

# Dispersion Report

## Workspace: 72438-1RiempFSRU-1R

### Study: Riempimento FSRU-ME4-Water

#### Equipment Item: 1R Manichette GNL riempimento FSRU

72438-1RiempFSRU-1R\Riempimento FSRU-ME4-Water\1R Manichette GNL riempimento FSRU

Material	GAS NATURALE	
East	0	m
North	0	m

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

72438-1RiempFSRU-1R\Riempimento FSRU-ME4-Water\1R 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/Lin e 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/Lin e cloud density [kg/m <sup>3</sup> ]
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	2,2099	0,8691	-152,401	0	10,363	1,8158



				1,02	7	83				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	5,24931	0	850.05	3,9621	0,9727	-130,183	0	6,9557	1,6266



	805			2,94	9	73			5	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 4	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	31,0172	0	505.15	29,188	1,9023	-35,2011	0	1,3056	1,1809



	47			9,21	3	8			3	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	128,745	9,893	23.921,	49,236	10,004	21,1665	0	2,2018	1,1754



	02		81	22	7	7			8	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	152,5 26	319,74	0	15.520, 03	71,382 7	18,578 9	22,5943	0	2,2955 3	1,1753 1
1	155,7 81	327,219	0	15.355, 01	71,708 6	18,668 7	22,6286	0	2,2989 8	1,1752 5
2	3600	0	0	999.99 9,41	1,7413 8	0,8438 56	-160,955	0	11,965 5	1,9109 5
2	3600, 01	0,11881 5	0	996.01 4,48	1,7808 8	0,8457 16	-160,169	0	11,811 5	1,9015 1
2	3600, 02	0,23617 8	0	992.11 2,01	1,8202 9	0,8476 47	-159,398	0	11,661 8	1,8924
2	3600, 03	0,35207 5	0	988.29 0,52	1,8596 1	0,8496 35	-158,641	0	11,516 1	1,8835 9
2	3600, 04	0,46653 8	0	984.54 7,21	1,8988 4	0,8516 7	-157,898	0	11,374 3	1,8750 8
2	3600, 05	0,57963 5	0	980.87 7,83	1,9379 9	0,8537 54	-157,169	0	11,236 2	1,8668 4
2	3600, 06	0,69136 8	0	977.28 1,00	1,9770 6	0,8558 76	-156,452	0	11,101 7	1,8588 7
2	3600, 07	0,80178 9	0	973.75 3,39	2,0160 5	0,8580 33	-155,748	0	10,970 7	1,8511 4
2	3600, 08	0,91090 9	0	970.29 3,35	2,0549 7	0,8602 18	-155,055	0	10,843 7	1,8436 5
2	3600, 09	1,01876	0	966.89 8,61	2,0938 2	0,8624 27	-154,375	0	10,718 5	1,8363 8



2	3600,1	1,1254	0	963.56 5,91	2,1326	0,8646 62	-153,706	0	10,597	1,8293 2
2	3600,11	1,23081	0	960.29 4,75	2,1713 2	0,8669 12	-153,048	0	10,478 6	1,8224 7
2	3600,12	1,33508	0	957.08 1,02	2,2099 7	0,8691 83	-152,401	0	10,363	1,8158 1
2	3600,13	1,43817	0	953.92 5,13	2,2485 6	0,8714 63	-151,764	0	10,250 2	1,8093 3
2	3600,14	1,54015	0	950.82 3,82	2,2870 9	0,8737 56	-151,137	0	10,14	1,8030 3
2	3600,15	1,64104	0	947.77 5,88	2,3255 7	0,8760 58	-150,52	0	10,032 4	1,7969
2	3600,16	1,74085	0	944.77 9,70	2,3639 8	0,8783 66	-149,912	0	9,9273 4	1,7909 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	3601,06	8,14314	0	784.68 7,72	5,6966 3	1,0606 8	-115,954	0	5,3027 6	1,5346 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	520.125,89	27,4048	1,79804	-40,5844	0	1,39376	1,19877
2	3611,61	31,0172	0	505.159,21	29,1883	1,90249	-35,2011	0	1,30556	1,18099
2	3611,61	31,0172	0	505.159,21	29,1883	1,90238	-35,2011	0	1,30563	1,18099
2	3612,01	31,5287	0	500.459,37	29,2142	1,95252	-33,7784	0	1,29052	1,17686
2	3614,38	34,4979	0	424.199,53	29,6771	2,55534	-18,7247	0	1,21829	1,15047
2	3617,23	37,9391	0	310.807,11	30,8034	3,60949	-2,57533	0	1,21046	1,14056
2	3620,65	42,15	0	222.150,48	32,3841	4,79763	6,49005	0	1,25849	1,14643
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	3700,07	200,708	0	18.670,29	66,11	17,031	21,9164	0	2,23962	1,17649
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	953.805,51	2,34464	0,798161	-150,018	0	10,8957	1,78228
2	3600,17	1,93487	0	951.151,90	2,38072	0,797122	-149,367	0	10,8354	1,77537
2	3600,18	2,04292	0	948.522,51	2,41664	0,796222	-148,72	0	10,7759	1,76858
2	3600,19	2,15038	0	945.916,84	2,45242	0,795453	-148,077	0	10,717	1,7619
2	3600,2	2,25726	0	943.334,45	2,48806	0,794806	-147,437	0	10,6589	1,75532
2	3600,21	2,38475	0	940.265,78	2,53064	0,79418	-146,674	0	10,5901	1,74757
2	3600,23	2,53665	0	936.626,47	2,58149	0,793634	-145,764	0	10,5087	1,73845
2	3600,24	2,71741	0	932.319,48	2,64215	0,793246	-144,682	0	10,4129	1,72777
2	3600,26	2,93215	0	927.236,29	2,71447	0,793131	-143,397	0	10,3006	1,71533
2	3600,29	3,1868	0	921.257,16	2,80057	0,793449	-141,873	0	10,1693	1,70089
2	3600,32	3,48812	0	914.250,16	2,90296	0,794397	-140,072	0	10,0167	1,68426
2	3600,35	3,84381	0	906.074,39	3,02461	0,796229	-137,949	0	9,8406	1,6652
2	3600,4	4,2625	0	896.581,63	3,16896	0,799243	-135,453	0	9,63875	1,64356
2	3600,45	4,7538	0	885.627,37	3,33999	0,803803	-132,534	0	9,40944	1,6192
2	3600,51	5,32823	0	873.077,54	3,54222	0,810333	-129,134	0	9,15152	1,59203
2	3600,59	5,9972	0	858.818,61	3,78078	0,819297	-125,199	0	8,86476	1,56208
2	3600,67	6,77303	0	842.771,99	4,06139	0,831184	-120,675	0	8,55016	1,52945
2	3600,78	7,66896	0	824.906,04	4,39016	0,846507	-115,514	0	8,21012	1,49437
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

72438-1RiempFSRU-1R\Riempimento FSRU-ME4-Water\1R 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]
-----------------	----------	------------------------	--------------------	--------------------	----------------------	----------------------	-----------------------------------	-------------------------	--------------------------	-------------------------------



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



DNV

	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	1,7025
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	1,5642
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	1,17166
2	3671,93	347,325	0	11.541,76	40,9897	19,8509	23,9611	0	5,24322	1,17182



## Scenario (Leak) : 300mm

72438-1RiempFSRU-1R\Riempimento FSRU-ME4-Water\1R 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

		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 <sup>3</sup> ]
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	0,78242	24,6246	0	0,6148 73	1,1739
2	0	33,2988	0	1.687,5 6	0,00177	0,78242	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	19,0 64	55,498	0	214.97 4,64	140,067	4,61815	6,48941	0	1,0070 2	1,1510 9
2	20,8 733	58,8938	0	169.07 0,01	141,37	5,38464	10,5898	0	1,1064 6	1,1556 2
2	20,8 733	58,8938	0	169.07 0,01	141,37	5,38462	10,5898	0	1,1064 6	1,1556 2
2	31,2 966	78,4571	0	88.260, 17	145,428	8,12218	16,6307	0	1,3969 8	1,1671 2
2	63,7 033	141,157	0	59.586, 24	149,029	10,3197	18,6472	0	1,5906 2	1,1711 3
2	103, 691	221,796	0	49.748, 70	152,699	11,4031	19,4229	0	1,6782	1,1720 2
2	152, 18	323,678	0	41.295, 51	157,199	12,6153	20,0482	0	1,7706	1,1729 8
2	211, 182	452,718	0	33.884, 45	162,738	13,9923	20,7535	0	1,8697 6	1,1732 8
2	283, 029	616,411	0	27.518, 17	169,573	15,5813	22,001	0	1,9779 3	1,1713 8
2	355, 122	787,471	0	23.276, 47	176,541	17,0837	22,7817	0	2,0750 3	1,1705 2
2	370, 529	824,4	0	22.049, 40	178,025	17,3917	22,9072	0	2,0943 9	1,1704 2
2	477, 238	1089,48	0	17.577, 39	188,5	19,4658	23,5503	0	2,2205 1	1,1701 3
2	606, 795	1425,82	0	13.371, 00	201,455	21,8165	24,0079	0	2,3555	1,1701 9
2	763, 794	1854,14	0	19.045, 12	217,51	24,4882	24,3284	0	2,5004 3	1,1704 7
2	816, 552	2001,93	0	17.652, 02	222,955	25,3438	24,4027	0	2,5451 7	1,1705 8
3	- 126, 363	22,1992	0	1.687,5 6	0,00177 245	0,78242 8	24,6246	0	0,6148 73	1,1739
3	0	22,1992	0	1.687,5 6	0,00177 245	0,78242 8	24,6246	0	0,6148 73	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	1,5669
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	1,173973
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	1,524625
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	2,93699	1,17268
14	593,305	846,626	0	6.436,04	197,698	37,6567	24,319	0	3,12163	1,17274
15	57,3496	-55,498	0	1,00	0,00177245	0,782428	24,6246	0	0,614873	1,1739
15	57,4496	-55,4562	0	662.867,41	3,24102	0,00895011	-102,214	0	0,38754	1,51128
15	57,5496	-55,4176	0	680.502,43	4,51105	0,0164937	-105,321	0	0,384925	1,5246
15	57,6496	-55,3791	0	686.225,61	5,50428	0,0239888	-106,305	0	0,384161	1,52881
15	57,7496	-55,3409	0	694.532,58	6,34946	0,0311331	-107,981	0	0,381473	1,53739
15	57,8496	-55,3029	0	703.757,83	7,09897	0,0379044	-109,881	0	0,378223	1,54751
15	57,9496	-55,2652	0	712.653,55	7,77849	0,0443806	-111,711	0	0,375074	1,5575
15	58,0496	-55,2278	0	720.906,05	8,40642	0,0505984	-113,399	0	0,372188	1,5669
15	58,1496	-55,1907	0	728.469,13	8,99464	0,0565927	-114,935	0	0,369586	1,57561
15	58,2496	-55,1539	0	735.375,44	9,55058	0,0623957	-116,329	0	0,367255	1,58363
15	58,3496	-55,1173	0	741.689,88	10,0794	0,0680356	-117,596	0	0,365165	1,59102
15	58,4496	-55,0809	0	747.484,15	10,5847	0,0735382	-118,752	0	0,363282	1,59786
15	58,5496	-55,0446	0	752.817,70	11,0701	0,0789152	-119,81	0	0,361582	1,60419
15	58,6496	-55,0086	0	757.741,38	11,5391	0,0841704	-120,783	0	0,360044	1,61007
15	58,7496	-54,9726	0	762.306,44	11,9932	0,0893191	-121,68	0	0,358647	1,61555
15	58,8496	-54,9368	0	766.551,21	12,4348	0,0943625	-122,51	0	0,357375	1,62068



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 <sup>3</sup> ]
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	211,199	749,878	0	17.691,11	242,003	35,6573	23,1742	0	5,87066	1,17178
3	239,254	917,238	0	13.866,66	255,53	41,8133	23,6457	0	6,05846	1,17179
4	54,6865	-45,8374	0	1,00	0,00177245	0,151276	24,6246	0	3,18023	1,1739
4	54,7865	-45,5899	0	468.945,16	8,02375	0,0168831	-75,1637	0	2,46404	1,44477
4	54,8865	-45,3435	0	468.978,97	11,3515	0,0336221	-75,1389	0	2,46517	1,44456
4	54,9865	-45,0969	0	468.630,66	13,9134	0,050317	-75,0745	0	2,46641	1,44434
4	55,0865	-44,8502	0	468.239,84	16,0763	0,0670038	-75,0088	0	2,46757	1,44415
4	55,1865	-44,6034	0	467.853,73	17,9832	0,0837005	-74,946	0	2,46864	1,44397
4	55,2865	-44,3565	0	467.468,03	19,718	0,100329	-74,8841	0	2,46969	1,4438
4	55,3865	-44,1094	0	467.066,24	21,3199	0,116912	-74,8199	0	2,47079	1,44362
4	55,4865	-43,8623	0	466.654,95	22,8143	0,133463	-74,7543	0	2,4719	1,44345
4	55,5865	-43,6151	0	466.241,69	24,2213	0,149975	-74,6887	0	2,47301	1,44327
4	55,6865	-43,3677	0	465.828,41	25,5546	0,166465	-74,6232	0	2,47411	1,44309
4	55,7865	-43,1202	0	465.409,93	26,8294	0,182884	-74,557	0	2,47523	1,44292
4	55,8865	-42,8727	0	464.989,48	28,051	0,199267	-74,4905	0	2,47634	1,44274
4	55,9865	-42,625	0	464.569,57	29,2243	0,215641	-74,4242	0	2,47746	1,44256
4	56,0865	-42,3772	0	464.149,21	30,3564	0,231978	-74,3578	0	2,47857	1,44239
4	56,1865	-42,1292	0	463.729,96	31,4508	0,248295	-74,2917	0	2,47968	1,44221



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	-	0	448.61	29,6399	0,1958	-72,0919	0	2,5133	1,4373
	76	48,1396		1,78		86			1	
5	64,61	-	0	448.23	30,8764	0,2120	-72,0331	0	2,5142	1,4371
	76	47,8882		8,59		25			7	5
5	64,71	-	0	447.86	32,069	0,2281	-71,9745	0	2,5152	1,437
	76	47,6367		5,93		37			2	
5	64,81	-	0	447.49	33,2227	0,2442	-71,9159	0	2,5161	1,4368
	76	47,3851		3,65		21			8	5
5	64,91	-	0	447.12	34,3419	0,2602	-71,8573	0	2,5171	1,4367
	76	47,1335		1,25		71			3	
5	65,01	-	0	446.75	35,4298	0,2762	-71,8018	0	2,5180	1,4365
	76	46,8817		9,63		81			6	6
5	65,11	-	0	446.65	36,488	0,2920	-71,8181	0	2,5185	1,4367
	76	46,6299		7,30		47			4	5
5	65,21	-	0	446.75	37,5201	0,3075	-71,8907	0	2,5186	1,4372
	76	46,3781		8,02		68			7	
5	65,31	-	0	447.06	38,5272	0,3228	-72,0183	0	2,5184	1,4379
	76	46,1262		1,10		25			6	
5	65,43	-45,824	0	447.70	39,7062	0,3407	-72,2488	0	2,5177	1,4390
	76			9,22		15			5	9
5	65,58	-	0	448.77	41,0816	0,3616	-72,601	0	2,5164	1,4408
	16	45,4615		0,35		54			5	7
5	65,75	-	0	450.38	42,6814	0,3860	-73,1134	0	2,5143	1,4434
	44	45,0268		6,33		03			9	1
5	65,96	-	0	452.65	44,5355	0,4142	-73,8097	0	2,5115	1,4468
	17	44,5056		0,32		07				4
5	66,21	-	0	455.64	46,6769	0,4467	-74,7101	0	2,5077	1,4512
	06	43,8811		4,35		37			5	6
5	66,50	-	0	459.43	49,141	0,4841	-75,8291	0	2,5031	1,4567
	92	43,1329		0,44		12			5	6
5	66,86	-	0	464.04	51,9663	0,5268	-77,1749	0	2,4977	1,4634
	75	42,2369		8,40		85			5	1
5	67,29	-	0	469.50	55,1998	0,5755	-78,747	0	2,4917	1,4712
	75	41,1642		7,72		62			2	6
5	67,81	-	0	475.78	58,8931	0,6306	-80,5375	0	2,4852	1,4803
	35	39,8802		5,29		75			5	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 56	- 36,5044	0	490.52 1,62	67,8748	0,7627 41	-84,7008	0	2,4721 6	1,5019 6
5	70,06 72	- 34,3031	0	498.74 0,75	73,3012	0,8408 22	-87,0138	0	2,4663 2	1,5144 1
5	71,13 72	- 31,6671	0	507.29 7,01	79,4704	0,9275 54	-89,4286	0	2,4616 5	1,5277 7
5	72,42 11	- 28,5088	0	515.95 7,43	86,4849	1,0234 3	-91,8969	0	2,4587 8	1,5418 9
5	73,96 18	- 24,7212	0	524.40 7,09	94,4447	1,1308 3	-94,1002	0	2,4585	1,5542 7
5	75,81 06	- 20,1737	0	532.61 3,44	103,451	1,2536 8	-95,5693	0	2,4611	1,5606 8
5	78,02 93	-14,709	0	541.68 3,47	113,625	1,3890 2	-96,5492	0	2,4653	1,5621 7
5	80,69 16	- 8,13562	0	550.74 9,59	125,293	1,5378 3	-96,7069	0	2,4735 1	1,5563 8
5	83,88 64	- 0,15662 4	0	557.48 9,17	139,527	1,6762	-95,2352	0	2,5295 2	1,5381 8
5	83,94 83	3,71534 E-15	0	557.56 8,18	139,806	1,6787 4	-95,188	0	2,5308 2	1,5377
5	83,94 83	3,71534 E-15	0	563.83 9,93	138,055	1,6658 8	-96,1885	0	2,5720 4	1,5413 5
5	87,72 01	9,82539	0	564.37 3,97	155,113	1,8317 4	-92,149	0	2,6391 7	1,5064 9
5	92,32 07	22,199	0	554.83 9,43	175,798	2,0456 3	-84,0525	0	2,7419 9	1,4491 1
5	97,84 13	37,7454	0	528.09 5,05	199,775	2,3449 6	-70,7199	0	2,8949 7	1,3726 1
5	104,4 66	57,6411	0	475.11 2,78	225,701	2,7973 9	-50,6834	0	3,1177 4	1,2835 2
5	108,9 75	72,1136	0	421.38 6,87	239,783	3,2055 7	-32,8812	0	3,3116 3	1,2209 5
5	108,9 75	72,1136	0	421.38 6,87	239,783	3,2055 6	-32,8812	0	3,3116 4	1,2209 5
5	110,2 88	76,5147	0	395.80 6,01	242,557	3,4000 3	-23,8001	0	3,3964 2	1,1908 2

5	110,2 88	76,5147	0	395.80 6,01	242,557	3,4000 2	-23,8001	0	3,3964 3	1,1908 2
5	112,4 16	83,9034	0	345.25 8,74	244,063	3,8733 7	-10,9967	0	3,5588 7	1,1595 7
5	121,9 55	121,398	0	165.67 6,50	248,155	7,2446 6	11,6508	0	4,2120 7	1,1510 9
5	133,4 03	171,816	0	107.83 7,75	252,829	10,28	16,2131	0	4,5559 8	1,1588 6
5	147,1 4	236,353	0	75.937, 49	258,675	13,545 7	18,2895	0	4,8301 4	1,1646 3
5	163,6 24	318,148	0	54.676, 91	265,924	17,431 9	19,5014	0	5,0868 7	1,1691 2
5	183,4 06	421,297	0	40.008, 34	274,867	22,032 5	20,2552	0	5,3330 7	1,1725 6
5	207,1 43	550,859	0	29.568, 14	285,852	27,492 6	21,326	0	5,5744 6	1,1731 5
5	230,0 85	681,064	0	23.206, 58	296,668	32,694 9	22,299	0	5,7694 7	1,1724 3
5	235,6 29	713,209	0	22.002, 64	299,307	33,937 4	22,4729	0	5,8126 5	1,1723 4
5	269,8 11	916,514	0	16.370, 86	315,753	41,498	23,2394	0	6,0488 4	1,1720 6
5	292,3 84	1054,56	0	13.878, 70	326,734	46,333 6	23,5631	0	6,1820 3	1,1720 2
6	63,31 86	- 51,1496	0	0,99	0,00177	0,1512 76	24,6246	0	3,1802 3	1,1739
6	63,41 86	- 50,8984	0	449.79 2,82	8,48071	0,0165 745	-72,7019	0	2,5024 6	1,4390 9
6	63,51 86	-50,648	0	449.78 9,13	11,9977	0,0330 119	-72,6738	0	2,5035 7	1,4388 9
6	63,61 86	- 50,3976	0	449.49 7,14	14,7064	0,0494 211	-72,6193	0	2,5046 7	1,4387 1
6	63,71 86	- 50,1471	0	449.15 3,42	16,9931	0,0658 179	-72,5612	0	2,5056 7	1,4385 4
6	63,81 86	- 49,8965	0	448.79 8,78	19,0155	0,0821 74	-72,5032	0	2,5065 6	1,4383 8
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 4	-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	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	164,6 76	158,55	0	76.145, 74	275,373	7,0507 5	16,4778	0	4,2623 2	1,1731
11	178,4 13	219,417	0	46.307, 53	280,961	10,164 3	18,8984	0	4,5854 2	1,1750 4
11	194,8 97	297,552	0	29.791, 41	287,919	13,938 4	20,0812	0	4,8813 1	1,1770 4
11	214,6 78	396,938	0	19.961, 33	296,578	18,440 8	20,7739	0	5,1586 4	1,1784 8
11	214,8 94	398,053	0	19.891, 68	296,674	18,490 5	20,7933	0	5,1613 6	1,1784 4
11	238,4 16	522,745	0	14.216, 84	307,292	23,851 2	22,291	0	5,4269 2	1,1757 4
11	255,5 04	616,88	0	11.615, 98	315,165	27,684 2	22,9095	0	5,5885	1,1747 9
12	102,5 92	- 69,9694	0	1,00	0,00177 245	0,1512 76	24,6246	0	3,1802 3	1,1739
12	102,6 92	- 69,7067	0	396.96 6,35	9,67448	0,0156 455	-64,6391	0	2,6198 3	1,4218 6
12	102,7 92	- 69,4447	0	397.02 5,72	13,6878	0,0311 815	-64,6269	0	2,6205 1	1,4217 3
12	102,8 92	- 69,1826	0	396.81 2,04	16,7714	0,0467 141	-64,5867	0	2,6212 1	1,4216
12	102,9 92	- 68,9204	0	396.55 9,19	19,381	0,0622 148	-64,5441	0	2,6218 8	1,4214 9
12	103,0 92	- 68,6582	0	396.28 6,99	21,6821	0,0777 086	-64,4998	0	2,6225 5	1,4213 8
12	103,1 92	- 68,3959	0	396.01 2,70	23,7657	0,0931 884	-64,456	0	2,6232 1	1,4212 7
12	103,2 92	- 68,1336	0	395.73 4,56	25,6871	0,1086 4	-64,4119	0	2,6238 7	1,4211 6
12	103,3 92	- 67,8711	0	395.45 2,88	27,4793	0,1240 71	-64,3674	0	2,6245 4	1,4210 6
12	103,4 92	- 67,6086	0	395.17 0,19	29,1646	0,1394 91	-64,3228	0	2,6252	1,4209 5
12	103,5 92	- 67,3461	0	394.88 9,27	30,7606	0,1548 99	-64,2787	0	2,6258 5	1,4208 4





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	162,149	117,227	0	80.306,91	277,783	4,40713	12,7463	0	3,88781	1,19082
12	172,677	159,536	0	50.864,88	293,323	6,07381	17,0885	0	4,14496	1,18326
12	186,414	218,576	0	30.375,37	305,52	8,66563	19,3118	0	4,44682	1,18143
12	199,724	279,563	0	19.817,48	311,282	11,6124	20,2736	0	4,71088	1,18137
12	202,899	294,638	0	18.383,32	312,613	12,3248	20,4197	0	4,76647	1,18141
12	222,68	392,034	0	12.417,66	321,105	16,7691	21,46	0	5,06421	1,18007
12	230,783	433,483	0	10.870,50	324,666	18,5952	22,0364	0	5,16834	1,17867
13	110,273	-72,5415	0	1,00	0,00177245	0,151276	24,6246	0	3,18023	1,17393
13	110,373	-72,2772	0	389.061,36	9,85159	0,0155228	-63,4942	0	2,63555	1,41957
13	110,473	-72,0137	0	389.134,20	13,9361	0,0309476	-63,4854	0	2,63616	1,41946
13	110,573	-71,75	0	388.925,47	17,077	0,0463606	-63,4462	0	2,63683	1,41934
13	110,673	-71,4863	0	388.687,95	19,732	0,0617531	-63,4065	0	2,63745	1,41924
13	110,773	-71,2225	0	388.430,15	22,0773	0,0771234	-63,3648	0	2,63808	1,41913
13	110,873	-70,9587	0	388.167,64	24,1987	0,0924901	-63,3231	0	2,63871	1,41903
13	110,973	-70,6948	0	387.907,71	26,1541	0,107836	-63,2822	0	2,63931	1,41894
13	111,073	-70,4308	0	387.646,72	27,9796	0,123155	-63,2413	0	2,63991	1,41884
13	111,173	-70,1668	0	387.384,54	29,6984	0,138452	-63,2003	0	2,64052	1,41875
13	111,273	-69,9027	0	387.120,51	31,3265	0,153736	-63,1591	0	2,64113	1,41865
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-Q254,5

72438-1RiempFSRU-1R\ Riempimento FSRU-ME4-Water\1R Manichette GNL  
riempimento FSRU\300mm-Q254,5

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	-0,532525	kg/s	0	0	176,929
2	Continuous	404,659	-46,972	kg/s	0	0	249,961
3	Continuous	801,635	-54,7072	kg/s	0	0	251,268
4	Continuous	1197,38	-59,5803	kg/s	0	0	252,207
5	Continuous	1592,53	-63,2423	kg/s	0	0	252,524
6	Continuous	1987,27	-66,1074	kg/s	0	0	252,852
7	Continuous	2381,75	-68,5149	kg/s	0	0	253,079
8	Continuous	2776,04	-70,5969	kg/s	0	0	252,816
9	Continuous	3170,17	-72,4076	kg/s	0	0	252,944
10	Continuous	3564,18	-74,001	kg/s	0	0	19,7927

### 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/m3]
1	0,22	- 0,53252 5	0	1,00	0,00177 245	0,78242 8	24,6246	0	0,6148 73	1,1739
1	0,32	- 0,51626 7	0	931.75 1,05	0,67721 5	0,11542 6	-148,208	0	0,0831 886	1,7798 1
1	0,42	- 0,50919 2	0	955.73 5,31	1,04155	0,17302 5	-152,766	0	0,0630 708	1,8232 8
1	0,52	- 0,50322 8	0	963.98 7,20	1,37308	0,20689 2	-154,316	0	0,0573 473	1,8388 7
1	0,62	- 0,49759 6	0	967.88 5,68	1,68985	0,22809 3	-155,043	0	0,0557 067	1,8463 3
1	0,72	- 0,49203 4	0	969.92 8,38	1,99534	0,24249 6	-155,422	0	0,0558 101	1,8502 5
1	0,82	- 0,48641 3	0	970.99 5,33	2,29251	0,25287 6	-155,619	0	0,0568 239	1,8522 9
1	0,92	- 0,48066 6	0	971.49 0,77	2,5822	0,26099 1	-155,71	0	0,0583 535	1,8532 3
1	1,02	- 0,47474 6	0	971.62 1,26	2,86594	0,26766 7	-155,733	0	0,0602 005	1,8534 7
1	1,12	- 0,46863	0	971.51 1,20	3,1441	0,27354 8	-155,712	0	0,0622 388	1,8532 5
1	1,22	-0,4623	0	971.22 1,09	3,41726	0,27902 9	-155,617	0	0,0644 037	1,852
1	1,32	-	0	970.73	3,68546	0,2846	-155,282	0	0,0666	1,8469

		0,45574 5		9,95					907	6
1	1,42	- 0,44895 9	0	970.11 2,60	3,94837	0,29054 9	-154,73	0	0,0690 51	1,8385 5
1	1,52	- 0,44193 4	0	969.38 4,49	4,2068	0,29680 1	-154,036	0	0,0714 502	1,8280 3
1	1,62	- 0,43466 8	0	968.58 8,10	4,46175	0,30320 4	-153,259	0	0,0738 681	1,8164
1	1,72	- 0,42716	0	967.74 6,62	4,71362	0,30973 3	-152,434	0	0,0762 867	1,8042 3
1	1,82	- 0,41941 2	0	966.87 5,55	4,96231	0,31645 5	-151,573	0	0,0786 896	1,7917 2
1	1,92	- 0,41142 3	0	965.98 8,91	5,20835	0,32329 3	-150,7	0	0,0810 682	1,7792 6
1	2,02	- 0,40319 9	0	965.09 4,00	5,45226	0,33017 3	-149,829	0	0,0834 2	1,7670 2
1	2,12	- 0,39474 1	0	964.19 8,13	5,69439	0,33704 8	-148,97	0	0,0857 417	1,7551 6
1	2,22	- 0,38605 2	0	963.30 5,36	5,93443	0,34399 9	-148,121	0	0,0880 264	1,7436 2
1	2,34	- 0,37532 7	0	962.24 4,28	6,22003	0,35240 7	-147,122	0	0,0907 156	1,7302 9
1	2,48 4	- 0,36203 6	0	960.99 0,57	6,56224	0,36234 3	-145,965	0	0,0938 716	1,7151 7
1	2,65 68	- 0,34549 4	0	959.51 4,52	6,97479	0,37385 6	-144,636	0	0,0975 684	1,6982 2
1	2,86 416	- 0,32481	0	957.78 1,05	7,47298	0,38723 6	-143,096	0	0,1018 8	1,6790 7

2

1	3,11 299	- 0,29883 5	0	955.75 1,41	8,07429	0,40267 6	-141,32	0	0,1069 05	1,6576 6
1	3,41 159	- 0,26604	0	953.38 6,20	8,79968	0,42039 7	-139,287	0	0,1127 47	1,6339 7
1	3,76 991	- 0,22443 1	0	950.65 6,92	9,67444	0,44077 2	-136,983	0	0,1194 91	1,6081
1	4,19 989	- 0,17138 5	0	947.53 2,39	10,7286	0,46391 3	-134,421	0	0,1272 57	1,5805 6
1	4,71 587	- 0,10343 6	0	943.99 7,23	11,9974	0,49038 9	-131,596	0	0,1361 11	1,5515 5
1	5,33 504	- 0,01604 36	0	940.04 2,67	13,5228	0,52049 1	-128,541	0	0,1461 32	1,5216 9
1	6,07 805	0,09675 04	0	935.67 2,37	15,3532	0,55459 4	-125,298	0	0,1573 82	1,4916 4
1	6,96 966	0,24272 1	0	930.90 5,66	17,5455	0,59329 6	-121,905	0	0,1698 71	1,4618 7
1	8,03 959	0,43189 3	0	925.74 7,38	20,1642	0,63697	-118,385	0	0,1836 68	1,4326 8
1	9,32 351	0,67743 2	0	920.24 3,92	23,2833	0,68638 1	-114,788	0	0,1987 16	1,4045 1
1	10,8 642	0,99607	0	914.44 1,17	26,9869	0,74217 6	-111,15	0	0,2149 66	1,3775 9
1	12,7 131	1,40949	0	908.40 3,70	31,3689	0,80551 3	-107,493	0	0,2322 78	1,352
1	14,9 317	1,94515	0	902.19 3,48	36,5314	0,87748 7	-103,834	0	0,2505 1	1,3277 1
1	17,5 94	2,63791	0	895.87 7,34	42,5818	0,95931 8	-100,199	0	0,2695	1,3047 8
1	20,7 888	3,53095	0	889.52 4,74	49,62	1,05289	-96,5671	0	0,2890 42	1,2829 3
1	24,6 226	4,67788	0	883.22 5,33	57,721	1,16036	-92,977	0	0,3088 92	1,2622 6



1	29,2 231	6,14538	0	876.83 4,08	66,9141	1,2853	-89,4274	0	0,3288 4	1,2427 9
1	34,7 437	8,02115	0	865.74 4,27	77,1186	1,43847	-85,3341	0	0,3506 1	1,2241 3
1	41,3 684	10,4266	0	844.70 5,22	88,0911	1,64405	-80,2193	0	0,3750 84	1,2072 8
1	49,3 181	13,6332	0	809.00 8,71	99,4458	1,82197	-74,1003	0	0,4317 28	1,1958 4
1	58,8 577	18,0437	0	769.45 7,13	111,794	2,07895	-68,5172	0	0,4914 86	1,1908 8
1	70,3 053	24,0221	0	730.51 0,49	125,888	2,39857	-63,0438	0	0,5522 11	1,1864 3
1	84,0 423	32,257	0	585.85 4,47	136,147	3,10023	-39,2652	0	0,7084 09	1,1549 2
1	94,9 302	42,6366	0	230.85 5,00	136,148	6,31825	5,59621	0	1,1868	1,1470 7
1	94,9 302	42,6366	0	230.85 5,00	136,148	6,31825	5,59621	0	1,1868	1,1470 7
1	100, 527	49,7974	0	159.48 9,00	139,012	7,98146	11,6888	0	1,3656 7	1,1554
1	100, 705	50,041	0	157.88 6,10	139,099	8,03216	11,8124	0	1,3706 8	1,1556 2
1	100, 705	50,041	0	157.88 6,10	139,099	8,0321	11,8124	0	1,3706 9	1,1556 2
1	120, 308	80,6262	0	86.934, 44	144,173	11,6715	16,8482	0	1,6880 9	1,1668 6
1	144, 046	122,062	0	74.250, 98	146,271	12,8157	17,763	0	1,7762	1,1685 4
1	172, 531	173,53	0	67.026, 43	148,646	13,5485	18,3281	0	1,8306 1	1,1692 4
1	206, 713	237,119	0	59.986, 39	151,517	14,3733	18,8581	0	1,8897 5	1,17
1	247, 732	315,957	0	53.158, 39	154,996	15,3067	19,3501	0	1,9543 3	1,1708 3
1	296, 954	413,905	0	46.607, 26	159,221	16,3675	19,8008	0	2,0250 1	1,1717 3
1	356, 021	535,847	0	40.401, 40	164,364	17,5762	20,2048	0	2,1025	1,1726 8



1	426,901	687,938	0	34.573,96	170,638	18,9644	20,7508	0	2,18811	1,17302
1	511,957	878,126	0	29.180,73	178,307	20,5728	21,7375	0	2,28318	1,17169
1	614,025	1116,49	0	24.273,85	187,7	22,4083	22,5326	0	2,38684	1,17091
1	645,165	1191,27	0	23.013,22	190,604	22,9503	22,7192	0	2,41665	1,17077
1	736,506	1416,71	0	19.828,33	199,237	24,5117	23,1605	0	2,50056	1,17055
1	883,483	1793,54	0	16.034,24	213,389	26,8882	23,6506	0	2,62329	1,17048
1	1059,86	2267,92	0	12.755,19	230,774	29,5762	24,0267	0	2,75572	1,17062
1	1271,5	2866,25	0	10.000,87	252,149	32,6052	24,3088	0	2,89794	1,17085
1	1327,11	3028,34	0	9.429,20	257,849	33,3694	24,3635	0	2,93277	1,17092
1	1525,48	3624,36	0	7.684,47	278,483	36,0356	24,5159	0	3,05122	1,17116
1	1548,89	3696,18	0	7.521,00	280,943	36,3383	24,5304	0	3,06462	1,17119
2	404,659	-46,972	0	1,00	0,00177245	0,782428	24,6246	0	0,614873	1,1739
2	404,759	-46,9218	0	490.110,26	3,34772	0,00647304	-73,5917	0	0,484394	1,41772
2	404,859	-46,8734	0	506.831,88	4,70354	0,0120899	-76,8304	0	0,483652	1,42889
2	404,959	-46,8251	0	511.024,64	5,75668	0,0177648	-77,5519	0	0,483714	1,43108
2	405,059	-46,7767	0	512.598,03	6,65307	0,0234449	-77,7993	0	0,483876	1,43174
2	405,159	-46,7283	0	513.384,57	7,44949	0,0291065	-77,9246	0	0,484027	1,43208
2	405,259	-46,6799	0	515.709,94	8,17376	0,0345769	-78,4697	0	0,483607	1,43439
2	405,	-	0	519.85	8,84361	0,03974	-79,4783	0	0,4826	1,4388



	359	46,6316		8,88		98			44	1
2	405,459	-46,5834	0	524.976,14	9,47051	0,044647	-80,722	0	0,481449	1,44433
2	405,559	-46,5353	0	530.512,16	10,0624	0,0493052	-82,0591	0	0,480193	1,45033
2	405,659	-46,4873	0	536.083,37	10,6247	0,0537735	-83,3949	0	0,478973	1,45638
2	405,759	-46,4395	0	541.559,70	11,1622	0,0580742	-84,6981	0	0,477818	1,46234
2	405,859	-46,3918	0	546.890,27	11,6787	0,0622244	-85,9577	0	0,476731	1,46815
2	405,959	-46,3441	0	552.052,78	12,1768	0,0662391	-87,1699	0	0,475711	1,4738
2	406,059	-46,2966	0	557.034,86	12,6583	0,0701354	-88,3329	0	0,474752	1,47927
2	406,159	-46,2492	0	561.822,27	13,1248	0,0739257	-89,444	0	0,473856	1,48454
2	406,259	-46,2018	0	566.418,00	13,578	0,0776191	-90,5049	0	0,473019	1,48962
2	406,359	-46,1546	0	570.826,66	14,0196	0,0812226	-91,5172	0	0,472238	1,49451
2	406,459	-46,1074	0	575.044,81	14,4514	0,0847367	-92,4809	0	0,471513	1,4992
2	406,559	-46,0603	0	579.100,35	14,873	0,0881791	-93,4032	0	0,470833	1,50373
2	406,659	-46,0132	0	582.984,79	15,2864	0,0915461	-94,2826	0	0,470201	1,50808
2	406,779	-45,9568	0	587.460,48	15,7705	0,0955111	-95,2914	0	0,46949	1,51319
2	406,923	-45,8893	0	592.553,07	16,3379	0,100151	-96,4331	0	0,468711	1,51885
2	407,096	-45,8083	0	598.316,92	16,9997	0,105578	-97,7177	0	0,467863	1,52538
2	407,303	-45,7114	0	604.774,07	17,7702	0,111902	-99,1474	0	0,466959	1,53273
2	407,552	-45,5953	0	611.937,17	18,6651	0,119247	-100,722	0	0,466015	1,54094
2	407,	-	0	620.00	19,7027	0,12768	-102,485	0	0,4649	1,5502



	851	45,4563		4,73		2			92	9
2	408,209	-45,29	0	629.690,53	20,9055	0,137069	-104,601	0	0,463703	1,56179
2	408,639	-45,0909	0	641.285,21	22,2989	0,147339	-107,128	0	0,462118	1,57591
2	409,155	-44,8529	0	654.872,43	23,9129	0,158432	-110,066	0	0,460295	1,59285
2	409,774	-44,5685	0	670.038,62	25,7771	0,170478	-113,294	0	0,458465	1,61204
2	410,517	-44,2285	0	686.361,26	27,9254	0,183648	-116,699	0	0,456811	1,63291
2	411,409	-43,8218	0	703.575,04	30,4043	0,198031	-120,207	0	0,455438	1,65513
2	412,479	-43,335	0	721.303,81	33,2697	0,213764	-123,726	0	0,454493	1,67814
2	413,763	-42,7518	0	739.133,94	36,5658	0,23189	-126,73	0	0,454112	1,69622
2	415,303	-42,0519	0	756.108,18	40,3243	0,255236	-128,02	0	0,454533	1,69532
2	417,152	-41,2104	0	771.459,90	44,6156	0,285453	-127,458	0	0,455908	1,67402
2	419,371	-40,1964	0	784.565,29	49,5365	0,324127	-125,12	0	0,458302	1,63479
2	422,033	-38,9717	0	794.902,51	55,2824	0,372358	-121,201	0	0,461731	1,582531
2	425,228	-37,4893	0	801.723,37	62,3128	0,430222	-115,724	0	0,466415	1,52072
2	429,062	-35,6895	0	803.930,00	70,8251	0,500401	-108,709	0	0,472586	1,45342
2	433,662	-33,4979	0	800.203,10	80,915	0,587172	-100,405	0	0,480142	1,38631
2	439,183	-30,8231	0	788.843,33	92,5334	0,697481	-91,2109	0	0,4888	1,32511
2	445,807	-27,5531	0	767.316,75	105,477	0,843868	-81,362	0	0,498284	1,27329
2	453,757	-23,5501	0	731.632,51	119,324	1,05054	-70,8007	0	0,508514	1,23242
2	463,	-	0	675.35	133,336	1,37014	-58,9542	0	0,5197	1,2023



	297	18,6429		0,16					85	4
2	474,744	-12,5573	0	603.912,33	146,103	1,7915	-46,8717	0	0,557163	1,18378
2	488,481	-4,23395	0	513.708,24	156,023	2,34332	-34,5048	0	0,656656	1,17665
2	504,966	7,42947	0	456.251,24	168,26	2,97447	-28,4544	0	0,746654	1,18094
2	524,747	22,7302	0	437.514,36	190,502	3,4075	-26,0778	0	0,799379	1,18043
2	548,485	45,2047	0	204.647,01	196,552	6,63665	5,56037	0	1,22285	1,16106
2	552,558	50,3866	0	171.970,64	196,552	7,5607	8,68152	0	1,31942	1,16329
2	552,558	50,3866	0	171.970,64	196,552	7,56028	8,68152	0	1,3195	1,16329
2	576,97	87,1092	0	96.804,38	201,179	10,9356	15,4378	0	1,62794	1,169
2	611,152	144,59	0	82.261,54	203,894	12,0583	16,7856	0	1,71839	1,16955
2	652,171	216,622	0	71.868,32	207,18	13,0316	17,7431	0	1,79293	1,16992
2	701,393	306,837	0	62.328,11	211,178	14,1199	18,5619	0	1,87227	1,17057
2	760,46	419,979	0	53.564,76	216,061	15,3488	19,2615	0	1,95755	1,17125
2	831,34	562,059	0	45.553,10	222,037	16,7442	19,8546	0	2,04977	1,17213
2	916,396	740,732	0	38.303,95	229,365	18,3335	20,3473	0	2,14979	1,17313
2	1018,46	965,817	0	31.821,65	238,368	20,1597	21,0821	0	2,25901	1,17303
2	1140,94	1249,97	0	26.100,35	249,449	22,2606	22,1542	0	2,37872	1,17153
2	1225,35	1453,99	0	23.043,86	257,248	23,6471	22,6586	0	2,4545	1,17101
2	1287,92	1609,61	0	21.118,30	263,114	24,651	22,9516	0	2,50797	1,17078
2	1464	2064,46	0	16.872,	279,959	27,3536	23,5425	0	2,6467	1,1705



	,29			41					1	1
2	1675,94	2640,54	0	13.308,95	300,736	30,3992	23,9751	0	2,79506	1,17055
2	1929,92	3370,9	0	10.361,13	326,368	33,8135	24,2868	0	2,95283	1,17077
2	2038,9	3696,14	0	9.424,96	337,571	35,2072	24,3802	0	3,01498	1,17087
3	801,635	- 54,7072	0	1,00	0,00177245	0,782428	24,6246	0	0,614873	1,1739
3	801,735	- 54,6546	0	419.208,49	3,65826	0,00587191	-62,0158	0	0,513547	1,38857
3	801,835	- 54,6032	0	433.686,13	5,15099	0,0110422	-64,9963	0	0,513168	1,39839
3	801,935	- 54,5519	0	437.296,59	6,30672	0,0162733	-65,6538	0	0,513239	1,40031
3	802,035	- 54,5006	0	438.652,52	7,28987	0,0215083	-65,8805	0	0,513363	1,40089
3	802,135	- 54,4492	0	439.215,97	8,16158	0,026741	-65,9659	0	0,513502	1,40108
3	802,235	- 54,3979	0	439.461,65	8,95437	0,0319643	-66,0011	0	0,513635	1,40114
3	802,335	- 54,3465	0	440.586,71	9,68658	0,0370599	-66,2926	0	0,513497	1,40233
3	802,435	- 54,2952	0	443.225,91	10,3712	0,0419005	-66,9995	0	0,512963	1,40531
3	802,535	- 54,2439	0	446.891,71	11,0174	0,0464822	-67,9794	0	0,512202	1,40946
3	802,635	- 54,1928	0	451.048,80	11,6314	0,0508472	-69,0817	0	0,511372	1,41415
3	802,735	- 54,1417	0	455.428,78	12,2177	0,0550269	-70,2335	0	0,510534	1,41908
3	802,835	- 54,0906	0	459.901,31	12,7797	0,0590457	-71,4013	0	0,509708	1,42413
3	802,935	- 54,0397	0	464.377,05	13,3206	0,0629208	-72,5619	0	0,508908	1,42918
3	803,035	- 53,9889	0	468.802,01	13,8434	0,0666634	-73,7015	0	0,508144	1,43417



3	803,135	-53,9381	0	473.148,67	14,3499	0,0702881	-74,814	0	0,507418	1,43909
3	803,235	-53,8874	0	477.397,70	14,8422	0,0738037	-75,8952	0	0,506729	1,4439
3	803,335	-53,8367	0	481.537,82	15,3216	0,0772207	-76,9427	0	0,506077	1,4486
3	803,435	-53,7862	0	485.565,02	15,7885	0,0805518	-77,9564	0	0,50546	1,45319
3	803,535	-53,7356	0	489.476,53	16,2443	0,0838031	-78,9361	0	0,504876	1,45765
3	803,635	-53,6852	0	493.271,80	16,6899	0,0869798	-79,8821	0	0,504324	1,46199
3	803,755	-53,6247	0	497.677,46	17,2125	0,0907005	-80,9747	0	0,503701	1,46704
3	803,899	-53,5522	0	502.753,45	17,8243	0,0950393	-82,2261	0	0,503008	1,47288
3	804,071	-53,4654	0	508.556,32	18,5386	0,100083	-83,6471	0	0,502248	1,47959
3	804,279	-53,3613	0	515.129,29	19,3707	0,105924	-85,2446	0	0,50143	1,48721
3	804,528	-53,2367	0	522.500,76	20,3365	0,11267	-87,0216	0	0,500564	1,49581
3	804,826	-53,0873	0	530.673,72	21,4556	0,120433	-88,9739	0	0,499673	1,5054
3	805,185	-52,9085	0	539.725,56	22,7494	0,129299	-91,1168	0	0,498757	1,51612
3	805,615	-52,6942	0	550.053,88	24,2437	0,139214	-93,5468	0	0,497742	1,52855
3	806,131	-52,4378	0	562.349,62	25,9637	0,149983	-96,4304	0	0,496492	1,54374
3	806,75	-52,1308	0	576.910,61	27,9442	0,16143	-99,8205	0	0,495011	1,56221
3	807,493	-51,7636	0	593.668,72	30,2258	0,173473	-103,667	0	0,493421	1,58394
3	808,384	-51,3243	0	612.233,39	32,8541	0,186176	-107,838	0	0,491915	1,60839
3	809,454	-50,7987	0	632.148,27	35,8786	0,199705	-112,194	0	0,490651	1,63492



3	810,738	-50,1694	0	652.868,39	39,3639	0,21426	-116,578	0	0,489799	1,66264
3	812,279	-49,4151	0	673.803,81	43,371	0,230722	-120,499	0	0,489492	1,68671
3	814,128	-48,5098	0	693.924,76	47,9178	0,252503	-122,41	0	0,489897	1,68983
3	816,346	-47,4217	0	712.219,41	53,0771	0,281667	-122,065	0	0,491131	1,66915
3	819,009	-46,1115	0	727.841,74	58,9623	0,320012	-119,58	0	0,493227	1,62772
3	822,203	-44,5311	0	740.086,12	65,783	0,368921	-115,253	0	0,496159	1,57193
3	826,037	-42,6215	0	747.999,71	74,0836	0,428788	-109,19	0	0,500086	1,50673
3	830,638	-40,3093	0	750.147,18	84,1163	0,502845	-101,431	0	0,5052	1,43677
3	836,158	-37,5032	0	744.794,03	95,9414	0,596603	-92,3053	0	0,511397	1,36858
3	842,783	-34,092	0	729.720,71	109,455	0,719332	-82,2286	0	0,518433	1,30795
3	850,733	-29,9396	0	701.971,91	124,325	0,888102	-71,4593	0	0,526087	1,25829
3	860,272	-24,8796	0	656.703,59	140	1,13807	-59,8027	0	0,53442	1,22052
3	871,72	-18,7083	0	590.660,61	155,451	1,53848	-47,0757	0	0,543365	1,19416
3	885,457	-10,8568	0	512.724,39	168,938	1,98887	-34,9819	0	0,612257	1,18063
3	901,941	0,0722159	0	438.723,43	181,521	2,58869	-25,8181	0	0,709284	1,17946
3	921,723	14,8302	0	408.326,06	202,011	3,08622	-22,9686	0	0,775486	1,18321
3	945,46	34,1662	0	355.451,98	221,976	3,82023	-13,8751	0	0,880164	1,17048
3	966,139	56,9559	0	155.859,29	221,972	7,46801	9,75701	0	1,31722	1,16677
3	966,139	56,9559	0	155.859,29	221,972	7,46808	9,75701	0	1,31721	1,16677



3	973,946	67,7208	0	123.509,40	223,842	8,68306	12,859	0	1,43618	1,16836
3	1008,13	121,508	0	83.514,18	227,477	11,142	16,4116	0	1,64933	1,17096
3	1049,15	190,756	0	72.572,74	230,665	12,1101	17,4982	0	1,72599	1,17099
3	1098,37	277,75	0	62.606,88	234,553	13,1964	18,4095	0	1,80795	1,17133
3	1157,44	387,161	0	53.581,17	239,31	14,4202	19,1719	0	1,89558	1,1719
3	1228,32	524,932	0	45.432,05	245,142	15,8083	19,8087	0	1,98998	1,17263
3	1313,37	698,595	0	38.123,93	252,306	17,3897	20,334	0	2,09213	1,17349
3	1415,44	917,866	0	31.638,38	261,122	19,2001	20,9337	0	2,20308	1,17382
3	1537,92	1195,25	0	25.939,03	271,991	21,2925	22,0792	0	2,32496	1,17201
3	1611,67	1369,2	0	23.265,53	278,677	22,502	22,5532	0	2,39258	1,17143
3	1684,9	1547,26	0	21.023,61	285,421	23,6758	22,9177	0	2,45644	1,17108
3	1861,27	1993,24	0	16.815,68	302,002	26,371	23,5299	0	2,59737	1,17069
3	2072,92	2559,07	0	13.296,87	322,483	29,4108	23,9729	0	2,74794	1,17066
3	2326,89	3277,72	0	10.385,41	347,789	32,8217	24,2888	0	2,90798	1,17083
3	2396,19	3480,63	0	9.776,86	354,814	33,7123	24,3507	0	2,94839	1,17089
4	1197,38	-59,5803	0	1,00	0,00177	0,78242	24,6245	0	0,614873	1,1739
4	1197,48	-59,5265	0	380.422,75	3,83738	0,00560	-55,7173	0	0,527412	1,37428
4	1197,58	-59,4738	0	393.448,43	5,41179	0,01057	-58,529	0	0,52721	1,38348
4	1197	-	0	396.69	6,62661	0,01560	-59,1468	0	0,5272	1,3852



	,68	59,4211		5,99		31			81	8
4	1197 ,78	- 59,3683	0	397.92 9,19	7,65881	0,02064 16	-59,3628	0	0,5273 79	1,3858 4
4	1197 ,88	- 59,3156	0	398.44 6,99	8,5746	0,02567 49	-59,4463	0	0,5274 89	1,3860 3
4	1197 ,98	- 59,2628	0	398.64 6,59	9,40554	0,03070 94	-59,4737	0	0,5276 03	1,3860 7
4	1198 ,08	- 59,2101	0	398.81 0,93	10,1728	0,03572 62	-59,5096	0	0,5276 83	1,3861 9
4	1198 ,18	- 59,1573	0	400.01 6,10	10,8905	0,04057 41	-59,8521	0	0,5274 91	1,3876
4	1198 ,28	- 59,1046	0	402.44 8,43	11,5676	0,04517 11	-60,5448	0	0,5270 18	1,3904 7
4	1198 ,38	- 59,0519	0	405.65 9,90	12,2109	0,04953 36	-61,4527	0	0,5264	1,3942 5
4	1198 ,48	- 58,9993	0	409.27 1,86	12,8252	0,05369 84	-62,4648	0	0,5257 35	1,3984 8
4	1198 ,58	- 58,9468	0	413.09 0,85	13,4145	0,05769 07	-63,5263	0	0,5250 61	1,4029 4
4	1198 ,68	- 58,8943	0	417.01 3,37	13,981	0,06153 23	-64,6087	0	0,5243 94	1,4075 2
4	1198 ,78	- 58,8419	0	420.95 8,38	14,5296	0,06522 74	-65,6897	0	0,5237 49	1,4121 2
4	1198 ,88	- 58,7895	0	424.88 7,61	15,0613	0,06879 65	-66,7597	0	0,5231 28	1,4167 1
4	1198 ,98	- 58,7372	0	428.77 6,12	15,5771	0,07225 66	-67,8128	0	0,5225 33	1,4212 5
4	1199 ,08	-58,685	0	432.60 0,42	16,079	0,07561 41	-68,8428	0	0,5219 65	1,4257 3
4	1199 ,18	- 58,6328	0	436.35 0,83	16,5681	0,07887 88	-69,8476	0	0,5214 23	1,4301 4
4	1199 ,28	- 58,5807	0	440.02 3,64	17,0452	0,08206 04	-70,8269	0	0,5209 07	1,4344 6
4	1199 ,38	- 58,5287	0	443.61 1,94	17,5117	0,08516 32	-71,7792	0	0,5204 17	1,4386 9
4	1199 ,5	- 58,4662	0	447.80 6,46	18,0584	0,08879 1	-72,8867	0	0,5198 59	1,4436 5
4	1199	-	0	452.67	18,6976	0,09301	-74,1651	0	0,5192	1,4494

	,64	58,3914		6,02		75			33	3
4	1199,81	- 58,3018	0	458.284,75	19,4435	0,0979179	-75,6276	0	0,518542	1,45611
4	1200,02	- 58,1943	0	464.685,89	20,3117	0,103578	-77,2841	0	0,517791	1,46376
4	1200,27	- 58,0656	0	471.917,66	21,3197	0,110092	-79,1395	0	0,516991	1,47245
4	1200,57	- 57,9113	0	479.999,17	22,4851	0,117572	-81,1937	0	0,516157	1,48222
4	1200,93	- 57,7265	0	488.927,70	23,8303	0,126128	-83,4398	0	0,51531	1,49309
4	1201,36	- 57,5051	0	498.698,33	25,3844	0,135824	-85,8716	0	0,514471	1,50508
4	1201,87	- 57,2399	0	510.089,21	27,1728	0,146462	-88,6919	0	0,513489	1,51937
4	1202,49	- 56,9224	0	523.896,83	29,2274	0,157697	-92,0964	0	0,512242	1,53721
4	1203,23	- 56,5423	0	540.101,11	31,5896	0,169399	-96,0432	0	0,510836	1,55863
4	1204,13	- 56,0874	0	558.506,74	34,3045	0,181558	-100,443	0	0,509406	1,58347
4	1205,2	- 55,5431	0	578.762,11	37,426	0,194229	-105,163	0	0,50811	1,61123
4	1206,48	- 54,8914	0	600.339,06	41,0215	0,207556	-110,029	0	0,507118	1,64105
4	1208,02	- 54,1107	0	622.691,61	45,1663	0,221784	-114,876	0	0,506561	1,67196
4	1209,87	- 53,1742	0	644.981,13	49,887	0,239358	-118,431	0	0,506554	1,69075
4	1212,09	- 52,0497	0	665.971,99	55,225	0,26347	-119,551	0	0,507262	1,68422
4	1214,75	- 50,6974	0	684.593,08	61,2784	0,29612	-118,212	0	0,508748	1,65291
4	1217,94	- 49,0685	0	699.926,98	68,1938	0,339163	-114,654	0	0,511	1,60214
4	1221,78	- 47,1037	0	711.099,07	76,3487	0,393617	-109,211	0	0,514021	1,53927
4	1226	-44,73	0	716.81	86,2972	0,46086	-101,953	0	0,5179	1,4693





	,38			9,54		9			99	
4	1231 ,9	- 41,8565	0	715.29 7,86	98,1873	0,54572 9	-93,0634	0	0,5230 08	1,3982
4	1238 ,52	- 38,3723	0	704.40 5,17	111,972	0,65609 9	-82,9814	0	0,5288 54	1,3326 8
4	1246 ,47	- 34,1421	0	681.51 4,78	127,394	0,80587 2	-72,1101	0	0,5353 01	1,2774 9
4	1256 ,01	- 29,0015	0	642.93 7,18	143,992	1,02192	-60,5297	0	0,5422 73	1,2345 6
4	1267 ,46	- 22,7486	0	583.02 6,65	160,942	1,36417	-47,7737	0	0,5500 03	1,2033 6
4	1281 ,2	- 15,0457	0	511.06 7,82	176,806	1,81077	-35,5827	0	0,5875 46	1,1853 4
4	1297 ,68	- 4,59922	0	436.79 5,47	191,343	2,33485	-25,6331	0	0,6783 96	1,1804 4
4	1317 ,46	9,64507	0	394.25 9,73	210,865	2,86509	-21,1331	0	0,7551 66	1,1831 7
4	1341 ,2	28,4106	0	360.45 8,53	236,286	3,40488	-15,9452	0	0,8305 58	1,1778 2
4	1369 ,69	56,8797	0	167.15 1,02	240,426	6,71292	8,26995	0	1,2435 4	1,1682 6
4	1373 ,19	61,3277	0	151.11 9,84	240,436	7,2425	9,85682	0	1,2983 2	1,1689
4	1373 ,19	61,3277	0	151.11 9,84	240,436	7,24249	9,85682	0	1,2983 2	1,1689
4	1403 ,87	106,194	0	88.889, 42	244,64	10,2112	15,7789	0	1,5745 3	1,1715 4
4	1444 ,89	172,882	0	75.104, 98	247,731	11,3199	17,1718	0	1,6661 9	1,1714 9
4	1494 ,11	256,994	0	64.413, 25	251,515	12,399	18,1985	0	1,7503 5	1,1716 3
4	1553 ,18	363,07	0	54.855, 94	256,153	13,6125	19,0392	0	1,8398 6	1,1720 6
4	1624 ,06	496,96	0	46.315, 95	261,849	14,9888	19,7294	0	1,9360 3	1,1727 1
4	1709 ,11	666,141	0	38.728, 76	268,859	16,5569	20,2934	0	2,0398 5	1,1735
4	1811	880,177	0	32.045, 277,5	277,5	18,3462	20,7441	0	2,1522	1,1744



	,18			45					6	1
4	1933,66	1151,45	0	26.214,47	288,17	20,4271	21,9766	0	2,2758	1,17231
4	2012,58	1333,93	0	23.318,92	295,206	21,7131	22,5129	0	2,34903	1,17159
4	2080,64	1496,3	0	21.207,08	301,376	22,797	22,8681	0	2,40906	1,1712
4	2257,01	1934,08	0	16.944,89	317,706	25,4807	23,5085	0	2,55185	1,17073
4	2468,66	2490,51	0	13.392,02	337,909	28,5109	23,9658	0	2,70433	1,17066
4	2722,63	3198,35	0	10.460,95	362,906	31,9148	24,2882	0	2,86635	1,17081
4	2789,37	3390,96	0	9.869,32	369,594	32,7716	24,3489	0	2,90576	1,17087
5	1592,53	-63,2423	0	1,00	0,00177245	0,782427	24,6244	0	0,614873	1,1739
5	1592,63	-63,1877	0	354,000,04	3,97757	0,00544018	-51,4513	0	0,536143	1,36522
5	1592,73	-63,1341	0	366,030,42	5,60813	0,0102924	-54,1428	0	0,536018	1,37401
5	1592,83	-63,0805	0	369,040,11	6,87092	0,0151941	-54,7372	0	0,53608	1,37575
5	1592,93	-63,0269	0	370,170,04	7,94008	0,0201122	-54,9432	0	0,536171	1,37629
5	1593,03	-62,9733	0	370,660,58	8,88676	0,0250322	-55,0262	0	0,536261	1,37649
5	1593,13	-62,9197	0	370,860,16	9,74804	0,0299447	-55,0565	0	0,536352	1,37655
5	1593,23	-62,866	0	370,904,67	10,5433	0,0348541	-55,0598	0	0,536446	1,37654
5	1593,33	-62,8124	0	371,336,45	11,286	0,0396918	-55,1884	0	0,536431	1,37706
5	1593,43	-62,7587	0	372,894,58	11,9865	0,0443153	-55,6553	0	0,536152	1,37898
5	1593,53	-62,7051	0	375,368,44	12,6517	0,0487027	-56,3896	0	0,53569	1,38201



5	1593 ,63	- 62,6516	0	378.40 6,74	13,2871	0,05287 71	-57,2831	0	0,5351 4	1,3857
5	1593 ,73	- 62,5981	0	381.74 6,23	13,8967	0,05687 05	-58,2568	0	0,5345 62	1,3897 3
5	1593 ,83	- 62,5447	0	385.24 7,55	14,4834	0,06070 54	-59,2697	0	0,5339 82	1,3939 5
5	1593 ,93	- 62,4913	0	388.83 2,30	15,0498	0,06439 74	-60,2994	0	0,5334 1	1,3982 7
5	1594 ,03	-62,438	0	392.44 6,27	15,5982	0,06796 05	-61,331	0	0,5328 54	1,4026 2
5	1594 ,13	- 62,3847	0	396.04 7,95	16,1316	0,07139 99	-62,3527	0	0,5323 19	1,4069 6
5	1594 ,23	- 62,3315	0	399.61 6,37	16,6509	0,07473 12	-63,3594	0	0,5318 07	1,4112 6
5	1594 ,33	- 62,2784	0	403.14 2,23	17,1564	0,07796 94	-64,3492	0	0,5313 15	1,4155 2
5	1594 ,43	- 62,2253	0	406.60 6,36	17,6501	0,08111 61	-65,3167	0	0,5308 46	1,4197 1
5	1594 ,53	- 62,1722	0	410.00 8,79	18,1323	0,08418 32	-66,2627	0	0,5303 98	1,4238 4
5	1594 ,65	- 62,1086	0	414.00 2,01	18,6974	0,08776 47	-67,3674	0	0,5298 87	1,4287
5	1594 ,79	- 62,0323	0	418.65 9,93	19,3577	0,09193 2	-68,6486	0	0,5293 12	1,4343 8
5	1594 ,97	- 61,9409	0	424.05 7,61	20,1271	0,09676 23	-70,1238	0	0,5286 7	1,4409 9
5	1595 ,17	- 61,8314	0	430.25 6,47	21,0213	0,10233 7	-71,8053	0	0,5279 68	1,4486 1
5	1595 ,42	- 61,7001	0	437.30 5,00	22,059	0,10873 7	-73,7009	0	0,5272 14	1,4573 2
5	1595 ,72	- 61,5428	0	445.22 9,16	23,261	0,11605 1	-75,8117	0	0,5264 23	1,4671 8
5	1596 ,08	- 61,3543	0	454.03 5,44	24,6471	0,12439 8	-78,1334	0	0,5256 15	1,4782
5	1596 ,51	- 61,1285	0	463.70 2,57	26,2427	0,13389 1	-80,6531	0	0,5248 11	1,4904 1
5	1597 ,03	- 60,8579	0	474.48 8,52	28,0783	0,14449 8	-83,4372	0	0,5239 74	1,5042 1



5	1597 ,64	- 60,5338	0	487.50 4,46	30,1893	0,15571 5	-86,7846	0	0,5229 1	1,5213 4
5	1598 ,39	- 60,1457	0	503.12 8,48	32,6154	0,16725 6	-90,7658	0	0,5216 35	1,5424 6
5	1599 ,28	- 59,6812	0	521.18 2,48	35,402	0,17908 2	-95,2881	0	0,5202 85	1,5674 3
5	1600 ,35	- 59,1253	0	541.40 7,13	38,6008	0,19120 6	-100,234	0	0,5190 05	1,5959 3
5	1601 ,63	- 58,4596	0	563.26 0,86	42,2783	0,20377 4	-105,409	0	0,5179 72	1,6270 8
5	1603 ,17	- 57,6622	0	586.20 2,81	46,5115	0,21700 6	-110,632	0	0,5173 13	1,6599 1
5	1605 ,02	- 56,7061	0	609.56 0,27	51,361	0,23205 8	-115,271	0	0,5171 25	1,6884 1
5	1607 ,24	- 55,5584	0	632.10 9,26	56,8394	0,25284	-117,506	0	0,5175 57	1,6927 8
5	1609 ,9	- 54,1791	0	652.59 8,85	63,0264	0,28170 2	-117,065	0	0,5187 13	1,6698 4
5	1613 ,1	-52,519	0	669.96 0,48	70,0588	0,32063 6	-114,125	0	0,5205 59	1,6237 1
5	1616 ,93	- 50,5186	0	683.27 6,08	78,2101	0,37112 8	-109,08	0	0,5231 03	1,5623 8
5	1621 ,53	- 48,1044	0	691.32 7,47	88,0761	0,43416 9	-102,133	0	0,5264 37	1,4924
5	1627 ,05	- 45,1865	0	692.37 6,07	99,9745	0,51345 1	-93,4482	0	0,5307 06	1,4197 6
5	1633 ,68	-41,654	0	684.33 2,63	113,912	0,61610 5	-83,4128	0	0,5357 91	1,3512 4
5	1641 ,63	- 37,3717	0	664.75 1,68	129,677	0,75428 4	-72,4936	0	0,5414 71	1,2923 4
5	1651 ,17	- 32,1764	0	630.57 0,20	146,873	0,95033 1	-60,9524	0	0,5475 98	1,2458 5
5	1662 ,62	- 25,8685	0	577.00 6,75	164,826	1,2525	-48,4971	0	0,5543 34	1,2116
5	1676 ,35	- 18,1937	0	507.97 8,25	182,322	1,70164	-36,0011	0	0,5715 89	1,1898 5
5	1692 ,84	-8,0652	0	435.58 2,56	198,45	2,17138	-25,695	0	0,6570 53	1,1820 3



5	1712,62	5,78338	0	386.729,21	218,127	2,69841	-20,1986	0	0,737369	1,18356
5	1736,36	24,1272	0	354.829,50	244,949	3,20505	-15,8289	0	0,808499	1,18086
5	1764,84	49,787	0	214.823,52	256,208	5,23112	3,13368	0	1,08213	1,16807
5	1777,41	64,6314	0	150.347,78	256,28	6,96711	9,78791	0	1,27356	1,16984
5	1777,41	64,6314	0	150.347,78	256,28	6,96711	9,78791	0	1,27356	1,16984
5	1799,02	94,7442	0	98.318,54	259,475	9,19203	14,8918	0	1,4887	1,1714
5	1840,04	159,049	0	77.596,16	262,587	10,6751	16,9109	0	1,61568	1,17172
5	1889,26	240,746	0	66.171,26	266,285	11,7495	18,0425	0	1,70222	1,17171
5	1948,33	344,005	0	56.101,90	270,822	12,9546	18,9506	0	1,7934	1,17206
5	2019,21	474,639	0	47.190,61	276,403	14,3208	19,684	0	1,89106	1,17267
5	2104,27	640,053	0	39.335,83	283,283	15,8778	20,2764	0	1,99632	1,17343
5	2206,33	849,724	0	32.464,99	291,778	17,6564	20,7477	0	2,1101	1,17431
5	2328,82	1115,94	0	26.507,63	302,283	19,7204	21,9142	0	2,23492	1,17247
5	2411,48	1303,93	0	23.432,58	309,549	21,0598	22,4968	0	2,3124	1,17165
5	2475,79	1454,9	0	21.414,63	315,301	22,0784	22,8436	0	2,36967	1,17125
5	2652,17	1885,84	0	17.098,39	331,421	24,7512	23,5035	0	2,51398	1,17073
5	2863,81	2434,43	0	13.509,87	351,391	27,7727	23,9695	0	2,66807	1,17063
5	3117,79	3133,27	0	10.556,67	376,131	31,1703	24,2949	0	2,83174	1,17078
5	3181,43	3314,71	0	9.985,32	382,446	31,9866	24,3531	0	2,86974	1,17083



6	1987	-	0	1,00	0,00177	0,78242	24,6243	0	0,6148	1,1739
	,27	66,1074			245	7			73	
6	1987	-	0	334.73	4,07466	0,00533	-48,3532	0	0,5421	1,3589
	,37	66,0523		2,47		678			59	2
6	1987	-	0	346.24	5,74769	0,01010	-50,9935	0	0,5420	1,3675
	,47	65,9981		3,99		69			08	3
6	1987	-	0	349.07	7,04281	0,01492	-51,5698	0	0,5420	1,3692
	,57	65,9439		4,67		53			79	3
6	1987	-	0	350.15	8,13745	0,01976	-51,7723	0	0,5421	1,3697
	,67	65,8897		1,17		47			57	7
6	1987	-	0	350.61	9,10831	0,02460	-51,8545	0	0,5422	1,3699
	,77	65,8355		7,81		11			39	7
6	1987	-	0	350.80	9,99005	0,02943	-51,8848	0	0,5423	1,3700
	,87	65,7813		5,80		55			22	4
6	1987	-65,727	0	350.85	10,8039	0,03426	-51,8898	0	0,5424	1,3700
	,97			2,07		82			05	4
6	1988	-	0	351.09	11,5647	0,03905	-51,9649	0	0,5424	1,3703
	,07	65,6728		3,28		43			26	4
6	1988	-	0	352.15	12,2822	0,04367	-52,2965	0	0,5422	1,3717
	,17	65,6186		9,61		56			6	
6	1988	-	0	354.09	12,9638	0,04807	-52,8911	0	0,5419	1,3741
	,27	65,5644		1,30		98			17	4
6	1988	-	0	356.64	13,6147	0,05227	-53,6689	0	0,5414	1,3773
	,37	65,5102		0,71		32			68	3
6	1988	-	0	359.57	14,2389	0,05627	-54,5569	0	0,5409	1,3809
	,47	65,4561		6,57		85			69	8
6	1988	-65,402	0	362.74	14,8397	0,06011	-55,5064	0	0,5404	1,3849
	,57			0,27		77			54	
6	1988	-65,348	0	366.03	15,4198	0,06380	-56,4868	0	0,5399	1,3889
	,67			0,30		94			4	8
6	1988	-65,294	0	369.38	15,9815	0,06736	-57,4798	0	0,5394	1,3931
	,77			4,46		76			35	3
6	1988	-	0	372.76	16,5269	0,07080	-58,4734	0	0,5389	1,3973
	,87	65,2401		0,89		48			45	
6	1988	-	0	376.12	17,0573	0,07413	-59,4585	0	0,5384	1,4014
	,97	65,1862		7,12		35			71	7
6	1989	-	0	379.46	17,5741	0,07736	-60,4304	0	0,5380	1,4056

	,07	65,1324		5,24		27			15	1
6	1989	-	0	382.76	18,0785	0,08049	-61,3861	0	0,5375	1,4097
	,17	65,0786		4,12		97			77	1
6	1989	-	0	386.01	18,5715	0,08355	-62,3233	0	0,5371	1,4137
	,27	65,0249		4,19		18			58	6
6	1989	-	0	389.84	19,1493	0,08711	-63,4214	0	0,5366	1,4185
	,39	64,9604		1,71		08			8	3
6	1989	-	0	394.32	19,8249	0,09124	-64,6993	0	0,5361	1,4241
	,53	64,8832		1,59		36			39	3
6	1989	-	0	399.52	20,6128	0,09602	-66,1742	0	0,5355	1,4306
	,7	64,7906		6,33		29			37	7
6	1989	-	0	405.52	21,5287	0,10152	-67,861	0	0,5348	1,4382
	,91	64,6796		3,75		7			77	3
6	1990	-	0	412.36	22,5899	0,10784	-69,7706	0	0,5341	1,4469
	,16	64,5466		9,43		5			66	
6	1990	-	0	420.10	23,8162	0,11506	-71,9069	0	0,5334	1,4567
	,46	64,3872		0,16		7			16	6
6	1990	-	0	428.73	25,2298	0,12329	-74,2681	0	0,5326	1,4678
	,82	64,1962		3,42		5			41	4
6	1991	-	0	438.26	26,8565	0,13262	-76,8456	0	0,5318	1,4801
	,25	63,9674		5,13		9			63	8
6	1991	-	0	448.84	28,7272	0,14308	-79,6741	0	0,5310	1,4940
	,76	63,6932		1,82		6			73	3
6	1992	-	0	461.14	30,8756	0,15438	-82,9415	0	0,5301	1,5105
	,38	63,3646		9,14		2			6	
6	1993	-	0	476.09	33,3426	0,16598	-86,8839	0	0,5290	1,5311
	,12	62,9712		0,34		7			02	2
6	1994	-	0	493.77	36,1784	0,17764	-91,4856	0	0,5276	1,5561
	,02	62,5001		8,88		9			94	8
6	1995	-	0	513.84	39,4381	0,18939	-96,5829	0	0,5264	1,5851
	,09	61,9361		5,59		1			3	6
6	1996	-61,261	0	535.74	43,1844	0,20139	-101,968	0	0,5253	1,6171
	,37			1,48		9			88	9
6	1997	-	0	558.89	47,489	0,21395	-107,441	0	0,5246	1,6512
	,91	60,4521		8,24		4			83	5
6	1999	-	0	582.79	52,4339	0,22755	-112,704	0	0,5243	1,6849
	,76	59,4824		9,27		5			92	3
6	2001	-	0	606.35	58,0315	0,24587	-115,861	0	0,5246	1,6982



	,98	58,3188		0,85		7			47	1
6	2004	-	0	628.15	64,3346	0,27189	-116,195	0	0,5255	1,6826
	,64	56,9209		0,60		6			63	8
6	2007	-	0	647.01	71,4716	0,30771	-113,813	0	0,5271	1,6410
	,83	55,2394		6,30					57	8
6	2011	-	0	661.92	79,6455	0,35513	-109,121	0	0,5293	1,5814
	,67	53,2142		0,76		4			89	7
6	2016	-	0	671.75	89,4433	0,41493	-102,476	0	0,5323	1,5119
	,27	50,7721		5,78		8			03	7
6	2021	-	0	674.82	101,338	0,49007	-93,9698	0	0,5360	1,4381
	,79	47,8232		9,05		1			72	6
6	2028	-	0	669.02	115,371	0,58713	-83,9678	0	0,5406	1,3670
	,41	44,2567		7,57		5			49	9
6	2036	-39,938	0	651.97	131,395	0,71697	-72,9979	0	0,5458	1,3050
	,36			8,94		3			18	9
6	2045	-	0	620.96	149,042	0,89921	-61,4311	0	0,5514	1,2555
	,9	34,7039		5,20		2			03	6
6	2057	-	0	572.22	167,728	1,17382	-49,1824	0	0,5574	1,2187
	,35	28,3563		1,21					57	9
6	2071	-	0	505.40	186,41	1,61441	-36,4685	0	0,5637	1,1942
	,09	20,6514		1,19					72	1
6	2087	-	0	435.34	204,074	2,05244	-25,954	0	0,6405	1,1838
	,57	10,7536		9,76					97	9
6	2107	2,76679	0	382.29	224,214	2,56759	-19,6407	0	0,7222	1,1838
	,35			9,23					85	8
6	2131	20,7868	0	348.88	251,462	3,06794	-15,4077	0	0,7941	1,1825
	,09			3,41					82	8
6	2159	45,0574	0	269.25	270,839	4,17049	-3,41422	0	0,9500	1,1702
	,58			0,05					22	2
6	2179	67,3343	0	151.96	270,821	6,66999	9,5675	0	1,2456	1,1702
	,79			0,08					1	8
6	2179	67,3343	0	151.96	270,821	6,67	9,5675	0	1,2456	1,1702
	,79			0,08					1	8
6	2193	85,8631	0	111.39	273,068	8,17932	13,683	0	1,3981	1,1709
	,76			1,37					8	7
6	2234	147,892	0	79.284,	276,459	10,1773	16,7232	0	1,5765	1,1719
	,78			42					9	4
6	2284	227,655	0	67.413,	280,092	11,2372	17,932	0	1,6634	1,1717





				48					4	8
6	2343,07	328,659	0	56.939,20	284,548	12,4351	18,8939	0	1,75596	1,17206
6	2413,95	456,667	0	47.739,54	290,037	13,7934	19,661	0	1,85488	1,17264
6	2499	619,053	0	39.686,95	296,812	15,3415	20,2733	0	1,96134	1,17339
6	2601,07	825,218	0	32.684,31	305,189	17,111	20,7588	0	2,07629	1,17425
6	2723,55	1087,35	0	26.643,78	315,56	19,1634	21,8806	0	2,20209	1,17258
6	2806,58	1273,48	0	23.522,33	322,773	20,5029	22,486	0	2,28072	1,17169
6	2870,53	1421,57	0	21.499,37	328,428	21,5119	22,8392	0	2,33818	1,17127
6	3046,9	1847,07	0	17.158,23	344,382	24,1767	23,5108	0	2,48378	1,17071
6	3258,55	2389,41	0	13.556,19	364,166	27,1915	23,9803	0	2,63919	1,17069
6	3512,53	3081,1	0	10.597,88	388,7	30,5842	24,3054	0	2,80422	1,17075
6	3567,89	3237,31	0	10.095,66	394,15	31,2945	24,3562	0	2,8376	1,1708
7	2381,75	-68,5149	0	1,00	0,00177245	0,782427	24,6242	0	0,614873	1,1739
7	2381,85	-68,4594	0	319.505,08	4,16275	0,00525025	-45,9201	0	0,54673	1,35416
7	2381,95	-68,4048	0	330.347,12	5,87444	0,00995311	-48,4782	0	0,546645	1,36256
7	2382,05	-68,3501	0	333.069,23	7,1957	0,0147165	-49,0438	0	0,546693	1,36423
7	2382,15	-68,2954	0	334.094,35	8,31625	0,0194877	-49,2416	0	0,546767	1,36476
7	2382,25	-68,2408	0	334.537,99	9,30806	0,0242572	-49,3223	0	0,546841	1,36497
7	2382,35	-68,1861	0	334.716,43	10,2093	0,0290214	-49,3525	0	0,546918	1,36503



7	2382	-	0	334.76	11,0399	0,03378	-49,3586	0	0,5469	1,3650
	,45	68,1314		2,59		96			93	4
7	2382	-	0	334.87	11,8152	0,03853	-49,3947	0	0,5470	1,3651
	,55	68,0767		3,01		86			38	9
7	2382	-68,022	0	335.52	12,5456	0,04317	-49,6057	0	0,5469	1,3660
	,65			7,74		94			58	5
7	2382	-	0	337.04	13,2396	0,04761	-50,0856	0	0,5466	1,3680
	,75	67,9673		0,24		35			99	1
7	2382	-	0	339.25	13,9032	0,05182	-50,7813	0	0,5463	1,3708
	,85	67,9126		2,85		57			1	5
7	2382	-67,858	0	341.95	14,5408	0,05582	-51,6243	0	0,5458	1,3743
	,95			4,08		72			46	
7	2383	-	0	344.91	15,1551	0,05965	-52,542	0	0,5453	1,3780
	,05	67,8035		7,55		47			6	8
7	2383	-	0	348.00	15,7478	0,06334	-53,4889	0	0,5448	1,3819
	,15	67,7489		0,14					83	9
7	2383	-	0	351.13	16,3208	0,06690	-54,4453	0	0,5444	1,3859
	,25	67,6945		6,91		11			22	6
7	2383	-	0	354.30	16,8768	0,07034	-55,4063	0	0,5439	1,3899
	,35	67,6401		7,86		06			72	7
7	2383	-	0	357.49	17,4172	0,07366	-56,3655	0	0,5435	1,394
	,45	67,5857		0,09		93			33	
7	2383	-	0	360.66	17,9437	0,07689	-57,317	0	0,5431	1,3980
	,55	67,5313		2,60		61			08	2
7	2383	-	0	363.81	18,4574	0,08002	-58,2565	0	0,5426	1,4020
	,65	67,4771		0,45		89			99	1
7	2383	-	0	366.92	18,9598	0,08307	-59,1803	0	0,5423	1,4059
	,75	67,4228		0,34		31			06	7
7	2383	-	0	370.58	19,5494	0,08661	-60,2643	0	0,5418	1,4106
	,87	67,3578		8,34		54			58	4
7	2384	-	0	374.89	20,2385	0,09072	-61,53	0	0,5413	1,4161
	,01	67,2798		4,78		64			5	5
7	2384	-	0	379.91	21,041	0,09548	-62,9977	0	0,5407	1,4225
	,18	67,1863		9,31		22			81	9
7	2384	-	0	385.72	21,9731	0,10095	-64,6823	0	0,5401	1,4300
	,39	67,0742		8,57		7			53	8
7	2384	-	0	392.38	23,0527	0,10723	-66,5973	0	0,5394	1,4387
	,64	66,9399		6,12		5			73	



7	2384 ,94	- 66,7789	0	399.94 7,02	24,2992	0,11440 5	-68,7526	0	0,5387 48	1,4485 6
7	2385 ,3	-66,586	0	408.43 8,95	25,7358	0,12255 5	-71,1485	0	0,5379 93	1,4597 1
7	2385 ,73	- 66,3548	0	417.85 0,84	27,3908	0,13177	-73,7733	0	0,5372 33	1,4721 7
7	2386 ,24	- 66,0778	0	428.14 0,59	29,2953	0,14215	-76,6068	0	0,5364 95	1,4859 2
7	2386 ,86	- 65,7459	0	439.84 4,84	31,4796	0,15351 8	-79,8029	0	0,5356 89	1,5018 6
7	2387 ,61	- 65,3483	0	454.36 9,27	33,9854	0,16507	-83,7569	0	0,5345 91	1,5223 2
7	2388 ,5	- 64,8722	0	471.82 7,27	36,8657	0,17651 8	-88,4454	0	0,5333 19	1,5476
7	2389 ,57	- 64,3023	0	491.66 3,52	40,1755	0,18799 7	-93,6433	0	0,5321 03	1,5768 6
7	2390 ,85	- 63,6198	0	513.40 3,28	43,9753	0,19967 7	-99,1597	0	0,5310 69	1,6093 8
7	2392 ,39	- 62,8021	0	536.58 1,33	48,343	0,21173 7	-104,815	0	0,5303 35	1,6443 1
7	2394 ,24	-61,822	0	560.77 5,79	53,3591	0,22448 2	-110,437	0	0,5299 75	1,6806
7	2396 ,46	- 60,6461	0	584.99 9,68	59,0509	0,24099 7	-114,338	0	0,5301 04	1,7009 3
7	2399 ,12	- 59,2339	0	607.75 0,58	65,4497	0,26485 4	-115,326	0	0,5308 52	1,6917 6
7	2402 ,32	- 57,5358	0	627.75 7,84	72,6748	0,29824 9	-113,438	0	0,5322 46	1,6544 3
7	2406 ,15	- 55,4916	0	643.91 2,14	80,9065	0,34313 5	-109,056	0	0,5342 5	1,5966 1
7	2410 ,75	- 53,0278	0	655.12 8,52	90,6591	0,40046 7	-102,637	0	0,5368 65	1,5275
7	2416 ,27	- 50,0547	0	659.77 6,65	102,549	0,47243 2	-94,2945	0	0,5402 66	1,4530 2
7	2422 ,9	- 46,4617	0	655.74 7,30	116,641	0,56530 6	-84,3479	0	0,5444 55	1,3801 7
7	2430 ,85	- 42,1143	0	640.74 9,11	132,839	0,68894 6	-73,3687	0	0,5492 25	1,3158 6



7	2440 ,39	- 36,8498	0	612.28 5,21	150,829	0,86095 1	-61,7975	0	0,5543 94	1,2639 6
7	2451 ,83	- 30,4708	0	567.26 1,83	170,081	1,11582	-49,6941	0	0,5599 49	1,2251 3
7	2465 ,57	- 22,7367	0	503.82 0,54	189,706	1,52138	-37,0483	0	0,5658 85	1,1984 9
7	2482 ,05	- 13,0019	0	435.04 5,48	208,568	1,96246	-26,1916	0	0,6277 61	1,1856 4
7	2501 ,84	0,26694 3	0	379.08 7,22	229,193	2,46517	-19,3017	0	0,7099 29	1,1844 9
7	2525 ,57	17,9984	0	344.66 8,89	257,047	2,95621	-15,1183	0	0,7812 77	1,1839 1
7	2554 ,06	41,6153	0	291.63 5,34	283,527	3,71843	-6,80929	0	0,8906 42	1,1742 7
7	2580 ,9	69,5947	0	153.99 7,31	284,246	6,40181	9,35109	0	1,2197 7	1,1704 9
7	2580 ,9	69,5947	0	153.99 7,31	284,246	6,40182	9,35109	0	1,2197 6	1,1704 9
7	2588 ,24	78,8739	0	128.34 6,81	285,509	7,22195	12,0566	0	1,3066 4	1,1705 3
7	2629 ,26	138,563	0	80.704, 47	289,325	9,76314	16,5643	0	1,5427 6	1,1721 3
7	2678 ,48	216,757	0	68.254, 89	292,884	10,8257	17,8517	0	1,6317 1	1,1718 6
7	2737 ,55	315,931	0	57.442, 21	297,273	12,018	18,8573	0	1,7253 7	1,1720 9
7	2808 ,43	441,815	0	48.014, 40	302,687	13,3697	19,6501	0	1,8253 4	1,1726 4
7	2893 ,49	601,735	0	39.811, 93	309,378	14,9106	20,2771	0	1,9328	1,1733 8
7	2995 ,55	805,041	0	32.716, 25	317,658	16,6726	20,7721	0	2,0487 6	1,1742 3
7	3118 ,03	1063,85	0	26.624, 65	327,921	18,715	21,8584	0	2,1755 4	1,1727
7	3199 ,14	1243,47	0	23.550, 56	334,897	20,0205	22,4667	0	2,2529 4	1,1717 7
7	3265 ,01	1394,23	0	21.453, 24	340,668	21,0571	22,839	0	2,3125 9	1,1713 1

7	3441,38	1815,5	0	17.104,29	356,489	23,7169	23,5186	0	2,45935	1,17072
7	3653,03	2352,8	0	13.508,37	376,124	26,7265	23,9903	0	2,61586	1,17066
7	3907,01	3038,72	0	10.560,61	400,493	30,1155	24,3149	0	2,78201	1,17074
7	3950,76	3161,03	0	10.161,84	404,769	30,6772	24,3553	0	2,80864	1,17078
8	2776,04	-70,5969	0	1,00	0,00177	0,78242	24,6241	0	0,614873	1,1739
8	2776,14	-70,5412	0	307.114,09	4,23386	0,00518489	-43,9482	0	0,550338	1,35042
8	2776,24	-70,4861	0	317.538,26	5,97676	0,00984193	-46,4569	0	0,550254	1,35867
8	2776,34	-70,4311	0	320.098,97	7,32333	0,0145455	-47,0038	0	0,550319	1,3603
8	2776,44	-70,3761	0	321.065,46	8,46192	0,0192688	-47,1956	0	0,550391	1,36084
8	2776,54	-70,321	0	321.496,91	9,46695	0,0240071	-47,2763	0	0,550455	1,36104
8	2776,64	-70,266	0	321.690,23	10,3821	0,0287346	-47,3106	0	0,550515	1,36112
8	2776,74	-70,2109	0	321.745,36	11,2285	0,0334537	-47,3192	0	0,550582	1,36114
8	2776,84	-70,1559	0	321.719,17	12,019	0,0381693	-47,3132	0	0,550651	1,36112
8	2776,94	-70,1008	0	322.178,52	12,7641	0,0427835	-47,4688	0	0,550608	1,36177
8	2777,04	-70,0457	0	323.501,32	13,4709	0,0471961	-47,9012	0	0,550389	1,36353
8	2777,14	-69,9907	0	325.460,86	14,1452	0,0514097	-48,5335	0	0,550058	1,3661
8	2777,24	-69,9357	0	327.843,57	14,7913	0,0554412	-49,2953	0	0,549664	1,36921
8	2777,34	-69,8808	0	330.503,82	15,4128	0,059308	-50,1393	0	0,549239	1,37266
8	2777	-	0	333.34	16,0132	0,06302	-51,0354	0	0,5488	1,3763

	,44	69,8259		8,82		02			02	5
8	2777 ,54	-69,771	0	336.30 6,79	16,5948	0,06659 1	-51,9611	0	0,5483 65	1,3801 7
8	2777 ,64	-	0	339.32 9,05	17,1599	0,07003 13	-52,9012	0	0,5479 35	1,3840 8
8	2777 ,74	-	0	342.37 7,08	17,7099	0,07335 41	-53,8442	0	0,5475 18	1,3880 2
8	2777 ,84	-	0	345.42 3,95	18,2458	0,07657 27	-54,7822	0	0,5471 14	1,3919 6
8	2777 ,94	-69,552	0	348.44 8,67	18,7687	0,07969 6	-55,7088	0	0,5467 25	1,3958 8
8	2778 ,04	-	0	351.44 4,92	19,2791	0,08273 45	-56,6226	0	0,5463 51	1,3997 7
8	2778 ,16	-	0	354.99 2,96	19,8772	0,08627 35	-57,6995	0	0,5459 21	1,4043 9
8	2778 ,3	-	0	359.16 9,06	20,5761	0,09037 78	-58,96	0	0,5454 33	1,4098 4
8	2778 ,48	-	0	364.03 7,54	21,392	0,09510 88	-60,4197	0	0,5448 91	1,4162 1
8	2778 ,68	-	0	369.68 2,45	22,3399	0,10054 9	-62,1004	0	0,5442 91	1,4236 3
8	2778 ,93	-	0	376.17 1,97	23,437	0,10678 3	-64,0175	0	0,5436 39	1,4322 2
8	2779 ,23	-	0	383.55 2,04	24,7039	0,11389 3	-66,178	0	0,5429 44	1,4420 4
8	2779 ,59	-	0	391.86 1,67	26,1629	0,12197	-68,5863	0	0,5422 19	1,4531 8
8	2780 ,02	-	0	401.11 7,66	27,8398	0,13110 9	-71,239	0	0,5414 81	1,4657
8	2780 ,54	-	0	411.29 1,46	29,7662	0,14139 9	-74,1184	0	0,5407 54	1,4795 8
8	2781 ,16	-	0	422.84 1,97	31,9787	0,15265	-77,3561	0	0,5399 72	1,4956 3
8	2781 ,9	-	0	436.75 9,09	34,5219	0,16426 1	-81,235	0	0,5389 9	1,5155 4
8	2782 ,79	-	0	453.62 4,82	37,4409	0,17574 7	-85,8811	0	0,5378 13	1,5403 7
8	2783	-	0	473.08	40,79	0,18712	-91,1231	0	0,5366	1,5696



	,86	66,3517		5,13		8			27	5
8	2785 ,14	- 65,6634	0	494.71 9,96	44,6338	0,19852 2	-96,7765	0	0,5355 8	1,6027 5
8	2786 ,69	- 64,8389	0	518.07 1,29	49,0482	0,21011	-102,649	0	0,5347 96	1,6388 6
8	2788 ,53	- 63,8506	0	542.48 9,49	54,1245	0,22223 4	-108,503	0	0,5343 9	1,6766
8	2790 ,75	-62,665	0	567.17 1,89	59,9009	0,23724 2	-113,05	0	0,5344 33	1,7030 2
8	2793 ,41	- 61,2415	0	590.63 6,04	66,3866	0,25929 2	-114,614	0	0,5350 56	1,6995
8	2796 ,61	- 59,5302	0	611.52 5,83	73,6919	0,29068 7	-113,159	0	0,5363 3	1,6660
8	2800 ,44	- 57,4707	0	628.65 6,48	82,0023	0,33341 6	-109,033	0	0,5381 38	1,6097 4
8	2805 ,04	- 54,9895	0	640.93 6,46	91,7512	0,38873 4	-102,745	0	0,5405 52	1,5405
8	2810 ,56	- 51,9968	0	646.78 5,24	103,602	0,45841 9	-94,5105	0	0,5436 71	1,4653 7
8	2817 ,19	- 48,3824	0	644.16 4,55	117,744	0,54792 1	-84,6384	0	0,5475 45	1,3913 2
8	2825 ,14	- 44,0118	0	630.81 4,66	134,098	0,66663 8	-73,6564	0	0,5520 01	1,3251 6
8	2834 ,68	- 38,7224	0	604.38 2,44	152,358	0,83083 6	-62,0695	0	0,5568 48	1,2712 5
8	2846 ,13	- 32,3175	0	562.24 3,03	172,056	1,07106	-50,0628	0	0,5620 22	1,2307
8	2859 ,86	- 24,5575	0	501.46 2,55	192,409	1,45129	-37,4448	0	0,5676 45	1,2022 8
8	2876 ,35	- 14,9184	0	434.11 0,86	212,306	1,89357	-26,4	0	0,6176 45	1,1875 5
8	2896 ,13	- 1,87102	0	377.09 3,55	233,671	2,37788	-19,1318	0	0,6987 28	1,1851 7
8	2919 ,87	15,6217	0	340.34 3,17	261,619	2,87025	-14,7346	0	0,7718 01	1,1848 2
8	2948 ,35	38,8667	0	295.50 7,22	291,649	3,52925	-7,78801	0	0,8666 96	1,1769 7
8	2980	71,5381	0	157.48	296,699	6,12042	8,94081	0	1,1916	1,1708



	,9			7,79					3	3
8	2980,9	71,5381	0	157.487,79	296,699	6,12042	8,94081	0	1,19163	1,17083
8	2982,53	73,505	0	150.896,11	296,979	6,29715	9,68064	0	1,21139	1,17066
8	3023,55	130,586	0	83.235,00	301,304	9,30292	16,3206	0	1,50444	1,17218
8	3072,77	207,141	0	69.350,07	304,815	10,428	17,7557	0	1,60049	1,17191
8	3131,84	304,504	0	58.161,22	309,137	11,614	18,811	0	1,69526	1,17208
8	3202,72	428,293	0	48.475,84	314,476	12,9581	19,6331	0	1,7962	1,1726
8	3287,78	585,771	0	40.097,26	321,081	14,4911	20,2771	0	1,90461	1,17334
8	3389,85	786,232	0	32.884,87	329,265	16,2453	20,7824	0	2,02154	1,17418
8	3512,33	1041,76	0	26.722,27	339,419	18,2776	21,8408	0	2,14922	1,17276
8	3592,87	1218,02	0	23.645,31	346,279	19,5696	22,4592	0	2,22668	1,17188
8	3659,3	1368,1	0	21.512,06	352,039	20,6092	22,8432	0	2,28716	1,17131
8	3835,68	1784,69	0	17.141,07	367,719	23,26	23,5323	0	2,43485	1,17069
8	4047,32	2316,91	0	13.534,18	387,202	26,2638	24,005	0	2,59244	1,17056
8	4301,3	2997,03	0	10.584,68	411,403	29,6484	24,3277	0	2,75972	1,17071
8	4337,14	3096,34	0	10.254,92	414,883	30,1086	24,3607	0	2,78172	1,17075
9	3170,17	-72,4076	0	1,00	0,00177245	0,782426	24,624	0	0,614873	1,1739
9	3170,27	-72,3516	0	296.962,44	4,29405	0,00513736	-42,3388	0	0,553219	1,34744
9	3170,37	-72,2963	0	306.967,04	6,06342	0,00975568	-44,7964	0	0,55316	1,35556





9	3170 ,47	-72,241	0	309.44 2,17	7,42899	0,01442 77	-45,3351	0	0,5532 16	1,3571 8
9	3170 ,57	- 72,1857	0	310.37 9,30	8,5847	0,01911 5	-45,5251	0	0,5532 81	1,3577 2
9	3170 ,67	- 72,1303	0	310.78 7,90	9,60746	0,02380 37	-45,6039	0	0,5533 45	1,3579 2
9	3170 ,77	-72,075	0	310.95 8,45	10,537	0,02848 77	-45,6354	0	0,5534 09	1,358
9	3170 ,87	- 72,0197	0	311.00 3,31	11,3944	0,03317 12	-45,6431	0	0,5534 74	1,3580 2
9	3170 ,97	- 71,9643	0	310.97 7,99	12,1948	0,03785 31	-45,6379	0	0,5535 38	1,3580 1
9	3171 ,07	-71,909	0	311.27 3,74	12,9492	0,04246 53	-45,7435	0	0,5535 25	1,3584 5
9	3171 ,17	- 71,8536	0	312.29 1,16	13,6652	0,04690 71	-46,085	0	0,5533 66	1,3598 4
9	3171 ,27	- 71,7983	0	313.93 4,92	14,3488	0,05115 65	-46,629	0	0,5530 9	1,3620 6
9	3171 ,37	-71,743	0	316.07 2,80	15,0044	0,05521 09	-47,3288	0	0,5527 37	1,3649
9	3171 ,47	- 71,6877	0	318.52 9,45	15,6352	0,05909 32	-48,1265	0	0,5523 44	1,3681 6
9	3171 ,57	- 71,6325	0	321.17 7,40	16,2441	0,06282 34	-48,9805	0	0,5519 37	1,3716 6
9	3171 ,67	- 71,5773	0	323.96 8,33	16,8335	0,06640 93	-49,8748	0	0,5515 24	1,3753 5
9	3171 ,77	- 71,5222	0	326.85 2,50	17,406	0,06985 88	-50,7932	0	0,5511 14	1,3791 5
9	3171 ,87	- 71,4671	0	329.77 9,21	17,963	0,07318 87	-51,7201	0	0,5507 13	1,3830 1
9	3171 ,97	- 71,4121	0	332.72 2,88	18,5062	0,07640 66	-52,6474	0	0,5503 24	1,3868 9
9	3172 ,07	-71,357	0	335.65 8,31	19,0365	0,07952 6	-53,5678	0	0,5499 49	1,3907 7
9	3172 ,17	- 71,3021	0	338.57 2,42	19,5547	0,08255 54	-54,4773	0	0,5495 89	1,3946 3
9	3172 ,29	- 71,2361	0	342.02 7,33	20,1617	0,08608 28	-55,5505	0	0,5491 75	1,3992 1



9	3172 ,43	- 71,1571	0	346.10 3,93	20,8703	0,09017 48	-56,81	0	0,5487 04	1,4046 3
9	3172 ,61	- 71,0623	0	350.88 0,37	21,6951	0,09490 04	-58,2766	0	0,5481 75	1,4110 1
9	3172 ,81	- 70,9487	0	356.42 8,27	22,6527	0,10033 3	-59,9677	0	0,5475 89	1,4184 4
9	3173 ,06	- 70,8125	0	362.81 3,58	23,7622	0,10654 4	-61,898	0	0,5469 52	1,4270 4
9	3173 ,36	- 70,6493	0	370.09 1,06	25,0445	0,11361	-64,0777	0	0,5462 73	1,4369 1
9	3173 ,72	- 70,4537	0	378.29 2,26	26,5232	0,12161 6	-66,5088	0	0,5455 67	1,4481 67
9	3174 ,15	- 70,2193	0	387.42 2,66	28,2246	0,13065 1	-69,1847	0	0,5448 51	1,4606 7
9	3174 ,67	- 69,9384	0	397.46 3,45	30,1803	0,14080 1	-72,091	0	0,5441 51	1,4746 3
9	3175 ,29	- 69,6017	0	408.74 7,06	32,4235	0,15197	-75,3233	0	0,5434 21	1,4905 7
9	3176 ,03	- 69,1983	0	422.31 1,32	34,9928	0,16357 1	-79,1861	0	0,5425 06	1,5102 8
9	3176 ,92	-68,715	0	438.81 1,00	37,94	0,17504 4	-83,8378	0	0,5413 76	1,5350 1
9	3177 ,99	- 68,1364	0	458.10 9,43	41,3258	0,18623 3	-89,1668	0	0,5401 95	1,5646 4
9	3179 ,27	- 67,4436	0	479.63 6,24	45,2142	0,19733 1	-94,9281	0	0,5391 64	1,5982 4
9	3180 ,81	- 66,6136	0	502.92 2,61	49,6765	0,20856 7	-100,922	0	0,5383 86	1,6349 8
9	3182 ,66	- 65,6187	0	527.40 6,09	54,8014	0,22025 3	-106,932	0	0,5379 52	1,6736 6
9	3184 ,88	- 64,4253	0	552.34 1,26	60,6524	0,23409 6	-111,987	0	0,5379 43	1,7048 5
9	3187 ,54	- 62,9925	0	576.30 2,12	67,2186	0,25462 6	-114,062	0	0,5384 77	1,7064 1
9	3190 ,74	- 61,2705	0	597.86 1,47	74,5984	0,28432 5	-112,999	0	0,5396 06	1,6765 6
9	3194 ,57	- 59,1986	0	615.80 0,49	82,9654	0,32522 7	-109,133	0	0,5413 08	1,6219 8



9	3199	-	0	628.98	92,6891	0,37882	-103,002	0	0,5435	1,5529
	,17	56,7032		1,94		1			51	9
9	3204	-	0	635.92	104,488	0,44644	-94,9165	0	0,5464	1,4775
	,69	53,6946		0,27		4			38	8
9	3211	-	0	634.63	118,652	0,53295	-85,1373	0	0,5500	1,4024
	,32	50,0628		1,15		8			38	6
9	3219	-	0	622.83	135,134	0,64725	-74,154	0	0,5542	1,3344
	,27	45,6734		8,75		8			43	4
9	3228	-	0	598.13	153,665	0,80465	-62,4998	0	0,5588	1,2783
	,81	40,3639		7,09		9			58	5
9	3240	-	0	558.23	173,771	1,03301	-50,4938	0	0,5637	1,2359
	,26	33,9375		7,67					59	5
9	3253	-	0	500.73	194,768	1,38845	-38,0661	0	0,5690	1,2062
	,99	26,1553		4,87					15	1
9	3270	-	0	434.07	215,609	1,83351	-26,7097	0	0,6085	1,1894
	,48	16,5865		0,41					1	1
9	3290	-	0	375.36	237,48	2,30591	-19,0091	0	0,6893	1,1858
	,26	3,72187		3,21					86	8
9	3314	13,5499	0	337.42	265,863	2,7908	-14,5106	0	0,7626	1,1856
				6,54					1	6
9	3342	36,4427	0	297.45	298,096	3,38794	-8,39173	0	0,8489	1,1789
	,48			1,62					6	7
9	3376	69,1957	0	174.47	308,332	5,53701	7,18033	0	1,1275	1,1707
	,66			1,35					9	5
9	3380	73,2771	0	158.99	308,332	5,92884	8,91642	0	1,1725	1,1704
	,21			6,17					3	3
9	3380	73,2771	0	158.99	308,332	5,92886	8,91642	0	1,1725	1,1704
	,21			6,17					3	3
9	3417	124,057	0	84.939,	312,681	8,9804	16,215	0	1,4775	1,1721
	,68			14					5	6
9	3466	199,708	0	69.645,	316,162	10,2152	17,7791	0	1,5836	1,1720
	,9			99					8	5
9	3525	296,108	0	59.088,	320,452	11,4012	18,8434	0	1,6792	1,1722
	,97			51					8	
9	3596	418,798	0	50.264,	325,754	12,744	19,6668	0	1,7809	1,1727
	,85			92					4	2
9	3681	575,012	0	41.968,	332,318	14,2751	20,3088	0	1,8900	1,1734
	,91			76					1	4



9	3783,98	774,035	0	34.469,14	340,455	16,027	20,8105	0	2,00756	1,17428
9	3906,46	1027,89	0	28.031,08	350,557	18,0568	21,8591	0	2,13583	1,17286
9	3977,61	1182,33	0	25.112,72	356,581	19,1992	22,4173	0	2,20484	1,17196
9	4053,43	1352,35	0	22.578,61	363,119	20,3869	22,8634	0	2,27444	1,17137
9	4229,81	1766,76	0	18.029,87	378,734	23,0363	23,5498	0	2,42275	1,17074
9	4441,45	2296,55	0	14.247,11	398,147	26,0388	24,018	0	2,581	1,17061
9	4695,43	2973,86	0	11.204,46	422,27	29,4231	24,3373	0	2,74891	1,17075
9	4706,97	3005,63	0	11.159,40	423,386	29,5717	24,3481	0	2,75606	1,17076
10	3564,18	-74,001	0	1,00	0,00177245	0,782426	24,6239	0	0,614873	1,1739
10	3564,28	-73,9448	0	288.109,12	4,34604	0,00509454	-40,9417	0	0,555677	1,34492
10	3564,38	-73,8892	0	297.770,94	6,13826	0,00968031	-43,3568	0	0,55563	1,35293
10	3564,48	-73,8336	0	300.159,73	7,52101	0,0143194	-43,8868	0	0,555684	1,35454
10	3564,58	-73,7781	0	301.063,85	8,69081	0,0189743	-44,074	0	0,555746	1,35507
10	3564,68	-73,7225	0	301.458,17	9,72637	0,0236294	-44,1521	0	0,555807	1,35528
10	3564,78	-73,6669	0	301.623,10	10,6669	0,0282816	-44,1837	0	0,555867	1,35536
10	3564,88	-73,6113	0	301.667,40	11,5343	0,0329339	-44,1921	0	0,555928	1,35538
10	3564,98	-73,5557	0	301.671,90	12,3444	0,0375786	-44,1969	0	0,555983	1,35541
10	3565,08	-73,5001	0	301.915,76	13,1086	0,0421627	-44,2867	0	0,555981	1,35579
10	3565	-	0	302.73	13,8334	0,04660	-44,5701	0	0,5558	1,3569



	,18	73,4445		8,91		67			64	4
10	3565 ,28	-73,389	0	304.19 4,90	14,5251	0,05086 29	-45,062	0	0,5556 27	1,3589 5
10	3565 ,38	- 73,3334	0	306.14 8,86	15,1885	0,05492 67	-45,7149	0	0,5553 07	1,3616
10	3565 ,48	- 73,2779	0	308.43 9,74	15,8271	0,05881 55	-46,474	0	0,5549 44	1,3647
10	3565 ,58	- 73,2224	0	310.96 6,39	16,4437	0,06254 15	-47,3051	0	0,5545 58	1,3681
10	3565 ,68	-73,167	0	313.64 0,39	17,0408	0,06612 17	-48,1789	0	0,5541 66	1,3716 9
10	3565 ,78	- 73,1116	0	316.40 0,58	17,6202	0,06957 22	-49,0753	0	0,5537 78	1,3753 9
10	3565 ,88	- 73,0562	0	319.20 9,10	18,1831	0,07290 74	-49,9828	0	0,5533 96	1,3791 6
10	3565 ,98	- 73,0009	0	322.03 7,62	18,7312	0,07613 69	-50,8922	0	0,5530 24	1,3829 6
10	3566 ,08	- 72,9456	0	324.86 7,05	19,2657	0,07926 85	-51,7974	0	0,5526 63	1,3867 6
10	3566 ,18	- 72,8903	0	327.68 4,61	19,7879	0,08230 84	-52,6947	0	0,5523 15	1,3905 6
10	3566 ,3	- 72,8241	0	331.03 5,21	20,4005	0,08584 05	-53,7563	0	0,5519 16	1,3950 8
10	3566 ,45	- 72,7446	0	334.99 7,34	21,1159	0,08993 45	-55,005	0	0,5514 61	1,4004 3
10	3566 ,62	- 72,6494	0	339.64 9,43	21,9503	0,09464 97	-56,4616	0	0,5509 5	1,4067 4
10	3566 ,83	- 72,5352	0	345.06 6,66	22,9197	0,10006 1	-58,146	0	0,5503 84	1,4141 2
10	3567 ,08	- 72,3983	0	351.31 6,09	24,0428	0,10624 2	-60,0737	0	0,5497 69	1,4226 8
10	3567 ,37	- 72,2343	0	358.45 0,54	25,3408	0,11326 8	-62,2545	0	0,5491 13	1,4325 2
10	3567 ,73	- 72,0377	0	366.50 4,35	26,838	0,12121 4	-64,6917	0	0,5484 3	1,4437
10	3568 ,16	-71,802	0	375.48 8,05	28,5587	0,13018 4	-67,3805	0	0,5477 37	1,4562 9
10	3568	-	0	385.38	30,5319	0,14027	-70,3066	0	0,5470	1,4702



	,68	71,5195		5,38		8			54	9
10	3569,3	-71,181	0	396.309,22	32,7926	0,151511	-73,4972	0	0,546376	1,48595
10	3570,04	-70,7754	0	409.414,34	35,3852	0,163202	-77,3045	0	0,545522	1,50528
10	3570,93	-70,2895	0	425.621,65	38,3609	0,174623	-81,9752	0	0,544416	1,53
10	3572	-69,7076	0	444.666,50	41,7768	0,185705	-87,3502	0	0,543262	1,55975
10	3573,29	-69,0108	0	466.029,30	45,6984	0,196615	-93,1963	0	0,542234	1,5937
10	3574,83	-68,176	0	489.165,27	50,2034	0,207588	-99,2816	0	0,541455	1,63085
10	3576,68	-67,1754	0	513.579,03	55,3773	0,218925	-105,406	0	0,541006	1,67016
10	3578,89	-65,9752	0	538.744,72	61,2866	0,231883	-110,86	0	0,540943	1,7049
10	3581,56	-64,5346	0	563.158,10	67,9197	0,251137	-113,399	0	0,541395	1,71102
10	3584,75	-62,8034	0	585.333,99	75,362	0,279378	-112,709	0	0,542421	1,68468
10	3588,59	-60,7209	0	603.974,85	83,7862	0,318719	-109,079	0	0,544008	1,6318
10	3593,19	-58,2134	0	617.953,01	93,5272	0,370701	-103,095	0	0,54611	1,56322
10	3598,71	-55,1911	0	625.782,23	105,337	0,43651	-95,0841	0	0,548824	1,48727
10	3600	-54,4808	0	626.403,02	108,119	0,452544	-93,0864	0	0,549549	1,47043
10	3600	-54,4808	0	626.403,02	108,119	0,452544	-93,0864	0	0,549549	1,47043
10	3604,11	-52,1017	0	537.700,84	110,98	0,602384	-39,8039	0	0,587412	1,19082
10	3604,11	-52,1017	0	537.700,84	110,98	0,602384	-39,8039	0	0,587412	1,19082
10	3605,33	-51,3784	0	460.752,33	111,021	0,745875	-22,2251	0	0,595908	1,15149
10	3613	-	0	130.52	111,303	2,43094	14,6077	0	0,7506	1,1575



	,28	46,2063		7,08					64	
10	3622,82	-38,0493	0	68.439,78	111,747	3,74286	18,3968	0	0,942482	1,16909
10	3634,27	-26,484	0	48.340,17	112,378	4,70213	19,5348	0	1,06202	1,17301
10	3648,01	-11,4032	0	40.341,15	113,2	5,27815	20,0283	0	1,12831	1,17434
10	3664,49	7,78022	0	33.952,31	114,241	5,88373	20,4165	0	1,19415	1,17542
10	3684,27	32,0195	0	29.070,39	115,496	6,47776	20,8122	0	1,25555	1,17587
10	3708,01	62,7389	0	24.061,81	117,021	7,29121	21,8287	0	1,33531	1,17424
10	3716,47	74,1791	0	22.388,28	117,577	7,62778	22,1315	0	1,36694	1,17384
10	3736,49	102,338	0	19.020,67	118,922	8,45293	22,7102	0	1,44202	1,17318
10	3770,68	154,739	0	13.092,01	121,368	10,7279	23,5584	0	1,63192	1,1727
10	3790,65	188,563	0	10.522,28	122,914	12,3471	23,8924	0	1,75531	1,17263
10	3811,69	227,15	0	8.507,37	124,651	14,1691	24,1426	0	1,88494	1,17263
10	3860,92	327,082	0	5.678,79	129,058	18,5081	24,4809	0	2,1642	1,17271
10	3919,98	463,676	0	3.980,93	134,911	23,6571	24,6748	0	2,45658	1,17281
10	4017,36	648,7	0	2.699,59	142,609	29,5716	24,7895	0	2,75619	1,17291
10	4140,68	896,398	0	1.860,07	152,611	36,2031	24,8603	0	3,05897	1,17299
10	4294,08	1224,49	0	1.300,45	165,463	43,53	24,9056	0	3,36263	1,17304
10	4480,08	1655,41	0	918,28	181,834	51,5259	24,9354	0	3,66802	1,17309
10	4707,34	2217,01	0	652,47	202,522	60,2142	24,9554	0	3,97396	1,17312
10	4982	2945,22	0	465,03	228,523	69,6253	24,9691	0	4,2817	1,1731



DNV

	,36								4	5
10	4996 ,45	3005,69	0	453,76	230,647	70,338	24,9699	0	4,3041 9	1,1731 5



### 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	-0,532525	kg/s	0	0	11,9172
2	Continuous	404,359	-45,394	kg/s	0	0	251,038
3	Continuous	801,201	-52,2457	kg/s	0	0	252,349
4	Continuous	1196,88	-56,4194	kg/s	0	0	252,39
5	Continuous	1592,03	-59,4894	kg/s	0	0	253,103
6	Continuous	1986,81	-61,8475	kg/s	0	0	252,696
7	Continuous	2381,37	-63,8025	kg/s	0	0	253,369
8	Continuous	2775,76	-65,4723	kg/s	0	0	253,21
9	Continuous	3170,01	-66,9122	kg/s	0	0	253,097
10	Continuous	3564,17	-68,184	kg/s	0	0	217,887

### 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/
-----------------	----------	-----------------------	-------------------	-------------------	---------------------	---------------------	----------------------------------	------------------------	-------------------------	---------------------------



										m3]
1	0,22	-	0	1,00	0,00177	0,1512	24,6246	0	3,1802	1,1739
		0,53252			245	76			3	
		5								
1	0,32	-	0	914.86	0,79698	0,0807	-145,559	0	0,5945	1,7596
		0,46043		3,04	2	273			54	
1	0,42	-	0	910.73	1,20164	0,1256	-144,751	0	0,6362	1,7524
		0,39912		3,79		01			72	9
		4								
1	0,52	-	0	905.29	1,55102	0,1618	-143,781	0	0,6806	1,7446
		0,33319		4,18		47			36	3
		3								
1	0,62	-	0	901.14	1,8744	0,1926	-143,081	0	0,7173	1,7393
		0,26323		2,63		38			31	
		9								
1	0,72	-	0	897.50	2,17996	0,2193	-142,484	0	0,7502	1,7349
		0,18983		9,02		94			48	1
		5								
1	0,82	-	0	894.10	2,47342	0,2429	-141,932	0	0,7810	1,7309
		0,11324		6,23		26			41	5
		8								
1	0,92	-	0	890.83	2,75764	0,2639	-141,405	0	0,8103	1,7272
		0,03365		7,45		33			46	2
		96								
1	1,02	0,04880	0	887.62	3,03508	0,2827	-140,885	0	0,8386	1,7235
		49		8,61		71			96	6
1	1,12	0,13405	0	884.46	3,30537	0,3003	-140,252	0	0,8661	1,7183
		2		1,43		89			45	7
1	1,22	0,22200	0	881.29	3,56957	0,3170	-139,499	0	0,893	1,7116
		3		2,78		05				4
1	1,32	0,31261	0	878.12	3,82855	0,3327	-138,672	0	0,9193	1,7040
		6		3,95		44			17	1
1	1,42	0,40583	0	874.97	4,0821	0,3479	-137,786	0	0,9450	1,6957
		2		1,76		05			18	2
1	1,52	0,50158	0	871.81	4,33086	0,3624	-136,859	0	0,9702	1,6870
		8		7,78		89			69	1
1	1,62	0,59985	0	868.66	4,5754	0,3765	-135,905	0	0,9951	1,6781
				1,14		26			16	



1	1,72	0,70058	0	865.50 2,86	4,81747	0,3899 98	-134,926	0	1,0195 7	1,6690 3
1	1,82	0,80374	0	862.33 1,73	5,06069	0,4027 25	-133,918	0	1,0437 2	1,6597 5
1	1,92	0,90931	0	859.12 0,13	5,30566	0,4147 04	-132,876	0	1,0677 4	1,6502 5
1	2,02	1,01729	0	855.85 4,25	5,55221	0,4259 8	-131,805	0	1,0917 3	1,6406 1
1	2,12	1,12772	0	852.49 9,34	5,79994	0,4367 14	-130,674	0	1,1158 9	1,6305 1
1	2,22	1,24081	0	849.03 0,04	6,04877	0,4468 77	-129,522	0	1,1404 3	1,6204 5
1	2,34	1,37945	0	844.83 0,35	6,34817	0,4585 03	-128,113	0	1,1695 7	1,6083 5
1	2,484	1,5504	0	839.63 3,46	6,70818	0,4717 47	-126,353	0	1,2047 7	1,5935 5
1	2,656	1,76227	0	833.13 8,50	7,14055	0,4866 98	-124,164	0	1,2475 6	1,5757
1	2,864	2,02636	0	824.94 8,14	7,65857	0,5036 59	-121,407	0	1,2997 1	1,5540 3
1	3,112	2,35769	0	814.49 0,65	8,27706	0,5229 01	-117,907	0	1,3636 5	1,5277 9
1	3,411	2,77661	0	800.90 9,91	9,01154	0,5447 32	-113,414	0	1,4427 1	1,4960 7
1	3,769	3,31114	0	782.86 4,84	9,87622	0,5695 66	-107,548	0	1,5416 7	1,4577 2
1	4,199	4,00099	0	757.86 6,80	10,8788	0,5976 17	-99,5985	0	1,6689 2	1,4106 4
1	4,715	4,90634	0	719.88 0,05	12,0022	0,6279 19	-87,8097	0	1,8444 5	1,3494 4
1	5,080	5,6058	0	682.29 7,83	12,71	0,6434 64	-76,1842	0	2,0032 1	1,2967 7
1	5,080	5,6058	0	682.29 7,83	12,71	0,6434 64	-76,1842	0	2,0032 1	1,2967 7
1	5,335	6,13496	0	645.66 5,96	13,1135	0,6564 19	-62,7482	0	2,1471 6	1,2391 7
1	6,078	7,86534	0	531.66 5,90	13,5836	0,7626 87	-29,6892	0	2,5035 1	1,1393 9



1	6,969 66	10,2447	0	383.90 9,61	13,9357	1,0178 8	-4,27431	0	2,8015 2	1,1098 2
1	8,039 59	13,342	0	271.65 2,13	14,4083	1,3747 6	7,01056	0	2,9653 6	1,1196 8
1	9,323 51	17,2412	0	195.94 6,30	14,9769	1,7776 2	12,5846	0	3,1295 4	1,1330 6
1	10,86 42	22,2179	0	143.97 6,28	15,6353	2,2126 9	15,6957	0	3,3213 2	1,1444 6
1	12,71 31	28,5198	0	107.69 1,59	16,3866	2,7100 8	17,589	0	3,4879 7	1,1532 7
1	13,38 81	30,8918	0	98.377, 49	16,6507	2,8840 6	18,0417	0	3,5380 6	1,1556 2
1	13,38 81	30,8918	0	98.377, 49	16,6507	2,8840 5	18,0417	0	3,5380 6	1,1556 2
1	14,93 17	36,4315	0	81.899, 06	17,2338	3,2667 1	18,8125	0	3,6377 4	1,1598 9
1	17,59 4	46,3084	0	62.724, 19	18,2169	3,8992 1	19,6564	0	3,7790 2	1,1650 2
1	20,78 88	58,6197	0	47.325, 73	19,4244	4,6793 2	20,2819	0	3,9254 9	1,1693 3
1	24,62 26	73,9901	0	34.524, 75	20,9164	5,7381 4	21,5352	0	4,0922 4	1,1703 5
1	29,22 31	93,2309	0	24.728, 32	22,7553	7,0804 5	22,6809	0	4,2687 4	1,1705 2
1	29,73 84	95,435	0	23.884, 89	22,9646	7,2340 9	22,7747	0	4,2870 9	1,1705 5
1	34,74 37	117,304	0	17.976, 94	25,0267	8,5417 6	23,4162	0	4,4315 9	1,1708 5
1	41,36 84	147,196	0	13.086, 41	27,8111	10,200 7	23,9162	0	4,5905 4	1,1712 2
1	41,58 29	148,181	0	12.962, 12	27,9022	10,254 2	23,9284	0	4,5952 7	1,1712 3
1	49,31 81	184,35	0	9.431,7 7	31,2232	12,176 7	24,265	0	4,7541 5	1,1715 9
1	58,85 77	230,513	0	6.733,3 9	35,3997	14,527 6	24,5061	0	4,9227 2	1,1719 4
1	70,30 53	287,879	0	4.765,7 3	40,5087	17,317 4	24,6705	0	5,0961 4	1,1722 3

1	84,04 23	359,146	0	3.348,7 5	46,7511	20,621 7	24,7813	0	5,2743 4	1,1724 7
1	100,5 27	447,625	0	2.338,0 8	54,3684	24,529 2	24,8557	0	5,4573 6	1,1726 7
1	105,6 7	475,819	0	2.114,3 0	56,7687	25,735 5	24,8715	0	5,5091 7	1,1727 1
2	404,3 59	-45,394	0	1,00	0,00177 245	0,1512 76	24,6241	0	3,1802 3	1,1739
2	404,4 59	- 45,1087	0	267.34 0,53	7,66737	0,0140 044	-46,1557	0	2,8483 2	1,3895 1
2	404,5 59	- 44,8238	0	267.47 4,32	10,8388	0,0279 431	-46,1681	0	2,8486 9	1,3894 9
2	404,6 59	- 44,5389	0	267.33 4,10	13,2773	0,0418 719	-46,1423	0	2,8491 1	1,3894 3
2	404,7 59	-44,254	0	267.13 7,73	15,3373	0,0557 833	-46,1098	0	2,8495 4	1,3893 5
2	404,8 59	-43,969	0	266.91 4,76	17,1556	0,0696 768	-46,074	0	2,85 8	1,3892
2	404,9 59	-43,684	0	266.67 9,35	18,8021	0,0835 554	-46,0368	0	2,8504 6	1,3892
2	405,0 59	- 43,3989	0	266.44 0,18	20,3166	0,0974 31	-45,9994	0	2,8509 2	1,3891 3
2	405,1 59	- 43,1138	0	266.20 1,22	21,7265	0,1113 04	-45,9622	0	2,8513 7	1,3890 6
2	405,2 59	- 42,8286	0	265.96 3,78	23,0516	0,1251 72	-45,9255	0	2,8518 1	1,3889 9
2	405,3 59	- 42,5434	0	265.72 7,54	24,3063	0,1390 29	-45,889	0	2,8522 5	1,3889 1
2	405,4 59	- 42,2582	0	265.49 3,04	25,4995	0,1528 89	-45,8529	0	2,8526 8	1,3888 5
2	405,5 59	- 41,9729	0	265.26 0,04	26,6398	0,1667 47	-45,8171	0	2,8531 1	1,3887 8
2	405,6 59	- 41,6876	0	265.02 7,76	27,7352	0,1805 91	-45,7814	0	2,8535 3	1,3887 1
2	405,7 59	- 41,4022	0	264.79 5,74	28,7907	0,1944 2	-45,7458	0	2,8539 6	1,3886 4
2	405,8	-	0	264.56	29,8112	0,2082	-45,7101	0	2,8543	1,3885

	59	41,1168		3,48		29		8	7	
2	405,9	-	0	264.33	30,7991	0,2220	-45,6744	0	2,8548	1,3885
	59	40,8313		0,72		31			1	
2	406,0	-	0	264.09	31,7582	0,2358	-45,6385	0	2,8552	1,3884
	59	40,5458		7,19		15			4	4
2	406,1	-	0	263.86	32,6902	0,2495	-45,6026	0	2,8556	1,3883
	59	40,2603		2,99		91			7	7
2	406,2	-	0	263.62	33,5979	0,2633	-45,5664	0	2,8561	1,3883
	59	39,9747		7,95		53				
2	406,3	-	0	263.39	34,4831	0,2771	-45,5302	0	2,8565	1,3882
	59	39,6891		2,06		02			4	3
2	406,4	-	0	263.10	35,5183	0,2935	-45,4865	0	2,8570	1,3881
	79	39,3462		7,83		81			6	5
2	406,6	-	0	262.77	36,7247	0,3133	-45,4382	0	2,8576	1,3880
	23	38,9348		6,70		12			7	7
2	406,7	-	0	262.41	38,1239	0,3369	-45,3956	0	2,8583	1,3880
	96	38,4409		8,46		01			6	4
2	407,0	-	0	262.16	39,7398	0,3648	-45,4108	0	2,8589	1,3883
	03	37,8482		0,93		52			7	
2	407,2	-	0	262.37	41,5993	0,3971	-45,6308	0	2,8590	1,3895
	52	37,1368		6,71		99			3	1
2	407,5	-	0	263.26	43,7319	0,4341	-46,1363	0	2,8583	1,3920
	51	36,2831		6,96		82			4	4
2	407,9	-	0	264.96	46,169	0,4760	-46,9762	0	2,8568	1,3961
	09	35,2591		8,34		66			4	2
2	408,3	-	0	267.54	48,9469	0,5231	-48,1738	0	2,8546	1,4019
	39	34,0311		5,77		42			2	
2	408,8	-	0	270.98	52,1025	0,5758	-49,7243	0	2,8518	1,4094
	55	32,5589		7,56		23			2	
2	409,4	-	0	275.26	55,6733	0,6345	-51,6214	0	2,8486	1,4186
	74	30,7941		9,13		03			4	8
2	410,2	-	0	280.36	59,6942	0,6995	-53,8603	0	2,8452	1,4298
	17	28,6788		3,10		63			5	1
2	411,1	-	0	286.17	64,2247	0,7711	-56,4144	0	2,8419	1,4428
	09	26,1434		4,16		36			5	
2	412,1	-	0	292.56	69,3289	0,8493	-59,2476	0	2,8391	1,4576
	79	23,1042		0,60		84				1
2	413,4	-	0	299.34	75,0394	0,9362	-62,0462	0	2,8371	1,4723



	63	19,4604		7,39		09			1	3
2	415,0 03	- 15,0898	0	306.06 1,22	81,3949	1,0362 1	-64,1039	0	2,8367 7	1,4822 7
2	416,8 52	-9,8435	0	312.12 1,84	88,4138	1,1540 1	-65,1196	0	2,8389 4	1,4854 3
2	419,0 71	- 3,53917	0	316.73 3,27	96,488	1,2912 6	-64,7034	0	2,8447 8	1,4794 6
2	421,7 33	4,04918	0	318.43 7,88	106,506	1,4479 2	-62,1229	0	2,8566 2	1,4604 7
2	424,9 28	13,225	0	314.98 9,95	118,79	1,6264 8	-56,4334	0	2,8989 1	1,4247 9
2	428,7 62	24,5422	0	302.78 3,81	133,304	1,8373	-46,5033	0	3,0077 8	1,3706
2	433,3 62	38,7158	0	275.31 2,58	149,508	2,1469 2	-30,6741	0	3,1590 3	1,2979 3
2	435,6 75	46,1281	0	253.15 3,88	156,664	2,3407 7	-20,3765	0	3,2538 2	1,2576 3
2	435,6 75	46,1281	0	253.15 3,88	156,664	2,3407 7	-20,3765	0	3,2538 3	1,2576 3
2	438,8 83	56,8455	0	208.87 2,87	163,909	2,7559 5	-2,57729	0	3,4285 9	1,1972 9
2	439,7 45	59,8214	0	197.51 8,22	165,286	2,8829 9	0,108178	0	3,4731 5	1,1908 2
2	439,7 45	59,8214	0	197.51 8,22	165,286	2,8831	0,108178	0	3,4730 1	1,1908 2
2	445,5 07	80,6287	0	137.68 3,32	169,657	3,8967 2	10,7774	0	3,7449 3	1,1720 9
2	453,4 57	111,821	0	85.483, 79	172,6	5,7881 6	16,2844	0	4,0821 6	1,1714 2
2	462,9 97	152,17	0	57.075, 60	176,359	8,0085 7	18,5944	0	4,3653	1,1736 9
2	474,4 44	203,712	0	39.479, 48	181,07	10,688 7	19,8156	0	4,6271	1,1759 2
2	488,1 81	269,053	0	27.981, 02	186,928	13,897 5	20,532	0	4,8758 9	1,1777 1
2	495,8 5	306,906	0	23.805, 93	190,273	15,687 3	20,9526	0	4,9944 4	1,1778
2	504,6	351,533	0	20.155,	194,175	17,758	21,747	0	5,1187	1,1764



	66			05		5			8	
2	524,447	455,21	0	14.687,27	203,101	22,3479	22,837	0	5,35669	1,1747
2	528,279	475,814	0	13.909,90	204,854	23,2287	22,9813	0	5,39772	1,17451
3	801,201	-52,2457	0	1,00	0,00177245	0,151276	24,6234	0	3,18023	1,1739
3	801,301	-51,953	0	216.744,41	8,31814	0,0134833	-39,2086	0	2,92343	1,38
3	801,401	-51,6606	0	216.829,57	11,7634	0,026904	-39,2211	0	2,92373	1,38002
3	801,501	-51,3682	0	216.717,53	14,4108	0,0403203	-39,2021	0	2,92403	1,37998
3	801,601	-51,0758	0	216.569,86	16,6432	0,0537358	-39,1785	0	2,92433	1,37994
3	801,701	-50,7834	0	216.408,79	18,6144	0,0671341	-39,1532	0	2,92463	1,37989
3	801,801	-50,4909	0	216.240,15	20,3957	0,0805375	-39,127	0	2,92493	1,37984
3	801,901	-50,1984	0	216.070,39	22,0344	0,0939375	-39,1008	0	2,92522	1,37979
3	802,001	-49,9059	0	215.898,76	23,5625	0,107321	-39,0745	0	2,92552	1,37974
3	802,101	-49,6133	0	215.726,13	25,0001	0,120693	-39,048	0	2,92582	1,37972
3	802,201	-49,3207	0	215.551,95	26,3612	0,134056	-39,0214	0	2,92612	1,37965
3	802,301	-49,0281	0	215.376,55	27,6555	0,147422	-38,9946	0	2,92642	1,37962
3	802,401	-48,7354	0	215.200,99	28,8922	0,160787	-38,9678	0	2,92672	1,37955
3	802,501	-48,4427	0	215.025,75	30,0792	0,174146	-38,9411	0	2,92701	1,37951
3	802,601	-48,15	0	214.850,47	31,2226	0,187496	-38,9144	0	2,92731	1,37946
3	802,701	-47,8573	0	214.674,82	32,3272	0,200834	-38,8876	0	2,92761	1,37941





3	802,801	-47,5645	0	214.498,75	33,3972	0,21416	-38,8608	0	2,92791	1,37936
3	802,901	-47,2717	0	214.322,65	34,4358	0,227474	-38,834	0	2,92821	1,37931
3	803,001	-46,9788	0	214.146,38	35,4446	0,240785	-38,8072	0	2,92851	1,37927
3	803,101	-46,686	0	213.969,68	36,4272	0,254085	-38,7803	0	2,9288	1,37922
3	803,201	-46,3931	0	213.792,57	37,3845	0,267381	-38,7533	0	2,9291	1,37917
3	803,321	-46,0416	0	213.579,61	38,5022	0,283337	-38,7209	0	2,92947	1,37912
3	803,465	-45,6197	0	213.323,87	39,8037	0,302473	-38,682	0	2,9299	1,37905
3	803,637	-45,1134	0	213.016,88	41,3127	0,325427	-38,6354	0	2,93042	1,37896
3	803,845	-44,5057	0	212.682,83	43,0568	0,352876	-38,5946	0	2,931	1,37893
3	804,094	-43,7763	0	212.577,16	45,0652	0,385054	-38,6771	0	2,93133	1,37949
3	804,392	-42,901	0	212.953,35	47,3682	0,422117	-38,9961	0	2,93116	1,38114
3	804,75	-41,8508	0	213.979,93	50,0011	0,464254	-39,6296	0	2,93035	1,38426
3	805,18	-40,5911	0	215.808,77	52,9998	0,51156	-40,6436	0	2,92882	1,38916
3	805,696	-39,0803	0	218.441,87	56,4024	0,564448	-42,0408	0	2,9267	1,39592
3	806,316	-37,2689	0	221.929,39	60,2543	0,622991	-43,8441	0	2,92408	1,40478
3	807,059	-35,0974	0	226.239,14	64,6088	0,687349	-46,0444	0	2,92115	1,41556
3	807,95	-32,4943	0	231.293,94	69,5139	0,757848	-48,6174	0	2,91815	1,42853
3	809,02	-29,3737	0	237.008,90	75,014	0,834844	-51,54	0	2,91529	1,44365
3	810,304	-25,6324	0	243.247,07	81,177	0,91844	-54,7679	0	2,91291	1,46087



3	811,845	-21,1458	0	249.752,72	88,0684	1,01155	-57,7016	0	2,91148	1,47644
3	813,694	-15,7631	0	256.070,01	95,7105	1,11957	-59,7328	0	2,91164	1,48631
3	815,912	-9,30094	0	261.619,14	104,144	1,24793	-60,5301	0	2,91413	1,48827
3	818,575	-1,53524	0	265.503,78	114,221	1,39555	-59,5799	0	2,92027	1,47927
3	821,769	7,81471	0	266.098,20	126,741	1,56913	-55,9861	0	2,93204	1,45475
3	825,603	19,2275	0	260.945,26	141,828	1,75526	-48,7447	0	3,02083	1,41158
3	830,204	33,3917	0	246.296,59	159,401	2,01582	-36,8211	0	3,13916	1,34982
3	835,724	51,1738	0	213.932,23	178,423	2,4152	-18,2505	0	3,31026	1,26981
3	836,176	52,6727	0	210.017,20	179,805	2,4546	-16,3476	0	3,32744	1,26251
3	836,176	52,6727	0	210.017,20	179,805	2,4546	-16,3476	0	3,32743	1,26251
3	842,338	74,0189	0	148.505,07	193,33	3,25013	5,69987	0	3,59835	1,19082
3	842,338	74,0189	0	148.505,07	193,33	3,25027	5,69987	0	3,59819	1,19082
3	842,349	74,059	0	148.408,93	193,347	3,25193	5,72043	0	3,59865	1,19077
3	850,299	103,901	0	95.830,47	201,499	4,61667	14,1634	0	3,89806	1,17712
3	859,838	142,519	0	62.328,35	206,624	6,53416	17,6881	0	4,19215	1,17605
3	871,286	192,254	0	41.033,06	211,267	9,13964	19,4433	0	4,48664	1,17734
3	885,023	255,841	0	28.094,56	216,992	12,2979	20,3679	0	4,76029	1,17869
3	892,16	290,254	0	23.875,28	220,044	13,9376	20,6464	0	4,88	1,17923
3	901,507	336,683	0	19.754,11	224,116	16,1076	21,2697	0	5,0218	1,17853



3	921,289	438,643	0	14.167,51	232,921	20,6666	22,5877	0	5,2752	1,17597
3	923,443	450,035	0	13.720,90	233,894	21,1592	22,6854	0	5,29978	1,17579
4	1196,88	-56,4194	0	1,00	0,00177245	0,151275	24,6226	0	3,18023	1,1739
4	1196,98	-56,1233	0	192.059,67	8,68922	0,0132435	-35,9236	0	2,95767	1,37619
4	1197,08	-55,8275	0	192.120,71	12,2861	0,0264364	-35,9367	0	2,95792	1,37623
4	1197,18	-55,5317	0	192.028,75	15,0589	0,0396041	-35,922	0	2,95817	1,3762
4	1197,28	-55,2359	0	191.885,27	17,3923	0,0527787	-35,8995	0	2,95844	1,37616
4	1197,38	-54,94	0	191.735,35	19,4519	0,0659338	-35,8763	0	2,95871	1,37612
4	1197,48	-54,6441	0	191.586,99	21,3111	0,0791077	-35,8537	0	2,95896	1,37608
4	1197,58	-54,3482	0	191.442,93	23,0195	0,0922998	-35,8318	0	2,95919	1,37604
4	1197,68	-54,0523	0	191.303,11	24,6099	0,105495	-35,8107	0	2,95942	1,37601
4	1197,78	-53,7564	0	191.163,82	26,1092	0,118659	-35,7896	0	2,95965	1,37597
4	1197,88	-53,4604	0	191.021,40	27,5316	0,131798	-35,7681	0	2,95988	1,37593
4	1197,98	-53,1644	0	190.875,10	28,8849	0,144936	-35,7459	0	2,96012	1,37589
4	1198,08	-52,8684	0	190.726,74	30,1784	0,158071	-35,7234	0	2,96037	1,37586
4	1198,18	-52,5723	0	190.577,68	31,42	0,171193	-35,7007	0	2,96061	1,37582
4	1198,28	-52,2762	0	190.428,65	32,6146	0,184314	-35,6782	0	2,96086	1,37578
4	1198,38	-51,9801	0	190.279,56	33,7677	0,197432	-35,6556	0	2,9611	1,37574
4	1198,48	-51,684	0	190.13	34,884	0,2105	-35,633	0	2,9613	1,3757



	48			0,16		41			4	
4	1198, - 58	- 51,3879	0	189.97 8,86	35,9694	0,2236 15	-35,6101	0	2,9615 9	1,3756 6
4	1198, - 68	- 51,0917	0	189.82 7,50	37,0233	0,2366 95	-35,5872	0	2,9618 4	1,3756 2
4	1198, - 78	- 50,7955	0	189.67 5,03	38,0505	0,2497 49	-35,5641	0	2,9620 9	1,3755 8
4	1198, - 88	- 50,4993	0	189.52 3,32	39,0492	0,2628 3	-35,5412	0	2,9623 3	1,3755 4
4	1199 - 50,1438	- 50,1438	0	189.34 0,51	40,2174	0,2785 01	-35,5135	0	2,9626 3	1,3755
4	1199, - 15	- 49,7171	0	189.12 2,00	41,5752	0,2973 27	-35,4805	0	2,9629 9	1,3754 4
4	1199, - 32	- 49,2051	0	188.85 9,96	43,1506	0,3199 02	-35,4409	0	2,9634 1	1,3753 7
4	1199, - 53	- 48,5906	0	188.60 4,98	44,9692	0,3468 63	-35,4215	0	2,9638 5	1,3754 2
4	1199, -47,853 78	-47,853 78	0	188.43 3,90	47,0623	0,3788 27	-35,4621	0	2,9642 3	1,3757 6
4	1200, -46,968 08	-46,968 08	0	188.62 7,02	49,462	0,4158 76	-35,7009	0	2,9642 3	1,3770 3
4	1200, - 43	- 45,9059	0	189.41 7,50	52,2091	0,4579 65	-36,2541	0	2,9636 3	1,3797 7
4	1200, - 86	- 44,6317	0	190.99 5,34	55,3468	0,5049 42	-37,2161	0	2,9623	1,3844 4
4	1201, - 38	- 43,1035	0	193.36 5,83	58,9121	0,5571 79	-38,5884	0	2,9603 8	1,3910 9
4	1202 - 41,2711	- 41,2711	0	196.45 3,12	62,9381	0,6153 61	-40,3329	0	2,9581 2	1,3996
4	1202, - 74	- 39,0742	0	200.27 7,03	67,4739	0,6796 17	-42,4672	0	2,9555 8	1,4101 6
4	1203, - 63	- 36,4401	0	204.82 9,82	72,581	0,7499 15	-44,9982	0	2,9528 7	1,4229 2
4	1204, - 7	- 33,2821	0	210.03 4,37	78,3273	0,8262 59	-47,9038	0	2,9502 4	1,4379 4
4	1205, - 99	- 29,4957	0	215.81 3,48	84,7618	0,9089 82	-51,165	0	2,9478 9	1,4553
4	1207, -	-	0	222.00	91,9573	0,9993	-54,4934	0	2,9461	1,4733



	53	24,9554		8,58		31		6	8	
4	1209,38	-19,5091	0	228.222,44	99,9588	1,1028	-57,0393	0	2,94564	1,48666
4	1211,6	-12,9728	0	233.939,85	108,786	1,22495	-58,438	0	2,94698	1,49264
4	1214,26	-5,12218	0	238.468,69	118,884	1,36877	-58,2641	0	2,95101	1,48862
4	1217,45	4,31811	0	240.557,54	131,423	1,53505	-55,7435	0	2,95942	1,47032
4	1221,29	15,7807	0	238.159,04	146,768	1,71431	-49,8545	0	3,02868	1,43354
4	1225,89	29,9545	0	228.252,25	164,909	1,95352	-39,5979	0	3,13401	1,37724
4	1231,41	47,6443	0	205.986,23	185,334	2,30535	-23,9053	0	3,27868	1,30372
4	1234,15	56,7396	0	188.442,27	194,378	2,52139	-14,3585	0	3,36554	1,26501
4	1234,15	56,7396	0	188.442,27	194,378	2,52138	-14,3585	0	3,36555	1,26501
4	1238,03	70,121	0	154.743,71	204,431	2,95791	0,823664	0	3,52089	1,21064
4	1241,92	84,1063	0	124.461,20	211,766	3,50721	8,36374	0	3,67105	1,19082
4	1241,92	84,1063	0	124.461,20	211,766	3,50742	8,36374	0	3,67083	1,19082
4	1245,98	99,3055	0	100.413,72	217,361	4,14803	12,5411	0	3,81273	1,18295
4	1255,52	137,083	0	65.033,24	225,663	5,84727	17,0054	0	4,10014	1,17836
4	1266,97	185,791	0	41.969,53	231,323	8,31012	19,1572	0	4,40317	1,17857
4	1280,71	248,352	0	28.063,28	236,964	11,4389	20,2476	0	4,69306	1,17944
4	1287,41	280,195	0	23.895,94	239,794	12,9671	20,5468	0	4,81133	1,17983
4	1297,19	328,212	0	19.423,35	244,014	15,2143	20,941	0	4,96593	1,18001
4	1316,429	429,163	0	13.787,252	252,748	19,753	22,4227	0	5,2286	1,1768



	97			84		9			9	1
4	1317,434,4698	0	13.575,63	253,202	19,9846	22,4743	0	5,24067	1,17671	
5	1592,03	-59,4894	0	1,00	0,00177245	0,151275	24,622	0	3,18023	1,17391
5	1592,13	-59,1913	0	176.307,62	8,95517	0,0130932	-33,8756	0	2,97874	1,37409
5	1592,23	-58,8934	0	176.345,76	12,6622	0,0261373	-33,8876	0	2,979	1,37414
5	1592,33	-58,5955	0	176.280,76	15,5074	0,0391984	-33,8782	0	2,97916	1,37413
5	1592,43	-58,2975	0	176.170,89	17,9128	0,0522362	-33,8612	0	2,97938	1,37418
5	1592,53	-57,9996	0	176.049,93	20,0321	0,0652662	-33,8427	0	2,97959	1,37406
5	1592,63	-57,7016	0	175.919,96	21,9527	0,078272	-33,8228	0	2,97981	1,37403
5	1592,73	-57,4036	0	175.787,36	23,7177	0,0912875	-33,8026	0	2,98002	1,37399
5	1592,83	-57,1056	0	175.655,66	25,3588	0,10432	-33,7827	0	2,98024	1,37396
5	1592,93	-56,8076	0	175.525,94	26,8997	0,117363	-33,7631	0	2,98045	1,37393
5	1593,03	-56,5095	0	175.398,27	28,3583	0,130402	-33,7439	0	2,98065	1,37395
5	1593,13	-56,2115	0	175.270,61	29,7494	0,14342	-33,7246	0	2,98085	1,37386
5	1593,23	-55,9134	0	175.141,13	31,0845	0,1564	-33,7051	0	2,98106	1,37383
5	1593,33	-55,6152	0	175.007,95	32,3693	0,169356	-33,685	0	2,98127	1,37387
5	1593,43	-55,3171	0	174.870,97	33,6066	0,182308	-33,6643	0	2,98149	1,37376
5	1593,53	-55,0189	0	174.732,86	34,798	0,195268	-33,6434	0	2,98172	1,37373
5	1593,63	-54,7208	0	174.594,81	35,9483	0,208242	-33,6225	0	2,98194	1,37369



5	1593,73	-54,4226	0	174.457,34	37,0629	0,221219	-33,6018	0	2,98216	1,37366
5	1593,83	-54,1243	0	174.320,59	38,1455	0,234195	-33,5812	0	2,98238	1,37362
5	1593,93	-53,8261	0	174.182,47	39,2024	0,247127	-33,5604	0	2,9826	1,37359
5	1594,03	-53,5278	0	174.044,43	40,2328	0,260055	-33,5396	0	2,98281	1,37355
5	1594,15	-53,1699	0	173.878,91	41,4366	0,275564	-33,5147	0	2,98308	1,37351
5	1594,3	-52,7403	0	173.680,38	42,8381	0,294165	-33,4849	0	2,98339	1,37346
5	1594,47	-52,2247	0	173.443,04	44,4621	0,316496	-33,4492	0	2,98377	1,3734
5	1594,68	-51,606	0	173.166,76	46,3372	0,343279	-33,4103	0	2,98421	1,37335
5	1594,93	-50,8633	0	172.904,70	48,4949	0,375207	-33,3985	0	2,98465	1,37344
5	1595,23	-49,9721	0	172.976,60	50,9683	0,412267	-33,5813	0	2,98475	1,37446
5	1595,58	-48,9027	0	173.621,41	53,7941	0,454409	-34,0831	0	2,98426	1,37696
5	1596,01	-47,6196	0	174.971,14	57,0141	0,501677	-34,9715	0	2,98315	1,38129
5	1596,53	-46,0808	0	177.067,82	60,6701	0,554292	-36,2689	0	2,98148	1,38758
5	1597,15	-44,2354	0	179.923,54	64,8074	0,612479	-37,9853	0	2,97936	1,39597
5	1597,89	-42,0227	0	183.502,55	69,4804	0,676514	-40,1097	0	2,97693	1,40648
5	1598,78	-39,3696	0	187.802,81	74,7315	0,74658	-42,6509	0	2,97438	1,4193
5	1599,85	-36,1887	0	192.769,25	80,6282	0,822656	-45,5924	0	2,97168	1,43449
5	1601,14	-32,3749	0	198.308,98	87,2541	0,904587	-48,9046	0	2,9693	1,45211
5	1602,68	-27,8017	0	204.270,75	94,6826	0,992931	-52,445	0	2,96748	1,47151



5	1604, - 53 22,3162	0	210.35 4,31	102,956	1,0929 6	-55,3511	0	2,9666 6	1,4871 7
5	1606, - 75 15,7339	0	216.09 5,14	112,098	1,2104 3	-57,1581	0	2,9674 2	1,4959
5	1609, - 41 7,83011	0	220.89 9,79	122,35	1,3502 1	-57,4764	0	2,9704 3	1,4951
5	1612, 1,66944	0	223.79 6,80	134,959	1,5108 3	-55,6468	0	2,9769 7	1,4809 3
5	1616, 13,161 44	0	223.34 0,05	150,474	1,6823 4	-50,8044	0	3,0314 1	1,4494 3
5	1621, 27,3285 04	0	216.09 7,68	168,972	1,9074	-41,5716	0	3,1295	1,3966 9
5	1626, 44,9616 56	0	198.54 4,21	190,169	2,2338 2	-27,3294	0	3,2614 8	1,3264 7
5	1631 59,7358	0	175.14 5,42	205,482	2,5662 8	-13,2366	0	3,3891 6	1,2670 8
5	1631 59,7358	0	175.14 5,42	205,482	2,5662 8	-13,2366	0	3,3891 6	1,2670 8
5	1633, 67,2082 18	0	158.16 0,74	211,741	2,7922 2	-3,71004	0	3,4713 6	1,2304 8
5	1640, 92,0658 09	0	109.99 8,71	226,115	3,7008 6	9,94284	0	3,7199	1,1908 2
5	1640, 92,0658 09	0	109.99 8,71	226,115	3,7008 8	9,94284	0	3,7198 8	1,1908 2
5	1641, 95,9559 13	0	104.22 4,17	227,775	3,8581 2	11,0088	0	3,7548 4	1,1886 1
5	1650, 133,198 67	0	67.080, 86	238,929	5,4340 6	16,4095	0	4,0401 9	1,1805
5	1662, 181,183 12	0	43.115, 82	246,586	7,7136 3	18,8885	0	4,3387 2	1,1794 5
5	1675, 242,958 86	0	28.262, 24	252,173	10,817 7	20,1374	0	4,6417 3	1,18
5	1682, 274,629 59	0	23.901, 41	255,028	12,341 2	20,4706	0	4,7646 9	1,1803
5	1692, 322,056 34	0	19.310, 39	259,203	14,566 7	20,8029	0	4,9236 7	1,1807
5	1712, 422,239 12	0	13.590, 19	267,883	19,085 6	22,2732	0	5,1934 7	1,1775





5	1712,82	425,843	0	13.443,30	268,192	19,2433	22,3119	0	5,20191	1,17742
6	1986,81	-61,8475	0	1,00	0,00177	0,151275	24,6215	0	3,18023	1,17391
6	1986,91	-61,5479	0	165.485,13	9,14112	0,013003	-32,497	0	2,99289	1,37284
6	1987,01	-61,2486	0	165.537,22	12,9286	0,025957	-32,5128	0	2,99309	1,37289
6	1987,11	-60,9493	0	165.457,06	15,8393	0,0389051	-32,5012	0	2,99329	1,37288
6	1987,21	-60,65	0	165.352,03	18,2919	0,0518598	-32,4853	0	2,99348	1,37285
6	1987,31	-60,3506	0	165.238,96	20,4576	0,0647979	-32,4682	0	2,99367	1,37282
6	1987,41	-60,0512	0	165.120,57	22,4166	0,0777341	-32,4503	0	2,99386	1,37279
6	1987,51	-59,7518	0	165.000,70	24,2172	0,0906759	-32,4322	0	2,99406	1,37276
6	1987,61	-59,4524	0	164.880,58	25,8949	0,103609	-32,4141	0	2,99425	1,37273
6	1987,71	-59,153	0	164.759,41	27,4737	0,116528	-32,3958	0	2,99444	1,37274
6	1987,81	-58,8535	0	164.637,85	28,9687	0,12944	-32,3776	0	2,99463	1,37267
6	1987,91	-58,5541	0	164.515,28	30,3917	0,142347	-32,3591	0	2,99483	1,37264
6	1988,01	-58,2546	0	164.392,09	31,7512	0,155257	-32,3406	0	2,99502	1,37261
6	1988,11	-57,9551	0	164.268,90	33,0551	0,168168	-32,3221	0	2,99521	1,37258
6	1988,21	-57,6555	0	164.145,99	34,3105	0,181074	-32,3036	0	2,99541	1,37255
6	1988,31	-57,356	0	164.023,16	35,5229	0,193974	-32,2852	0	2,99562	1,37252
6	1988,41	-57,0564	0	163.900,17	36,697	0,206865	-32,2668	0	2,99579	1,37249
6	1988,-	-	0	163.77	37,8363	0,2197	-32,2483	0	2,9959	1,3724



	51	56,7568		6,82		46		8	6	
6	1988,61	-56,4572	0	163.653,54	38,9444	0,232616	-32,2298	0	2,99617	1,37243
6	1988,71	-56,1576	0	163.530,16	40,0229	0,245481	-32,2113	0	2,99637	1,37247
6	1988,81	-55,8579	0	163.406,65	41,0739	0,258344	-32,1928	0	2,99656	1,37237
6	1988,93	-55,4983	0	163.258,05	42,3026	0,273768	-32,1705	0	2,99679	1,37233
6	1989,08	-55,0668	0	163.079,25	43,7317	0,292281	-32,1437	0	2,99707	1,37229
6	1989,25	-54,5489	0	162.864,51	45,3897	0,314484	-32,1115	0	2,99741	1,37224
6	1989,46	-53,9273	0	162.606,78	47,3043	0,341123	-32,0729	0	2,99781	1,37217
6	1989,71	-53,1813	0	162.342,21	49,5086	0,372933	-32,0505	0	2,99824	1,37221
6	1990	-52,286	0	162.368,25	52,037	0,409903	-32,2077	0	2,99836	1,37309
6	1990,36	-51,2117	0	162.902,57	54,9253	0,452066	-32,6614	0	2,998	1,37537
6	1990,79	-49,9227	0	164.089,46	58,2157	0,499443	-33,4925	0	2,99704	1,37944
6	1991,31	-48,3767	0	166.015,39	61,9517	0,552082	-34,748	0	2,9955	1,38555
6	1991,93	-46,5226	0	168.720,19	66,1813	0,610023	-36,4514	0	2,99348	1,39389
6	1992,67	-44,2993	0	172.128,46	70,9539	0,67377	-38,5718	0	2,99116	1,40446
6	1993,56	-41,6335	0	176.204,94	76,3315	0,743442	-41,0991	0	2,98868	1,41716
6	1994,63	-38,4372	0	180.930,35	82,3816	0,818893	-44,0367	0	2,9862	1,43236
6	1995,92	-34,6047	0	186.222,22	89,1597	0,900289	-47,359	0	2,98391	1,45005
6	1997,46	-30,0089	0	191.971,70	96,7279	0,987999	-50,9995	0	2,98205	1,47008
6	1999	-	0	197.92	105,202	1,0857	-54,1628	0	2,9810	1,4874



	31	24,4967		0,50		9			4	4
6	2001, 52	- 17,8828	0	203.63 0,10	114,579	1,2000 9	-56,2646	0	2,9814 4	1,4981 6
6	2004, 19	- 9,94249	0	208.56 1,91	124,971	1,3368 7	-56,9314	0	2,9838 2	1,4996 9
6	2007, 38	- 0,40186 6	0	211.95 1,09	137,621	1,4934 6	-55,6057	0	2,9891 8	1,4886 2
6	2011, 21	11,117	0	212.68 6,40	153,258	1,6597 5	-51,5052	0	3,0331 5	1,4610 5
6	2015, 82	25,2769	0	207.34 5,74	171,988	1,8724 9	-43,0737	0	3,1254 2	1,4114 1
6	2021, 34	42,8687	0	192.57 0,88	193,676	2,1831 1	-29,6738	0	3,2501 6	1,3429 5
6	2027, 11	62,0568	0	165.50 5,29	214,111	2,5961 6	-12,5471	0	3,4060 4	1,2690 9
6	2027, 11	62,0568	0	165.50 5,29	214,111	2,5961 6	-12,5471	0	3,4060 4	1,2690 9
6	2027, 96	64,9761	0	159.39 9,05	216,755	2,6802 8	-8,44429	0	3,4370 3	1,2525 1
6	2035, 91	93,4038	0	107.07 1,02	235,065	3,6537 6	9,58037	0	3,7118 8	1,1941 4
6	2037, 33	98,7046	0	99.631, 20	237,575	3,8604 9	11,049	0	3,7579 5	1,1908 2
6	2037, 33	98,7046	0	99.631, 20	237,575	3,8604 9	11,049	0	3,7579 4	1,1908 2
6	2045, 45	130,206	0	68.590, 46	248,724	5,1420 2	15,9	0	3,9957 1	1,1824 1
6	2056, 9	177,655	0	44.015, 85	258,458	7,2737 9	18,6613	0	4,2886 9	1,1802 7
6	2070, 63	238,77	0	28.468, 66	264,51	10,314 5	20,0458	0	4,5984 8	1,1804 4
6	2077, 43	270,472	0	23.904, 90	267,401	11,842 8	20,411	0	4,7262 9	1,1806 6
6	2087, 12	317,225	0	19.226, 55	271,521	14,043 7	20,7647	0	4,8884 2	1,1809 8
6	2106, 9	416,801	0	13.425, 28	280,158	18,544 3	22,1662	0	5,1642 7	1,1780 1



6	2107,419,406	0	13.317,280,381	18,658	22,1962	0	5,1705	1,1779	
	4		59	6			4	4	
7	2381,-	0	1,00	0,00177	0,1512	24,6211	0	3,1802	1,1739
	37 63,8025			245	74			3	1
7	2381,-	0	157.15	9,29951	0,0129	-31,4521	0	3,0035	1,3719
	47 63,5019		8,33		282			9	7
7	2381,-	0	157.20	13,1539	0,0258	-31,4675	0	3,0037	1,3720
	57 63,2015		0,51		072			9	3
7	2381,-	0	157.12	16,1133	0,0386	-31,4571	0	3,0039	1,3720
	67 62,9011		4,45		869			7	2
7	2381,-	0	157.02	18,6104	0,0515	-31,442	0	3,0041	1,3719
	77 62,6007		3,71		635			5	9
7	2381,-	0	156.91	20,8108	0,0644	-31,426	0	3,0043	1,3719
	87 62,3003		7,25		396			3	7
7	2381,-	0	156.80	22,8042	0,0773	-31,4096	0	3,0045	1,3719
	97 61,9999		7,60		013			1	4
7	2382,-	0	156.69	24,6385	0,0901	-31,3927	0	3,0046	1,3719
	07 61,6994		5,27		601			9	1
7	2382,-	0	156.58	26,3453	0,1030	-31,3756	0	3,0048	1,3718
	17 61,3989		1,83		23			7	8
7	2382,-	0	156.46	27,9493	0,1158	-31,3587	0	3,0050	1,3718
	27 61,0984		8,56		82			4	6
7	2382,-	0	156.35	29,4687	0,1287	-31,3416	0	3,0052	1,3718
	37 60,7979		4,69		3			2	3
7	2382,-	0	156.24	30,9163	0,1415	-31,3245	0	3,0054	1,3718
	47 60,4974		0,45		65				
7	2382,-	0	156.12	32,3004	0,1543	-31,3073	0	3,0055	1,3717
	57 60,1968		5,93		97			7	7
7	2382,-	0	156.01	33,6292	0,1672	-31,2901	0	3,0057	1,3717
	67 59,8963		0,81		23			5	5
7	2382,-	0	155.89	34,9075	0,1800	-31,2728	0	3,0059	1,3717
	77 59,5957		5,27		52			3	2
7	2382,-	0	155.77	36,1412	0,1928	-31,2555	0	3,0061	1,3716
	87 59,2951		9,72		81			1	9
7	2382,-	0	155.66	37,335	0,2057	-31,2382	0	3,0062	1,3716
	97 58,9945		4,28		06			9	6
7	2383,-	0	155.54	38,4928	0,2185	-31,221	0	3,0064	1,3716



	07	58,6938		9,08		28			7	3
7	2383,17	-58,3932	0	155.433,84	39,6181	0,231342	-31,2038	0	3,00664	1,37161
7	2383,27	-58,0925	0	155.318,48	40,7139	0,244147	-31,1865	0	3,00682	1,37158
7	2383,37	-57,7918	0	155.202,82	41,7824	0,256945	-31,1693	0	3,007	1,37155
7	2383,49	-57,431	0	155.064,08	43,0319	0,272288	-31,1485	0	3,00721	1,37152
7	2383,63	-56,9979	0	154.897,45	44,4871	0,290691	-31,1236	0	3,00747	1,37148
7	2383,8	-56,4782	0	154.697,15	46,1753	0,312763	-31,0937	0	3,00778	1,37143
7	2384,01	-55,8544	0	154.456,06	48,1258	0,339238	-31,0577	0	3,00815	1,37137
7	2384,26	-55,1059	0	154.231,11	50,3704	0,370791	-31,0501	0	3,00852	1,37147
7	2384,56	-54,2075	0	154.187,75	52,9427	0,407806	-31,1662	0	3,00873	1,37216
7	2384,92	-53,1295	0	154.661,51	55,8824	0,449905	-31,5968	0	3,0084	1,37433
7	2385,35	-51,8361	0	155.799,16	59,2309	0,497066	-32,4249	0	3,00747	1,37839
7	2385,86	-50,2846	0	157.629,77	63,0334	0,549533	-33,6652	0	3,00602	1,38444
7	2386,48	-48,4239	0	160.156,37	67,3379	0,607557	-35,3248	0	3,00416	1,39258
7	2387,23	-46,1926	0	163.378,20	72,192	0,671318	-37,4113	0	3,00198	1,40295
7	2388,12	-43,5171	0	167.289,11	77,6454	0,740945	-39,9306	0	2,99959	1,41569
7	2389,19	-40,309	0	171.824,48	83,7997	0,816102	-42,8614	0	2,99718	1,43087
7	2390,47	-36,4623	0	176.925,52	90,704	0,897065	-46,1895	0	2,99494	1,44861
7	2392,01	-31,8494	0	182.493,06	98,4358	0,983886	-49,8774	0	2,99309	1,46894
7	2393,-		0	188.31	107,065	1,0801	-53,2321	0	2,9919	1,4875



	86	26,3169		2,10		8			8	6
7	2396,08	-19,679	0	193.969,61	116,626	1,19218	-55,5597	0	2,99213	1,49983
7	2398,74	-11,7107	0	198.959,72	127,184	1,32628	-56,489	0	2,99409	1,50313
7	2401,94	-2,13854	0	202.679,81	139,876	1,47976	-55,549	0	2,99862	1,49447
7	2405,77	9,39945	0	204.252,06	155,637	1,64169	-52,0248	0	3,03463	1,47008
7	2410,37	23,5548	0	200.395,63	174,527	1,84392	-44,2776	0	3,12209	1,42331
7	2415,89	41,1145	0	187.554,71	196,56	2,14317	-31,4705	0	3,24167	1,35605
7	2422,52	63,1276	0	160.070,20	220,557	2,60077	-12,9727	0	3,41062	1,27436
7	2422,77	63,9829	0	158.617,29	221,376	2,62124	-12,1784	0	3,41807	1,27127
7	2422,77	63,9829	0	158.617,29	221,376	2,62124	-12,1784	0	3,41808	1,27128
7	2430,47	91,3073	0	109.853,21	240,818	3,49791	8,11806	0	3,67663	1,19983
7	2434,02	104,587	0	92.052,43	247,465	4,00207	11,8566	0	3,78916	1,19082
7	2434,02	104,587	0	92.052,43	247,465	4,00197	11,8566	0	3,78926	1,19082
7	2440,01	127,777	0	70.142,27	256,436	4,9226	15,3871	0	3,96045	1,18435
7	2451,45	174,805	0	44.927,94	268,015	6,94678	18,4342	0	4,24967	1,18107
7	2465,19	235,366	0	28.853,25	275,113	9,889	19,9459	0	4,56052	1,18083
7	2472,29	268,235	0	23.909,19	278	11,487	20,3579	0	4,69802	1,18098
7	2481,67	313,258	0	19.270,54	281,97	13,6111	20,7221	0	4,85844	1,18122
7	2501,46	412,28	0	13.362,15	290,567	18,0923	22,0484	0	5,13933	1,17851
7	2502,46	415,942	0	13.208,15	290,882	18,2533	22,0932	0	5,14843	1,17841



	17			82		2				1
8	2775,76	-65,4723	0	1,00	0,00177245	0,151274	24,6206	0	3,18023	1,17391
8	2775,86	-65,1709	0	150.413,52	9,43756	0,0128613	-30,6164	0	3,01215	1,37133
8	2775,96	-64,8697	0	150.468,09	13,3516	0,0256752	-30,6343	0	3,01232	1,3714
8	2776,06	-64,5684	0	150.380,08	16,357	0,0384787	-30,622	0	3,01252	1,37138
8	2776,16	-64,2671	0	150.280,02	18,8881	0,0512966	-30,6073	0	3,01269	1,37136
8	2776,26	-63,9659	0	150.184,93	21,1149	0,0641414	-30,5932	0	3,01284	1,37134
8	2776,36	-63,6646	0	150.091,13	23,1365	0,0769527	-30,5794	0	3,01299	1,37132
8	2776,46	-63,3633	0	149.989,50	24,9993	0,089751	-30,5641	0	3,01315	1,37129
8	2776,56	-63,062	0	149.883,38	26,7335	0,102547	-30,5482	0	3,01332	1,37127
8	2776,66	-62,7606	0	149.776,75	28,3627	0,115334	-30,5322	0	3,01348	1,37124
8	2776,76	-62,4593	0	149.670,02	29,9034	0,128125	-30,5162	0	3,01365	1,37121
8	2776,86	-62,1579	0	149.561,13	31,3738	0,140879	-30,4999	0	3,01382	1,37119
8	2776,96	-61,8565	0	149.451,19	32,7801	0,153628	-30,4835	0	3,01399	1,37116
8	2777,06	-61,5551	0	149.341,07	34,1278	0,16639	-30,467	0	3,01416	1,37113
8	2777,16	-61,2537	0	149.230,80	35,4254	0,179146	-30,4505	0	3,01433	1,37111
8	2777,26	-60,9522	0	149.120,80	36,6777	0,191904	-30,4341	0	3,01449	1,37108
8	2777,36	-60,6508	0	149.011,47	37,8878	0,204676	-30,4178	0	3,01466	1,37106
8	2777,46	-60,3493	0	148.902,58	39,0612	0,217449	-30,4015	0	3,01483	1,37103



8	2777,56	-60,0478	0	148.794,30	40,2009	0,230225	-30,3854	0	3,01499	1,371
8	2777,66	-59,7463	0	148.686,56	41,3098	0,243003	-30,3694	0	3,01515	1,37098
8	2777,76	-59,4448	0	148.579,25	42,3903	0,255778	-30,3534	0	3,01532	1,37095
8	2777,88	-59,0829	0	148.450,97	43,6545	0,271087	-30,3343	0	3,01551	1,37092
8	2778,02	-58,6487	0	148.296,73	45,1277	0,289443	-30,3113	0	3,01575	1,37089
8	2778,2	-58,1275	0	148.110,90	46,8426	0,311407	-30,2837	0	3,01603	1,37084
8	2778,4	-57,5021	0	147.885,10	48,8292	0,337712	-30,25	0	3,01637	1,37079
8	2778,65	-56,7515	0	147.641,35	51,1151	0,36917	-30,2265	0	3,01676	1,37086
8	2778,95	-55,8507	0	147.573,72	53,7276	0,406135	-30,3275	0	3,01698	1,37142
8	2779,31	-54,7697	0	148.026,24	56,7061	0,448154	-30,7535	0	3,01666	1,37357
8	2779,74	-53,4726	0	149.122,03	60,1001	0,4952	-31,5752	0	3,01576	1,37761
8	2780,25	-51,9169	0	150.879,72	63,9611	0,547503	-32,804	0	3,01438	1,38361
8	2780,87	-50,051	0	153.290,69	68,3267	0,605488	-34,4402	0	3,01262	1,39166
8	2781,62	-47,8134	0	156.378,04	73,2534	0,66913	-36,5063	0	3,01054	1,40194
8	2782,51	-45,1302	0	160.129,22	78,8041	0,738461	-39,0062	0	3,00826	1,41461
8	2783,58	-41,9128	0	164.515,34	85,0376	0,813574	-41,9362	0	3,00592	1,42982
8	2784,86	-38,0549	0	169.480,68	92,0274	0,894439	-45,2805	0	3,0037	1,44764
8	2786,4	-33,4287	0	174.920,77	99,865	0,980888	-49,0013	0	3,00182	1,46817
8	2788,25	-27,8801	0	180.629,13	108,627	1,07585	-52,5123	0	3,00063	1,48783





8	2790,47	-21,2232	0	186.234,19	118,346	1,18592	-55,0241	0	3,0006	1,50135
8	2793,13	-13,2328	0	191.255,95	129,057	1,31761	-56,1676	0	3,00224	1,50611
8	2796,33	-3,6355	0	195.233,09	141,756	1,46856	-55,5545	0	3,00613	1,49953
8	2800,16	7,92171	0	197.459,47	157,525	1,6276	-52,5229	0	3,03554	1,47791
8	2804,76	22,0722	0	194.775,84	176,56	1,82041	-45,3627	0	3,11865	1,43372
8	2810,28	39,6059	0	183.342,03	198,846	2,11008	-32,9729	0	3,23468	1,36716
8	2816,91	61,5511	0	159.172,99	223,471	2,54735	-15,4866	0	3,39446	1,28762
8	2818,1	65,627	0	152.826,13	227,492	2,64208	-11,733	0	3,42854	1,27229
8	2818,1	65,627	0	152.826,13	227,492	2,64208	-11,733	0	3,42853	1,27229
8	2824,86	89,5417	0	111.725,40	245,333	3,38073	6,78044	0	3,64954	1,20534
8	2830,23	109,602	0	86.114,91	255,793	4,11929	12,4826	0	3,81456	1,19082
8	2830,23	109,602	0	86.114,91	255,793	4,1194	12,4826	0	3,81446	1,19082
8	2834,4	125,739	0	71.374,50	262,483	4,7483	14,9254	0	3,93158	1,18607
8	2845,84	172,422	0	45.593,87	275,7	6,69372	18,2453	0	4,21852	1,18179
8	2859,58	232,526	0	29.167,66	284,12	9,53197	19,8627	0	4,52761	1,18117
8	2866,9	266,219	0	23.912,05	287,068	11,1747	20,3151	0	4,67267	1,18125
8	2876,07	309,93	0	19.290,43	290,925	13,2409	20,6889	0	4,8322	1,18142
8	2895,85	408,48	0	13.292,24	299,488	17,7064	21,9541	0	5,11763	1,17892
8	2896,69	412,821	0	13.108,48	299,861	17,8977	22,0101	0	5,12852	1,17879



9	3170,01	-66,9122	0	1,00	0,00177	0,1512	24,6203	0	3,1802	1,1739
					245	74			3	1
9	3170,11	-66,6101	0	145.01	9,54964	0,0128	-29,9557	0	3,0189	1,3708
				1,76		175			4	7
9	3170,21	-66,3082	0	145.03	13,5092	0,0255	-29,9705	0	3,0191	1,3709
				7,85		779			4	4
9	3170,31	-66,0063	0	144.97	16,5437	0,0383	-29,963	0	3,0192	1,3709
				6,35		676			8	3
9	3170,41	-65,7044	0	144.87	19,119	0,0511	-29,9486	0	3,0194	1,3709
				8,86		077			5	1
9	3170,51	-65,4024	0	144.77	21,38	0,0638	-29,9325	0	3,0196	1,3708
				1,42		673			3	9
9	3170,61	-65,1004	0	144.66	23,4291	0,0766	-29,9164	0	3,0198	1,3708
				3,12		023				6
9	3170,71	-64,7984	0	144.55	25,3114	0,0893	-29,9005	0	3,0199	1,3708
				6,29		521			7	3
9	3170,81	-64,4964	0	144.45	27,062	0,1021	-29,885	0	3,0201	1,3708
				2,20		15			2	1
9	3170,91	-64,1944	0	144.35	28,7056	0,1148	-29,87	0	3,0202	1,3707
				0,87		91			7	9
9	3171,01	-63,8924	0	144.25	30,2603	0,1276	-29,8554	0	3,0204	1,3707
				1,96		71			2	6
9	3171,11	-63,5903	0	144.15	31,7432	0,1404	-29,8409	0	3,0205	1,3707
				4,01		29			7	4
9	3171,21	-63,2883	0	144.05	33,1661	0,1531	-29,8263	0	3,0207	1,3707
				5,25		52			2	2
9	3171,31	-62,9862	0	143.95	34,5314	0,1658	-29,8113	0	3,0208	1,3707
				4,39		75			7	
9	3171,41	-62,6841	0	143.85	35,8458	0,1785	-29,796	0	3,0210	1,3706
				1,97		96			2	7
9	3171,51	-62,382	0	143.74	37,1145	0,1913	-29,7806	0	3,0211	1,3706
				8,48		14			8	5
9	3171,61	-62,0799	0	143.64	38,3422	0,2040	-29,7651	0	3,0213	1,3706
				4,65		28			4	2
9	3171,71	-61,7777	0	143.54	39,533	0,2167	-29,7496	0	3,0215	1,3706
				0,66		3				
9	3171,-	-	0	143.43	40,6893	0,2294	-29,7341	0	3,0216	1,3705



	81	61,4756		6,71		32		6	7	
9	3171,91	-61,1734	0	143.332,84	41,8142	0,242136	-29,7186	0	3,02181	1,37055
9	3172,01	-60,8712	0	143.228,94	42,9107	0,254834	-29,7032	0	3,02197	1,37052
9	3172,13	-60,5086	0	143.102,99	44,1945	0,270035	-29,6844	0	3,02216	1,37049
9	3172,28	-60,0733	0	142.951,28	45,6899	0,288267	-29,6619	0	3,02239	1,37046
9	3172,45	-59,5511	0	142.768,35	47,4259	0,310119	-29,6346	0	3,02267	1,37042
9	3172,66	-58,9242	0	142.549,31	49,4288	0,336367	-29,6021	0	3,023	1,37036
9	3172,91	-58,172	0	142.307,92	51,7335	0,367784	-29,5754	0	3,02337	1,37036
9	3173,21	-57,2692	0	142.303,90	54,3749	0,404404	-29,7101	0	3,02352	1,37113
9	3173,56	-56,1859	0	142.728,25	57,3909	0,446323	-30,1223	0	3,02324	1,37321
9	3173,99	-54,8861	0	143.733,92	60,8252	0,493487	-30,904	0	3,02243	1,37706
9	3174,51	-53,3269	0	145.389,59	64,7251	0,545979	-32,0977	0	3,02113	1,38291
9	3175,13	-51,4568	0	147.715,28	69,139	0,603978	-33,7203	0	3,01941	1,39091
9	3175,87	-49,2141	0	150.710,94	74,1238	0,667581	-35,7797	0	3,01738	1,40116
9	3176,76	-46,5248	0	154.363,10	79,7494	0,73672	-38,2794	0	3,01516	1,41385
9	3177,83	-43,3001	0	158.632,47	86,0687	0,811542	-41,2115	0	3,01288	1,42907
9	3179,12	-39,4332	0	163.455,38	93,1543	0,892031	-44,5545	0	3,01072	1,44693
9	3180,66	-34,796	0	168.728,65	101,103	0,978038	-48,2719	0	3,0089	1,46747
9	3182,51	-29,2343	0	174.327,83	109,975	1,07208	-51,9057	0	3,00767	1,48794
9	3184,-	-	0	179.87	119,826	1,1806	-54,5707	0	3,0075	1,5025



	73	22,5618		1,03		4			1	1
9	3187,39	-14,5534	0	184.898,84	130,672	1,31039	-55,8934	0	3,00891	1,5085
9	3190,58	-4,93551	0	189.055,63	143,372	1,45941	-55,5461	0	3,01233	1,50363
9	3194,42	6,64008	0	191.704,00	159,174	1,6167	-52,8968	0	3,03635	1,48425
9	3199,02	20,7934	0	189.915,79	178,318	1,80192	-46,23	0	3,11657	1,44235
9	3204,54	38,2984	0	179.942,63	200,863	2,08084	-34,3484	0	3,22823	1,37718
9	3211,16	60,1822	0	158.019,53	226,008	2,50356	-17,3013	0	3,38213	1,29765
9	3213,18	67,0699	0	148.084,23	232,932	2,65959	-11,2612	0	3,43742	1,27267
9	3213,18	67,0699	0	148.084,23	232,932	2,65959	-11,2612	0	3,43742	1,27267
9	3219,11	88,0221	0	113.185,40	249,146	3,28831	5,53315	0	3,62766	1,21061
9	3226,03	113,855	0	81.520,60	263,05	4,21755	12,9681	0	3,83464	1,19082
9	3226,03	113,855	0	81.520,60	263,05	4,21731	12,9681	0	3,83487	1,19082
9	3228,65	123,995	0	72.501,09	267,479	4,60689	14,5	0	3,90751	1,18772
9	3240,1	170,395	0	46.195,41	282,089	6,49357	18,0757	0	4,19324	1,18245
9	3253,84	230,128	0	29.513,77	291,872	9,23313	19,7864	0	4,49929	1,18147
9	3261,38	264,654	0	23.956,40	294,872	10,9207	20,2785	0	4,65169	1,18148
9	3270,32	307,106	0	19.359,69	298,621	12,9308	20,6591	0	4,80977	1,18159
9	3290,1	405,253	0	13.271,52	307,154	17,383	21,8692	0	5,09906	1,17929
9	3291,11	410,397	0	13.051,41	307,597	17,6102	21,9386	0	5,11214	1,17912



10	3564,17	-68,184	0	1,00	0,00177245	0,151274	24,6199	0	3,18023	1,17391
10	3564,27	-67,8814	0	140.403,36	9,64888	0,0127761	-29,398	0	3,02468	1,37051
10	3564,37	-67,5789	0	140.426,92	13,6492	0,0254971	-29,4131	0	3,02487	1,37059
10	3564,47	-67,2764	0	140.369,22	16,7148	0,0382481	-29,4063	0	3,025	1,37058
10	3564,57	-66,9739	0	140.285,56	19,3084	0,0509745	-29,3942	0	3,02515	1,37056
10	3564,67	-66,6714	0	140.192,70	21,593	0,0636959	-29,3804	0	3,02537	1,37054
10	3564,77	-66,3688	0	140.094,94	23,6633	0,0763925	-29,3659	0	3,02546	1,37052
10	3564,87	-66,0663	0	139.994,26	25,5675	0,0890908	-29,3508	0	3,02561	1,37051
10	3564,97	-65,7637	0	139.893,96	27,3379	0,101804	-29,3359	0	3,02577	1,37047
10	3565,07	-65,4611	0	139.795,14	28,9999	0,11453	-29,3212	0	3,02592	1,37045
10	3565,17	-65,1585	0	139.698,14	30,5717	0,127265	-29,3068	0	3,02606	1,37043
10	3565,27	-64,8559	0	139.602,61	32,0691	0,139987	-29,2927	0	3,0262	1,3704
10	3565,37	-64,5533	0	139.506,87	33,5042	0,152686	-29,2785	0	3,02635	1,37038
10	3565,47	-64,2506	0	139.409,59	34,8859	0,165356	-29,264	0	3,02649	1,37036
10	3565,57	-63,948	0	139.309,74	36,2196	0,178003	-29,2492	0	3,02664	1,37034
10	3565,67	-63,6453	0	139.207,26	37,5073	0,19065	-29,2339	0	3,0268	1,37031
10	3565,77	-63,3426	0	139.104,08	38,7505	0,203303	-29,2185	0	3,02696	1,37029
10	3565,87	-63,0399	0	139.000,97	39,953	0,215973	-29,2031	0	3,02711	1,37026
10	3565,97	-62,7372	0	138.898,33	41,1203	0,228646	-29,1878	0	3,02727	1,37024



10	3566,07	-62,4345	0	138.796,10	42,2567	0,241312	-29,1726	0	3,02742	1,37022
10	3566,17	-62,1317	0	138.693,53	43,3657	0,253958	-29,1574	0	3,02758	1,37019
10	3566,29	-61,7684	0	138.569,96	44,6636	0,269107	-29,139	0	3,02776	1,37016
10	3566,43	-61,3324	0	138.421,99	46,1743	0,287286	-29,117	0	3,02798	1,37013
10	3566,61	-60,8091	0	138.244,58	47,9267	0,30909	-29,0907	0	3,02825	1,37009
10	3566,81	-60,1811	0	138.032,51	49,9501	0,335261	-29,0592	0	3,02857	1,37004
10	3567,06	-59,4275	0	137.825,20	52,2772	0,366513	-29,049	0	3,0289	1,37011
10	3567,36	-58,5231	0	137.779,34	54,9435	0,403221	-29,1575	0	3,02907	1,37075
10	3567,72	-57,4378	0	138.159,31	57,9894	0,445198	-29,548	0	3,02883	1,37273
10	3568,15	-56,1355	0	139.116,49	61,4587	0,492374	-30,3135	0	3,02806	1,37651
10	3568,67	-54,5734	0	140.715,79	65,3987	0,544832	-31,4953	0	3,0268	1,38231
10	3569,28	-52,6997	0	142.972,09	69,8579	0,602778	-33,108	0	3,02514	1,39026
10	3570,03	-50,4528	0	145.885,44	74,8923	0,666324	-35,1598	0	3,02316	1,40056
10	3570,92	-47,7582	0	149.451,59	80,5506	0,735634	-37,6598	0	3,02095	1,4132
10	3571,99	-44,5272	0	153.637,48	86,9141	0,810497	-40,5997	0	3,01868	1,42848
10	3573,27	-40,6529	0	158.386,92	94,0679	0,890734	-43,9626	0	3,01651	1,44645
10	3574,81	-36,0069	0	163.600,84	102,099	0,976292	-47,7125	0	3,01466	1,46718
10	3576,66	-30,4346	0	169.114,71	111,084	1,06912	-51,4575	0	3,01341	1,48839
10	3578,88	-23,7496	0	174.604,33	121,064	1,17603	-54,2612	0	3,01316	1,50392



10	3581,54	-15,7262	0	179.626,91	132,057	1,30368	-55,7338	0	3,0144	1,51095
10	3584,74	-6,09134	0	183.920,03	144,79	1,4506	-55,6068	0	3,01746	1,50751
10	3588,57	5,49762	0	186.919,22	160,625	1,60587	-53,2727	0	3,03727	1,48997
10	3593,17	19,6472	0	185.853,93	179,863	1,78501	-47,0152	0	3,11421	1,451
10	3598,69	37,1351	0	176.810,29	202,557	2,05655	-35,4598	0	3,22297	1,38558
10	3600	41,3655	0	173.443,55	207,793	2,1319	-32,0043	0	3,25181	1,36787
10	3600	41,3655	0	173.443,55	207,793	2,1319	-32,0043	0	3,25181	1,36787
10	3605,32	59,2441	0	134.979,42	224,699	2,6861	-0,547351	0	3,4654	1,22932
10	3613,27	87,921	0	87.938,43	241,119	3,74617	12,2632	0	3,74312	1,1918
10	3613,82	90,0094	0	85.476,79	242,082	3,82817	12,7096	0	3,76064	1,19082
10	3613,82	90,0094	0	85.476,79	242,082	3,82814	12,7096	0	3,76067	1,19082
10	3622,81	124,993	0	56.299,87	254,315	5,27705	17,0392	0	4,02182	1,18334
10	3634,25	172,751	0	35.987,19	263,438	7,50728	19,2479	0	4,31799	1,18152
10	3647,11	230,202	0	23.982,84	268,842	10,4088	20,3168	0	4,60802	1,18145
10	3647,99	234,265	0	23.415,58	269,207	10,6092	20,3636	0	4,62546	1,18146
10	3664,48	313,083	0	15.929,30	276,195	14,3705	20,9514	0	4,91142	1,18175
10	3673,31	357,044	0	13.450,86	280,036	16,3973	21,6792	0	5,041	1,17997
10	3683,75	410,402	0	11.271,72	284,648	18,787	22,3731	0	5,17792	1,17825

## Scenario (User defined source) : 300mm-Q254,5 Disp F2

72438-1RiempFSRU-1R\Riempimento FSRU-ME4-Water\1R Manichette GNL  
riempimento FSRU\300mm-Q254,5 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	45,2	0	45,2
2	Continuous	3600	0	kg/s	45,2	0	45,2

### 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	2,0198 3	0,9786 92	-160,955	0	11,965 5	1,9109 5
1	0,01	0,11894 4	0	996.55 7,62	2,0624 8	0,9790 66	-160,277	0	11,832 4	1,9027 9
1	0,02	0,23661 7	0	993.17 7,79	2,1050 1	0,9795 82	-159,609	0	11,702 4	1,8948 7
1	0,03	0,35301 1	0	989.85 8,75	2,1474 1	0,9802 24	-158,952	0	11,575 3	1,8871 9
1	0,04	0,46815 8	0	986.59 8,28	2,1897 1	0,9809 82	-158,305	0	11,451 2	1,8797 3
1	0,05	0,58208 8	0	983.39 4,26	2,2318 9	0,9818 48	-157,669	0	11,329 7	1,8724 8
1	0,06	0,69482 3	0	980.24 5,02	2,2739 8	0,9828 11	-157,042	0	11,211	1,8654 2
1	0,07	0,80638	0	977.14 9,05	2,3159 6	0,9838 63	-156,425	0	11,094 9	1,8585 6
1	0,08	0,91682 2	0	974.10 3,38	2,3578 4	0,9850 02	-155,816	0	10,981 3	1,8518 9
1	0,09	1,02618	0	971.10 6,13	2,3996 4	0,9862 22	-155,217	0	10,87	1,8453 8
1	0,1	1,13444	0	968.15 7,35	2,4413 5	0,9875 11	-154,626	0	10,761 1	1,8390 4
1	0,11	1,24159	0	965.25 6,31	2,4829 7	0,9888 61	-154,044	0	10,654 6	1,8328 6
1	0,12	1,34774	0	962.39 8,97	2,5245 2	0,9902 78	-153,469	0	10,550 2	1,8268 4
1	0,13	1,45286	0	959.58 5,58	2,5659 8	0,9917 5	-152,903	0	10,448	1,8209 6
1	0,14	1,55694	0	956.81 6,18	2,6073 7	0,9932 68	-152,345	0	10,347 9	1,8152 2
1	0,15	1,65996	0	954.09 0,16	2,6486 8	0,9948 24	-151,794	0	10,249 8	1,8096 3
1	0,16	1,76211	0	951.40 1,85	2,6899 2	0,9964 35	-151,25	0	10,153 7	1,8041 5
1	0,17	1,8633	0	948.75 3,14	2,7311	0,9980 85	-150,714	0	10,059 4	1,7988 1
1	0,18	1,96352	0	946.14 3,85	2,7722	0,9997 66	-150,185	0	9,9670 4	1,7935 8



1	0,19	2,06277	0	943.57 3,27	2,8132 4	1,0014 7	-149,663	0	9,8765 3	1,7884 8
1	0,2	2,16122	0	941.03 6,31	2,8542 2	1,0032 2	-149,147	0	9,7876 7	1,7834 8
1	0,212	2,27818	0	938.03 9,37	2,9033 1	1,0053 6	-148,536	0	9,6833 1	1,7776 3
1	0,226 4	2,41681	0	934.51 0,23	2,9621 1	1,0079 6	-147,816	0	9,5612 7	1,7708
1	0,243 68	2,58089	0	930.36 5,44	3,0325 2	1,0111 3	-146,968	0	9,4191	1,7628 8
1	0,264 416	2,77457	0	925.51 7,14	3,1167 9	1,0150 2	-145,974	0	9,2544 3	1,7537 4
1	0,289 299	3,00249	0	919.87 1,46	3,2176 2	1,0197 6	-144,814	0	9,0649 2	1,7432 5
1	0,319 159	3,26984	0	913.32 9,94	3,3382 2	1,0255 3	-143,464	0	8,8484	1,7313 2
1	0,354 991	3,58233	0	905.79 1,74	3,4824 2	1,0325 6	-141,903	0	8,6029 9	1,7178 5
1	0,397 989	3,94612	0	897.15 7,41	3,6547 7	1,0410 8	-140,108	0	8,3273 9	1,7027 7
1	0,449 587	4,36774	0	887.33 6,37	3,8606 6	1,0513 9	-138,055	0	8,0210 5	1,6860 4
1	0,511 504	4,85399	0	876.25 0,14	4,1065 2	1,0637 7	-135,724	0	7,6844 1	1,6677
1	0,585 805	5,41162	0	863.84 3,83	4,3999 5	1,0785 4	-133,099	0	7,3191 6	1,6478 1
1	0,674 966	6,04737	0	850.08 8,68	4,7498 9	1,0960 2	-130,168	0	6,9281 2	1,6264 8
1	0,781 959	6,7671	0	834.99 7,04	5,1669 3	1,1164	-126,926	0	6,5160 5	1,6039 1
1	0,910 351	7,57671	0	818.60 4,69	5,6635 3	1,1399 1	-123,372	0	6,0884 2	1,5803 1
1	1,064 42	8,4805	0	801.00 1,84	6,2542 2	1,1665 6	-119,519	0	5,6522 7	1,5559 4
1	1,249 31	9,48318	0	782.29 1,80	6,9559 4	1,1965 1	-115,379	0	5,2141 7	1,5310 6
1	1,471 17	10,5898	0	762.59 3,55	7,7882 8	1,2301 6	-110,957	0	4,7801 9	1,5058



1	1,737 4	11,8051	0	742.04 9,53	8,7736 8	1,2681 2	-106,242	0	4,3559 1	1,4801 1
1	2,056 88	13,1308	0	720.86 5,95	9,9372 4	1,3102 8	-101,244	0	3,9482 9	1,4540 7
1	2,440 26	14,5706	0	699.22 4,77	11,306 8	1,3570 4	-95,9703	0	3,5616	1,4277 7
1	2,900 31	16,129	0	677.32 6,98	12,897 7	1,4088 2	-90,4261	0	3,1992 4	1,4012 3
1	3,452 37	17,8087	0	655.40 9,12	14,704 7	1,4653 9	-84,6174	0	2,8649 4	1,3744 7
1	4,114 84	19,6128	0	633.68 1,24	16,738 6	1,5269 3	-78,5394	0	2,5605	1,3474 2
1	4,909 81	21,546	0	612.32 8,76	19,005 4	1,5941 3	-72,1786	0	2,2863 3	1,3200 1
1	5,863 77	23,6255	0	591.42 9,60	21,509 9	1,6671 4	-65,5037	0	2,0438 9	1,2921 4
1	7,008 53	25,8689	0	571.11 1,72	24,243 9	1,7394	-58,6054	0	1,8403 1	1,2644 1
1	8,382 23	28,3051	0	551.42 5,92	27,187	1,8185 6	-51,6971	0	1,6649 4	1,2380 3
1	10,03 07	30,9515	0	532.56 8,21	30,263	1,9078 6	-44,8724	0	1,5165 9	1,2132 3
1	12,00 88	33,8294	0	514.65 2,58	33,234 8	2,0166 2	-38,2232	0	1,3955 1	1,1902 1
1	12,94 77	35,1182	0	506.42 0,88	34,198 3	2,0815 4	-35,3489	0	1,3531 4	1,1809 6
1	12,94 77	35,1182	0	506.42 0,88	34,198 3	2,0815 2	-35,3489	0	1,3531 5	1,1809 6
1	14,38 26	37,0249	0	481.96 7,49	34,341 8	2,3133 5	-29,3196	0	1,3063 3	1,1663 8
1	17,23 11	40,657	0	371.61 8,04	35,222 1	3,2805 8	-10,5025	0	1,2576 6	1,1428 1
1	20,64 93	44,9896	0	262.03 1,44	36,798 2	4,5913 6	2,57194	0	1,2869 4	1,1432 9
1	24,75 12	50,4132	0	186.19 6,37	38,782	5,9808 9	9,6009	0	1,3597 9	1,1507
1	24,75 12	50,4132	0	186.19 6,37	38,782	5,9808 9	9,6009	0	1,3597 9	1,1507



1	24,75 12	50,4132	0,02	186.19 5,99	38,782	5,9636 2	9,60633	0	1,3592	1,1506 7
1	29,67 34	57,0633	1,835 97	136.52 1,24	40,868 7	5,3097 6	13,4984	0	1,4689 3	1,1574 5
1	33,94 81	62,9578	5,182	100.96 4,30	42,468 2	4,172	15,962	0	1,7469 7	1,1630 4
1	33,94 81	62,9578	5,182	100.96 4,30	42,468 2	4,1706	15,962	0	1,7474 9	1,1630 4
1	35,58 01	65,587	6,533 79	87.472, 72	43,140 6	4,3589 6	16,8323	0	1,8741 7	1,1653 5
1	42,66 81	79,488	11,45 19	51.669, 18	45,910 1	5,7719	19,0305	0	2,2553 4	1,1715 5
1	51,17 37	99,4458	14,59 23	35.442, 12	48,449 1	7,3443 5	19,9792	0	2,4668 5	1,1743 4
1	52,21 46	102,011	14,76 49	34.386, 99	48,681 7	7,5048 1	20,0395	0	2,4784 7	1,1745 3
1	52,21 46	102,011	14,76 49	34.386, 99	48,681 7	7,5048 5	20,0395	0	2,4784 6	1,1745 3
1	61,38 05	124,776	14,27 68	28.181, 00	50,312 1	9,0797 4	20,4408	0	2,4639 2	1,1756 9
1	67,20 96	138,775	12,17 43	24.618, 94	51,553 4	11,099	21,0307	0	2,3953 2	1,1753 5
1	67,20 96	138,775	12,17 43	24.618, 94	51,553 4	11,099	21,0307	0	2,3953 2	1,1753 5
1	68,66 54	142,167	11,48 65	23.921, 22	54,509 2	11,142	21,1448	0	2,3601 4	1,1753 2
1	73,62 86	153,408	9,110 28	22.174, 04	61,921 8	11,947	21,4289	0	2,2800 2	1,1753 7
1	88,32 63	186,22	3,695 78	19.803, 97	72,890 4	15,459 1	21,8017	0	2,2802 1	1,1758
1	103,1 52	220,51	0,01	18.688, 99	75,517 8	18,8	21,8731	0	2,374	1,1766 5
1	103,1 52	220,51	0	18.689, 01	75,517 8	18,822 3	21,8707	0	2,3724 4	1,1766 6
1	105,9 64	227,186	0	18.507, 67	75,817	18,913 4	21,9108	0	2,3752 6	1,1765 9
1	127,1 28	277,777	0	17.237, 14	78,057 4	19,58	22,1869	0	2,3965 6	1,1761



1	152,526	339,097	0	15.904,12	80,7306	20,3338	22,4695	0	2,42235	1,17562
1	161,638	361,27	0	15.468,17	81,6866	20,5955	22,5602	0	2,43153	1,17547
2	3600	0	0	999.999,41	2,01983	0,978692	-160,955	0	11,9655	1,91095
2	3600,01	0,118944	0	996.557,62	2,06248	0,979066	-160,277	0	11,8324	1,90279
2	3600,02	0,236617	0	993.177,79	2,10501	0,979582	-159,609	0	11,7024	1,89487
2	3600,03	0,353011	0	989.858,75	2,14741	0,980224	-158,952	0	11,5753	1,88719
2	3600,04	0,468158	0	986.598,28	2,18971	0,980982	-158,305	0	11,4512	1,87973
2	3600,05	0,582088	0	983.394,26	2,23189	0,981848	-157,669	0	11,3297	1,87248
2	3600,06	0,694823	0	980.245,02	2,27398	0,982811	-157,042	0	11,2111	1,86542
2	3600,07	0,80638	0	977.149,05	2,31596	0,983863	-156,425	0	11,0949	1,85856
2	3600,08	0,916822	0	974.103,38	2,35784	0,985002	-155,816	0	10,9813	1,85189
2	3600,09	1,02618	0	971.106,13	2,39964	0,986222	-155,217	0	10,87	1,84538
2	3600,1	1,13444	0	968.157,35	2,44135	0,987511	-154,626	0	10,7611	1,83904
2	3600,11	1,24159	0	965.256,31	2,48297	0,988861	-154,044	0	10,6546	1,83286
2	3600,12	1,34774	0	962.398,97	2,52452	0,990278	-153,469	0	10,5502	1,82684
2	3600,13	1,45286	0	959.585,58	2,56598	0,99175	-152,903	0	10,448	1,82096
2	3600,14	1,55694	0	956.816,18	2,60737	0,993268	-152,345	0	10,3479	1,81522
2	3600,15	1,65996	0	954.090,16	2,64868	0,994824	-151,794	0	10,2498	1,80963
2	3600,	1,76211	0	951.40	2,6899	0,9964	-151,25	0	10,153	1,8041



	16			1,85	2	35			7	5
2	3600,17	1,8633	0	948.75 3,14	2,7311	0,9980 85	-150,714	0	10,059 4	1,7988 1
2	3600,18	1,96352	0	946.14 3,85	2,7722	0,9997 66	-150,185	0	9,9670 4	1,7935 8
2	3600,19	2,06277	0	943.57 3,27	2,8132 4	1,0014 7	-149,663	0	9,8765 3	1,7884 8
2	3600,2	2,16122	0	941.03 6,31	2,8542 2	1,0032 2	-149,147	0	9,7876 7	1,7834 8
2	3600,21	2,27818	0	938.03 9,37	2,9033 1	1,0053 6	-148,536	0	9,6833 1	1,7776 3
2	3600,23	2,41681	0	934.51 0,23	2,9621 1	1,0079 6	-147,816	0	9,5612 7	1,7708
2	3600,24	2,58089	0	930.36 5,44	3,0325 2	1,0111 3	-146,968	0	9,4191	1,7628 8
2	3600,26	2,77457	0	925.51 7,14	3,1167 9	1,0150 2	-145,974	0	9,2544 3	1,7537 4
2	3600,29	3,00249	0	919.87 1,46	3,2176 2	1,0197 6	-144,814	0	9,0649 2	1,7432 5
2	3600,32	3,26984	0	913.32 9,94	3,3382 2	1,0255 3	-143,464	0	8,8484	1,7313 2
2	3600,35	3,58233	0	905.79 1,74	3,4824 2	1,0325 6	-141,903	0	8,6029 9	1,7178 5
2	3600,4	3,94612	0	897.15 7,41	3,6547 7	1,0410 8	-140,108	0	8,3273 9	1,7027 7
2	3600,45	4,36774	0	887.33 6,37	3,8606 6	1,0513 9	-138,055	0	8,0210 5	1,6860 4
2	3600,51	4,85399	0	876.25 0,14	4,1065 2	1,0637 7	-135,724	0	7,6844 1	1,6677
2	3600,59	5,41162	0	863.84 3,83	4,3999 5	1,0785 4	-133,099	0	7,3191 6	1,6478 1
2	3600,67	6,04737	0	850.08 8,68	4,7498 9	1,0960 2	-130,168	0	6,9281 2	1,6264 8
2	3600,78	6,7671	0	834.99 7,04	5,1669 3	1,1164	-126,926	0	6,5160 5	1,6039 1
2	3600,91	7,57671	0	818.60 4,69	5,6635 3	1,1399 1	-123,372	0	6,0884 2	1,5803 1
2	3601,	8,4805	0	801.00	6,2542	1,1665	-119,519	0	5,6522	1,5559



	06			1,84	2	6			7	4
2	3601, 25	9,48318	0	782.29 1,80	6,9559 4	1,1965 1	-115,379	0	5,2141 7	1,5310 6
2	3601, 47	10,5898	0	762.59 3,55	7,7882 8	1,2301 6	-110,957	0	4,7801 9	1,5058
2	3601, 74	11,8051	0	742.04 9,53	8,7736 8	1,2681 2	-106,242	0	4,3559 1	1,4801 1
2	3602, 06	13,1308	0	720.86 5,95	9,9372 4	1,3102 8	-101,244	0	3,9482 9	1,4540 7
2	3602, 44	14,5706	0	699.22 4,77	11,306 8	1,3570 4	-95,9703	0	3,5616	1,4277 7
2	3602, 9	16,129	0	677.32 6,98	12,897 7	1,4088 2	-90,4261	0	3,1992 4	1,4012 3
2	3603, 45	17,8087	0	655.40 9,12	14,704 7	1,4653 9	-84,6174	0	2,8649 4	1,3744 7
2	3604, 11	19,6128	0	633.68 1,24	16,738 6	1,5269 3	-78,5394	0	2,5605	1,3474 2
2	3604, 91	21,546	0	612.32 8,76	19,005 4	1,5941 3	-72,1786	0	2,2863 3	1,3200 1
2	3605, 86	23,6255	0	591.42 9,60	21,509 9	1,6671 4	-65,5037	0	2,0438 9	1,2921 4
2	3607, 01	25,8689	0	571.11 1,72	24,243 9	1,7394	-58,6054	0	1,8403 1	1,2644 1
2	3608, 38	28,3051	0	551.42 5,92	27,187	1,8185 6	-51,6971	0	1,6649 4	1,2380 3
2	3610, 03	30,9515	0	532.56 8,21	30,263	1,9078 6	-44,8724	0	1,5165 9	1,2132 3
2	3612, 01	33,8294	0	514.65 2,58	33,234 8	2,0166 2	-38,2232	0	1,3955 1	1,1902 1
2	3612, 95	35,1182	0	506.42 0,88	34,198 3	2,0815 4	-35,3489	0	1,3531 4	1,1809 6
2	3612, 95	35,1182	0	506.42 0,88	34,198 3	2,0815 2	-35,3489	0	1,3531 5	1,1809 6
2	3614, 38	37,0249	0	481.96 7,49	34,341 8	2,3133 5	-29,3196	0	1,3063 3	1,1663 8
2	3617, 23	40,657	0	371.61 8,04	35,222 1	3,2805 8	-10,5025	0	1,2576 6	1,1428 1
2	3620,	44,9896	0	262.03	36,798	4,5913	2,57194	0	1,2869	1,1432



	65			1,44	2	6			4	9
2	3624,75	50,4132	0	186.19 6,37	38,782	5,9808 9	9,6009	0	1,3597 9	1,1507
2	3624,75	50,4132	0	186.19 6,37	38,782	5,9808 9	9,6009	0	1,3597 9	1,1507
2	3624,75	50,4132	0,02	186.19 5,99	38,782	5,9636 2	9,60633	0	1,3592	1,1506 7
2	3629,67	57,0633	1,835 97	136.52 1,24	40,868 7	5,3097 6	13,4984	0	1,4689 3	1,1574 5
2	3633,95	62,9578	5,182	100.96 4,30	42,468 2	4,172	15,962	0	1,7469 7	1,1630 4
2	3633,95	62,9578	5,182	100.96 4,30	42,468 2	4,1706	15,962	0	1,7474 9	1,1630 4
2	3635,58	65,587	6,533 79	87.472, 72	43,140 6	4,3589 6	16,8323	0	1,8741 7	1,1653 5
2	3642,67	79,488	11,45 19	51.669, 18	45,910 1	5,7719	19,0305	0	2,2553 4	1,1715 5
2	3651,17	99,4458	14,59 23	35.442, 12	48,449 1	7,3443 5	19,9792	0	2,4668 5	1,1743 4
2	3652,21	102,011	14,76 49	34.386, 99	48,681 7	7,5048 1	20,0395	0	2,4784 7	1,1745 3
2	3652,21	102,011	14,76 49	34.386, 99	48,681 7	7,5048 5	20,0395	0	2,4784 6	1,1745 3
2	3661,38	124,776	14,27 68	28.181, 00	50,312 1	9,0797 4	20,4408	0	2,4639 2	1,1756 9
2	3667,21	138,775	12,17 43	24.618, 94	51,553 4	11,099	21,0307	0	2,3953 2	1,1753 5
2	3667,21	138,775	12,17 43	24.618, 94	51,553 4	11,099	21,0307	0	2,3953 2	1,1753 5
2	3668,67	142,167	11,48 65	23.921, 22	54,509 2	11,142	21,1448	0	2,3601 4	1,1753 2
2	3673,63	153,408	9,110 28	22.174, 04	61,921 8	11,947	21,4289	0	2,2800 2	1,1753 7
2	3688,33	186,22	3,695 78	19.803, 97	72,890 4	15,459 1	21,8017	0	2,2802 1	1,1758
2	3703,15	220,51	0,01	18.688, 99	75,517 8	18,8	21,8731	0	2,374	1,1766 5
2	3703,	220,51	0	18.689,	75,517	18,822	21,8707	0	2,3724	1,1766





	15			01	8	3			4	6
2	3705,96	227,186	0	18.507,67	75,817	18,9134	21,9108	0	2,37526	1,17659
2	3727,13	277,777	0	17.237,14	78,0574	19,58	22,1869	0	2,39656	1,1761
2	3752,53	339,097	0	15.904,12	80,7306	20,3338	22,4695	0	2,42235	1,17562
2	3761,64	361,27	0	15.468,17	81,6866	20,5955	22,5602	0	2,43153	1,17547

### 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	45,2	0	45,2
2	Continuous	3600	0	kg/s	45,2	0	45,2

### 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	2,0197 3	0,9787 37	-160,955	0	11,965 5	1,9109 5
1	0,01	0,11931 9	0	997.30 5,26	2,0623 4	0,9720 51	-160,337	0	11,902 3	1,9029 7
1	0,02	0,23802 8	0	994.63 7,60	2,1046 5	0,9658 37	-159,723	0	11,839 7	1,8951 3



1	0,03	0,356117	0	991.995,77	2,14668	0,960065	-159,112	0	11,7778	1,88742
1	0,04	0,473592	0	989.378,79	2,18843	0,954702	-158,504	0	11,7166	1,87984
1	0,05	0,590459	0	986.785,85	2,22993	0,94972	-157,9	0	11,6559	1,87239
1	0,06	0,706725	0	984.216,25	2,27117	0,945093	-157,298	0	11,5959	1,86505
1	0,07	0,822392	0	981.669,57	2,31217	0,940797	-156,7	0	11,5364	1,85783
1	0,08	0,937478	0	979.144,40	2,35294	0,936807	-156,104	0	11,4775	1,85071
1	0,09	1,05199	0	976.640,47	2,3935	0,933105	-155,511	0	11,4193	1,84371
1	0,1	1,16591	0	974.157,72	2,43383	0,929675	-154,921	0	11,3616	1,83682
1	0,11	1,27926	0	971.695,88	2,47395	0,926502	-154,333	0	11,3044	1,83002
1	0,12	1,39205	0	969.253,52	2,51389	0,923561	-153,748	0	11,2479	1,82333
1	0,13	1,50428	0	966.831,15	2,55362	0,920846	-153,166	0	11,1919	1,81674
1	0,14	1,61594	0	964.428,57	2,59315	0,918347	-152,587	0	11,1364	1,81024
1	0,15	1,72705	0	962.045,24	2,63249	0,916048	-152,01	0	11,0815	1,80384
1	0,16	1,83762	0	959.680,05	2,67168	0,913931	-151,435	0	11,0271	1,79752
1	0,17	1,94766	0	957.333,46	2,71068	0,911992	-150,864	0	10,9733	1,79133
1	0,18	2,05714	0	955.005,29	2,74951	0,910223	-150,294	0	10,92	1,78516
1	0,19	2,1661	0	952.694,96	2,78818	0,908612	-149,728	0	10,8672	1,77911
1	0,2	2,27454	0	950.401,97	2,8267	0,907146	-149,163	0	10,815	1,77314
1	0,212	2,40398	0	947.673,47	2,87272	0,905575	-148,489	0	10,753	1,76608



1	0,226 4	2,55831	0	944.43 2,03	2,9276 4	0,9039 44	-147,685	0	10,679 5	1,7577 6
1	0,243 68	2,74213	0	940.58 8,31	2,9931 7	0,9023 18	-146,727	0	10,592 7	1,7479 9
1	0,264 416	2,96075	0	936.04 0,90	3,0712 6	0,9008 07	-145,587	0	10,490 6	1,7365 6
1	0,289 299	3,2203	0	930.67 5,36	3,1642 4	0,8995 63	-144,232	0	10,370 7	1,7232 4
1	0,319 159	3,52786	0	924.36 4,63	3,2748 1	0,8987 88	-142,626	0	10,230 8	1,7078 1
1	0,354 991	3,8915	0	916.96 9,76	3,4061 7	0,8987 45	-140,725	0	10,068 3	1,6900 4
1	0,397 989	4,32033	0	908.34 2,97	3,5620 7	0,8997 62	-138,484	0	9,8809 4	1,6697 3
1	0,449 587	4,82456	0	898.33 2,59	3,7468 4	0,9022 29	-135,851	0	9,6665	1,6467
1	0,511 504	5,41549	0	886.79 1,21	3,9654 7	0,9066 18	-132,769	0	9,4233 4	1,6208 4
1	0,585 805	6,10542	0	873.58 5,27	4,2236 2	0,9134 63	-129,182	0	9,1505 2	1,5920 8
1	0,674 966	6,90795	0	858.60 7,70	4,5276 5	0,9233 47	-125,034	0	8,8481	1,5605
1	0,781 959	7,83728	0	841.78 8,67	4,8846 4	0,9368 71	-120,27	0	8,5175 3	1,5262 2
1	0,910 351	8,90815	0	823.11 6,53	5,302	0,9546 65	-114,844	0	8,1617 9	1,4895 2
1	1,064 42	10,1362	0	802.65 0,10	5,7869 6	0,9773 88	-108,719	0	7,7854 1	1,4507 7
1	1,249 31	11,5382	0	780.53 0,60	6,3456 9	1,0057 3	-101,88	0	7,3944 4	1,4104 6
1	1,471 17	13,1328	0	756.98 1,22	6,9815 5	1,0405 1	-94,3318	0	6,9959 1	1,3691 5
1	1,737 4	14,938	0	732.30 5,05	7,6920 6	1,0829 4	-86,1031	0	6,5974 6	1,3274 3
1	2,056 88	16,9788	0	706.77 1,43	8,4649	1,1350 8	-77,247	0	6,2062 4	1,2859 6
1	2,440 26	19,2784	0	678.56 1,38	9,2676 5	1,2086 9	-67,4998	0	5,8188 3	1,2447 7



1	2,900 31	21,8618	0	644.43 8,14	10,018 2	1,3282 9	-56,505	0	5,4308 7	1,2044 9
1	3,452 37	24,7536	0	605.23 5,63	10,507	1,5233 4	-44,8157	0	5,0644 3	1,1679 4
1	4,114 84	28,0039	0	543.90 0,55	10,829 5	1,8506 5	-30,6489	0	4,7788 9	1,1365 5
1	4,909 81	31,7095	0	468.34 3,55	11,223	2,2967 6	-16,7271	0	4,5649 7	1,1172 9
1	5,863 77	35,987	0	392.00 9,92	11,774 5	2,8210 3	-5,81358	0	4,4186 5	1,1119 2
1	7,008 53	40,986	0	322.20 4,56	12,489 4	3,3986 9	1,62707	0	4,3327 7	1,1167 5
1	8,382 23	46,903	0	262.11 0,93	13,360 4	4,0259 8	7,02015	0	4,2948 6	1,1242 9
1	10,03 07	53,9747	0	211.72 5,86	14,391 9	4,7021 7	10,8345	0	4,2923 8	1,1328 6
1	12,00 88	62,4856	0	170.23 9,41	15,59	5,4307 7	13,5784	0	4,3160 9	1,1411 1
1	14,38 26	72,7796	0	136.52 5,86	16,960 6	6,2159 8	15,5826	0	4,3590 9	1,1484 8
1	17,23 11	85,2763	0	109.40 3,53	18,508	7,0620 9	17,0651	0	4,4159 3	1,1547 7
1	17,70 41	87,3672	0	105.83 9,97	18,755 1	7,1942 1	17,2519	0	4,4253 7	1,1556 2
1	17,70 41	87,3672	0	105.83 9,97	18,755 1	7,1942 1	17,2519	0	4,4253 7	1,1556 2
1	20,64 93	100,486	0	87.772, 28	20,218 9	7,9756 9	18,1728	0	4,4830 6	1,1600 1
1	24,75 12	119,03	0	70.504, 93	22,098 9	8,9680 3	19,0117	0	4,5581 6	1,1643 1
1	29,67 34	141,674	0	56.283, 32	24,254 7	10,081	19,6692	0	4,6417 2	1,1679 6
1	35,58 01	169,378	0	44.087, 17	26,834 7	11,420 5	20,203	0	4,7393 6	1,1712
1	42,66 81	203,397	0	33.525, 60	29,947 3	13,174 8	21,3018	0	4,8603 9	1,1717 7
1	51,17 37	245,313	0	25.068, 20	33,719 7	15,286 4	22,3903	0	4,9944	1,1715 2



1	52,65 17	252,71	0	23.921, 22	34,380 3	15,650 7	22,5319	0	5,0162 9	1,1715 1
1	61,38 05	297,078	0	18.460, 18	38,312 8	17,804 3	23,1827	0	5,1391 2	1,1715 6
1	73,62 86	360,967	0	13.441, 31	43,902	20,764 6	23,7472	0	5,2917 3	1,1717 4
1	79,44 04	391,902	0	11.733, 70	46,579 9	22,155 9	23,9308	0	5,3579 9	1,1718 3
2	3600	0	0	999.99 9,41	2,0197 3	0,9787 37	-160,955	0	11,965 5	1,9109 5
2	3600, 01	0,11931 9	0	997.30 5,26	2,0623 4	0,9720 51	-160,337	0	11,902 3	1,9029 7
2	3600, 02	0,23802 8	0	994.63 7,60	2,1046 5	0,9658 37	-159,723	0	11,839 7	1,8951 3
2	3600, 03	0,35611 7	0	991.99 5,77	2,1466 8	0,9600 65	-159,112	0	11,777 8	1,8874 2
2	3600, 04	0,47359 2	0	989.37 8,79	2,1884 3	0,9547 02	-158,504	0	11,716 6	1,8798 4
2	3600, 05	0,59045 9	0	986.78 5,85	2,2299 3	0,9497 2	-157,9	0	11,655 9	1,8723 9
2	3600, 06	0,70672 5	0	984.21 6,25	2,2711 7	0,9450 93	-157,298	0	11,595 9	1,8650 5
2	3600, 07	0,82239 2	0	981.66 9,57	2,3121 7	0,9407 97	-156,7	0	11,536 4	1,8578 3
2	3600, 08	0,93747 8	0	979.14 4,40	2,3529 4	0,9368 07	-156,104	0	11,477 5	1,8507 1
2	3600, 09	1,05199	0	976.64 0,47	2,3935	0,9331 05	-155,511	0	11,419 3	1,8437 1
2	3600, 1	1,16591	0	974.15 7,72	2,4338 3	0,9296 75	-154,921	0	11,361 6	1,8368 2
2	3600, 11	1,27926	0	971.69 5,88	2,4739 5	0,9265 02	-154,333	0	11,304 4	1,8300 2
2	3600, 12	1,39205	0	969.25 3,52	2,5138 9	0,9235 61	-153,748	0	11,247 9	1,8233 3
2	3600, 13	1,50428	0	966.83 1,15	2,5536 2	0,9208 46	-153,166	0	11,191 9	1,8167 4
2	3600,	1,61594	0	964.42	2,5931	0,9183	-152,587	0	11,136	1,8102



	14			8,57	5	47			4	4
2	3600,15	1,72705	0	962.045,24	2,63249	0,916048	-152,01	0	11,0815	1,80384
2	3600,16	1,83762	0	959.680,05	2,67168	0,913931	-151,435	0	11,0271	1,79752
2	3600,17	1,94766	0	957.333,46	2,71068	0,911992	-150,864	0	10,9733	1,79133
2	3600,18	2,05714	0	955.005,29	2,74951	0,910223	-150,294	0	10,92	1,78516
2	3600,19	2,1661	0	952.694,96	2,78818	0,908612	-149,728	0	10,8672	1,77911
2	3600,2	2,27454	0	950.401,97	2,8267	0,907146	-149,163	0	10,815	1,77314
2	3600,21	2,40398	0	947.673,47	2,87272	0,905575	-148,489	0	10,753	1,76608
2	3600,23	2,55831	0	944.432,03	2,92764	0,903944	-147,685	0	10,6795	1,75776
2	3600,24	2,74213	0	940.588,31	2,99317	0,902318	-146,727	0	10,5927	1,74799
2	3600,26	2,96075	0	936.040,90	3,07126	0,900807	-145,587	0	10,4906	1,73656
2	3600,29	3,2203	0	930.675,36	3,16424	0,899563	-144,232	0	10,3707	1,72324
2	3600,32	3,52786	0	924.364,63	3,27481	0,898788	-142,626	0	10,2308	1,70781
2	3600,35	3,8915	0	916.969,76	3,40617	0,898745	-140,725	0	10,0683	1,69004
2	3600,4	4,32033	0	908.342,97	3,56207	0,899762	-138,484	0	9,88094	1,66973
2	3600,45	4,82456	0	898.332,59	3,74684	0,902229	-135,851	0	9,6665	1,6467
2	3600,51	5,41549	0	886.791,21	3,96547	0,906618	-132,769	0	9,42334	1,62084
2	3600,59	6,10542	0	873.585,27	4,22362	0,913463	-129,182	0	9,15052	1,59208
2	3600,67	6,90795	0	858.607,70	4,52765	0,923347	-125,034	0	8,8481	1,5605
2	3600,7	7,83728	0	841.78	4,8846	0,9368	-120,27	0	8,5175	1,5262



	78			8,67	4	71			3	2
2	3600,91	8,90815	0	823.116,53	5,302	0,954665	-114,844	0	8,16179	1,48952
2	3601,06	10,1362	0	802.650,10	5,78696	0,977388	-108,719	0	7,78541	1,45077
2	3601,25	11,5382	0	780.530,60	6,34569	1,00573	-101,88	0	7,39444	1,41046
2	3601,47	13,1328	0	756.981,22	6,98155	1,04051	-94,3318	0	6,99591	1,36915
2	3601,74	14,938	0	732.305,05	7,69206	1,08294	-86,1031	0	6,59746	1,32743
2	3602,06	16,9788	0	706.771,43	8,4649	1,13508	-77,247	0	6,20624	1,28596
2	3602,44	19,2784	0	678.561,38	9,26765	1,20869	-67,4998	0	5,81883	1,24477
2	3602,9	21,8618	0	644.438,14	10,0182	1,32829	-56,505	0	5,43087	1,20449
2	3603,45	24,7536	0	605.235,63	10,507	1,52334	-44,8157	0	5,06443	1,16794
2	3604,11	28,0039	0	543.900,55	10,8295	1,85065	-30,6489	0	4,77889	1,13655
2	3604,91	31,7095	0	468.343,55	11,223	2,29676	-16,7271	0	4,56497	1,11729
2	3605,86	35,987	0	392.009,92	11,7745	2,82103	-5,81358	0	4,41865	1,11192
2	3607,01	40,986	0	322.204,56	12,4894	3,39869	1,62707	0	4,33277	1,11675
2	3608,38	46,903	0	262.110,93	13,3604	4,02598	7,02015	0	4,29486	1,12429
2	3610,03	53,9747	0	211.725,86	14,3919	4,70217	10,8345	0	4,29238	1,13286
2	3612,01	62,4856	0	170.239,41	15,59	5,43077	13,5784	0	4,31609	1,14111
2	3614,38	72,7796	0	136.525,86	16,9606	6,21598	15,5826	0	4,35909	1,14848
2	3617,23	85,2763	0	109.403,53	18,508	7,06209	17,0651	0	4,41593	1,15477
2	3617,	87,3672	0	105.83	18,755	7,1942	17,2519	0	4,4253	1,1556





	7			9,97	1	1			7	2
2	3617,7	87,3672	0	105.839,97	18,7551	7,19421	17,2519	0	4,42537	1,15562
2	3620,65	100,486	0	87.772,28	20,2189	7,97569	18,1728	0	4,48306	1,16001
2	3624,75	119,03	0	70.504,93	22,0989	8,96803	19,0117	0	4,55816	1,16431
2	3629,67	141,674	0	56.283,32	24,2547	10,081	19,6692	0	4,64172	1,16796
2	3635,58	169,378	0	44.087,17	26,8347	11,4205	20,203	0	4,73936	1,1712
2	3642,67	203,397	0	33.525,60	29,9473	13,1748	21,3018	0	4,86039	1,17177
2	3651,17	245,313	0	25.068,20	33,7197	15,2864	22,3903	0	4,9944	1,17152
2	3652,65	252,71	0	23.921,22	34,3803	15,6507	22,5319	0	5,01629	1,17151
2	3661,38	297,078	0	18.460,18	38,3128	17,8043	23,1827	0	5,13912	1,17156
2	3673,63	360,967	0	13.441,31	43,902	20,7646	23,7472	0	5,29173	1,17174
2	3679,44	391,902	0	11.733,70	46,5799	22,1559	23,9308	0	5,35799	1,17183

## Scenario (User defined source) : 300mm-Q254,5 Disp D5

72438-1RiempFSRU-1R\ Riempimento FSRU-ME4-Water\1R Manichette GNL  
riempimento FSRU\300mm-Q254,5 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	46	0	46
2	Continuous	3600	0	kg/s	46	0	46

### 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	2,0376 3	0,9873 12	-160,955	0	11,965 5	1,9109 5
1	0,01	0,11895 1	0	996.58 7,36	2,0804 7	0,9875 94	-160,282	0	11,833 5	1,9028 6
1	0,02	0,23664 1	0	993.23 6,22	2,1231 9	0,9880 23	-159,62	0	11,704 6	1,8950 1
1	0,03	0,35306 2	0	989.94 4,85	2,1657 9	0,9885 82	-158,969	0	11,578 6	1,8873 9
1	0,04	0,46824 7	0	986.71 1,06	2,2082 8	0,9892 6	-158,328	0	11,455 4	1,8799 8
1	0,05	0,58222 3	0	983.53 2,81	2,2506 5	0,9900 49	-157,696	0	11,334 9	1,8727 9
1	0,06	0,69501 4	0	980.40 8,41	2,2929 2	0,9909 39	-157,074	0	11,217 1	1,8657 9
1	0,07	0,80663 3	0	977.33 6,52	2,3350 8	0,9919 22	-156,462	0	11,101 8	1,8589 8
1	0,08	0,91715 2	0	974.31 3,89	2,3771 5	0,9929 95	-155,858	0	10,988 9	1,8523 4
1	0,09	1,02659	0	971.33 9,13	2,4191 3	0,9941 51	-155,263	0	10,878 5	1,8458 8
1	0,1	1,13493	0	968.41 2,13	2,4610 2	0,9953 79	-154,677	0	10,770 3	1,8395 8
1	0,11	1,24217	0	965.53 2,19	2,5028 2	0,9966 7	-154,099	0	10,664 5	1,8334 5
1	0,12	1,34842	0	962.69 4,92	2,5445 5	0,9980 32	-153,529	0	10,560 7	1,8274 6
1	0,13	1,45365	0	959.90 1,32	2,5861 9	0,9994 5	-152,967	0	10,459 1	1,8216 1
1	0,14	1,55783	0	957.15 1,13	2,6277 5	1,0009 2	-152,412	0	10,359 6	1,8159 1
1	0,15	1,66098	0	954.44 3,50	2,6692 3	1,0024 2	-151,865	0	10,262 1	1,8103 5
1	0,16	1,76326	0	951.77 2,76	2,7106 5	1,0039 9	-151,325	0	10,166 5	1,8049
1	0,17	1,86457	0	949.14 1,48	2,752	1,0055 9	-150,793	0	10,072 7	1,7995 9
1	0,18	1,96491	0	946.54 9,12	2,7932 8	1,0072 3	-150,267	0	9,9808 7	1,7943 9



1	0,19	2,06432	0	943.99 4,35	2,8344 9	1,0089	-149,748	0	9,8908	1,7893 1
1	0,2	2,16291	0	941.47 3,20	2,8756 4	1,0106 1	-149,235	0	9,8023 8	1,7843 4
1	0,212	2,28003	0	938.49 4,69	2,9249 4	1,0127	-148,629	0	9,6985 2	1,7785 1
1	0,226 4	2,41887	0	934.98 6,90	2,9839 8	1,0152 4	-147,913	0	9,5770 4	1,7717 2
1	0,243 68	2,58324	0	930.86 5,88	3,0546 7	1,0183 7	-147,07	0	9,4354 8	1,7638 3
1	0,264 416	2,77725	0	926.04 4,90	3,1392 8	1,0221 9	-146,082	0	9,2714 8	1,7547 2
1	0,289 299	3,0056	0	920.42 9,83	3,2405 3	1,0268 6	-144,928	0	9,0826 8	1,7442 7
1	0,319 159	3,27349	0	913.92 2,12	3,3616 2	1,0325 6	-143,586	0	8,8668 9	1,7323 8
1	0,354 991	3,58666	0	906.42 0,68	3,5063 9	1,0395 1	-142,033	0	8,6222 1	1,7189 5
1	0,397 989	3,9513	0	897.82 6,03	3,6794 3	1,0479 6	-140,246	0	8,3473 3	1,7039 1
1	0,449 587	4,37399	0	888.04 6,35	3,8861 4	1,0581 9	-138,202	0	8,0416 3	1,6872 3
1	0,511 504	4,86153	0	877.00 3,80	4,1329 8	1,0705	-135,882	0	7,7055 6	1,6689 2
1	0,585 805	5,42073	0	864.64 2,03	4,4275 5	1,0852	-133,267	0	7,3407 3	1,6490 5
1	0,674 966	6,0584	0	850.93 1,19	4,7788 7	1,1026 3	-130,346	0	6,9499 6	1,6277 5
1	0,781 959	6,7805	0	835.88 0,49	5,1975 4	1,1229 9	-127,114	0	6,5378 8	1,6051 9
1	0,910 351	7,59281	0	819.52 8,00	5,6961	1,1464 9	-123,571	0	6,1100 8	1,5815 9
1	1,064 42	8,49986	0	801.95 9,36	6,2891 3	1,1731 6	-119,727	0	5,6734 8	1,5572 2
1	1,249 31	9,50638	0	783.27 7,16	6,9936 5	1,2031 6	-115,595	0	5,2346 7	1,5323 2
1	1,471 17	10,6175	0	763.59 9,29	7,8293 7	1,2369	-111,182	0	4,7997 1	1,5070 4



1	1,737 4	11,8379	0	743.07 0,52	8,8188 8	1,2749 6	-106,477	0	4,3743 3	1,4813 5
1	2,056 88	13,1693	0	721.89 3,95	9,9874 2	1,3172 5	-101,487	0	3,9654 6	1,4552 9
1	2,440 26	14,6156	0	700.25 1,45	11,363	1,3642 1	-96,2205	0	3,5773 7	1,4289 8
1	2,900 31	16,1809	0	678.34 9,84	12,961 2	1,4161 2	-90,6845	0	3,2137 3	1,4024 3
1	3,452 37	17,8682	0	656.41 9,96	14,776 8	1,4728 6	-84,8839	0	2,8781	1,3756 5
1	4,114 84	19,6804	0	634.67 4,09	16,820 8	1,5345 5	-78,8145	0	2,5723 8	1,3486
1	4,909 81	21,6225	0	613.29 4,37	19,099 4	1,6019 6	-72,4622	0	2,2969 2	1,3211 9
1	5,863 77	23,7123	0	592.35 6,31	21,618 2	1,6740 7	-65,7951	0	2,0546 1	1,2933 1
1	7,008 53	25,9678	0	571.98 2,41	24,369 2	1,7463 2	-58,8911	0	1,8501 2	1,2655
1	8,382 23	28,4126	0	552.26 7,12	27,330 1	1,8241 6	-51,9776	0	1,6748 9	1,2390 4
1	10,03 07	31,0674	0	533.36 1,10	30,430 2	1,9122 8	-45,1425	0	1,5261 7	1,2141 5
1	12,00 88	33,9611	0	515.35 3,17	33,444 3	2,0204 9	-38,4674	0	1,4038 4	1,1910 1
1	13,02 88	35,3679	0	506.57 4,18	34,516 4	2,0895 3	-35,3725	0	1,3575	1,1809 8
1	13,02 88	35,3679	0	506.57 4,18	34,516 4	2,0895 7	-35,3725	0	1,3574 7	1,1809 8
1	14,38 26	37,1754	0	485.23 3,39	34,642 6	2,2979 1	-29,9551	0	1,3132 5	1,1674 9
1	17,23 11	40,8229	0	376.11 4,37	35,500 4	3,2522	-11,1379	0	1,2613 7	1,1431 7
1	20,64 93	45,1628	0	264.78 2,95	37,077 1	4,5752 6	2,28996	0	1,2883 4	1,1431 1
1	24,75 12	50,593	0	187.80 4,80	39,069 2	5,9748 2	9,46725	0	1,3614 5	1,1504 9
1	24,75 12	50,593	0	187.80 4,80	39,069 2	5,9748 2	9,46725	0	1,3614 5	1,1504 9



1	24,75 12	50,593	0,02	187.80 4,41	39,069 2	5,9574 4	9,47268	0	1,3608 8	1,1504 6
1	29,67 34	57,2484	1,852 26	137.49 3,55	41,165 2	5,2917 3	13,427	0	1,4718 5	1,1573
1	33,88 45	63,0571	5,171 26	102.01 1,50	42,744	4,1633 6	15,8915	0	1,7495 6	1,1628 6
1	33,88 45	63,0571	5,171 26	102.01 1,50	42,744	4,1621 4	15,8915	0	1,7500 2	1,1628 6
1	35,58 01	65,794	6,585 69	87.834, 30	43,444 3	4,3610 4	16,8078	0	1,8824 9	1,1652 8
1	42,66 81	79,7481	11,53 67	51.826, 87	46,223 1	5,7879 8	19,0208	0	2,2644 6	1,1715 1
1	51,17 37	99,7854	14,70 93	35.522, 10	48,774 3	7,3708 9	19,9748	0	2,4770 9	1,1743
1	52,29 23	102,554	14,89 67	34.387, 50	49,025 1	7,5442 2	20,0396	0	2,4895 8	1,1745 1
1	52,29 23	102,554	14,89 67	34.387, 50	49,025 1	7,5441 6	20,0396	0	2,4896 1	1,1745 1
1	61,38 05	125,228	14,42 87	28.255, 31	50,640 7	9,0988 1	20,4274	0	2,4756 2	1,1756 9
1	67,38 57	139,713	12,25 87	24.595, 19	51,920 1	11,177 9	21,0338	0	2,4043 1	1,1753 3
1	67,38 57	139,713	12,25 87	24.595, 19	51,920 1	11,177 9	21,0338	0	2,4043 1	1,1753 3
1	68,79 6	143,011	11,58 74	23.921, 22	54,822 1	11,214 8	21,144	0	2,3698 9	1,1753 1
1	73,62 86	154,002	9,253 36	22.210, 21	62,177 4	11,984 4	21,4221	0	2,2899 2	1,1753 6
1	88,32 63	186,921	3,774 04	19.818, 23	73,389	15,508 5	21,7982	0	2,2870 4	1,1757 9
1	103,3 58	221,796	0,01	18.689, 58	76,115 5	18,907	21,8709	0	2,3824	1,1766 6
1	103,3 58	221,796	0	18.689, 61	76,115 5	18,932 7	21,8685	0	2,3804	1,1766 7
1	105,9 64	228,003	0	18.522, 29	76,393 5	19,017 4	21,9055	0	2,383	1,1766
1	127,1 28	278,749	0	17.256, 45	78,640 8	19,684 8	22,1807	0	2,4042 5	1,1761 2



1	152,526	340,261	0	15.927,60	81,3216	20,4407	22,4625	0	2,42988	1,17563
1	162,023	363,41	0	15.476,14	82,3215	20,7126	22,5568	0	2,43937	1,17548
2	3600	0	0	999.999,41	2,03763	0,987312	-160,955	0	11,9655	1,91095
2	3600,01	0,118951	0	996.587,36	2,08047	0,987594	-160,282	0	11,8335	1,90286
2	3600,02	0,236641	0	993.236,22	2,12319	0,988023	-159,62	0	11,7046	1,89501
2	3600,03	0,353062	0	989.944,85	2,16579	0,988582	-158,969	0	11,5786	1,88739
2	3600,04	0,468247	0	986.711,06	2,20828	0,98926	-158,328	0	11,4554	1,87998
2	3600,05	0,582223	0	983.532,81	2,25065	0,990049	-157,696	0	11,3349	1,87279
2	3600,06	0,695014	0	980.408,41	2,29292	0,990939	-157,074	0	11,2171	1,86579
2	3600,07	0,806633	0	977.336,52	2,33508	0,991922	-156,462	0	11,1018	1,85898
2	3600,08	0,917152	0	974.313,89	2,37715	0,992995	-155,858	0	10,9889	1,85234
2	3600,09	1,02659	0	971.339,13	2,41913	0,994151	-155,263	0	10,8785	1,84588
2	3600,1	1,13493	0	968.412,13	2,46102	0,995379	-154,677	0	10,7703	1,83958
2	3600,11	1,24217	0	965.532,19	2,50282	0,99667	-154,099	0	10,6645	1,83345
2	3600,12	1,34842	0	962.694,92	2,54455	0,998032	-153,529	0	10,5607	1,82746
2	3600,13	1,45365	0	959.901,32	2,58619	0,99945	-152,967	0	10,4591	1,82161
2	3600,14	1,55783	0	957.151,13	2,62775	1,00092	-152,412	0	10,3596	1,81591
2	3600,15	1,66098	0	954.443,50	2,66923	1,00242	-151,865	0	10,2621	1,81035
2	3600,	1,76326	0	951.77	2,7106	1,0039	-151,325	0	10,166	1,8049



	16			2,76	5	9			5	
2	3600,17	1,86457	0	949.141,48	2,752	1,00559	-150,793	0	10,0727	1,79959
2	3600,18	1,96491	0	946.549,12	2,79328	1,00723	-150,267	0	9,98087	1,79439
2	3600,19	2,06432	0	943.994,35	2,83449	1,0089	-149,748	0	9,8908	1,78931
2	3600,2	2,16291	0	941.473,20	2,87564	1,01061	-149,235	0	9,80238	1,78434
2	3600,21	2,28003	0	938.494,69	2,92494	1,0127	-148,629	0	9,69852	1,77851
2	3600,23	2,41887	0	934.986,90	2,98398	1,01524	-147,913	0	9,57704	1,77172
2	3600,24	2,58324	0	930.865,88	3,05467	1,01837	-147,07	0	9,43548	1,76383
2	3600,26	2,77725	0	926.044,90	3,13928	1,02219	-146,082	0	9,27148	1,75472
2	3600,29	3,0056	0	920.429,83	3,24053	1,02686	-144,928	0	9,08268	1,74427
2	3600,32	3,27349	0	913.922,12	3,36162	1,03256	-143,586	0	8,86689	1,73238
2	3600,35	3,58666	0	906.420,68	3,50639	1,03951	-142,033	0	8,62221	1,71895
2	3600,4	3,9513	0	897.826,03	3,67943	1,04796	-140,246	0	8,34733	1,70391
2	3600,45	4,37399	0	888.046,35	3,88614	1,05819	-138,202	0	8,04163	1,68723
2	3600,51	4,86153	0	877.003,80	4,13298	1,0705	-135,882	0	7,70556	1,66892
2	3600,59	5,42073	0	864.642,03	4,42755	1,0852	-133,267	0	7,34073	1,64905
2	3600,67	6,0584	0	850.931,19	4,77887	1,10263	-130,346	0	6,94996	1,62775
2	3600,78	6,7805	0	835.880,49	5,19754	1,12299	-127,114	0	6,53788	1,60519
2	3600,91	7,59281	0	819.528,00	5,6961	1,14649	-123,571	0	6,11008	1,58159
2	3601,	8,49986	0	801.95	6,2891	1,1731	-119,727	0	5,6734	1,5572





	06			9,36	3	6			8	2
2	3601, 25	9,50638	0	783.27 7,16	6,9936 5	1,2031 6	-115,595	0	5,2346 7	1,5323 2
2	3601, 47	10,6175	0	763.59 9,29	7,8293 7	1,2369	-111,182	0	4,7997 1	1,5070 4
2	3601, 74	11,8379	0	743.07 0,52	8,8188 8	1,2749 6	-106,477	0	4,3743 3	1,4813 5
2	3602, 06	13,1693	0	721.89 3,95	9,9874 2	1,3172 5	-101,487	0	3,9654 6	1,4552 9
2	3602, 44	14,6156	0	700.25 1,45	11,363	1,3642 1	-96,2205	0	3,5773 7	1,4289 8
2	3602, 9	16,1809	0	678.34 9,84	12,961 2	1,4161 2	-90,6845	0	3,2137 3	1,4024 3
2	3603, 45	17,8682	0	656.41 9,96	14,776 8	1,4728 6	-84,8839	0	2,8781	1,3756 5
2	3604, 11	19,6804	0	634.67 4,09	16,820 8	1,5345 5	-78,8145	0	2,5723 8	1,3486
2	3604, 91	21,6225	0	613.29 4,37	19,099 4	1,6019 6	-72,4622	0	2,2969 2	1,3211 9
2	3605, 86	23,7123	0	592.35 6,31	21,618 2	1,6740 7	-65,7951	0	2,0546 1	1,2933 1
2	3607, 01	25,9678	0	571.98 2,41	24,369 2	1,7463 2	-58,8911	0	1,8501 2	1,2655
2	3608, 38	28,4126	0	552.26 7,12	27,330 1	1,8241 6	-51,9776	0	1,6748 9	1,2390 4
2	3610, 03	31,0674	0	533.36 1,10	30,430 2	1,9122 8	-45,1425	0	1,5261 7	1,2141 5
2	3612, 01	33,9611	0	515.35 3,17	33,444 3	2,0204 9	-38,4674	0	1,4038 4	1,1910 1
2	3613, 03	35,3679	0	506.57 4,18	34,516 4	2,0895 3	-35,3725	0	1,3575	1,1809 8
2	3613, 03	35,3679	0	506.57 4,18	34,516 4	2,0895 7	-35,3725	0	1,3574 7	1,1809 8
2	3614, 38	37,1754	0	485.23 3,39	34,642 6	2,2979 1	-29,9551	0	1,3132 5	1,1674 9
2	3617, 23	40,8229	0	376.11 4,37	35,500 4	3,2522	-11,1379	0	1,2613 7	1,1431 7
2	3620, 45	45,1628	0	264.78	37,077	4,5752	2,28996	0	1,2883	1,1431



	65			2,95	1	6			4	1
2	3624,75	50,593	0	187.804,80	39,0692	5,97482	9,46725	0	1,36145	1,15049
2	3624,75	50,593	0	187.804,80	39,0692	5,97482	9,46725	0	1,36145	1,15049
2	3624,75	50,593	0,02	187.804,41	39,0692	5,95744	9,47268	0	1,36088	1,15046
2	3629,67	57,2484	1,85226	137.493,55	41,1652	5,29173	13,427	0	1,47185	1,1573
2	3633,88	63,0571	5,17126	102.011,50	42,744	4,16336	15,8915	0	1,74956	1,16286
2	3633,88	63,0571	5,17126	102.011,50	42,744	4,16214	15,8915	0	1,75002	1,16286
2	3635,58	65,794	6,58569	87.834,30	43,4443	4,36104	16,8078	0	1,88249	1,16528
2	3642,67	79,7481	11,5367	51.826,87	46,2231	5,78798	19,0208	0	2,26446	1,17151
2	3651,17	99,7854	14,7093	35.522,10	48,7743	7,37089	19,9748	0	2,47709	1,1743
2	3652,29	102,554	14,8967	34.387,50	49,0251	7,54422	20,0396	0	2,48958	1,17451
2	3652,29	102,554	14,8967	34.387,50	49,0251	7,54416	20,0396	0	2,48961	1,17451
2	3661,38	125,228	14,4287	28.255,31	50,6407	9,09881	20,4274	0	2,47562	1,17569
2	3667,39	139,713	12,2587	24.595,19	51,9201	11,1779	21,0338	0	2,40431	1,17533
2	3667,39	139,713	12,2587	24.595,19	51,9201	11,1779	21,0338	0	2,40431	1,17533
2	3668,8	143,011	11,5874	23.921,22	54,8221	11,2148	21,144	0	2,36989	1,17531
2	3673,63	154,002	9,25336	22.210,21	62,1774	11,9844	21,4221	0	2,28992	1,17536
2	3688,33	186,921	3,77404	19.818,23	73,389	15,5085	21,7982	0	2,28704	1,17579
2	3703,36	221,796	0,01	18.689,58	76,1155	18,907	21,8709	0	2,3824	1,17666
2	3703,	221,796	0	18.689,	76,115	18,932	21,8685	0	2,3804	1,1766



	36			61	5	7				7
2	3705,96	228,003	0	18.522,29	76,3935	19,0174	21,9055	0	2,383	1,1766
2	3727,13	278,749	0	17.256,45	78,6408	19,6848	22,1807	0	2,40425	1,17612
2	3752,53	340,261	0	15.927,60	81,3216	20,4407	22,4625	0	2,42988	1,17563
2	3762,02	363,41	0	15.476,14	82,3215	20,7126	22,5568	0	2,43937	1,17548

### 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	46	0	46
2	Continuous	3600	0	kg/s	46	0	46

### 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	2,0375 3	0,9873 61	-160,955	0	11,965 5	1,9109 5
1	0,01	0,11932 2	0	997.32 8,66	2,0803 3	0,9805 81	-160,343	0	11,902 8	1,9030 4
1	0,02	0,23803 9	0	994.68 3,94	2,1228 3	0,9742 78	-159,734	0	11,840 8	1,8952 7



1	0,03	0,35614 1	0	992.06 4,61	2,1650 5	0,9684 18	-159,128	0	11,779 4	1,8876 2
1	0,04	0,47363 5	0	989.46 9,68	2,207	0,9629 71	-158,525	0	11,718 7	1,8801
1	0,05	0,59052 6	0	986.89 8,38	2,2486 9	0,9579 06	-157,926	0	11,658 5	1,8727 1
1	0,06	0,70682	0	984.35 0,00	2,2901 2	0,9531 99	-157,329	0	11,598 9	1,8654 3
1	0,07	0,82252	0	981.82 4,18	2,3313	0,9488 27	-156,736	0	11,54	1,8582 6
1	0,08	0,93764 5	0	979.31 9,39	2,3722 7	0,9447 62	-156,145	0	11,481 6	1,8512
1	0,09	1,05219	0	976.83 5,54	2,4130 1	0,9409 87	-155,557	0	11,423 7	1,8442 5
1	0,1	1,16617	0	974.37 2,52	2,4535 3	0,9374 86	-154,971	0	11,366 5	1,8374
1	0,11	1,27956	0	971.92 9,98	2,4938 3	0,9342 45	-154,389	0	11,309 8	1,8306 6
1	0,12	1,39241	0	969.50 6,63	2,5339 5	0,9312 38	-153,808	0	11,253 6	1,8240 2
1	0,13	1,5047	0	967.10 2,95	2,5738 6	0,9284 6	-153,231	0	11,198	1,8174 7
1	0,14	1,61642	0	964.71 8,74	2,6135 8	0,9258 99	-152,656	0	11,142 9	1,8110 1
1	0,15	1,7276	0	962.35 3,30	2,6531	0,9235 39	-152,084	0	11,088 4	1,8046 5
1	0,16	1,83824	0	960.00 5,79	2,6924 7	0,9213 63	-151,514	0	11,034 4	1,7983 7
1	0,17	1,94835	0	957.67 6,57	2,7316 5	0,9193 68	-150,946	0	10,981	1,7921 9
1	0,18	2,05791	0	955.36 5,48	2,7706 5	0,9175 45	-150,381	0	10,928	1,7860 9
1	0,19	2,16695	0	953.07 1,77	2,8095	0,9158 79	-149,819	0	10,875 6	1,7800 7
1	0,2	2,27548	0	950.79 5,22	2,8482	0,9143 61	-149,259	0	10,823 7	1,7741 4
1	0,212	2,40502	0	948.08 6,06	2,8944 3	0,9127 3	-148,59	0	10,762 1	1,7671 2



1	0,226 4	2,55948	0	944.86 7,26	2,9496 1	0,9110 3	-147,792	0	10,689 1	1,7588 5
1	0,243 68	2,74347	0	941.04 9,93	3,0154 3	0,9093 25	-146,841	0	10,602 8	1,7491 3
1	0,264 416	2,9623	0	936.53 3,12	3,0938 8	0,9077 24	-145,709	0	10,501 3	1,7377 6
1	0,289 299	3,22213	0	931.20 2,75	3,1872 8	0,9063 78	-144,363	0	10,382 1	1,7245 1
1	0,319 159	3,53004	0	924.93 2,16	3,2983 5	0,9054 91	-142,768	0	10,242 9	1,7091 5
1	0,354 991	3,89413	0	917.58 2,54	3,4303 2	0,9053 25	-140,881	0	10,081 3	1,6914 6
1	0,397 989	4,32353	0	909.00 6,28	3,5869 3	0,9062 1	-138,654	0	9,8947 3	1,6712 3
1	0,449 587	4,8285	0	899.05 1,35	3,7725 5	0,9085 38	-136,037	0	9,6812	1,6482 9
1	0,511 504	5,42037	0	887.56 9,85	3,9921 8	0,9127 83	-132,974	0	9,4389 6	1,6225
1	0,585 805	6,1115	0	874.42 7,37	4,2515 1	0,9194 9	-129,408	0	9,1670 1	1,5938 3
1	0,674 966	6,91555	0	859.51 4,93	4,5569 6	0,9292 38	-125,281	0	8,8653 8	1,5623 1
1	0,781 959	7,84676	0	842.76 0,66	4,9156 6	0,9426 36	-120,541	0	8,5354 7	1,5280 9
1	0,910 351	8,91994	0	824.15 0,26	5,3351	0,9603 2	-115,139	0	8,1802	1,4914 3
1	1,064 42	10,1508	0	803.73 9,56	5,8226 1	0,9829 51	-109,039	0	7,8040 6	1,4527
1	1,249 31	11,5563	0	781.66 6,74	6,3845 1	1,0112 2	-102,224	0	7,4130 4	1,4123 9
1	1,471 17	13,1549	0	758.15 2,03	7,0243 5	1,0459 5	-94,6989	0	7,0141 8	1,3710 5
1	1,737 4	14,9649	0	733.49 5,66	7,7399 4	1,0883 3	-86,4905	0	6,6150 8	1,3292 8
1	2,056 88	17,0113	0	708.05 7,04	8,5194	1,1400 8	-77,667	0	6,2234 7	1,2877 9
1	2,440 26	19,3177	0	680.20 2,90	9,3312 6	1,2121 3	-67,9911	0	5,8366 5	1,2465 9



1	2,900 31	21,9093	0	646.19 5,05	10,095 4	1,3307 3	-57,0116	0	5,4471 1	1,2061 3
1	3,452 37	24,8117	0	607.79 4,16	10,581	1,5237 3	-45,4306	0	5,0814 8	1,1694 5
1	4,114 84	28,0744	0	547.28 1,35	10,900 6	1,8484 1	-31,3141	0	4,7944 9	1,1376 5
1	4,909 81	31,7926	0	471.84 9,27	11,295 1	2,2938 5	-17,2842	0	4,5774 2	1,1177 7
1	5,863 77	36,0797	0	395.06 5,01	11,846 2	2,821	-6,19204	0	4,4285	1,1119
1	7,008 53	41,0909	0	324.84 7,17	12,559 2	3,4022 4	1,37161	0	4,3403 7	1,1164 8
1	8,382 23	47,023	0	264.33 6,33	13,429 6	4,0333 4	6,85426	0	4,3009 6	1,1238 8
1	10,03 07	54,1072	0	213.47 6,51	14,464 9	4,7142 8	10,7264	0	4,2976 4	1,1324 7
1	12,00 88	62,6277	0	171.57 8,51	15,669 6	5,4479 6	13,5037	0	4,321	1,1407 9
1	14,38 26	72,9364	0	137.56 4,52	17,046 3	6,2384 7	15,53	0	4,3638	1,1482 1
1	17,23 11	85,4476	0	110.21 1,57	18,602 2	7,0899 5	17,0275	0	4,4203 6	1,1545 6
1	17,82 28	88,0667	0	105.75 0,33	18,912 7	7,2558 5	17,2614	0	4,4321 3	1,1556 2
1	17,82 28	88,0667	0	105.75 0,33	18,912 7	7,2558 7	17,2614	0	4,4321 2	1,1556 2
1	20,64 93	100,673	0	88.397, 29	20,323 7	8,0090 3	18,145	0	4,4874 6	1,1598 4
1	24,75 12	119,235	0	71.009, 00	22,211 5	9,0064 8	18,9901	0	4,5625 5	1,1641 8
1	29,67 34	141,9	0	56.715, 64	24,371 5	10,122 5	19,6512	0	4,6459 2	1,1678 4
1	35,58 01	169,627	0	44.475, 50	26,954 2	11,460 4	20,1876	0	4,7430 4	1,1710 9
1	42,66 81	203,671	0	33.864, 34	30,067 5	13,210 6	21,2572	0	4,8633 9	1,1717 8
1	51,17 37	245,607	0	25.343, 11	33,841 5	15,323 1	22,3566	0	4,9969 9	1,1715 2



1	53,005	254,78	0	23.921,22	34,6605	15,7747	22,5326	0	5,024	1,17151
1	61,3805	297,462	0	18.639,35	38,4395	17,8714	23,1603	0	5,14294	1,17156
1	73,6286	361,469	0	13.563,81	44,0359	20,857	23,7313	0	5,29666	1,17174
1	79,937	395,107	0	11.714,77	46,9464	22,3662	23,9303	0	5,36804	1,17184
2	3600	0	0	999.999,41	2,03753	0,987361	-160,955	0	11,9655	1,91095
2	3600,01	0,119322	0	997.328,66	2,08033	0,980581	-160,343	0	11,9028	1,90304
2	3600,02	0,238039	0	994.683,94	2,12283	0,974278	-159,734	0	11,8408	1,89527
2	3600,03	0,356141	0	992.064,61	2,16505	0,968418	-159,128	0	11,7794	1,88762
2	3600,04	0,473635	0	989.469,68	2,207	0,962971	-158,525	0	11,7187	1,8801
2	3600,05	0,590526	0	986.898,38	2,24869	0,957906	-157,926	0	11,6585	1,87271
2	3600,06	0,70682	0	984.350,00	2,29012	0,953199	-157,329	0	11,5989	1,86543
2	3600,07	0,82252	0	981.824,18	2,3313	0,948827	-156,736	0	11,54	1,85826
2	3600,08	0,937645	0	979.319,39	2,37227	0,944762	-156,145	0	11,4816	1,8512
2	3600,09	1,05219	0	976.835,54	2,41301	0,940987	-155,557	0	11,4237	1,84425
2	3600,1	1,16617	0	974.372,52	2,45353	0,937486	-154,971	0	11,3665	1,8374
2	3600,11	1,27956	0	971.929,98	2,49383	0,934245	-154,389	0	11,3098	1,83066
2	3600,12	1,39241	0	969.506,63	2,53395	0,931238	-153,808	0	11,2536	1,82402
2	3600,13	1,5047	0	967.102,95	2,57386	0,92846	-153,231	0	11,198	1,81747
2	3600,	1,61642	0	964.71	2,6135	0,9258	-152,656	0	11,142	1,8110





	14			8,74	8	99			9	1
2	3600,15	1,7276	0	962.353,30	2,6531	0,923539	-152,084	0	11,0884	1,80465
2	3600,16	1,83824	0	960.005,79	2,69247	0,921363	-151,514	0	11,0344	1,79837
2	3600,17	1,94835	0	957.676,57	2,73165	0,919368	-150,946	0	10,981	1,79219
2	3600,18	2,05791	0	955.365,48	2,77065	0,917545	-150,381	0	10,928	1,78609
2	3600,19	2,16695	0	953.071,77	2,8095	0,915879	-149,819	0	10,8756	1,78007
2	3600,2	2,27548	0	950.795,22	2,84821	0,914361	-149,259	0	10,8237	1,77414
2	3600,21	2,40502	0	948.086,06	2,89443	0,91273	-148,59	0	10,7621	1,76712
2	3600,23	2,55948	0	944.867,26	2,94961	0,91103	-147,792	0	10,6891	1,75885
2	3600,24	2,74347	0	941.049,93	3,01543	0,909325	-146,841	0	10,6028	1,74913
2	3600,26	2,9623	0	936.533,12	3,09388	0,907724	-145,709	0	10,5013	1,73776
2	3600,29	3,22213	0	931.202,75	3,18728	0,906378	-144,363	0	10,3821	1,72451
2	3600,32	3,53004	0	924.932,16	3,29835	0,905491	-142,768	0	10,2429	1,70915
2	3600,35	3,89413	0	917.582,54	3,43032	0,905325	-140,881	0	10,0813	1,69146
2	3600,4	4,32353	0	909.006,28	3,58693	0,90621	-138,654	0	9,89473	1,67123
2	3600,45	4,8285	0	899.051,35	3,77255	0,908538	-136,037	0	9,6812	1,64829
2	3600,51	5,42037	0	887.569,85	3,99218	0,912783	-132,974	0	9,43896	1,62256
2	3600,59	6,1115	0	874.427,37	4,25151	0,91949	-129,408	0	9,16701	1,59383
2	3600,67	6,91555	0	859.514,93	4,55696	0,929238	-125,281	0	8,86538	1,56231
2	3600,7	7,84676	0	842.76	4,9156	0,9426	-120,541	0	8,5354	1,5280



	78			0,66	6	36			7	9
2	3600,91	8,91994	0	824.150,26	5,3351	0,96032	-115,139	0	8,1802	1,49143
2	3601,06	10,1508	0	803.739,56	5,82261	0,982951	-109,039	0	7,80406	1,45276
2	3601,25	11,5563	0	781.666,74	6,38451	1,01122	-102,224	0	7,41304	1,41239
2	3601,47	13,1549	0	758.152,03	7,02435	1,04595	-94,6989	0	7,01418	1,37105
2	3601,74	14,9649	0	733.495,66	7,73994	1,08833	-86,4905	0	6,61508	1,32928
2	3602,06	17,0113	0	708.057,04	8,5194	1,14008	-77,667	0	6,22347	1,28779
2	3602,44	19,3177	0	680.202,90	9,33126	1,21213	-67,9911	0	5,83665	1,24659
2	3602,9	21,9093	0	646.195,05	10,0954	1,33073	-57,0116	0	5,44711	1,20613
2	3603,45	24,8117	0	607.794,16	10,581	1,52373	-45,4306	0	5,08148	1,16945
2	3604,11	28,0744	0	547.281,35	10,9006	1,84841	-31,3141	0	4,79449	1,13765
2	3604,91	31,7926	0	471.849,27	11,2951	2,29385	-17,2842	0	4,57742	1,11777
2	3605,86	36,0797	0	395.065,01	11,8462	2,821	-6,19204	0	4,4285	1,1119
2	3607,01	41,0909	0	324.847,17	12,5592	3,40224	1,37161	0	4,34037	1,11648
2	3608,38	47,023	0	264.336,33	13,4296	4,03334	6,85426	0	4,30096	1,12388
2	3610,03	54,1072	0	213.476,51	14,4649	4,71428	10,7264	0	4,29764	1,13247
2	3612,01	62,6277	0	171.578,51	15,6696	5,44796	13,5037	0	4,321	1,14079
2	3614,38	72,9364	0	137.564,52	17,0463	6,23847	15,53	0	4,3638	1,14821
2	3617,23	85,4476	0	110.211,57	18,6022	7,08995	17,0275	0	4,42036	1,15456
2	3617,88	88,0667	0	105.75	18,912	7,2558	17,2614	0	4,4321	1,1556



	82			0,33	7	5			3	2
2	3617,82	88,0667	0	105.750,33	18,9127	7,25587	17,2614	0	4,43212	1,15562
2	3620,65	100,673	0	88.397,29	20,3237	8,00903	18,145	0	4,48746	1,15984
2	3624,75	119,235	0	71.009,00	22,2115	9,00648	18,9901	0	4,56255	1,16418
2	3629,67	141,9	0	56.715,64	24,3715	10,1225	19,6512	0	4,64592	1,16784
2	3635,58	169,627	0	44.475,50	26,9542	11,4604	20,1876	0	4,74304	1,17109
2	3642,67	203,671	0	33.864,34	30,0675	13,2106	21,2572	0	4,86339	1,17178
2	3651,17	245,607	0	25.343,11	33,8415	15,3231	22,3566	0	4,99699	1,17152
2	3653	254,78	0	23.921,22	34,6605	15,7747	22,5326	0	5,024	1,17151
2	3661,38	297,462	0	18.639,35	38,4395	17,8714	23,1603	0	5,14294	1,17156
2	3673,63	361,469	0	13.563,81	44,0359	20,857	23,7313	0	5,29666	1,17174
2	3679,94	395,107	0	11.714,77	46,9464	22,3662	23,9303	0	5,36804	1,17184

## Scenario (Leak) : 60mm

72438-1RiempFSRU-1R\Riempimento FSRU-ME4-Water\1R Manichette GNL  
riempimento FSRU\60mm

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			Final
					Release	Rainout	Pool vapour pick-up	
1	Continuous	0	0	kg/s	36,6419	36,4419	0,200052	
2	Continuous	0,22	-0,327613	kg/s	36,6419	36,4419	21,6796	
3	Continuous	240,846	-15,7101	kg/s	36,6419	36,4419	35,8555	
4	Continuous	475,755	-18,3413	kg/s	36,6419	36,4419	36,0964	
5	Continuous	709,719	-20,0255	kg/s	36,6419	36,4419	36,2336	
6	Continuous	943,205	-21,2821	kg/s	36,6419	36,4419	36,2952	
7	Continuous	1176,38	-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/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 <sup>3</sup> ]
1	0	0	0	999.89 1,66	0,1343 18	0,0651 573	-160,935	0	11,965 5	1,9107 1
1	0,01	0,11092 9	0	953.92 1,85	0,1447 94	0,0799 812	-151,798	0	10,323 4	1,8098 8
1	0,02	0,20820 9	0	917.24 3,69	0,1561 69	0,0923 503	-144,392	0	9,1862 8	1,7401 2
1	0,03	0,29560 4	0	886.87 9,60	0,1681 21	0,1027 24	-138,182	0	8,3402 6	1,6881 8
1	0,04	0,37548	0	861.09 1,30	0,1804 43	0,1115 11	-132,851	0	7,6791 3	1,6475 5
1	0,05	0,44943 2	0	838.76 4,55	0,1930 01	0,1190 57	-128,192	0	7,1430 1	1,6146 5
1	0,06	0,51852 8	0	819.15 6,17	0,2057 07	0,1256 09	-124,065	0	6,6968 8	1,5873

1	0,07	0,58355 3	0	801.73 3,36	0,2185	0,1313 55	-120,37	0	6,3180 7	1,5641
1	0,08	0,64507 1	0	786.10 8,39	0,2313 41	0,1364 3	-117,033	0	5,9917	1,5441 1
1	0,09	0,70352 1	0	771.98 6,28	0,2442 01	0,1409 37	-113,997	0	5,7071 2	1,5266 6
1	0,1	0,75928 5	0	759.12 8,21	0,2570 56	0,1449 76	-111,216	0	5,4560 7	1,5112 4
1	0,11	0,81268 7	0	747.34 3,02	0,2698 9	0,1486 3	-108,652	0	5,2323 2	1,4974 8
1	0,12	0,86398 6	0	736.47 9,28	0,2826 89	0,1519 64	-106,274	0	5,0311 5	1,4850 8
1	0,13	0,91338 1	0	726.41 7,75	0,2954 46	0,1550 25	-104,057	0	4,8490 8	1,4738
1	0,14	0,96103 9	0	717.06 0,58	0,3081 53	0,1578 52	-101,978	0	4,6833 9	1,4634 6
1	0,15	1,00711	0	708.32 5,14	0,3208 07	0,1604 74	-100,022	0	4,5318 2	1,4539 2
1	0,16	1,05175	0	700.13 4,55	0,3334 01	0,1629 26	-98,1742	0	4,3923 5	1,4450 7
1	0,17	1,09504	0	692.43 9,66	0,3459 35	0,1652 19	-96,4253	0	4,2636 8	1,4368 4
1	0,18	1,13714	0	685.17 4,46	0,3584 05	0,1673 93	-94,7622	0	4,1441 2	1,4291 3
1	0,19	1,17813	0	678.29 7,67	0,3708 09	0,1694 63	-93,1766	0	4,0326 3	1,4218 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	4,07221	0	420.47 2,08	1,4112 5	0,3465 69	-21,0737	0	1,1686 4	1,1631 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 01	28,0946	0	52.023, 02	4,1390 2	2,2469 2	20,1887	0	0,7284 11	1,1722 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	- 0,30047 9	0	945.17 5,99	0,7158 63	0,1663 66	-150,787	0	0,0738 189	1,8041
2	0,52	- 0,29351 6	0	955.62 9,19	0,9568 98	0,1948 33	-152,766	0	0,0666 085	1,8234
2	0,62	- 0,28699 3	0	960.67 9,53	1,1888 4	0,2116 97	-153,695	0	0,0643 714	1,8325 7
2	0,72	- 0,28056 8	0	963.21 4,53	1,4116 3	0,2238 35	-153,529	0	0,0643 952	1,8269 5
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	0,83993	0	937.44	6,3155	0,3101	-143,234	0	0,7427	1,7025
	89	5		7,40	2	29			02	8
2	4,715	1,17837	0	946.11	7,5678	0,4105	-143,983	0	0,5898	1,7034
	87			9,94	9	45			65	7
2	5,335	1,51264	0	951.19	9,2113	0,4874	-142,578	0	0,4991	1,6788
	04			6,76	9	43			5	3
2	6,078	1,8593	0	952.63	11,260	0,5505	-139,027	0	0,4396	1,6309
	05			0,47	9	7			81	8
2	6,969	2,23175	0	950.62	13,734	0,6063	-133,428	0	0,3998	1,5652
	66			2,10	3	44			94	3
2	8,039	2,64403	0	945.84	16,639	0,6578	-126,1	0	0,3742	1,4894
	59			1,15	9	3			28	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	36,94 8	19,8635	0,415 709	153.61 6,76	37,478 6	4,4285 2	12,2713	0	1,0599 3	1,1553 1
2	36,94 8	19,8635	0,415 709	153.61 6,76	37,478 6	4,4285	12,2713	0	1,0599 3	1,1553 1
2	41,36 84	24,2582	2,848 91	114.60 3,05	38,626 4	2,8072 2	15,1004	0	1,2796 3	1,1610 8
2	42,15 33	25,1288	3,407 25	107.04 7,84	38,800 9	2,7433 4	15,6018	0	1,3563 7	1,1623 6
2	42,15 33	25,1288	3,407 25	107.04 7,84	38,800 9	2,7415 2	15,6018	0	1,3572 6	1,1623 6
2	49,31 81	35,9574	8,451 92	66.705, 76	39,847 8	3,0001 1	18,2101	0	1,9390 2	1,1693 2

2	58,85 77	56,2167	14,12 13	50.225, 05	40,851 7	3,0552	19,1498	0	2,4306	1,1713 7
2	70,30 53	85,5603	17,83 21	34.969, 76	42,273 9	3,7011 1	19,961	0	2,6861 1	1,1735 8
2	84,04 23	121,941	15,65 62	25.525, 53	43,996	4,9171 3	20,4189	0	2,5513 4	1,1757 6
2	95,92 33	147,896	7,325 28	21.988, 17	45,203 2	7,4069 7	20,8311	0	2,0254 2	1,1768 5
2	95,92 33	147,896	7,325 28	21.988, 17	45,203 2	7,4069 7	20,8311	0	2,0254 2	1,1768 5
2	100,4 49	156,166	3,561 81	21.270, 06	45,584 5	10,192 4	20,9142	0	2,0396 7	1,1773 8
2	100,5 27	156,316	3,508 94	21.258, 91	45,591 5	10,237 7	20,9155	0	2,0414 1	1,1773 8
2	107,6 26	170,882	0,01	20.319, 37	46,259 6	13,28	20,944	0	2,1690 5	1,1782 3
2	107,6 26	170,882	0	20.319, 39	46,259 6	13,345 2	20,9417	0	2,1600 9	1,1782 5
2	120,3 08	198,283	0	18.826, 36	47,504 4	13,768 7	21,2523	0	2,1612 4	1,1776 2
2	144,0 46	249,659	0	16.467, 67	49,807 6	14,509 7	21,7442	0	2,1677 7	1,1766 7
2	172,5 31	311,613	0	14.213, 26	52,538 6	15,332 4	22,2175	0	2,1810 7	1,1758
2	206,7 13	386,547	0	12.813, 77	55,784 1	16,246 8	22,663	0	2,2022 9	1,1750 3
2	211,4 86	397,069	0	12.659, 53	56,235 4	16,369 3	22,7168	0	2,2055 8	1,1749 4
3	240,8 46	- 15,7101	0	1,00	0,0017 7245	0,7824 28	24,6246	0	0,6148 73	1,1739
3	240,9 46	- 15,6613	0	529.69 5,96	1,8896 1	0,0075 8703	-79,4149	0	0,4588 17	1,4309
3	241,0 46	- 15,6156	0	557.93 8,97	2,6429 2	0,0135 632	-85,0334	0	0,4561 59	1,4522 5
3	241,1 46	-15,57	0	565.30 4,19	3,2340 4	0,0196 105	-86,3534	0	0,4560 71	1,4569
3	241,2	-	0	568.16	3,7399	0,0256	-86,833	0	0,4563	1,4584

	46	15,5244		3,99	7	633			36	6
3	241,3	-	0	571.64	4,1912	0,0315	-87,5586	0	0,4559	1,4615
	46	15,4788		4,94	2	358			37	1
3	241,4	-	0	577.08	4,6040	0,0370	-88,7858	0	0,4547	1,4670
	46	15,4333		7,36	5	687			4	7
3	241,5	-	0	583.32	4,9878	0,0422	-90,2073	0	0,4532	1,4736
	46	15,3879		0,29	8	958			79	7
3	241,6	-	0	589.67	5,3493	0,0472	-91,6541	0	0,4518	1,4805
	46	15,3426		5,16	5	532			17	
3	241,7	-	0	595.90	5,6920	0,0519	-93,0665	0	0,4504	1,4872
	46	15,2975		2,87	7	941			25	6
3	241,8	-	0	601.89	6,0181	0,0565	-94,4204	0	0,4491	1,4938
	46	15,2525		9,07	5	625			22	2
3	241,9	-	0	607.61	6,3305	0,0609	-95,705	0	0,4479	1,5001
	46	15,2076		7,06	3	741			18	3
3	242,0	-	0	613.04	6,6317	0,0652	-96,9186	0	0,4468	1,5061
	46	15,1629		6,41	5	392			13	5
3	242,1	-	0	618.19	6,9244	0,0693	-98,0628	0	0,4458	1,5119
	46	15,1183		0,25	5	595			07	
3	242,2	-	0	623.05	7,2093	0,0733	-99,1402	0	0,4448	1,5173
	46	15,0737		5,36	9	524			96	6
3	242,3	-	0	627.65	7,4869	0,0772	-100,154	0	0,4440	1,5225
	46	15,0293		3,63	2	357			71	6
3	242,4	-	0	632.00	7,7576	0,0810	-101,11	0	0,4433	1,5275
	46	14,9849		4,16	6	212			24	
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	-	0	765.74	32,452	0,3968	-95,1624	0	0,4601	1,3721
	58	9,18798		6,21	2	59			61	7
3	258,2	-7,9491	0	751.98	36,930	0,4651	-86,3427	0	0,4705	1,3179
	2			2,87	6	07			24	8
3	261,4	-	0	727.09	41,916	0,5574	-76,4321	0	0,4824	1,2699
	15	6,42657		0,02	6	86			63	1
3	265,2	-	0	688.14	47,240	0,6893	-65,4775	0	0,4956	1,2301
	49	4,55095		8,39	9	86			19	5
3	269,8	-	0	639.09	52,561	0,8783	-54,4123	0	0,5084	1,2005
	49	2,24004		0,28	8	76			87	
3	274,2	1,77747	0	587.11	56,265	1,1118	-44,6068	0	0,5196	1,1819



	07	E-12		2,63	3	6			78	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 3	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 57	165,989	0	59.164, 84	66,564 3	8,2870 9	18,7599	0	1,4218 1	1,1688 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	642,245	0	20.519,	87,027	13,437	22,9303	0	1,8332	1,1699





	92			59	7	2			2	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	477,055	-17,7029	0	529.924,47	7,63496	0,0649875	-83,4855	0	0,484829	1,46183
4	477,155	-17,6544	0	534.589,74	7,94489	0,0687481	-84,6117	0	0,484049	1,46706
4	477,255	-17,606	0	539.082,34	8,2461	0,072397	-85,6912	0	0,483326	1,47212
4	477,355	-17,5577	0	543.404,65	8,5394	0,075946	-86,7253	0	0,482657	1,47701
4	477,455	-17,5095	0	547.558,07	8,82572	0,0794017	-87,7149	0	0,482037	1,48173
4	477,555	-17,4613	0	551.548,37	9,10575	0,0827713	-88,6619	0	0,481464	1,48629
4	477,655	-17,4132	0	555.379,66	9,38014	0,0860602	-89,5677	0	0,480936	1,49068
4	477,755	-17,3651	0	559.058,24	9,64957	0,0892714	-90,4342	0	0,48045	1,49492
4	477,875	-17,3075	0	563.280,32	9,9668	0,0930318	-91,4251	0	0,479918	1,4998
4	478,019	-17,2385	0	568.085,11	10,3398	0,0974169	-92,5481	0	0,479349	1,50539
4	478,192	-17,1557	0	573.504,06	10,7767	0,102522	-93,809	0	0,478753	1,51174
4	478,399	-17,0565	0	579.552,09	11,2877	0,108442	-95,2095	0	0,47815	1,51888
4	478,648	-16,9376	0	586.225,47	11,8843	0,115277	-96,7468	0	0,477564	1,52682
4	478,947	-16,795	0	593.473,32	12,5814	0,123114	-98,4082	0	0,477037	1,53555
4	479,305	-16,6242	0	601.793,46	13,3931	0,131917	-100,313	0	0,476457	1,54577
4	479,735	-16,4195	0	611.842,86	14,3372	0,141517	-102,614	0	0,47569	1,55845
4	480,251	-16,1742	0	623.695,79	15,4352	0,151843	-105,316	0	0,4748	1,57378
4	480,87	-15,8805	0	637.236,15	16,7102	0,163074	-108,187	0	0,473911	1,58986
4	481,613	-15,5287	0	651.731,03	18,1826	0,176284	-110,334	0	0,473314	1,5986



4	482,505	-15,1067	0	666.373,01	19,8763	0,192345	-111,41	0	0,473267	1,59678
4	483,575	-14,6001	0	680.346,50	21,821	0,212231	-111,196	0	0,47397	1,58274
4	484,858	-13,9906	0	692.855,01	24,0622	0,236954	-109,577	0	0,475565	1,55645
4	486,399	-13,2559	0	702.960,12	26,7317	0,267055	-106,437	0	0,47824	1,51867
4	488,248	-12,3682	0	709.333,70	29,978	0,303549	-101,578	0	0,482301	1,47049
4	490,467	-11,2919	0	710.269,32	33,886	0,348768	-94,9268	0	0,487996	1,41501
4	493,129	-9,98302	0	703.659,98	38,4781	0,406721	-86,6019	0	0,495329	1,35717
4	496,324	-8,38635	0	686.814,25	43,7145	0,484048	-76,8683	0	0,504128	1,30253
4	500,158	-6,43393	0	655.817,68	49,4766	0,59342	-65,7945	0	0,51428	1,25487
4	504,758	-4,04254	0	610.291,00	55,4891	0,753681	-53,9263	0	0,524996	1,21724
4	510,279	-1,11194	0	554.649,81	61,1894	0,99212	-42,1087	0	0,535321	1,19002
4	512,345	2,47578E-14	0	530.692,48	62,7743	1,10746	-37,6999	0	0,539258	1,18245
4	512,345	2,47578E-14	0	536.231,05	62,0828	1,0162	-39,2153	0	0,590931	1,18656
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	559,5 77	43,2188	0	106.56 6,18	67,052 5	5,9061 6	14,5531	0	1,1808 1	1,1683 7
4	576,0 62	63,0747	0	94.551, 50	68,030 7	6,3327 2	15,8203	0	1,2284 7	1,1682 4
4	595,8 43	87,9402	0	82.119, 16	69,231 5	6,8720 5	16,9863	0	1,2855 2	1,1687 1
4	619,5 81	119,135	0	71.725, 62	70,708 3	7,4109 7	17,9151	0	1,3397 5	1,1692 6
4	648,0 66	158,08	0	62.543, 36	72,516 2	7,9781 5	18,6924	0	1,3942 1	1,1699
4	682,2 48	206,772	0	53.853, 99	74,732 9	8,6315 3	19,3711	0	1,4540 7	1,1707 5
4	723,2 67	267,779	0	45.727, 11	77,456 4	9,3881 7	19,9568	0	1,5202 1	1,1717 5
4	772,4 89	344,424	0	38.247, 33	80,81	10,266	20,4537	0	1,5933 4	1,1728 5
4	831,5 56	440,982	0	31.481, 99	84,949 2	11,298 6	21,4084	0	1,6751 7	1,1721 1
4	902,4 36	562,992	0	25.465, 94	90,070 8	12,506 1	22,49	0	1,7663 1	1,1707 2
4	931,3 48	614,567	0	23.499, 19	92,205 1	12,988 8	22,8055	0	1,8012 5	1,1704 3
4	987,4 92	717,933	0	20.227, 56	96,429 1	13,918 2	23,2812	0	1,8671 1	1,1701 3
4	1089, 56	914,433	0	15.781, 53	104,31 8	15,549 5	23,8503	0	1,9775 8	1,1700 3
4	1212, 04	1164,08	0	12.107, 61	114,11 6	17,433	24,2477	0	2,0981 8	1,1702 5
4	1359, 02	1482,21	0	9.126,2 4	126,30 6	19,606 8	24,5151	0	2,2296 1	1,1706 4
4	1394, 74	1562,4	0	8.569,9 9	129,33 4	20,122	24,56	0	2,2596 8	1,1707 4
5	709,7 19	- 20,0255	0	1,00	0,0017 7245	0,7824 28	24,6246	0	0,6148 73	1,1739
5	709,8 19	- 19,9728	0	420.74 9,42	2,1939 6	0,0063 3123	-61,4355	0	0,5085 5	1,3836 6
5	709,9	-19,922	0	443.78	3,0858	0,0114	-66,4409	0	0,5075	1,4010



	19			8,79	1	885			18	7
5	710,0	-	0	449.68	3,7800	0,0167	-67,586	0	0,5076	1,4047
	19	19,8713		8,87	9	391			03	4
5	710,1	-	0	451.92	4,371	0,0220	-67,9875	0	0,5078	1,4059
	19	19,8205		2,04		137			1	1
5	710,2	-	0	452.87	4,8962	0,0272	-68,1465	0	0,5080	1,4063
	19	19,7697		4,22	9	91			37	3
5	710,3	-	0	453.48	5,3751	0,0325	-68,2647	0	0,5082	1,4067
	19	19,7189		7,32		406			04	1
5	710,4	-	0	455.22	5,8197	0,0376	-68,707	0	0,5080	1,4085
	19	19,6681		0,22	1	026			05	4
5	710,5	-	0	458.31	6,2372	0,0423	-69,5221	0	0,5074	1,412
	19	19,6173		5,90	8	931			37	
5	710,6	-	0	462.23	6,6325	0,0469	-70,5536	0	0,5066	1,4164
	19	19,5666		3,25	2	304			89	2
5	710,7	-19,516	0	466.53	7,0091	0,0512	-71,6791	0	0,5058	1,4212
	19			3,63	6	48			94	8
5	710,8	-	0	470.98	7,3695	0,0553	-72,8383	0	0,5050	1,4263
	19	19,4654		9,65		818			99	3
5	710,9	-19,415	0	475.46	7,7163	0,0593	-73,9965	0	0,5043	1,4314
	19			9,17	6	49			31	1
5	711,0	-	0	479.89	8,0522	0,0631	-75,1344	0	0,5036	1,4364
	19	19,3646		4,87	8	614			05	5
5	711,1	-	0	484.22	8,3779	0,0668	-76,2428	0	0,5029	1,4413
	19	19,3142		8,87	9	403			22	9
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 83	- 18,8817	0	516.72 1,55	10,881	0,0947 344	-84,3925	0	0,4985 84	1,4791 8
5	712,1 56	- 18,7956	0	522.16 6,92	11,335 6	0,0996 732	-85,7322	0	0,4979 97	1,4856 4
5	712,3 64	- 18,6924	0	528.29 5,04	11,867 4	0,1053 78	-87,2316	0	0,4973 9	1,4929 7
5	712,6 12	- 18,5688	0	535.11 1,21	12,489 3	0,1119 34	-88,8894	0	0,4967 87	1,5011 8
5	712,9 11	- 18,4205	0	542.59 8,32	13,214 6	0,1194 45	-90,6996	0	0,4962 2	1,5103
5	713,2 69	- 18,2428	0	550.70 6,08	14,056 6	0,1280 47	-92,6488	0	0,4957 22	1,5203
5	713,6 99	- 18,0297	0	559.93 1,06	15,031 8	0,1376 66	-94,8618	0	0,4951 87	1,5319 2
5	714,2 15	- 17,7744	0	571.15 0,35	16,164 5	0,1479 45	-97,5525	0	0,4944 54	1,5464 7
5	714,8 34	- 17,4685	0	584.44 2,07	17,480 4	0,1587 63	-100,721	0	0,4936 01	1,5641 6
5	715,5 77	- 17,1021	0	599.46 7,83	19,005 3	0,1705 59	-103,861	0	0,4928 24	1,5808 8
5	716,4 69	- 16,6629	0	615.32 7,50	20,760 5	0,1846 07	-106,037	0	0,4924 16	1,5883 8
5	717,5 39	-16,136	0	631.07 4,39	22,773 3	0,2019 19	-106,917	0	0,4926 18	1,5837 5
5	718,8 23	-15,503	0	645.76 8,82	25,077 4	0,2236 55	-106,292	0	0,4935 92	1,5656 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	-	0	633.24	50,821	0,5444	-66,0939	0	0,5242	1,2726

	22	7,73599		4,48	6	46			33	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 08	82,8852	0	83.126, 29	73,746 2	6,5497 6	16,7885	0	1,2537 9	1,1692 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 7	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, 45	429,959	0	31.329, 39	89,237	10,989	21,3175	0	1,6512	1,1725



	52			47	4	7			4	3
5	1136,4	550,309	0	25.343,10	94,299	12,192	22,4366	0	1,7428	1,1709
5	1164,07	598,999	0	23.467,50	96,319	12,650	22,7489	0	1,7767	1,1706
5	1221,46	703,058	0	20.149,66	100,58	13,589	23,2518	0	1,8442	1,1702
5	1323,52	897,021	0	15.736,53	108,39	15,208	23,8353	0	1,9550	1,1701
5	1446,01	1144,02	0	12.083,28	118,10	17,084	24,2398	0	2,0764	1,1702
5	1592,98	1459,08	0	9.117,1	130,19	19,250	24,511	0	2,2086	1,1706
5	1621,69	1522,83	0	8.668,4	132,60	19,664	24,5482	0	2,2329	1,1707
6	943,205	-	0	1,00	0,0017	0,7824	24,6246	0	0,6148	1,1739
6	943,305	-	0	393.61	2,2775	0,0060	-56,9954	0	0,5189	1,3734
6	943,405	-	0	415.21	3,2042	0,0111	-61,8298	0	0,5181	1,3901
6	943,505	-	0	420.75	3,9257	0,0162	-62,9336	0	0,5182	1,3936
6	943,605	-	0	422.85	4,5391	0,0213	-63,323	0	0,5183	1,3947
6	943,705	-	0	423.75	5,0851	0,0264	-63,4784	0	0,5185	1,3951
6	943,805	-	0	424.11	5,5837	0,0315	-63,537	0	0,5187	1,3952
6	943,905	-	0	424.92	6,0457	0,0365	-63,7455	0	0,5188	1,3961
6	944,005	-	0	426.95	6,4782	0,0413	-64,3068	0	0,5185	1,3984
6	944,105	-	0	430.03	6,8872	0,0459	-65,1546	0	0,5179	1,4020
6	944,205	-	0	433.70	7,2769	0,0502	-66,1616	0	0,5172	1,4063



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	983,6 79	1,11215 E-14	0	473.20 6,57	70,844 7	1,1067 5	-31,0621	0	0,5554 34	1,185
6	983,6 79	1,11215 E-14	0	478.71 5,43	70,069 8	1,0298 1	-32,4594	0	0,5998 1	1,1884 6
6	984,3 53	0,40264 9	0	472.26 3,65	70,614 2	1,0714 6	-31,3308	0	0,5964 63	1,1867 5
6	992,3 03	5,06163	0	389.81 5,30	74,148 1	1,6797 1	-17,8879	0	0,5872 88	1,1702 1
6	1001, 84	11,6577	0	229.76 2,35	74,150 7	2,9034 8	1,6174	0	0,7957 37	1,1665 9
6	1013, 05	21,6002	0	164.16 1,63	74,150 7	4,1492 3	8,00702	0	0,9666 74	1,1705 7



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,	-22,283	0	1,00	0,0017	0,7824	24,6245	0	0,6148	1,1739



	38			7245		28			73	
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	1177,68	-21,5984	0	420.718,97	8,58671	0,0614246	-65,218	0	0,523334	1,40906
7	1177,78	-21,5461	0	424.541,38	8,93083	0,0650732	-66,2757	0	0,522758	1,41361
7	1177,88	-21,4938	0	428.338,41	9,26474	0,0685979	-67,3208	0	0,522207	1,41814
7	1177,98	-21,4416	0	432.083,06	9,58957	0,0720091	-68,3463	0	0,521683	1,42262
7	1178,08	-21,3895	0	435.757,50	9,9063	0,0753162	-69,3478	0	0,521188	1,42703
7	1178,18	-21,3374	0	439.351,12	10,2159	0,0785256	-70,3228	0	0,520722	1,43135
7	1178,	-	0	442.85	10,518	0,0816	-71,2703	0	0,5202	1,4355



	28	21,2853		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	1183,13	-18,785	0	550.76	21,891	0,1781	-98,5239	0	0,5130	1,5723
				2,20	9	53			29	5
7	1184,2	- 18,2363	0	567.99	23,999	0,1926	-100,855	0	0,5127	1,5798
				4,81	4	26			94	1
7	1185,48	- 17,5777	0	584.87	26,407	0,2108	-101,621	0	0,5131	1,5733
				2,27	3	08			88	3
7	1187,02	- 16,7862	0	600.30	29,153	0,2340	-100,62	0	0,5143	1,5519
				7,17		79			3	6
7	1188,87	- 15,8336	0	613.19	32,344	0,2635	-97,7924	0	0,5163	1,5169
				3,86	7	11				6
7	1191,09	- 14,6849	0	622.01	36,217	0,2999	-92,9541	0	0,5193	1,4697
				1,38	1	45			12	6
7	1193,	-	0	624.64	40,880	0,3462	-85,9839	0	0,5235	1,4135



	75	13,2968		0,73	6	17			98	8
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	3,63773E-15	0	456.331,29	73,7894	1,10344	-29,2179	0	0,559727	1,18629
7	1218,22	3,63773E-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	1,171129
7	1249,21	22,5664	0	164.998,86	77,8584	3,99891	7,84261	0	0,949029	1,171129
7	1260,2	33,6791	0	120.916,72	79,1221	4,87599	12,7764	0	1,06582	1,17011
7	1276,69	52,0101	0	99.466,10	80,1195	5,50913	15,0675	0	1,14227	1,16981
7	1296,47	75,1661	0	86.124,09	81,2481	6,00805	16,4699	0	1,19887	1,16962
7	1320,2	104,404	0	73.560,52	82,6449	6,59732	17,6468	0	1,26164	1,17001
7	1348,69	141,155	0	63.768,88	84,3652	7,15472	18,5329	0	1,31802	1,17042
7	1382,87	187,275	0	54.666,60	86,4807	7,79366	19,2856	0	1,37951	1,17106



7	1423,89	245,271	0	46.255,65	89,0877	8,53392	19,9207	0	1,44719	1,17192
7	1473,11	318,371	0	38.588,45	92,3073	9,39393	20,4502	0	1,52197	1,17292
7	1532,18	410,749	0	31.710,89	96,2919	10,4007	21,1654	0	1,60508	1,17301
7	1603,06	527,854	0	25.637,06	101,237	11,5883	22,3583	0	1,69803	1,17123
7	1633,11	579,445	0	23.583,12	103,383	12,0811	22,7137	0	1,73517	1,17079
7	1688,12	676,819	0	20.385,52	107,388	12,9713	23,2147	0	1,80042	1,17035
7	1790,18	866,381	0	15.934,04	115,042	14,5758	23,8199	0	1,91262	1,17011
7	1912,66	1108,27	0	12.247,75	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	1409,55	-23,0168	0	377.033,04	3,37085	0,0106598	-55,6781	0	0,531166	1,37633
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,	-	0	385.81	6,8108	0,0401	-57,5137	0	0,5318	1,3821



	15	22,6979		4,74	3	716			96	3
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	1,4004
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	1,4221
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	1411,47	-21,9999	0	429.224,66	11,4032	0,0876378	-69,8294	0	0,525719	1,43515
8	1411,61	-21,9243	0	433.729,32	11,8196	0,0917347	-71,0659	0	0,525229	1,44074
8	1411,79	-21,8336	0	438.912,95	12,3071	0,0964701	-72,4812	0	0,524698	1,44721
8	1411,99	-21,7248	0	444.823,14	12,876	0,101926	-74,0859	0	0,524136	1,45463
8	1412,24	-21,5945	0	451.490,68	13,5386	0,108185	-75,8851	0	0,523557	1,46308
8	1412,54	-21,4382	0	458.924,52	14,3089	0,115333	-77,8779	0	0,522982	1,47258
8	1412,	-	0	467.10	15,203	0,1234	-80,0564	0	0,5224	1,4831





	9	21,2509		8,78	3	58			41	7
8	1413,33	- 21,0264	0	476.00 1,71	16,239 5	0,1326 72	-82,407	0	0,5219 62	1,4948 3
8	1413,84	- 20,7572	0	485.86 3,43	17,438 3	0,1429 34	-85,0004	0	0,5215 14	1,5080 1
8	1414,46	- 20,4345	0	497.59 7,32	18,826 1	0,1538 29	-88,0805	0	0,5209 41	1,5241 5
8	1415,21	- 20,0477	0	511.82 7,65	20,435 5	0,1649 03	-91,7969	0	0,5202 03	1,5443 5
8	1416,1	- 19,5842	0	528.22 8,53	22,298 9	0,1764 41	-95,7	0	0,5195 17	1,5654
8	1417,17	- 19,0286	0	545.72 0,23	24,439	0,1900 97	-98,52	0	0,5191 76	1,5768
8	1418,45	- 18,3619	0	563.15 1,05	26,884 2	0,2071 74	-99,7907	0	0,5194 05	1,5745 2
8	1419,99	-17,561	0	579.38 4,66	29,670 5	0,2290 83	-99,2548	0	0,5203 36	1,5569
8	1421,84	- 16,5976	0	593.32 4,90	32,873	0,2571 15	-96,8522	0	0,5220 31	1,5249 6
8	1424,06	- 15,4366	0	603.47 7,01	36,728 4	0,2920 5	-92,42	0	0,5246 63	1,4801 3
8	1426,72	- 14,0348	0	607.79 5,96	41,391 4	0,3363 03	-85,7961	0	0,5284 68	1,4251 3
8	1429,92	- 12,3385	0	603.75 4,16	46,905 1	0,3944 07	-77,0859	0	0,5335 03	1,3654 9
8	1433,75	- 10,2814	0	588.38 3,97	53,227 4	0,4738 65	-66,6672	0	0,5396 15	1,3080 4
8	1438,35	- 7,78243	0	557.97 6,08	60,219	0,5887 72	-54,8497	0	0,5466 64	1,2579 8
8	1443,87	- 4,74338	0	512.14 3,52	67,563	0,7611 46	-42,3455	0	0,5541 6	1,2189 7
8	1450,5	-1,048	0	457.94 9,84	74,684	1,0162 2	-30,6091	0	0,5612 36	1,1924
8	1452,36	9,04611 E-12	0	442.11 4,29	76,306	1,1031 5	-27,6194	0	0,5631 25	1,1871 5
8	1452,36	9,04611 E-12	0	447.55 2,88	75,473 5	1,0334 2	-28,9407	0	0,6038 18	1,1902 4
8	1458,	3,61328	0	395.35	79,891	1,4093	-20,0433	0	0,5872	1,1777



	45			2,31	3	4			54	6
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	1765,15	404,092	0	31.719,37	99,2572	10,2142	21,1219	0	1,59012	1,17322
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	1,17046
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,	1403,57	0	9.285,5	139,20	18,380	24,5149	0	2,1565	1,1706



	61			1	5	7				1
8	2313,9	1449,670	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	1,3977
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 E-11	0	430.491,93	78,5305	1,10219	-26,3755	0	0,565773	1,18815
9	1686,19	1,04901 E-11	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	1874,87	-24,4977	0	1,00	0,00177245	0,782427	24,6244	0	0,614873	1,1739
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,	-	0	358.60	6,0783	0,0297	-53,0976	0	0,5398	1,3724

	47	24,1728		0,41	4	095			54	2
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	1,38792
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	9,78649	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	1,400328
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	1876,77	-23,473	0	390.440,00	11,1055	0,0802972	-62,6131	0	0,535612	1,41263
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	1,440662
10	1877,	-	0	418.69	13,980	0,1070	-70,7019	0	0,5328	1,4490



	76	22,9427		2,41	4	88			1	3
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	1892,24	- 15,2568	0	580.285,83	42,2606	0,321921	-85,3219	0	0,535767	1,44267
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,	4,87617	0	420.05	80,543	1,1024	-25,2608	0	0,5680	1,1890





	81	E-14		2,30	5	5			17	4
10	1919,81	4,87617 E-14	0	425.41 8,43	79,665 9	1,0374 2	-26,5232	0	0,6062 01	1,1918 8
10	1923,97	2,48885	0	394.61 6,19	83,173 4	1,2617 6	-21,1214	0	0,5933 35	1,1837 2
10	1933,51	8,1618	0	324.32 8,52	87,268 1	1,8296 3	-10,2925	0	0,6205 54	1,1722 7
10	1944,95	16,2819	0	213.50 7,40	87,268 6	2,8710 1	2,56417	0	0,7943 87	1,1713 8
10	1954,86	24,6864	0	171.60 8,21	87,268 6	3,6108 8	7,11349	0	0,9010 41	1,1716 7
10	1954,86	24,6864	0	171.60 8,21	87,268 6	3,6108 5	7,11349	0	0,9010 47	1,1716 7
10	1958,69	28,2283	0	151.05 7,25	87,757 2	3,9221 3	9,61074	0	0,9463 95	1,1704 1
10	1975,18	45,1334	0	104.00 5,17	89,152 3	4,9838	14,5548	0	1,0843 2	1,1702 7
10	1994,96	67,2537	0	88.492, 55	90,239 4	5,5021 4	16,2131	0	1,1456 5	1,1698 5
10	2018,69	95,2509	0	74.356, 63	91,585 2	6,1116 7	17,5487	0	1,213	1,1701 7
10	2047,18	130,708	0	63.566, 58	93,254 2	6,6939 1	18,52	0	1,2737 4	1,1705 7
10	2081,36	175,333	0	54.179, 22	95,311 4	7,3251 9	19,3036	0	1,3361 9	1,1711 6
10	2122,38	231,575	0	45.600, 14	97,851 2	8,0559 6	19,9556	0	1,4048 6	1,1719 8
10	2171,6	302,62	0	37.852, 01	100,99 3	8,9062 1	20,4929	0	1,4806 9	1,1729 5
10	2230,67	392,591	0	30.962, 60	104,89	9,8999 3	21,084	0	1,5646 6	1,1734 5
10	2301,55	506,877	0	24.944, 38	109,73 3	11,075 3	22,3285	0	1,6589	1,1714 3
10	2328,21	551,553	0	23.142, 93	111,59 9	11,509 2	22,6565	0	1,6922 6	1,1710 2
10	2386,61	652,578	0	19.760, 65	115,77	12,447 1	23,208	0	1,7624 5	1,1704 7
10	2488,	838,33	0	15.402,	123,29	14,039	23,8236	0	1,8759	1,1701



	67			38	4	6			4	7
10	2611,15	1075,810	0	11.802,37	132,689	15,8888	24,2431	0	2,00003	1,17028
10	2758,13	1379,860	0	8.958,14	144,426	18,0304	24,5212	0	2,13518	1,17061
10	2768,58	1402,220	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	1,417225
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	2060,9	-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,	-	0	518.10	27,872	0,2011	-95,7494	0	0,5311	1,5748
	25	20,0507		7,14	8	18			61	
11	2064,	-19,232	0	535.73	30,747	0,2203	-96,2294	0	0,5317	1,5654
	79			3,58	5	44			24	5
11	2066,	-	0	551.47	34,015	0,2454	-94,6739	0	0,5329	1,5398
	64	18,2478		1,30	6	56			74	7
11	2068,	-	0	564.01	37,861	0,2774	-91,0399	0	0,5349	1,5000
	86	17,0632		4,72		13			84	1
11	2071,	-	0	571.47	42,522	0,3178	-85,1488	0	0,5379	1,4481
	52	15,6351		2,54	6	21			54	
11	2074,	-	0	571.37	48,092	0,3705	-77,0038	0	0,5420	1,3888
	72	13,9101		3,39	7	61			22	9
11	2078,	-	0	560.85	54,561	0,4421	-66,9346	0	0,5471	1,3292
	55	11,8223		6,10	5	23			1	9
11	2083,	-	0	536.67	61,823	0,5439	-55,4156	0	0,5530	1,2757
	15	9,29149		1,95	1	03			35	8
11	2088,	-	0	495.98	69,637	0,6971	-42,8473	0	0,5596	1,2322
	67	6,21996		3,52	6	36			31	4
11	2095,	-	0	446.13	77,557	0,9209	-31,0459	0	0,5658	1,2021
	3	2,49145		6,86	7	87			65	4
11	2099,	1,32034	0	414.04	81,878	1,0985	-24,6837	0	0,5694	1,1898
	68	E-11		8,96	2				05	9
11	2099,	1,32034	0	419.40	80,984	1,0348	-25,9314	0	0,6069	1,1926
	68	E-11		0,99	8	4			82	7
11	2103,	2,13851	0	393.92	84,109	1,2202	-21,4139	0	0,5954	1,1856
	25			6,48	4	9			96	6
11	2112,	7,80384	0	317.50	88,742	1,7813	-9,3346	0	0,6156	1,1718
	78			1,07		1			45	6
11	2124,	15,9154	0	193.50	88,745	2,7785	4,7709	0	0,7896	1,1719
	23			3,64	4	1			84	5
11	2135,	25,0406	0	157.70	90,675	3,2739	8,44626	0	0,8652	1,1731
	21			2,33					38	1
11	2135,	25,0406	0	157.70	90,675	3,2737	8,44626	0	0,8652	1,1731
	21			2,33		7			73	1
11	2137,	27,4619	0	146.49	90,929	3,4361	9,86656	0	0,8896	1,1720
	97			2,17		5				6
11	2154,	43,3128	0	100.05	92,215	4,3983	14,8293	0	1,0198	1,1712
	45			6,22	8	7			3	



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	1,42238	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	2,02016	1,17066
12	2054,15	-24,9207	0	0,99	0,00177245	0,782427	24,6243	0	0,614873	1,173973
12	2054,25	-24,8654	0	323.194,56	2,5034	0,00560413	-45,885	0	0,542167	1,35015
12	2054,35	-24,8112	0	340.787,62	3,52872	0,010299	-50,2459	0	0,541797	1,36502
12	2054,45	-24,757	0	345.281,66	4,32535	0,0150766	-51,2391	0	0,541879	1,36816
12	2054,55	-24,7028	0	346.981,73	5,00188	0,0198722	-51,5912	0	0,54201	1,36921
12	2054,	-	0	347.70	5,6015	0,0246	-51,7353	0	0,5421	1,3696



	65	24,6486		9,24		764		48	2	
12	2054,75	-24,5944	0	348.010,20	6,14598	0,0294888	-51,7927	0	0,542282	1,36977
12	2054,85	-24,5401	0	348.092,82	6,64959	0,034301	-51,8078	0	0,542411	1,36981
12	2054,95	-24,4859	0	348.330,36	7,12196	0,039058	-51,8855	0	0,542476	1,37014
12	2055,05	-24,4316	0	349.241,59	7,56969	0,0436565	-52,1789	0	0,542381	1,37136
12	2055,15	-24,3774	0	351.004,34	7,99632	0,0480317	-52,7369	0	0,542106	1,37366
12	2055,25	-24,3232	0	353.432,13	8,40407	0,0521823	-53,4955	0	0,541715	1,376815
12	2055,35	-24,2691	0	356.223,91	8,79551	0,0561467	-54,36	0	0,541276	1,38038
12	2055,45	-24,215	0	359.225,86	9,17288	0,0599467	-55,2828	0	0,54082	1,38423
12	2055,55	-24,1609	0	362.345,55	9,53792	0,0635992	-56,2355	0	0,540364	1,38821
12	2055,65	-24,1069	0	365.524,87	9,89189	0,0671199	-57,201	0	0,539916	1,39228
12	2055,75	-24,0529	0	368.724,47	10,2361	0,0705197	-58,1675	0	0,539482	1,39638
12	2055,85	-23,999	0	371.915,76	10,5714	0,0738086	-59,1268	0	0,539064	1,40047
12	2055,95	-23,9451	0	375.080,12	10,8991	0,0769924	-60,0734	0	0,538666	1,40454
12	2056,05	-23,8913	0	378.202,78	11,2196	0,0800805	-61,0035	0	0,538287	1,40856
12	2056,15	-23,8375	0	381.274,66	11,534	0,0830766	-61,9146	0	0,537929	1,41252
12	2056,27	-23,7729	0	384.884,58	11,9031	0,0865676	-62,981	0	0,537525	1,417225
12	2056,41	-23,6956	0	389.097,90	12,3356	0,0906169	-64,2199	0	0,537075	1,42269
12	2056,58	-23,6028	0	393.977,81	12,8411	0,0952942	-65,6474	0	0,536584	1,42907
12	2056,	-	0	399.57	13,430	0,1006	-67,2753	0	0,5360	1,4364



	79	23,4916		4,59	8	69			59	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, 86	- 17,0632	0	560.26 7,73	37,861	0,2774 13	-91,0399	0	0,5349 84	1,5000 1
12	2071, 52	- 15,6351	0	567.67 6,00	42,522 6	0,3178 21	-85,1488	0	0,5379 54	1,4481
12	2074, 72	- 13,9101	0	567.57 7,52	48,092 7	0,3705 61	-77,0038	0	0,5420 22	1,3888 9
12	2078, 55	- 11,8223	0	557.13 0,10	54,561 5	0,4421 23	-66,9346	0	0,5471 1	1,3292 9
12	2083, 15	- 9,29149	0	533.10 6,61	61,823 1	0,5439 03	-55,4156	0	0,5530 35	1,2757 8
12	2088, 67	- 6,21996	0	492.68 8,50	69,637 6	0,6971 36	-42,8473	0	0,5596 31	1,2322 4
12	2095, -		0	443.17	77,557	0,9209	-31,0459	0	0,5658	1,2021



	3	2,49145		2,98	7	87			65	4
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	3,2737	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	1,1712
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	2260,64	166,996	0	28.883,93	98,0857	6,69698	19,6066	0	1,2765	1,17193
12	2301,66	220,798	0	22.050,69	100,524	7,40787	20,2209	0	1,34576	1,17276
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,	626,69	0	6.778,7	117,86	11,704	23,4534	0	1,7073	1,1705





	89			4	3	4				6
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	0,56533	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	8.983,89	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	201,696	13,0104	24,9204	0	1,8036	1,17242
13	3051,06	1188,73	0	660,29	205,986	13,8101	24,9352	0	1,86017	1,17248

### 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 <sup>3</sup> ]
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	241,8 61	- 10,7615	0	308.93 3,27	17,2708	0,2310 74	-51,8798	0	2,7847 1	1,3979
3	241,9 61	- 10,4829	0	308.36 5,28	17,7897	0,2454 35	-51,7916	0	2,7858 5	1,3977 2
3	242,0 61	- 10,2043	0	307.79 4,07	18,2923	0,2597 88	-51,7029	0	2,7869 9	1,3975 4
3	242,1 61	- 9,92553	0	307.21 9,61	18,7796	0,2741 39	-51,6137	0	2,7881 4	1,3973 5
3	242,2 61	- 9,64666	0	306.64 1,42	19,2533	0,2884 77	-51,5239	0	2,7892 9	1,3971 7
3	242,3 81	- 9,31186	0	305.94 2,91	19,8041	0,3056 85	-51,4154	0	2,7906 8	1,3969 5
3	242,5 25	-8,9099	0	305.17 8,28	20,4423	0,3262 1	-51,3121	0	2,7922 6	1,3968
3	242,6 98	-8,4273	0	304.44 3,26	21,1778	0,3505 16	-51,2534	0	2,7939 1	1,3969 2
3	242,9 05	- 7,84783	0	303.96 6,46	22,0218	0,3788 7	-51,3275	0	2,7953 5	1,3977
3	243,1 54	- 7,15205	0	303.96 1,55	22,9854	0,4115 06	-51,6185	0	2,7963 6	1,3995 5
3	243,4 53	- 6,31684	0	304.50 5,66	24,0791	0,4487 98	-52,1605	0	2,7969 8	1,4026 4
3	243,8 11	-5,3145	0	305.58 8,24	25,3131	0,4911 91	-52,9607	0	2,7974 3	1,4070 4
3	244,2 41	- 4,11154	0	307.12 4,49	26,6939	0,5396 75	-53,8304	0	2,7980 2	1,4116 3
3	244,7 57	- 2,66753	0	308.90 6,64	28,2235	0,5958 34	-54,475	0	2,7992 6	1,4146 6
3	245,3 76	- 0,93355	0	310.59 3,78	29,8966	0,6614 53	-54,7054	0	2,8018 7	1,4151
3	245,7 09	2,48792 E-14	0	311.20 9,65	30,7437	0,6960 38	-54,5945	0	2,8038 7	1,4140 2
3	245,7 09	2,48792 E-14	0	315.99 5,53	30,4069	0,6928 5	-55,4147	0	2,8256 1	1,4161 3
3	246,1 19	1,15809	0	316.23 9,64	31,4393	0,7347 88	-55,0954	0	2,8247 9	1,4139 6
3	247,0 11	3,67791	0	315.22 2,65	33,7552	0,8200 78	-53,4271	0	2,8285 3	1,4040 3



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 245	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	944,5 69	- 10,7021	0	202.98 9,34	28,5125	0,4239 57	-37,5579	0	2,9465 2	1,3789 2
6	944,9 27	- 9,64621	0	203.27 0,10	29,9908	0,4667 93	-38,0732	0	2,9469 4	1,3817 9
6	945,3 57	- 8,37896	0	204.15 6,26	31,6532	0,5149 6	-38,948	0	2,9469 6	1,3864 1
6	945,8 73	- 6,85833	0	205.59 0,11	33,5112	0,5688 69	-40,1745	0	2,9468 5	1,3928 4
6	946,4 92	-5,0337	0	207.43 6,21	35,5685	0,6298 97	-41,4432	0	2,9469 4	1,3993 4
6	947,2 35	- 2,84388	0	209.45 3,98	37,8229	0,7001 57	-42,3827	0	2,9476 8	1,4038 3
6	948,1 27	- 0,21487 6	0	211.25 8,02	40,2602	0,7822 62	-42,735	0	2,9497 3	1,4049 3
6	948,2	7,01691 E-14	0	211.36 8,24	40,4512	0,7888 57	-42,728	0	2,9499 5	1,4048 3
6	948,2	7,01691 E-14	0	215.05 6,16	40,012	0,7867 27	-43,3468	0	2,9637	1,4062 5
6	949,1 97	2,95455	0	215.63 7,46	42,6702	0,8734 34	-42,8049	0	2,9633	1,4027
6	950,4 81	6,76218	0	214.12 5,37	46,2242	0,9784 22	-40,3752	0	2,9686 7	1,3892 1
6	952,0 22	11,3458	0	208.35 8,79	50,5676	1,1045	-34,9725	0	2,9826 8	1,3614 7
6	953,8 7	16,8839	0	194.52 6,39	55,6716	1,2705 2	-25,0421	0	3,0102 6	1,3152 5
6	954,9 46	20,1333	0	181.14 2,52	58,4543	1,3821 1	-17,1454	0	3,0346 2	1,2820 6
6	954,9 46	20,1333	0	181.14 2,52	58,4543	1,3821 1	-17,1454	0	3,0346 2	1,2820 6
6	956,0 89	23,6222	0	161.04 3,31	61,0275	1,5392 9	-5,63664	0	3,0677 3	1,2370 9
6	958,7 51	32,0112	0	121.11 4,91	65,5703	1,8957 5	6,94934	0	3,2363 5	1,1985 6
6	960,1 45	36,5743	0	105.93 0,55	67,4543	2,0849 7	10,214	0	3,3132 6	1,1908 2
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	2,99077	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	166.297,35	15,7145	0,104048	-32,6897	0	2,99146	1,37287
12	2092,89	-20,4356	0	166.059,40	16,6606	0,117039	-32,6536	0	2,99184	1,37281
12	2092,99	-20,1364	0	165.818,87	17,5547	0,130026	-32,6171	0	2,99223	1,37275
12	2093,09	-19,8372	0	165.576,85	18,4035	0,143015	-32,5804	0	2,99262	1,37269
12	2093,19	-19,5379	0	165.333,99	19,2126	0,156011	-32,5436	0	2,993	1,37263
12	2093,29	-19,2386	0	165.090,66	19,987	0,169012	-32,5067	0	2,99339	1,37257
12	2093,39	-18,9392	0	164.847,05	20,7307	0,182016	-32,4699	0	2,99378	1,37251
12	2093,49	-18,6398	0	164.603,22	21,4468	0,195024	-32,433	0	2,99416	1,37245
12	2093,59	-18,3404	0	164.359,08	22,1383	0,208033	-32,3961	0	2,99455	1,37239
12	2093,69	-18,0409	0	164.114,48	22,8074	0,221042	-32,3592	0	2,99493	1,37233
12	2093,79	-17,7414	0	163.869,57	23,4556	0,234059	-32,3222	0	2,99532	1,37227
12	2093,89	-17,4419	0	163.624,41	24,0845	0,247083	-32,2852	0	2,99571	1,37221
12	2093,99	-17,1423	0	163.378,92	24,6955	0,260114	-32,2481	0	2,99609	1,37215
12	2094,11	-16,7827	0	163.083,63	25,4073	0,275756	-32,2035	0	2,99656	1,37207
12	2094,25	-16,3512	0	162.727,98	26,2339	0,294521	-32,1498	0	2,99712	1,37199
12	2094,43	-15,8332	0	162.299,04	27,1895	0,317035	-32,0851	0	2,99779	1,37188
12	2094,63	-15,2115	0	161.784,47	28,2896	0,344029	-32,0088	0	2,99861	1,37176
12	2094,88	-14,4652	0	161.235,56	29,549	0,376198	-31,9561	0	2,99951	1,37181
12	2095,18	-13,5695	0	160.887,35	30,9834	0,413671	-32,0626	0	3,00026	1,37262



12	2095,54	-12,4945	0	160.991,76	32,6076	0,45631	-32,4765	0	3,00062	1,37494
12	2095,97	-11,2042	0	161.620,26	34,436	0,504338	-33,2496	0	3,0006	1,37901
12	2096,48	-9,65603	0	162.771,60	36,484	0,558037	-34,3996	0	3,00034	1,38497
12	2097,1	-7,79839	0	164.395,41	38,7631	0,617754	-35,9203	0	3,00003	1,39288
12	2097,85	-5,5694	0	166.372,05	41,2794	0,685048	-37,419	0	2,99996	1,40056
12	2098,74	-2,89439	0	168.442,63	44,0256	0,762435	-38,5074	0	3,00056	1,40584
12	2099,7	6,03347E-11	0	170.086,98	46,7177	0,844011	-38,8907	0	3,00218	1,40721
12	2099,7	6,03347E-11	0	173.205,38	46,2107	0,842258	-39,409	0	3,01304	1,40836
12	2099,81	0,31801	0	173.319,18	46,4969	0,851011	-39,4178	0	3,01286	1,40835
12	2101,09	4,18601	0	173.886,32	50,0751	0,952299	-38,683	0	3,01313	1,40374
12	2102,63	8,83212	0	172.188,26	54,529	1,06835	-35,7363	0	3,01882	1,38759
12	2104,48	14,4248	0	166.189,60	59,9398	1,21232	-29,4267	0	3,0323	1,35551
12	2106,7	21,1797	0	151.434,40	66,2214	1,40897	-18,1134	0	3,05952	1,30374
12	2107,34	23,1515	0	144.807,14	67,932	1,47479	-13,8878	0	3,07091	1,28595
12	2107,34	23,1515	0	144.807,14	67,932	1,47479	-13,8878	0	3,07091	1,28595
12	2109,36	29,4271	0	119.767,84	72,548	1,71451	0,47574	0	3,16339	1,22992
12	2112,56	39,8226	0	87.939,01	78,179	2,135	10,3071	0	3,33864	1,19957
12	2115,21	48,8564	0	70.429,17	82,0637	2,49231	13,9255	0	3,45644	1,19082
12	2115,21	48,8564	0	70.429,17	82,0637	2,49229	13,9255	0	3,45647	1,19082



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

