2,25	8,32722	0,03864 26	-49,7763	0	0,5462 91	1,3658 9
7	2382 ,61	- 33,4993	0	337.96 1,69	8,84814	0,04326 12	-49,9731	0	0,5462 51	1,3667 1
7	2382 ,71	- 33,4447	0	339.44 6,82	9,34295	0,04766 83	-50,4521	0	0,5460 19	1,3686 8
7	2382 ,81	- 33,3901	0	341.62 0,11	9,81562	0,05185 99	-51,1438	0	0,5456 55	1,3715 3
7	2382 ,91	- 33,3356	0	344.22 1,25	10,2695	0,05585 75	-51,9619	0	0,5452 35	1,3749
7	2383 ,01	- 33,2811	0	347.08 9,09	10,7073	0,05967 99	-52,856	0	0,5447 9	1,3786
7	2383 ,11	- 33,2266	0	350.10 3,97	11,1307	0,06334 89	-53,789	0	0,5443 43	1,3824 8
7	2383 ,21	- 33,1722	0	353.19 4,88	11,5413	0,06688 15	-54,7394	0	0,5439 04	1,3864 5
7	2383 ,31	- 33,1178	0	356.31 7,56	11,9403	0,07029 12	-55,6941	0	0,5434 77	1,3904 6
7	2383 ,41	- 33,0635	0	359.44 2,33	12,3289	0,07358 71	-56,6443	0	0,5430 66	1,3944 7
7	2383 ,51	- 33,0092	0	362.55 2,50	12,7076	0,07678 19	-57,5856	0	0,5426 7	1,3984 8
7	2383 ,61	-32,955	0	365.63 4,59	13,0772	0,07988 42	-58,5142	0	0,5422 91	1,4024 6
7	2383 ,71	- 32,9008	0	368.67 7,98	13,4387	0,08289 99	-59,4272	0	0,5419 27	1,4063 9
7	2383 ,83	- 32,8358	0	372.26 6,04	13,8632	0,08640 98	-60,4986	0	0,5415 14	1,4110 5



7	2383 ,97	- 32,7578	0	376.45 8,42	14,3618	0,09046 83	-61,744	0	0,5410 55	1,4165
7	2384 ,14	- 32,6643	0	381.33 1,04	14,9445	0,09515 06	-63,1834	0	0,5405 48	1,4228 7
7	2384 ,35	- 32,5523	0	386.95 1,76	15,6228	0,10053 7	-64,8339	0	0,5399 97	1,4302 6
7	2384 ,6	-32,418	0	393.36 9,14	16,4106	0,10670 4	-66,7055	0	0,5394 12	1,4387 6
7	2384 ,9	-32,257	0	400.62 5,46	17,3229	0,11373 8	-68,8062	0	0,5388 05	1,4484 5
7	2385 ,26	- 32,0641	0	408.73 9,85	18,3778	0,12172	-71,1362	0	0,5381 93	1,4594
7	2385 ,69	- 31,8328	0	417.69 3,47	19,5967	0,13073 4	-73,6841	0	0,5376 04	1,4716 2
7	2386 ,2	- 31,5556	0	427.44 6,10	21,0054	0,14085 1	-76,4333	0	0,5370 68	1,4851 1
7	2386 ,82	- 31,2232	0	438.38 4,39	22,6304	0,15193 6	-79,4964	0	0,5365 28	1,5005 6
7	2387 ,56	- 30,8248	0	451.75 4,72	24,5051	0,16327 2	-83,2314	0	0,5357 9	1,5200 8
7	2388 ,46	- 30,3475	0	468.02 0,53	26,6705	0,17438 2	-87,7289	0	0,5348 97	1,5445 5
7	2389 ,52	- 29,7757	0	486.59 1,65	29,1753	0,18535	-92,7575	0	0,5341 03	1,5731 2
7	2390 ,81	- 29,0903	0	506.78 7,88	32,0569	0,19720 1	-97,4567	0	0,5335 82	1,5991 6
7	2392 ,35	- 28,2683	0	527.37 7,98	35,3406	0,21234 2	-100,348	0	0,5335 57	1,6094 6
7	2394 ,2	- 27,2814	0	547.02 8,51	39,0652	0,23256 3	-101,019	0	0,5341 65	1,6001
7	2396 ,42	- 26,0949	0	564.47 3,30	43,2889	0,25965 5	-99,362	0	0,5354 46	1,5712
7	2399 ,08	- 24,6669	0	578.49 2,35	48,1819	0,29494	-95,5022	0	0,5374 04	1,5264 9
7	2402 ,27	- 22,9456	0	587.35 3,96	54,1181	0,33958 8	-89,3866	0	0,5402 04	1,4695 5
7	2406 ,11	- 20,8675	0	588.76 0,60	61,2325	0,39751 7	-81,0589	0	0,5439 85	1,4056 1



7	2410 ,71	- 18,3541	0	580.11 2,14	69,5346	0,47509 9	-70,9386	0	0,5486 49	1,3423
7	2416 ,23	- 15,3102	0	558.59 9,29	78,926	0,58316 4	-59,5719	0	0,5540 03	1,2862 1
7	2422 ,85	- 11,6199	0	520.69 3,68	89,1506	0,74351 2	-47,1945	0	0,5599 94	1,2406 1
7	2430 ,8	- 7,14265	0	468.27 4,93	99,7334	0,98773 8	-34,7368	0	0,5661 02	1,2078 2
7	2440 ,34	- 1,71385	0	410.42 0,00	109,933	1,35033	-23,6998	0	0,5717 3	1,1876 6
7	2451 ,79	4,96962	0	340.50 2,32	118,031	1,85823	-12,8607	0	0,6175 52	1,1758 4
7	2465 ,53	14,1636	0	280.16 1,77	123,51	2,44106	-5,64321	0	0,7183 03	1,1748 7
7	2482 ,01	26,855	0	233.26 9,33	130,481	3,1007	- 0,071900 4	0	0,8197 55	1,1737 1
7	2490 ,73	34,2849	0	196.12 1,49	131,573	3,61765	4,8638	0	0,8978 65	1,1701 9
7	2490 ,73	34,2849	0	196.12 1,49	131,573	3,61761	4,8638	0	0,8978 75	1,1701 9
7	2501 ,79	45,0937	0	130.40 6,86	133,199	4,73478	12,249	0	1,0506 1	1,1687 2
7	2525 ,53	72,2307	0	90.056, 94	134,93	6,01726	16,0781	0	1,1999 5	1,1701 1
7	2554 ,02	107,525	0	75.179, 06	136,619	6,7331	17,5217	0	1,2754 5	1,1702 9
7	2588 ,2	152,275	0	64.246, 65	138,706	7,40095	18,5372	0	1,3418 9	1,1705 5
7	2629 ,22	208,812	0	54.412, 28	141,281	8,16419	19,362	0	1,4136 3	1,1711 6
7	2678 ,44	280,356	0	45.588, 65	144,468	9,04491	20,0316	0	1,4919 5	1,1719 9
7	2737 ,51	371,059	0	37.747, 36	148,416	10,0655	20,5718	0	1,5777 8	1,1729 7
7	2808 ,39	486,286	0	30.863, 40	153,32	11,2544	21,1706	0	1,6722 8	1,1734 3
7	2893	633,071	0	24.892,	159,423	12,6564	22,4141	0	1,7774	1,1713



	,44			28					9	7
7	2915,29	672,182	0	23.657,36	161,026	13,0092	22,6418	0	1,80298	1,17107
7	2995,51	820,71	0	19.795,17	167,038	14,2848	23,2779	0	1,89271	1,17042
7	3117,99	1060,28	0	15.524,44	176,532	16,1664	23,8743	0	2,01794	1,17012
7	3264,97	1367	0	12.005,20	188,386	18,3398	24,2725	0	2,15398	1,17025
7	3418,98	1708,86	0	9.477,02	201,284	20,5294	24,5078	0	2,28323	1,17056
8	2776,01	-35,0069	0	1,00	0,00177245	0,782426	24,6241	0	0,614873	1,1739
8	2776,11	-34,9511	0	304.149,57	2,97662	0,00537456	-42,8232	0	0,549502	1,34569
8	2776,21	-34,8961	0	318.546,79	4,20165	0,00999216	-46,4472	0	0,549305	1,35796
8	2776,31	-34,8412	0	322.174,90	5,14861	0,0146895	-47,261	0	0,549381	1,36051
8	2776,41	-34,7862	0	323.553,28	5,95196	0,0194064	-47,5506	0	0,54948	1,36136
8	2776,51	-34,7313	0	324.151,93	6,66355	0,0241283	-47,6712	0	0,549579	1,3617
8	2776,61	-34,6763	0	324.399,28	7,31136	0,0288443	-47,72	0	0,549678	1,36184
8	2776,71	-34,6214	0	324.461,67	7,91028	0,0335564	-47,7326	0	0,549779	1,36187
8	2776,81	-34,5664	0	324.453,35	8,47016	0,0382599	-47,7363	0	0,549871	1,3619
8	2776,91	-34,5114	0	324.787,49	8,99868	0,0428836	-47,8569	0	0,549879	1,36242
8	2777,01	-34,4564	0	326.040,83	9,50131	0,0472931	-48,2735	0	0,549689	1,36413
8	2777,11	-34,4015	0	328.026,75	9,98185	0,0514778	-48,9212	0	0,549364	1,36679
8	2777,21	-34,3465	0	330.434,88	10,4432	0,0554718	-49,6973	0	0,548983	1,36998



8	2777 ,31	- 34,2917	0	333.08 5,16	10,8878	0,05930 16	-50,5442	0	0,5485 8	1,3734 7
8	2777 ,41	- 34,2368	0	335.89 0,63	11,3178	0,06298 1	-51,4343	0	0,5481 7	1,3771 5
8	2777 ,51	-34,182	0	338.79 4,73	11,7347	0,06652 17	-52,35	0	0,5477 62	1,3809 6
8	2777 ,61	- 34,1273	0	341.75 2,41	12,1397	0,06993 63	-53,2775	0	0,5473 61	1,3848 4
8	2777 ,71	- 34,0726	0	344.72 8,46	12,5341	0,07323 55	-54,2058	0	0,5469 74	1,3887 4
8	2777 ,81	- 34,0179	0	347.69 6,38	12,9195	0,07642 5	-55,127	0	0,5466 02	1,3926 4
8	2777 ,91	- 33,9632	0	350.64 4,63	13,296	0,07951 72	-56,0382	0	0,5462 45	1,3965 2
8	2778 ,01	- 33,9086	0	353.56 3,35	13,6644	0,08252 16	-56,9366	0	0,5459 03	1,4003 8
8	2778 ,13	- 33,8431	0	357.01 2,84	14,0967	0,08601 76	-57,9939	0	0,5455 13	1,4049 4
8	2778 ,27	- 33,7646	0	361.06 8,44	14,6024	0,09007 17	-59,231	0	0,5450 74	1,4103 3
8	2778 ,44	- 33,6705	0	365.80 2,91	15,1924	0,09475 27	-60,6673	0	0,5445 86	1,4166 5
8	2778 ,65	- 33,5576	0	371.28 4,34	15,8791	0,10013 2	-62,3202	0	0,5440 52	1,4240 1
8	2778 ,9	- 33,4223	0	377.57 0,14	16,6765	0,10628 2	-64,2026	0	0,5434 8	1,4325 1
8	2779 ,2	- 33,2601	0	384.69 6,12	17,6013	0,11327 4	-66,32	0	0,5428 86	1,4422 2
8	2779 ,56	- 33,0657	0	392.67 3,58	18,6721	0,12118 3	-68,6704	0	0,5422 89	1,4532
8	2779 ,99	- 32,8326	0	401.48 9,73	19,9084	0,13010 9	-71,2453	0	0,5417 13	1,4654 7
8	2780 ,5	- 32,5533	0	411.10 4,73	21,3343	0,14014	-74,0272	0	0,5411 85	1,4790 4
8	2781 ,12	- 32,2183	0	421.74 0,75	22,9783	0,15121 5	-77,0806	0	0,5406 81	1,4943 3
8	2781 ,86	- 31,8169	0	434.83 3,86	24,8755	0,16248 2	-80,83	0	0,5399 77	1,5137 8



8	2782	-	0	450.57	27,0679	0,17360	-85,287	0	0,5391	1,5378
	,76	31,3358		2,25		6			65	2
8	2783	-	0	468.75	29,5984	0,18454	-90,3431	0	0,5383	1,5663
	,83	30,7593		1,55		2			84	3
8	2785	-	0	488.91	32,515	0,19583	-95,4197	0	0,5378	1,5951
	,11	30,0685		8,50					09	8
8	2786	-	0	509.76	35,8421	0,21002	-98,8012	0	0,5376	1,6095
	,65	29,2401		6,20		5			88	8
8	2788	-	0	529.91	39,6148	0,22904	-99,9407	0	0,5381	1,6042
	,5	28,2456		6,25		6			68	3
8	2790	-	0	548.05	43,8885	0,25473	-98,6692	0	0,5392	1,5784
	,72	27,0505		3,66		9			99	2
8	2793	-	0	562.94	48,7995	0,28861	-95,1102	0	0,5410	1,5356
	,38	25,6124		0,91		2			73	8
8	2796	-	0	572.91	54,7274	0,3317	-89,2609	0	0,5436	1,4798
	,57	23,8798		9,37					16	8
8	2800	-	0	575.73	61,8596	0,38750	-81,1371	0	0,5470	1,4160
	,41	21,7892		1,38		5			87	6
8	2805	-	0	568.79	70,221	0,46207	-71,1312	0	0,5514	1,3518
	,01	19,2623		5,90		5			19	
8	2810	-	0	549.39	79,73	0,56543	-59,8332	0	0,5564	1,2942
	,53	16,2041		8,88		7			19	1
8	2817	-	0	514.39	90,161	0,71706	-47,5874	0	0,5620	1,2470
	,15	12,4992		8,14		2			02	4
8	2825	-	0	464.01	101,086	0,94862	-35,0599	0	0,5678	1,2123
	,1	8,00751		4,97		1			57	1
8	2834	-	0	408.14	111,845	1,28877	-24,0323	0	0,5731	1,1908
	,64	2,56398		4,26					88	6
8	2846	4,07435	0	344.68	121,262	1,7686	-13,8297	0	0,6019	1,1783
	,09			6,01					72	6
8	2859	13,0552	0	279.02	128,146	2,33421	-5,5617	0	0,7031	1,1754
	,83			1,25					43	
8	2876	25,5019	0	230.19	136,344	2,98283	0,01	0	0,8047	1,1751
	,31			0,42					59	4
8	2887	35,2607	0	190.97	139,417	3,54383	5,22613	0	0,8896	1,1712
	,91			4,86					22	9
8	2887	35,2607	0	190.97	139,417	3,5438	5,22613	0	0,8896	1,1712
	,91			4,86					28	9



8	2896,09	42,9883	0	141.992,21	140,569	4,31311	10,9745	0	0,998467	1,16914
8	2919,83	69,1758	0	90.698,91	142,497	5,77714	15,9436	0	1,17472	1,17054
8	2948,32	103,81	0	74.951,22	144,152	6,51338	17,487	0	1,25376	1,17065
8	2982,5	147,833	0	63.871,99	146,21	7,17874	18,5329	0	1,32094	1,17083
8	3023,52	203,52	0	53.986,78	148,752	7,93687	19,3736	0	1,39318	1,17137
8	3072,74	274,07	0	45.157,41	151,9	8,81198	20,0512	0	1,47199	1,17217
8	3131,81	363,609	0	37.342,47	155,805	9,82648	20,5946	0	1,55832	1,17311
8	3202,69	477,475	0	30.504,78	160,658	11,0086	21,1886	0	1,65336	1,17356
8	3287,74	622,672	0	24.590,29	166,704	12,4037	22,4359	0	1,75911	1,17145
8	3303,53	650,589	0	23.701,84	167,851	12,6576	22,6034	0	1,77771	1,17123
8	3389,81	808,198	0	19.561,72	174,248	14,0215	23,3006	0	1,8746	1,17046
8	3512,29	1045,63	0	15.345,98	183,67	15,8962	23,8918	0	2,00045	1,17016
8	3659,27	1349,88	0	11.875,50	195,445	18,0629	24,2858	0	2,13713	1,17028
8	3797,7	1653,97	0	9.595,07	206,945	20,0302	24,4998	0	2,25439	1,17054
9	3170,16	-35,9009	0	1,00	0,00177245	0,782426	24,624	0	0,614873	1,1739
9	3170,26	-35,8448	0	294.073,31	3,0207	0,00531827	-41,219	0	0,552434	1,34274
9	3170,36	-35,7896	0	307.943,42	4,26478	0,00989797	-44,7755	0	0,552262	1,35481
9	3170,46	-35,7343	0	311.435,07	5,22614	0,0145565	-45,5743	0	0,552336	1,35733
9	3170	-	0	312.76	6,04161	0,01923	-45,8592	0	0,5524	1,3581



	,56	35,6791		1,71		43			29	8
9	3170,66	-35,6238	0	313.338,29	6,7637	0,0239177	-45,9784	0	0,552522	1,35852
9	3170,76	-35,5686	0	313.577,15	7,42097	0,0285955	-46,0273	0	0,552616	1,35866
9	3170,86	-35,5133	0	313.638,41	8,0286	0,0332693	-46,0408	0	0,552709	1,3587
9	3170,96	-35,458	0	313.609,76	8,59659	0,0379384	-46,0386	0	0,552801	1,35871
9	3171,06	-35,4028	0	313.763,46	9,13261	0,0425571	-46,1035	0	0,552841	1,359
9	3171,16	-35,3475	0	314.740,65	9,64228	0,0469841	-46,439	0	0,552707	1,36038
9	3171,26	-35,2922	0	316.491,04	10,1295	0,0511837	-47,0246	0	0,552424	1,36279
9	3171,36	-35,237	0	318.687,37	10,5973	0,0551924	-47,75	0	0,552076	1,36576
9	3171,46	-35,1818	0	321.155,40	11,0482	0,0590327	-48,5573	0	0,551703	1,36908
9	3171,56	-35,1267	0	323.800,11	11,4841	0,0627196	-49,4157	0	0,55132	1,37262
9	3171,66	-35,0716	0	326.556,67	11,9064	0,0662692	-50,3049	0	0,550935	1,376335
9	3171,76	-35,0165	0	329.379,65	12,3165	0,0696925	-51,2104	0	0,550555	1,38008
9	3171,86	-34,9614	0	332.235,72	12,716	0,0729978	-52,1217	0	0,550184	1,383984
9	3171,96	-34,9064	0	335.100,07	13,1056	0,0761961	-53,0314	0	0,549825	1,38773
9	3172,06	-34,8515	0	337.955,77	13,4865	0,0792938	-53,9342	0	0,54948	1,39156
9	3172,16	-34,7966	0	340.789,25	13,8592	0,0823006	-54,8263	0	0,549149	1,39537
9	3172,28	-34,7307	0	344.148,07	14,2965	0,0857976	-55,8792	0	0,548771	1,399971
9	3172,42	-34,6517	0	348.105,24	14,8079	0,089851	-57,1138	0	0,548342	1,40525
9	3172	-34,557	0	352.73	15,4046	0,09452	-58,5496	0	0,5478	1,4115

	,6			2,76		63			66	4
9	3172 ,8	- 34,4434	0	358.09 9,29	16,0994	0,09989 07	-60,2043	0	0,5473 45	1,4188 7
9	3173 ,05	- 34,3073	0	364.26 2,04	16,9068	0,10601 2	-62,0913	0	0,5467 89	1,4273 5
9	3173 ,35	- 34,1441	0	371.26 2,72	17,8429	0,11296 4	-64,2185	0	0,5462 09	1,4370 6
9	3173 ,71	- 33,9485	0	379.12 0,58	18,9259	0,12082 6	-66,5866	0	0,5456 24	1,4480 6
9	3174 ,14	-33,714	0	387.82 7,25	20,1766	0,12968 1	-69,1873	0	0,5450 57	1,4604
9	3174 ,66	- 33,4329	0	397.35 0,71	21,6202	0,13960 6	-72,0056	0	0,5445 34	1,4740 8
9	3175 ,28	- 33,0959	0	407.88 1,24	23,2835	0,15056 2	-75,0967	0	0,5440 41	1,4894 9
9	3176 ,02	- 32,6919	0	420.40 7,88	25,2	0,16197 1	-78,7591	0	0,5434 26	1,5083 6
9	3176 ,91	- 32,2077	0	435.75 8,76	27,4106	0,17316 9	-83,2153	0	0,5426 26	1,5322 8
9	3177 ,98	- 31,6276	0	453.79 2,47	29,9652	0,18395 9	-88,3577	0	0,5418 27	1,5611 3
9	3179 ,26	- 30,9323	0	473.88 1,16	32,9144	0,19478 4	-93,7105	0	0,5412 37	1,5919 8
9	3180 ,8	- 30,0986	0	494.88 6,40	36,282	0,20814 2	-97,5219	0	0,5410 58	1,6099 5
9	3182 ,65	-29,098	0	515.41 1,51	40,0992	0,22610 7	-99,0765	0	0,5414 5	1,6081 5
9	3184 ,87	- 27,8957	0	534.10 2,68	44,419	0,25057 3	-98,1515	0	0,5424 69	1,5851 6
9	3187 ,53	- 26,4494	0	549.66 6,89	49,3604	0,28318 1	-94,8385	0	0,5441 1	1,5440 4
9	3190 ,73	- 24,7074	0	560.53 0,84	55,2739	0,32500 8	-89,2086	0	0,5464 62	1,4891 9
9	3194 ,56	- 22,6064	0	564.52 6,49	62,4065	0,37905	-81,2885	0	0,5496 67	1,4256 7
9	3199 ,16	- 20,0684	0	559.08 5,63	70,8216	0,45096 7	-71,4024	0	0,5537 19	1,3606 8
9	3204	-	0	541.48	80,4339	0,55036	-60,1377	0	0,5584	1,3015



	,68	16,9983		4,97		7			47	9
9	3211 ,31	- 13,2809	0	508.92 0,59	91,0461	0,69478 4	-47,9829	0	0,5636 97	1,2529 5
9	3219 ,26	- 8,77728	0	459.55 3,13	102,251	0,91784 1	-35,2578	0	0,5694 11	1,2162 6
9	3228 ,8	- 3,31958	0	405.17 3,64	113,465	1,24155	-24,263	0	0,5744 36	1,1939 3
9	3240 ,25	3,30062	0	347.47 8,33	123,943	1,69846	-14,6572	0	0,5899 49	1,1809 5
9	3253 ,98	12,0686	0	280.72 0,14	132,209	2,22959	-5,82027	0	0,6873 74	1,1759 8
9	3270 ,47	24,2737	0	229.12 5,02	141,374	2,87188	0,01	0	0,7897 98	1,1759 1
9	3284 ,75	36,1311	0	187.45 4,71	147,163	3,46342	5,54136	0	0,8801 38	1,1718
9	3284 ,75	36,1311	0	187.45 4,71	147,163	3,46341	5,54136	0	0,8801 4	1,1718
9	3290 ,25	41,1616	0	154.41 2,51	147,9	3,94331	9,59668	0	0,9504 02	1,1696 6
9	3313 ,99	66,5182	0	92.015, 61	149,982	5,55024	15,8132	0	1,1502 6	1,1708 2
9	3342 ,47	100,549	0	75.244, 50	151,614	6,31447	17,4678	0	1,2338	1,1709 2
9	3376 ,65	143,901	0	64.178, 14	153,644	6,97586	18,5387	0	1,3015 3	1,1710 4
9	3417 ,67	198,791	0	54.462, 88	156,155	7,72947	19,3933	0	1,3742 7	1,1715 3
9	3466 ,89	268,409	0	45.997, 32	159,267	8,59951	20,0773	0	1,4535 5	1,1722 9
9	3525 ,96	356,871	0	38.685, 12	163,131	9,60827	20,6219	0	1,5403 5	1,1732 1
9	3596 ,84	469,48	0	32.436, 73	167,938	10,7844	21,2115	0	1,6358 6	1,1736 5
9	3681 ,9	613,209	0	26.818, 67	173,931	12,173	22,4628	0	1,7421 2	1,1715
9	3692 ,02	630,906	0	26.257, 48	174,66	12,3353	22,5718	0	1,7541 4	1,1713 5
9	3783	797,124	0	21.523,	181,419	13,7857	23,3237	0	1,8582	1,1705



	,96			46					3	
9	3906,45	1032,54	0	16.919,89	190,773	15,6544	23,9116	0	1,98468	1,17018
9	4053,42	1334,51	0	13.522,65	202,473	17,8155	24,3009	0	2,12196	1,17036
9	4177,27	1603,94	0	11.927,80	212,685	19,5748	24,4939	0	2,22778	1,17053
10	3564,18	-36,6717	0	1,00	0,00177245	0,782426	24,6239	0	0,614873	1,173973
10	3564,28	-36,6154	0	285.538,99	3,05643	0,00527523	-39,8646	0	0,554866	1,340366
10	3564,38	-36,5599	0	299.022,95	4,31454	0,00983016	-43,372	0	0,554694	1,35221
10	3564,48	-36,5044	0	302.458,30	5,28671	0,0144611	-44,1682	0	0,554743	1,35473
10	3564,58	-36,4489	0	303.758,04	6,11304	0,0191032	-44,4525	0	0,55483	1,35559
10	3564,68	-36,3934	0	304.310,74	6,84498	0,023749	-44,5702	0	0,554924	1,35593
10	3564,78	-36,3379	0	304.540,47	7,50849	0,0284017	-44,619	0	0,555013	1,35607
10	3564,88	-36,2824	0	304.606,02	8,12237	0,0330476	-44,6343	0	0,555113	1,35612
10	3564,98	-36,2269	0	304.570,16	8,69743	0,0376852	-44,6298	0	0,555188	1,35612
10	3565,08	-36,1714	0	304.632,99	9,2404	0,042286	-44,6668	0	0,555243	1,356343
10	3565,18	-36,1159	0	305.421,02	9,75646	0,0467165	-44,9474	0	0,555144	1,35747
10	3565,28	-36,0604	0	306.940,27	10,2496	0,0509328	-45,4686	0	0,554906	1,35961
10	3565,38	-36,0049	0	308.939,30	10,7235	0,0549493	-46,1429	0	0,554598	1,36237
10	3565,48	-35,9495	0	311.240,67	11,1805	0,0587892	-46,9109	0	0,554258	1,36552
10	3565,58	-35,8941	0	313.739,62	11,622	0,0624763	-47,7388	0	0,5539	1,36893



10	3565 ,68	- 35,8387	0	316.36 1,85	12,05	0,06602 22	-48,6019	0	0,5535 4	1,3725
10	3565 ,78	- 35,7833	0	319.06 0,29	12,4654	0,06944 34	-49,4852	0	0,5531 82	1,3761 7
10	3565 ,88	-35,728	0	321.80 1,11	12,8695	0,07275 04	-50,378	0	0,5528 3	1,3799 1
10	3565 ,98	- 35,6728	0	324.55 8,26	13,2635	0,07595 11	-51,272	0	0,5524 88	1,3836 7
10	3566 ,08	- 35,6175	0	327.31 5,79	13,6483	0,07905 39	-52,1622	0	0,5521 56	1,3874 3
10	3566 ,18	- 35,5623	0	330.05 9,69	14,0247	0,08206 55	-53,0444	0	0,5518 37	1,3911 9
10	3566 ,3	- 35,4961	0	333.32 0,86	14,4664	0,08556 58	-54,0883	0	0,5514 72	1,3956 7
10	3566 ,44	- 35,4168	0	337.17 3,63	14,9839	0,08961 3	-55,3153	0	0,5510 58	1,4009 7
10	3566 ,62	- 35,3216	0	341.68 9,35	15,5886	0,09426 87	-56,7453	0	0,5505 99	1,4072 1
10	3566 ,82	- 35,2075	0	346.93 4,48	16,2926	0,09960 79	-58,3963	0	0,5500 97	1,4145
10	3567 ,07	- 35,0707	0	352.96 4,93	17,1096	0,10570 5	-60,2819	0	0,5495 6	1,4229 4
10	3567 ,37	- 34,9066	0	359.82 5,57	18,0557	0,11263 3	-62,411	0	0,5489 98	1,4326 3
10	3567 ,73	-34,71	0	367.53 5,64	19,1496	0,12046 4	-64,784	0	0,5484 29	1,4436 2
10	3568 ,16	- 34,4743	0	376.08 7,26	20,413	0,12927 4	-67,393	0	0,5478 74	1,4559 5
10	3568 ,68	- 34,1917	0	385.44 6,79	21,8709	0,13914 2	-70,2223	0	0,5473 62	1,4696 3
10	3569 ,3	-33,853	0	395.82 6,94	23,5489	0,15003 6	-73,3346	0	0,5468 73	1,4850 9
10	3570 ,04	- 33,4469	0	408.27 1,59	25,4808	0,16133 2	-77,049	0	0,5462 57	1,5041 6
10	3570 ,93	- 32,9602	0	423.44 2,32	27,7086	0,17245 1	-81,5391	0	0,5454 84	1,5281 5
10	3572	-32,377	0	441.21 6,02	30,2816	0,18320 5	-86,7089	0	0,5447 03	1,5570 3



10	3573 ,28	-31,678	0	461.15 4,90	33,2535	0,19379	-92,2321	0	0,5440 95	1,5890 5
10	3574 ,82	-30,84	0	482.21 2,23	36,6522	0,20654 3	-96,3811	0	0,5438 7	1,6098
10	3576 ,67	- 29,8343	0	502.97 5,53	40,5048	0,22370 5	-98,2735	0	0,5441 87	1,6109 3
10	3578 ,89	-28,626	0	522.06 4,79	44,8618	0,24720 7	-97,6399	0	0,5451 11	1,5903 6
10	3581 ,55	- 27,1728	0	538.16 1,70	49,8334	0,27876	-94,5434	0	0,5466 4	1,5507 5
10	3584 ,75	-25,423	0	549.71 4,82	55,7426	0,31955 5	-89,084	0	0,5488 4	1,4966 8
10	3588 ,58	- 23,3132	0	554.61 4,40	62,8797	0,37221 8	-81,3107	0	0,5518 43	1,4333 6
10	3593 ,18	- 20,7657	0	550.33 0,83	71,3292	0,44213	-71,5272	0	0,5556 68	1,3679
10	3598 ,7	- 17,6855	0	534.18 7,98	81,02	0,53841 6	-60,3236	0	0,5601 59	1,3078 2
10	3600 ,33	- 16,9591	0	528.70 3,38	83,2024	0,56344 4	-57,5784	0	0,5614 38	1,2950 5
10	3600 ,33	- 16,9591	0	528.70 3,38	83,2024	0,56344 4	-57,5784	0	0,5614 38	1,2950 5
10	3602 ,5	- 15,5172	0	472.15 5,34	85,1186	0,65572 2	-31,6627	0	0,5827 33	1,1908 2
10	3602 ,5	- 15,5172	0	472.15 5,34	85,1186	0,65572 2	-31,6627	0	0,5827 33	1,1908 2
10	3605 ,33	- 13,8409	0	306.69 8,59	85,211	1,10565	-1,68328	0	0,6010 85	1,1438 7
10	3613 ,28	- 8,52636	0	111.97 3,56	85,5007	2,54342	15,5713	0	0,7683 31	1,1622 7
10	3622 ,82	- 0,33541 6	0	64.432, 81	85,9472	3,67198	18,5268	0	0,9328 89	1,1705 8
10	3634 ,27	10,9814	0	48.230, 52	86,5566	4,43317	19,5001	0	1,0298 5	1,1734 1
10	3648	25,5801	0	40.087, 06	87,3142	4,98513	20,0164	0	1,0951	1,1746 7
10	3664	44,1804	0	33.705,	88,2517	5,56503	20,4195	0	1,1598	1,1756



	,49			83					9	9
10	3684,27	67,7467	0	28.873,30	89,4097	6,13751	20,7344	0	1,22076	1,17644
10	3708,01	97,549	0	24.248,17	90,8408	6,84296	21,6788	0	1,29193	1,17488
10	3708,24	97,8516	0	24.203,54	90,8552	6,85093	21,6879	0	1,29271	1,17486
10	3736,49	135,803	0	19.172,15	92,6376	7,92814	22,6246	0	1,39476	1,17358
10	3770,67	185,822	0	14.043,05	94,9356	9,65648	23,429	0	1,54514	1,17288
10	3808,73	248,792	0	9.422,24	97,7653	12,4964	24,0433	0	1,76634	1,17269
10	3811,69	254,058	0	9.155,88	97,9992	12,7341	24,0771	0	1,78361	1,17269
10	3860,91	348,816	0	6.034,04	102,15	16,7868	24,4575	0	2,05776	1,17273
10	3919,98	479,09	0	4.176,91	107,71	21,6476	24,6701	0	2,34668	1,17282
10	4002,54	656,143	0	2.961,76	115,063	27,2134	24,7921	0	2,64105	1,17292
10	4130,71	893,595	0	2.005,07	124,648	33,424	24,8651	0	2,9357	1,17299
10	4288,72	1208,65	0	1.379,32	137	40,2297	24,9107	0	3,22958	1,17305
10	4405,83	1603,96	0	973,38	152,055	47,3045	24,939	0	3,51027	1,17309

Weather: Category 5/D

Wind speed [m/s]	5
Pasquill stability	D neutral - little sun and high wind or overcast/windy night
Atmospheric temperature [degC]	25
Relative humidity [fraction]	0,75
Solar radiation flux [kW/m2]	0,5
Mixing layer height [m]	800

Observer Release Data and Observer Mass Data

Observer number	Release type	Start time [s]	Start downwind distance [m]	Unit	Masses or mass rates		
					Release	Rainout	Final
1	Continuous	0,22	-0,376552	kg/s	0	0	3,61936
2	Continuous	404,277	-22,5151	kg/s	0	0	62,7496
3	Continuous	801,077	-25,8403	kg/s	0	0	63,1678
4	Continuous	1196,75	-27,8649	kg/s	0	0	63,1624
5	Continuous	1591,9	-29,3447	kg/s	0	0	63,316
6	Continuous	1986,69	-30,4761	kg/s	0	0	63,2768
7	Continuous	2381,27	-31,414	kg/s	0	0	63,3745
8	Continuous	2775,69	-32,2111	kg/s	0	0	63,4119
9	Continuous	3169,98	-32,9066	kg/s	0	0	63,397
10	Continuous	3564,17	-33,5	kg/s	0	0	63,3884

Time-varying Observer Dispersion Data (before along-wind-diffusion effects)

Dispersion data correspond to an averaging time of: 18,75 s

Observer number	Time [s]	Downwind distance [m]	C/Line height [m]	C/Line conc [ppm]	Effective width [m]	Effective depth [m]	C/Line vapour temperature [degC]	C/Line liquid fraction	Centroid velocity [m/s]	C/Line cloud density [kg/
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										m3]
1	0,22	-	0	1,00	0,00177	0,1512	24,6246	0	3,1802	1,1739
		0,37655			245	76			3	
		2								
1	0,32	-	0	911.36	0,60896	0,0818	-144,955	0	0,6122	1,7547
		0,30105		9,41	2	365			81	3
		3								
1	0,42	-	0	907.71	0,91651	0,1245	-144,228	0	0,6538	1,7483
		0,23803		1,59	5	74			32	4
		2								
1	0,52	-	0	901.54	1,18517	0,1579	-143,121	0	0,7032	1,7394
		0,17010		3,25		32			91	3
		7								
1	0,62	-	0	896.38	1,43449	0,1858	-142,239	0	0,7462	1,7327
		0,09758		7,14		32			83	2
		32								
1	0,72	-	0	891.66	1,67028	0,2098	-141,397	0	0,7858	1,7262
		0,02095		0,54		83			25	2
		88								
1	0,82	0,05953	0	887.01	1,89595	0,2313	-140,275	0	0,8238	1,7159
		53		4,07		51			17	5
1	0,92	0,14375	0	882.39	2,11256	0,2511	-138,946	0	0,8606	1,7031
		9		5,95		29			08	3
1	1,02	0,23162	0	877.74	2,32197	0,2693	-137,5	0	0,8967	1,6891
		9		2,34		54			29	2
1	1,12	0,32308	0	873.05	2,52832	0,2860	-135,976	0	0,9322	1,6744
		1		6,97		47			24	7
1	1,22	0,41808	0	868.24	2,73724	0,3008	-134,359	0	0,9677	1,6591
		2		0,84		1			43	8
1	1,32	0,51666	0	863.20	2,94877	0,3138	-132,64	0	1,0038	1,6432
		2		0,62		32			7	6
1	1,42	0,61889	0	857.89	3,16184	0,3255	-130,8	0	1,0407	1,6266
				7,73		42			9	1
1	1,52	0,72485	0	852.30	3,3756	0,3362	-128,844	0	1,0786	1,6093
		6		1,27		04			7	8
1	1,62	0,83466	0	846.38	3,58942	0,3459	-126,777	0	1,1176	1,5917
		2		1,29		69			4	3
1	1,72	0,94842	0	840.11	3,80279	0,3549	-124,601	0	1,1577	1,5737



		3		4,52		89			7	7
1	1,82	1,06626	0	833.48 2,31	4,01525	0,3634 21	-122,309	0	1,1991 1	1,5554 9
1	1,92	1,18829	0	826.44 7,08	4,22636	0,3713 22	-119,896	0	1,2417 8	1,5369 4
1	2,02	1,31466	0	818.96 2,29	4,43571	0,3787 16	-117,357	0	1,2859 6	1,5181 8
1	2,12	1,44554	0	810.97 4,87	4,64285	0,3856 39	-114,68	0	1,3318 2	1,4991 7
1	2,22	1,58109	0	802.41 4,97	4,84732	0,3921 15	-111,841	0	1,3796 1	1,4798 5
1	2,34	1,75023	0	791.24 7,38	5,08841	0,3992 71	-108,178	0	1,4400 2	1,4561
1	2,484	1,96314	0	776.21 9,90	5,3701	0,4068 38	-103,314	0	1,5181 8	1,4264 1
1	2,656 8	2,2344	0	754.86 4,13	5,69379	0,4139 07	-96,4955	0	1,6238 8	1,3879 9
1	2,856 13	2,57265	0	721.91 8,50	6,03842	0,4161 69	-85,9709	0	1,7778	1,3345
1	2,856 13	2,57265	0	721.91 8,50	6,03842	0,4161 69	-85,9709	0	1,7778	1,3345
1	2,864 16	2,58696	0	720.10 0,79	6,05138	0,4159 52	-85,2576	0	1,7861 6	1,3308 1
1	3,112 99	3,06504	0	662.82 0,25	6,38094	0,4181 12	-64,2764	0	2,0338 1	1,2365 4
1	3,411 59	3,71122	0	594.70 1,34	6,57084	0,4433 08	-42,7015	0	2,2882 5	1,164
1	3,769 91	4,5811	0	497.20 8,85	6,67824	0,5121 97	-20,3812	0	2,5558 6	1,1172 9
1	4,199 89	5,7303	0	394.18 9,08	6,83841	0,6202 46	-4,25643	0	2,7704 2	1,1043 8
1	4,715 87	7,20085	0	306.39 3,79	7,04087	0,7638 1	4,84282	0	2,9144 4	1,1114 1
1	5,335 04	9,03521	0	237.45 7,89	7,28494	0,9443 82	10,3723	0	3,0063 2	1,1223 2
1	6,078 05	11,2914	0	184.63 8,34	7,57423	1,1625	13,8087	0	3,0647 5	1,1332 2
1	6,969	14,0426	0	144.39	7,91357	1,4192	16,0535	0	3,1022	1,1426



	66			2,06		2			9	8
1	8,039 59	17,3907	0	113.59 4,78	8,308	1,6913 2	17,5892	0	3,1733	1,1504 7
1	9,041 18	20,6159	0	94.047, 30	8,66319	1,9113 1	18,492	0	3,2658 3	1,1556 2
1	9,041 18	20,6159	0	94.047, 30	8,66319	1,9113 6	18,492	0	3,2657 6	1,1556 2
1	9,323 51	21,5423	0	89.591, 45	8,76072	1,9718 6	18,6899	0	3,2889 5	1,1568 3
1	10,86 42	26,7101	0	70.510, 84	9,28506	2,2946 7	19,5028	0	3,4009	1,1620 7
1	12,71 31	33,1043	0	54.869, 60	9,92503	2,6772 5	20,125	0	3,5144 4	1,1665 3
1	14,93 17	41,0442	0	41.338, 61	10,7181	3,1842 9	20,9456	0	3,6426	1,1694
1	17,59 4	50,9399	0	30.079, 07	11,6923	3,8715 4	22,2587	0	3,7898 9	1,1696 2
1	19,73 32	59,163	0	23.894, 50	12,4945	4,4454 5	22,924	0	3,8962 3	1,1699 6
1	20,78 88	63,3108	0	21.459, 24	12,8969	4,7382 3	23,1731	0	3,9460 4	1,1701 4
1	24,62 26	78,7878	0	15.038, 28	14,3883	5,8262 4	23,7985	0	4,1118 1	1,1707 6
1	27,76 64	91,904	0	11.624, 79	15,6407	6,7410 5	24,1107	0	4,2321 4	1,1711 6
1	29,22 31	98,107	0	10.403, 17	16,2296	7,1729 4	24,2182	0	4,2844 3	1,1713 2
1	34,74 37	122,266	0	7.358,0 3	18,502	8,5882 6	24,4783	0	4,4397	1,1717 5
1	41,36 84	152,211	0	5.182,5 7	21,2848	10,239 9	24,6535	0	4,5961 6	1,1721 1
1	49,31 81	189,398	0	3.620,3 2	24,6933	12,206 6	24,7719	0	4,7578 6	1,1723 9
1	58,85 77	235,592	0	2.510,2 1	28,8657	14,546 9	24,851	0	4,9249 6	1,1726 1
1	60,13 12	241,876	0	2.400,7 6	29,4286	14,857 6	24,8585	0	4,9454 8	1,1726 3



2	404,2 - 77 22,5151	0	1,00	0,00177 245	0,1512 76	24,6242	0	3,1802 3	1,1739
2	404,3 - 77 22,2301	0	270.25 3,20	5,38142	0,0140 609	-46,5585	0	2,8434 7	1,3900 9
2	404,4 - 77 21,9457	0	270.36 5,20	7,60445	0,0280 259	-46,5685	0	2,8441 6	1,3900 8
2	404,5 - 77 21,6612	0	270.13 4,24	9,30935	0,0419 937	-46,5283	0	2,8448 1	1,3899 8
2	404,6 - 77 21,3767	0	269.81 9,22	10,7484	0,0559 405	-46,477	0	2,8455	1,3898 7
2	404,7 - 77 21,0921	0	269.47 1,51	12,0159	0,0698 775	-46,4217	0	2,8462	1,3897 6
2	404,8 - 77 20,8075	0	269.11 3,25	13,1602	0,0838 149	-46,3655	0	2,8468 9	1,3896 4
2	404,9 - 77 20,5228	0	268.75 2,32	14,2112	0,0977 514	-46,3093	0	2,8475 8	1,3895 3
2	405,0 - 77 -20,238	0	268.39 0,37	15,1886	0,1116 84	-46,2531	0	2,8482 6	1,3894 2
2	405,1 - 77 19,9531	0	268.02 9,09	16,1048	0,1256 24	-46,1972	0	2,8489 3	1,3893 1
2	405,2 - 77 19,6682	0	267.66 7,58	16,9709	0,1395 56	-46,1414	0	2,8496 1	1,3892
2	405,3 - 77 19,3832	0	267.30 5,01	17,7946	0,1534 75	-46,0855	0	2,8502 8	1,3891
2	405,4 - 77 19,0981	0	266.94 0,61	18,5818	0,1673 77	-46,0293	0	2,8509 6	1,3889 9
2	405,5 - 77 -18,813	0	266.57 3,90	19,3367	0,1812 68	-45,9728	0	2,8516 4	1,3888 8
2	405,6 - 77 18,5278	0	266.20 4,90	20,0626	0,1951 51	-45,9159	0	2,8523 2	1,3887 7
2	405,7 - 77 18,2425	0	265.83 3,46	20,7627	0,2090 22	-45,8587	0	2,8530 1	1,3886 6
2	405,8 - 77 17,9572	0	265.45 9,53	21,4398	0,2228 8	-45,8011	0	2,8537 1	1,3885 5
2	405,9 - 77 17,6718	0	265.08 3,24	22,0959	0,2367 25	-45,743	0	2,8544	1,3884 4
2	406,0 - 77 17,3863	0	264.70 5,16	22,7323	0,2505 64	-45,6848	0	2,8551 1	1,3883 3



2	406,177	-17,1008	0	264.325,56	23,3501	0,264408	-45,6263	0	2,85581	1,38821
2	406,277	-16,8152	0	263.944,54	23,9509	0,278247	-45,5676	0	2,85651	1,38811
2	406,397	-16,4723	0	263.485,78	24,6515	0,294851	-45,4969	0	2,85736	1,38796
2	406,541	-16,0608	0	262.933,46	25,4647	0,314774	-45,4118	0	2,85838	1,38788
2	406,714	-15,5668	0	262.268,33	26,4053	0,338669	-45,3094	0	2,85961	1,38761
2	406,922	-14,9737	0	261.719,69	27,4888	0,366846	-45,2832	0	2,86076	1,38786
2	407,17	-14,2618	0	261.581,79	28,7317	0,399439	-45,4545	0	2,86149	1,38894
2	407,469	-13,4073	0	262.065,27	30,1505	0,436629	-45,9109	0	2,86159	1,39143
2	407,827	-12,3819	0	263.234,68	31,7622	0,478765	-46,6806	0	2,86114	1,39542
2	408,257	-11,1518	0	265.076,65	33,5844	0,526288	-47,7665	0	2,86032	1,40097
2	408,773	-9,67622	0	267.546,38	35,6322	0,579632	-49,1649	0	2,85937	1,40813
2	409,392	-7,90604	0	270.579,09	37,9195	0,639334	-50,8204	0	2,85853	1,41666
2	410,135	-5,78226	0	273.954,64	40,4599	0,707373	-52,2597	0	2,85832	1,42372
2	411,027	-3,23336	0	277.283,14	43,249	0,786218	-53,1859	0	2,85946	1,42766
2	412,097	-0,172287	0	280.006,26	46,3232	0,878242	-53,2934	0	2,86291	1,42662
2	413,381	3,50789	0	281.110,77	50,0328	0,981858	-52,0368	0	2,87044	1,41796
2	414,922	7,94084	0	278.798,24	54,644	1,10058	-48,5095	0	2,88504	1,39743
2	416,77	13,2973	0	270.215,49	60,2191	1,2468	-41,5019	0	2,91092	1,36086
2	418,9	19,802	0	249.95	66,6345	1,4448	-29,1721	0	2,9556	1,3044



	89			4,94		1			8	4
2	419,9 62	22,6902	0	235.30 8,50	69,2149	1,5464 9	-21,7082	0	2,9844 3	1,2741 1
2	419,9 62	22,6902	0	235.30 8,50	69,2149	1,5464 9	-21,7082	0	2,9844 3	1,2741 1
2	421,6 51	27,8368	0	200.57 1,97	72,8278	1,7596 4	-5,44421	0	3,1135 9	1,2147 7
2	423,4 99	33,7136	0	167.40 7,06	75,5806	2,0178 4	3,45878	0	3,2442 7	1,1908 2
2	423,4 99	33,7136	0	167.40 7,06	75,5806	2,0178	3,45878	0	3,2443 4	1,1908 2
2	424,8 46	38,1415	0	147.90 2,79	76,9961	2,2194 1	7,40746	0	3,3280 3	1,1825 3
2	428,6 8	51,328	0	105.54 3,20	79,193	2,9079 3	13,5986	0	3,5481 1	1,1745 9
2	433,2 8	68,2213	0	71.796, 58	80,8652	3,9722 5	17,0315	0	3,7936 5	1,1743 8
2	438,8 01	89,9051	0	47.966, 76	82,9735	5,4703 3	18,9592	0	4,052	1,1762 2
2	445,4 26	117,558	0	33.708, 51	85,5842	7,1768 8	19,9818	0	4,2792 4	1,1778 2
2	453,3 76	152,482	0	24.518, 07	88,8306	9,0913 2	20,5919	0	4,4858 7	1,1790 5
2	454,1 29	155,866	0	23.867, 26	89,1429	9,2716 9	20,6332	0	4,5034 6	1,1791 4
2	462,9 15	196,345	0	17.946, 22	92,8437	11,408 6	21,8927	0	4,6924 6	1,1769 1
2	472,4 4	241,874	0	13.839, 20	96,9473	13,705 4	22,7745	0	4,8657 2	1,1753 8
3	801,0 77	- 25,8403	0	1,00	0,00177 245	0,1512 76	24,6234	0	3,1802 3	1,1739
3	801,1 77	-25,548	0	220.23 3,21	5,8356	0,0135 378	-39,6722	0	2,9182 5	1,3805 5
3	801,2 77	- 25,2562	0	220.33 7,59	8,2479	0,0269 939	-39,6911	0	2,9187 2	1,3805 9
3	801,3 77	- 24,9643	0	220.15 8,08	10,0981	0,0404 533	-39,6617	0	2,9191 9	1,3805 3

3	801,4 77	- 24,6724	0	219.92 0,32	11,6575	0,0539 1	-39,624	0	2,9196 6	1,3804 6
3	801,5 77	- 24,3804	0	219.66 5,31	13,0294	0,0673 703	-39,5842	0	2,9201 3	1,3803 8
3	801,6 77	- 24,0883	0	219.40 1,30	14,2707	0,0808 144	-39,5433	0	2,9206	1,3803 1
3	801,7 77	- 23,7962	0	219.13 1,31	15,4115	0,0942 561	-39,5017	0	2,9210 8	1,3802 3
3	801,8 77	- 23,5041	0	218.85 7,53	16,4716	0,1077 02	-39,4596	0	2,9215 6	1,3801 6
3	801,9 77	- 23,2119	0	218.58 2,67	17,466	0,1211 5	-39,4175	0	2,9220 3	1,3800 8
3	802,0 77	- 22,9197	0	218.30 6,52	18,4063	0,1345 89	-39,3752	0	2,9225 1	1,38
3	802,1 77	- 22,6274	0	218.02 8,57	19,3009	0,1480 15	-39,3327	0	2,9229 8	1,3799 3
3	802,2 77	- 22,3351	0	217.74 9,61	20,1556	0,1614 34	-39,2901	0	2,9234 6	1,3798 5
3	802,3 77	- 22,0427	0	217.46 9,29	20,9748	0,1748 49	-39,2473	0	2,9239 4	1,3797 7
3	802,4 77	- 21,7503	0	217.18 7,35	21,7619	0,1882 67	-39,2042	0	2,9244 3	1,3797
3	802,5 77	- 21,4579	0	216.90 4,39	22,5206	0,2016 82	-39,161	0	2,9249 1	1,3796 2
3	802,6 77	- 21,1653	0	216.62 0,69	23,2531	0,2151 02	-39,1177	0	2,9253 9	1,3795 4
3	802,7 77	- 20,8728	0	216.33 6,42	23,9625	0,2285 19	-39,0744	0	2,9258 8	1,3794 7
3	802,8 77	- 20,5802	0	216.05 1,68	24,6506	0,2419 33	-39,0309	0	2,9263 6	1,3793 9
3	802,9 77	- 20,2875	0	215.76 6,10	25,3196	0,2553 4	-38,9874	0	2,9268 5	1,3793 1
3	803,0 77	- 19,9948	0	215.47 9,59	25,9709	0,2687 4	-38,9437	0	2,9273 4	1,3792 3
3	803,1 97	- 19,6435	0	215.13 4,35	26,7309	0,2848 1	-38,8911	0	2,9279 3	1,3791 4
3	803,3 41	- 19,2218	0	214.71 8,69	27,6148	0,3040 78	-38,8277	0	2,9286 3	1,3790 3



3	803,5 13	- 18,7157	0	214.21 7,66	28,6376	0,3271 95	-38,7514	0	2,9294 9	1,3788 9
3	803,7 21	- 18,1081	0	213.70 1,55	29,8165	0,3547 21	-38,6981	0	2,9304 1	1,3789
3	803,9 7	- 17,3789	0	213.29 9,72	31,1671	0,3871 78	-38,7316	0	2,9312 7	1,3793 5
3	804,2 68	- 16,5035	0	213.31 9,13	32,7082	0,4245 87	-38,9953	0	2,9317 2	1,3809
3	804,6 26	-15,453	0	213.96 7,85	34,4586	0,4670 04	-39,5897	0	2,9315 8	1,3840 3
3	805,0 56	- 14,1924	0	215.33 3,43	36,4388	0,5145 89	-40,5584	0	2,9309	1,3889 5
3	805,5 72	- 12,6804	0	217.34 5,78	38,6686	0,5678 38	-41,8789	0	2,9299 5	1,3956 4
3	806,1 92	- 10,8666	0	219.93 9,35	41,1662	0,6271 64	-43,544	0	2,9289 5	1,4041 3
3	806,9 35	- 8,69069	0	223.04 1,58	43,9478	0,6931 24	-45,4441	0	2,9281 3	1,4139
3	807,8 26	- 6,08008	0	226.40 8,53	47,0202	0,7682 66	-47,0269	0	2,9279 8	1,4216 9
3	808,8 96	- 2,94684	0	229.63 6,72	50,3756	0,8554 94	-47,9894	0	2,9291 6	1,4257 7
3	810,1 8	0,81594	0	232.13 1,65	54,1272	0,9567 36	-47,963	0	2,9326 1	1,4241 4
3	811,7 21	5,33951	0	232.76 6,01	58,7679	1,0702 8	-46,2597	0	2,9401 2	1,4132 5
3	813,5 7	10,7877	0	229.63 9,94	64,4973	1,2043 9	-41,8477	0	2,9544 8	1,3885 5
3	815,7 88	17,3687	0	219.81 4,10	71,3419	1,3764 9	-33,4858	0	2,9794 5	1,3463 9
3	818,4 51	25,3613	0	196.64 6,83	79,0451	1,6130 8	-19,0423	0	3,0409 3	1,2830 6
3	818,6 42	25,9451	0	194.19 0,61	79,5566	1,63	-17,741	0	3,0519 3	1,2778 6
3	818,6 42	25,9451	0	194.19 0,61	79,5566	1,6300 6	-17,741	0	3,0518 3	1,2778 6
3	821,6 45	35,4106	0	148.57 8,46	85,9061	2,0003 4	2,13938	0	3,2488 6	1,2070 6

3	823,897	42,872	0	121.860,67	89,2988	2,31653	8,53055	0	3,37399	1,19082
3	823,897	42,872	0	121.860,67	89,2988	2,31655	8,53055	0	3,37398	1,19082
3	825,479	48,2711	0	107.139,97	91,1852	2,5497	11,238	0	3,45192	1,1854
3	830,08	64,6516	0	74.933,57	94,9894	3,3566	15,7472	0	3,66748	1,17949
3	835,6	85,5944	0	49.868,36	97,8789	4,63126	18,3155	0	3,91999	1,17879
3	842,225	112,467	0	33.709,52	100,431	6,31102	19,6927	0	4,17294	1,17947
3	850,175	146,551	0	23.985,52	103,61	8,19032	20,4462	0	4,39494	1,18019
3	850,271	146,974	0	23.897,60	103,649	8,21308	20,4527	0	4,39737	1,18019
3	859,714	189,626	0	17.275,17	107,56	10,4723	21,4758	0	4,61435	1,17891
3	867,908	228,091	0	13.669,52	111,038	12,4326	22,4035	0	4,77349	1,17695
4	1196,75	-27,8649	0	1,00	0,00177245	0,151275	24,6228	0	3,18023	1,1739
4	1196,85	-27,5692	0	195.733,48	6,09345	0,0133004	-36,3971	0	2,95249	1,37666
4	1196,95	-27,274	0	195.793,82	8,61712	0,0265061	-36,415	0	2,95292	1,37673
4	1197,05	-26,9786	0	195.633,17	10,546	0,0397561	-36,3905	0	2,95331	1,37669
4	1197,15	-26,6833	0	195.439,40	12,1763	0,0529827	-36,3607	0	2,95367	1,37663
4	1197,25	-26,3879	0	195.217,49	13,612	0,0662034	-36,3264	0	2,95407	1,37657
4	1197,35	-26,0925	0	194.989,23	14,9078	0,0794236	-36,2914	0	2,95446	1,37651
4	1197,45	-25,797	0	194.753,02	16,1016	0,0926114	-36,2553	0	2,95486	1,37645
4	1197,-	-	0	194.51	17,2109	0,1058	-36,2189	0	2,9552	1,3763



	55	25,5015		3,77		09		6	8	
4	1197,65	-25,206	0	194.274,23	18,2506	0,119019	-36,1824	0	2,95566	1,37632
4	1197,75	-24,9104	0	194.035,80	19,2319	0,132245	-36,1462	0	2,95606	1,37626
4	1197,85	-24,6148	0	193.798,75	20,164	0,145481	-36,1102	0	2,95644	1,37619
4	1197,95	-24,3191	0	193.562,82	21,0536	0,15872	-36,0745	0	2,95683	1,37613
4	1198,05	-24,0234	0	193.327,12	21,9076	0,171943	-36,0388	0	2,95722	1,37607
4	1198,15	-23,7276	0	193.090,23	22,731	0,185139	-36,003	0	2,9576	1,37601
4	1198,25	-23,4319	0	192.850,82	23,5266	0,198316	-35,9667	0	2,958	1,37595
4	1198,35	-23,136	0	192.608,20	24,2976	0,211468	-35,9299	0	2,9584	1,37589
4	1198,45	-22,8402	0	192.362,45	25,0442	0,224623	-35,8926	0	2,9588	1,37582
4	1198,55	-22,5443	0	192.114,01	25,7679	0,237776	-35,8548	0	2,95921	1,37576
4	1198,65	-22,2483	0	191.865,31	26,4682	0,250959	-35,8171	0	2,95962	1,37569
4	1198,75	-21,9524	0	191.615,75	27,15	0,264132	-35,7793	0	2,96003	1,37563
4	1198,87	-21,5971	0	191.316,59	27,9442	0,279955	-35,7339	0	2,96052	1,37555
4	1199,02	-21,1708	0	190.957,57	28,8667	0,298942	-35,6795	0	2,96111	1,37546
4	1199,19	-20,659	0	190.526,69	29,9341	0,321727	-35,6143	0	2,96182	1,37534
4	1199,4	-20,0448	0	190.009,58	31,1634	0,349077	-35,536	0	2,96266	1,37521
4	1199,65	-19,3075	0	189.537,57	32,5731	0,381506	-35,5135	0	2,9635	1,37537
4	1199,94	-18,4225	0	189.433,83	34,1839	0,418936	-35,7095	0	2,96398	1,37658
4	1200,	-	0	189.92	36,0172	0,4613	-36,2406	0	2,9639	1,3793



	3	17,3605		5,43		05				8
4	1200,73	-16,0861	0	191.104,29	38,0946	0,508728	-37,159	0	2,96329	1,38404
4	1201,25	-14,5573	0	192.879,06	40,4334	0,561887	-38,4291	0	2,9624	1,39045
4	1201,87	-12,7234	0	195.222,99	43,0538	0,621062	-40,0584	0	2,96139	1,39873
4	1202,61	-10,5234	0	198.103,23	45,9752	0,686445	-42,0503	0	2,96043	1,409
4	1203,5	-7,88414	0	201.366,54	49,2115	0,759884	-43,9538	0	2,95988	1,41867
4	1204,57	-4,71716	0	204.671,55	52,7616	0,84433	-45,3314	0	2,96029	1,42522
4	1205,86	-0,915236	0	207.546,42	56,6358	0,943104	-45,8604	0	2,96237	1,42682
4	1207,4	3,65237	0	209.172,40	61,2901	1,05446	-44,9923	0	2,96737	1,42055
4	1209,25	9,14723	0	208.031,22	67,0997	1,18283	-41,7772	0	2,97752	1,40182
4	1211,46	15,7722	0	201.858,91	74,0807	1,34437	-35,0927	0	2,99568	1,36653
4	1214,13	23,788	0	186.603,28	82,2243	1,56476	-23,5204	0	3,02678	1,31222
4	1215,49	27,9449	0	173.594,95	86,0699	1,67726	-15,686	0	3,09097	1,27933
4	1215,49	27,9449	0	173.594,95	86,0699	1,67724	-15,686	0	3,09101	1,27933
4	1217,32	33,7212	0	149.397,51	90,4461	1,88331	-2,43005	0	3,20204	1,22839
4	1221,16	46,4068	0	107.321,97	97,14	2,40227	9,45414	0	3,40824	1,19398
4	1222,02	49,3843	0	100.283,18	98,3817	2,52367	10,8585	0	3,44771	1,19082
4	1222,02	49,3843	0	100.283,18	98,3817	2,52362	10,8585	0	3,44779	1,19082
4	1225,76	62,553	0	76.017,29	102,706	3,09786	14,8309	0	3,60835	1,18363



4	1231,28	83,1112	0	51.600,05	107,022	4,16986	17,7887	0	3,83911	1,18076
4	1237,9	109,44	0	34.252,79	110,092	5,76284	19,4535	0	4,09872	1,18056
4	1245,85	142,985	0	23.908,14	113,225	7,62328	20,3337	0	4,33348	1,18089
4	1245,85	142,992	0	23.906,55	113,226	7,62366	20,3339	0	4,33353	1,18089
4	1255,39	185,524	0	16.995,30	117,132	9,87981	21,1677	0	4,56203	1,18028
4	1263,23	221,92	0	13.486,47	120,429	11,7444	22,1733	0	4,72034	1,17795
5	1591,9	-29,3447	0	1,00	0,00177	0,151275	24,6222	0	3,18023	1,17391
5	1592	-29,047	0	180.257,27	6,27005	0,0131598	-34,3744	0	2,97336	1,37453
5	1592,1	-28,7497	0	180.329,48	8,8665	0,0262399	-34,3976	0	2,97371	1,37462
5	1592,2	-28,4523	0	180.175,17	10,8556	0,0393345	-34,3749	0	2,97407	1,37458
5	1592,3	-28,1549	0	179.986,88	12,5344	0,0524166	-34,3463	0	2,97442	1,37454
5	1592,4	-27,8574	0	179.781,65	14,011	0,0655066	-34,315	0	2,97477	1,37448
5	1592,5	-27,5599	0	179.574,77	15,3444	0,0785993	-34,2837	0	2,97511	1,37443
5	1592,6	-27,2624	0	179.366,06	16,5712	0,0916811	-34,2521	0	2,97545	1,37438
5	1592,7	-26,9648	0	179.155,17	17,7132	0,104756	-34,2202	0	2,9758	1,37432
5	1592,8	-26,6672	0	178.941,86	18,7846	0,117833	-34,1879	0	2,97614	1,37427
5	1592,9	-26,3696	0	178.727,58	19,7965	0,130915	-34,1555	0	2,97649	1,37421
5	1593	-26,0719	0	178.513,21	20,758	0,143996	-34,1231	0	2,97683	1,37416
5	1593	-	0	178.29	21,6766	0,1570	-34,0907	0	2,9771	1,3741



	1	25,7742		8,46		73			8	
5	1593,-	-	0	178.08	22,5575	0,1701	-34,0582	0	2,9775	1,3740
	2	25,4765		2,75		42			2	5
5	1593,-	-	0	177.86	23,4054	0,1832	-34,0256	0	2,9778	1,3739
	3	25,1787		6,64		02			7	9
5	1593,-	-	0	177.65	24,2228	0,1962	-33,9929	0	2,9782	1,3739
	4	24,8809		0,00		62			2	4
5	1593,-	-	0	177.43	25,0133	0,2093	-33,9601	0	2,9785	1,3738
	5	24,5831		2,53		16			6	9
5	1593,-	-	0	177.21	25,7784	0,2223	-33,9272	0	2,9789	1,3738
	6	24,2852		4,20		74			1	3
5	1593,-	-	0	176.99	26,5205	0,2354	-33,8941	0	2,9792	1,3737
	7	23,9873		5,26		32			6	7
5	1593,-	-	0	176.77	27,2415	0,2484	-33,8611	0	2,9796	1,3737
	8	23,6893		5,84		93			2	2
5	1593,-	-	0	176.55	27,943	0,2615	-33,8279	0	2,9799	1,3736
	9	23,3914		5,99		54			7	6
5	1594,-	-	0	176.29	28,7613	0,2772	-33,7881	0	2,9803	1,3736
	02	23,0337		1,74		25			9	
5	1594,-	-	0	175.97	29,7126	0,2960	-33,7401	0	2,9809	1,3735
	17	22,6045		3,75		24				2
5	1594,-	-	0	175.59	30,8143	0,3185	-33,6824	0	2,9815	1,3734
	34	22,0894		0,56		7			1	2
5	1594,-	-	0	175.15	32,085	0,3455	-33,6239	0	2,9822	1,3733
	55	21,4711		0,49		47			2	6
5	1594,-	-	0	174.75	33,544	0,3775	-33,6204	0	2,9829	1,3735
	8	20,7289		2,51		1			3	8
5	1595,-	-	0	174.59	35,2088	0,4147	-33,7789	0	2,9834	1,3746
	1	19,8382		4,32		69			4	
5	1595,-	-	0	174.92	37,1007	0,4572	-34,236	0	2,9835	1,3770
	45	18,7691		7,84		45				4
5	1595,-	-	0	175.88	39,2427	0,5049	-35,0669	0	2,9830	1,3812
	88	17,4863		3,44		76			5	8
5	1596,-	-	0	177.48	41,658	0,5581	-36,2944	0	2,9822	1,3874
	4	15,9472		5,27		63			1	7
5	1597,-	-14,101	0	179.68	44,368	0,6171	-37,9081	0	2,9811	1,3956
	02			2,17		76			8	6
5	1597,-	-	0	182.42	47,3882	0,6823	-39,909	0	2,9801	1,4059



	76	11,8863	0,76	38	4	5				
5	1598,65	-9,22949	0	185.574,34	50,7429	0,754635	-42,02	0	2,97942	1,41685
5	1599,72	-6,04179	0	188.867,31	54,4337	0,837216	-43,6674	0	2,97945	1,425
5	1601,01	-2,21567	0	191.887,74	58,4501	0,933562	-44,5422	0	2,98086	1,42865
5	1602,55	2,37952	0	193.979,76	63,1074	1,04381	-44,1766	0	2,98459	1,42522
5	1604,4	7,90424	0	193.882,71	68,9301	1,16923	-41,7075	0	2,99248	1,41033
5	1606,62	14,5585	0	189.652,61	76,0299	1,32357	-36,0445	0	3,00701	1,37956
5	1609,28	22,5959	0	178.159,29	84,4141	1,53019	-25,9476	0	3,0318	1,33021
5	1611,5	29,4038	0	160.970,38	90,9082	1,7104	-14,5688	0	3,11555	1,28096
5	1611,5	29,4038	0	160.970,38	90,9082	1,7104	-14,5688	0	3,11556	1,28096
5	1612,47	32,4722	0	149.375,33	93,4268	1,81375	-6,94739	0	3,17161	1,25012
5	1616,31	45,0301	0	108.261,58	101,092	2,30011	7,75844	0	3,37567	1,20171
5	1619,08	54,5791	0	87.346,29	105,391	2,68616	12,2307	0	3,49929	1,19082
5	1619,08	54,5791	0	87.346,29	105,391	2,68617	12,2307	0	3,49928	1,19082
5	1620,91	61,0285	0	76.717,16	107,811	2,9509	14,0639	0	3,57252	1,18717
5	1626,43	81,3506	0	52.732,70	113,355	3,90499	17,3588	0	3,78914	1,1825
5	1633,05	107,304	0	35.082,62	117,502	5,3562	19,2266	0	4,03975	1,18142
5	1641	140,423	0	24.093,80	120,652	7,19463	20,2295	0	4,28443	1,18141
5	1641,19	141,214	0	23.909,99	120,725	7,23759	20,2452	0	4,2895	1,18142
5	1650,	182,533	0	16.930,	124,523	9,4299	20,8857	0	4,5204	1,1814



	54			43		6			8	5
5	1658,219,163 5	0	13.313,43	127,845	11,312	22,0077	0	4,6858	1,1787	
6	1986,- 69 30,4761	0	1,00	0,00177	0,1512	24,6217	0	3,1802	1,1739	
				245	75			3	1	
6	1986,- 79 30,1771	0	169.41 0,73	6,40435	0,0130 6	-32,9826	0	2,9876	1,3732	
								5	1	
6	1986,- 89 29,8783	0	169.47 7,34	9,05672	0,0260 437	-33,0071	0	2,9879	1,3733	
								6	1	
6	1986,- 99 29,5795	0	169.33 3,89	11,0888	0,0390 415	-32,9868	0	2,9882	1,3732	
								9	8	
6	1987,- 09 29,2806	0	169.16 0,02	12,8039	0,0520 274	-32,9608	0	2,9886	1,3732	
								1	4	
6	1987,- 19 28,9818	0	168.97 0,20	14,3126	0,0650 211	-32,9321	0	2,9889	1,3731	
								3	9	
6	1987,- 29 28,6828	0	168.77 8,91	15,6748	0,0780 185	-32,9032	0	2,9892	1,3731	
								4	4	
6	1987,- 39 28,3839	0	168.58 6,20	16,9281	0,0910 056	-32,8742	0	2,9895	1,3730	
								5	9	
6	1987,- 49 28,0849	0	168.39 1,59	18,0949	0,1039 85	-32,8449	0	2,9898	1,3730	
								6	4	
6	1987,- 59 27,7859	0	168.19 4,75	19,1898	0,1169 67	-32,8152	0	2,9901	1,3729	
								8	9	
6	1987,- 69 27,4869	0	167.99 6,94	20,2239	0,1299 54	-32,7855	0	2,9904	1,3729	
								9	5	
6	1987,- 79 27,1878	0	167.79 9,06	21,2065	0,1429 41	-32,7557	0	2,9908	1,3729	
6	1987,- 89 26,8887	0	167.60 0,92	22,1452	0,1559 24	-32,7259	0	2,9911	1,3728	
								2	5	
6	1987,- 99 26,5896	0	167.40 1,98	23,0454	0,1689	-32,696	0	2,9914	1,3728	
								3		
6	1988,- 09 26,2905	0	167.20 2,61	23,9119	0,1818 67	-32,666	0	2,9917	1,3727	
								4	5	
6	1988,- 19 25,9913	0	167.00 2,81	24,7475	0,1948 33	-32,636	0	2,9920	1,3727	
								6		
6	1988,-25,692 29	0	166.80 2,34	25,5554	0,2077 95	-32,6059	0	2,9923	1,3726	
								7	5	

6	1988,39	-25,3928	0	166.601,08	26,3376	0,220759	-32,5756	0	2,99269	1,3726
6	1988,49	-25,0935	0	166.399,21	27,0962	0,233726	-32,5453	0	2,99301	1,37255
6	1988,59	-24,7942	0	166.196,92	27,8334	0,246692	-32,5149	0	2,99333	1,3725
6	1988,69	-24,4948	0	165.994,26	28,5506	0,259662	-32,4845	0	2,99364	1,37245
6	1988,81	-24,1356	0	165.750,68	29,3873	0,275223	-32,4479	0	2,99403	1,37239
6	1988,96	-23,7044	0	165.457,70	30,3599	0,293891	-32,4039	0	2,99449	1,37232
6	1989,13	-23,1869	0	165.104,73	31,4864	0,316282	-32,3509	0	2,99504	1,37223
6	1989,34	-22,5658	0	164.691,66	32,7858	0,343096	-32,2936	0	2,9957	1,37216
6	1989,59	-21,8203	0	164.304,23	34,2782	0,374914	-32,2829	0	2,99636	1,37233
6	1989,88	-20,9255	0	164.115,67	35,9816	0,412105	-32,4171	0	2,99687	1,37322
6	1990,24	-19,8517	0	164.387,61	37,9177	0,454546	-32,8437	0	2,99695	1,37551
6	1990,67	-18,5631	0	165.252,69	40,1099	0,502263	-33,6422	0	2,99655	1,37959
6	1991,19	-17,017	0	166.748,64	42,5827	0,555404	-34,8433	0	2,99574	1,38565
6	1991,81	-15,1624	0	168.832,14	45,3588	0,614309	-36,4395	0	2,99473	1,39374
6	1992,55	-12,9376	0	171.453,34	48,4549	0,679301	-38,4316	0	2,99368	1,40398
6	1993,44	-10,2688	0	174.512,82	51,8963	0,750949	-40,6587	0	2,99286	1,41555
6	1994,51	-7,06684	0	177.771,64	55,691	0,832268	-42,495	0	2,99267	1,42483
6	1995,8	-3,224	0	180.855,42	59,8257	0,926755	-43,6102	0	2,99367	1,42991
6	1997,34	1,39038	0	183.202,05	64,5089	1,03595	-43,5826	0	2,99664	1,42842



6	1999,	6,93618	0	183.72	70,3716	1,1589	-41,6183	0	3,0031	1,4162
				2,54		3			5	2
6	2001,	13,6118	0	180.66	77,5311	1,3089	-36,6404	0	3,0154	1,3886
	4			9,95		3			6	1
6	2004,	21,6665	0	171.41	86,0769	1,5063	-27,5248	0	3,0365	1,3428
	07			6,55		6			1	3
6	2006,	30,5276	0	151.89	94,714	1,7340	-13,7992	0	3,1331	1,2822
	95			2,74		8			3	6
6	2006,	30,5276	0	151.89	94,714	1,7340	-13,7992	0	3,1331	1,2822
	95			2,74		8			3	6
6	2007,	31,5101	0	148.46	95,568	1,7660	-11,1872	0	3,1504	1,2712
	26			8,45		5			8	7
6	2011,	43,9769	0	109.10	103,994	2,2201	6,15228	0	3,3497	1,2089
	1			8,48		7			4	9
6	2015,	58,9397	0	78.320,	111,071	2,82	13,1698	0	3,5387	1,1908
	44			67					5	2
6	2015,	58,9397	0	78.320,	111,071	2,82	13,1698	0	3,5387	1,1908
	44			67					6	2
6	2015,	59,8657	0	76.925,	111,451	2,8563	13,4217	0	3,5487	1,1902
	7			33		5				8
6	2021,	80,0285	0	53.346,	118,027	3,7326	17,0046	0	3,7551	1,1840
	22			46		1			5	6
6	2027,	105,709	0	35.871,	123,242	5,0460	19,0187	0	3,9921	1,1821
	84			74		7			9	8
6	2035,	138,459	0	24.375,	126,681	6,8348	20,1325	0	4,2414	1,1818
	79			88		5				3
6	2036,	140,358	0	23.913,	126,858	6,9381	20,1742	0	4,2540	1,1818
	24			42		2			5	3
6	2045,	180,193	0	16.942,	130,522	9,0542	20,7709	0	4,4844	1,1819
	33			20		2			5	6
6	2053,	217,837	0	13.143,	133,938	10,989	21,8927	0	4,6593	1,1792
	56			85		6			5	4
7	2381,	-31,414	0	1,00	0,00177	0,1512	24,6213	0	3,1802	1,1739
	27				245	75			3	1
7	2381,	-	0	161.13	6,51316	0,0129	-31,9369	0	2,9983	1,3723
	37	31,1138		9,77		847			6	
7	2381,	-30,814	0	161.20	9,21083	0,0258	-31,9623	0	2,9986	1,3724



	47			1,96		957			6	
7	2381,-	-	0	161.06	11,2778	0,0388	-31,9438	0	2,9989	1,3723
	57	30,5141		6,75		206			7	8
7	2381,-	-	0	160.90	13,0222	0,0517	-31,9197	0	2,9992	1,3723
	67	30,2142		3,68		34			6	4
7	2381,-	-	0	160.72	14,5569	0,0646	-31,8929	0	2,9995	1,3723
	77	29,9142		5,50		549			5	
7	2381,-	-	0	160.54	15,9425	0,0775	-31,8659	0	2,9998	1,3722
	87	29,6143		5,96		802			4	6
7	2381,-	-	0	160.36	17,2173	0,0904	-31,8389	0	3,0001	1,3722
	97	29,3143		5,29		957			3	1
7	2382,-	-	0	160.18	18,4043	0,1034	-31,8115	0	3,0004	1,3721
	07	29,0142		2,91		04			2	7
7	2382,-	-	0	159.99	19,5182	0,1163	-31,7838	0	3,0007	1,3721
	17	28,7142		8,45		13			1	2
7	2382,-	-	0	159.81	20,5703	0,1292	-31,756	0	3,001	1,3720
	27	28,4141		3,04		28				8
7	2382,-	-28,114	0	159.62	21,5701	0,1421	-31,7282	0	3,0012	1,3720
	37			7,56		44			9	3
7	2382,-	-	0	159.44	22,5251	0,1550	-31,7003	0	3,0015	1,3719
	47	27,8138		1,92		56			8	9
7	2382,-	-	0	159.25	23,441	0,1679	-31,6724	0	3,0018	1,3719
	57	27,5137		5,59		62			7	4
7	2382,-	-	0	159.06	24,3226	0,1808	-31,6444	0	3,0021	1,3718
	67	27,2135		8,80		59			6	9
7	2382,-	-	0	158.88	25,1729	0,1937	-31,6164	0	3,0024	1,3718
	77	26,9132		1,65		53			5	5
7	2382,-	-26,613	0	158.69	25,995	0,2066	-31,5882	0	3,0027	1,3718
	87			3,94		46			4	
7	2382,-	-	0	158.50	26,7911	0,2195	-31,56	0	3,0030	1,3717
	97	26,3127		5,50		38			3	6
7	2383,-	-	0	158.31	27,5631	0,2324	-31,5317	0	3,0033	1,3717
	07	26,0124		6,47		35			2	1
7	2383,-	-25,712	0	158.12	28,3135	0,2453	-31,5033	0	3,0036	1,3716
	17			7,05		31			2	7
7	2383,-	-	0	157.93	29,0434	0,2582	-31,4749	0	3,0039	1,3716
	27	25,4117		7,31		31			1	2
7	2383,-	-	0	157.70	29,8951	0,2737	-31,4407	0	3,0042	1,3715



	39	25,0512		9,25		08			7	6
7	2383,53	-24,6185	0	157.435,03	30,8851	0,292277	-31,3997	0	3,00469	1,3715
7	2383,71	-24,0993	0	157.104,73	32,0317	0,314548	-31,3502	0	3,0052	1,37142
7	2383,91	-23,476	0	156.714,19	33,3546	0,341234	-31,2948	0	3,00581	1,37134
7	2384,16	-22,728	0	156.338,45	34,8742	0,372933	-31,28	0	3,00644	1,37149
7	2384,46	-21,8303	0	156.133,02	36,6089	0,41006	-31,3976	0	3,00694	1,37228
7	2384,82	-20,7528	0	156.363,80	38,5809	0,452463	-31,8023	0	3,00704	1,37446
7	2385,25	-19,4599	0	157.164,39	40,8143	0,500156	-32,5768	0	3,00666	1,37842
7	2385,77	-17,9086	0	158.581,57	43,334	0,553248	-33,7578	0	3,00589	1,38439
7	2386,38	-16,0476	0	160.578,52	46,1639	0,61206	-35,3403	0	3,00489	1,39241
7	2387,13	-13,8153	0	163.107,50	49,3219	0,676908	-37,3249	0	3,00383	1,40263
7	2388,02	-11,1375	0	166.086,70	52,8338	0,748125	-39,6214	0	3,00295	1,41458
7	2389,09	-7,92479	0	169.305,87	56,713	0,828476	-41,6041	0	3,00262	1,42473
7	2390,37	-4,06934	0	172.418,68	60,9484	0,921463	-42,9046	0	3,00334	1,43091
7	2391,91	0,559571	0	174.925,07	65,6636	1,02973	-43,1313	0	3,00579	1,43099
7	2393,76	6,12148	0	175.863,73	71,5259	1,15141	-41,5486	0	3,01135	1,42077
7	2395,98	12,8136	0	173.637,89	78,7543	1,29761	-37,1001	0	3,0221	1,39568
7	2398,64	20,8827	0	165.873,96	87,402	1,48876	-28,6829	0	3,04065	1,35254
7	2401,84	30,714	0	147.333,47	97,1808	1,73388	-14,6528	0	3,13557	1,28921
7	2402,	31,458	0	145.21	97,8521	1,7541	-13,3231	0	3,1464	1,2836



	08			0,65					7	8
7	2402, 31,458 08	0	145.21 0,65	97,8521	1,7541	-13,3231	0	3,1464	1,2836	
7	2405, 43,1088 67	0	109.97 7,94	106,277	2,1591	4,62485	0	3,3288	1,2158	
7	2410, 58,9052 27	0	77.194, 58	114,25	2,7882 1	12,8455	0	3,5308	1,1930	
7	2411, 62,6005 31	0	71.916, 23	115,838	2,9317 4	13,833	0	3,5697	1,1908	
7	2411, 62,6005 31	0	71.916, 23	115,838	2,9317 4	13,833	0	3,5697	1,1908	
7	2415, 78,9532 79	0	53.839, 65	121,649	3,6125 3	16,6951	0	3,7305	1,1854	
7	2422, 104,447 42	0	36.221, 44	127,743	4,8611	18,8605	0	3,9627	1,1828	
7	2430, 136,945 37	0	24.537, 68	131,756	6,5844 6	20,0525	0	4,2103	1,1822	
7	2430, 139,415 95	0	23.915, 57	131,988	6,7187 7	20,1109	0	4,2272	1,1822	
7	2439, 178,409 91	0	16.914, 95	135,577	8,7937	20,7338	0	4,4588	1,1822	
7	2448, 216,375 25	0	13.024, 14	139,024	10,745 5	21,7817	0	4,6389	1,1797	
8	2775, - 69 32,2111	0	1,00	0,00177 245	0,1512 74	24,6209	0	3,1802	1,1739	
8	2775, - 79 31,9102	0	154.53 9,06	6,60405	0,0129 25	-31,1129	0	3,0068	1,3716	
8	2775, - 89 31,6095	0	154.59 7,74	9,33955	0,0257 785	-31,1391	0	3,0070	1,3717	
8	2775, - 99 31,3088	0	154.46 9,03	11,4356	0,0386 456	-31,122	0	3,0073	1,3717	
8	2776, -31,008 09	0	154.31 4,46	13,2046	0,0515 016	-31,0993	0	3,0076	1,3717	
8	2776, - 19 30,7072	0	154.14 5,46	14,7609	0,0643 649	-31,0741	0	3,0079	1,3716	
8	2776, - 29 30,4064	0	153.97 5,18	16,1662	0,0772 33	-31,0486	0	3,0082	1,3716	



8	2776,39	-30,1056	0	153.803,99	17,459	0,0900918	-31,0231	0	3,00846	1,37157
8	2776,49	-29,8047	0	153.631,24	18,6629	0,102943	-30,9972	0	3,00873	1,37153
8	2776,59	-29,5038	0	153.456,53	19,7926	0,115795	-30,9711	0	3,00901	1,37149
8	2776,69	-29,2029	0	153.280,88	20,8599	0,128652	-30,9448	0	3,00928	1,37145
8	2776,79	-28,902	0	153.105,16	21,8739	0,141512	-30,9185	0	3,00955	1,3714
8	2776,89	-28,601	0	152.929,36	22,8425	0,154368	-30,8922	0	3,00982	1,37136
8	2776,99	-28,3	0	152.752,96	23,7716	0,167217	-30,8658	0	3,01009	1,37132
8	2777,09	-27,999	0	152.576,07	24,6658	0,180059	-30,8394	0	3,01036	1,37128
8	2777,19	-27,698	0	152.398,88	25,5285	0,192897	-30,8129	0	3,01064	1,37123
8	2777,29	-27,3969	0	152.221,20	26,3624	0,205734	-30,7863	0	3,01091	1,37119
8	2777,39	-27,0958	0	152.042,84	27,1702	0,218569	-30,7597	0	3,01118	1,37115
8	2777,49	-26,7946	0	151.863,91	27,9534	0,231411	-30,7329	0	3,01146	1,37111
8	2777,59	-26,4935	0	151.684,62	28,7148	0,24425	-30,7061	0	3,01174	1,37106
8	2777,69	-26,1923	0	151.505,03	29,4554	0,257094	-30,6793	0	3,01201	1,37102
8	2777,81	-25,8308	0	151.289,19	30,3196	0,272504	-30,647	0	3,01234	1,37097
8	2777,95	-25,397	0	151.029,71	31,3241	0,290994	-30,6083	0	3,01274	1,37091
8	2778,12	-24,8764	0	150.717,23	32,4877	0,313171	-30,5616	0	3,01322	1,37083
8	2778,33	-24,2515	0	150.345,04	33,8302	0,339753	-30,5079	0	3,01379	1,37075
8	2778,58	-23,5015	0	149.981,08	35,3725	0,371351	-30,4909	0	3,01439	1,37088



8	2778, - 88 22,6014	0	149.76 6,27	37,1336	0,4084 17	-30,5966	0	3,0148 8	1,3716 1
8	2779, - 24 21,5211	0	149.96 7,65	39,1358	0,4507 81	-30,9847	0	3,0149 8	1,3737
8	2779, - 67 20,2247	0	150.71 9,23	41,4035	0,4984 47	-31,7405	0	3,0146 3	1,3775 7
8	2780, - 18 18,6693	0	152.07 4,61	43,9627	0,5514 94	-32,9054	0	3,0138 8	1,3834 6
8	2780, - 8 16,8034	0	154.00 2,14	46,8377	0,6102 23	-34,4769	0	3,0129	1,3914 3
8	2781, - 54 14,5652	0	156.45 5,81	50,0477	0,6749 44	-36,4551	0	3,0118 4	1,4015 9
8	2782, - 44 11,8802	0	159.36 4,69	53,6188	0,7458 53	-38,7929	0	3,0109 3	1,4138
8	2783, -8,659 51	0	162.54 3,19	57,5685	0,8254 34	-40,8938	0	3,0104 9	1,4246 6
8	2784, - 79 4,79357	0	165.66 8,13	61,8877	0,9172 21	-42,3448	0	3,011	1,4317 4
8	2786, - 33 0,15311	0	168.27 5,51	66,6547	1,0244 3	-42,7679	0	3,0130 9	1,4328 8
8	2788, 5,42169 18	0	169.50 8,09	72,5306	1,1449 3	-41,4816	0	3,0179 6	1,4243 8
8	2790, 12,1272 4	0	167.88 4,96	79,8004	1,2885	-37,4456	0	3,0275 5	1,4013 1
8	2793, 20,2086 06	0	161.26 6,18	88,5186	1,4747 9	-29,5905	0	3,0441 9	1,3603 8
8	2796, 30,0312 25	0	145.26 6,69	98,5229	1,7124 5	-16,5137	0	3,1271 9	1,2999 2
8	2796, 32,2487 96	0	139.78 3,99	100,566	1,7706 9	-12,9056	0	3,1574 5	1,2846 7
8	2796, 32,2487 96	0	139.78 3,99	100,566	1,7706 9	-12,9056	0	3,1574 5	1,2846 7
8	2800, 42,3708 09	0	110.44 7,62	108,155	2,1126 7	3,20407	0	3,3122 4	1,2224 6
8	2804, 58,0885 69	0	77.535, 82	116,57	2,7283 1	12,2937	0	3,5148 9	1,1956 2
8	2806, 65,8383 87	0	66.907, 53	120	3,0284 2	14,3468	0	3,5954 7	1,1908 2



8	2806,87	65,8383	0	66.907,53	120	3,02842	14,3468	0	3,59547	1,19082
8	2810,21	78,0448	0	54.177,88	124,598	3,52089	16,4192	0	3,71134	1,18673
8	2816,83	103,385	0	36.598,60	131,454	4,70524	18,711	0	3,93703	1,18352
8	2824,78	135,645	0	24.808,12	136,194	6,34744	19,9733	0	4,18007	1,18255
8	2825,6	139,073	0	23.916,53	136,524	6,53333	20,0599	0	4,20413	1,18251
8	2834,32	176,845	0	16.958,47	140,002	8,54556	20,6985	0	4,43379	1,18249
8	2842,93	215,844	0	12.898,63	143,544	10,5499	21,6989	0	4,62231	1,18014
9	3169,98	-32,9066	0	1,00	0,00177245	0,151274	24,6206	0	3,18023	1,17391
9	3170,08	-32,605	0	149.109,58	6,682	0,012877	-30,4438	0	3,01367	1,37114
9	3170,18	-32,3036	0	149.146,07	9,44957	0,0256846	-30,4672	0	3,01397	1,37126
9	3170,28	-32,0022	0	149.032,14	11,5687	0,0385139	-30,4527	0	3,01423	1,37124
9	3170,38	-31,7007	0	148.892,87	13,3567	0,0513336	-30,4326	0	3,01447	1,37121
9	3170,48	-31,3993	0	148.736,05	14,9341	0,0641368	-30,4092	0	3,01473	1,37118
9	3170,58	-31,0978	0	148.569,55	16,3594	0,0769399	-30,3843	0	3,015	1,37114
9	3170,68	-30,7963	0	148.400,95	17,6674	0,0897547	-30,3591	0	3,01526	1,37109
9	3170,78	-30,4947	0	148.233,45	18,8838	0,102571	-30,3341	0	3,01552	1,37105
9	3170,88	-30,1932	0	148.066,46	20,0265	0,115383	-30,3092	0	3,01578	1,37102
9	3170,98	-29,8916	0	147.898,91	21,108	0,128184	-30,2842	0	3,01604	1,37098
9	3171,	-29,59	0	147.73	22,137	0,1409	-30,259	0	3,0162	1,3709



	08		0,13		78		9	4		
9	3171,18	-29,2883	0	147.560,07	23,119	0,153776	-30,2336	0	3,01655	1,37089
9	3171,28	-28,9867	0	147.389,30	24,0602	0,166574	-30,2081	0	3,01682	1,37085
9	3171,38	-28,685	0	147.218,28	24,9645	0,179379	-30,1825	0	3,01708	1,37081
9	3171,48	-28,3832	0	147.047,41	25,8362	0,192185	-30,157	0	3,01734	1,37077
9	3171,58	-28,0815	0	146.876,69	26,679	0,20499	-30,1316	0	3,0176	1,37073
9	3171,68	-27,7797	0	146.706,10	27,4955	0,217792	-30,1062	0	3,01786	1,37069
9	3171,78	-27,4779	0	146.535,36	28,2883	0,230588	-30,0807	0	3,01812	1,37065
9	3171,88	-27,1761	0	146.364,24	29,0592	0,243381	-30,0552	0	3,01838	1,37061
9	3171,98	-26,8742	0	146.192,70	29,8099	0,256169	-30,0297	0	3,01864	1,37057
9	3172,1	-26,512	0	145.986,54	30,6865	0,271506	-29,9989	0	3,01895	1,37052
9	3172,25	-26,0772	0	145.738,39	31,7053	0,289913	-29,962	0	3,01933	1,37046
9	3172,42	-25,5554	0	145.439,36	32,8854	0,311993	-29,9174	0	3,01978	1,37039
9	3172,63	-24,9292	0	145.078,81	34,2446	0,3385	-29,8636	0	3,02033	1,37031
9	3172,88	-24,1776	0	144.650,31	35,8042	0,370292	-29,8023	0	3,02099	1,37022
9	3173,17	-23,2755	0	144.388,45	37,5861	0,4075	-29,8757	0	3,0215	1,3708
9	3173,53	-22,1928	0	144.557,00	39,614	0,449911	-30,2475	0	3,0216	1,37281
9	3173,96	-20,8936	0	145.295,59	41,9118	0,497475	-31,0046	0	3,02123	1,37668
9	3174,48	-19,3348	0	146.619,87	44,5046	0,550427	-32,1669	0	3,02049	1,38255
9	3175,-	-	0	148.49	47,4169	0,6091	-33,7302	0	3,0195	1,3904



	1	17,4649		3,48		18			2	8
9	3175,84	-15,2218	0	150.878,78	50,676	0,67365	-35,7007	0	3,01848	1,40059
9	3176,73	-12,5309	0	153.721,21	54,3025	0,744264	-38,0623	0	3,01755	1,41294
9	3177,8	-9,30271	0	156.866,03	58,3122	0,823235	-40,2667	0	3,01702	1,42441
9	3179,09	-5,429	0	159.997,83	62,7032	0,914035	-41,8479	0	3,01736	1,43227
9	3180,63	-0,778957	0	162.684,04	67,5127	1,02037	-42,4412	0	3,01916	1,43441
9	3182,48	4,8066	0	164.151,90	73,3508	1,14058	-41,4145	0	3,02347	1,42736
9	3184,69	11,5234	0	163.033,69	80,6258	1,28196	-37,7599	0	3,03209	1,4062
9	3187,36	19,615	0	157.299,42	89,4326	1,46349	-30,3715	0	3,04728	1,36716
9	3190,55	29,4351	0	143.080,98	99,5826	1,69569	-17,9499	0	3,12205	1,30862
9	3191,67	32,9448	0	135.248,49	102,873	1,78562	-12,5572	0	3,16693	1,2855
9	3191,67	32,9448	0	135.248,49	102,873	1,78561	-12,5572	0	3,16694	1,2855
9	3194,38	41,7325	0	110.728,99	109,664	2,07551	1,8473	0	3,29847	1,22882
9	3198,99	57,3829	0	77.908,69	118,472	2,67596	11,7633	0	3,50064	1,19807
9	3202,18	68,7475	0	62.849,02	123,623	3,11497	14,76	0	3,61769	1,19082
9	3202,18	68,7475	0	62.849,02	123,623	3,11497	14,76	0	3,61769	1,19082
9	3204,51	77,2639	0	54.410,73	126,986	3,44945	16,1692	0	3,69605	1,18792
9	3211,13	102,481	0	37.006,62	134,492	4,57037	18,5618	0	3,91432	1,18414
9	3219,08	134,55	0	25.088,57	140,019	6,14121	19,8927	0	4,15296	1,18287



9	3220,13	138,937	0	23.917,69	140,465	6,3771	20,0101	0	4,1841	1,1828
9	3228,62	175,512	0	17.019,48	143,833	8,3273	20,6621	0	4,4112	1,1825
9	3237,51	215,634	0	12.781,64	147,478	10,389	21,6238	0	4,6082	1,1804
10	3564,17	-33,5	0	1,00	0,00177	0,1512	24,6203	0	3,1802	1,1739
10	3564,27	-33,1979	0	144.54,1,94	6,74875	0,0128	-29,8849	0	3,0194	1,3707
10	3564,37	-32,8959	0	144.59,6,93	9,54403	0,0256	-29,9125	0	3,0196	1,3708
10	3564,47	-32,5939	0	144.47,6,68	11,6865	0,0383	-29,8972	0	3,0199	1,3708
10	3564,57	-32,2919	0	144.33,4,98	13,494	0,0511	-29,8768	0	3,0201	1,3708
10	3564,67	-31,9899	0	144.17,9,80	15,0855	0,0639	-29,8538	0	3,0204	1,3708
10	3564,77	-31,6878	0	144.02,2,31	16,5219	0,0767	-29,8305	0	3,0206	1,3707
10	3564,87	-31,3858	0	143.86,5,00	17,8431	0,0894	-29,8071	0	3,0209	1,3707
10	3564,97	-31,0836	0	143.70,6,39	19,0736	0,1022	-29,7835	0	3,0211	1,3706
10	3565,07	-30,7815	0	143.54,6,38	20,229	0,1150	-29,7597	0	3,0214	1,3706
10	3565,17	-30,4794	0	143.38,5,04	21,3204	0,1277	-29,7356	0	3,0216	1,3706
10	3565,27	-30,1772	0	143.22,3,44	22,3574	0,1405	-29,7115	0	3,0219	1,3705
10	3565,37	-29,875	0	143.06,1,96	23,3476	0,1533	-29,6875	0	3,0221	1,3705
10	3565,47	-29,5728	0	142.90,0,22	24,2973	0,1660	-29,6634	0	3,0223	1,3705
10	3565,57	-29,2705	0	142.73,7,84	25,2112	0,1788	-29,6392	0	3,0226	1,3704
10	3565,	-	0	142.57	26,0934	0,1916	-29,615	0	3,0228	1,3704



	67	28,9682		5,28		11			8	2
10	3565,77	-28,6659	0	142.412,40	26,9461	0,204364	-29,5908	0	3,02313	1,37038
10	3565,87	-28,3636	0	142.249,04	27,7725	0,217113	-29,5665	0	3,02337	1,37035
10	3565,97	-28,0613	0	142.085,10	28,5742	0,229864	-29,5421	0	3,02362	1,37031
10	3566,07	-27,7589	0	141.920,70	29,353	0,24262	-29,5176	0	3,02387	1,37027
10	3566,17	-27,4565	0	141.756,00	30,1112	0,255374	-29,4931	0	3,02412	1,37023
10	3566,29	-27,0936	0	141.558,02	30,9953	0,270684	-29,4636	0	3,02442	1,37018
10	3566,43	-26,658	0	141.320,06	32,0231	0,289053	-29,4282	0	3,02478	1,37013
10	3566,6	-26,1353	0	141.033,80	33,2133	0,311091	-29,3856	0	3,02521	1,37006
10	3566,81	-25,5079	0	140.688,82	34,5865	0,337521	-29,3342	0	3,02573	1,36998
10	3567,06	-24,755	0	140.323,32	36,1645	0,369041	-29,3022	0	3,02631	1,37002
10	3567,36	-23,8513	0	140.120,12	37,9685	0,405915	-29,4042	0	3,02675	1,37072
10	3567,72	-22,7668	0	140.269,18	40,0195	0,448245	-29,761	0	3,02688	1,37266
10	3568,15	-21,4653	0	140.942,99	42,3423	0,495891	-30,485	0	3,02657	1,37637
10	3568,66	-19,9037	0	142.196,92	44,9631	0,548927	-31,6201	0	3,02587	1,38212
10	3569,28	-18,0304	0	144.012,99	47,9083	0,607585	-33,1715	0	3,02491	1,38999
10	3570,02	-15,7833	0	146.350,81	51,2004	0,672114	-35,1407	0	3,02386	1,40016
10	3570,92	-13,0876	0	149.145,45	54,8669	0,742599	-37,5175	0	3,0229	1,41254
10	3571,99	-9,85366	0	152.248,87	58,9289	0,821001	-39,8023	0	3,02232	1,42449
10	3573,-	-	0	155.37	63,3819	0,9109	-41,4845	0	3,0225	1,4329



	27	5,97321	0,46		44			6	7	
10	3574,81	-1,3153	0	158.099,02	68,2474	1,01628	-42,2065	0	3,02415	1,43587
10	3576,66	4,27914	0	159.718,98	74,0991	1,13573	-41,3663	0	3,02807	1,42987
10	3578,88	11,0054	0	158.945,14	81,4	1,27547	-37,9778	0	3,036	1,41005
10	3581,54	19,1059	0	153.864,84	90,265	1,4538	-30,9474	0	3,05007	1,3725
10	3584,73	28,923	0	141.091,86	100,55	1,68189	-19,0987	0	3,11695	1,31578
10	3586,2	33,5328	0	131.538,68	104,929	1,79755	-12,2433	0	3,17452	1,28605
10	3586,2	33,5328	0	131.538,68	104,929	1,79755	-12,2433	0	3,17451	1,28605
10	3588,57	41,1841	0	110.844,66	110,984	2,04529	0,611956	0	3,28766	1,23476
10	3593,17	56,7791	0	78.241,61	120,128	2,63139	11,2783	0	3,4883	1,20031
10	3597,24	71,2839	0	59.561,11	126,829	3,1911	15,0937	0	3,63667	1,19082
10	3597,24	71,2839	0	59.561,11	126,829	3,19111	15,0937	0	3,63666	1,19082
10	3598,69	76,599	0	54.525,78	129,01	3,39525	15,9537	0	3,68426	1,18899
10	3605,31	101,723	0	37.127,85	137,087	4,48296	18,4495	0	3,89966	1,18469
10	3613,26	133,659	0	25.217,40	143,322	5,99489	19,8292	0	4,13321	1,18317
10	3614,44	138,519	0	23.918,21	143,918	6,24702	19,964	0	4,16724	1,18307
10	3622,8	174,441	0	17.023,27	147,252	8,16208	20,6329	0	4,39394	1,18276
10	3631,82	214,986	0	12.693,97	150,936	10,2454	21,5494	0	4,59567	1,18083
10	3631,96	215,636	0	12.641,27	150,995	10,2783	21,5686	0	4,59859	1,18078



Scenario (User defined source) : 300mm-Q63,6 Disp F2

72438-4FSRUInvioGNL-12R\Invio GNL Water\12R Manichette GNL riempimento FSRU\300mm-Q63,6 Disp F2

Material to track **GAS NATURALE**

Weather: Category 2/F

Wind speed [m/s]	2
Pasquill stability	F stable - night with moderate clouds and light/moderate wind
Atmospheric temperature [degC]	25
Relative humidity [fraction]	0,75
Solar radiation flux [kW/m2]	0,5
Mixing layer height [m]	100

Observer Release Data and Observer Mass Data

Observer number	Release type	Start time [s]	Start downwind distance [m]	Unit	Masses or mass rates		
					Release	Rainout	Final
1	Continuous	0	0	kg/s	36,7	0	36,7
2	Continuous	3600	0	kg/s	36,7	0	36,7

Time-varying Observer Dispersion Data (before along-wind-diffusion effects)

Dispersion data correspond to an averaging time of: 18,75 s

Observer number	Time [s]	Down wind distance [m]	C/Li ne height [m]	C/Li ne conc [ppm]	Effect ive width [m]	Effect ive depth [m]	C/Li ne vapour temperature [degC]	C/Li ne liquid fraction	Centr oid velocity [m/s]	C/Li ne cloud density [kg/m3]
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1	0	0	0	999.99 9,41	1,8199 6	0,8819 12	-160,955	0	11,965 5	1,9109 5
1	0,01	0,11885 5	0	996.18 4,39	1,8603 8	0,8833 42	-160,203	0	11,818 1	1,9019 1
1	0,02	0,23631 6	0	992.44 5,10	1,9006 9	0,8848 65	-159,464	0	11,674 5	1,8931 7
1	0,03	0,35236 8	0	988.78 0,19	1,9409 1	0,8864 65	-158,738	0	11,534 5	1,8847 2
1	0,04	0,46704 3	0	985.18 7,09	1,9810 2	0,8881 34	-158,025	0	11,398 2	1,8765 3
1	0,05	0,58040 1	0	981.66 2,12	2,0210 5	0,8898 69	-157,324	0	11,265 3	1,8685 9
1	0,06	0,69243 6	0	978.20 4,30	2,0609 9	0,8916 58	-156,636	0	11,135 6	1,8609
1	0,07	0,80321 9	0	974.80 9,84	2,1008 5	0,8935 02	-155,958	0	11,009 2	1,8534 4
1	0,08	0,91272 6	0	971.47 8,57	2,1406 2	0,8953 86	-155,292	0	10,885 8	1,8462
1	0,09	1,02103	0	968.20 6,62	2,1803 2	0,8973 15	-154,637	0	10,765 3	1,8391 6
1	0,1	1,12814	0	964.99 3,20	2,2199 5	0,8992 78	-153,992	0	10,647 8	1,8323 3
1	0,11	1,23408	0	961.83 5,72	2,2595	0,9012 74	-153,358	0	10,532 9	1,8256 8
1	0,12	1,33889	0	958.73 2,60	2,2989 8	0,9033	-152,733	0	10,420 7	1,8192 1
1	0,13	1,44257	0	955.68 2,72	2,3384	0,9053 49	-152,118	0	10,311 2	1,8129 2
1	0,14	1,54517	0	952.68 3,71	2,3777 6	0,9074 22	-151,512	0	10,204	1,8067 9
1	0,15	1,6467	0	949.73 4,42	2,4170 5	0,9095 14	-150,915	0	10,099 3	1,8008 2
1	0,16	1,74718	0	946.83 3,34	2,4562 8	0,9116 23	-150,327	0	9,9969 2	1,795
1	0,17	1,84665	0	943.97 9,00	2,4954 5	0,9137 47	-149,748	0	9,8967 8	1,7893 3
1	0,18	1,94511	0	941.16 9,86	2,5345 6	0,9158 85	-149,177	0	9,7988	1,7837 9



1	0,19	2,0426	0	938.40 4,56	2,5736 2	0,9180 35	-148,614	0	9,7029 3	1,7783 9
1	0,2	2,13915	0	935.68 1,73	2,6126 3	0,9201 95	-148,059	0	9,6090 8	1,7731 1
1	0,212	2,25378	0	932.46 8,65	2,6593 8	0,9228	-147,403	0	9,4990 5	1,7669 5
1	0,226 4	2,38957	0	928.69 0,36	2,7153 7	0,9259 33	-146,63	0	9,3706 3	1,7597 7
1	0,243 68	2,5501	0	924.26 2,14	2,7824 3	0,9297 05	-145,722	0	9,2214 9	1,7514 6
1	0,264 416	2,73937	0	919.09 3,15	2,8627 1	0,9342 42	-144,659	0	9,0492 6	1,7419
1	0,289 299	2,96189	0	913.08 6,81	2,9588 1	0,9396 97	-143,42	0	8,8516 9	1,7309 7
1	0,319 159	3,22254	0	906.14 6,28	3,0737 8	0,9462 3	-141,984	0	8,6268 3	1,7185 7
1	0,354 991	3,52672	0	898.17 1,91	3,2112 9	0,9540 44	-140,327	0	8,3730 8	1,7046 3
1	0,397 989	3,8803	0	889.06 7,28	3,3756 8	0,9633 73	-138,427	0	8,0894 4	1,6890 8
1	0,449 587	4,2891	0	878.75 5,99	3,5721 1	0,9744 22	-136,263	0	7,7759 8	1,6719 4
1	0,511 504	4,75946	0	867.16 6,85	3,8067 1	0,9874 64	-133,816	0	7,4335 7	1,6532 3
1	0,585 805	5,29753	0	854.25 7,97	4,0867 1	1,0027 4	-131,073	0	7,0644 4	1,6330 4
1	0,674 966	5,90934	0	840.01 4,17	4,4206 7	1,0205	-128,023	0	6,6720 3	1,6115 1
1	0,781 959	6,60071	0	824.45 0,83	4,8186 5	1,0409 8	-124,663	0	6,2609 4	1,5888 4
1	0,910 351	7,37695	0	807.62 0,90	5,2924 8	1,0643 7	-120,996	0	5,8368 4	1,5652 3
1	1,064 42	8,24276	0	789.61 4,21	5,8559 2	1,0908 2	-117,033	0	5,4061 4	1,5409 6
1	1,249 31	9,20191	0	770.55 9,65	6,5249 7	1,1203 9	-112,788	0	4,9758 2	1,5162 4
1	1,471 17	10,2577	0	750.60 7,01	7,3179 4	1,1532 6	-108,262	0	4,5525 9	1,4911 3



1	1,737 4	11,4131	0	729.92 3,38	8,2555 8	1,1896 8	-103,451	0	4,1425 2	1,4656 1
1	2,056 88	12,6711	0	708.68 5,05	9,3610 5	1,2299 6	-98,3609	0	3,7504 7	1,4397 6
1	2,440 26	14,0337	0	687.09 6,22	10,659 5	1,2741	-93,001	0	3,3811 3	1,4136 5
1	2,900 31	15,5049	0	665.34 5,25	12,162 9	1,3224 7	-87,3723	0	3,0373 5	1,3872 8
1	3,452 37	17,0921	0	643.59 9,34	13,867 1	1,3761 4	-81,4655	0	2,7199 5	1,3606 1
1	4,114 84	18,8002	0	622.06 1,94	15,781 7	1,4357 7	-75,2737	0	2,4302 6	1,3335 8
1	4,909 81	20,6356	0	600.92 5,31	17,911 5	1,5024 6	-68,7865	0	2,1686 2	1,3061 4
1	5,863 77	22,6062	0	580.38 0,55	20,252 9	1,5778 8	-62,0269	0	1,9345 6	1,2784 6
1	7,008 53	24,719	0	560.64 7,98	22,788 9	1,6597 5	-55,2047	0	1,7307 2	1,2517
1	8,382 23	26,9979	0	541.78 3,70	25,486 1	1,7383 7	-48,4681	0	1,5662 5	1,2265 5
1	10,03 07	29,473	0	523.82 3,01	28,243 2	1,8284 4	-41,8539	0	1,4289 8	1,2029 9
1	12,00 18	32,1774	0	505.68 1,63	30,599 6	1,9538 5	-35,264	0	1,3188 2	1,1809 8
1	12,00 18	32,1774	0	505.68 1,63	30,599 6	1,9538 5	-35,264	0	1,3188 2	1,1809 8
1	12,00 88	32,1867	0	505.60 8,53	30,600 1	1,9546 9	-35,2404	0	1,3185 5	1,1809 1
1	14,38 26	35,2166	0	442.94 9,98	30,968 4	2,4725	-21,9778	0	1,2419	1,1546 8
1	17,23 11	38,7078	0	327.65 2,27	32,038 7	3,5203 4	-4,61272	0	1,2226 1	1,1405 2
1	20,64 93	42,9525	0	233.01 4,56	33,626 2	4,7476 9	5,46532	0	1,2663 1	1,1454 3
1	24,75 12	48,2999	0	168.36 3,62	35,528 3	6,0162 5	11,064	0	1,3414 8	1,1530 2
1	24,75 12	48,2999	0	168.36 3,62	35,528 3	6,0162 5	11,064	0	1,3414 8	1,1530 2

1	24,75 12	48,2999	0,02	168.36 3,27	35,528 3	5,9989 2	11,0693	0	1,3409 2	1,153
1	29,67 34	54,8909	1,649 62	125.37 5,36	37,508 2	5,4836 3	14,3157	0	1,4377 3	1,1592 1
1	34,70 64	61,8022	5,272 16	89.663, 28	39,315 3	4,2445 8	16,7202	0	1,7169 1	1,1649 8
1	34,70 64	61,8022	5,272 16	89.663, 28	39,315 3	4,2431 5	16,7202	0	1,7174 2	1,1649 8
1	35,58 01	63,1781	5,936 34	83.319, 86	39,664 6	4,3257 7	17,1199	0	1,7799 6	1,1660 9
1	42,66 81	76,4567	10,47 42	49.860, 03	42,324 8	5,5705 4	19,1464	0	2,1498 6	1,1719 9
1	51,17 37	95,5156	13,24 14	34.480, 36	44,721 8	7,0317 2	20,0352	0	2,3476 8	1,1747 1
1	51,28 98	95,7875	13,25 8	34.363, 95	44,746 6	7,0491 6	20,0418	0	2,3487 7	1,1747 3
1	51,28 98	95,7875	13,25 8	34.363, 95	44,746 6	7,0500 9	20,0418	0	2,3484 8	1,1747 3
1	61,38 05	119,517	12,51 51	27.272, 52	46,552	8,8812 4	20,6079	0	2,3281 6	1,1757 1
1	65,13 49	128,079	11,19 78	24.925, 23	47,342 9	10,185 7	20,9943	0	2,2894 8	1,1754 8
1	65,13 49	128,079	11,19 78	24.925, 23	47,342 9	10,185 6	20,9943	0	2,2894 8	1,1754 8
1	67,17 22	132,615	10,32 26	23.921, 22	50,828 5	10,323 1	21,1588	0	2,2464 6	1,1754 3
1	73,62 86	146,556	7,560 7	21.806, 99	58,512	11,529 5	21,5037	0	2,1712 9	1,1754 7
1	88,32 63	178,163	2,859 16	19.658, 25	66,932	14,868 1	21,843	0	2,2009 7	1,1758 3
1	100,8 97	206,175	0,01	18.692, 21	68,765 5	17,520 1	21,9014	0	2,2786 1	1,1765 3
1	100,8 97	206,175	0	18.692, 23	68,765 5	17,535	21,899	0	2,2779 7	1,1765 5
1	105,9 64	217,734	0	18.348, 36	69,285 5	17,695 4	21,9751	0	2,2832 7	1,1764 1
1	127,1 28	266,382	0	17.024, 53	71,447 5	18,343 6	22,2625	0	2,3055 8	1,1759



1	152,526	325,419	0	15.640,78	74,0291	19,0798	22,5543	0	2,33237	1,17541
1	157,496	337,038	0	15.392,92	74,5334	19,2184	22,6059	0	2,33761	1,17532
2	3600	0	0	999.999,41	1,81996	0,881912	-160,955	0	11,9655	1,91095
2	3600,01	0,118855	0	996.184,39	1,86038	0,883342	-160,203	0	11,8181	1,90191
2	3600,02	0,236316	0	992.445,10	1,90069	0,884865	-159,464	0	11,6745	1,89317
2	3600,03	0,352368	0	988.780,19	1,94091	0,886465	-158,738	0	11,5345	1,88472
2	3600,04	0,467043	0	985.187,09	1,98102	0,888134	-158,025	0	11,3982	1,87653
2	3600,05	0,580401	0	981.662,12	2,02105	0,889869	-157,324	0	11,2653	1,86859
2	3600,06	0,692436	0	978.204,30	2,06099	0,891658	-156,636	0	11,1356	1,86096
2	3600,07	0,803219	0	974.809,84	2,10085	0,893502	-155,958	0	11,0092	1,85344
2	3600,08	0,912726	0	971.478,57	2,14062	0,895386	-155,292	0	10,8858	1,84628
2	3600,09	1,02103	0	968.206,62	2,18032	0,897315	-154,637	0	10,7653	1,83916
2	3600,1	1,12814	0	964.993,20	2,21995	0,899278	-153,992	0	10,6478	1,83233
2	3600,11	1,23408	0	961.835,72	2,2595	0,901274	-153,358	0	10,5329	1,82568
2	3600,12	1,33889	0	958.732,60	2,29898	0,90338	-152,733	0	10,4207	1,81921
2	3600,13	1,44257	0	955.682,72	2,3384	0,905349	-152,118	0	10,3112	1,81292
2	3600,14	1,54517	0	952.683,71	2,37776	0,907422	-151,512	0	10,204	1,80679
2	3600,15	1,6467	0	949.734,42	2,41705	0,909514	-150,915	0	10,0993	1,80082
2	3600,	1,74718	0	946.83	2,4562	0,9116	-150,327	0	9,9969	1,795



	16			3,34	8	23			2	
2	3600,17	1,84665	0	943.979,00	2,49545	0,913747	-149,748	0	9,89678	1,78933
2	3600,18	1,94511	0	941.169,86	2,53456	0,915885	-149,177	0	9,7988	1,78379
2	3600,19	2,0426	0	938.404,56	2,57362	0,918035	-148,614	0	9,70293	1,77839
2	3600,2	2,13915	0	935.681,73	2,61263	0,920195	-148,059	0	9,60908	1,77311
2	3600,21	2,25378	0	932.468,65	2,65938	0,9228	-147,403	0	9,49905	1,76695
2	3600,23	2,38957	0	928.690,36	2,71537	0,925933	-146,63	0	9,37063	1,75977
2	3600,24	2,5501	0	924.262,14	2,78243	0,929705	-145,722	0	9,22149	1,75146
2	3600,26	2,73937	0	919.093,15	2,86271	0,934242	-144,659	0	9,04926	1,7419
2	3600,29	2,96189	0	913.086,81	2,95881	0,939697	-143,42	0	8,85169	1,73097
2	3600,32	3,22254	0	906.146,28	3,07378	0,94623	-141,984	0	8,62683	1,71857
2	3600,35	3,52672	0	898.171,91	3,21129	0,954044	-140,327	0	8,37308	1,70463
2	3600,4	3,8803	0	889.067,28	3,37568	0,963373	-138,427	0	8,08944	1,68908
2	3600,45	4,2891	0	878.755,99	3,57211	0,974422	-136,263	0	7,77598	1,67194
2	3600,51	4,75946	0	867.166,85	3,80671	0,987464	-133,816	0	7,43357	1,65323
2	3600,59	5,29753	0	854.257,97	4,08671	1,00274	-131,073	0	7,06444	1,63304
2	3600,67	5,90934	0	840.014,17	4,42067	1,0205	-128,023	0	6,67203	1,61151
2	3600,78	6,60071	0	824.450,83	4,81865	1,04098	-124,663	0	6,26094	1,58884
2	3600,91	7,37695	0	807.620,90	5,29248	1,06437	-120,996	0	5,83684	1,56523
2	3601,	8,24276	0	789.61	5,8559	1,0908	-117,033	0	5,4061	1,5409



	06			4,21	2	2			4	6
2	3601, 25	9,20191	0	770.55 9,65	6,5249 7	1,1203 9	-112,788	0	4,9758 2	1,5162 4
2	3601, 47	10,2577	0	750.60 7,01	7,3179 4	1,1532 6	-108,262	0	4,5525 9	1,4911 3
2	3601, 74	11,4131	0	729.92 3,38	8,2555 8	1,1896 8	-103,451	0	4,1425 2	1,4656 1
2	3602, 06	12,6711	0	708.68 5,05	9,3610 5	1,2299 6	-98,3609	0	3,7504 7	1,4397 6
2	3602, 44	14,0337	0	687.09 6,22	10,659 5	1,2741	-93,001	0	3,3811 3	1,4136 5
2	3602, 9	15,5049	0	665.34 5,25	12,162 9	1,3224 7	-87,3723	0	3,0373 5	1,3872 8
2	3603, 45	17,0921	0	643.59 9,34	13,867 1	1,3761 4	-81,4655	0	2,7199 5	1,3606 1
2	3604, 11	18,8002	0	622.06 1,94	15,781 7	1,4357 7	-75,2737	0	2,4302 6	1,3335 8
2	3604, 91	20,6356	0	600.92 5,31	17,911 5	1,5024 6	-68,7865	0	2,1686 2	1,3061 4
2	3605, 86	22,6062	0	580.38 0,55	20,252 9	1,5778 8	-62,0269	0	1,9345 6	1,2784 6
2	3607, 01	24,719	0	560.64 7,98	22,788 9	1,6597 5	-55,2047	0	1,7307 2	1,2517
2	3608, 38	26,9979	0	541.78 3,70	25,486 1	1,7383 7	-48,4681	0	1,5662 5	1,2265 5
2	3610, 03	29,473	0	523.82 3,01	28,243 2	1,8284 4	-41,8539	0	1,4289 8	1,2029 9
2	3612	32,1774	0	505.68 1,63	30,599 6	1,9538 5	-35,264	0	1,3188 2	1,1809 8
2	3612	32,1774	0	505.68 1,63	30,599 6	1,9538 5	-35,264	0	1,3188 2	1,1809 8
2	3612, 01	32,1867	0	505.60 8,53	30,600 1	1,9546 9	-35,2404	0	1,3185 5	1,1809 1
2	3614, 38	35,2166	0	442.94 9,98	30,968 4	2,4725	-21,9778	0	1,2419	1,1546 8
2	3617, 23	38,7078	0	327.65 2,27	32,038 7	3,5203 4	-4,61272	0	1,2226 1	1,1405 2
2	3620,	42,9525	0	233.01	33,626	4,7476	5,46532	0	1,2663	1,1454



	65			4,56	2	9			1	3
2	3624,75	48,2999	0	168.36 3,62	35,528 3	6,0162 5	11,064	0	1,3414 8	1,1530 2
2	3624,75	48,2999	0	168.36 3,62	35,528 3	6,0162 5	11,064	0	1,3414 8	1,1530 2
2	3624,75	48,2999	0,02	168.36 3,27	35,528 3	5,9989 2	11,0693	0	1,3409 2	1,153
2	3629,67	54,8909	1,649 62	125.37 5,36	37,508 2	5,4836 3	14,3157	0	1,4377 3	1,1592 1
2	3634,71	61,8022	5,272 16	89.663, 28	39,315 3	4,2445 8	16,7202	0	1,7169 1	1,1649 8
2	3634,71	61,8022	5,272 16	89.663, 28	39,315 3	4,2431 5	16,7202	0	1,7174 2	1,1649 8
2	3635,58	63,1781	5,936 34	83.319, 86	39,664 6	4,3257 7	17,1199	0	1,7799 6	1,1660 9
2	3642,67	76,4567	10,47 42	49.860, 03	42,324 8	5,5705 4	19,1464	0	2,1498 6	1,1719 9
2	3651,17	95,5156	13,24 14	34.480, 36	44,721 8	7,0317 2	20,0352	0	2,3476 8	1,1747 1
2	3651,29	95,7875	13,25 8	34.363, 95	44,746 6	7,0491 6	20,0418	0	2,3487 7	1,1747 3
2	3651,29	95,7875	13,25 8	34.363, 95	44,746 6	7,0500 9	20,0418	0	2,3484 8	1,1747 3
2	3661,38	119,517	12,51 51	27.272, 52	46,552	8,8812 4	20,6079	0	2,3281 6	1,1757 1
2	3665,13	128,079	11,19 78	24.925, 23	47,342 9	10,185 7	20,9943	0	2,2894 8	1,1754 8
2	3665,13	128,079	11,19 78	24.925, 23	47,342 9	10,185 6	20,9943	0	2,2894 8	1,1754 8
2	3667,17	132,615	10,32 26	23.921, 22	50,828 5	10,323 1	21,1588	0	2,2464 6	1,1754 3
2	3673,63	146,556	7,560 7	21.806, 99	58,512	11,529 5	21,5037	0	2,1712 9	1,1754 7
2	3688,33	178,163	2,859 16	19.658, 25	66,932	14,868 1	21,843	0	2,2009 7	1,1758 3
2	3700,9	206,175	0,01	18.692, 21	68,765 5	17,520 1	21,9014	0	2,2786 1	1,1765 3
2	3700,	206,175	0	18.692,	68,765	17,535	21,899	0	2,2779	1,1765



	9			23	5				7	5
2	3705,96	217,734	0	18.348,36	69,2855	17,6954	21,9751	0	2,28327	1,17641
2	3727,13	266,382	0	17.024,53	71,4475	18,3436	22,2625	0	2,30558	1,1759
2	3752,53	325,419	0	15.640,78	74,0291	19,0798	22,5543	0	2,33237	1,17541
2	3757,5	337,038	0	15.392,92	74,5334	19,2184	22,6059	0	2,33761	1,17532

Weather: Category 5/D

Wind speed [m/s]	5
Pasquill stability	D neutral - little sun and high wind or overcast/windy night
Atmospheric temperature [degC]	25
Relative humidity [fraction]	0,75
Solar radiation flux [kW/m2]	0,5
Mixing layer height [m]	800

Observer Release Data and Observer Mass Data

Observer number	Release type	Start time [s]	Start downwind distance [m]	Unit	Masses or mass rates		
					Release	Rainout	Final
1	Continuous	0	0	kg/s	36,7	0	36,7
2	Continuous	3600	0	kg/s	36,7	0	36,7

Time-varying Observer Dispersion Data (before along-wind-diffusion effects)

Dispersion data correspond to an averaging time of: 18,75 s

Observer number	Time [s]	Down wind distance [m]	C/Li ne height [m]	C/Li ne conc [ppm]	Effect ive width [m]	Effect ive depth [m]	C/Li ne vapour temperature [degC]	C/Li ne liquid fraction	Centr oid velocity [m/s]	C/Li ne cloud density [kg/m3]
1	0	0	0	999.99 9,41	1,8199 4	0,8819 22	-160,955	0	11,965 5	1,9109 5
1	0,01	0,11927 7	0	997.01 1,37	1,8603 1	0,8763 07	-160,27	0	11,895 4	1,9021 1
1	0,02	0,23788 3	0	994.05 5,92	1,9003 9	0,8711 31	-159,589	0	11,826 2	1,8934 4



1	0,03	0,35580 3	0	991.13 2,30	1,9402	0,8663 64	-158,912	0	11,757 7	1,8849 3
1	0,04	0,47304 8	0	988.23 9,13	1,9797 5	0,8619 73	-158,24	0	11,690 1	1,8765 8
1	0,05	0,58962 3	0	985.37 5,68	2,0190 5	0,8579 31	-157,571	0	11,623 3	1,8683 8
1	0,06	0,70553 5	0	982.54 1,00	2,0581 1	0,8542 15	-156,907	0	11,557 2	1,8603 3
1	0,07	0,82079	0	979.73 4,44	2,0969 3	0,8508 01	-156,246	0	11,491 9	1,8524 2
1	0,08	0,93539 5	0	976.95 5,27	2,1355 4	0,8476 69	-155,589	0	11,427 3	1,8446 5
1	0,09	1,04936	0	974.20 2,61	2,1739 3	0,8447 99	-154,936	0	11,363 4	1,8370 1
1	0,1	1,16269	0	971.47 6,05	2,2121 1	0,8421 75	-154,286	0	11,300 3	1,8295 1
1	0,11	1,27539	0	968.77 4,72	2,2500 9	0,8397 79	-153,639	0	11,237 9	1,8221 2
1	0,12	1,38747	0	966.09 8,47	2,2878 8	0,8375 99	-152,997	0	11,176 2	1,8148 6
1	0,13	1,49893	0	963.44 6,54	2,3254 8	0,8356 19	-152,357	0	11,115 2	1,8077 2
1	0,14	1,60979	0	960.81 8,56	2,3629	0,8338 28	-151,721	0	11,054 9	1,8007
1	0,15	1,72004	0	958.21 4,04	2,4001 5	0,8322 15	-151,088	0	10,995 3	1,7937 8
1	0,16	1,8297	0	955.63 2,55	2,4372 3	0,8307 68	-150,459	0	10,936 3	1,7869 8
1	0,17	1,93877	0	953.07 3,70	2,4741 4	0,8294 77	-149,833	0	10,878	1,7802 8
1	0,18	2,04726	0	950.53 7,01	2,5109	0,8283 32	-149,21	0	10,820 3	1,7736 9
1	0,19	2,15517	0	948.02 2,06	2,5475 1	0,8273 26	-148,59	0	10,763 3	1,7671 9
1	0,2	2,26252	0	945.52 8,44	2,5839 7	0,8264 5	-147,973	0	10,707	1,7608
1	0,212	2,3906	0	942.56 4,20	2,6275 4	0,8255 61	-147,238	0	10,640 2	1,7532 5



1	0,226 4	2,54324	0	939.04 6,44	2,6795 6	0,8247 1	-146,36	0	10,561 2	1,7443 7
1	0,243 68	2,72493	0	934.88 0,47	2,7416 4	0,8239 74	-145,316	0	10,468 2	1,7339 7
1	0,264 416	2,94084	0	929.96 0,96	2,8156 1	0,8234 72	-144,075	0	10,358 8	1,7218 2
1	0,289 299	3,19699	0	924.16 8,66	2,9036 8	0,8233 56	-142,604	0	10,231	1,7077 2
1	0,319 159	3,50021	0	917.37 3,36	3,0084 3	0,8238 25	-140,862	0	10,082 2	1,6914 4
1	0,354 991	3,85833	0	909.43 3,51	3,1328 7	0,8251 37	-138,807	0	9,9100 6	1,6727 6
1	0,397 989	4,28013	0	900.20 0,99	3,2805 7	0,8275 96	-136,389	0	9,7124 6	1,6515 1
1	0,449 587	4,77534	0	889.53 0,36	3,4555 3	0,8315 95	-133,556	0	9,4874 1	1,6275 2
1	0,511 504	5,35476	0	877.28 1,63	3,6624 7	0,8375 49	-130,252	0	9,2336 9	1,6007 3
1	0,585 805	6,02998	0	863.33 5,63	3,9066 5	0,8459 6	-126,422	0	8,9507 9	1,5711 1
1	0,674 966	6,81368	0	847.60 3,09	4,1940 2	0,8573 24	-122,01	0	8,6395	1,5387 6
1	0,781 959	7,71935	0	830.04 1,88	4,5309 9	0,8721 79	-116,966	0	8,3019 4	1,5038 9
1	0,910 351	8,76128	0	810.67 2,62	4,9240 3	0,8911 01	-111,251	0	7,9416 9	1,4667 9
1	1,064 42	9,95432	0	789.58 6,76	5,3790 9	0,9147 32	-104,836	0	7,5637 5	1,4278 7
1	1,249 31	11,3147	0	766.95 9,64	5,9005 1	0,9437 8	-97,7146	0	7,1743 9	1,3876 5
1	1,471 17	12,8609	0	743.04 7,69	6,4893 2	0,9791 02	-89,9038	0	6,7808 3	1,3467
1	1,737 4	14,6126	0	718.18 3,74	7,1399 2	1,0219 7	-81,4512	0	6,3905 6	1,3056 6
1	2,056 88	16,5918	0	691.92 7,18	7,834	1,0775	-72,2968	0	6,0063 3	1,2648 8
1	2,440 26	18,8186	0	660.14 3,88	8,5268 3	1,1670 7	-61,8436	0	5,6158 8	1,2240 7



1	2,900 31	21,3142	0	624.45 9,59	9,1004 9	1,3028 8	-50,6614	0	5,2438	1,1859 6
1	3,452 37	24,1071	0	577.65 1,98	9,4127 2	1,5465 6	-38,1313	0	4,8750 2	1,1518 4
1	4,114 84	27,2464	0	509.95 0,05	9,7293 6	1,8958 4	-23,9992	0	4,6204 9	1,1259 4
1	4,909 81	30,8406	0	435.26 1,11	10,141 1	2,3314 8	-11,5607	0	4,4376 9	1,1131 8
1	5,863 77	35,0099	0	362.98 2,87	10,700 2	2,8243 4	-2,34827	0	4,3172	1,1125 1
1	7,008 53	39,9079	0	298.44 8,82	11,399 5	3,359	3,97494	0	4,2496 8	1,1189 4
1	8,382 23	45,7233	0	242.90 5,48	12,243 1	3,9392 9	8,62653	0	4,2239 3	1,1269 9
1	10,03 07	52,6882	0	196.27 5,65	13,234 7	4,5660 7	11,9611	0	4,2296 6	1,1355 3
1	12,00 88	61,0819	0	157.98 4,56	14,381 9	5,2388 3	14,3863	0	4,2578 3	1,1434 7
1	14,38 26	71,2433	0	126.82 2,12	15,689 6	5,9647 7	16,176	0	4,3031 2	1,1504 7
1	16,78 44	81,6372	0	105.01 5,08	16,937 8	6,6309 9	17,339	0	4,3520 4	1,1556 2
1	16,78 44	81,6372	0	105.01 5,08	16,937 8	6,6309 5	17,339	0	4,3520 6	1,1556 2
1	17,23 11	83,5842	0	101.69 5,91	17,161 1	6,7491 8	17,5098	0	4,3612 1	1,1564 3
1	20,64 93	98,642	0	81.312, 71	18,779 7	7,6249 5	18,5222	0	4,4316 5	1,1614 7
1	24,75 12	116,983	0	65.098, 67	20,596 4	8,5663 4	19,2901	0	4,5079 6	1,1655 8
1	29,67 34	139,385	0	51.584, 66	22,720 8	9,6430 1	19,8985	0	4,5938 4	1,1691
1	35,58 01	166,827	0	39.805, 07	25,271 9	11,011 2	20,4852	0	4,6992 2	1,1719 9
1	42,66 81	200,591	0	29.898, 60	28,352 1	12,780 2	21,8042	0	4,8268 1	1,1715 2
1	48,84 88	230,743	0	23.921, 22	31,072	14,311 7	22,552	0	4,9285 6	1,1714 3



1	51,17 37	242,259	0	22.104, 80	32,103 6	14,890 9	22,7707	0	4,9651 7	1,1714 4
1	61,38 05	293,738	0	16.121, 80	36,675 6	17,396 6	23,4637	0	5,1131 5	1,1715 7
1	73,62 86	357,327	0	11.631, 96	42,243 1	20,349 4	23,9515	0	5,2689 4	1,1718
1	73,73 38	357,881	0	11.601, 72	42,291 3	20,374 5	23,9547	0	5,2701 9	1,1718
2	3600	0	0	999.99 9,41	1,8199 4	0,8819 22	-160,955	0	11,965 5	1,9109 5
2	3600, 01	0,11927 7	0	997.01 1,37	1,8603 1	0,8763 07	-160,27	0	11,895 4	1,9021 1
2	3600, 02	0,23788 3	0	994.05 5,92	1,9003 9	0,8711 31	-159,589	0	11,826 2	1,8934 4
2	3600, 03	0,35580 3	0	991.13 2,30	1,9402	0,8663 64	-158,912	0	11,757 7	1,8849 3
2	3600, 04	0,47304 8	0	988.23 9,13	1,9797 5	0,8619 73	-158,24	0	11,690 1	1,8765 8
2	3600, 05	0,58962 3	0	985.37 5,68	2,0190 5	0,8579 31	-157,571	0	11,623 3	1,8683 8
2	3600, 06	0,70553 5	0	982.54 1,00	2,0581 1	0,8542 15	-156,907	0	11,557 2	1,8603 3
2	3600, 07	0,82079	0	979.73 4,44	2,0969 3	0,8508 01	-156,246	0	11,491 9	1,8524 2
2	3600, 08	0,93539 5	0	976.95 5,27	2,1355 4	0,8476 69	-155,589	0	11,427 3	1,8446 5
2	3600, 09	1,04936	0	974.20 2,61	2,1739 3	0,8447 99	-154,936	0	11,363 4	1,8370 1
2	3600, 1	1,16269	0	971.47 6,05	2,2121 1	0,8421 75	-154,286	0	11,300 3	1,8295 1
2	3600, 11	1,27539	0	968.77 4,72	2,2500 9	0,8397 79	-153,639	0	11,237 9	1,8221 2
2	3600, 12	1,38747	0	966.09 8,47	2,2878 8	0,8375 99	-152,997	0	11,176 2	1,8148 6
2	3600, 13	1,49893	0	963.44 6,54	2,3254 8	0,8356 19	-152,357	0	11,115 2	1,8077 2
2	3600,	1,60979	0	960.81	2,3629	0,8338	-151,721	0	11,054	1,8007



	14			8,56		28			9	
2	3600,15	1,72004	0	958.214,04	2,40015	0,832215	-151,088	0	10,9953	1,79378
2	3600,16	1,8297	0	955.632,55	2,43723	0,830768	-150,459	0	10,9363	1,78698
2	3600,17	1,93877	0	953.073,70	2,47414	0,829477	-149,833	0	10,8783	1,78028
2	3600,18	2,04726	0	950.537,01	2,5109	0,828332	-149,21	0	10,8203	1,77369
2	3600,19	2,15517	0	948.022,06	2,54751	0,827326	-148,59	0	10,7633	1,76719
2	3600,2	2,26252	0	945.528,44	2,58397	0,82645	-147,973	0	10,7072	1,7608
2	3600,21	2,3906	0	942.564,20	2,62754	0,825561	-147,238	0	10,6402	1,75325
2	3600,23	2,54324	0	939.046,44	2,67956	0,82471	-146,36	0	10,5612	1,74437
2	3600,24	2,72493	0	934.880,47	2,74164	0,823974	-145,316	0	10,4682	1,73397
2	3600,26	2,94084	0	929.960,96	2,81561	0,823472	-144,075	0	10,3588	1,72182
2	3600,29	3,19699	0	924.168,66	2,90368	0,823356	-142,604	0	10,2312	1,70772
2	3600,32	3,50021	0	917.373,36	3,00843	0,823825	-140,862	0	10,0822	1,69144
2	3600,35	3,85833	0	909.433,51	3,13287	0,825137	-138,807	0	9,91006	1,67276
2	3600,4	4,28013	0	900.200,99	3,28057	0,827596	-136,389	0	9,71246	1,65151
2	3600,45	4,77534	0	889.530,36	3,45553	0,831595	-133,556	0	9,48741	1,62752
2	3600,51	5,35476	0	877.281,63	3,66247	0,837549	-130,252	0	9,23369	1,60073
2	3600,59	6,02998	0	863.335,63	3,90665	0,84596	-126,422	0	8,95079	1,57111
2	3600,67	6,81368	0	847.603,09	4,19402	0,857324	-122,01	0	8,63959	1,53876
2	3600,7	7,71935	0	830.04	4,5309	0,8721	-116,966	0	8,3019	1,5038



	78			1,88	9	79			4	9
2	3600,91	8,76128	0	810.67 2,62	4,9240 3	0,8911 01	-111,251	0	7,9416 9	1,4667 9
2	3601,06	9,95432	0	789.58 6,76	5,3790 9	0,9147 32	-104,836	0	7,5637 5	1,4278 7
2	3601,25	11,3147	0	766.95 9,64	5,9005 1	0,9437 8	-97,7146	0	7,1743 9	1,3876 5
2	3601,47	12,8609	0	743.04 7,69	6,4893 2	0,9791 02	-89,9038	0	6,7808 3	1,3467
2	3601,74	14,6126	0	718.18 3,74	7,1399 2	1,0219 7	-81,4512	0	6,3905 6	1,3056 6
2	3602,06	16,5918	0	691.92 7,18	7,834	1,0775	-72,2968	0	6,0063 3	1,2648 8
2	3602,44	18,8186	0	660.14 3,88	8,5268 3	1,1670 7	-61,8436	0	5,6158 8	1,2240 7
2	3602,9	21,3142	0	624.45 9,59	9,1004 9	1,3028 8	-50,6614	0	5,2438	1,1859 6
2	3603,45	24,1071	0	577.65 1,98	9,4127 2	1,5465 6	-38,1313	0	4,8750 2	1,1518 4
2	3604,11	27,2464	0	509.95 0,05	9,7293 6	1,8958 4	-23,9992	0	4,6204 9	1,1259 4
2	3604,91	30,8406	0	435.26 1,11	10,141 1	2,3314 8	-11,5607	0	4,4376 9	1,1131 8
2	3605,86	35,0099	0	362.98 2,87	10,700 2	2,8243 4	-2,34827	0	4,3172	1,1125 1
2	3607,01	39,9079	0	298.44 8,82	11,399 5	3,359	3,97494	0	4,2496 8	1,1189 4
2	3608,38	45,7233	0	242.90 5,48	12,243 1	3,9392 9	8,62653	0	4,2239 3	1,1269 9
2	3610,03	52,6882	0	196.27 5,65	13,234 7	4,5660 7	11,9611	0	4,2296 6	1,1355 3
2	3612,01	61,0819	0	157.98 4,56	14,381 9	5,2388 3	14,3863	0	4,2578 3	1,1434 7
2	3614,38	71,2433	0	126.82 2,12	15,689 6	5,9647 7	16,176	0	4,3031 2	1,1504 7
2	3616,78	81,6372	0	105.01 5,08	16,937 8	6,6309 9	17,339	0	4,3520 4	1,1556 2
2	3616,	81,6372	0	105.01	16,937	6,6309	17,339	0	4,3520	1,1556



	78			5,08	8	5			6	2
2	3617,23	83,5842	0	101.695,91	17,1611	6,74918	17,5098	0	4,36121	1,15643
2	3620,65	98,642	0	81.312,71	18,7797	7,62495	18,5222	0	4,43165	1,16147
2	3624,75	116,983	0	65.098,67	20,5964	8,56634	19,2901	0	4,50796	1,16558
2	3629,67	139,385	0	51.584,66	22,7208	9,64301	19,8985	0	4,59384	1,1691
2	3635,58	166,827	0	39.805,07	25,2719	11,0112	20,4852	0	4,69922	1,17199
2	3642,67	200,591	0	29.898,60	28,3521	12,7802	21,8042	0	4,82681	1,17152
2	3648,85	230,743	0	23.921,22	31,072	14,3117	22,552	0	4,92856	1,17143
2	3651,17	242,259	0	22.104,80	32,1036	14,8909	22,7707	0	4,96517	1,17144
2	3661,38	293,738	0	16.121,80	36,6756	17,3966	23,4637	0	5,11315	1,17157
2	3673,63	357,327	0	11.631,96	42,2431	20,3494	23,9515	0	5,26894	1,1718
2	3673,73	357,881	0	11.601,72	42,2913	20,3745	23,9547	0	5,27019	1,17189

Scenario (User defined source) : 300mm-Q63,6 Disp D5

72438-4FSRUInvioGNL-12R\Invio GNL Water\12R Manichette GNL riempimento FSRU\300mm-Q63,6 Disp D5

Material to track

GAS NATURALE

Weather: Category 2/F

Wind speed [m/s]	2
Pasquill stability	F stable - night with moderate clouds and light/moderate wind
Atmospheric temperature [degC]	25
Relative humidity [fraction]	0,75
Solar radiation flux [kW/m2]	0,5
Mixing layer height [m]	100

Observer Release Data and Observer Mass Data

Observer number	Release type	Start time [s]	Start downwind distance [m]	Unit	Masses or mass rates		
					Release	Rainout	Final
1	Continuous	0	0	kg/s	37,4	0	37,4
2	Continuous	3600	0	kg/s	37,4	0	37,4

Time-varying Observer Dispersion Data (before along-wind-diffusion effects)

Dispersion data correspond to an averaging time of: 18,75 s

Observer number	Time [s]	Down wind distance [m]	C/Li ne height [m]	C/Li ne conc [ppm]	Effect ive width [m]	Effect ive depth [m]	C/Li ne vapour temperature [degC]	C/Li ne liquid fraction	Centr oid velocity [m/s]	C/Li ne cloud density [kg/m3]
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1	0	0	0	999.99 9,41	1,8372 4	0,8902 8	-160,955	0	11,965 5	1,9109 5
1	0,01	0,11886 4	0	996.21 9,83	1,8778 6	0,8916 16	-160,21	0	11,819 4	1,902
1	0,02	0,23634 4	0	992.51 4,61	1,9183 7	0,8930 51	-159,478	0	11,677 1	1,8933 3
1	0,03	0,35242 9	0	988.88 2,42	1,9587 7	0,8945 67	-158,758	0	11,538 4	1,8849 5
1	0,04	0,46714 9	0	985.32 0,74	1,9990 8	0,8961 56	-158,052	0	11,403 2	1,8768 3
1	0,05	0,58056 1	0	981.82 6,02	2,0393	0,8978 14	-157,357	0	11,271 3	1,8689 6
1	0,06	0,69266 2	0	978.39 7,27	2,0794 3	0,8995 31	-156,674	0	11,142 7	1,8613 3
1	0,07	0,80351 8	0	975.03 0,84	2,1194 8	0,9013 06	-156,002	0	11,017 2	1,8539 2
1	0,08	0,91310 6	0	971.72 6,61	2,1594 4	0,9031 25	-155,342	0	10,894 8	1,8467 3
1	0,09	1,02151	0	968.48 0,49	2,1993 2	0,9049 91	-154,692	0	10,775 2	1,8397 5
1	0,1	1,12871	0	965.29 2,17	2,2391 3	0,9068 94	-154,052	0	10,658 4	1,8329 6
1	0,11	1,23482	0	962.15 6,99	2,2788 7	0,9088 43	-153,422	0	10,544 3	1,8263 5
1	0,12	1,33984	0	959.07 3,86	2,3185 4	0,9108 3	-152,801	0	10,432 7	1,8199 2
1	0,13	1,44375	0	956.04 2,68	2,3581 4	0,9128 45	-152,19	0	10,323 7	1,8136 6
1	0,14	1,54656	0	953.06 2,67	2,3976 8	0,9148 81	-151,588	0	10,217 2	1,8075 6
1	0,15	1,64834	0	950.13 0,44	2,4371 6	0,9169 45	-150,995	0	10,112 9	1,8016 2
1	0,16	1,74914	0	947.24 3,89	2,4765 7	0,9190 38	-150,411	0	10,010 9	1,7958 2
1	0,17	1,8489	0	944.40 4,23	2,5159 3	0,9211 43	-149,834	0	9,9111 8	1,7901 7
1	0,18	1,94762	0	941.61 0,78	2,5552 3	0,9232 55	-149,267	0	9,8136 3	1,7846 6



1	0,19	2,04535	0	938.86 1,31	2,5944 7	0,9253 78	-148,707	0	9,7181 8	1,7792 8
1	0,2	2,14224	0	936.15 0,60	2,6336 6	0,9275 3	-148,155	0	9,6246 1	1,7740 2
1	0,212	2,25725	0	932.95 2,72	2,6806 3	0,9301 2	-147,502	0	9,5149 3	1,7678 7
1	0,226 4	2,39345	0	929.19 3,11	2,7368 8	0,9332 29	-146,733	0	9,3869 7	1,7607 2
1	0,243 68	2,55459	0	924.78 2,65	2,8042 5	0,9369 93	-145,829	0	9,2382	1,7524 4
1	0,264 416	2,74459	0	919.63 3,98	2,8849 2	0,9415 21	-144,771	0	9,0663 9	1,7429
1	0,289 299	2,96786	0	913.65 3,36	2,9814 6	0,9469 49	-143,538	0	8,8693 7	1,732
1	0,319 159	3,22943	0	906.74 0,92	3,0969 7	0,9534 59	-142,108	0	8,6450 6	1,7196 3
1	0,354 991	3,53458	0	898.80 1,64	3,2351	0,9612 26	-140,459	0	8,3919 8	1,7057 3
1	0,397 989	3,88907	0	889.74 2,34	3,4002 3	0,9704 7	-138,568	0	8,1092	1,6902 3
1	0,449 587	4,29911	0	879.47 4,99	3,5975 3	0,9814 53	-136,415	0	7,7964 5	1,6731 3
1	0,511 504	4,77099	0	867.93 1,71	3,8331 7	0,9944 35	-133,979	0	7,4546 2	1,6544 5
1	0,585 805	5,31124	0	855.06 0,32	4,1144 2	1,0097 3	-131,245	0	7,0856 1	1,6342 8
1	0,674 966	5,9257	0	840.85 2,47	4,4498 8	1,0275 3	-128,204	0	6,6930 7	1,6127 7
1	0,781 959	6,62019	0	825.32 5,51	4,8496 5	1,0480 8	-124,853	0	6,2815 7	1,5901
1	0,910 351	7,40014	0	808.52 8,81	5,3256 1	1,0716	-121,195	0	5,8567 6	1,5664 9
1	1,064 42	8,26943	0	790.56 6,76	5,8916	1,0980 5	-117,244	0	5,4257 5	1,5422 2
1	1,249 31	9,23147	0	771.56 9,94	6,5636 5	1,1273 9	-113,015	0	4,9957 1	1,5175 4
1	1,471 17	10,2905	0	751.66 6,23	7,3601 5	1,1600 4	-108,504	0	4,5725 3	1,4924 4



1	1,737 4	11,4512	0	730.99 3,97	8,3020 5	1,1966 7	-103,699	0	4,1610 8	1,4668 8
1	2,056 88	12,7158	0	709.75 3,72	9,4127 4	1,2373	-98,614	0	3,7672 3	1,4409 9
1	2,440 26	14,0873	0	688.13 9,10	10,717 7	1,2821 1	-93,259	0	3,3954 1	1,4148 6
1	2,900 31	15,5708	0	666.32 9,19	12,230 8	1,3318 3	-87,6307	0	3,0480 2	1,3884 7
1	3,452 37	17,1699	0	644.55 7,79	13,946 3	1,3864 3	-81,7329	0	2,7281 7	1,3618
1	4,114 84	18,8868	0	623.04 5,82	15,872 5	1,4459 8	-75,5616	0	2,4377 8	1,3348 1
1	4,909 81	20,726	0	601.97 8,29	18,012 7	1,5112 4	-69,103	0	2,1771 5	1,3074 3
1	5,863 77	22,7034	0	581.43 8,22	20,367 5	1,5862 4	-62,3521	0	1,9427	1,2797
1	7,008 53	24,8263	0	561.67 2,08	22,920 8	1,6668 5	-55,5279	0	1,7393 7	1,2528 7
1	8,382 23	27,1191	0	542.73 9,29	25,640 6	1,7452	-48,7752	0	1,5742 7	1,2276
1	10,03 07	29,6097	0	524.69 8,90	28,427 3	1,8352 8	-42,1388	0	1,4359 9	1,2039 1
1	12,00 88	32,337	0	506.44 5,32	30,848 7	1,9599 8	-35,5102	0	1,3245 9	1,1817 3
1	12,08 31	32,4353	0	505.66 4,07	30,909 8	1,9662 1	-35,2597	0	1,3212 9	1,1809 7
1	12,08 31	32,4353	0	505.66 4,07	30,909 8	1,9663	-35,2597	0	1,3212 4	1,1809 7
1	14,38 26	35,3828	0	447.64 9,55	31,251 5	2,4516 9	-22,7861	0	1,2465 3	1,1557 1
1	17,23 11	38,8821	0	331.61 1,47	32,311	3,4995 3	-5,09777	0	1,2247 2	1,1405 5
1	20,64 93	43,1305	0	235.44 7,86	33,902 6	4,7361 1	5,2363	0	1,2677 8	1,1452
1	24,75 12	48,4842	0	169.90 1,26	35,811 2	6,0143 5	10,9446	0	1,3428 8	1,1528
1	24,75 12	48,4842	0	169.90 1,26	35,811 2	6,0143 5	10,9446	0	1,3428 8	1,1528



1	24,75 12	48,4842	0,02	169.90 0,90	35,811 2	5,9969 5	10,9499	0	1,3423 3	1,1527 7
1	29,67 34	55,0793	1,667 55	126.32 2,85	37,802	5,4683 4	14,2498	0	1,4404	1,1590 5
1	34,62 95	61,8859	5,265 78	90.600, 05	39,590 2	4,2394 5	16,6595	0	1,7196 2	1,1648 1
1	34,62 95	61,8859	5,265 78	90.600, 05	39,590 2	4,2378 9	16,6595	0	1,7201 9	1,1648 1
1	35,58 01	63,3863	5,994 42	83.620, 01	39,971 3	4,3296 6	17,1	0	1,7887 7	1,1660 3
1	42,66 81	76,7216	10,56 45	49.995, 89	42,640 9	5,5896 4	19,1383	0	2,1595 5	1,1719 6
1	51,17 37	95,8622	13,36 57	34.551, 08	45,050 5	7,0626 7	20,0316	0	2,3578 9	1,1746 7
1	51,37 22	96,3296	13,39 46	34.351, 68	45,093 1	7,0921 8	20,0428	0	2,3599 4	1,1747 1
1	51,37 22	96,3296	13,39 46	34.351, 68	45,093 1	7,0905 9	20,0428	0	2,3604 5	1,1747 1
1	61,38 05	119,986	12,67 48	27.344, 39	46,882 6	8,8975	20,5952	0	2,3404 8	1,1757
1	65,32 75	129,031	11,28 62	24.883, 26	47,714 8	10,268 3	21,0006	0	2,2991 8	1,1754 6
1	65,32 75	129,031	11,28 62	24.883, 26	47,714 8	10,268 3	21,0006	0	2,2991 9	1,1754 6
1	67,28 29	133,404	10,43 88	23.921, 22	51,112 9	10,394 2	21,1581	0	2,2573 4	1,1754 2
1	73,62 86	147,166	7,691 83	21.826, 97	58,818	11,573	21,4996	0	2,181	1,1754 5
1	88,32 63	178,88	2,942 82	19.670, 02	67,417 8	14,917 9	21,8401	0	2,2081 5	1,1758 2
1	101,1 68	207,598	0,01	18.687, 39	69,290 7	17,643 4	21,9001	0	2,2881 5	1,1765 4
1	101,1 68	207,598	0	18.687, 41	69,290 7	17,661 4	21,8978	0	2,2870 9	1,1765 5
1	105,9 64	218,583	0	18.363, 39	69,784 7	17,813 7	21,9694	0	2,2921	1,1764 2
1	127,1 28	267,419	0	17.044, 04	71,954 2	18,463 8	22,2557	0	2,3143	1,1759 2



1	152,5 26	326,646	0	15.665, 83	74,545 2	19,200 5	22,5468	0	2,3409 6	1,1754 2
1	157,8 1	339,038	0	15.403, 46	75,083 2	19,348 3	22,6014	0	2,3464 4	1,1753 3
2	3600	0	0	999.99 9,41	1,8372 4	0,8902 8	-160,955	0	11,965 5	1,9109 5
2	3600, 01	0,11886 4	0	996.21 9,83	1,8778 6	0,8916 16	-160,21	0	11,819 4	1,902
2	3600, 02	0,23634 4	0	992.51 4,61	1,9183 7	0,8930 51	-159,478	0	11,677 1	1,8933 3
2	3600, 03	0,35242 9	0	988.88 2,42	1,9587 7	0,8945 67	-158,758	0	11,538 4	1,8849 5
2	3600, 04	0,46714 9	0	985.32 0,74	1,9990 8	0,8961 56	-158,052	0	11,403 2	1,8768 3
2	3600, 05	0,58056 1	0	981.82 6,02	2,0393	0,8978 14	-157,357	0	11,271 3	1,8689 6
2	3600, 06	0,69266 2	0	978.39 7,27	2,0794 3	0,8995 31	-156,674	0	11,142 7	1,8613 3
2	3600, 07	0,80351 8	0	975.03 0,84	2,1194 8	0,9013 06	-156,002	0	11,017 2	1,8539 2
2	3600, 08	0,91310 6	0	971.72 6,61	2,1594 4	0,9031 25	-155,342	0	10,894 8	1,8467 3
2	3600, 09	1,02151	0	968.48 0,49	2,1993 2	0,9049 91	-154,692	0	10,775 2	1,8397 5
2	3600, 1	1,12871	0	965.29 2,17	2,2391 3	0,9068 94	-154,052	0	10,658 4	1,8329 6
2	3600, 11	1,23482	0	962.15 6,99	2,2788 7	0,9088 43	-153,422	0	10,544 3	1,8263 5
2	3600, 12	1,33984	0	959.07 3,86	2,3185 4	0,9108 3	-152,801	0	10,432 7	1,8199 2
2	3600, 13	1,44375	0	956.04 2,68	2,3581 4	0,9128 45	-152,19	0	10,323 7	1,8136 6
2	3600, 14	1,54656	0	953.06 2,67	2,3976 8	0,9148 81	-151,588	0	10,217 2	1,8075 6
2	3600, 15	1,64834	0	950.13 0,44	2,4371 6	0,9169 45	-150,995	0	10,112 9	1,8016 2
2	3600,	1,74914	0	947.24	2,4765	0,9190	-150,411	0	10,010	1,7958



	16			3,89	7	38			9	2
2	3600,17	1,8489	0	944.404,23	2,51593	0,921143	-149,834	0	9,91118	1,79017
2	3600,18	1,94762	0	941.610,78	2,55523	0,923255	-149,267	0	9,81363	1,78466
2	3600,19	2,04535	0	938.861,31	2,59447	0,925378	-148,707	0	9,71818	1,77928
2	3600,2	2,14224	0	936.150,60	2,63366	0,92753	-148,155	0	9,62461	1,77402
2	3600,21	2,25725	0	932.952,72	2,68063	0,93012	-147,502	0	9,51493	1,76787
2	3600,23	2,39345	0	929.193,11	2,73688	0,933229	-146,733	0	9,38697	1,76072
2	3600,24	2,55459	0	924.782,65	2,80425	0,936993	-145,829	0	9,2382	1,75244
2	3600,26	2,74459	0	919.633,98	2,88492	0,941521	-144,771	0	9,06639	1,74299
2	3600,29	2,96786	0	913.653,36	2,98146	0,946949	-143,538	0	8,86937	1,7327
2	3600,32	3,22943	0	906.740,92	3,09697	0,953459	-142,108	0	8,64506	1,71963
2	3600,35	3,53458	0	898.801,64	3,2351	0,961226	-140,459	0	8,39198	1,70573
2	3600,4	3,88907	0	889.742,34	3,40023	0,97047	-138,568	0	8,1092	1,69023
2	3600,45	4,29911	0	879.474,99	3,59753	0,981453	-136,415	0	7,79645	1,67313
2	3600,51	4,77099	0	867.931,71	3,83317	0,994435	-133,979	0	7,45462	1,65445
2	3600,59	5,31124	0	855.060,32	4,11442	1,00973	-131,245	0	7,08561	1,63428
2	3600,67	5,9257	0	840.852,47	4,44988	1,02753	-128,204	0	6,69307	1,61277
2	3600,78	6,62019	0	825.325,51	4,84965	1,04808	-124,853	0	6,28157	1,59017
2	3600,91	7,40014	0	808.528,81	5,32561	1,0716	-121,195	0	5,85676	1,56649
2	3601,	8,26943	0	790.56	5,8916	1,0980	-117,244	0	5,4257	1,5422



	06			6,76		5			5	2
2	3601, 25	9,23147	0	771.56 9,94	6,5636 5	1,1273 9	-113,015	0	4,9957 1	1,5175 4
2	3601, 47	10,2905	0	751.66 6,23	7,3601 5	1,1600 4	-108,504	0	4,5725 3	1,4924 4
2	3601, 74	11,4512	0	730.99 3,97	8,3020 5	1,1966 7	-103,699	0	4,1610 8	1,4668 8
2	3602, 06	12,7158	0	709.75 3,72	9,4127 4	1,2373	-98,614	0	3,7672 3	1,4409 9
2	3602, 44	14,0873	0	688.13 9,10	10,717 7	1,2821 1	-93,259	0	3,3954 1	1,4148 6
2	3602, 9	15,5708	0	666.32 9,19	12,230 8	1,3318 3	-87,6307	0	3,0480 2	1,3884 7
2	3603, 45	17,1699	0	644.55 7,79	13,946 3	1,3864 3	-81,7329	0	2,7281 7	1,3618
2	3604, 11	18,8868	0	623.04 5,82	15,872 5	1,4459 8	-75,5616	0	2,4377 8	1,3348 1
2	3604, 91	20,726	0	601.97 8,29	18,012 7	1,5112 4	-69,103	0	2,1771 5	1,3074 3
2	3605, 86	22,7034	0	581.43 8,22	20,367 5	1,5862 4	-62,3521	0	1,9427	1,2797
2	3607, 01	24,8263	0	561.67 2,08	22,920 8	1,6668 5	-55,5279	0	1,7393 7	1,2528 7
2	3608, 38	27,1191	0	542.73 9,29	25,640 6	1,7452	-48,7752	0	1,5742 7	1,2276
2	3610, 03	29,6097	0	524.69 8,90	28,427 3	1,8352 8	-42,1388	0	1,4359 9	1,2039 1
2	3612, 01	32,337	0	506.44 5,32	30,848 7	1,9599 8	-35,5102	0	1,3245 9	1,1817 3
2	3612, 08	32,4353	0	505.66 4,07	30,909 8	1,9662 1	-35,2597	0	1,3212 9	1,1809 7
2	3612, 08	32,4353	0	505.66 4,07	30,909 8	1,9663	-35,2597	0	1,3212 4	1,1809 7
2	3614, 38	35,3828	0	447.64 9,55	31,251 5	2,4516 9	-22,7861	0	1,2465 3	1,1557 1
2	3617, 23	38,8821	0	331.61 1,47	32,311	3,4995 3	-5,09777	0	1,2247 2	1,1405 5
2	3620,	43,1305	0	235.44	33,902	4,7361	5,2363	0	1,2677	1,1452



	65			7,86	6	1			8	
2	3624,75	48,4842	0	169.90 1,26	35,811 2	6,0143 5	10,9446	0	1,3428 8	1,1528
2	3624,75	48,4842	0	169.90 1,26	35,811 2	6,0143 5	10,9446	0	1,3428 8	1,1528
2	3624,75	48,4842	0,02	169.90 0,90	35,811 2	5,9969 5	10,9499	0	1,3423 3	1,1527 7
2	3629,67	55,0793	1,667 55	126.32 2,85	37,802	5,4683 4	14,2498	0	1,4404	1,1590 5
2	3634,63	61,8859	5,265 78	90.600, 05	39,590 2	4,2394 5	16,6595	0	1,7196 2	1,1648 1
2	3634,63	61,8859	5,265 78	90.600, 05	39,590 2	4,2378 9	16,6595	0	1,7201 9	1,1648 1
2	3635,58	63,3863	5,994 42	83.620, 01	39,971 3	4,3296 6	17,1	0	1,7887 7	1,1660 3
2	3642,67	76,7216	10,56 45	49.995, 89	42,640 9	5,5896 4	19,1383	0	2,1595 5	1,1719 6
2	3651,17	95,8622	13,36 57	34.551, 08	45,050 5	7,0626 7	20,0316	0	2,3578 9	1,1746 7
2	3651,37	96,3296	13,39 46	34.351, 68	45,093 1	7,0921 8	20,0428	0	2,3599 4	1,1747 1
2	3651,37	96,3296	13,39 46	34.351, 68	45,093 1	7,0905 9	20,0428	0	2,3604 5	1,1747 1
2	3661,38	119,986	12,67 48	27.344, 39	46,882 6	8,8975	20,5952	0	2,3404 8	1,1757
2	3665,33	129,031	11,28 62	24.883, 26	47,714 8	10,268 3	21,0006	0	2,2991 8	1,1754 6
2	3665,33	129,031	11,28 62	24.883, 26	47,714 8	10,268 3	21,0006	0	2,2991 9	1,1754 6
2	3667,28	133,404	10,43 88	23.921, 22	51,112 9	10,394 2	21,1581	0	2,2573 4	1,1754 2
2	3673,63	147,166	7,691 83	21.826, 97	58,818	11,573	21,4996	0	2,181	1,1754 5
2	3688,33	178,88	2,942 82	19.670, 02	67,417 8	14,917 9	21,8401	0	2,2081 5	1,1758 2
2	3701,17	207,598	0,01	18.687, 39	69,290 7	17,643 4	21,9001	0	2,2881 5	1,1765 4
2	3701,	207,598	0	18.687,	69,290	17,661	21,8978	0	2,2870	1,1765



DNV

	17			41	7	4			9	5
2	3705,96	218,583	0	18.363,39	69,7847	17,8137	21,9694	0	2,2921	1,17642
2	3727,13	267,419	0	17.044,04	71,9542	18,4638	22,2557	0	2,3143	1,17592
2	3752,53	326,646	0	15.665,83	74,5452	19,2005	22,5468	0	2,34096	1,17542
2	3757,81	339,038	0	15.403,46	75,0832	19,3483	22,6014	0	2,34644	1,17533

Weather: Category 5/D

Wind speed [m/s]	5
Pasquill stability	D neutral - little sun and high wind or overcast/windy night
Atmospheric temperature [degC]	25
Relative humidity [fraction]	0,75
Solar radiation flux [kW/m2]	0,5
Mixing layer height [m]	800

Observer Release Data and Observer Mass Data

Observer number	Release type	Start time [s]	Start downwind distance [m]	Unit	Masses or mass rates		
					Release	Rainout	Final
1	Continuous	0	0	kg/s	37,4	0	37,4
2	Continuous	3600	0	kg/s	37,4	0	37,4

Time-varying Observer Dispersion Data (before along-wind-diffusion effects)

Dispersion data correspond to an averaging time of: 18,75 s

Observer number	Time [s]	Down wind distance [m]	C/Li ne height [m]	C/Li ne conc [ppm]	Effect ive width [m]	Effect ive depth [m]	C/Line vapour temperature [degC]	C/Li ne liquid fraction	Centr oid velocity [m/s]	C/Li ne cloud density [kg/m3]
1	0	0	0	999.99 9,41	1,8372 2	0,8902 93	-160,955	0	11,965 5	1,9109 5
1	0,01	0,11928 1	0	997.03 9,29	1,8777 8	0,8845 83	-160,276	0	11,896 1	1,9021 9
1	0,02	0,23789 7	0	994.11 1,16	1,9180 6	0,8793 16	-159,602	0	11,827 5	1,8936



1	0,03	0,35583 3	0	991.21 4,25	1,9580 6	0,8744 59	-158,931	0	11,759 6	1,8851 6
1	0,04	0,4731	0	988.34 7,22	1,9978 1	0,8699 83	-158,265	0	11,692 6	1,8768 9
1	0,05	0,58970 2	0	985.50 9,38	2,0373	0,8658 59	-157,603	0	11,626 4	1,8687 6
1	0,06	0,70564 8	0	982.69 9,73	2,0765 6	0,8620 62	-156,944	0	11,560 9	1,8607 7
1	0,07	0,82094 1	0	979.91 7,74	2,1155 7	0,8585 71	-156,289	0	11,496 1	1,8529 3
1	0,08	0,93559 2	0	977.16 2,55	2,1543 7	0,8553 64	-155,638	0	11,432	1,8452 2
1	0,09	1,04961	0	974.43 3,44	2,1929 5	0,8524 22	-154,99	0	11,368 7	1,8376 4
1	0,1	1,16299	0	971.72 9,89	2,2313 2	0,8497 27	-154,346	0	11,306 1	1,8301 9
1	0,11	1,27575	0	969.05 1,16	2,2694 9	0,8472 64	-153,705	0	11,244 2	1,8228 7
1	0,12	1,38789	0	966.39 7,01	2,3074 6	0,8450 19	-153,068	0	11,183	1,8156 6
1	0,13	1,49942	0	963.76 6,75	2,3452 5	0,8429 76	-152,434	0	11,122 4	1,8085 7
1	0,14	1,61035	0	961.15 9,98	2,3828 6	0,8411 24	-151,803	0	11,062 6	1,8015 9
1	0,15	1,72069	0	958.57 6,25	2,4202 9	0,8394 51	-151,175	0	11,003 4	1,7947 3
1	0,16	1,83043	0	956.01 5,13	2,4575 5	0,8379 46	-150,551	0	10,944 8	1,7879 7
1	0,17	1,93958	0	953.47 6,21	2,4946 5	0,8366	-149,93	0	10,886 9	1,7813 1
1	0,18	2,04816	0	950.95 9,05	2,5315 9	0,8354 02	-149,312	0	10,829 7	1,7747 6
1	0,19	2,15617	0	948.46 3,23	2,5683 8	0,8343 44	-148,697	0	10,773 1	1,7683 1
1	0,2	2,26362	0	945.98 8,37	2,6050 2	0,8334 18	-148,086	0	10,717 1	1,7619 5
1	0,212	2,39182	0	943.04 6,14	2,6488	0,8324 7	-147,356	0	10,650 7	1,7544 5



1	0,226 4	2,54462	0	939.55 4,05	2,7010 8	0,8315 52	-146,485	0	10,572 3	1,7456 2
1	0,243 68	2,72651	0	935.41 8,03	2,7634 5	0,8307 4	-145,449	0	10,479 8	1,7352 7
1	0,264 416	2,94267	0	930.53 3,08	2,8377 9	0,8301 52	-144,218	0	10,371 1	1,7231 9
1	0,289 299	3,19913	0	924.78 0,38	2,9262 9	0,8299 39	-142,757	0	10,244	1,7091 6
1	0,319 159	3,50276	0	918.03 0,01	3,0315 5	0,8303 02	-141,028	0	10,096	1,6929 6
1	0,354 991	3,86139	0	910.14 0,29	3,1566	0,8314 99	-138,987	0	9,9247 4	1,6743 6
1	0,397 989	4,28384	0	900.96 3,20	3,3050 3	0,8338 33	-136,585	0	9,7280 6	1,6531 9
1	0,449 587	4,77988	0	890.35 3,27	3,4808 4	0,8377 07	-133,771	0	9,5039 4	1,6292 9
1	0,511 504	5,36035	0	878.16 9,18	3,6888	0,8435 34	-130,488	0	9,2511 3	1,6025 8
1	0,585 805	6,03691	0	864.29 0,49	3,9342	0,8518 18	-126,68	0	8,9690 9	1,5730 3
1	0,674 966	6,82228	0	848.62 5,80	4,2230 3	0,8630 64	-122,292	0	8,6585 4	1,5407 5
1	0,781 959	7,73003	0	831.13 0,84	4,5617 7	0,8778 12	-117,273	0	8,3215 5	1,5059 2
1	0,910 351	8,77452	0	811.82 3,05	4,9569 9	0,8966 42	-111,584	0	7,9616 5	1,4688 5
1	1,064 42	9,97064	0	790.79 0,81	5,4147 2	0,9202 01	-105,195	0	7,5837 7	1,4299 5
1	1,249 31	11,3348	0	768.20 6,40	5,9394 9	0,9491 93	-98,0986	0	7,1941 9	1,3897 1
1	1,471 17	12,8853	0	744.32 3,62	6,5325 6	0,9844 69	-90,3111	0	6,8001 1	1,3487 2
1	1,737 4	14,642	0	719.47 2,90	7,1886 1	1,0272 9	-81,8783	0	6,4090 4	1,3076 2
1	2,056 88	16,6272	0	693.34 3,96	7,8898 9	1,0822 8	-72,7616	0	6,0244 2	1,2667 9
1	2,440 26	18,8611	0	661.84 0,11	8,5928 8	1,1705 7	-62,3623	0	5,6337 5	1,2259 2



1	2,900 31	21,3646	0	626.24 0,17	9,1837 5	1,3048 9	-51,1847	0	5,2599	1,1875 8
1	3,452 37	24,1666	0	580.40 0,33	9,5059 5	1,5436 2	-38,7623	0	4,8922	1,1532 3
1	4,114 84	27,3149	0	513.06 2,90	9,8235	1,8918 4	-24,5849	0	4,634	1,1267 8
1	4,909 81	30,9197	0	438.29 5,32	10,236 7	2,3278 9	-12,0035	0	4,4481 7	1,1134 3
1	5,863 77	35,0982	0	365.59 1,11	10,794 9	2,8238 3	-2,63837	0	4,3256 3	1,1123 8
1	7,008 53	40,0064	0	300.60 2,80	11,495 4	3,3624 2	3,77573	0	4,2561 1	1,1186 9
1	8,382 23	45,8323	0	244.70 3,88	12,341	3,9461 1	8,49074	0	4,2293 3	1,1266 8
1	10,03 07	52,8084	0	197.81 9,97	13,336 8	4,5751 7	11,8686	0	4,2338 5	1,1351 8
1	12,00 88	61,2109	0	159.16 1,78	14,489 4	5,2535 1	14,3233	0	4,2619 1	1,1431 8
1	14,38 26	71,3795	0	127.69 9,09	15,803 8	5,9859 3	16,13	0	4,3074 6	1,1502 6
1	16,87 47	82,177	0	105.01 9,48	17,103 8	6,6818 9	17,3385	0	4,3583 6	1,1556 2
1	16,87 47	82,177	0	105.01 9,48	17,103 8	6,6818 2	17,3385	0	4,3584 1	1,1556 2
1	17,23 11	83,7319	0	102.36 9,69	17,282 7	6,7765 6	17,4749	0	4,3656 9	1,1562 7
1	20,64 93	98,7959	0	81.944, 34	18,908 4	7,6505 1	18,4923	0	4,4354	1,1613
1	24,75 12	117,148	0	65.660, 09	20,726 7	8,5930 9	19,265	0	4,5114 2	1,1654 3
1	29,67 34	139,566	0	52.021, 33	22,858	9,6773 2	19,8798	0	4,5975 4	1,1689 9
1	35,58 01	167,034	0	40.125, 12	25,411 9	11,058	20,4399	0	4,7037 8	1,1720 1
1	42,66 81	200,825	0	30.178, 43	28,495 7	12,826 8	21,7652	0	4,8304 6	1,1715 4
1	49,14 78	232,467	0	23.921, 22	31,349 9	14,431 8	22,5502	0	4,9365 9	1,1714 4



1	51,17 37	242,511	0	22.340, 70	32,249 5	14,935 8	22,7409	0	4,9683 1	1,1714 4
1	61,38 05	294,011	0	16.313, 79	36,823 3	17,439 3	23,4413	0	5,1157 6	1,1715 7
1	73,62 86	357,624	0	11.780, 39	42,392 7	20,393 7	23,9354	0	5,2712 8	1,1717 9
1	74,18 37	360,551	0	11.620, 41	42,647 1	20,526 7	23,9522	0	5,2778 8	1,1718
2	3600	0	0	999.99 9,41	1,8372 2	0,8902 93	-160,955	0	11,965 5	1,9109 5
2	3600, 01	0,11928 1	0	997.03 9,29	1,8777 8	0,8845 83	-160,276	0	11,896 1	1,9021 9
2	3600, 02	0,23789 7	0	994.11 1,16	1,9180 6	0,8793 16	-159,602	0	11,827 5	1,8936
2	3600, 03	0,35583 3	0	991.21 4,25	1,9580 6	0,8744 59	-158,931	0	11,759 6	1,8851 6
2	3600, 04	0,4731	0	988.34 7,22	1,9978 1	0,8699 83	-158,265	0	11,692 6	1,8768 9
2	3600, 05	0,58970 2	0	985.50 9,38	2,0373	0,8658 59	-157,603	0	11,626 4	1,8687 6
2	3600, 06	0,70564 8	0	982.69 9,73	2,0765 6	0,8620 62	-156,944	0	11,560 9	1,8607 7
2	3600, 07	0,82094 1	0	979.91 7,74	2,1155 7	0,8585 71	-156,289	0	11,496 1	1,8529 3
2	3600, 08	0,93559 2	0	977.16 2,55	2,1543 7	0,8553 64	-155,638	0	11,432	1,8452 2
2	3600, 09	1,04961	0	974.43 3,44	2,1929 5	0,8524 22	-154,99	0	11,368 7	1,8376 4
2	3600, 1	1,16299	0	971.72 9,89	2,2313 2	0,8497 27	-154,346	0	11,306 1	1,8301 9
2	3600, 11	1,27575	0	969.05 1,16	2,2694 9	0,8472 64	-153,705	0	11,244 2	1,8228 7
2	3600, 12	1,38789	0	966.39 7,01	2,3074 6	0,8450 19	-153,068	0	11,183	1,8156 6
2	3600, 13	1,49942	0	963.76 6,75	2,3452 5	0,8429 76	-152,434	0	11,122 4	1,8085 7
2	3600,	1,61035	0	961.15	2,3828	0,8411	-151,803	0	11,062	1,8015



	14			9,98	6	24			6	9
2	3600,15	1,72069	0	958.576,25	2,42029	0,839451	-151,175	0	11,0034	1,79473
2	3600,16	1,83043	0	956.015,13	2,45755	0,837946	-150,551	0	10,9448	1,78797
2	3600,17	1,93958	0	953.476,21	2,49465	0,83665	-149,93	0	10,8869	1,78131
2	3600,18	2,04816	0	950.959,05	2,53159	0,835402	-149,312	0	10,8297	1,77476
2	3600,19	2,15617	0	948.463,23	2,56838	0,834344	-148,697	0	10,7731	1,76831
2	3600,2	2,26362	0	945.988,37	2,60502	0,833418	-148,086	0	10,7171	1,76195
2	3600,21	2,39182	0	943.046,14	2,64887	0,83247	-147,356	0	10,6507	1,75445
2	3600,23	2,54462	0	939.554,05	2,70108	0,831552	-146,485	0	10,5723	1,74562
2	3600,24	2,72651	0	935.418,03	2,76345	0,83074	-145,449	0	10,4798	1,73527
2	3600,26	2,94267	0	930.533,08	2,83779	0,830152	-144,218	0	10,3711	1,72319
2	3600,29	3,19913	0	924.780,38	2,92629	0,829939	-142,757	0	10,244	1,70916
2	3600,32	3,50276	0	918.030,01	3,03155	0,830302	-141,028	0	10,096	1,69296
2	3600,35	3,86139	0	910.140,29	3,15667	0,831499	-138,987	0	9,92474	1,67436
2	3600,4	4,28384	0	900.963,20	3,30503	0,833833	-136,585	0	9,72806	1,65319
2	3600,45	4,77988	0	890.353,27	3,48084	0,837707	-133,771	0	9,50394	1,62929
2	3600,51	5,36035	0	878.169,18	3,68883	0,843534	-130,488	0	9,25113	1,60258
2	3600,59	6,03691	0	864.290,49	3,93427	0,851818	-126,68	0	8,96909	1,57303
2	3600,67	6,82228	0	848.625,80	4,22303	0,863064	-122,292	0	8,65854	1,54075
2	3600,77	7,73003	0	831.13	4,5617	0,8778	-117,273	0	8,3215	1,5059



	78			0,84	7	12			5	2
2	3600,91	8,77452	0	811.823,05	4,95699	0,896642	-111,584	0	7,96165	1,46885
2	3601,06	9,97064	0	790.790,81	5,41472	0,920201	-105,195	0	7,58377	1,42995
2	3601,25	11,3348	0	768.206,40	5,93949	0,949193	-98,0986	0	7,19419	1,38971
2	3601,47	12,8853	0	744.323,62	6,53256	0,984469	-90,3111	0	6,80011	1,34872
2	3601,74	14,642	0	719.472,90	7,18861	1,02729	-81,8783	0	6,40904	1,30762
2	3602,06	16,6272	0	693.343,96	7,88989	1,08228	-72,7616	0	6,02442	1,26679
2	3602,44	18,8611	0	661.840,11	8,59288	1,17057	-62,3623	0	5,63375	1,22592
2	3602,9	21,3646	0	626.240,17	9,18375	1,30489	-51,1847	0	5,2599	1,18758
2	3603,45	24,1666	0	580.400,33	9,50595	1,54362	-38,7623	0	4,8922	1,15323
2	3604,11	27,3149	0	513.062,90	9,8235	1,89184	-24,5849	0	4,634	1,12678
2	3604,91	30,9197	0	438.295,32	10,2367	2,32789	-12,0035	0	4,44817	1,11343
2	3605,86	35,0982	0	365.591,11	10,7949	2,82383	-2,63837	0	4,32563	1,11238
2	3607,01	40,0064	0	300.602,80	11,4954	3,36242	3,77573	0	4,25611	1,11869
2	3608,38	45,8323	0	244.703,88	12,341	3,94611	8,49074	0	4,22933	1,12668
2	3610,03	52,8084	0	197.819,97	13,3368	4,57517	11,8686	0	4,23385	1,13518
2	3612,01	61,2109	0	159.161,78	14,4894	5,25351	14,3233	0	4,26191	1,14318
2	3614,38	71,3795	0	127.699,09	15,8038	5,98593	16,13	0	4,30746	1,15026
2	3616,87	82,177	0	105.019,48	17,1038	6,68189	17,3385	0	4,35836	1,15562
2	3616,	82,177	0	105.01	17,103	6,6818	17,3385	0	4,3584	1,1556



	87			9,48	8	2			1	2
2	3617,23	83,7319	0	102.369,69	17,2827	6,77656	17,4749	0	4,36569	1,15627
2	3620,65	98,7959	0	81.944,34	18,9084	7,65051	18,4923	0	4,4354	1,1613
2	3624,75	117,148	0	65.660,09	20,7267	8,59309	19,265	0	4,51142	1,16543
2	3629,67	139,566	0	52.021,33	22,858	9,67732	19,8798	0	4,59754	1,16899
2	3635,58	167,034	0	40.125,12	25,4119	11,058	20,4399	0	4,70378	1,17201
2	3642,67	200,825	0	30.178,43	28,4957	12,8268	21,7652	0	4,83046	1,17154
2	3649,15	232,467	0	23.921,22	31,3499	14,4318	22,5502	0	4,93659	1,17144
2	3651,17	242,511	0	22.340,70	32,2495	14,9358	22,7409	0	4,96831	1,17144
2	3661,38	294,011	0	16.313,79	36,8233	17,4393	23,4413	0	5,11576	1,17157
2	3673,63	357,624	0	11.780,39	42,3927	20,3937	23,9354	0	5,27128	1,17179
2	3674,18	360,551	0	11.620,41	42,6471	20,5267	23,9522	0	5,27788	1,17188

