



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	1	1	1	TQV	eSg	09	46	24.8	0.8	0.03	0.03	0.02	90	02	35	54.9	2.5					
2	1	1	10	HBV	ePg	02	36	07.5					160									
				TQV	eSg	02	36	18.5	0.7													
				TQV	ePg	02	36	26.3														
3	1	1	22	TQV	eSg	09	59	45.8	0.5				360	09	58	45.5	5.7					
				TQV	ePg	10	00	46.1	0.6	0.03			480									
				BGV	eSg	10	00	29.1	0.8													
				BGV	ePg	10	01	05.5	0.8													
4	1	1	25	RGV	eSg	10	01	03.5	0.8	0.6	0.01		425	07	50	28.0	5.8	110.30	30			h = 20 km
				RGV	ePg	07	51	27.0														
				HBV	eP		51	29.6	0.8													
				HBV	ePg		51	43.0	0.8													
				HBV	eSg	07	52	35.0														
				HBV	ePg	07	51	31.0														
				TQV	eSg	07	52	59.5	0.8				525									
				TQV	ePg	07	51	40.8														
				TQV	eSg	07	52	45.0	0.6													
				TQV	ePg		52	39.3	0.8													
				TQV	eSg		53	04.8	0.7													
5	1	1	29	TQV	ePg	10	57	08.8	0.5	0.01	0.02		280	10	56	25.0	3.9					4.2
				TQV	eSg		57	12.8	0.5	0.04												
				TQV	ePg		57	46.3	0.7													
6	2	2	1	FBV	ePg	09	27	25.0														
				BGV	eSg	09	27	57.0	0.9				112	09	27	23.7	2.4					
				TQV	ePg	09	27	44.7	0.3				120									
				TQV	eSg	09	27	59.4	0.5													
7	2	2	5	TQV	eSg	14	33	26.5	0.8		0.02		30	22	58	16.9	1.6	105.20	5			2.6
8	2	2	13	TQV	ePg	22	58	21.9														
				TQV	eSg	22	58	25.4														
9	2	2	15	TQV	eSg	21	09	57.2	0.5	0.01	0.01											
10	2	2	16	TQV	ePg	04	41	20.6	0.6	0.01	0.03		465	04	40	13.2	3.9	103.80	35			h = 20 km
				TQV	eSg	04	41	36.1	0.7	0.06	0.06											
				HBV	ePg	04	41	25.6					580									
				HBV	eSg	04	41	46.6														
				BGV	eSg	04	42	58.6					560									
				BGV	ePg	04	41	59.0	1.0	0.01	0.01											
				BGV	eSg	04	43	07.2	1.2	0.07												
11	2	2	18	HBV	ePg	15	57	32.2					315	15	56	53.9	6.3	104.11	30			4.2
				HBV	eSg	15	57	57.7														
				BGV	eSg	15	58	20.2	0.3				400									
				BGV	ePg	15	57	38.1	0.5													
				BGV	eSg	15	57	46.5	0.5													
				BGV	ePg	15	58	17.6	1.0													
				BGV	eSg	15	58	33.6	1.0													
				TQV	ePg	15	57	38.1	0.5	0.01	0.01		415									
				TQV	eSg	15	57	49.3	0.8	0.02	0.03											
				HBV	ePg	01	58	40.3	0.8	0.07	0.12											
12	2	2	19	HBV	eSg	15	06	52.1	1.0	0.02	0.06		280									
13	2	2	22	TQV	ePg	15	07	55.3	0.5													
				TQV	eSg	15	08	29.5														
				HBV	ePg	15	08	05.5	1.0	0.01	0.04		325									
				HBV	eSg	15	08	45.4	1.0	0.07	0.15											
				BGV	ePg	15	08	48.0	0.6	0.01	0.01		390									
				BGV	eSg	15	08	48.0	0.9	0.03	0.04											

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
14	2	22	TQV	1SG	16	10	21.0	1.0	0.12	0.07	0.08	275					22.15	102.48	25	3.7	
15	2	22	HBV	1SG	16	10	36.9	0.5	0.01	0.02	0.02										
			TQV	1SG	21	22	07.1	0.5	0.05	0.06	0.06										
			HBV	ePE	21	22	40.7	0.8	0.01	0.01	0.01	320									
			BGV	eSG	PG	PG	15.9	1.0	0.1	0.06	0.08	390									
				PG	SG	PG	54.9	0.6	0.01	0.01	0.01										
				PG	SG	PG	48.0	0.6	0.03	0.02	0.03										
16	2	23	TQV	1PA	03	48	44.0	0.5	0.03	0.02	0.02	290	03	48	06.0	4.0				4.2	
				1PG			47.0	0.8			0.09										
				1SG	03	49	21.5	0.1	0.04			290									
			HBV	ePG	03	48	49.9	0.7	0.05												
17	2	23	TQV	1PG	09	24	24.9	0.3	0.02	0.02	0.02	130	09	23	58.9	2.5				3.2	
				1SG	09	24	21.3	0.7	0.03	0.03	0.03	430	00	42	31.3	5.4					
18	2	25	PLV	ePG	00	43	45.3	0.9	4.06	3.18	3.84										
19	2	25	HBV	1SG	19	04	37.3	0.9	0.01												
20	2	26	HBV	ePA	07	05	33.1	1.0	0.01	0.09	0.09	80	07	23	13.7	2.0				3.1	
				eSG	07	23	27.3														
				eSG			36.8														
21	3	10	TQV	1PG	16	11	52.4	0.6	0.04	0.03	0.02	410	16	10	42.0	5.2				3.7	
22	3	15	HBV	1SG	12	12	41.7	1.0	0.04			370	12	08	11.3	4.9				3.5	
				ePG	12	09	14.9	0.5	0.04	0.02	0.06										
				eSG	12	09	59.4	0.8	0.05	0.05	0.06	125	11	11	42.5	2.9				3.6	
23	3	17	TQV	1PG	11	12	03.3	0.5	0.05	0.05	0.13										
				1SG	11	12	18.3	0.8	0.05			210									
				ePG	11	12	19.7														
				1SG	12	37	45.2	0.6	0.05	0.06	0.06	120	12	36	28.7	2.4				3.5	
24	3	17	TQV	1PG	12	37	12.3	0.6	0.05	0.12	0.12										
25	3	18	TQV	ePG	02	41	26.8	0.6	0.05	0.03	0.03	470	02	40	30.7	5.8				3.7	
				1SG	02	42	35.8	0.8	0.03	0.04	0.03										
				e	02	43	09.9														
26	3	19	TQV	1SG	07	14	51.6	0.6	0.01	0.01	0.02	537	07	14	44.5	2.3				3.1	
				1PG	07	15	50.3	0.5	0.02	0.01	0.01	115	08	36	28.7	2.4					
				1SG	08	12	03.8	0.6	0.04	0.01	0.04										
27	3	20	TQV	ePG	08	12	43.0	0.6	0.04	0.01	0.01	490	08	40	30.7	5.8				3.7	
				1SG	08	13	42.0	0.8	0.04	0.10	0.06										
28	3	20	DGV	1PG	08	58	07.5	0.3	0.01	0.01	0.01	450	08	57	26.6	3.5				3.7	
				1SG	01	55	36.0	0.5	0.04	0.07	0.06										
29	3	25	BGV	1PG	01	55	46.2	0.8	0.01	0.01	0.01	450	01	54	29.2	5.6				4.1	
				1SG	12	23	50.2	0.8	0.06	0.02	0.02										
30	4	8	TQV	1PG	12	23	51.6	0.7	0.01	0.01	0.01	220	12	23	15.0	4.8	21.59	103.08	25	4.3	
				1SG	12	24	17.6	0.5	0.01	0.02	0.02										
				ePG	12	24	09.8	0.7	0.01	0.02	0.01	320	21	40	20.9	5.0				4.2	
				eSG	21	41	47.8	0.7	0.02	0.05	0.02	360	21	40	20.9	5.0					
31	4	12	TQV	1PA	21	41	09.0	1.0	0.13	0.17	0.14	410	21	40	20.9	5.0					
				1PG	21	42	18.7	0.8	0.02	0.05	0.02										
				1SG	21	41	01.7	0.9	0.01	0.01	0.01	410	19	16	05.0	1.7					
				ePA	19	42	21.0	0.9	0.01	0.02	0.02	45	19	16	05.0	1.7					
				1PG	19	42	35.0														
32	4	18	DGV	1SG	19	42	24.5														
				ePG	19	16	12.9														
				eSG			18.4														

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
33	5	31	BGV	epn epg esg	06	13	13.2 28.2 16.7	1.0	0.01	0.02	1.27	405	06	12	18.9	5.1				5.5			
34	5	31	BGV	epn epg esg	08	40	25.9 39.9 32.4	0.6 0.6 0.8	0.02 0.02 0.07	0.04 0.04 0.07	0.01 0.03 0.09	440	08	39	24.9	5.5				4.3			
35	6	1	TQV HBV PLV	epn epn ipn isg epn esg epn epg esg epn esg	06 06 06 14 04 34 34 40	13 13 13 14 34 34 40	03.7 08.5 24.3 32.3 01.4 56.9 15.2 27.0	0.7 0.9 1.3 0.5 0.6 0.8	0.6 37.4	2.66 38.6	2.05 52.13	550	08	39	27.4	4.6				4.5			
36	6	1	HBV	epn esg epn epn esg epn epg esg epn esg	08 08 11	41 40 41 55	08.7 20.0 35.5 10.4	0.8	0.02 0.05 0.22 0.21	0.08 0.05 0.22 0.21	0.03	475	11	54	50.0	4.7	24.02	103.29	30	4.1	h = 20 km		
37	6	1	TQV	epn epg esg epn esg epn epg esg epn esg	11	55	20.7 55.0 18.5 39.5 23.5 40.2 32.2 58.5 37.7 06.9 05.4 11.0	1.0 1.0 1.0 1.0 0.9 1.0 0.8 0.8 0.9 0.9 1.0 0.6	0.13	0.13 0.02 0.06 0.18 0.02 0.02	415	17	07	13.9	4.4					3.5			
38	6	1	TQV	epn epg esg epn esg epn epg esg epn esg	11	55	20.7 55.0 18.5 39.5 23.5 40.2 32.2 58.5 37.7 06.9 05.4 11.0	1.0 1.0 1.0 1.0 0.9 1.0 0.8 0.8 0.9 0.9 1.0 0.6	0.13	0.13 0.02 0.06 0.18 0.02 0.02	415	17	07	13.9	4.4						3.5		
39	6	1	TQV	epn epg esg epn esg epn epg esg epn esg	17	08	37.7 06.9 05.4 11.0	0.8 0.9 0.9 1.0	0.01 0.04	0.01 0.04	0.01 0.04	0.02 0.12 0.34 0.02 0.06 0.17 0.02 0.09 0.16 0.02 0.13	380	14	01	44.6	4.9	22.53	102.20	30	4.3	h = 20 km	
40	6	4	TQV	epn esg ipn epg isg ipn ipg isg ipn ipg isg ipn ipg isg	14	02	21.5 03.5 15.5 30.0 16.5 25.0 39.8 28.8 52.0 03.0 45.0 58.0 11.0 55.5 09.2 23.2 16.2 30.9 24.0 47.0 53.0 07.3 02.5 16.5 19.9 00.7 10.2	0.7 1.0 1.0 1.0 1.1 0.5 0.8 1.0 0.5 0.8 1.0 1.0 1.0 0.8 0.6 1.0 0.8 0.9 0.9 1.0 1.0 1.0 1.6 2.8 0.8 1.2	0.02 0.05 0.44 0.04 0.01 0.03 0.18	320	14	01	44.6	4.9								4.3	h = 20 km
41	6	7	TQV	epn epg esg ipn ipg isg ipn ipg isg ipn ipg isg ipn ipg isg	02	12 13 13 12 13	52.0 03.0 45.0 58.0 11.0 55.5 09.2 23.2 16.2 30.9 24.0 47.0 53.0 07.3 02.5 16.5 19.9 00.7 10.2	0.5 0.8 1.0 1.0 1.0 0.8 0.6 1.0 0.8 0.9 0.9 1.0 1.0 1.0 0.8 0.6 1.0 0.8 0.9 0.9 1.0 1.0 1.0 1.6 2.8 0.8 1.2	0.02 0.03 0.18	345	12	25.9	4.98	21.58	101.93	30	4.3				4.3	h = 20 km	
42	6	10	BGV	epn esg ipn ipg esg epn epg esg epn esg epn esg epn esg epn esg	05 06 02 02	59 00 06 07 08 07 08 08 23 24	30.9 24.0 47.0 53.0 07.3 02.5 16.5 19.9 00.7 10.2	0.8 0.9 1.0 1.0 0.9 1.0 1.6 2.8 0.8 1.2	0.01 0.03 0.02 0.04 0.19 0.44 0.01 0.04	0.01 0.02 0.17 0.43	480	02	06	12.6	6.0					4.1			
43	6	12	BGV	epn esg ipn ipg esg epn epg esg epn esg epn esg epn esg epn esg	02 02	06 07 08 07 08 07 08 08 23 24	07.3 02.5 16.5 19.9 00.7 10.2	1.0 1.0 1.0 1.0 1.0 1.0 1.6 2.8 0.8 1.2	0.02 0.01 0.06 0.11 0.27 14.4 0.02 0.06	0.02 0.08 0.15 0.17 0.21 2.1	450	02	06	12.6	6.0						4.4		
44	6	20	TQV	e esg	14	23 24	00.7 10.2	0.8 1.2	0.01 0.05	0.01 0.06	0.02 0.08 0.15 0.17 0.21 2.1	520	02	06	12.6	6.0				4.4			

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
45	6	22	BGV	ePn	02	32	01.5	0.6	0.04			265								3.4	
				eSg			40.5	0.5	0.02												
				ePn	02	32	44.0	0.6	0.11	0.1	0.07										
46	6	22	BGV	eSg	03	33	09.0	0.3	0.02			345	03	12	53.7	4.6				3.3	
				ePg			37.8	0.3	0.05												
				eSg	03	14	20.0	0.4	0.01	0.02											
47	6	23	TQV	eSg	03	14	49.8					120	22	58	54.6	2.4				3.0	
				ePg	22	59	16.0														
48	6	25	BGV	eSg	19	04	31.0					225	19	03	28.0	3.4				3.7	
				ePg			05.9														
49	7	3	BGV	ePg	11	48	59.0	0.5	0.01		0.01	170	11	48	29.0	2.9				2.9	
				eSg			20.0	0.5	0.07		0.07										
50	7	4	TQV	ePn	01	39	11.4	0.8	0.04	0.03	0.03	500								5.6	
				eSg			31.4	0.9	0.35	0.63	0.46										
51	7	5	TQV	ePn	00	18	44.9	0.8	0.01		0.01	425								4.5	
				ePb			49.5	0.7	0.03		0.03										
				eSg			37.0	0.6	0.11		0.05										
52	7	8	TQV	ePn	05	11	01.3	0.7	0.01	0.01	0.03	450	05	09	56.0	5.4				3.7	
				ePg			15.1	0.8	0.01	0.02	0.01										
				eSg			10.5	0.9	0.03	0.04	0.02										
53	7	1	TQV	ePn	16	16	46.8	1.1	0.05	0.06		390								3.9	
				eSg			47.3														
54	7	1	HBV	ePn	17	17	12.1														
				eSg			52.1	1.0	0.06		0.03									4.0	
55	7	1	HBV	ePn	07	15	14.6	0.6	0.02	0.01		290									
				eSg			53.1	1.0	0.04	0.07	0.04										
				eSg			18.4	1.0	0.02			308									
56	7	1	BGV	eSg	07	16	18.4					475								3.9	
				ePn	11	17	12.8	0.7	0.02												
				eSg			28.3														
57	7	1	BGV	ePg	17	07	49.6					365	17	06	53.8	4.8				4.1	
				eSg			33.8														
				ePn	17	08	49.6	0.5	0.02	0.01	0.01	430									
				eSg			57.1	1.0	0.05	0.03	0.03										
58	8	3	HBV	ePg	06	02	51.3					90	06	02	35.3	2.1				2.7	
				eSg			02.3														
59	8	4	BGV	ePg	21	07	12.2					210	21	06	35.2	3.3					
				eSg			38.2	0.4	0.03	0.01											
				ePn	00	57	46.4	0.4	0.01		0.01	365	00	57	01.3	4.8					
60	8	19	BGV	ePg			04.9	0.8	0.01		0.01										
				eSg			49.4	0.8	0.02		0.02										
				eSg			12.5	1.0				430									
61	8	19	HBV	ePn	01	15	21.7	0.3		0.05	0.06	450	11	14	14.0	6.4	25.26	102.84	30	4.7	h = 25 km
				ePg			37.2	0.3													
				eSg			31.2	1.0		0.06											
				ePn	01	15	28.6	0.5	0.01		0.01	560									
				ePg			47.6	0.6	0.01		0.02										
				eSg			29.8	0.8	0.07		0.04										
				ePn	01	15	57.8	0.8	0.09		0.11	560									
				ePg			34.9	0.8		0.01											
				eSg			52.4	1.0		0.05											
62	8	21	TQV	eSg	21	17	00.9	1.0			0.06	205	21	27	13.8	3.8				3.3	
				ePg			53.1	0.2	0.03		0.02										
				eSg			18.1	0.4	0.09		0.02	320									
				ePg	21	28	06.6														
				eSg			45.6														

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
96	10	30	TQV	1PG	21	18	11.1	0.7	0.01	0.01	0.14										
			HBV	1SG			52.1	0.6	0.06	0.03	0.04										
			BGV	1SG	21	18	05.1	0.6	0.03	0.01	0.03										
			TQV	1SG	21	18	37.3	0.8	0.01	0.01	0.02										
97	10	30	TQV	ePG	22	43	52.6	0.2	0.01	0.01	0.01	210	22	43	16.7	3.5	23.41	106.14	20		
			BGV	eSE	44	44	19.1	0.7	0.04	0.04		250									
			BGV	ePE	44	44	01.1			0.01	0.04										
			HBV	1SG	22	44	11.6	0.5	0.02	0.01	0.04										
98	10	31	TQV	1SG	22	44	49.4	0.8	0.01	0.03	0.03	316	20	11	56.4	4.0	23.40	105.45	20	3.7	
			TQV	ePn	20	12	16.2	0.4	0.01	0.01	0.01	200									
			BGV	1SG	20	12	43.2	0.5		0.08	0.02	250									
			BGV	1Pn	20	12	25.7	0.5			0.02										
			HBV	1PG	20	12	28.7	0.5			0.01	305									
			HBV	1SG	20	12	36.0	0.6	0.01	0.01	0.01										
			TQV	ePG	21	02	12.5	1.0	0.08	0.06	0.08	210	21	02	09.8	3.8	23.57	105.82	17		
99	10	31	TQV	eSE	21	03	49.1	0.6	0.06	0.04	0.04	260									
			BGV	ePn	21	02	12.1	0.5		0.04	0.04										
			HBV	1SG	21	03	54.8	0.5		0.03	0.03	313									
			HBV	eSE	21	03	26.3	0.9	0.02	0.03	0.03										
			HBV	1SG	21	03	41.5	0.9			0.03										
100	11	1	TQV	ePG	12	01	21.7	0.2		0.01	0.01	225	12	00	43.8	3.4	23.64	106.25			
			HBV	eSG	12	01	48.2	0.5		0.03	0.03										
			HBV	ePn	12	01	38.5	0.8	0.07	0.05		331									
			TQV	eSE	16	02	18.5	0.8			0.03	220	16	13	00.2	3.9	23.53	106.27	20	3.9	
101	11	5	TQV	ePn	16	13	33.2	0.5			0.03										
			BGV	1PG	16	13	39.2	0.6	0.01	0.01	0.16										
			BGV	1SG	16	14	07.2	0.6	0.07	0.06		225									
			BGV	ePG	16	13	45.2	0.5		0.01	0.01										
			HBV	eSE	16	14	17.3	0.5	0.04	0.02	0.02	320									
			HBV	1Pn	16	13	47.0	0.6	0.09	0.09	0.09										
			HBV	1PG	09	14	54.5	0.7	0.06	0.03	0.11										
			HBV	1SG	09	14	33.0	0.8	0.02	0.01	0.01	200	02	23	06.7	3.2					
102	11	14	HBV	e	09	07	24.9	1.0	0.06	0.03	0.01										
			BGV	1SG	02	23	56.0	0.6	0.02	0.01	0.01										
			BGV	ePG	02	23	39.2	0.6	0.05	0.01	0.01										
			TQV	eSG	24	24	42.0	0.5	0.05	0.04	0.04										
104	11	30	TQV	eSG	SE	24	06.7	0.7	0.05	0.05	0.04	270									
			HBV	ePn	12	PE	33s	0.7	0.01	0.01	0.02	280									
			TQV	eSE	12	54	25.6	0.7	0.02	0.01	0.02										
			TQV	eP	12	54	06.6	0.5	0.05	0.04	0.04										
			TQV	eP	12	54	31.5	0.5	0.05	0.05	0.04										
105	12	3	TQV	ePG	14	26	15.9	0.2	0.02	0.01	0.01	125	14	25	03.9	2.5					
			HBV	eSG	14	26	31.3	0.5	0.10	0.03	0.03										
			HBV	ePG	20	54	02.5	0.5	0.05	0.01	0.02										
			BGV	e	20	54	18.0	0.5	0.05	0.01	0.02	250	13	29	42.1	3.9					
			TQV	eP	20	54	18.6	0.5	0.05	0.01	0.02	320									
			TQV	ePG	13	30	20.3	0.5	0.05	0.01	0.02										
			HBV	1SG	13	30	45.8	0.6	0.06	0.06	0.04	200	17	35	43.2	3.5	23.62	105.74	20	3.7	
			HBV	ePG	13	30	36.8	0.6	0.06	0.06	0.04	320									
			TQV	eSG	17	36	16.3	0.6	0.06	0.06	0.04	200	17	35	43.2	3.5	23.62	105.74	20	3.7	
			TQV	ePG	17	36	19.2	0.6	0.06	0.06	0.04	265									
108	12	14	BGV	ePG	17	36	43.7	0.6	0.06	0.06	0.04										

h = 20 km

h = 25 km

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
109	12	19	HBV BGV	ESG ESG EPG ISG IPG ISG	17 05	37 37 47	00.0 15.5 33.0	0.8				319 400	05	46	23.7	5.1				3.6	
110	12	20	TQV	ISG IPG ISG	06	48 19 20	21.5 44.8 32.8	0.8 0.7 0.9	0.02 0.01 0.04	0.01 0.03	0.01 0.04	390	06	18	36.2	5.1				3.8	
111	12	28	TQV	ISG	PG	PA PA	14.8					410								5.1	
112	12	30	TQV	IPG	PG	PA PA	14.8			0.01	0.01	410	20	17	28.7	2.5				5.0	
113	12	30	TQV	IPG ISG	21	17 15	50.1 05.1	0.5 0.7	0.02 0.05	0.01	0.03	120	20	17	28.7	2.5				3.3	
114	12	31	TQV	IPG ISG	20	12	17.2 43.2	0.3 0.7	0.01	0.01	0.01 0.10	210	20	11	40.1	1.5				3.8	