

# Dispersion Report

## Workspace: 72438-2FSRURegas-9R

### Study: FSRU in rigassificazione-ME7

### Equipment Item: 9Ra Compressore BOG LD

72438-2FSRURegas-9R\FSRU in rigassificazione-ME7\9Ra Compressore BOG LD

Material	<b>GAS NATURALE</b>	
East	0	m
North	0	m

### Scenario (Leak) : 75mm

72438-2FSRURegas-9R\FSRU in rigassificazione-ME7\9Ra Compressore BOG LD\75mm

Material to track	<b>GAS NATURALE</b>
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### Weather: Category 2/F

Wind speed [m/s]	2
Pasquill stability	<b>F stable - night with moderate clouds and light/moderate wind</b>
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	4,07992	0	4,07992
2	Continuous	53,3743	0	kg/s	4,07992	0	4,07992

## 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	12,5	999.99 9,37	0,1343 64	0,0672 531	20,43	0	300	0,7524 99
1	0,01	1,35449	12,50 01	395.29 1,06	0,3938 82	0,1971 12	22,9182	0	89,215 4	1,0085 8
1	0,02	2,10757	12,50 03	299.10 3,01	0,5292 3	0,2648 2	23,3931	0	65,435 9	1,0485 8
1	0,03	2,70093	12,50 06	251.12 7,69	0,6345 3	0,3174 89	23,6399	0	54,271	1,0684 3
1	0,04	3,20763	12,50 09	220.83 8,23	0,7239 38	0,3622 05	23,7993	0	47,443 7	1,0809 4
1	0,05	3,65727	12,50 12	199.42 8,15	0,8030 41	0,4017 64	23,9137	0	42,717 2	1,0897 6
1	0,06	4,06647	12,50 16	183.19 9,46	0,8749 34	0,4377 14	24,0014	0	39,187 9	1,0964 4
1	0,07	4,44451	12,50 2	170.33 7,38	0,9413 19	0,4709 09	24,0715	0	36,422 9	1,1017 3
1	0,08	4,79747	12,50 25	159.81 3,35	1,0033 1	0,5019 02	24,1293	0	34,181 2	1,1060 5
1	0,09	5,12977	12,50 29	150.98 9,10	1,0617	0,5310 95	24,178	0	32,315 8	1,1096 8
1	0,1	5,44488	12,50 34	143.44 2,43	1,1171 1	0,5588	24,2199	0	30,730 7	1,1127 7
1	0,11	5,74547	12,50 4	136.88 4,95	1,1700 2	0,5852 52	24,2564	0	29,360 9	1,1154 6
1	0,12	6,03342	12,50 45	131.11 5,46	1,2207 7	0,6106 22	24,2887	0	28,161 5	1,1178 3
1	0,13	6,30982	12,50 51	125.99 3,28	1,2695 5	0,6350 06	24,3174	0	27,101 1	1,1199 3



1	0,14	6,57561	12,50	121.40	1,3165	0,6584	24,3432	0	26,155	1,1218
			57	9,99	3	91			9	
1	0,15	6,83199	12,50	117.27	1,3619	0,6811	24,3666	0	25,306	1,1235
			63	5,07	2	8				
1	0,16	7,08002	12,50	113.51	1,4059	0,7031	24,3878	0	24,536	1,1250
			69	6,99		66				3
1	0,17	7,32064	12,50	110.07	1,4486	0,7245	24,4073	0	23,833	1,1264
			76	8,80	5	31			4	4
1	0,18	7,55498	12,50	106.91	1,4903	0,7453	24,4253	0	23,187	1,1277
			83	1,18	4	69			8	4
1	0,19	7,78301	12,50	103.98	1,5309	0,7656	24,442	0	22,593	1,1289
			9	5,98	8	82				3
1	0,2	8,00504	12,50	101.27	1,5706	0,7854	24,4574	0	22,043	1,1300
			97	5,33	3	97				4
1	0,212	8,26478	12,51	98.264,	1,6170	0,8087	24,4746	0	21,433	1,1312
			06	28	9	2			4	7
1	0,226	8,56737	12,51	94.956,	1,6713	0,8358	24,4935	0	20,765	1,1326
	4		16	21	5	37			4	3
1	0,243	8,91879	12,51	91.359,	1,7345	0,8674	24,5142	0	20,041	1,1341
	68		3	87	3	16				
1	0,264	9,32547	12,51	87.494,	1,8079	0,9040	24,5364	0	19,264	1,1356
	416		46	20		81			6	7
1	0,289	9,79408	12,51	83.389,	1,8927	0,9464	24,56	0	18,442	1,1373
	299		67	86	8	97			9	5
1	0,319	10,3315	12,51	79.087,	1,9906	0,9953	24,5849	0	17,584	1,1391
	159		93	17		8			2	1
1	0,354	10,9451	12,52	74.631,	2,1029	1,0515	24,6107	0	16,698	1,1409
	991		25	73	7	3			1	3
1	0,397	11,6421	12,52	70.076,	2,2315	1,1157	24,6372	0	15,795	1,1427
	989		66	85	5	8			3	8
1	0,449	12,4309	12,53	65.471,	2,3783	1,1891	24,664	0	14,885	1,1446
	587		18	62	4	3			9	6
1	0,511	13,3217	12,53	60.860,	2,5457	1,2727	24,6909	0	13,978	1,1465
	504		83	18	9	9			6	4
1	0,585	14,3244	12,54	56.289,	2,7364	1,3680	24,7177	0	13,082	1,1484
	805		66	51	8	6			6	
1	0,674	15,4495	12,55	51.802,	2,9534	1,4764	24,7441	0	12,206	1,1502
	966		71	11		3			2	3



1	0,781 959	16,7091	12,57 05	47.433, 23	3,2000 8	1,5996 6	24,7698	0	11,356 2	1,1520 1
1	0,910 351	18,1138	12,58 75	43.217, 70	3,4803 1	1,7396 5	24,7947	0	10,539 1	1,1537 2
1	1,064 42	19,6734	12,60 91	39.184, 52	3,7983 2	1,8985 1	24,8186	0	9,7604 2	1,1553 6
1	1,249 31	21,3997	12,63 65	35.351, 31	4,1593 8	2,0788 7	24,8414	0	9,0232 8	1,1569 2
1	1,471 17	23,3078	12,67 13	31.727, 60	4,5700 3	2,2839 9	24,863	0	8,3293 7	1,1583 9
1	1,737 4	25,425	12,71 53	28.311, 12	5,0392 5	2,5183 7	24,8833	0	7,6781 2	1,1597 7
1	2,056 88	27,7695	12,77 07	25.109, 74	5,5762 1	2,7865 8	24,9025	0	7,0709 4	1,1610 6
1	2,351 73	29,7827	12,82 39	22.750, 14	6,0521 6	3,0243 3	24,9166	0	6,6257 1	1,1620 2
1	2,440 26	30,362	12,84 02	22.126, 21	6,1920 6	3,0942 1	24,9204	0	6,5083 6	1,1622 7
1	2,900 31	33,189	12,92 77	19.359, 14	6,9005 6	3,4481 2	24,937	0	5,9902	1,1633 8
1	3,452 37	36,3267	13,03 63	16.869, 72	7,6952 8	3,8451 2	24,9519	0	5,5281 8	1,1643 8
1	4,114 84	39,8502	13,17 06	14.652, 22	8,5791 8	4,2866 8	24,9653	0	5,1213 7	1,1652 6
1	4,909 81	43,7907	13,33 68	12.676, 44	9,5634 3	4,7784	24,9772	0	4,7644 4	1,1660 4
1	5,863 77	48,1965	13,54 21	10.916, 96	10,660 8	5,3266 6	24,9878	0	4,4532 2	1,1667 3
1	7,008 53	53,1392	13,79 49	9.348,9 9	11,889	5,9403 2	24,9973	0	4,1840 1	1,1673 3
1	8,382 23	58,7074	14,10 47	7.952,7 1	13,269	6,6298 7	25,0057	0	3,9544 1	1,1678 5
1	10,03 07	65,035	14,48 15	6.710,5 6	14,828 2	7,4090 1	25,0131	0	3,7625 8	1,1683 1
1	12,00 88	72,314	14,93 54	5.608,4 4	16,599 7	8,2942 9	25,0197	0	3,6076 2	1,1687
1	14,38 26	80,7449	15,47 69	4.637,6 6	18,618 7	9,3033 1	25,0255	0	3,4891 3	1,1690 2



1	14,72 59	81,9424	15,55 47	4.520,1 4	18,902 7	9,4452 2	25,0262	0	3,4763 5	1,1690 5
2	53,37 43	0	12,5	999.99 9,37	0,1343 64	0,0672 531	20,43	0	300	0,7524 99
2	53,38 43	1,35449	12,50 01	395.29 1,06	0,3938 82	0,1971 12	22,9182	0	89,215 4	1,0085 8
2	53,39 43	2,10757	12,50 03	299.10 3,01	0,5292 3	0,2648 2	23,3931	0	65,435 9	1,0485 8
2	53,40 43	2,70093	12,50 06	251.12 7,69	0,6345 3	0,3174 89	23,6399	0	54,271	1,0684 3
2	53,41 43	3,20763	12,50 09	220.83 8,23	0,7239 38	0,3622 05	23,7993	0	47,443 7	1,0809 4
2	53,42 43	3,65727	12,50 12	199.42 8,15	0,8030 41	0,4017 64	23,9137	0	42,717 2	1,0897 6
2	53,43 43	4,06647	12,50 16	183.19 9,46	0,8749 34	0,4377 14	24,0014	0	39,187 9	1,0964 4
2	53,44 43	4,44451	12,50 2	170.33 7,38	0,9413 19	0,4709 09	24,0715	0	36,422 9	1,1017 3
2	53,45 43	4,79747	12,50 25	159.81 3,35	1,0033 1	0,5019 02	24,1293	0	34,181 2	1,1060 5
2	53,46 43	5,12977	12,50 29	150.98 9,10	1,0617	0,5310 95	24,178	0	32,315 8	1,1096 8
2	53,47 43	5,44488	12,50 34	143.44 2,43	1,1171 1	0,5588	24,2199	0	30,730 7	1,1127 7
2	53,48 43	5,74547	12,50 4	136.88 4,95	1,1700 2	0,5852 52	24,2564	0	29,360 9	1,1154 6
2	53,49 43	6,03342	12,50 45	131.11 5,46	1,2207 7	0,6106 22	24,2887	0	28,161 5	1,1178 3
2	53,50 43	6,30982	12,50 51	125.99 3,28	1,2695 5	0,6350 06	24,3174	0	27,101 1	1,1199 3
2	53,51 43	6,57561	12,50 57	121.40 9,99	1,3165 3	0,6584 91	24,3432	0	26,155 9	1,1218
2	53,52 43	6,83199	12,50 63	117.27 5,07	1,3619 2	0,6811 8	24,3666	0	25,306	1,1235
2	53,53 43	7,08002	12,50 69	113.51 6,99	1,4059	0,7031 66	24,3878	0	24,536	1,1250 3
2	53,54	7,32064	12,50	110.07	1,4486	0,7245	24,4073	0	23,833	1,1264



	43		76	8,80	5	31			4	4
2	53,55	7,55498	12,50	106.91	1,4903	0,7453	24,4253	0	23,187	1,1277
	43		83	1,18	4	69			8	4
2	53,56	7,78301	12,50	103.98	1,5309	0,7656	24,442	0	22,593	1,1289
	43		9	5,98	8	82				3
2	53,57	8,00504	12,50	101.27	1,5706	0,7854	24,4574	0	22,043	1,1300
	43		97	5,33	3	97				4
2	53,58	8,26478	12,51	98.264,	1,6170	0,8087	24,4746	0	21,433	1,1312
	63		06	28	9	2			4	7
2	53,60	8,56737	12,51	94.956,	1,6713	0,8358	24,4935	0	20,765	1,1326
	07		16	21	5	37			4	3
2	53,61	8,91879	12,51	91.359,	1,7345	0,8674	24,5142	0	20,041	1,1341
	79		3	87	3	16				
2	53,63	9,32547	12,51	87.494,	1,8079	0,9040	24,5364	0	19,264	1,1356
	87		46	20		81			6	7
2	53,66	9,79408	12,51	83.389,	1,8927	0,9464	24,56	0	18,442	1,1373
	36		67	86	8	97			9	5
2	53,69	10,3315	12,51	79.087,	1,9906	0,9953	24,5849	0	17,584	1,1391
	34		93	17		8			2	1
2	53,72	10,9451	12,52	74.631,	2,1029	1,0515	24,6107	0	16,698	1,1409
	93		25	73	7	3			1	3
2	53,77	11,6421	12,52	70.076,	2,2315	1,1157	24,6372	0	15,795	1,1427
	23		66	85	5	8			3	8
2	53,82	12,4309	12,53	65.471,	2,3783	1,1891	24,664	0	14,885	1,1446
	38		18	62	4	3			9	6
2	53,88	13,3217	12,53	60.860,	2,5457	1,2727	24,6909	0	13,978	1,1465
	58		83	18	9	9			6	4
2	53,96	14,3244	12,54	56.289,	2,7364	1,3680	24,7177	0	13,082	1,1484
	01		66	51	8	6			6	
2	54,04	15,4495	12,55	51.802,	2,9534	1,4764	24,7441	0	12,206	1,1502
	92		71	11		3			2	3
2	54,15	16,7091	12,57	47.433,	3,2000	1,5996	24,7698	0	11,356	1,1520
	62		05	23	8	6			2	1
2	54,28	18,1138	12,58	43.217,	3,4803	1,7396	24,7947	0	10,539	1,1537
	46		75	70	1	5			1	2
2	54,43	19,6734	12,60	39.184,	3,7983	1,8985	24,8186	0	9,7604	1,1553
	87		91	52	2	1			2	6
2	54,62	21,3997	12,63	35.351,	4,1593	2,0788	24,8414	0	9,0232	1,1569



	36		65	31	8	7			8	2
2	54,84 54	23,3078	12,67 13	31.727, 60	4,5700 3	2,2839 9	24,863	0	8,3293 7	1,1583 9
2	55,11 17	25,425	12,71 53	28.311, 12	5,0392 5	2,5183 7	24,8833	0	7,6781 2	1,1597 7
2	55,43 11	27,7695	12,77 07	25.109, 74	5,5762 1	2,7865 8	24,9025	0	7,0709 4	1,1610 6
2	55,72 6	29,7827	12,82 39	22.750, 14	6,0521 6	3,0243 3	24,9166	0	6,6257 1	1,1620 2
2	55,81 45	30,362	12,84 02	22.126, 21	6,1920 6	3,0942 1	24,9204	0	6,5083 6	1,1622 7
2	56,27 46	33,189	12,92 77	19.359, 14	6,9005 6	3,4481 2	24,937	0	5,9902	1,1633 8
2	56,82 66	36,3267	13,03 63	16.869, 72	7,6952 8	3,8451 2	24,9519	0	5,5281 8	1,1643 8
2	57,48 91	39,8502	13,17 06	14.652, 22	8,5791 8	4,2866 8	24,9653	0	5,1213 7	1,1652 6
2	58,28 41	43,7907	13,33 68	12.676, 44	9,5634 3	4,7784	24,9772	0	4,7644 4	1,1660 4
2	59,23 8	48,1965	13,54 21	10.916, 96	10,660 8	5,3266 6	24,9878	0	4,4532 2	1,1667 3
2	60,38 28	53,1392	13,79 49	9.348,9 9	11,889	5,9403 2	24,9973	0	4,1840 1	1,1673 3
2	61,75 65	58,7074	14,10 47	7.952,7 1	13,269	6,6298 7	25,0057	0	3,9544 1	1,1678 5
2	63,40 49	65,035	14,48 15	6.710,5 6	14,828 2	7,4090 1	25,0131	0	3,7625 8	1,1683 1
2	65,38 31	72,314	14,93 54	5.608,4 4	16,599 7	8,2942 9	25,0197	0	3,6076 2	1,1687
2	67,75 68	80,7449	15,47 69	4.637,6 6	18,618 7	9,3033 1	25,0255	0	3,4891 3	1,1690 2
2	68,10 02	81,9424	15,55 47	4.520,1 4	18,902 7	9,4452 2	25,0262	0	3,4763 5	1,1690 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	0	kg/s	4,07992	0	4,07992
2	Continuous	53,3743	0	kg/s	4,07992	0	4,07992

### 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 liqui d fraction	Centr oid velocity [m/s]	C/Lin e cloud densi ty [kg/m3]
1	0	0	12,5	999.99 9,37	0,1344 35	0,0672 175	20,43	0	300	0,7524 99
1	0,01	1,36508	12,50 01	391.95 4,50	0,3928 11	0,1964 05	22,8388	0	90,521 2	1,0103 7
1	0,02	2,13023	12,50 03	294.46 0,29	0,5282 48	0,2641 24	23,3028	0	66,747	1,0509 8
1	0,03	2,73453	12,50	245.78	0,6338	0,3169	23,5443	0	55,582	1,0711





			05	9,14	96	48			7	7
1	0,04	3,25205	12,50	214.99	0,7239	0,3619	23,7007	0	48,744	1,0839
			08	7,56	68	84			7	1
1	0,05	3,71207	12,50	193.20	0,8039	0,4019	23,8131	0	44,007	1,0929
			12	8,99	29	64			2	1
1	0,06	4,13227	12,50	176.64	0,8769	0,4384	23,8995	0	40,460	1,0997
			16	6,39	94	97			5	4
1	0,07	4,52117	12,50	163.50	0,9447	0,4723	23,9687	0	37,679	1,1051
			2	7,80	09	55			9	5
1	0,08	4,88508	12,50	152.74	1,0082	0,5040	24,0257	0	35,422	1,1095
			24	3,09		99			9	8
1	0,09	5,22839	12,50	143.70	1,0682	0,5341	24,0739	0	33,543	1,1133
			28	6,51	4	22				
1	0,1	5,5538	12,50	135.98	1,1253	0,5626	24,1153	0	31,947	1,1164
			33	6,70	2	62			4	8
1	0,11	5,86451	12,50	129.27	1,1799	0,5899	24,1514	0	30,568	1,1192
			38	7,02	8	92			4	3
1	0,12	6,16314	12,50	123.36	1,2326	0,6163	24,1834	0	29,358	1,1216
			43	1,05	6	31			5	6
1	0,13	6,45015	12,50	118.10	1,2834	0,6417	24,2119	0	28,288	1,1238
			49	6,21	6	3			4	2
1	0,14	6,72754	12,50	113.38	1,3327	0,6663	24,2376	0	27,331	1,1257
			54	7,27		51			2	6
1	0,15	6,99535	12,50	109.12	1,3804	0,6902	24,2608	0	26,470	1,1275
			6	9,81	2	09			5	1
1	0,16	7,25498	12,50	105.25	1,4268	0,7134	24,282	0	25,690	1,1290
			66	6,99	3	15			1	9
1	0,17	7,50727	12,50	101.71	1,4720	0,7360	24,3014	0	24,977	1,1305
			72	2,46	8	41			9	5
1	0,18	7,75321	12,50	98.448,	1,5163	0,7581	24,3193	0	24,323	1,1318
			78	13	3	65			6	9
1	0,19	7,99247	12,50	95.436,	1,5595	0,7797	24,3359	0	23,721	1,1331
			85	66	4	69			6	2
1	0,2	8,22573	12,50	92.645,	1,6018	0,8009	24,3513	0	23,164	1,1342
			91	21	2	09			7	6
1	0,212	8,49839	12,50	89.549,	1,6514	0,8257	24,3684	0	22,548	1,1355
			99	48	3	16			6	3
1	0,226	8,81617	12,51	86.150,	1,7095	0,8547	24,3871	0	21,873	1,1369



	4		09	84	2	62			8	3
1	0,243 68	9,18566	12,51 21	82.457, 51	1,7774 2	0,8887 11	24,4076	0	21,142 6	1,1384 4
1	0,264 416	9,61451	12,51 36	78.485, 85	1,8566 6	0,9283 33	24,4297	0	20,358 5	1,1400 6
1	0,289 299	10,1086	12,51 54	74.277, 02	1,9486 8	0,9743 4	24,4531	0	19,530 3	1,1417 9
1	0,319 159	10,6769	12,51 77	69.864, 59	2,0554 2	1,0277 1	24,4778	0	18,664 8	1,1435 9
1	0,354 991	11,3264	12,52 06	65.303, 77	2,1787 6	1,0893 8	24,5033	0	17,773 4	1,1454 6
1	0,397 989	12,068	12,52 42	60.638, 00	2,3212 5	1,1606 3	24,5295	0	16,864 7	1,1473 6
1	0,449 587	12,9102	12,52 86	55.928, 13	2,4854 2	1,2427 1	24,556	0	15,950 8	1,1492 9
1	0,511 504	13,8628	12,53 41	51.229, 51	2,6743	1,3371 5	24,5825	0	15,042 4	1,1512 1
1	0,585 805	14,9424	12,54 1	46.582, 05	2,8920 4	1,4460 2	24,6088	0	14,147 3	1,1531 1
1	0,674 966	16,169	12,54 96	42.026, 95	3,1435 5	1,5717 7	24,6346	0	13,273 2	1,1549 7
1	0,781 959	17,5493	12,56 03	37.625, 03	3,4331 3	1,7165 7	24,6596	0	12,431 6	1,1567 6
1	0,910 351	19,0998	12,57 36	33.413, 19	3,7668 3	1,8834 1	24,6835	0	11,629 3	1,1584 8
1	1,064 42	20,8393	12,58 99	29.421, 92	4,1518 6	2,0759 3	24,7063	0	10,871 9	1,1601 1
1	1,249 31	22,7843	12,61 01	25.678, 05	4,5965 8	2,2982 9	24,7276	0	10,164 3	1,1616 3
1	1,432	24,585	12,63 04	22.750, 14	5,0217 5	2,5108 8	24,7442	0	9,6123 7	1,1628 2
1	1,471 17	24,9586	12,63 48	22.197, 78	5,1115 7	2,5557 9	24,7474	0	9,5085 1	1,1630 5
1	1,737 4	27,3829	12,66 49	18.972, 56	5,7139 9	2,857	24,7657	0	8,9034 2	1,1643 6
1	2,056 88	30,1331	12,70 1	16.048, 61	6,4127 9	3,2064	24,7823	0	8,3571 8	1,1655 5
1	2,440	33,2474	12,74	13.413,	7,2297	3,6149	24,7971	0	7,8672	1,1666



	26		42	64	9				1	2
1	2,900 31	36,7731	12,79 52	11.067, 34	8,1887 6	4,0943 9	24,8102	0	7,4332 9	1,1675 7
1	3,452 37	40,7737	12,85 48	9.005,8 5	9,3194	4,6597 1	24,8216	0	7,0547 3	1,1684
1	4,020 3	44,6935	12,91 4	7.440,7 8	10,469 9	5,2349 7	24,8301	0	6,7702 8	1,1690 3
2	53,37 43	0	12,5	999.99 9,37	0,1344 35	0,0672 175	20,43	0	300	0,7524 99
2	53,38 43	1,36508	12,50 01	391.95 4,50	0,3928 11	0,1964 05	22,8388	0	90,521 2	1,0103 7
2	53,39 43	2,13023	12,50 03	294.46 0,29	0,5282 48	0,2641 24	23,3028	0	66,747	1,0509 8
2	53,40 43	2,73453	12,50 05	245.78 9,14	0,6338 96	0,3169 48	23,5443	0	55,582 7	1,0711 7
2	53,41 43	3,25205	12,50 08	214.99 7,56	0,7239 68	0,3619 84	23,7007	0	48,744 7	1,0839 1
2	53,42 43	3,71207	12,50 12	193.20 8,99	0,8039 29	0,4019 64	23,8131	0	44,007 2	1,0929 1
2	53,43 43	4,13227	12,50 16	176.64 6,39	0,8769 94	0,4384 97	23,8995	0	40,460 5	1,0997 4
2	53,44 43	4,52117	12,50 2	163.50 7,80	0,9447 09	0,4723 55	23,9687	0	37,679 9	1,1051 5
2	53,45 43	4,88508	12,50 24	152.74 3,09	1,0082	0,5040 99	24,0257	0	35,422 9	1,1095 8
2	53,46 43	5,22839	12,50 28	143.70 6,51	1,0682 4	0,5341 22	24,0739	0	33,543	1,1133
2	53,47 43	5,5538	12,50 33	135.98 6,70	1,1253 2	0,5626 62	24,1153	0	31,947 4	1,1164 8
2	53,48 43	5,86451	12,50 38	129.27 7,02	1,1799 8	0,5899 92	24,1514	0	30,568 4	1,1192 3
2	53,49 43	6,16314	12,50 43	123.36 1,05	1,2326 6	0,6163 31	24,1834	0	29,358 5	1,1216 6
2	53,50 43	6,45015	12,50 49	118.10 6,21	1,2834 6	0,6417 3	24,2119	0	28,288 4	1,1238 2
2	53,51 43	6,72754	12,50 54	113.38 7,27	1,3327	0,6663 51	24,2376	0	27,331 2	1,1257 6



2	53,52 43	6,99535	12,50 6	109.12 9,81	1,3804 2	0,6902 09	24,2608	0	26,470 5	1,1275 1
2	53,53 43	7,25498	12,50 66	105.25 6,99	1,4268 3	0,7134 15	24,282	0	25,690 1	1,1290 9
2	53,54 43	7,50727	12,50 72	101.71 2,46	1,4720 8	0,7360 41	24,3014	0	24,977 9	1,1305 5
2	53,55 43	7,75321	12,50 78	98.448, 13	1,5163 3	0,7581 65	24,3193	0	24,323 6	1,1318 9
2	53,56 43	7,99247	12,50 85	95.436, 66	1,5595 4	0,7797 69	24,3359	0	23,721 6	1,1331 2
2	53,57 43	8,22573	12,50 91	92.645, 21	1,6018 2	0,8009 09	24,3513	0	23,164 7	1,1342 6
2	53,58 63	8,49839	12,50 99	89.549, 48	1,6514 3	0,8257 16	24,3684	0	22,548 6	1,1355 3
2	53,60 07	8,81617	12,51 09	86.150, 84	1,7095 2	0,8547 62	24,3871	0	21,873 8	1,1369 3
2	53,61 79	9,18566	12,51 21	82.457, 51	1,7774 2	0,8887 11	24,4076	0	21,142 6	1,1384 4
2	53,63 87	9,61451	12,51 36	78.485, 85	1,8566 6	0,9283 33	24,4297	0	20,358 5	1,1400 6
2	53,66 36	10,1086	12,51 54	74.277, 02	1,9486 8	0,9743 4	24,4531	0	19,530 3	1,1417 9
2	53,69 34	10,6769	12,51 77	69.864, 59	2,0554 2	1,0277 1	24,4778	0	18,664 8	1,1435 9
2	53,72 93	11,3264	12,52 06	65.303, 77	2,1787 6	1,0893 8	24,5033	0	17,773 4	1,1454 6
2	53,77 23	12,068	12,52 42	60.638, 00	2,3212 5	1,1606 3	24,5295	0	16,864 7	1,1473 6
2	53,82 38	12,9102	12,52 86	55.928, 13	2,4854 2	1,2427 1	24,556	0	15,950 8	1,1492 9
2	53,88 58	13,8628	12,53 41	51.229, 51	2,6743 5	1,3371 5	24,5825	0	15,042 4	1,1512 1
2	53,96 01	14,9424	12,54 1	46.582, 05	2,8920 4	1,4460 2	24,6088	0	14,147 3	1,1531 1
2	54,04 92	16,169	12,54 96	42.026, 95	3,1435 5	1,5717 7	24,6346	0	13,273 2	1,1549 7
2	54,15 62	17,5493	12,56 03	37.625, 03	3,4331 3	1,7165 7	24,6596	0	12,431 6	1,1567 6



2	54,28 46	19,0998	12,57 36	33.413, 19	3,7668 3	1,8834 1	24,6835	0	11,629 3	1,1584 8
2	54,43 87	20,8393	12,58 99	29.421, 92	4,1518 6	2,0759 3	24,7063	0	10,871 9	1,1601 1
2	54,62 36	22,7843	12,61 01	25.678, 05	4,5965 8	2,2982 9	24,7276	0	10,164	1,1616 3
2	54,80 63	24,585	12,63 04	22.750, 14	5,0217 5	2,5108 8	24,7442	0	9,6123 7	1,1628 2
2	54,84 54	24,9586	12,63 48	22.197, 78	5,1115 7	2,5557 9	24,7474	0	9,5085 1	1,1630 5
2	55,11 17	27,3829	12,66 49	18.972, 56	5,7139 9	2,857	24,7657	0	8,9034 2	1,1643 6
2	55,43 11	30,1331	12,70 1	16.048, 61	6,4127 9	3,2064	24,7823	0	8,3571 8	1,1655 5
2	55,81 45	33,2474	12,74 42	13.413, 64	7,2297 9	3,6149	24,7971	0	7,8672 1	1,1666 2
2	56,27 46	36,7731	12,79 52	11.067, 34	8,1887 6	4,0943 9	24,8102	0	7,4332 9	1,1675 7
2	56,82 66	40,7737	12,85 48	9.005,8 5	9,3194	4,6597 1	24,8216	0	7,0547 3	1,1684
2	57,39 46	44,6935	12,91 4	7.440,7 8	10,469 9	5,2349 7	24,8301	0	6,7702 8	1,1690 3

