

Дата		0 ^h всемирного времени			Дата		0 ^h всемирного времени		
		Звездное время		Нугация в прямом восхождении			Звездное время		Нугация в прямом восхождении
		истинное	среднее				истинное	среднее	
				0.0001				0.0001	
Янв.	0	h m s 6 37 36.2347	s 35.5127	+ 7102 + 118	Февр.	h m s 9 38 57.8472	s 57.0596	+ 7990 - 114	
	1	6 41 32.7918	32.0681	7138 + 100		16	9 42 54.3991	53.6150	7987 - 145
	2	6 45 29.3460	28.6234	7173 + 53		17	9 46 50.9534	50.1703	7983 - 152
	3	6 49 25.8981	25.1788	7209 - 15		18	9 50 47.5100	46.7257	7978 - 134
	4	6 53 22.4497	21.7342	7244 - 88		19	9 54 44.0688	43.2811	7972 - 95
	5	6 57 19.0026	18.2895	+ 7278 - 147		20	9 58 40.6289	39.8364	+ 7965 - 41
	6	7 01 15.5585	14.8449	7312 - 176		21	10 02 37.1896	36.3918	7958 + 20
	7	7 05 12.1184	11.4003	7345 - 164		22	10 06 33.7495	32.9472	7949 + 75
	8	7 09 08.6822	07.9556	7378 - 112		23	10 10 30.3076	29.5025	7940 + 111
	9	7 13 05.2490	04.5110	7410 - 31		24	10 14 26.8627	26.0579	7930 + 118
	10	7 17 01.8166	01.0664	+ 7442 + 60		25	10 18 23.4143	22.6133	+ 7919 + 91
	11	7 20 58.3830	57.6217	7473 + 139		26	10 22 19.9628	19.1686	7907 + 35
	12	7 24 54.9464	54.1771	7503 + 190		27	10 26 16.5097	15.7240	7895 - 38
	13	7 28 51.5059	50.7325	7533 + 202		28	10 30 13.0570	12.2794	7882 - 106
14	7 32 48.0618	47.2878	7561 + 178	Март	1	10 34 09.6065	08.8347	7868 - 150	
15	7 36 44.6147	43.8432	+ 7590 + 126	2	10 38 06.1597	05.3901	+ 7854 - 157		
16	7 40 41.1660	40.3986	7617 + 58	3	10 42 02.7169	01.9455	7839 - 124		
17	7 44 37.7169	36.9539	7643 - 14	4	10 45 59.2772	58.5008	7823 - 59		
18	7 48 34.2685	33.5093	7669 - 77	5	10 49 55.8392	55.0562	7807 + 23		
19	7 52 30.8217	30.0647	7693 - 123	6	10 53 52.4009	51.6116	7790 + 103		
20	7 56 27.3771	26.6200	+ 7717 - 147	7	10 57 48.9607	48.1669	+ 7773 + 165		
21	8 00 23.9349	23.1754	7740 - 145	8	11 01 45.5175	44.7223	7755 + 196		
22	8 04 20.4952	19.7308	7762 - 118	9	11 05 42.0708	41.2777	7737 + 194		
23	8 08 17.0573	16.2861	7783 - 71	10	11 09 38.6208	37.8330	7719 + 159		
24	8 12 13.6207	12.8415	7803 - 12	11	11 13 35.1685	34.3884	7700 + 101		
25	8 16 10.1840	09.3969	+ 7823 + 49	12	11 17 31.7149	30.9438	+ 7681 + 30		
26	8 20 06.7461	05.9522	7841 + 98	13	11 21 28.2613	27.4991	7661 - 40		
27	8 24 03.3057	02.5076	7858 + 123	14	11 25 24.8088	24.0545	7641 - 99		
28	8 27 59.8620	59.0630	7874 + 116	15	11 29 21.3582	20.6099	7621 - 138		
29	8 31 56.4149	55.6183	7889 + 76	16	11 33 17.9100	17.1652	7601 - 153		
30	8 35 52.9653	52.1737	+ 7904 + 12	17	11 37 14.4643	13.7206	+ 7581 - 144		
31	8 39 49.5146	48.7291	7917 - 61	18	11 41 11.0207	10.2760	7560 - 112		
Февр.	1	8 43 46.0649	45.2844	7929 - 124	19	11 45 07.5788	06.8313	7539 - 64	
	2	8 47 42.6177	41.8398	7940 - 161	20	11 49 04.1378	03.3867	7519 - 8	
	3	8 51 39.1742	38.3952	7950 - 160	21	11 52 60.6965	59.9421	7498 + 47	
	4	8 55 35.7344	34.9505	+ 7959 - 120	22	11 56 57.2540	56.4974	+ 7477 + 89	
	5	8 59 32.2976	31.5059	7967 - 50	23	12 00 53.8091	53.0528	7456 + 107	
	6	9 03 28.8621	28.0613	7974 + 34	24	12 04 50.3612	49.6082	7436 + 94	
	7	9 07 25.4260	24.6166	7980 + 114	25	12 08 46.9100	46.1635	7415 + 50	
	8	9 11 21.9876	21.1720	7984 + 172	26	12 12 43.4566	42.7189	7395 - 18	
	9	9 15 18.5458	17.7274	+ 7988 + 196	27	12 16 40.0026	39.2743	+ 7374 - 91	
	10	9 19 15.1003	14.2828	7991 + 185	28	12 20 36.5504	35.8297	7354 - 146	
	11	9 23 11.6516	10.8381	7993 + 142	29	12 24 33.1019	32.3850	7334 - 165	
	12	9 27 08.2007	07.3935	7994 + 78	30	12 28 29.6578	28.9404	7315 - 141	
	13	9 31 04.7489	03.9489	7993 + 7	31	12 32 26.2175	25.4958	7295 - 78	
	14	9 35 01.2974	00.5042	+ 7992 - 61	Апр.	1	12 36 22.7794	22.0511	+ 7276 + 7
	15	9 38 57.8472	57.0596	+ 7990 - 114		2	12 40 19.3415	18.6065	+ 7257 + 93

Дата	0 ^h всемирного времени			Дата	0 ^h всемирного времени				
	Звездное время		Нутация в прямом восхождении		Звездное время		Нутация в прямом восхождении		
	истинное	среднее			истинное	среднее			
			0.0001				0.0001		
Апр.	1	12 36 22.7794	22.0511	+ 7276 + 7	Май	17	15 37 44.3183	43.5980	+ 7109 + 94
	2	12 40 19.3415	18.6065	7257 + 93		18	15 41 40.8726	40.1534	7125 + 68
	3	12 44 15.9019	15.1619	7239 + 161		19	15 45 37.4244	36.7088	7141 + 16
	4	12 48 12.4594	11.7172	7221 + 201		20	15 49 33.9746	33.2641	7158 - 54
	5	12 52 09.0135	08.2726	7204 + 206		21	15 53 30.5246	29.8195	7176 - 125
	6	12 56 05.5644	04.8280	+ 7187 + 178		22	15 57 27.0767	26.3749	+ 7195 - 176
	7	13 00 02.1128	01.3833	7170 + 124		23	16 01 23.6327	22.9302	7214 - 190
	8	13 03 58.6597	57.9387	7154 + 56		24	16 05 20.1934	19.4856	7235 - 156
	9	13 07 55.2064	54.4941	7139 - 15		25	16 09 16.7584	16.0410	7255 - 81
	10	13 11 51.7540	51.0494	7124 - 78		26	16 13 13.3258	12.5963	7277 + 18
	11	13 15 48.3034	47.6048	+ 7109 - 124		27	16 17 09.8929	09.1517	+ 7299 + 113
	12	13 19 44.8551	44.1602	7095 - 146		28	16 21 06.4576	05.7071	7322 + 183
	13	13 23 41.4093	40.7155	7082 - 144		29	16 25 03.0185	02.2624	7345 + 215
	14	13 27 37.9659	37.2709	7070 - 119		30	16 28 59.5755	58.8178	7369 + 208
	15	13 31 34.5244	33.8263	7058 - 77		31	16 32 56.1293	55.3732	7394 + 168
16	13 35 31.0839	30.3816	+ 7047 - 25	Июнь	1	16 36 52.6810	51.9285	+ 7419 + 106	
17	13 39 27.6435	26.9370	7037 + 28		2	16 40 49.2319	48.4839	7445 + 35	
18	13 43 24.2022	23.4924	7027 + 71		3	16 44 45.7831	45.0393	7471 - 33	
19	13 47 20.7590	20.0477	7018 + 95		4	16 48 42.3357	41.5946	7498 - 87	
20	13 51 17.3133	16.6031	7010 + 92		5	16 52 38.8904	38.1500	7525 - 121	
21	13 55 13.8646	13.1585	+ 7003 + 58		6	16 56 35.4476	34.7054	+ 7553 - 131	
22	13 59 10.4133	09.7138	6996 - 1		7	17 00 32.0071	31.2607	7581 - 117	
23	14 03 06.9608	06.2692	6990 - 74		8	17 04 28.5688	27.8161	7609 - 82	
24	14 07 03.5091	02.8246	6985 - 140		9	17 08 25.1319	24.3715	7638 - 34	
25	14 10 60.0604	59.3799	6981 - 176		10	17 12 21.6954	20.9268	7667 + 18	
26	14 14 56.6162	55.9353	+ 6978 - 168	11	17 16 18.2584	17.4822	+ 7697 + 65		
27	14 18 53.1767	52.4907	6975 - 115	12	17 20 14.8198	14.0376	7727 + 96		
28	14 22 49.7405	49.0460	6974 - 29	13	17 24 11.3789	10.5929	7757 + 103		
29	14 26 46.3053	45.6014	6973 + 66	14	17 28 07.9353	07.1483	7787 + 83		
30	14 30 42.8689	42.1568	6973 + 148	15	17 32 04.4890	03.7037	7817 + 36		
Май	1	14 34 39.4296	38.7121	+ 6974 + 200	16	17 36 01.0408	00.2590	+ 7848 - 31	
	2	14 38 35.9867	35.2675	6976 + 216	17	17 39 57.5920	56.8144	7879 - 103	
	3	14 42 32.5403	31.8229	6979 + 196	18	17 43 54.1444	53.3698	7909 - 163	
	4	14 46 29.0913	28.3782	6983 + 148	19	17 47 50.6998	49.9251	7940 - 194	
	5	14 50 25.6405	24.9336	6987 + 82	20	17 51 47.2595	46.4805	7971 - 182	
	6	14 54 22.1893	21.4890	+ 6992 + 11	21	17 55 43.8236	43.0359	+ 8003 - 126	
	7	14 58 18.7387	18.0443	6999 - 55	22	17 59 40.3910	39.5912	8034 - 36	
	8	15 02 15.2898	14.5997	7006 - 105	23	18 03 36.9595	36.1466	8065 + 64	
	9	15 06 11.8431	11.1551	7014 - 134	24	18 07 33.5265	32.7020	8096 + 149	
	10	15 10 08.3989	07.7104	7023 - 138	25	18 11 30.0901	29.2574	8127 + 201	
	11	15 14 04.9572	04.2658	+ 7033 - 119	26	18 15 26.6495	25.8127	+ 8157 + 210	
	12	15 18 01.5174	00.8212	7043 - 81	27	18 19 23.2051	22.3681	8188 + 182	
	13	15 21 58.0789	57.3766	7055 - 31	28	18 23 19.7579	18.9235	8219 + 126	
	14	15 25 54.6407	53.9319	7067 + 21	29	18 27 16.3094	15.4788	8249 + 57	
	15	15 29 51.2018	50.4873	7080 + 65	30	18 31 12.8608	12.0342	8279 - 13	
16	15 33 47.7613	47.0427	+ 7094 + 92	Июль	1	18 35 09.4133	08.5896	+ 8309 - 71	
17	15 37 44.3183	43.5980	+ 7109 + 94		2	18 39 05.9676	05.1449	+ 8338 - 111	

0 ^h всемирного времени				0 ^h всемирного времени			
Дата	Звездное время		Нутация в прямом восхождении	Дата	Звездное время		Нутация в прямом восхождении
	истинное	среднее			истинное	среднее	
			0.0001				0.0001
Июль	h m s	s		Авг.	h m s	s	
1	18 35 09.4133	08.5896	+ 8309 — 71	16	21 36 31.0399	30.1365	+ 9043 — 9
2	18 39 05.9676	05.1449	8338 — 111	17	21 40 27.6038	26.6918	9040 + 79
3	18 43 02.5243	01.7003	8368 — 127	18	21 44 24.1659	23.2472	9036 + 151
4	18 46 59.0835	58.2557	8396 — 118	19	21 48 20.7248	19.8026	9032 + 190
5	18 50 55.6447	54.8110	8425 — 88	20	21 52 17.2796	16.3579	9026 + 191
6	18 54 52.2075	51.3664	+ 8453 — 42	21	21 56 13.8309	12.9133	+ 9020 + 156
7	18 58 48.7711	47.9218	8481 + 12	22	22 00 10.3795	09.4687	9013 + 95
8	19 02 45.3342	44.4771	8508 + 62	23	22 04 06.9270	06.0240	9005 + 24
9	19 06 41.8960	41.0325	8535 + 99	24	22 08 03.4748	02.5794	8997 — 43
10	19 10 38.4554	37.5879	8562 + 113	25	22 11 60.0240	59.1348	8988 — 95
11	19 14 35.0120	34.1432	+ 8588 + 100	26	22 15 56.5754	55.6901	+ 8977 — 125
12	19 18 31.5657	30.6986	8613 + 58	27	22 19 53.1290	52.2455	8967 — 131
13	19 22 28.1173	27.2540	8638 — 5	28	22 23 49.6850	48.8009	8955 — 114
14	19 26 24.6679	23.8093	8662 — 77	29	22 27 46.2429	45.3562	8943 — 76
15	19 30 21.2191	20.3647	8686 — 142	30	22 31 42.8020	41.9116	8930 — 26
16	19 34 17.7727	16.9201	+ 8709 — 183	31	22 35 39.3614	38.4670	+ 8916 + 28
17	19 38 14.3299	13.4754	8732 — 187	Сент.	22 39 35.9201	35.0223	8902 + 76
18	19 42 10.8912	10.0308	8753 — 149	2	22 43 32.4772	31.5777	8887 + 108
19	19 46 07.4561	06.5862	8774 — 75	3	22 47 29.0317	28.1331	8872 + 115
20	19 50 04.0229	03.1415	8795 + 18	4	22 51 25.5832	24.6884	8856 + 92
21	19 53 60.5893	59.6969	+ 8815 + 109	5	22 55 22.1319	21.2438	+ 8839 + 42
22	19 57 57.1531	56.2523	8834 + 175	6	22 59 18.6787	17.7992	8822 — 27
23	20 01 53.7131	52.8076	8852 + 202	7	23 03 15.2252	14.3545	8804 — 98
24	20 05 50.2688	49.3630	8870 + 189	8	23 07 11.7734	10.9099	8786 — 152
25	20 09 46.8212	45.9184	8886 + 142	9	23 11 08.3247	07.4653	8768 — 174
26	20 13 43.3716	42.4737	+ 8902 + 76	10	23 15 04.8799	04.0206	+ 8748 — 156
27	20 17 39.9214	39.0291	8917 + 5	11	23 19 01.4388	00.5760	8729 — 101
28	20 21 36.4719	35.5845	8932 — 58	12	23 22 58.0002	57.1314	8709 — 21
29	20 25 33.0241	32.1398	8945 — 103	13	23 26 54.5621	53.6867	8689 + 65
30	20 29 29.5784	28.6952	8958 — 126	14	23 30 51.1228	50.2421	8669 + 138
31	20 33 26.1351	25.2506	+ 8970 — 124	15	23 34 47.6807	46.7975	+ 8648 + 184
Авг.	20 37 22.6941	21.8059	8981 — 100	16	23 38 44.2349	43.3528	8627 + 194
2	20 41 19.2547	18.3613	8991 — 57	17	23 42 40.7856	39.9082	8605 + 168
3	20 45 15.8164	14.9167	9001 — 4	18	23 46 37.3334	36.4636	8584 + 115
4	20 49 12.3779	11.4720	9009 + 50	19	23 50 33.8798	33.0189	8562 + 46
5	20 53 08.9384	08.0274	+ 9017 + 93	20	23 54 30.4260	29.5743	+ 8540 — 24
6	20 57 05.4968	04.5828	9024 + 117	21	23 58 26.9733	26.1297	8518 — 82
7	21 01 02.0523	01.1382	9029 + 112	22	0 02 23.5227	22.6851	8496 — 120
8	21 04 58.6048	57.6935	9034 + 79	23	0 06 20.0744	19.2404	8474 — 134
9	21 08 55.1548	54.2489	9039 + 21	24	0 10 16.6286	15.7958	8452 — 124
10	21 12 51.7034	50.8043	+ 9042 — 50	25	0 14 13.1849	12.3512	+ 8430 — 93
11	21 16 48.2522	47.3596	9044 — 118	26	0 18 09.7426	08.9065	8408 — 48
12	21 20 44.8029	43.9150	9046 — 166	27	0 22 06.3009	05.4619	8386 + 4
13	21 24 41.3570	40.4704	9046 — 180	28	0 26 02.8590	02.0173	8364 + 53
14	21 28 37.9149	37.0257	9046 — 154	29	0 29 59.4159	58.5726	8343 + 90
15	21 32 34.4763	33.5811	+ 9045 — 93	Окт.	0 33 55.9707	55.1280	+ 8321 + 106
16	21 36 31.0399	30.1365	+ 9043 — 9	1	0 37 52.5228	51.6834	+ 8300 + 95

0 ^h всемирного времени				0 ^h всемирного времени			
Дата	Звездное время		Нутация в прямом восхождении	Дата	Звездное время		Нутация в прямом восхождении
	истинное	среднее			истинное	среднее	
			0.0001				0.0001
Окт. 1	h m s 0 37 52.5228	s 51.6834	+ 8300 + 95	Нояб. 16	h m s 3 39 14.0187	s 13.2303	+ 8002 - 118
2	0 41 49.0721	48.2387	8279 + 55	17	3 43 10.5751	09.7856	8017 - 122
3	0 45 45.6191	44.7941	8258 - 7	18	3 47 07.1340	06.3410	8032 - 103
4	0 49 42.1653	41.3495	8237 - 79	19	3 51 03.6947	02.8964	8049 - 66
5	0 53 38.7124	37.9048	8217 - 142	20	3 54 60.2565	59.4517	8067 - 19
6	0 57 35.2624	34.4602	+ 8197 - 175	21	3 58 56.8185	56.0071	+ 8086 + 29
7	1 01 31.8166	31.0156	8178 - 167	22	4 02 53.3799	52.5625	8105 + 69
8	1 05 28.3751	27.5709	8159 - 117	23	4 06 49.9397	49.1178	8126 + 93
9	1 09 24.9366	24.1263	8140 - 38	24	4 10 46.4974	45.6732	8147 + 95
10	1 13 21.4991	20.6817	8122 + 52	25	4 14 43.0526	42.2286	8169 + 71
11	1 17 18.0607	17.2370	+ 8105 + 132	26	4 18 39.6055	38.7839	+ 8192 + 23
12	1 21 14.6196	13.7924	8088 + 185	27	4 22 36.1567	35.3393	8216 - 42
13	1 25 11.1751	10.3478	8071 + 202	28	4 26 32.7075	31.8947	8241 - 113
14	1 29 07.7270	06.9031	8055 + 183	29	4 30 29.2595	28.4500	8266 - 172
15	1 33 04.2761	03.4585	8040 + 136	30	4 34 25.8146	25.0054	8293 - 201
16	1 37 00.8234	00.0139	+ 8026 + 70	Дек. 1	4 38 22.3741	21.5608	+ 8320 - 186
17	1 40 57.3704	56.5692	8012 - 0	2	4 42 18.9384	18.1161	8348 - 125
18	1 44 53.9182	53.1246	7999 - 63	3	4 46 15.5060	14.6715	8376 - 31
19	1 48 50.4678	49.6800	7986 - 108	4	4 50 12.0746	11.2269	8405 + 72
20	1 52 47.0198	46.2353	7974 - 130	5	4 54 08.6415	07.7822	8435 + 157
21	1 56 43.5744	42.7907	+ 7964 - 127	6	4 58 05.2047	04.3376	+ 8465 + 206
22	2 00 40.1312	39.3461	7953 - 102	7	5 02 01.7637	00.8930	8496 + 211
23	2 04 36.6897	35.9014	7944 - 61	8	5 05 58.3190	57.4483	8528 + 179
24	2 08 33.2491	32.4568	7936 - 12	9	5 09 54.8717	54.0037	8560 + 120
25	2 12 29.8086	29.0122	7928 + 36	10	5 13 51.4234	50.5591	8592 + 51
26	2 16 26.3672	25.5675	+ 7921 + 75	11	5 17 47.9753	47.1144	+ 8625 - 16
27	2 20 22.9240	22.1229	7915 + 96	12	5 21 44.5286	43.6698	8658 - 70
28	2 24 19.4786	18.6783	7910 + 93	13	5 25 41.0840	40.2252	8692 - 104
29	2 28 16.0306	15.2336	7906 + 63	14	5 29 37.6418	36.7805	8726 - 113
30	2 32 12.5802	11.7890	7903 + 8	15	5 33 34.2020	33.3359	8761 - 100
31	2 36 09.1284	08.3444	+ 7901 - 61	16	5 37 30.7641	29.8913	+ 8795 - 67
Нояб. 1	2 40 05.6767	04.8998	7900 - 130	17	5 41 27.3275	26.4467	8830 - 21
2	2 44 02.2273	01.4551	7900 - 178	18	5 45 23.8913	23.0020	8865 + 27
3	2 47 58.7818	58.0105	7901 - 187	19	5 49 20.4544	19.5574	8900 + 70
4	2 51 55.3410	54.5659	7902 - 150	20	5 53 17.0161	16.1128	8936 + 98
5	2 55 51.9043	51.1212	+ 7905 - 74	21	5 57 13.5757	12.6681	+ 8971 + 104
6	2 59 48.4697	47.6766	7909 + 23	22	6 01 10.1327	09.2235	9007 + 86
7	3 03 45.0348	44.2320	7914 + 115	23	6 05 06.6874	05.7789	9042 + 43
8	3 07 41.5974	40.7873	7919 + 181	24	6 09 03.2401	02.3342	9078 - 19
9	3 11 38.1563	37.3427	7926 + 210	25	6 12 59.7920	58.8896	9113 - 89
10	3 15 34.7115	33.8981	+ 7934 + 200	26	6 16 56.3444	55.4450	+ 9149 - 154
11	3 19 31.2635	30.4534	7943 + 158	27	6 20 52.8990	52.0003	9184 - 197
12	3 23 27.8136	27.0088	7953 + 95	28	6 24 49.4572	48.5557	9219 - 204
13	3 27 24.3630	23.5642	7963 + 25	29	6 28 46.0198	45.1111	9254 - 167
14	3 31 20.9131	20.1195	7975 - 40	30	6 32 42.5864	41.6664	9288 - 89
15	3 35 17.4647	16.6749	+ 7988 - 90	31	6 36 39.1552	38.2218	+ 9322 + 12
16	3 39 14.0187	13.2303	+ 8002 - 118	32	6 40 35.7238	34.7772	+ 9356 + 109

Верхняя кульминация в Гриниче

Дата	1) ζ Cet		2) α And		3) β Cas		707) γ And	
	$4^m 62$ IX-22 A0		$2^m 15$ IX-23 A0p		$2^m 42$ IX-23 F5		$5^m 08$ IX-23 F0	
	h^m 0 03	$^{\circ}$ —17 23	h^m 0 07	$^{\circ}$ +29 02	h^m 0 08	$^{\circ}$ +59 05	h^m 0 09	$^{\circ}$ +46 00
Янв. —4.3	14.372 ¹¹¹	32.50 ⁴⁰	52.494 ¹³¹	20.80 ⁷³	38.232 ³⁰⁷	62.63 ⁴¹	48.042 ¹⁹⁷	78.93 ⁵⁸
5.7	14.261 ¹⁰²	32.90 ¹⁸	52.363 ¹²⁸	20.07 ⁹⁹	37.925 ²⁹⁸	62.22 ⁹³	47.845 ¹⁹²	78.35 ⁹⁹
15.7	14.159 ⁹⁴	33.08 ³	52.235 ¹²⁰	19.08 ¹²⁴	37.627 ²⁸⁴	61.29 ¹⁴³	47.653 ¹⁸⁴	77.36 ¹³⁹
25.7	14.065 ⁷⁹	33.05 ²⁹	52.115 ¹⁰⁶	17.84 ¹⁴³	37.343 ²⁵³	59.86 ¹⁸⁸	47.469 ¹⁶³	75.97 ¹⁷⁴
Февр. 4.6	13.986 ⁵⁹	32.76 ⁵²	52.009 ⁸⁴	16.41 ¹⁵⁴	37.090 ²⁰⁸	57.98 ²²²	47.306 ¹³³	74.23 ¹⁹⁹
14.6	13.927 ³⁷	32.24 ⁷⁵	51.925 ⁵⁸	14.87 ¹⁶⁰	36.882 ¹⁵⁷	55.76 ²⁴⁹	47.173 ⁹⁸	72.24 ²¹⁸
24.6	13.890 ⁷	31.49 ¹⁰¹	51.867 ²³	13.27 ¹⁵⁸	36.725 ⁸⁹	53.27 ²⁶⁶	47.075 ⁵¹	70.06 ²²⁷
Март 6.6	13.883 ²⁴	30.48 ¹²⁴	51.844 ¹⁷	11.69 ¹⁴⁶	36.636 ¹⁶	50.61 ²⁶⁸	47.024 ⁷	67.79 ²²³
16.5	13.907 ⁵⁹	29.24 ¹⁴⁸	51.861 ⁵⁹	10.23 ¹³⁰	36.620 ⁶¹	47.93 ²⁶³	47.025 ⁵⁶	65.56 ²¹³
26.5	13.966 ¹⁰⁰	27.76 ¹⁷²	51.920 ¹⁰⁷	08.93 ¹⁰⁵	36.681 ¹⁴⁶	45.30 ²⁴³	47.081 ¹¹⁹	63.43 ¹⁹¹
Апр. 5.5	14.066 ¹⁴⁰	26.04 ¹⁹⁰	52.027 ¹⁵³	07.88 ⁷⁴	36.827 ²²³	42.87 ²¹⁵	47.200 ¹⁷⁶	61.52 ¹⁶⁰
15.4	14.206 ¹⁸⁰	24.14 ²⁰⁶	52.180 ²⁰⁰	07.14 ⁴¹	37.050 ²⁹⁹	40.72 ¹⁷⁹	47.376 ²³⁴	59.92 ¹²⁶
25.4	14.386 ²²⁰	22.08 ²²⁰	52.380 ²⁴⁴	06.73 ⁰	37.349 ³⁷⁰	38.93 ¹³⁴	47.610 ²⁸⁹	58.66 ⁸¹
Май 5.4	14.606 ²⁵³	19.88 ²²⁸	52.624 ²⁸¹	06.73 ³⁸	37.719 ⁴²⁵	37.59 ⁸⁶	47.899 ³³³	57.85 ³⁷
15.4	14.859 ²⁸⁴	17.60 ²³²	52.905 ³¹²	07.11 ⁷⁷	38.144 ⁴⁷⁵	36.73 ³⁵	48.232 ³⁷¹	57.48 ¹¹
Июнь 25.3	15.143 ³⁰⁷	15.28 ²²⁹	53.217 ³³⁷	07.88 ¹¹⁶	38.619 ⁵⁰⁸	36.38 ²⁰	48.603 ⁴⁰⁰	57.59 ⁶⁰
4.3	15.450 ³³²	12.99 ²²²	53.554 ³⁵⁰	09.04 ¹⁴⁹	39.127 ⁵²⁶	36.58 ⁷²	49.003 ⁴¹⁴	58.19 ¹⁰⁵
14.3	15.772 ³²²	10.77 ²¹⁰	53.904 ³⁵⁷	10.53 ¹⁸⁰	39.653 ⁵³⁴	37.30 ¹²²	49.417 ⁴²²	59.24 ¹⁴⁸
24.3	16.104 ³²⁹	08.67 ¹⁹⁰	54.261 ³⁵³	12.33 ²⁰⁸	40.187 ⁵²⁵	38.52 ¹⁷¹	49.839 ⁴¹⁶	60.72 ¹⁹⁰
Июль 4.2	16.433 ³²⁰	06.77 ¹⁶⁷	54.614 ³³⁹	14.41 ²²⁶	40.712 ⁵⁰¹	40.23 ²¹²	50.255 ³⁹⁹	62.62 ²²²
14.2	16.753 ³⁰⁴	05.10 ¹⁴¹	54.953 ³²¹	16.67 ²⁴³	41.213 ⁴⁷²	42.35 ²⁵¹	50.654 ³⁷⁷	64.84 ²⁵²
24.2	17.057 ²⁷⁸	03.69 ¹⁰⁹	55.274 ²⁹¹	19.10 ²⁵²	41.685 ⁴²⁶	44.86 ²⁸⁴	51.031 ³⁴²	67.36 ²⁷⁶
Авг. 3.1	17.335 ²⁴⁶	02.60 ⁷⁸	55.565 ²⁵⁹	21.62 ²⁵⁴	42.111 ³⁷⁵	47.70 ³⁰⁷	51.373 ³⁰³	70.12 ²⁹¹
13.1	17.581 ²¹²	01.82 ⁴⁴	55.824 ²²³	24.16 ²⁵⁵	42.486 ³²¹	50.77 ³²⁸	51.676 ²⁶⁰	73.03 ³⁰⁴
23.1	17.793 ¹⁷¹	01.38 ¹⁰	56.047 ¹⁸⁰	26.71 ²⁴⁶	42.807 ²⁵⁵	54.05 ³³⁹	51.936 ²⁰⁹	76.07 ³⁰⁷
Сент. 2.1	17.964 ¹³¹	01.28 ¹⁹	56.227 ¹⁴⁰	29.17 ²³⁵	43.062 ¹⁹⁴	57.44 ³⁴³	52.145 ¹⁶²	79.14 ³⁰⁵
12.0	18.095 ⁹⁰	01.47 ⁴⁸	56.367 ¹⁰⁰	31.52 ²²¹	43.256 ¹³⁰	60.87 ³⁴⁵	52.307 ¹¹⁴	82.19 ³⁰⁰
22.0	18.185 ⁴⁹	01.95 ⁷³	56.467 ⁵⁹	33.73 ²⁰¹	43.386 ⁶³	64.32 ³³⁴	52.421 ⁶³	85.19 ²⁸⁵
Окт. 1.9	18.234 ¹³	02.68 ⁹⁰	56.526 ²⁴	35.74 ¹⁸⁰	43.449 ⁵	67.66 ³¹⁹	52.484 ²⁰	88.04 ²⁶⁶
11.9	18.247 ²⁰	03.58 ¹⁰⁶	56.550 ¹⁰	37.54 ¹⁵⁶	43.454 ⁵⁴	70.85 ²⁹⁹	52.504 ²³	90.70 ²⁴⁵
21.9	18.227 ⁴⁹	04.64 ¹¹³	56.540 ⁴¹	39.10 ¹²⁸	43.400 ¹⁰⁹	73.84 ²⁶⁹	52.481 ⁶³	93.15 ²¹⁵
31.9	18.178 ⁷¹	05.77 ¹¹⁴	56.499 ⁶⁴	40.38 ¹⁰²	43.291 ¹⁵⁵	76.53 ²³⁶	52.418 ⁹⁵	95.30 ¹⁸³
Нояб. 10.9	18.107 ⁹⁰	06.91 ¹¹¹	56.435 ⁸⁷	41.40 ⁷¹	43.136 ²⁰²	78.89 ¹⁹⁶	52.323 ¹²⁶	97.13 ¹⁴⁷
20.8	18.017 ¹⁰³	08.02 ¹⁰³	56.348 ¹⁰⁵	42.11 ³⁹	42.934 ²³⁸	80.85 ¹⁴⁹	52.197 ¹⁵²	98.60 ¹⁰⁴
30.8	17.914 ¹¹⁰	09.05 ⁸⁹	56.243 ¹¹⁶	42.50 ⁹	42.696 ²⁶⁶	82.34 ¹⁰¹	52.045 ¹⁷⁸	99.64 ⁶³
Дек. 10.8	17.804 ¹¹⁵	09.94 ⁷⁴	56.127 ¹²⁷	42.59 ²⁴	42.430 ²⁹²	83.35 ⁴⁸	51.875 ¹⁸⁷	100.27 ¹⁷
20.8	17.689 ¹¹⁵	10.68 ⁵⁴	56.000 ¹³²	42.35 ⁵⁶	42.138 ³⁰²	83.83 ⁹	51.688 ¹⁹⁵	100.44 ³¹
30.7	17.574 ¹¹⁰	11.22 ³⁴	55.868 ¹³²	41.79 ⁸³	41.836 ³⁰⁴	83.74 ⁶⁰	51.493 ¹⁹⁶	100.13 ⁷³
40.7	17.464 ¹⁰³	11.56 ¹²	55.736 ¹²⁸	40.96 ¹¹¹	41.532 ²⁹⁷	83.14 ¹¹⁵	51.297 ¹⁹³	99.40 ¹¹⁷
Средн. место J1990.5	15.223	19.89	53.704	16.84	40.009	50.63	49.460	69.98
Sec δ , tg δ	1.048	—0.313	1.144	+0.555	1.947	+1.671	1.440	+1.036
a, a'	+0.153	+1.000	+0.155	+0.999	+0.157	+0.999	+0.156	+0.999
b, b'	—0.021	—0.014	+0.037	—0.034	+0.111	—0.038	+0.069	—0.043

Верхняя кульминация в Гриниче

Дата	6) ι Cet		7) ι Cas		588) β Hvi		589) α Phe		
	$3^m 75$	IX-26 K0	$5^m 39$	IX-27 B9	$2^m 90$	IX-27 G0	$2^m 44$	IX-27 K0	
	h^m 0 18	$-8^{\circ} 52'$	h^m 0 24	$+61^{\circ} 46'$	h^m 0 25	$-77^{\circ} 18'$	h^m 0 25	$-42^{\circ} 21'$	
	s	"	s	"	s	"	s	"	
Янв.	—4.2	55.823 ¹⁰⁶	44.72 ⁵⁷	14.055 ³⁴³	55.37 ¹⁶	16.684 ⁸⁹⁷	53.42 ⁷⁷	48.538 ¹⁸⁵	46.65 ¹⁰
	5.7	55.717 ¹⁰¹	45.29 ⁴³	13.712 ³⁴⁰	55.21 ⁷⁰	15.787 ⁸⁴⁸	52.65 ¹³⁷	48.353 ¹⁷⁷	46.75 ³⁵
	15.7	55.616 ⁹⁷	45.72 ²⁹	13.372 ³³⁰	54.51 ¹²²	14.939 ⁷⁸⁹	51.28 ¹⁹²	48.176 ¹⁶⁷	46.40 ⁷⁷
	25.7	55.519 ⁸⁵	46.01 ¹¹	13.042 ³⁰¹	53.29 ¹⁷¹	14.150 ⁶⁹⁹	49.36 ²⁴⁶	48.009 ¹⁴⁸	45.63 ¹²²
Февр.	4.6	55.434 ⁶⁸	46.12 ⁸	12.741 ²⁵⁷	51.58 ²⁰⁹	13.451 ⁵⁹⁰	46.90 ²⁸⁷	47.861 ¹²³	44.41 ¹⁶⁰
	14.6	55.366 ⁴⁸	46.04 ²⁷	12.484 ²⁰⁵	49.49 ²⁴¹	12.861 ⁴⁷⁷	44.03 ³²⁴	47.738 ⁹⁶	42.81 ¹⁹⁶
	24.6	55.318 ²¹	45.77 ⁵¹	12.279 ¹³⁴	47.08 ²⁶³	12.384 ³³⁸	40.79 ³⁵⁵	47.642 ⁶⁰	40.85 ²²⁹
Март	6.6	55.297 ¹⁰	45.26 ⁷⁰	12.145 ⁵⁵	44.45 ²⁷⁰	12.046 ¹⁹⁷	37.24 ³⁷³	47.582 ¹⁹	38.56 ²⁵⁴
	16.5	55.307 ⁴²	44.56 ⁹⁵	12.090 ²⁷	41.75 ²⁷⁰	11.849 ⁵⁴	33.51 ³⁸⁶	47.563 ²⁴	36.02 ²⁷⁸
	26.5	55.349 ⁸⁴	43.61 ¹²³	12.117 ¹²⁰	39.05 ²⁵⁶	11.795 ¹⁰⁵	29.65 ³⁸⁹	47.587 ⁷⁴	33.24 ²⁹⁶
	5.5	55.433 ¹²⁴	42.38 ¹⁴⁴	12.237 ²⁰⁵	36.49 ²³⁰	11.900 ²⁵²	25.76 ³⁸³	47.661 ¹²²	30.28 ³⁰⁵
	15.5	55.557 ¹⁶⁴	40.94 ¹⁶⁵	12.442 ²⁹⁰	34.19 ²⁰⁰	12.152 ³⁹⁸	21.93 ³⁷³	47.783 ¹⁷³	27.23 ³¹¹
	25.4	55.721 ²⁰⁵	39.29 ¹⁸⁴	12.732 ³⁷⁰	32.19 ¹⁵⁷	12.550 ⁵⁴⁶	18.20 ³⁵¹	47.956 ²²³	24.12 ³¹⁰
Май	5.4	55.926 ²³⁹	37.45 ¹⁹⁹	13.102 ⁴³⁵	30.62 ¹¹¹	13.096 ⁶⁷¹	14.69 ³²²	48.179 ²⁶⁷	21.02 ³⁰¹
	15.4	56.165 ²⁷¹	35.46 ²¹⁰	13.537 ⁴⁹¹	29.51 ⁶²	13.767 ⁷⁹⁰	11.47 ²⁸⁹	48.446 ³⁰⁸	18.01 ²⁸⁸
	25.3	56.436 ²⁹⁶	33.36 ²¹⁷	14.028 ⁵³³	28.89 ⁷	14.557 ⁸⁹³	08.58 ²⁴⁶	48.754 ³⁴³	15.13 ²⁶⁵
Июнь	4.3	56.732 ³¹¹	31.19 ²¹⁷	14.561 ⁵⁵⁷	28.82 ⁴⁵	15.450 ⁹⁶⁴	06.12 ¹⁹⁹	49.097 ³⁶⁶	12.48 ²³⁸
	14.3	57.043 ³²³	29.02 ²¹⁴	15.118 ⁵⁷¹	29.27 ⁹⁶	16.414 ¹⁰²⁴	04.13 ¹⁵⁰	49.463 ³⁸⁴	10.10 ²⁰⁵
	24.3	57.366 ³²⁴	26.88 ²⁰⁴	15.689 ⁵⁶⁷	30.23 ¹⁴⁷	17.438 ¹⁰⁴⁹	02.63 ⁹¹	49.847 ³⁹⁰	08.05 ¹⁶⁵
Июль	4.2	57.690 ³¹⁵	24.84 ¹⁸⁸	16.256 ⁵⁴⁶	31.70 ¹⁹¹	18.487 ¹⁰⁴³	01.72 ³⁶	50.237 ³⁸⁵	06.40 ¹²³
	14.2	58.005 ³⁰²	22.96 ¹⁶⁹	16.802 ⁵²⁰	33.61 ²³¹	19.530 ¹⁰²⁰	01.36 ²¹	50.622 ³⁷²	05.17 ⁷⁸
	24.2	58.307 ²⁷⁹	21.27 ¹⁴⁴	17.322 ⁴⁷⁶	35.92 ²⁶⁸	20.550 ⁹⁵³	01.57 ⁸¹	50.994 ³⁴⁷	04.39 ²⁹
Авг.	3.2	58.586 ²⁵⁰	19.83 ¹¹⁹	17.798 ⁴²⁵	38.60 ²⁹⁵	21.503 ⁸⁶²	02.38 ¹³²	51.341 ³¹³	04.10 ¹⁸
	13.1	58.836 ²¹⁹	18.64 ⁸⁹	18.223 ³⁷⁰	41.55 ³²⁰	22.365 ⁷⁵¹	03.70 ¹⁸³	51.654 ²⁷⁵	04.28 ⁶⁴
	23.1	59.055 ¹⁸⁰	17.75 ⁵⁹	18.593 ³⁰³	44.75 ³³⁵	23.116 ⁶⁰³	05.53 ²²⁸	51.929 ²²⁶	04.92 ¹⁰⁹
	2.1	59.235 ¹⁴³	17.16 ³¹	18.896 ²³⁹	48.10 ³⁴⁴	23.719 ⁴⁴⁶	07.81 ²⁶⁰	52.155 ¹⁷⁷	06.01 ¹⁴⁶
	12.0	59.378 ¹⁰⁵	16.85 ²	19.135 ¹⁷¹	51.54 ³⁴⁸	24.165 ²⁷⁵	10.41 ²⁸⁹	52.332 ¹²⁵	07.47 ¹⁷⁹
	22.0	59.483 ⁶⁵	16.83 ²⁴	19.306 ¹⁰⁰	55.02 ³⁴²	24.440 ⁸⁵	13.30 ³⁰²	52.457 ⁷⁰	09.26 ²⁰⁴
Окт.	1.9	59.548 ³²	17.07 ⁴⁴	19.406 ³⁷	58.44 ³³¹	24.525 ⁹²	16.32 ³⁰⁴	52.527 ²¹	11.30 ²¹⁸
	11.9	59.580 ⁰	17.51 ⁶³	19.443 ²⁹	61.75 ³¹⁵	24.433 ²⁷²	19.36 ²⁹⁸	52.548 ²⁸	13.48 ²²⁷
	21.9	59.580 ²⁹	18.14 ⁷⁶	19.414 ⁹²	64.90 ²⁸⁷	24.161 ⁴⁴³	22.34 ²⁷³	52.520 ⁷¹	15.75 ²²³
	31.9	59.551 ⁵⁰	18.90 ⁸³	19.322 ¹⁴⁵	67.77 ²⁵⁸	23.718 ⁵⁸²	25.07 ²⁴¹	52.449 ¹⁰⁵	17.98 ²⁰⁹
Нояб.	10.9	59.501 ⁷⁵	19.73 ⁸⁹	19.177 ²⁰⁰	70.35 ²²⁰	23.136 ⁷¹²	27.48 ²⁰⁰	52.344 ¹³⁷	20.07 ¹⁹⁰
	20.9	59.429 ⁸²	20.62 ⁸⁷	18.977 ²⁴⁶	72.55 ¹⁷⁴	22.424 ⁸⁰⁹	29.48 ¹⁴⁶	52.207 ¹⁶¹	21.97 ¹⁵⁹
	30.8	59.344 ⁹⁶	21.49 ⁸³	18.731 ²⁸²	74.29 ¹²⁸	21.615 ⁸⁶⁹	30.94 ⁹⁰	52.046 ¹⁷⁵	23.56 ¹²⁴
	10.8	59.248 ¹⁰⁴	22.32 ⁷⁷	18.449 ³¹⁵	75.57 ⁷⁴	20.746 ⁹¹¹	31.84 ²⁹	51.871 ¹⁸⁶	24.80 ⁸⁴
	20.8	59.144 ¹⁰⁷	23.09 ⁶⁶	18.134 ³³⁴	76.31 ¹⁸	19.835 ⁹¹²	32.13 ³⁷	51.685 ¹⁸⁹	25.64 ³⁹
	30.7	59.037 ¹⁰⁶	23.75 ⁵⁴	17.800 ³⁴²	76.49 ³⁶	18.923 ⁸⁸⁵	31.76 ⁹⁶	51.496 ¹⁸⁵	26.03 ⁴
	40.7	58.931 ¹⁰⁴	24.29 ⁴⁰	17.458 ³⁴¹	76.13 ⁹²	18.038 ⁸⁴¹	30.80 ¹⁵⁷	51.311 ¹⁷⁹	25.99 ⁴⁹
Средн. место J1990.5		56.637	35.54	15.731	42.46	15.720	27.71	48.956	27.24
Sec δ , tg δ		1.012	—0.156	2.115	+1.863	4.551	—4.440	1.353	—0.912
a, a'		+0.152	+0.997	+0.166	+0.994	+0.121	+0.994	+0.146	+0.994
b, b'		—0.010	—0.083	+0.124	—0.106	—0.294	—0.110	—0.060	—0.112

ВИДИМЫЕ МЕСТА ЗВЕЗД 1990
Верхняя кульминация в Гриниче

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Дата	10) ζ Cas		12) ϵ And		13) δ And		14) α Cas		
	3 ^m 72 IX-30 B3		4 ^m 52 X-1 G5		3 ^m 49 X-1 K2		2 ^m 47 X-1 K0		
	h ^m 0 36	° ['] +53 50	h ^m 0 38	° ['] +29 15	h ^m 0 38	° ['] +30 48	h ^m 0 39	° ['] +56 28	
Янв.	—4.2	24.925 ^s ₂₄₈	52.65 ["] ₁₇	02.105 ^s ₁₃₃	41.91 ["] ₅₃	48.060 ^s ₁₃₅	38.04 ["] ₅₀	56.441 ^s ₂₇₃	79.57 ["] ₇
	5.7	24.677 ^s ₂₅₁	52.48 ["] ₆₄	01.972 ^s ₁₃₄	41.38 ["] ₇₈	47.925 ^s ₁₃₈	37.54 ["] ₇₈	56.168 ^s ₂₇₆	79.50 ["] ₅₈
	15.7	24.426 ^s ₂₄₉	51.84 ["] ₁₁₂	01.838 ^s ₁₃₄	40.60 ["] ₁₀₄	47.787 ^s ₁₃₇	36.76 ["] ₁₀₄	55.892 ^s ₂₇₄	78.92 ["] ₁₀₆
	25.7	24.177 ^s ₂₃₀	50.72 ["] ₁₅₆	01.704 ^s ₁₂₅	39.56 ["] ₁₂₆	47.650 ^s ₁₂₈	35.72 ["] ₁₂₇	55.618 ^s ₂₅₅	77.86 ["] ₁₅₄
Февр.	4.7	23.947 ^s ₂₀₁	49.16 ["] ₁₉₀	01.579 ^s ₁₀₈	38.30 ["] ₁₃₈	47.522 ^s ₁₁₁	34.45 ["] ₁₄₂	55.363 ^s ₂₂₄	76.32 ["] ₁₉₀
	14.6	23.746 ^s ₁₆₃	47.26 ["] ₂₁₉	01.471 ^s ₈₆	36.92 ["] ₁₄₉	47.411 ^s ₈₉	33.03 ["] ₁₅₄	55.139 ^s ₁₈₅	74.42 ["] ₂₂₁
	24.6	23.583 ^s ₁₁₁	45.07 ["] ₂₃₈	01.385 ^s ₅₄	35.43 ["] ₁₄₉	47.322 ^s ₅₆	31.49 ["] ₁₅₅	54.954 ^s ₁₂₇	72.21 ["] ₂₄₂
Март	6.6	23.472 ^s ₅₀	42.69 ["] ₂₄₃	01.331 ^s ₁₆	33.94 ["] ₁₄₃	47.266 ^s ₁₇	29.94 ["] ₁₅₀	54.827 ^s ₆₄	69.79 ["] ₂₅₀
	16.5	23.422 ^s ₁₄	40.26 ["] ₂₄₃	01.315 ^s ₂₅	32.51 ["] ₁₃₀	47.249 ^s ₂₄	28.44 ["] ₁₃₈	54.763 ^s ₆	67.29 ["] ₂₅₂
	26.5	23.436 ^s ₈₈	37.83 ["] ₂₂₈	01.340 ^s ₇₃	31.21 ["] ₁₁₀	47.273 ^s ₇₄	27.06 ["] ₁₁₈	54.769 ^s ₈₄	64.77 ["] ₂₃₉
Апр.	5.5	23.524 ^s ₁₅₈	35.55 ["] ₂₀₅	01.413 ^s ₁₂₁	30.11 ["] ₈₃	47.347 ^s ₁₂₂	25.88 ["] ₉₂	54.853 ^s ₁₆₀	62.38 ["] ₂₁₆
	15.5	23.682 ^s ₂₂₈	33.50 ["] ₁₇₅	01.534 ^s ₁₇₀	29.28 ["] ₅₄	47.469 ^s ₁₇₂	24.96 ["] ₆₂	55.013 ^s ₂₃₄	60.22 ["] ₁₈₈
	25.4	23.910 ^s ₂₉₆	31.75 ["] ₁₃₄	01.704 ^s ₂₁₈	28.74 ["] ₁₈	47.641 ^s ₂₂₁	24.34 ["] ₂₆	55.247 ^s ₃₀₇	58.34 ["] ₁₄₈
Май	5.4	24.206 ^s ₃₅₂	30.41 ["] ₉₂	01.922 ^s ₂₅₉	28.56 ["] ₁₉	47.862 ^s ₂₆₁	24.08 ["] ₁₂	55.554 ^s ₃₆₆	56.86 ["] ₁₀₅
	15.4	24.558 ^s ₄₀₁	29.49 ["] ₄₅	02.181 ^s ₂₉₅	28.75 ["] ₅₆	48.123 ^s ₃₀₀	24.20 ["] ₄₈	55.920 ^s ₄₂₀	55.81 ["] ₆₀
Июнь	25.4	24.959 ^s ₄₄₁	29.04 ["] ₆	02.476 ^s ₃₂₅	29.31 ["] ₉₄	48.423 ^s ₃₂₉	24.68 ["] ₈₈	56.340 ^s ₄₆₃	55.21 ["] ₇
	4.3	25.400 ^s ₄₆₄	29.10 ["] ₅₄	02.801 ^s ₃₄₃	30.25 ["] ₁₂₇	48.752 ^s ₃₄₈	25.56 ["] ₁₂₂	56.803 ^s ₄₈₇	55.14 ["] ₄₂
	14.3	25.864 ^s ₄₇₉	29.64 ["] ₁₀₀	03.144 ^s ₃₅₆	31.52 ["] ₁₅₈	49.100 ^s ₃₆₀	26.78 ["] ₁₅₅	57.290 ^s ₅₀₅	55.56 ["] ₈₉
	24.3	26.343 ^s ₄₈₀	30.64 ["] ₁₄₈	03.500 ^s ₃₅₇	33.10 ["] ₁₈₅	49.460 ^s ₃₆₃	28.33 ["] ₁₈₄	57.795 ^s ₅₀₆	56.45 ["] ₁₃₉
Июль	4.2	26.823 ^s ₄₆₇	32.12 ["] ₁₈₇	03.857 ^s ₃₅₀	34.95 ["] ₂₀₇	49.823 ^s ₃₅₄	30.17 ["] ₂₀₅	58.301 ^s ₄₉₄	57.84 ["] ₁₇₉
Авг.	14.2	27.290 ^s ₄₄₇	33.99 ["] ₂₂₅	04.207 ^s ₃₃₆	37.02 ["] ₂₂₄	50.177 ^s ₃₄₁	32.22 ["] ₂₂₅	58.795 ^s ₄₇₄	59.63 ["] ₂₁₈
	24.2	27.737 ^s ₄₁₄	36.24 ["] ₂₅₆	04.543 ^s ₃₁₂	39.26 ["] ₂₃₅	50.518 ^s ₃₁₇	34.47 ["] ₂₃₇	59.269 ^s ₄₄₀	61.81 ["] ₂₅₃
	3.2	28.151 ^s ₃₇₅	38.80 ["] ₂₇₉	04.855 ^s ₂₈₂	41.61 ["] ₂₄₀	50.835 ^s ₂₈₇	36.84 ["] ₂₄₄	59.709 ^s ₃₉₉	64.34 ["] ₂₇₈
	13.1	28.526 ^s ₃₃₀	41.59 ["] ₃₀₁	05.137 ^s ₂₅₁	44.01 ["] ₂₄₂	51.122 ^s ₂₅₅	39.28 ["] ₂₄₇	60.108 ^s ₃₅₃	67.12 ["] ₃₀₁
	23.1	28.856 ^s ₂₇₈	44.60 ["] ₃₁₃	05.388 ^s ₂₁₂	46.43 ["] ₂₃₇	51.377 ^s ₂₁₆	41.75 ["] ₂₄₃	60.461 ^s ₂₉₈	70.13 ["] ₃₁₆
Сент.	2.1	29.134 ^s ₂₂₅	47.73 ["] ₃₁₈	05.600 ^s ₁₇₄	48.80 ["] ₂₂₈	51.593 ^s ₁₇₇	44.18 ["] ₂₃₅	60.759 ^s ₂₄₃	73.29 ["] ₃₂₃
	12.1	29.359 ^s ₁₇₂	50.91 ["] ₃₂₁	05.774 ^s ₁₃₆	51.08 ["] ₂₁₇	51.770 ^s ₁₃₉	46.53 ["] ₂₂₄	61.002 ^s ₁₈₆	76.52 ["] ₃₂₈
	22.0	29.531 ^s ₁₁₅	54.12 ["] ₃₁₄	05.910 ^s ₉₅	53.25 ["] ₁₉₉	51.909 ^s ₉₇	48.77 ["] ₂₀₈	61.188 ^s ₁₂₆	79.80 ["] ₃₂₃
Окт.	1.9	29.646 ^s ₆₃	57.26 ["] ₃₀₁	06.005 ^s ₅₉	55.24 ["] ₁₈₁	52.006 ^s ₆₂	50.85 ["] ₁₉₀	61.314 ^s ₇₁	83.03 ["] ₃₁₁
	11.9	29.709 ^s ₁	60.27 ["] ₂₈₆	06.064 ^s ₂₅	57.05 ["] ₁₆₀	52.068 ^s ₂₆	52.75 ["] ₁₆₉	61.385 ^s ₁₅	86.14 ["] ₂₉₇
Нояб.	21.9	29.720 ^s ₃₉	63.13 ["] ₂₆₀	06.089 ^s ₈	58.65 ["] ₁₃₄	52.094 ^s ₇	54.44 ["] ₁₄₄	61.400 ^s ₃₉	89.11 ["] ₂₇₃
	31.9	29.681 ^s ₈₁	65.73 ["] ₂₃₁	06.081 ^s ₃₄	59.99 ["] ₁₁₁	52.087 ^s ₃₄	55.88 ["] ₁₁₉	61.361 ^s ₈₆	91.84 ["] ₂₄₄
	10.9	29.600 ^s ₁₂₅	68.04 ["] ₁₉₈	06.047 ^s ₆₂	61.10 ["] ₈₃	52.053 ^s ₆₁	57.07 ["] ₉₁	61.275 ^s ₁₃₃	94.28 ["] ₂₁₁
	20.9	29.475 ^s ₁₆₃	70.02 ["] ₁₅₅	05.985 ^s ₈₃	61.93 ["] ₅₃	51.992 ^s ₈₄	57.98 ["] ₆₁	61.142 ^s ₁₇₆	96.39 ["] ₁₆₈
	30.8	29.312 ^s ₁₉₃	71.57 ["] ₁₁₃	05.902 ^s ₁₀₀	62.46 ["] ₂₆	51.908 ^s ₁₀₂	58.59 ["] ₃₂	60.966 ^s ₂₀₉	98.07 ["] ₁₂₆
Дек.	10.8	29.119 ^s ₂₂₃	72.70 ["] ₆₅	05.802 ^s ₁₁₈	62.72 ["] ₆	51.806 ^s ₁₂₀	58.91 ["] ₀	60.757 ^s ₂₄₁	99.33 ["] ₇₆
	20.8	28.896 ^s ₂₄₀	73.35 ["] ₁₃	05.684 ^s ₁₂₈	62.66 ["] ₃₆	51.686 ^s ₁₃₁	58.91 ["] ₃₃	60.516 ^s ₂₆₃	100.09 ["] ₂₄
	30.8	28.656 ^s ₂₅₀	73.48 ["] ₃₄	05.556 ^s ₁₃₅	62.30 ["] ₆₃	51.555 ^s ₁₃₇	58.58 ["] ₆₁	60.253 ^s ₂₇₄	100.33 ["] ₂₇
	40.7	28.406 ^s ₂₅₄	73.14 ["] ₈₆	05.421 ^s ₁₃₈	61.67 ["] ₉₂	51.418 ^s ₁₄₂	57.97 ["] ₉₁	59.979 ^s ₂₈₀	100.06 ["] ₇₈
Средн. место J1990.5		26.286	41.03	03.120	36.95	49.099	32.65	57.827	67.28
Sec δ , tg δ		1.695	+1.369	1.146	+0.560	1.164	+0.596	1.811	+1.510
a, a'		+0.168	+0.987	+0.159	+0.986	+0.160	+0.986	+0.171	+0.985
b, b'		+0.090	-0.158	+0.037	-0.165	+0.039	-0.169	+0.099	-0.173

Дата	15) β Cet		16) α Cas		17) ζ And		19) δ Psc		
	2^m24 X-2 K0		4^m70 X-2 B2		4^m30 X-3 K0		4^m55 X-3 K5		
	h^m 0 43	$^{\circ}'$ -18 01	h^m 0 44	$^{\circ}'$ +48 13	h^m 0 46	$^{\circ}'$ +24 12	h^m 0 48	$^{\circ}'$ +7 31	
Янв.	—4.2	06.197 ^s ₁₁₈	90.80 ["] ₅₇	10.348 ^s ₂₀₆	67.44 ["] ₁₈	49.102 ^s ₁₂₁	59.59 ["] ₅₂	10.555 ^s ₁₀₄	58.12 ["] ₆₄
	5.7	06.079 ^s ₁₁₇	91.37 ["] ₃₃	10.142 ^s ₂₀₉	67.26 ["] ₆₂	48.981 ^s ₁₂₅	59.07 ["] ₇₃	10.451 ^s ₁₀₇	57.48 ["] ₆₇
	15.7	05.962 ^s ₁₁₅	91.70 ["] ₉	09.933 ^s ₂₁₁	66.64 ["] ₁₀₆	48.856 ^s ₁₂₆	58.34 ["] ₉₃	10.344 ^s ₁₀₈	56.81 ["] ₆₉
	25.7	05.847 ^s ₁₀₇	91.79 ["] ₁₈	09.722 ^s ₁₉₇	65.58 ["] ₁₄₅	48.730 ^s ₁₁₉	57.41 ["] ₁₀₉	10.236 ^s ₁₀₂	56.12 ["] ₆₇
Февр.	4.7	05.740 ^s ₉₁	91.61 ["] ₄₅	09.525 ^s ₁₇₄	64.13 ["] ₁₇₅	48.611 ^s ₁₀₅	56.32 ["] ₁₁₉	10.134 ^s ₉₀	55.45 ["] ₆₂
	14.6	05.649 ^s ₇₅	91.16 ["] ₇₁	09.351 ^s ₁₄₄	62.38 ["] ₂₀₂	48.506 ^s ₈₅	55.13 ["] ₁₂₅	10.044 ^s ₇₃	54.83 ["] ₅₄
	24.6	05.574 ^s ₄₈	90.45 ["] ₉₈	09.207 ^s ₉₉	60.36 ["] ₂₁₇	48.421 ^s ₅₇	53.88 ["] ₁₂₄	09.971 ^s ₄₈	54.29 ["] ₄₀
Март	6.6	05.526 ^s ₁₈	89.47 ["] ₁₂₃	09.108 ^s ₄₈	58.19 ["] ₂₂₂	48.364 ^s ₂₂	52.64 ["] ₁₁₅	09.923 ^s ₁₇	53.89 ["] ₂₄
	16.5	05.508 ^s ₁₆	88.24 ["] ₁₄₉	09.060 ^s ₈	55.97 ["] ₂₂₀	48.342 ^s ₁₇	51.49 ["] ₁₀₂	09.906 ^s ₁₉	53.65 ["] ₄
	26.5	05.524 ^s ₅₇	86.75 ["] ₁₇₃	09.068 ^s ₇₃	53.77 ["] ₂₀₅	48.359 ^s ₆₃	50.47 ["] ₈₀	09.925 ^s ₄₅	53.61 ["] ₂₆
Апр.	5.5	05.581 ^s ₉₉	85.02 ["] ₁₉₄	09.141 ^s ₁₃₆	51.72 ["] ₁₈₂	48.422 ^s ₁₀₈	49.67 ["] ₅₇	09.970 ^s ₁₀₇	53.87 ["] ₃₂
	15.5	05.680 ^s ₁₄₁	83.08 ["] ₂₁₂	09.277 ^s ₁₉₉	49.90 ["] ₁₅₄	48.530 ^s ₁₅₆	49.10 ["] ₂₈	10.077 ^s ₁₄₄	54.19 ["] ₇₀
	25.4	05.821 ^s ₁₈₄	80.96 ["] ₂₂₈	09.476 ^s ₂₆₁	48.36 ["] ₁₁₅	48.686 ^s ₂₀₃	48.82 ["] ₆	10.221 ^s ₁₈₆	54.89 ["] ₉₇
Май	5.4	06.005 ^s ₂₂₂	78.68 ["] ₂₃₅	09.737 ^s ₃₁₃	47.21 ["] ₇₃	48.889 ^s ₂₄₃	48.88 ["] ₃₉	10.407 ^s ₂₂₃	55.86 ["] ₁₂₂
	15.4	06.227 ^s ₂₅₈	76.33 ["] ₂₄₂	10.050 ^s ₃₅₉	46.48 ["] ₃₀	49.132 ^s ₂₇₉	49.27 ["] ₇₄	10.630 ^s ₂₅₈	57.08 ["] ₁₄₆
	25.4	06.485 ^s ₂₈₈	73.91 ["] ₂₄₁	10.409 ^s ₃₉₇	46.18 ["] ₁₈	49.411 ^s ₃₁₀	50.01 ["] ₁₀₇	10.888 ^s ₂₈₇	58.54 ["] ₁₆₈
Июнь	4.3	06.773 ^s ₃₀₈	71.50 ["] ₂₃₄	10.806 ^s ₄₁₉	46.36 ["] ₆₃	49.721 ^s ₃₃₀	51.08 ["] ₁₃₆	11.175 ^s ₃₀₆	60.22 ["] ₁₈₂
	14.3	07.081 ^s ₃₂₄	69.16 ["] ₂₂₄	11.225 ^s ₄₃₆	46.99 ["] ₁₀₆	50.051 ^s ₃₄₃	52.44 ["] ₁₆₄	11.481 ^s ₃₂₁	62.04 ["] ₁₉₆
	24.3	07.405 ^s ₃₃₀	66.92 ["] ₂₀₄	11.661 ^s ₄₃₉	48.05 ["] ₁₅₁	50.394 ^s ₃₄₇	54.08 ["] ₁₈₆	11.802 ^s ₃₂₆	64.00 ["] ₂₀₂
Июль	4.2	07.735 ^s ₃₂₆	64.88 ["] ₁₈₁	12.100 ^s ₄₂₉	49.56 ["] ₁₈₅	50.741 ^s ₃₄₁	55.94 ["] ₂₀₃	12.128 ^s ₃₂₀	66.02 ["] ₂₀₃
	14.2	08.061 ^s ₃₁₇	63.07 ["] ₁₅₅	12.529 ^s ₄₁₃	51.41 ["] ₂₂₀	51.082 ^s ₃₂₉	57.97 ["] ₂₁₇	12.448 ^s ₃₁₁	68.05 ["] ₂₀₁
	24.2	08.378 ^s ₂₉₈	61.52 ["] ₁₂₁	12.942 ^s ₃₈₅	53.61 ["] ₂₄₇	51.411 ^s ₃₀₈	60.14 ["] ₂₂₃	12.759 ^s ₂₉₂	70.06 ["] ₁₉₁
Авг.	3.2	08.676 ^s ₂₇₁	60.31 ["] ₈₉	13.327 ^s ₃₅₀	56.08 ["] ₂₆₈	51.719 ^s ₂₈₁	62.37 ["] ₂₂₄	13.051 ^s ₂₆₇	71.97 ["] ₁₇₈
	13.1	08.947 ^s ₂₄₃	59.42 ["] ₅₃	13.677 ^s ₃₁₂	58.76 ["] ₂₈₆	52.000 ^s ₂₅₁	64.61 ["] ₂₂₃	13.318 ^s ₂₃₉	73.75 ["] ₁₆₂
	23.1	09.190 ^s ₂₀₅	58.89 ["] ₁₅	13.989 ^s ₂₆₄	61.62 ["] ₂₉₅	52.251 ^s ₂₁₅	66.84 ["] ₂₁₄	13.557 ^s ₂₀₄	75.37 ["] ₁₄₂
Сент.	2.1	09.395 ^s ₁₆₈	58.74 ["] ₁₇	14.253 ^s ₂₁₉	64.57 ["] ₂₉₈	52.466 ^s ₁₇₈	68.98 ["] ₂₀₃	13.761 ^s ₁₇₀	76.79 ["] ₁₂₀
	12.1	09.563 ^s ₁₃₀	58.91 ["] ₅₀	14.472 ^s ₁₇₁	67.55 ["] ₂₉₉	52.644 ^s ₁₄₂	71.01 ["] ₁₈₉	13.931 ^s ₁₃₆	77.99 ["] ₉₈
	22.0	09.693 ^s ₈₉	59.41 ["] ₇₈	14.643 ^s ₁₂₀	70.54 ["] ₂₉₀	52.786 ^s ₁₀₃	72.90 ["] ₁₇₁	14.067 ^s ₉₈	78.97 ["] ₇₃
Окт.	2.0	09.782 ^s ₅₄	60.19 ["] ₁₀₀	14.763 ^s ₇₅	73.44 ["] ₂₇₇	52.889 ^s ₆₉	74.61 ["] ₁₅₂	14.165 ^s ₆₆	79.70 ["] ₅₂
	11.9	09.836 ^s ₁₈	61.19 ["] ₁₁₈	14.838 ^s ₂₉	76.21 ["] ₂₆₁	52.958 ^s ₃₅	76.13 ["] ₁₃₁	14.231 ^s ₃₅	80.22 ["] ₃₀
	21.9	09.854 ^s ₁₄	62.37 ["] ₁₂₉	14.867 ^s ₁₅	78.82 ["] ₂₃₆	52.993 ^s ₄	77.44 ["] ₁₀₇	14.266 ^s ₅	80.52 ["] ₁₁
	31.9	09.840 ^s ₃₉	63.66 ["] ₁₃₃	14.852 ^s ₅₃	81.18 ["] ₂₀₉	52.997 ^s ₂₂	78.51 ["] ₈₆	14.271 ^s ₁₉	80.63 ["] ₆
Нояб.	10.9	09.801 ^s ₆₄	64.99 ["] ₁₃₂	14.799 ^s ₉₂	83.27 ["] ₁₇₇	52.975 ^s ₄₈	79.37 ["] ₆₁	14.252 ^s ₄₂	80.57 ["] ₂₂
	20.9	09.737 ^s ₈₃	66.31 ["] ₁₂₄	14.707 ^s ₁₂₅	85.04 ["] ₁₃₉	52.927 ^s ₇₀	79.98 ["] ₃₅	14.210 ^s ₆₂	80.35 ["] ₃₆
	30.8	09.654 ^s ₉₇	67.55 ["] ₁₁₀	14.582 ^s ₁₅₃	86.43 ["] ₉₉	52.857 ^s ₈₈	80.33 ["] ₁₁	14.148 ^s ₇₆	79.99 ["] ₄₅
Дек.	10.8	09.557 ^s ₁₁₀	68.65 ["] ₉₅	14.429 ^s ₁₈₀	87.42 ["] ₅₅	52.769 ^s ₁₀₄	80.44 ["] ₁₄	14.072 ^s ₉₁	79.54 ["] ₅₆
	20.8	09.447 ^s ₁₁₇	69.60 ["] ₇₃	14.249 ^s ₁₉₇	87.97 ["] ₉	52.665 ^s ₁₁₇	80.30 ["] ₃₉	13.981 ^s ₁₀₁	78.98 ["] ₆₂
	30.8	09.330 ^s ₁₁₉	70.33 ["] ₅₀	14.052 ^s ₂₀₈	88.06 ["] ₃₅	52.548 ^s ₁₂₄	79.91 ["] ₆₁	13.880 ^s ₁₀₇	78.36 ["] ₆₆
	40.7	09.211 ^s ₁₂₁	70.83 ["] ₂₇	13.844 ^s ₂₁₄	87.71 ["] ₈₁	52.424 ^s ₁₂₉	79.30 ["] ₈₄	13.773 ^s ₁₁₁	77.70 ["] ₇₁
Средн. место J1990.5		06.781	79.15	11.552	56.96	50.022	56.14	11.331	60.46
Sec δ , tg δ		1.052	-0.326	1.501	+1.120	1.096	+0.450	1.009	+0.132
a, a'		+0.149	+0.982	+0.168	+0.981	+0.159	+0.979	+0.155	+0.978
b, b'		-0.021	-0.187	+0.073	-0.192	+0.029	-0.203	+0.009	-0.209

Дата	37) χ Cas		710) ν And		592) α Eri		38) δ And		
	4 ^m 88 X-15 K0		4 ^m 18 X-15 G0		0 ^m 60 X-16 B5		3 ^m 77 X-16 K0		
	h m	+ ° ' /	h m	+ ° ' /	h m	- ° ' /	h m	+ ° ' /	
	1 33	+59 10	1 36	+41 21	1 37	-57 16	1 37	+48 34	
Янв.	—4.2	17.393 ^s ₂₇₄	74.55 ^s ₅₉	13.455 ^s ₁₅₄	39.41 ^s ₁₃	22.496 ^s ₃₁₄	84.83 ^s ₇₀	23.530 ^s ₁₈₆	60.87 ^s ₃₄
	5.8	17.119 ^s ₂₉₇	75.14 ^s ₅₀	13.301 ^s ₁₆₉	39.54 ^s ₂₄	22.182 ^s ₃₂₄	85.53 ^s ₁₃	23.344 ^s ₂₀₅	61.21 ^s ₈
	15.7	16.822 ^s ₃₁₃	75.24 ^s ₄₂	13.132 ^s ₁₈₄	39.30 ^s ₅₉	21.858 ^s ₃₂₇	85.66 ^s ₄₁	23.139 ^s ₂₂₀	61.13 ^s ₅₁
	25.7	16.509 ^s ₃₁₄	74.82 ^s ₉₄	12.948 ^s ₁₈₆	38.71 ^s ₉₅	21.531 ^s ₃₂₀	85.25 ^s ₉₉	22.919 ^s ₂₂₃	60.62 ^s ₉₃
Февр.	4.7	16.195 ^s ₂₉₅	73.88 ^s ₁₃₇	12.762 ^s ₁₇₇	37.76 ^s ₁₂₄	21.211 ^s ₃₀₀	84.26 ^s ₁₄₉	22.696 ^s ₂₁₂	59.69 ^s ₁₂₈
	14.7	15.900 ^s ₂₆₈	72.51 ^s ₁₇₇	12.585 ^s ₁₆₂	36.52 ^s ₁₄₉	20.911 ^s ₂₇₅	82.77 ^s ₁₉₆	22.484 ^s ₁₉₄	58.41 ^s ₁₆₁
	24.6	15.632 ^s ₂₂₀	70.74 ^s ₂₁₁	12.423 ^s ₁₃₃	35.03 ^s ₁₆₇	20.636 ^s ₂₃₅	80.81 ^s ₂₄₂	22.290 ^s ₁₅₉	56.80 ^s ₁₈₅
Март	6.6	15.412 ^s ₁₅₉	68.63 ^s ₂₃₀	12.290 ^s ₉₄	33.36 ^s ₁₇₆	20.401 ^s ₁₈₉	78.39 ^s ₂₇₆	22.131 ^s ₁₁₅	54.95 ^s ₁₉₉
	16.6	15.253 ^s ₉₁	66.33 ^s ₂₄₅	12.196 ^s ₄₉	31.60 ^s ₁₇₉	20.212 ^s ₁₃₇	75.63 ^s ₃₀₉	22.016 ^s ₆₄	52.96 ^s ₂₀₇
	26.6	15.162 ^s ₉	63.88 ^s ₂₄₆	12.147 ^s ₆	29.81 ^s ₁₇₃	20.075 ^s ₇₃	72.54 ^s ₃₃₄	21.952 ^s ₁	50.89 ^s ₂₀₅
Апр.	5.5	15.153 ^s ₇₄	61.42 ^s ₂₃₆	12.153 ^s ₆₃	28.08 ^s ₁₅₇	20.002 ^s ₇	69.20 ^s ₃₄₈	21.951 ^s ₆₃	48.84 ^s ₁₉₂
	15.5	15.227 ^s ₁₅₇	59.06 ^s ₂₂₀	12.216 ^s ₁₂₁	26.51 ^s ₁₃₈	19.995 ^s ₆₀	65.72 ^s ₃₆₁	22.014 ^s ₁₂₉	46.92 ^s ₁₇₄
	25.5	15.384 ^s ₂₄₃	56.86 ^s ₁₉₃	12.337 ^s ₁₈₂	25.13 ^s ₁₀₉	20.055 ^s ₁₃₃	62.11 ^s ₃₆₂	22.143 ^s ₁₉₈	45.18 ^s ₁₄₆
Май	5.4	15.627 ^s ₃₁₇	54.93 ^s ₁₅₇	12.519 ^s ₂₃₅	24.04 ^s ₇₆	20.188 ^s ₂₀₁	58.49 ^s ₃₅₅	22.341 ^s ₂₅₇	43.72 ^s ₁₁₂
	15.4	15.944 ^s ₃₈₆	53.36 ^s ₁₂₀	12.754 ^s ₂₈₅	23.28 ^s ₄₂	20.389 ^s ₂₆₅	54.94 ^s ₃₄₄	22.598 ^s ₃₁₃	42.60 ^s ₇₇
Июнь	25.4	16.330 ^s ₄₄₆	52.16 ^s ₇₅	13.039 ^s ₃₂₉	22.86 ^s ₁	20.654 ^s ₃₂₈	51.50 ^s ₃₂₁	22.911 ^s ₃₆₂	41.83 ^s ₃₄
	4.4	16.776 ^s ₄₈₈	51.41 ^s ₂₈	13.368 ^s ₃₆₀	22.85 ^s ₃₆	20.982 ^s ₃₇₆	48.29 ^s ₂₉₁	23.273 ^s ₃₉₆	41.49 ^s ₆
	14.3	17.264 ^s ₅₂₃	51.13 ^s ₁₇	13.728 ^s ₃₈₅	23.21 ^s ₇₃	21.358 ^s ₄₂₀	45.38 ^s ₂₅₇	23.669 ^s ₄₂₆	41.55 ^s ₄₈
	24.3	17.787 ^s ₅₄₂	51.30 ^s ₆₆	14.113 ^s ₄₀₀	23.94 ^s ₁₁₁	21.778 ^s ₄₅₁	42.81 ^s ₂₁₂	24.095 ^s ₄₄₁	42.03 ^s ₉₁
Июль	4.3	18.329 ^s ₅₄₃	51.96 ^s ₁₁₀	14.513 ^s ₄₀₂	25.05 ^s ₁₄₂	22.229 ^s ₄₆₇	40.69 ^s ₁₆₅	24.536 ^s ₄₄₄	42.94 ^s ₁₂₆
Авг.	14.3	18.872 ^s ₅₄₀	53.06 ^s ₁₅₁	14.915 ^s ₃₉₈	26.47 ^s ₁₇₁	22.696 ^s ₄₇₅	39.04 ^s ₁₁₃	24.980 ^s ₄₄₁	44.20 ^s ₁₆₂
	24.2	19.412 ^s ₅₁₉	54.57 ^s ₁₉₁	15.313 ^s ₃₈₄	28.18 ^s ₁₉₇	23.171 ^s ₄₆₇	37.91 ^s ₅₅	25.421 ^s ₄₂₄	45.82 ^s ₁₉₄
	3.2	19.931 ^s ₄₈₈	56.48 ^s ₂₂₃	15.697 ^s ₃₆₀	30.15 ^s ₂₁₅	23.638 ^s ₄₄₅	37.36 ^s ₁	25.845 ^s ₄₀₀	47.76 ^s ₂₁₇
	13.2	20.419 ^s ₄₅₃	58.71 ^s ₂₅₂	16.057 ^s ₃₃₅	32.30 ^s ₂₃₁	24.083 ^s ₄₁₅	37.37 ^s ₅₈	26.245 ^s ₃₇₂	49.93 ^s ₂₄₀
	23.1	20.872 ^s ₄₀₅	61.23 ^s ₂₇₆	16.392 ^s ₃₀₀	34.61 ^s ₂₄₁	24.498 ^s ₃₆₉	37.95 ^s ₁₁₅	26.617 ^s ₃₃₄	52.33 ^s ₂₅₆
Сент.	2.1	21.277 ^s ₃₅₆	63.99 ^s ₂₉₂	16.692 ^s ₂₆₃	37.02 ^s ₂₄₅	24.867 ^s ₃₁₇	39.10 ^s ₁₆₄	26.951 ^s ₂₉₅	54.89 ^s ₂₆₅
	12.1	21.633 ^s ₃₀₃	66.91 ^s ₃₀₆	16.955 ^s ₂₂₇	39.47 ^s ₂₄₆	25.184 ^s ₂₅₈	40.74 ^s ₂₁₀	27.246 ^s ₂₅₂	57.54 ^s ₂₇₂
	22.1	21.936 ^s ₂₄₂	69.97 ^s ₃₁₁	17.182 ^s ₁₈₄	41.93 ^s ₂₄₂	25.442 ^s ₁₈₉	42.84 ^s ₂₄₇	27.498 ^s ₂₀₆	60.26 ^s ₂₇₁
Окт.	2.0	22.178 ^s ₁₈₆	73.08 ^s ₃₁₁	17.366 ^s ₁₄₅	44.35 ^s ₂₃₂	25.631 ^s ₁₂₂	45.31 ^s ₂₇₂	27.704 ^s ₁₆₂	62.97 ^s ₂₆₇
	12.0	22.364 ^s ₁₂₇	76.19 ^s ₃₀₆	17.511 ^s ₁₀₅	46.67 ^s ₂₂₂	25.753 ^s ₅₂	48.03 ^s ₂₉₁	27.866 ^s ₁₁₇	65.64 ^s ₂₅₈
Нояб.	21.9	22.491 ^s ₆₄	79.25 ^s ₂₉₁	17.616 ^s ₆₄	48.89 ^s ₂₀₃	25.805 ^s ₁₉	50.94 ^s ₂₉₆	27.983 ^s ₆₉	68.22 ^s ₂₄₂
	31.9	22.555 ^s ₈	82.16 ^s ₂₇₄	17.680 ^s ₂₉	50.92 ^s ₁₈₅	25.786 ^s ₈₁	53.90 ^s ₂₈₇	28.052 ^s ₂₈	70.64 ^s ₂₂₄
	10.9	22.563 ^s ₅₂	84.90 ^s ₂₄₉	17.709 ^s ₁₀	52.77 ^s ₁₆₁	25.705 ^s ₁₄₁	56.77 ^s ₂₇₂	28.080 ^s ₁₇	72.88 ^s ₂₀₀
	20.9	22.511 ^s ₁₁₀	87.39 ^s ₂₁₆	17.699 ^s ₄₇	54.38 ^s ₁₃₃	25.564 ^s ₁₉₆	59.49 ^s ₂₄₁	28.063 ^s ₆₀	74.88 ^s ₁₆₉
	30.9	22.401 ^s ₁₅₉	89.55 ^s ₁₈₀	17.652 ^s ₇₈	55.71 ^s ₁₀₄	25.368 ^s ₂₃₈	61.90 ^s ₂₀₃	28.003 ^s ₉₈	76.57 ^s ₁₃₈
Дек.	10.8	22.242 ^s ₂₁₀	91.35 ^s ₁₃₇	17.574 ^s ₁₁₂	56.75 ^s ₇₀	25.130 ^s ₂₇₈	63.93 ^s ₁₅₉	27.905 ^s ₁₃₆	77.95 ^s ₁₀₀
	20.8	22.032 ^s ₂₅₂	92.72 ^s ₈₉	17.462 ^s ₁₃₉	57.45 ^s ₃₃	24.852 ^s ₃₀₄	65.52 ^s ₁₀₅	27.769 ^s ₁₆₉	78.95 ^s ₅₉
	30.8	21.780 ^s ₂₈₃	93.61 ^s ₄₀	17.323 ^s ₁₆₀	57.78 ^s ₁	24.548 ^s ₃₂₁	66.57 ^s ₅₂	27.600 ^s ₁₉₄	79.54 ^s ₁₈
	40.8	21.497 ^s ₃₀₈	94.01 ^s ₁₂	17.163 ^s ₁₈₀	57.77 ^s ₄₀	24.227 ^s ₃₃₁	67.09 ^s ₅	27.406 ^s ₂₁₅	79.72 ^s ₂₇
Средн. место J1990.5		18.320	60.78	14.203	29.50	21.680	65.28	24.333	49.25
Sec δ , tg δ		1.952	+1.676	1.332	+0.880	1.850	-1.557	1.512	+1.133
a, a'		+0.198	+0.918	+0.177	+0.913	+0.110	+0.911	+0.184	+0.911
b, b'		+0.103	-0.396	+0.054	-0.408	-0.095	-0.412	+0.069	-0.412

Верхняя кульминация в Гриниче

Дата	53) γ And pr		54) α Ari		55) β Tri		595) μ For		
	2 ^m 28 X-22 K0		2 ^m 23 X-23 K2		3 ^m 08 X-24 A5		5 ^m 24 X-25 A0		
	h m 2 03	° ′ +42 16	h m 2 06	° ′ +23 25	h m 2 08	° ′ +34 56	h m 2 12	° ′ -30 45	
Янв.	—4.2	18.207 ^s ₁₄₁	74.43 ₃₈	37.712 ^s ₉₇	09.27 ₁₇	58.048 ₁₁₅	42.17 ₁₉	29.601 ^s ₁₃₈	76.66 ₁₂₀
	5.8	18.066 ₁₆₅	74.81 ₃₃	37.615 ₁₁₆	09.10 ₃₅	57.933 ₁₃₈	42.36 ₉	29.463 ₁₅₅	77.86 ₈₂
	15.8	17.901 ₁₈₅	74.84 ₃	37.499 ₁₃₃	08.75 ₅₁	57.795 ₁₅₈	42.27 ₃₈	29.308 ₁₆₈	78.68 ₄₄
	25.7	17.716 ₁₉₅	74.51 ₆₉	37.366 ₁₄₃	08.24 ₅₇	57.637 ₁₆₉	41.89 ₆₇	29.140 ₁₇₇	79.12 ₁
Февр.	4.7	17.521 ₁₉₃	73.82 ₁₀₀	37.223 ₁₄₃	07.57 ₇₉	57.468 ₁₆₉	41.22 ₈₉	28.963 ₁₇₄	79.13 ₃₈
	14.7	17.328 ₁₈₃	72.82 ₁₂₈	37.080 ₁₃₇	06.78 ₈₈	57.299 ₁₆₂	40.33 ₁₁₂	28.789 ₁₆₈	78.75 ₇₇
	24.7	17.145 ₁₅₉	71.54 ₁₅₁	36.943 ₁₂₀	05.90 ₉₃	57.137 ₁₄₂	39.21 ₁₂₇	28.621 ₁₅₀	77.98 ₁₁₈
Март	6.6	16.986 ₁₂₄	70.03 ₁₆₄	36.823 ₉₃	04.97 ₉₂	56.995 ₁₁₂	37.94 ₁₃₆	28.471 ₁₂₆	76.80 ₁₅₂
	16.6	16.862 ₈₂	68.39 ₁₇₃	36.730 ₆₁	04.05 ₈₈	56.883 ₇₅	36.58 ₁₄₀	28.345 ₉₆	75.28 ₁₈₅
	26.6	16.780 ₂₈	66.66 ₁₇₁	36.669 ₁₉	03.17 ₇₆	56.808 ₂₇	35.18 ₁₃₅	28.249 ₅₅	73.43 ₂₁₇
Апр.	5.6	16.752 ₂₉	64.95 ₁₆₂	36.650 ₂₆	02.41 ₅₉	56.781 ₂₄	33.83 ₁₂₄	28.194 ₁₂	71.26 ₂₄₁
	15.5	16.781 ₈₈	63.33 ₁₄₇	36.676 ₇₃	01.82 ₄₀	56.805 ₇₆	32.59 ₁₀₈	28.182 ₃₅	68.85 ₂₆₃
	25.5	16.869 ₁₅₀	61.86 ₁₂₄	36.749 ₁₂₄	01.42 ₁₉	56.881 ₁₃₄	31.51 ₈₅	28.217 ₈₆	66.22 ₂₈₁
Май	5.5	17.019 ₂₀₈	60.62 ₉₅	36.873 ₁₇₄	01.23 ₇	57.015 ₁₈₇	30.66 ₅₈	28.303 ₁₃₄	63.41 ₂₈₉
	15.4	17.227 ₂₆₂	59.67 ₆₄	37.047 ₂₁₈	01.30 ₃₅	57.202 ₂₃₇	30.08 ₃₀	28.437 ₁₈₀	60.52 ₂₉₅
Июнь	25.4	17.489 ₃₁₀	59.03 ₂₈	37.265 ₂₅₉	01.65 ₅₄	57.439 ₂₈₂	29.78 ₅	28.617 ₂₂₆	57.57 ₂₉₂
	4.4	17.799 ₃₄₇	58.75 ₈	37.524 ₂₉₁	02.29 ₈₉	57.721 ₃₁₇	29.83 ₃₆	28.843 ₂₆₂	54.65 ₂₈₃
	14.4	18.146 ₃₇₈	58.83 ₄₅	37.815 ₃₁₆	03.18 ₁₁₄	58.038 ₃₄₆	30.19 ₆₈	29.105 ₂₉₃	51.82 ₂₆₈
	24.3	18.524 ₃₉₈	59.28 ₈₁	38.131 ₃₃₅	04.32 ₁₃₅	58.384 ₃₆₆	30.87 ₉₈	29.398 ₃₁₈	49.14 ₂₄₃
Июль	4.3	18.922 ₄₀₆	60.09 ₁₁₂	38.466 ₃₄₂	05.67 ₁₅₃	58.750 ₃₇₄	31.85 ₁₂₅	29.716 ₃₃₀	46.71 ₂₁₃
Авг.	14.3	19.328 ₄₀₉	61.21 ₁₄₃	38.808 ₃₄₄	07.20 ₁₆₆	59.124 ₃₇₇	33.10 ₁₄₉	30.046 ₃₃₉	44.58 ₁₈₀
	24.3	19.737 ₃₉₉	62.64 ₁₆₉	39.152 ₃₃₇	08.86 ₁₇₅	59.501 ₃₇₀	34.59 ₁₆₉	30.385 ₃₃₇	42.78 ₁₃₇
	3.2	20.136 ₃₈₁	64.33 ₁₉₀	39.489 ₃₂₃	10.61 ₁₇₈	59.871 ₃₅₄	36.28 ₁₈₃	30.722 ₃₂₄	41.41 ₉₄
	13.2	20.517 ₃₆₁	66.23 ₂₀₉	39.812 ₃₀₄	12.39 ₁₇₉	60.225 ₃₃₅	38.11 ₁₉₅	31.046 ₃₁₀	40.47 ₄₇
	23.2	20.878 ₃₃₁	68.32 ₂₂₁	40.116 ₂₈₀	14.18 ₁₇₅	60.560 ₃₀₉	40.06 ₂₀₂	31.356 ₂₈₃	40.00 ₃
Сент.	2.1	21.209 ₂₉₇	70.53 ₂₂₈	40.396 ₂₅₁	15.93 ₁₆₆	60.869 ₂₇₉	42.08 ₂₀₃	31.639 ₂₅₄	40.03 ₄₈
	12.1	21.506 ₂₆₄	72.81 ₂₃₃	40.647 ₂₂₃	17.59 ₁₅₇	61.148 ₂₄₈	44.11 ₂₀₃	31.893 ₂₂₂	40.51 ₉₄
	22.1	21.770 ₂₂₄	75.14 ₂₃₂	40.870 ₁₉₀	19.16 ₁₄₃	61.396 ₂₁₂	46.14 ₁₉₇	32.115 ₁₈₄	41.45 ₁₃₆
Окт.	2.1	21.994 ₁₈₆	77.46 ₂₂₇	41.060 ₁₅₉	20.59 ₁₂₉	61.608 ₁₇₉	48.11 ₁₈₉	32.299 ₁₄₆	42.81 ₁₆₇
	12.0	22.180 ₁₄₇	79.73 ₂₂₀	41.219 ₁₂₈	21.88 ₁₁₃	61.787 ₁₄₃	50.00 ₁₇₉	32.445 ₁₀₇	44.48 ₁₉₇
Нояб.	22.0	22.327 ₁₀₅	81.93 ₂₀₆	41.347 ₉₃	23.01 ₉₆	61.930 ₁₀₆	51.79 ₁₆₄	32.552 ₆₇	46.45 ₂₁₆
	31.9	22.432 ₆₇	83.99 ₁₉₁	41.440 ₆₅	23.97 ₈₀	62.036 ₇₂	53.43 ₁₄₉	32.619 ₃₁	48.61 ₂₂₃
	10.9	22.499 ₂₇	85.90 ₁₇₃	41.505 ₃₃	24.77 ₆₃	62.108 ₃₇	54.92 ₁₃₁	32.650 ₅	50.84 ₂₂₆
	20.9	22.526 ₁₄	87.63 ₁₄₇	41.538 ₁	25.40 ₄₄	62.145 ₁	56.23 ₁₀₉	32.645 ₄₁	53.10 ₂₁₆
	30.9	22.512 ₅₀	89.10 ₁₂₂	41.539 ₂₆	25.84 ₂₉	62.144 ₃₂	57.32 ₈₈	32.604 ₇₀	55.26 ₁₉₈
Дек.	10.9	22.462 ₈₉	90.32 ₉₂	41.513 ₅₆	26.13 ₉	62.112 ₆₈	58.20 ₆₂	32.534 ₁₀₁	57.24 ₁₇₆
	20.8	22.373 ₁₂₃	91.24 ₅₇	41.457 ₈₃	26.22 ₈	62.044 ₉₉	58.82 ₃₄	32.433 ₁₂₆	59.00 ₁₄₂
	30.8	22.250 ₁₅₁	91.81 ₂₄	41.374 ₁₀₅	26.14 ₂₆	61.945 ₁₂₅	59.16 ₇	32.307 ₁₄₆	60.42 ₁₀₉
	40.8	22.099 ₁₇₇	92.05 ₁₃	41.269 ₁₂₇	25.88 ₄₃	61.820 ₁₅₀	59.23 ₂₃	32.161 ₁₆₅	61.51 ₇₁
Средн. место J1990.5		18.780	64.10	38.166	04.11	58.553	33.70	29.387	65.24
Sec δ , tg δ		1.352	+0.909	1.090	+0.433	1.220	+0.699	1.164	-0.595
a, a'		+0.184	+0.859	+0.168	+0.851	+0.178	+0.846	+0.132	+0.838
b, b'		+0.052	-0.512	+0.025	-0.525	+0.039	-0.534	-0.033	-0.546

Верхняя кульминация в Гриниче

Дата	70) τ Per		71) η Eri		600) θ Eri pr		712) 24 Per	
	4 ^m 06 XI-4 G0 A5		4 ^m 05 XI-5 K0		3 ^m 42 XI-5 A2		4 ^m 97 XI-5 K0	
	h m 2 53	° ′ +52 43	h m 2 55	° ′ -8 55	h m 2 57	° ′ -40 20	h m 2 58	° ′ +35 08
Янв. —4.1	34.555 ^s 147	39.48 ^{''} 113	57.862 ^s 76	71.08 ^{''} 112	54.841 ^s 156	43.57 ^{''} 171	28.013 ^s 83	52.74 ^{''} 46
5.8	34.408 ^s 189	40.61 ^{''} 75	57.786 ^s 100	72.20 ^{''} 94	54.685 ^s 184	45.28 ^{''} 127	27.930 ^s 116	53.20 ^{''} 23
15.8	34.219 ^s 228	41.36 ^{''} 35	57.686 ^s 123	73.14 ^{''} 76	54.501 ^s 208	46.55 ^{''} 82	27.814 ^s 147	53.43 ^{''} 3
25.8	33.991 ^s 255	41.71 ^{''} 10	57.563 ^s 140	73.90 ^{''} 54	54.293 ^s 225	47.37 ^{''} 33	27.667 ^s 169	53.40 ^{''} 30
Февр. 4.7	33.736 ^s 266	41.61 ^{''} 51	57.423 ^s 148	74.44 ^{''} 31	54.068 ^s 230	47.70 ^{''} 16	27.498 ^s 180	53.10 ^{''} 53
14.7	33.470 ^s 266	41.10 ^{''} 91	57.275 ^s 151	74.75 ^{''} 8	53.838 ^s 232	47.54 ^{''} 61	27.318 ^s 184	52.57 ^{''} 77
24.7	33.204 ^s 249	40.19 ^{''} 128	57.124 ^s 143	74.83 ^{''} 18	53.606 ^s 220	46.93 ^{''} 111	27.134 ^s 174	51.80 ^{''} 96
Март 6.7	32.955 ^s 216	38.91 ^{''} 156	56.981 ^s 127	74.65 ^{''} 41	53.386 ^s 198	45.82 ^{''} 151	26.960 ^s 151	50.84 ^{''} 110
16.6	32.739 ^s 173	37.35 ^{''} 180	56.854 ^s 105	74.24 ^{''} 66	53.188 ^s 171	44.31 ^{''} 192	26.809 ^s 123	49.74 ^{''} 121
26.6	32.566 ^s 114	35.55 ^{''} 196	56.749 ^s 71	73.58 ^{''} 92	53.017 ^s 131	42.39 ^{''} 229	26.686 ^s 79	48.53 ^{''} 123
Апр. 5.6	32.452 ^s 49	33.59 ^{''} 200	56.678 ^s 33	72.66 ^{''} 115	52.886 ^s 86	40.10 ^{''} 257	26.607 ^s 31	47.30 ^{''} 120
15.6	32.403 ^s 21	31.59 ^{''} 199	56.645 ^s 7	71.51 ^{''} 139	52.800 ^s 38	37.53 ^{''} 285	26.576 ^s 20	46.10 ^{''} 111
25.5	32.424 ^s 98	29.60 ^{''} 188	56.652 ^s 55	70.12 ^{''} 162	52.762 ^s 19	34.68 ^{''} 306	26.596 ^s 78	44.99 ^{''} 96
Май 5.5	32.522 ^s 169	27.72 ^{''} 169	56.707 ^s 99	68.50 ^{''} 179	52.781 ^s 72	31.62 ^{''} 316	26.674 ^s 133	44.03 ^{''} 77
15.5	32.691 ^s 238	26.03 ^{''} 147	56.806 ^s 144	66.71 ^{''} 197	52.853 ^s 127	28.46 ^{''} 326	26.807 ^s 186	43.26 ^{''} 56
Июнь 25.4	32.929 ^s 305	24.56 ^{''} 116	56.950 ^s 187	64.74 ^{''} 208	52.980 ^s 181	25.20 ^{''} 323	26.993 ^s 238	42.70 ^{''} 29
4.4	33.234 ^s 368	23.40 ^{''} 83	57.137 ^s 222	62.66 ^{''} 214	53.161 ^s 226	21.97 ^{''} 314	27.231 ^s 279	42.41 ^{''} 1
14.4	33.592 ^s 404	22.57 ^{''} 48	57.359 ^s 255	60.52 ^{''} 217	53.387 ^s 268	18.83 ^{''} 299	27.510 ^s 316	42.40 ^{''} 26
24.4	33.996 ^s 442	22.09 ^{''} 10	57.614 ^s 280	58.35 ^{''} 212	53.655 ^s 305	15.84 ^{''} 273	27.826 ^s 344	42.66 ^{''} 54
Июль 4.3	34.438 ^s 463	21.99 ^{''} 27	57.894 ^s 296	56.23 ^{''} 202	53.960 ^s 329	13.11 ^{''} 242	28.170 ^s 361	43.20 ^{''} 79
14.3	34.901 ^s 479	22.26 ^{''} 62	58.190 ^s 307	54.21 ^{''} 188	54.289 ^s 348	10.69 ^{''} 204	28.531 ^s 374	43.99 ^{''} 102
24.3	35.380 ^s 481	22.88 ^{''} 98	58.497 ^s 310	52.33 ^{''} 165	54.637 ^s 357	08.65 ^{''} 158	28.905 ^s 375	45.01 ^{''} 123
Авг. 3.3	35.861 ^s 474	23.86 ^{''} 128	58.807 ^s 305	50.68 ^{''} 140	54.994 ^s 355	07.07 ^{''} 109	29.280 ^s 369	46.24 ^{''} 137
13.2	36.335 ^s 462	25.14 ^{''} 157	59.112 ^s 297	49.28 ^{''} 110	55.349 ^s 350	05.98 ^{''} 57	29.649 ^s 360	47.61 ^{''} 151
23.2	36.797 ^s 438	26.71 ^{''} 182	59.409 ^s 281	48.18 ^{''} 75	55.699 ^s 331	05.41 ^{''} 0	30.009 ^s 341	49.12 ^{''} 160
Сент. 2.2	37.235 ^s 410	28.53 ^{''} 200	59.690 ^s 260	47.43 ^{''} 42	56.030 ^s 307	05.41 ^{''} 52	30.350 ^s 319	50.72 ^{''} 165
12.1	37.645 ^s 378	30.53 ^{''} 219	59.950 ^s 239	47.01 ^{''} 7	56.337 ^s 279	05.93 ^{''} 107	30.669 ^s 295	52.37 ^{''} 168
22.1	38.023 ^s 338	32.72 ^{''} 231	60.189 ^s 211	46.94 ^{''} 29	56.616 ^s 241	07.00 ^{''} 156	30.964 ^s 266	54.05 ^{''} 166
Окт. 2.1	38.361 ^s 299	35.03 ^{''} 239	60.400 ^s 184	47.23 ^{''} 59	56.857 ^s 204	08.56 ^{''} 196	31.230 ^s 235	55.71 ^{''} 163
12.1	38.660 ^s 254	37.42 ^{''} 244	60.584 ^s 156	47.82 ^{''} 88	57.061 ^s 163	10.52 ^{''} 234	31.465 ^s 205	57.34 ^{''} 158
Нояб. 22.0	38.914 ^s 205	39.86 ^{''} 242	60.740 ^s 124	48.70 ^{''} 111	57.224 ^s 116	12.86 ^{''} 259	31.670 ^s 169	58.92 ^{''} 149
1.0	39.119 ^s 158	42.28 ^{''} 237	60.864 ^s 95	49.81 ^{''} 127	57.340 ^s 74	15.45 ^{''} 273	31.839 ^s 135	60.41 ^{''} 140
10.9	39.277 ^s 104	44.65 ^{''} 228	60.959 ^s 64	51.08 ^{''} 139	57.414 ^s 29	18.18 ^{''} 280	31.974 ^s 98	61.81 ^{''} 128
20.9	39.381 ^s 49	46.93 ^{''} 211	61.023 ^s 31	52.47 ^{''} 143	57.443 ^s 18	20.98 ^{''} 272	32.072 ^s 57	63.09 ^{''} 114
30.9	39.430 ^s 5	49.04 ^{''} 192	61.054 ^s 2	53.90 ^{''} 141	57.425 ^s 57	23.70 ^{''} 256	32.129 ^s 21	64.23 ^{''} 98
Дек. 10.9	39.425 ^s 62	50.96 ^{''} 165	61.056 ^s 30	55.31 ^{''} 136	57.368 ^s 99	26.26 ^{''} 232	32.150 ^s 22	65.21 ^{''} 80
20.9	39.363 ^s 116	52.61 ^{''} 133	61.026 ^s 60	56.67 ^{''} 123	57.269 ^s 137	28.58 ^{''} 196	32.128 ^s 61	66.01 ^{''} 58
30.8	39.247 ^s 163	53.94 ^{''} 98	60.966 ^s 87	57.90 ^{''} 108	57.132 ^s 168	30.54 ^{''} 158	32.067 ^s 96	66.59 ^{''} 36
40.8	39.084 ^s 209	54.92 ^{''} 58	60.879 ^s 112	58.98 ^{''} 91	56.964 ^s 197	32.12 ^{''} 114	31.971 ^s 132	66.95 ^{''} 10
Средн. место J1990.5	34.762	26.83	57.774	68.17	54.077	32.92	28.211	43.82
Sec δ , tg δ	1.651	+1.314	1.012	-0.157	1.312	-0.849	1.223	+0.704
a, a'	+0.213	+0.727	+0.146	+0.719	+0.114	+0.714	+0.186	+0.712
b, b'	+0.064	-0.687	-0.008	-0.695	-0.040	-0.701	+0.033	-0.702

Дата	72) ϵ Ari m		73) λ Cet		74) α Cet		75) γ Per		
	4^m64 XI-5 A2		4^m69 XI-5 B5		2^m82 XI-6 M0		3^m08 XI-7 F5 A3		
	h m	$^{\circ}$ ' "	h m	$^{\circ}$ ' "	h m	$^{\circ}$ ' "	h m	$^{\circ}$ ' "	
	2 58	+21 18	2 59	+8 52	3 01	+4 03	3 04	+53 28	
Янв.	—4.1	39.884 ^s ₆₇	15.34 ^s ₉	12.213 ^s ₆₃	13.77 ^s ₅₆	46.905 ^s ₆₃	11.09 ^s ₇₃	06.102 ^s ₁₃₉	24.01 ^s ₁₂₄
	5.8	39.817 ₉₄	15.25 ₂₀	12.150 ₈₉	13.21 ₅₅	46.842 ₈₉	10.36 ₆₇	05.963 ₁₈₅	25.25 ₈₇
	15.8	39.723 ₁₂₂	15.05 ₃₂	12.061 ₁₁₄	12.66 ₅₄	46.753 ₁₁₄	09.69 ₆₂	05.778 ₂₂₇	26.12 ₄₇
	25.8	39.601 ₁₄₂	14.73 ₄₄	11.947 ₁₃₃	12.12 ₅₂	46.639 ₁₃₂	09.07 ₅₄	05.551 ₂₅₉	26.59 ₂
Февр.	4.8	39.459 ₁₅₁	14.29 ₅₃	11.814 ₁₄₂	11.60 ₄₇	46.507 ₁₄₃	08.53 ₄₄	05.292 ₂₇₂	26.61 ₃₉
	14.7	39.308 ₁₅₆	13.76 ₆₁	11.672 ₁₄₇	11.13 ₄₂	46.364 ₁₄₆	08.09 ₃₄	05.020 ₂₇₆	26.22 ₈₀
	24.7	39.152 ₁₄₉	13.15 ₆₆	11.525 ₁₄₀	10.71 ₃₅	46.218 ₁₄₁	07.75 ₂₂	04.744 ₂₆₁	25.42 ₁₁₈
Март	6.7	39.003 ₁₂₉	12.49 ₆₈	11.385 ₁₂₃	10.36 ₂₄	46.077 ₁₂₄	07.53 ₇	04.483 ₂₃₀	24.24 ₁₄₉
	16.6	38.874 ₁₀₅	11.81 ₆₆	11.262 ₁₀₀	10.12 ₁₃	45.953 ₁₀₃	07.46 ₈	04.253 ₁₈₉	22.75 ₁₇₅
	26.6	38.769 ₆₈	11.15 ₅₉	11.162 ₆₆	09.99 ₂	45.850 ₆₉	07.54 ₂₆	04.064 ₁₃₁	21.00 ₁₉₂
Апр.	5.6	38.701 ₂₅	10.56 ₄₉	11.096 ₂₇	10.01 ₁₉	45.781 ₃₁	07.80 ₄₄	03.933 ₆₆	19.08 ₂₀₀
	15.6	38.676 ₂₀	10.07 ₃₃	11.069 ₁₆	10.20 ₃₆	45.750 ₁₁	08.24 ₆₄	03.867 ₅	17.08 ₂₀₁
	25.5	38.696 ₇₁	09.74 ₁₁	11.085 ₆₂	10.56 ₅₄	45.761 ₅₆	08.88 ₈₄	03.872 ₈₂	15.07 ₁₉₃
Май	5.5	38.767 ₁₁₃	09.63 ₁	11.147 ₁₀₆	11.10 ₈₁	45.817 ₁₀₂	09.72 ₁₀₇	03.954 ₁₅₅	13.14 ₁₇₆
	15.5	38.880 ₁₆₈	09.62 ₂₃	11.253 ₁₅₄	11.91 ₉₉	45.919 ₁₄₇	10.79 ₁₂₅	04.109 ₂₂₇	11.38 ₁₅₆
Июнь	25.5	39.048 ₂₁₄	09.85 ₄₉	11.407 ₁₉₇	12.90 ₁₁₈	46.066 ₁₉₀	12.04 ₁₄₃	04.336 ₂₉₅	09.82 ₁₂₇
	4.4	39.262 ₂₄₉	10.34 ₆₉	11.604 ₂₃₃	14.08 ₁₃₂	46.256 ₂₂₆	13.47 ₁₅₄	04.631 ₃₅₁	08.55 ₉₅
	14.4	39.511 ₂₈₂	11.03 ₉₁	11.837 ₂₆₄	15.40 ₁₄₇	46.482 ₂₅₈	15.01 ₁₆₆	04.982 ₄₀₀	07.60 ₆₂
	24.4	39.793 ₃₀₈	11.94 ₁₀₉	12.101 ₂₈₉	16.87 ₁₅₅	46.740 ₂₈₃	16.67 ₁₇₁	05.382 ₄₄₀	06.98 ₂₄
Июль	4.3	40.101 ₃₂₄	13.03 ₁₂₃	12.390 ₃₀₄	18.42 ₁₅₉	47.023 ₂₉₈	18.38 ₁₇₁	05.822 ₄₆₅	06.74 ₁₂
Авг.	14.3	40.425 ₃₃₄	14.26 ₁₃₅	12.694 ₃₁₅	20.01 ₁₆₀	47.321 ₃₁₀	20.09 ₁₆₈	06.287 ₄₈₃	06.86 ₄₇
	24.3	40.759 ₃₃₆	15.61 ₁₄₂	13.009 ₃₁₇	21.61 ₁₅₅	47.631 ₃₁₃	21.77 ₁₅₉	06.770 ₄₉₀	07.33 ₈₃
	3.3	41.095 ₃₃₀	17.03 ₁₄₄	13.326 ₃₁₂	23.16 ₁₄₆	47.944 ₃₀₈	23.36 ₁₄₄	07.260 ₄₈₃	08.16 ₁₁₄
	13.2	41.425 ₃₂₁	18.47 ₁₄₅	13.638 ₃₀₄	24.62 ₁₃₄	48.252 ₃₀₀	24.80 ₁₂₈	07.743 ₄₇₅	09.30 ₁₄₃
	23.2	41.746 ₃₀₄	19.92 ₁₃₉	13.942 ₂₈₇	25.96 ₁₁₆	48.552 ₂₈₅	26.08 ₁₀₅	08.218 ₄₅₂	10.73 ₁₆₉
Сент.	2.2	42.050 ₂₈₄	21.31 ₁₃₂	14.229 ₂₆₈	27.12 ₉₇	48.837 ₂₆₆	27.13 ₈₂	08.670 ₄₂₆	12.42 ₁₉₀
	12.2	42.334 ₂₆₂	22.63 ₁₂₂	14.497 ₂₄₇	28.09 ₇₆	49.103 ₂₄₅	27.95 ₅₇	09.096 ₃₉₇	14.32 ₂₀₉
	22.1	42.596 ₂₃₆	23.85 ₁₀₉	14.744 ₂₂₁	28.85 ₅₃	49.348 ₂₁₉	28.52 ₃₀	09.493 ₃₅₈	16.41 ₂₂₄
Окт.	2.1	42.832 ₂₀₉	24.94 ₉₆	14.965 ₁₉₅	29.38 ₃₃	49.567 ₁₉₅	28.82 ₇	09.851 ₃₁₉	18.65 ₂₃₂
	12.1	43.041 ₁₈₁	25.90 ₈₃	15.160 ₁₆₉	29.71 ₁₂	49.762 ₁₆₇	28.89 ₁₆	10.170 ₂₇₆	20.97 ₂₄₀
Нояб.	22.0	43.222 ₁₅₀	26.73 ₆₉	15.329 ₁₃₉	29.83 ₇	49.929 ₁₃₈	28.73 ₃₆	10.446 ₂₂₅	23.37 ₂₄₀
	1.0	43.372 ₁₂₀	27.42 ₅₆	15.468 ₁₁₁	29.76 ₂₁	50.067 ₁₁₀	28.37 ₅₁	10.671 ₁₇₈	25.77 ₂₃₇
	10.9	43.492 ₈₉	27.98 ₄₃	15.579 ₈₀	29.55 ₃₄	50.177 ₇₉	27.86 ₆₅	10.849 ₁₂₄	28.14 ₂₃₀
	20.9	43.581 ₅₄	28.41 ₃₁	15.659 ₄₉	29.21 ₄₄	50.256 ₄₈	27.21 ₇₃	10.973 ₆₅	30.44 ₂₁₆
	30.9	43.635 ₂₂	28.72 ₁₉	15.708 ₁₉	28.77 ₅₀	50.304 ₁₈	26.48 ₇₇	11.038 ₁₁	32.60 ₁₉₈
Дек.	10.9	43.657 ₁₄	28.91 ₈	15.727 ₁₅	28.27 ₅₆	50.322 ₁₄	25.71 ₈₀	11.049 ₄₉	34.58 ₁₇₃
	20.9	43.643 ₄₇	28.99 ₄	15.712 ₄₆	27.71 ₅₇	50.308 ₄₆	24.91 ₇₇	11.000 ₁₀₇	36.31 ₁₄₃
	30.9	43.596 ₇₈	28.95 ₁₅	15.666 ₇₄	27.14 ₅₇	50.262 ₇₄	24.14 ₇₃	10.893 ₁₅₇	37.74 ₁₀₉
	40.8	43.518 ₁₀₉	28.80 ₂₈	15.592 ₁₀₃	26.57 ₅₈	50.188 ₁₀₂	23.41 ₆₉	10.736 ₂₀₆	38.83 ₇₀
Средн. место J1990.5		40.036	09.89	12.284	11.68	46.923	10.23	06.221	11.33
Sec δ , tg δ		1.073	+0.390	1.012	+0.156	1.003	+0.071	1.680	+1.350
a, a'		+0.172	+0.711	+0.161	+0.710	+0.157	+0.702	+0.218	+0.694
b, b'		+0.018	-0.703	+0.007	-0.705	+0.003	-0.713	+0.062	-0.720

Дата	80) α For 3 ^m 95 XI-9 F8		81) Pi 23 4 ^m 92 XI-10 K0		83) α Per 1 ^m 90 XI-12 F5		82) Pi 3 ^h 27 Cam 5 ^m 55 XI-12 K2	
	h m 3 11	—29 01'	h m 3 18	+34 11'	h m 3 23	+49 49'	h m 3 23	+64 33'
Янв. —4.1	40.531 ^s ₁₀₆	34.50 ["] ₁₆₆	07.954 ^s ₆₆	27.37 ["] ₅₁	38.433 ^s ₉₉	52.56 ["] ₁₂₂	50.830 ^s ₁₉₇	23.96 ["] ₁₈₂
5.8	40.425 ₁₃₄	36.16 ₁₃₀	07.888 ₁₀₂	27.88 ₃₀	38.334 ₁₄₇	53.78 ₈₉	50.633 ₂₆₇	25.78 ₁₄₂
15.8	40.291 ₁₅₉	37.46 ₉₆	07.786 ₁₃₆	28.18 ⁷ ₁₇	38.187 ₁₉₂	54.67 ₅₅	50.366 ₃₃₀	27.20 ₉₇
25.8	40.132 ₁₈₀	38.42 ₅₃	07.650 ₁₆₃	28.25 ¹⁷ ₁₇	37.995 ₂₂₆	55.22 ₁₆	50.036 ₃₇₉	28.17 ₄₆
Февр. 4.8	39.952 ₁₈₈	38.95 ₁₃	07.487 ₁₇₇	28.08 ₄₀	37.769 ₂₄₄	55.38 ₂₂	49.657 ₄₀₄	28.63 ₅
14.7	39.764 ₁₉₃	39.08 ₂₇	07.310 ₁₈₆	27.68 ₆₂	37.525 ₂₅₅	55.16 ₆₀	49.253 ₄₁₄	28.58 ₅₄
24.7	39.571 ₁₈₇	38.81 ₆₉	07.124 ₁₈₀	27.06 ₈₂	37.270 ₂₄₇	54.56 ₉₆	48.839 ₄₀₀	28.04 ₁₀₄
Март 6.7	39.384 ₁₇₀	38.12 ₁₀₆	06.944 ₁₆₂	26.24 ₉₆	37.023 ₂₂₄	53.60 ₁₂₅	48.439 ₃₆₂	27.00 ₁₄₅
16.7	39.214 ₁₄₇	37.06 ₁₄₃	06.782 ₁₃₇	25.28 ₁₀₇	36.799 ₁₉₀	52.35 ₁₅₁	48.077 ₃₁₀	25.55 ₁₈₂
26.6	39.067 ₁₁₃	35.63 ₁₇₉	06.645 ₉₆	24.21 ₁₁₃	36.609 ₁₄₁	50.84 ₁₆₉	47.767 ₂₃₅	23.73 ₂₁₂
Апр. 5.6	38.954 ₇₄	33.84 ₂₀₇	06.549 ₅₁	23.08 ₁₁₁	36.468 ₈₂	49.15 ₁₇₈	47.532 ₁₄₈	21.61 ₂₂₈
15.6	38.880 ₃₀	31.77 ₂₃₆	06.498 ₁	21.97 ₁₀₅	36.386 ₁₉	47.37 ₁₈₁	47.384 ₅₇	19.33 ₂₄₁
25.5	38.850 ₁₉	29.41 ₂₅₈	06.497 ₅₇	20.92 ₉₃	36.367 ₅₂	45.56 ₁₇₆	47.327 ₄₈	16.92 ₂₄₀
Май 5.5	38.869 ₆₉	26.83 ₂₇₄	06.554 ₁₁₀	19.99 ₇₇	36.419 ₁₂₁	43.80 ₁₆₃	47.375 ₁₄₈	14.52 ₂₃₁
15.5	38.938 ₁₁₇	24.09 ₂₈₇	06.664 ₁₆₃	19.22 ₅₈	36.540 ₁₈₈	42.17 ₁₄₇	47.523 ₂₄₅	12.21 ₂₁₆
25.5	39.055 ₁₆₆	21.22 ₂₉₁	06.827 ₂₁₇	18.64 ₃₅	36.728 ₂₅₃	40.70 ₁₂₁	47.768 ₃₄₀	10.05 ₁₉₁
Июнь 4.4	39.221 ₂₀₈	18.31 ₂₈₉	07.044 ₂₅₉	18.29 ₉	36.981 ₃₀₉	39.49 ₉₄	48.108 ₄₂₀	08.14 ₁₆₁
14.4	39.429 ₂₄₅	15.42 ₂₈₁	07.303 ₂₉₉	18.20 ₁₆	37.290 ₃₅₇	38.55 ₆₄	48.528 ₄₉₂	06.53 ₁₂₈
24.4	39.674 ₂₇₈	12.61 ₂₆₄	07.602 ₃₂₉	18.36 ₄₁	37.647 ₃₉₈	37.91 ₃₀	49.020 ₅₅₃	05.25 ₈₉
Июль 4.4	39.952 ₃₀₀	09.97 ₂₄₀	07.931 ₃₅₀	18.77 ₆₅	38.045 ₄₂₅	37.61 ₂	49.573 ₅₉₄	04.36 ₄₉
14.3	40.252 ₃₁₈	07.57 ₂₁₁	08.281 ₃₆₅	19.42 ₈₆	38.470 ₄₄₆	37.63 ₃₄	50.167 ₆₂₇	03.87 ₁₀
24.3	40.570 ₃₂₆	05.46 ₁₇₃	08.646 ₃₇₁	20.28 ₁₀₅	38.916 ₄₅₆	37.97 ₆₆	50.794 ₆₄₅	03.77 ₃₃
Авг. 3.3	40.896 ₃₂₅	03.73 ₁₃₂	09.017 ₃₆₈	21.33 ₁₂₀	39.372 ₄₅₅	38.63 ₉₃	51.439 ₆₄₆	04.10 ₇₀
13.2	41.221 ₃₂₁	02.41 ₈₆	09.385 ₃₆₁	22.53 ₁₃₃	39.827 ₄₅₀	39.56 ₁₂₀	52.085 ₆₄₃	04.80 ₁₀₈
23.2	41.542 ₃₀₆	01.55 ₃₆	09.746 ₃₄₈	23.86 ₁₄₀	40.277 ₄₃₄	40.76 ₁₄₄	52.728 ₆₂₃	05.88 ₁₄₄
Сент. 2.2	41.848 ₂₈₇	01.19 ₁₁	10.094 ₃₂₈	25.26 ₁₄₆	40.711 ₄₁₃	42.20 ₁₆₃	53.351 ₅₉₃	07.32 ₁₇₄
12.2	42.135 ₂₆₅	01.30 ₆₁	10.422 ₃₀₈	26.72 ₁₄₉	41.124 ₃₉₀	43.83 ₁₈₀	53.944 ₅₆₁	09.06 ₂₀₃
22.1	42.400 ₂₃₅	01.91 ₁₀₉	10.730 ₂₈₁	28.21 ₁₄₈	41.514 ₃₅₇	45.63 ₁₉₃	54.505 ₅₁₃	11.09 ₂₂₉
Окт. 2.1	42.635 ₂₀₄	03.00 ₁₄₈	11.011 ₂₅₄	29.69 ₁₄₅	41.871 ₃₂₃	47.56 ₂₀₂	55.018 ₄₆₃	13.38 ₂₄₆
12.1	42.839 ₁₇₁	04.48 ₁₈₄	11.265 ₂₂₅	31.14 ₁₄₁	42.194 ₂₈₇	49.58 ₂₁₀	55.481 ₄₀₆	15.84 ₂₆₅
22.1	43.010 ₁₃₄	06.32 ₂₁₃	11.490 ₁₉₀	32.55 ₁₃₅	42.481 ₂₄₂	51.68 ₂₁₂	55.887 ₃₃₇	18.49 ₂₇₄
Нояб. 1.0	43.144 ₉₈	08.45 ₂₂₉	11.680 ₁₅₈	33.90 ₁₂₇	42.723 ₂₀₀	53.80 ₂₁₁	56.224 ₂₆₉	21.23 ₂₇₈
11.0 ¹	43.242 ₆₀	10.74 ₂₄₂	11.838 ₁₂₂	35.17 ₁₁₈	42.923 ₁₅₁	55.91 ₂₀₆	56.493 ₁₉₂	24.01 ₂₇₉
20.9	43.302 ₂₂	13.16 ₂₃₉	11.960 ₈₁	36.35 ₁₀₆	43.074 ₉₇	57.97 ₁₉₆	56.685 ₁₀₇	26.80 ₂₆₉
30.9	43.324 ₁₄	15.55 ₂₃₀	12.041 ₄₃	37.41 ₉₄	43.171 ₄₆	59.93 ₁₈₂	56.792 ₂₇	29.49 ₂₅₅
Дек. 10.9	43.310 ₅₃	17.85 ₂₁₃	12.084 ₀	38.35 ₇₉	43.217 ₁₂	61.75 ₁₆₃	56.819 ₆₂	32.04 ₂₃₃
20.9	43.257 ₈₇	19.98 ₁₈₇	12.084 ₄₂	39.14 ₆₀	43.205 ₆₈	63.38 ₁₃₆	56.757 ₁₄₈	34.37 ₂₀₁
30.9	43.170 ₁₁₈	21.85 ₁₅₆	12.042 ₈₁	39.74 ₄₁	43.137 ₁₁₈	64.74 ₁₀₉	56.609 ₂₂₃	36.38 ₁₆₇
40.8	43.052 ₁₄₈	23.41 ₁₂₁	11.961 ₁₁₉	40.15 ₁₉	43.019 ₁₆₉	65.83 ₇₅	56.386 ₂₉₇	38.05 ₁₂₃
Средн. место J1990.5	40.032	26.92	08.044	18.62	38.439	40.73	50.572	09.98
Sec δ , tg δ	1.144	—0.555	1.209	+0.679	1.550	+1.185	2.327	+2.102
a, a'	+0.126	+0.670	+0.188	+0.649	+0.215	+0.631	+0.262	+0.630
b, b'	—0.025	—0.742	+0.029	—0.761	+0.050	—0.776	+0.088	—0.777

¹ Для звезд 80) и 81) нояб. 10.9.

Дата	117) θ^2 Tau		118) ϱ Tau		119) α Tau		120) ν Eri	
	3 ^m 62 XI-28 F0		4 ^m 75 XI-29 A5		1 ^m 06 XI-30 K5		4 ^m 12 XI-30 B2	
	h m	° ′	h m	° ′	h m	° ′	h m	° ′
	4 28	+15 51	4 33	+14 49	4 35	+16 29	4 35	-3 21
Янв. —4.1	07.384 ^s ₂	06.95 ^{''} ₃₀	18.770 ^s ₆	35.37 ^{''} ₃₆	22.737 ^s ₉	32.46 ^{''} ₂₈	51.018 ^s ₃	74.46 ^{''} ₁₃₀
5.9	07.386 ^s ₃₈	06.65 ^{''} ₂₉	18.776 ^s ₃₄	35.01 ^{''} ₃₃	22.746 ^s ₃₃	32.18 ^{''} ₂₆	51.015 ^s ₄₁	75.76 ^{''} ₁₁₅
15.9	07.348 ^s ₇₇	06.36 ^{''} ₂₉	18.742 ^s ₇₃	34.68 ^{''} ₃₃	22.713 ^s ₇₃	31.92 ^{''} ₂₆	50.974 ^s ₇₉	76.91 ^{''} ₁₀₀
25.8	07.271 ^s ₁₁₃	06.07 ^{''} ₂₉	18.669 ^s ₁₁₀	34.35 ^{''} ₃₂	22.640 ^s ₁₁₀	31.66 ^{''} ₂₇	50.895 ^s ₁₁₄	77.91 ^{''} ₈₂
Февр. 4.8	07.158 ^s ₁₃₈	05.78 ^{''} ₂₉	18.559 ^s ₁₃₇	34.03 ^{''} ₃₀	22.530 ^s ₁₃₇	31.39 ^{''} ₂₇	50.781 ^s ₁₃₈	78.73 ^{''} ₆₂
14.8	07.020 ^s ₁₅₉	05.49 ^{''} ₃₁	18.422 ^s ₁₅₇	33.73 ^{''} ₃₀	22.393 ^s ₁₅₈	31.12 ^{''} ₂₈	50.643 ^s ₁₅₉	79.35 ^{''} ₄₄
24.8	06.861 ^s ₁₆₈	05.18 ^{''} ₂₉	18.265 ^s ₁₆₈	33.43 ^{''} ₂₈	22.235 ^s ₁₆₉	30.84 ^{''} ₂₉	50.484 ^s ₁₆₉	79.79 ^{''} ₂₂
Март 6.7	06.693 ^s ₁₆₄	04.89 ^{''} ₂₉	18.097 ^s ₁₆₅	33.15 ^{''} ₂₇	22.066 ^s ₁₆₇	30.55 ^{''} ₂₈	50.315 ^s ₁₆₇	80.01 ^{''} ₂
16.7	06.529 ^s ₁₅₄	04.60 ^{''} ₂₇	17.932 ^s ₁₅₆	32.88 ^{''} ₂₃	21.899 ^s ₁₅₇	30.27 ^{''} ₂₈	50.148 ^s ₁₅₈	80.03 ^{''} ₁₈
26.7	06.375 ^s ₁₃₀	04.33 ^{''} ₂₂	17.776 ^s ₁₃₂	32.65 ^{''} ₁₈	21.742 ^s ₁₃₅	29.99 ^{''} ₂₃	49.990 ^s ₁₃₈	79.85 ^{''} ₄₀
Апр. 5.7	06.245 ^s ₉₉	04.11 ^{''} ₁₆	17.644 ^s ₁₀₂	32.47 ^{''} ₁₁	21.607 ^s ₁₀₃	29.76 ^{''} ₁₈	49.852 ^s ₁₀₉	79.45 ^{''} ₆₀
15.6	06.146 ^s ₆₁	03.95 ^{''} ₇	17.542 ^s ₆₆	32.36 ^{''} ₂	21.504 ^s ₆₇	29.58 ^{''} ₁₀	49.743 ^s ₇₅	78.85 ^{''} ₈₁
25.6	06.085 ^s ₁₆	03.88 ^{''} ₄	17.476 ^s ₂₀	32.34 ^{''} ₉	21.437 ^s ₂₂	29.48 ^{''} ₀	49.668 ^s ₃₃	78.04 ^{''} ₁₀₂
Май 5.6	06.069 ^s ₃₀	03.92 ^{''} ₁₆	17.456 ^s ₂₅	32.43 ^{''} ₂₁	21.415 ^s ₂₄	29.48 ^{''} ₁₁	49.635 ^s ₁₀	77.02 ^{''} ₁₂₀
15.5	06.099 ^s ₇₇	04.08 ^{''} ₂₇	17.481 ^s ₇₀	32.64 ^{''} ₃₃	21.439 ^s ₇₁	29.59 ^{''} ₂₃	49.645 ^s ₅₄	75.82 ^{''} ₁₃₈
25.5	06.176 ^s ₁₁₉	04.35 ^{''} ₄₆	17.551 ^s ₁₁₄	32.97 ^{''} ₄₉	21.510 ^s ₁₁₂	29.82 ^{''} ₃₆	49.699 ^s ₉₉	74.44 ^{''} ₁₅₃
Июнь 4.5	06.295 ^s ₁₆₆	04.81 ^{''} ₆₂	17.665 ^s ₁₆₀	33.46 ^{''} ₆₆	21.622 ^s ₁₆₀	30.18 ^{''} ₅₇	49.798 ^s ₁₄₀	72.91 ^{''} ₁₆₄
14.5	06.461 ^s ₂₀₅	05.43 ^{''} ₇₃	17.825 ^s ₂₀₉	34.12 ^{''} ₇₇	21.782 ^s ₂₀₀	30.75 ^{''} ₆₆	49.938 ^s ₁₇₈	71.27 ^{''} ₁₇₂
24.4	06.666 ^s ₂₄₁	06.16 ^{''} ₈₃	18.025 ^s ₂₃₄	34.89 ^{''} ₈₆	21.982 ^s ₂₃₆	31.41 ^{''} ₇₆	50.116 ^s ₂₁₄	69.55 ^{''} ₁₇₅
Июль 4.4	06.907 ^s ₂₆₆	06.99 ^{''} ₉₂	18.259 ^s ₂₆₁	35.75 ^{''} ₉₃	22.218 ^s ₂₆₂	32.17 ^{''} ₈₄	50.330 ^s ₂₄₀	67.80 ^{''} ₁₇₂
14.4	07.173 ^s ₂₈₈	07.91 ^{''} ₉₆	18.520 ^s ₂₈₄	36.68 ^{''} ₉₈	22.480 ^s ₂₈₆	33.01 ^{''} ₈₉	50.570 ^s ₂₆₃	66.08 ^{''} ₁₆₆
24.4	07.461 ^s ₃₀₄	08.87 ^{''} ₉₈	18.804 ^s ₃₀₈	37.66 ^{''} ₉₈	22.766 ^s ₃₀₁	33.90 ^{''} ₉₂	50.833 ^s ₂₈₁	64.42 ^{''} ₁₅₂
Авг. 3.3	07.765 ^s ₃₁₂	09.85 ^{''} ₉₆	19.104 ^s ₃₀₀	38.64 ^{''} ₉₅	23.067 ^s ₃₁₁	34.82 ^{''} ₈₉	51.114 ^s ₂₉₀	62.90 ^{''} ₁₃₄
13.3	08.077 ^s ₃₁₇	10.81 ^{''} ₉₀	19.412 ^s ₃₁₅	39.59 ^{''} ₈₉	23.378 ^s ₃₁₇	35.71 ^{''} ₈₅	51.404 ^s ₂₉₇	61.56 ^{''} ₁₁₁
23.3	08.394 ^s ₃₁₅	11.71 ^{''} ₈₁	19.727 ^s ₃₁₃	40.48 ^{''} ₇₈	23.695 ^s ₃₁₆	36.56 ^{''} ₇₆	51.701 ^s ₂₉₇	60.45 ^{''} ₈₃
Сент. 2.2	08.709 ^s ₃₀₈	12.52 ^{''} ₇₀	20.040 ^s ₃₀₈	41.26 ^{''} ₆₆	24.011 ^s ₃₁₀	37.32 ^{''} ₆₅	51.998 ^s ₂₉₂	59.62 ^{''} ₅₄
12.2	09.017 ^s ₃₀₁	13.22 ^{''} ₅₆	20.348 ^s ₃₀₀	41.92 ^{''} ₅₂	24.321 ^s ₃₀₄	37.97 ^{''} ₅₂	52.290 ^s ₂₈₅	59.08 ^{''} ₂₁
22.2	09.318 ^s ₂₈₆	13.78 ^{''} ₄₀	20.648 ^s ₂₈₇	42.44 ^{''} ₃₅	24.625 ^s ₂₉₁	38.49 ^{''} ₃₈	52.575 ^s ₂₇₃	58.87 ^{''} ₁₂
Окт. 2.2	09.604 ^s ₂₇₁	14.18 ^{''} ₂₇	20.935 ^s ₂₇₃	42.79 ^{''} ₂₀	24.916 ^s ₂₇₅	38.87 ^{''} ₂₄	52.848 ^s ₂₅₇	58.99 ^{''} ₄₃
12.1	09.875 ^s ₂₅₃	14.45 ^{''} ₁₁	21.208 ^s ₂₅₅	42.99 ^{''} ₄	25.191 ^s ₂₅₉	39.11 ^{''} ₁₀	53.105 ^s ₂₄₁	59.42 ^{''} ₇₃
22.1	10.128 ^s ₂₂₉	14.56 ^{''} ₁	21.463 ^s ₂₃₂	43.03 ^{''} ₉	25.450 ^s ₂₃₇	39.21 ^{''} ₃	53.346 ^s ₂₁₇	60.15 ^{''} ₉₉
Нояб. 1.1	10.357 ^s ₂₀₆	14.55 ^{''} ₁₂	21.695 ^s ₂₀₉	42.94 ^{''} ₂₀	25.687 ^s ₂₁₂	39.18 ^{''} ₁₂	53.563 ^s ₁₉₄	61.14 ^{''} ₁₁₉
11.1	10.563 ^s ₁₇₆	14.43 ^{''} ₂₁	21.904 ^s ₁₈₁	42.74 ^{''} ₂₉	25.899 ^s ₁₈₅	39.06 ^{''} ₂₀	53.757 ^s ₁₆₆	62.33 ^{''} ₁₃₆
21.0	10.739 ^s ₁₄₃	14.22 ^{''} ₂₆	22.085 ^s ₁₄₇	42.45 ^{''} ₃₄	26.084 ^s ₁₅₀	38.86 ^{''} ₂₆	53.923 ^s ₁₃₃	63.69 ^{''} ₁₄₄
30.9	10.882 ^s ₁₀₉	13.96 ^{''} ₂₉	22.232 ^s ₁₁₃	42.11 ^{''} ₃₈	26.234 ^s ₁₁₆	38.60 ^{''} ₂₈	54.056 ^s ₁₀₀	65.13 ^{''} ₁₄₈
Дек. 10.9	10.991 ^s ₆₉	13.67 ^{''} ₃₂	22.345 ^s ₇₃	41.73 ^{''} ₃₉	26.350 ^s ₇₆	38.32 ^{''} ₃₀	54.156 ^s ₆₁	66.61 ^{''} ₁₄₆
20.9	11.060 ^s ₂₆	13.35 ^{''} ₃₂	22.418 ^s ₃₁	41.34 ^{''} ₃₈	26.426 ^s ₃₃	38.02 ^{''} ₂₉	54.217 ^s ₂₀	68.07 ^{''} ₁₃₇
30.9	11.086 ^s ₁₃	13.03 ^{''} ₃₁	22.449 ^s ₉	40.96 ^{''} ₃₇	26.459 ^s ₇	37.73 ^{''} ₂₉	54.237 ^s ₁₈	69.44 ^{''} ₁₂₇
40.9	11.073 ^s ₅₆	12.72 ^{''} ₃₂	22.440 ^s ₅₃	40.59 ^{''} ₃₆	26.452 ^s ₅₂	37.44 ^{''} ₂₉	54.219 ^s ₅₉	70.71 ^{''} ₁₁₃
Средн. место J1990.5	07.144	01.43	18.510	29.96	22.476	26.68	50.622	77.02
Sec δ , tg δ	1.040	+0.284	1.034	+0.265	1.043	+0.296	1.002	-0.059
a, a'	+0.171	+0.390	+0.170	+0.369	+0.172	+0.361	+0.150	+0.359
b, b'	+0.007	-0.921	+0.007	-0.929	+0.007	-0.933	-0.001	-0.933

Дата	140) β Eri		604) λ Eri		141) μ Aur		142) β Ori		
	2 ^m 92 XII-8 A3		4 ^m 34 XII-8 B2		4 ^m 78 XII-9 A3		0 ^m 34 XII-10 B8p		
	h m	° ′	h m	° ′	h m	+38 28 ′	h m	° ′	
	5 07	—5 05	5 08	—8 45	5 12		5 14	—8 12	
	^s	"	^s	"	^s	"	^s	"	
Янв.	—4.1	23.408 ₂₂	50.06 ₁₅₀	42.004 ₁₉	53.65 ₁₆₉	47.084 ₄₈	34.32 ₉₇	05.379 ₂₅	40.21 ₁₆₈
	5.9	23.430 ₂₀	51.56 ₁₃₄	42.023 ₂₂	55.34 ₁₅₁	47.132 ₈	35.29 ₉₁	05.404 ₁₈	41.89 ₁₅₁
	15.9	23.410 ₆₂	52.90 ₁₁₈	42.001 ₆₄	56.85 ₁₃₂	47.124 ₆₂	36.20 ₈₀	05.386 ₅₉	43.40 ₁₃₂
	25.9	23.348 ₁₀₀	54.08 ₉₇	41.937 ₁₀₃	58.17 ₁₀₉	47.062 ₁₁₄	37.00 ₆₄	05.327 ₉₉	44.72 ₁₁₀
Февр.	4.8	23.248 ₁₃₀	55.05 ₇₅	41.834 ₁₃₃	59.26 ₈₅	46.948 ₁₅₄	37.64 ₄₆	05.228 ₁₃₁	45.82 ₈₆
	14.8	23.118 ₁₅₅	55.80 ₅₆	41.701 ₁₅₈	60.11 ₆₀	46.794 ₁₈₈	38.10 ₂₄	05.097 ₁₅₆	46.68 ₆₂
	24.8	22.963 ₁₇₀	56.36 ₃₁	41.543 ₁₇₄	60.71 ₃₃	46.606 ₂₀₉	38.34 ₁	04.941 ₁₇₃	47.30 ₃₅
Март	6.8	22.793 ₁₇₄	56.67 ₉	41.369 ₁₇₇	61.04 ₉	46.397 ₂₁₄	38.35 ₂₁	04.768 ₁₇₆	47.65 ₁₁
	16.7	22.619 ₁₇₀	56.76 ₁₂	41.192 ₁₇₄	61.13 ₁₇	46.183 ₂₀₉	38.14 ₄₅	04.592 ₁₇₅	47.76 ₁₄
	26.7	22.449 ₁₅₃	56.64 ₃₆	41.018 ₁₅₇	60.96 ₄₄	45.974 ₁₈₉	37.69 ₆₄	04.417 ₁₅₉	47.62 ₄₁
Апр.	5.7	22.296 ₁₂₉	56.28 ₅₆	40.861 ₁₃₃	60.52 ₆₇	45.785 ₁₅₇	37.05 ₈₁	04.258 ₁₃₅	47.21 ₆₃
	15.7	22.167 ₉₈	55.72 ₇₉	40.728 ₁₀₄	59.85 ₉₂	45.628 ₁₁₈	36.24 ₉₄	04.123 ₁₀₆	46.58 ₈₈
	25.6	22.069 ₆₀	54.93 ₁₀₀	40.624 ₆₄	58.93 ₁₁₅	45.510 ₆₈	35.30 ₁₀₂	04.017 ₆₈	45.70 ₁₁₁
Май	5.6	22.009 ₁₈	53.98 ₁₁₈	40.560 ₂₃	57.78 ₁₃₅	45.442 ₁₅	34.28 ₁₀₅	03.949 ₂₇	44.59 ₁₃₀
	15.6	21.991 ₂₄	52.75 ₁₃₆	40.537 ₁₉	56.43 ₁₅₄	45.427 ₃₉	33.23 ₁₀₄	03.922 ₁₅	43.29 ₁₄₉
	25.5	22.015 ₆₉	51.39 ₁₅₂	40.556 ₆₄	54.89 ₁₇₀	45.466 ₉₆	32.19 ₉₈	03.937 ₆₀	41.80 ₁₆₆
Июнь	4.5	22.084 ₁₁₀	49.87 ₁₆₂	40.620 ₁₀₅	53.19 ₁₈₁	45.562 ₁₄₈	31.21 ₈₉	03.997 ₁₀₁	40.14 ₁₇₆
	14.5	22.194 ₁₅₀	48.25 ₁₇₂	40.725 ₁₄₅	51.38 ₁₉₁	45.710 ₁₉₇	30.32 ₈₀	04.098 ₁₄₀	38.38 ₁₈₆
	24.5	22.344 ₁₈₆	46.53 ₁₇₅	40.870 ₁₈₃	49.47 ₁₉₁	45.907 ₂₄₅	29.52 ₆₅	04.238 ₁₇₉	36.52 ₁₈₈
Июль	4.4	22.530 ₂₁₆	44.78 ₁₇₁	41.053 ₂₁₂	47.56 ₁₈₈	46.152 ₂₈₁	28.87 ₅₀	04.417 ₂₀₈	34.64 ₁₈₄
	14.4	22.746 ₂₄₂	43.07 ₁₆₆	41.265 ₂₃₉	45.68 ₁₈₀	46.433 ₃₁₄	28.37 ₃₅	04.625 ₂₃₅	32.80 ₁₇₈
	24.4	22.988 ₂₆₃	41.41 ₁₅₂	41.504 ₂₆₁	43.88 ₁₆₄	46.747 ₃₄₀	28.02 ₁₉	04.860 ₂₅₈	31.02 ₁₆₁
Авг.	3.4	23.251 ₂₇₆	39.89 ₁₃₃	41.765 ₂₇₅	42.24 ₁₄₃	47.087 ₃₅₇	27.83 ₄	05.118 ₂₇₃	29.41 ₁₄₁
	13.3	23.527 ₂₈₈	38.56 ₁₁₀	42.040 ₂₈₇	40.81 ₁₁₇	47.444 ₃₇₂	27.79 ₈	05.391 ₂₈₅	28.00 ₁₁₆
	23.3	23.815 ₂₉₃	37.46 ₈₁	42.327 ₂₉₃	39.64 ₈₅	47.816 ₃₇₉	27.87 ₂₁	05.676 ₂₉₁	26.84 ₈₅
Сент.	2.3	24.108 ₂₉₃	36.65 ₅₀	42.620 ₂₉₃	38.79 ₅₁	48.195 ₃₇₉	28.08 ₃₁	05.967 ₂₉₃	25.99 ₅₁
	12.2	24.401 ₂₉₁	36.15 ₁₇	42.913 ₂₉₂	38.28 ₁₅	48.574 ₃₈₀	28.39 ₄₁	06.260 ₂₉₂	25.48 ₁₅
	22.2	24.692 ₂₈₃	35.98 ₁₉	43.205 ₂₈₃	38.13 ₂₅	48.954 ₃₇₀	28.80 ₅₀	06.552 ₂₈₅	25.33 ₂₄
Окт.	2.2	24.975 ₂₇₃	36.17 ₅₂	43.488 ₂₇₄	38.38 ₆₁	49.324 ₃₆₀	29.30 ₅₆	06.837 ₂₇₆	25.57 ₅₉
	12.2	25.248 ₂₆₀	36.69 ₈₄	43.762 ₂₆₀	38.99 ₉₆	49.684 ₃₄₅	29.86 ₆₅	07.113 ₂₆₃	26.16 ₉₄
	22.1	25.508 ₂₄₀	37.53 ₁₁₃	44.022 ₂₄₀	39.95 ₁₂₇	50.029 ₃₂₃	30.51 ₇₂	07.376 ₂₄₅	27.10 ₁₂₆
Нояб.	1.1	25.748 ₂₁₉	38.66 ₁₃₅	44.262 ₂₁₉	41.22 ₁₅₂	50.352 ₂₉₈	31.23 ₇₉	07.621 ₂₂₃	28.36 ₁₅₀
	11.1	25.967 ₁₉₃	40.01 ₁₅₃	44.481 ₁₉₃	42.74 ₁₇₂	50.650 ₂₆₇	32.02 ₈₆	07.844 ₁₉₈	29.86 ₁₇₀
	21.1	26.160 ₁₆₁	41.54 ₁₆₄	44.674 ₁₆₁	44.46 ₁₈₃	50.917 ₂₂₇	32.88 ₉₁	08.042 ₁₆₆	31.56 ₁₈₂
Дек.	1.0	26.321 ₁₂₈	43.18 ₁₆₈	44.835 ₁₂₆	46.29 ₁₈₈	51.144 ₁₈₆	33.79 ₉₆	08.208 ₁₃₃	33.38 ₁₈₆
	10.9	26.449 ₈₉	44.86 ₁₆₇	44.961 ₈₈	48.17 ₁₈₇	51.330 ₁₃₅	34.75 ₉₈	08.341 ₉₃	35.24 ₁₈₇
	20.9	26.538 ₄₆	46.53 ₁₅₈	45.049 ₄₄	50.04 ₁₇₈	51.465 ₈₀	35.73 ₉₈	08.434 ₅₀	37.11 ₁₇₇
	30.9	26.584 ₆	48.11 ₁₄₇	45.093 ₃	51.82 ₁₆₅	51.545 ₂₆	36.71 ₉₃	08.484 ₈	38.88 ₁₆₄
	40.9	26.590 ₃₉	49.58 ₁₃₁	45.096 ₄₁	53.47 ₁₄₇	51.571 ₃₂	37.64 ₈₅	08.492 ₃₇	40.52 ₁₄₇
Средн. место J1990.5		22.923	53.61	41.478	56.83	46.638	26.14	04.851	43.68
Sec δ , tg δ		1.004	—0.089	1.012	—0.154	1.277	+0.795	1.010	—0.144
a, a'		+0.147	+0.228	+0.143	+0.222	+0.205	+0.205	+0.144	+0.199
b, b'		—0.001	—0.974	—0.002	—0.975	+0.011	—0.979	—0.002	—0.980

Верхняя кульминация в Гриниче

Дата	143) α Aur		144) τ Ori		145) λ Aur		146) 16 Cam		
	0^m21 XII-10 G0		3^m68 XII-10 B5		4^m85 XII-11 G0		5^m25 XII-12 A0		
	h^m 5 15	$^{\circ}$ +45 59	h^m 5 17	$^{\circ}$ -6 50	h^m 5 18	$^{\circ}$ +40 05	h^m 5 22	$^{\circ}$ +57 32	
Янв.	—4.1	59.725 ^s ₄₉	29.80 ^s ₁₃₉	09.203 ^s ₂₉	71.26 ^s ₁₆₂	28.772 ^s ₅₄	37.37 ^s ₁₀₅	39.760 ^s ₅₃	18.95 ^s ₂₀₂
	5.9	59.774 ₁₃	31.19 ₁₂₉	09.232 ₁₄	72.88 ₁₄₆	28.826 ₁	38.42 ₉₈	39.813 ₂₇	20.97 ₁₈₈
	15.9	59.761 ₇₄	32.48 ₁₁₄	09.218 ₅₆	74.34 ₁₂₉	28.825 ₅₉	39.40 ₈₈	39.786 ₁₀₇	22.85 ₁₇₁
	25.9	59.687 ₁₃₃	33.62 ₉₄	09.162 ₉₆	75.63 ₁₀₇	28.766 ₁₁₂	40.28 ₇₂	39.679 ₁₈₃	24.56 ₁₄₂
Февр.	4.8	59.554 ₁₇₈	34.56 ₆₉	09.066 ₁₂₇	76.70 ₈₃	28.654 ₁₅₅	41.00 ₅₂	39.496 ₂₄₁	25.98 ₁₁₀
	14.8	59.376 ₂₁₆	35.25 ₄₂	08.939 ₁₅₄	77.53 ₆₁	28.499 ₁₉₀	41.52 ₃₀	39.255 ₂₉₀	27.08 ₇₃
	24.8	59.160 ₂₃₉	35.67 ₁₀	08.785 ₁₇₁	78.14 ₃₆	28.309 ₂₁₂	41.82 ₆	38.965 ₃₂₂	27.81 ₃₁
Март	6.8	58.921 ₂₄₅	35.77 ₂₁	08.614 ₁₇₆	78.50 ₁₂	28.097 ₂₁₈	41.88 ₁₉	38.643 ₃₃₀	28.12 ₁₁
	16.7	58.676 ₂₄₁	35.56 ₅₀	08.438 ₁₇₃	78.62 ₁₁	27.879 ₂₁₅	41.69 ₄₄	38.313 ₃₂₇	28.01 ₅₀
	26.7	58.435 ₂₁₈	35.06 ₇₈	08.265 ₁₅₉	78.51 ₃₆	27.664 ₁₉₆	41.25 ₆₅	37.986 ₃₀₀	27.51 ₉₀
Апр.	5.7	58.217 ₁₈₃	34.28 ₁₀₁	08.106 ₁₃₅	78.15 ₅₉	27.468 ₁₆₃	40.60 ₈₄	37.686 ₂₅₇	26.61 ₁₂₄
	15.7	58.034 ₁₄₀	33.27 ₁₂₁	07.971 ₁₀₇	77.56 ₈₁	27.305 ₁₂₅	39.76 ₉₉	37.429 ₂₀₅	25.37 ₁₅₂
	25.6	57.894 ₈₄	32.06 ₁₃₄	07.864 ₆₈	76.75 ₁₀₄	27.180 ₇₄	38.77 ₁₀₉	37.224 ₁₃₅	23.85 ₁₇₅
Май	5.6	57.810 ₂₆	30.72 ₁₄₂	07.796 ₂₈	75.71 ₁₂₃	27.106 ₂₁	37.68 ₁₁₃	37.089 ₆₃	22.10 ₁₈₉
	15.6	57.784 ₃₄	29.30 ₁₄₄	07.768 ₁₃	74.48 ₁₄₁	27.085 ₃₄	36.55 ₁₁₄	37.026 ₁₃	20.21 ₁₉₈
	25.5	57.818 ₉₉	27.86 ₁₄₁	07.781 ₅₈	73.07 ₁₅₈	27.119 ₉₃	35.41 ₁₁₀	37.039 ₉₄	18.23 ₂₀₀
Июнь	4.5	57.917 ₁₅₆	26.45 ₁₃₄	07.839 ₁₀₀	71.49 ₁₆₈	27.212 ₁₄₅	34.31 ₁₀₂	37.133 ₁₆₉	16.23 ₁₉₄
	14.5	58.073 ₂₁₂	25.11 ₁₂₃	07.939 ₁₃₈	69.81 ₁₇₈	27.357 ₁₉₆	33.29 ₉₂	37.302 ₂₄₀	14.29 ₁₈₅
	24.5	58.285 ₂₆₅	23.88 ₁₀₈	08.077 ₁₇₇	68.03 ₁₈₁	27.553 ₂₄₅	32.37 ₇₉	37.542 ₃₀₉	12.44 ₁₇₀
Июль	4.4	58.550 ₃₀₇	22.80 ₉₁	08.254 ₂₀₆	66.22 ₁₇₈	27.798 ₂₈₂	31.58 ₆₄	37.851 ₃₆₅	10.74 ₁₄₉
	14.4	58.857 ₃₄₄	21.89 ₇₃	08.460 ₂₃₄	64.44 ₁₇₁	28.080 ₃₁₇	30.94 ₄₉	38.216 ₄₁₅	09.25 ₁₂₉
	24.4	59.201 ₃₇₅	21.16 ₅₂	08.694 ₂₅₇	62.73 ₁₅₆	28.397 ₃₄₅	30.45 ₃₂	38.631 ₄₅₉	07.96 ₁₀₃
Авг.	3.4	59.576 ₃₉₅	20.64 ₃₃	08.951 ₂₇₁	61.17 ₁₃₇	28.742 ₃₆₃	30.13 ₁₇	39.090 ₄₈₇	06.93 ₇₇
	13.3	59.971 ₄₁₃	20.31 ₁₅	09.222 ₂₈₄	59.80 ₁₁₄	29.105 ₃₇₉	29.96 ₃	39.577 ₅₁₃	06.16 ₅₁
	23.3	60.384 ₄₂₁	20.16 ₅	09.506 ₂₉₁	58.66 ₈₃	29.484 ₃₈₇	29.93 ₁₀	40.090 ₅₂₉	05.65 ₂₂
Сент.	2.3	60.805 ₄₂₃	20.21 ₂₁	09.797 ₂₉₂	57.83 ₅₁	29.871 ₃₈₈	30.03 ₂₃	40.619 ₅₃₃	05.43 ₅
	12.2	61.228 ₄₂₄	20.42 ₃₉	10.089 ₂₉₂	57.32 ₁₆	30.259 ₃₉₀	30.26 ₃₃	41.152 ₅₃₈	05.48 ₃₁
	22.2	61.652 ₄₁₅	20.81 ₅₅	10.381 ₂₈₇	57.16 ₂₂	30.649 ₃₈₁	30.59 ₄₄	41.690 ₅₂₈	05.79 ₅₉
Окт.	2.2	62.067 ₄₀₃	21.36 ₆₉	10.668 ₂₇₆	57.38 ₅₆	31.030 ₃₇₁	31.03 ₅₃	42.218 ₅₁₄	06.38 ₈₃
	12.2	62.470 ₃₈₇	22.05 ₈₄	10.944 ₂₆₆	57.94 ₉₀	31.401 ₃₅₈	31.56 ₆₃	42.732 ₄₉₅	07.21 ₁₀₉
	22.1	62.857 ₃₆₂	22.89 ₉₉	11.210 ₂₄₆	58.84 ₁₂₁	31.759 ₃₃₅	32.19 ₇₂	43.227 ₄₆₁	08.30 ₁₃₂
Нояб.	1.1	63.219 ₃₃₃	23.88 ₁₀₉	11.456 ₂₂₇	60.05 ₁₄₄	32.094 ₃₁₁	32.91 ₈₀	43.688 ₄₂₅	09.62 ₁₅₃
	11.1	63.552 ₂₉₈	24.97 ₁₂₂	11.683 ₂₀₂	61.49 ₁₆₄	32.405 ₂₇₉	33.71 ₈₈	44.113 ₃₇₉	11.15 ₁₇₃
	21.1	63.850 ₂₅₃	26.19 ₁₃₂	11.885 ₁₆₉	63.13 ₁₇₆	32.684 ₂₃₉	34.59 ₉₆	44.492 ₃₁₉	12.88 ₁₈₇
Дек.	1.0	64.103 ₂₀₅	27.51 ₁₃₇	12.054 ₁₃₇	64.89 ₁₈₀	32.923 ₁₉₆	35.55 ₁₀₁	44.811 ₂₅₇	14.75 ₁₉₈
	11.0 ¹	64.308 ₁₄₉	28.88 ₁₄₁	12.191 ₉₇	66.69 ₁₈₀	33.119 ₁₄₅	36.56 ₁₀₅	45.068 ₁₈₂	16.73 ₂₀₅
	20.9	64.457 ₈₅	30.29 ₁₄₀	12.288 ₅₄	68.49 ₁₇₁	33.264 ₈₈	37.61 ₁₀₅	45.250 ₁₀₀	18.78 ₂₀₄
	30.9	64.542 ₂₅	31.69 ₁₃₄	12.342 ₁₃	70.20 ₁₅₉	33.352 ₃₃	38.66 ₁₀₁	45.350 ₂₂	20.82 ₁₉₅
	40.9	64.567 ₄₀	33.03 ₁₂₃	12.355 ₃₃	71.79 ₁₄₃	33.385 ₂₈	39.67 ₉₃	45.372 ₆₂	22.77 ₁₈₂
Средн. место J1990.5		59.168	20.88	08.685	74.99	28.313	28.88	38.844	09.69
Sec δ , tg δ		1.439	+1.035	1.007	-0.120	1.307	+0.842	1.863	+1.572
a, a'		+0.221	+0.191	+0.145	+0.186	+0.208	+0.180	+0.257	+0.162
b, b'		+0.013	-0.982	-0.001	-0.983	+0.010	-0.984	+0.017	-0.987

¹ Для звезд 143) и 144) дек. 10.9.

Дата	147) η Ori m		148) γ Ori		149) β Tau		150) β Lep	
	3 ^m 44 XII-12 B1		1 ^m 70 XII-12 B2		1 ^m 78 XII-13 B8		2 ^m 96 XII-13 G0	
	^{h m} 5 23	^{° ′} — 2 24	^{h m} 5 24	^{° ′} + 6 20	^{h m} 5 25	^{° ′} + 28 36	^{h m} 5 27	^{° ′} — 20 45
Янв. —4.1	60.429 ^s ₄₀	14.59 [″] ₁₄₂	37.679 ^s ₄₈	34.96 [″] ₉₃	41.848 ^s ₆₀	07.32 [″] ₃₉	51.007 ^s ₂₁	56.57 [″] ₂₃₃
5.9	60.469 [—] ₄	16.01 [″] ₁₂₇	37.727 [—] ₃	34.03 [″] ₈₃	41.908 [—] ₁₁	07.71 [″] ₃₈	51.028 [—] ₂₄	58.90 [″] ₂₁₁
15.9	60.465 [—] ₄₆	17.28 [″] ₁₁₃	37.730 [—] ₄₀	33.20 [″] ₇₃	41.919 [—] ₄₀	08.09 [″] ₃₅	51.004 [—] ₆₉	61.01 [″] ₁₈₇
25.9	60.419 [—] ₈₈	18.41 [″] ₉₃	37.690 [—] ₈₂	32.47 [″] ₆₁	41.879 [—] ₈₈	08.44 [″] ₃₀	50.935 [—] ₁₁₂	62.88 [″] ₁₅₅
Февр. 4.9	60.331 [—] ₁₂₀	19.34 [″] ₇₅	37.608 [—] ₁₁₆	31.86 [″] ₄₉	41.791 [—] ₁₂₇	08.74 [″] ₂₁	50.823 [—] ₁₄₄	64.43 [″] ₁₂₂
14.8	60.211 [—] ₁₄₈	20.09 [″] ₅₅	37.492 [—] ₁₄₄	31.37 [″] ₃₈	41.664 [—] ₁₅₉	08.95 [″] ₁₁	50.679 [—] ₁₇₃	65.65 [″] ₈₉
24.8	60.063 [—] ₁₆₆	20.64 [″] ₃₅	37.348 [—] ₁₆₃	30.99 [″] ₂₇	41.505 [—] ₁₈₁	09.06 [″] ₂	50.506 [—] ₁₉₁	66.54 [″] ₅₁
Март 6.8	59.897 [—] ₁₇₂	20.99 [″] ₁₅	37.185 [—] ₁₆₉	30.72 [″] ₁₅	41.324 [—] ₁₈₉	09.04 [″] ₁₄	50.315 [—] ₁₉₈	67.05 [″] ₁₅
16.7	59.725 [—] ₁₇₁	21.14 [″] ₄	37.016 [—] ₁₆₈	30.57 [″] ₅	41.135 [—] ₁₈₇	08.90 [″] ₂₆	50.117 [—] ₁₉₇	67.20 [″] ₁₉
26.7	59.554 [—] ₁₅₈	21.10 [″] ₂₅	36.848 [—] ₁₅₅	30.52 [″] ₈	40.948 [—] ₁₇₁	08.64 [″] ₃₈	49.920 [—] ₁₈₄	67.01 [″] ₅₇
Апр. 5.7	59.396 [—] ₁₃₅	20.85 [″] ₄₄	36.693 [—] ₁₃₁	30.60 [″] ₁₉	40.777 [—] ₁₄₅	08.26 [″] ₄₆	49.736 [—] ₁₆₂	66.44 [″] ₈₉
15.7	59.261 [—] ₁₀₆	20.41 [″] ₆₃	36.562 [—] ₁₀₂	30.79 [″] ₃₁	40.632 [—] ₁₁₂	07.80 [″] ₅₁	49.574 [—] ₁₃₃	65.55 [″] ₁₂₀
25.6	59.155 [—] ₇₀	19.78 [″] ₈₄	36.460 [—] ₆₅	31.10 [″] ₄₆	40.520 [—] ₆₉	07.29 [″] ₅₅	49.441 [—] ₉₆	64.35 [″] ₁₅₁
Май 5.6	59.085 [—] ₂₉	18.94 [″] ₉₉	36.395 [—] ₂₃	31.56 [″] ₅₈	40.451 [—] ₂₂	06.74 [″] ₅₄	49.345 [—] ₅₅	62.84 [″] ₁₇₆
15.6	59.056 [—] ₁₁	17.95 [″] ₁₁₇	36.372 [—] ₁₈	32.14 [″] ₇₁	40.429 [—] ₂₆	06.20 [″] ₅₀	49.290 [—] ₁₃	61.08 [″] ₂₀₀
Июнь 25.6	59.067 [—] ₅₇	16.78 [″] ₁₃₂	36.390 [—] ₆₃	32.85 [″] ₈₃	40.455 [—] ₇₈	05.70 [″] ₄₃	49.277 [—] ₃₃	59.08 [″] ₂₁₉
4.5	59.124 [—] ₉₇	15.46 [″] ₁₄₃	36.453 [—] ₁₀₄	33.68 [″] ₉₄	40.533 [—] ₁₁₉	05.27 [″] ₃₁	49.310 [—] ₇₆	56.89 [″] ₂₃₀
14.5	59.221 [—] ₁₃₆	14.03 [″] ₁₅₃	36.557 [—] ₁₄₃	34.62 [″] ₁₀₅	40.652 [—] ₁₆₇	04.96 [″] ₃₄	49.386 [—] ₁₁₇	54.59 [″] ₂₄₀
24.5	59.357 [—] ₁₇₄	12.50 [″] ₁₅₆	36.700 [—] ₁₈₂	35.67 [″] ₁₁₁	40.819 [—] ₂₁₁	04.62 [″] ₁₈	49.503 [—] ₁₅₉	52.19 [″] ₂₄₀
Июль 4.4	59.531 [—] ₂₀₄	10.94 [″] ₁₅₆	36.882 [—] ₂₁₁	36.78 [″] ₁₁₂	41.030 [—] ₂₄₄	04.44 [″] ₆	49.662 [—] ₁₉₁	49.79 [″] ₂₃₃
14.4	59.735 [—] ₂₃₂	09.38 [″] ₁₅₁	37.093 [—] ₂₃₉	37.90 [″] ₁₁₂	41.274 [—] ₂₇₄	04.38 [″] ₂	49.853 [—] ₂₂₃	47.46 [″] ₂₂₃
24.4	59.967 [—] ₂₅₄	07.87 [″] ₁₃₉	37.332 [—] ₂₆₁	39.02 [″] ₁₀₅	41.548 [—] ₂₉₉	04.40 [″] ₁₁	50.076 [—] ₂₄₉	45.23 [″] ₂₀₀
Авг. 3.4	60.221 [—] ₂₆₉	06.48 [″] ₁₂₄	37.593 [—] ₂₇₆	40.07 [″] ₉₅	41.847 [—] ₃₁₅	04.51 [″] ₁₇	50.325 [—] ₂₆₇	43.23 [″] ₁₇₃
13.3	60.490 [—] ₂₈₃	05.24 [″] ₁₀₃	37.869 [—] ₂₈₉	41.02 [″] ₈₂	42.162 [—] ₃₃₀	04.68 [″] ₂₂	50.592 [—] ₂₈₄	41.50 [″] ₁₄₁
23.3	60.773 [—] ₂₉₀	04.21 [″] ₇₇	38.158 [—] ₂₉₆	41.84 [″] ₆₃	42.492 [—] ₃₃₈	04.90 [″] ₂₄	50.876 [—] ₂₉₄	40.09 [″] ₁₀₀
Сент. 2.3	61.063 [—] ₂₉₃	03.44 [″] ₄₈	38.454 [—] ₂₉₈	42.47 [″] ₄₃	42.830 [—] ₃₄₀	05.14 [″] ₂₅	51.170 [—] ₂₉₈	39.09 [″] ₅₇
12.3	61.356 [—] ₂₉₃	02.96 [″] ₁₈	38.752 [—] ₂₉₉	42.90 [″] ₂₁	43.170 [—] ₃₄₂	05.39 [″] ₂₅	51.468 [—] ₃₀₁	38.52 [″] ₁₁
22.2	61.649 [—] ₂₈₉	02.78 [″] ₁₆	39.051 [—] ₂₉₄	43.11 [″] ₅	43.512 [—] ₃₃₇	05.64 [″] ₂₃	51.769 [—] ₂₉₅	38.41 [″] ₃₈
Окт. 2.2	61.938 [—] ₂₈₀	02.94 [″] ₄₆	39.345 [—] ₂₈₆	43.06 [″] ₂₇	43.849 [—] ₃₂₈	05.87 [″] ₂₂	52.064 [—] ₂₈₇	38.79 [″] ₈₄
12.2	62.218 [—] ₂₇₁	03.40 [″] ₇₈	39.631 [—] ₂₇₇	42.79 [″] ₅₀	44.177 [—] ₃₁₈	06.09 [″] ₂₁	52.351 [—] ₂₇₅	39.63 [″] ₁₂₉
Нояб. 22.1	62.489 [—] ₂₅₃	04.18 [″] ₁₀₄	39.908 [—] ₂₅₉	42.29 [″] ₇₀	44.495 [—] ₃₀₀	06.30 [″] ₂₀	52.626 [—] ₂₅₆	40.92 [″] ₁₆₉
1.1	62.742 [—] ₂₃₄	05.22 [″] ₁₂₆	40.167 [—] ₂₄₂	41.59 [″] ₈₆	44.795 [—] ₂₈₀	06.50 [″] ₂₁	52.882 [—] ₂₃₃	42.61 [″] ₂₀₁
11.1	62.976 [—] ₂₁₀	06.48 [″] ₁₄₃	40.409 [—] ₂₁₈	40.73 [″] ₉₈	45.075 [—] ₂₅₄	06.71 [″] ₂₃	53.115 [—] ₂₀₇	44.62 [″] ₂₂₉
21.1	63.186 [—] ₁₈₀	07.91 [″] ₁₅₄	40.627 [—] ₁₈₇	39.75 [″] ₁₀₅	45.329 [—] ₂₂₀	06.94 [″] ₂₅	53.322 [—] ₁₇₂	46.91 [″] ₂₄₆
Дек. 1.0	63.366 [—] ₁₄₇	09.45 [″] ₁₅₇	40.814 [—] ₁₅₆	38.70 [″] ₁₀₇	45.549 [—] ₁₈₃	07.19 [″] ₃₀	53.494 [—] ₁₃₆	49.37 [″] ₂₅₃
11.0	63.513 [—] ₁₀₈	11.02 [″] ₁₅₈	40.970 [—] ₁₁₆	37.63 [″] ₁₀₆	45.732 [—] ₁₃₉	07.49 [″] ₃₂	53.630 [—] ₉₃	51.90 [″] ₂₅₄
20.9	63.621 [—] ₆₅	12.60 [″] ₁₅₀	41.086 [—] ₇₃	36.57 [″] ₁₀₀	45.871 [—] ₉₀	07.81 [″] ₃₆	53.723 [—] ₄₈	54.44 [″] ₂₄₃
30.9	63.686 [—] ₂₃	14.10 [″] ₁₃₈	41.159 [—] ₃₀	35.57 [″] ₉₂	45.961 [—] ₄₁	08.17 [″] ₃₆	53.771 [—] ₃	56.87 [″] ₂₂₈
40.9	63.709 [—] ₂₃	15.48 [″] ₁₂₅	41.189 [—] ₁₆	34.65 [″] ₈₂	46.002 [—] ₁₂	08.53 [″] ₃₆	53.774 [—] ₄₄	59.15 [″] ₂₀₅
Средн. место J1990.5	59.946	18.98	37.256	29.80	41.438	00.18	50.278	59.71
Sec δ , tg δ	1.001	—0.042	1.006	+0.111	1.139	+0.545	1.069	—0.379
a, a'	+0.150	+0.156	+0.161	+0.154	+0.189	+0.149	+0.128	+0.140
b, b'	0.000	—0.988	+0.001	—0.988	+0.005	—0.989	—0.004	—0.990

Дата	155) λ^1 Ori		156) θ^1 Ori		605) ι Ori		157) ϵ Ori	
	3 ^m 66 XII-15 Oe5		5 ^m 36 XII-15 Oe5		2 ^m 89 XII-15 Oe5		1 ^m 75 XII-15 B0	
	h m 5 34	° / +9 55	h m 5 34	° / -5 23	h m 5 34	° / -5 54	h m 5 35	° / -1 12
Янв. —4.1	37.267 ^s 59	47.42 ^{''} 75	48.960 ^s 47	39.20 ^{''} 161	58.599 ^s 46	51.70 ^{''} 164	44.351 ^s 51	22.08 ^{''} 139
5.9	37.326 ^s 15	46.67 ^{''} 66	49.007 ^s 3	40.81 ^{''} 146	58.645 ^s 2	53.34 ^{''} 149	44.402 ^s 8	23.47 ^{''} 126
15.9	37.341 ^s 30	46.01 ^{''} 58	49.010 ^s 41	42.27 ^{''} 130	58.647 ^s 41	54.83 ^{''} 132	44.410 ^s 36	24.73 ^{''} 110
25.9	37.311 ^s 75	45.43 ^{''} 47	48.969 ^s 84	43.57 ^{''} 108	58.606 ^s 85	56.15 ^{''} 110	44.374 ^s 80	25.83 ^{''} 93
Февр. 4.9	37.236 ^s 110	44.96 ^{''} 38	48.885 ^s 118	44.65 ^{''} 86	58.521 ^s 118	57.25 ^{''} 87	44.294 ^s 113	26.76 ^{''} 74
14.8	37.126 ^s 141	44.58 ^{''} 31	48.767 ^s 146	45.51 ^{''} 65	58.403 ^s 147	58.12 ^{''} 66	44.181 ^s 144	27.50 ^{''} 56
24.8	36.985 ^s 161	44.27 ^{''} 22	48.621 ^s 167	46.16 ^{''} 41	58.256 ^s 167	58.78 ^{''} 41	44.037 ^s 163	28.06 ^{''} 36
Март 6.8	36.824 ^s 169	44.05 ^{''} 15	48.454 ^s 175	46.57 ^{''} 18	58.089 ^s 175	59.19 ^{''} 19	43.874 ^s 171	28.42 ^{''} 18
16.7	36.655 ^s 170	43.90 ^{''} 8	48.279 ^s 174	46.75 ^{''} 3	57.914 ^s 176	59.38 ^{''} 4	43.703 ^s 172	28.60 ^{''} 0
26.7	36.485 ^s 158	43.82 ^{''} 1	48.105 ^s 164	46.72 ^{''} 28	57.738 ^s 163	59.34 ^{''} 29	43.531 ^s 161	28.60 ^{''} 20
Апр. 5.7	36.327 ^s 136	43.83 ^{''} 9	47.941 ^s 142	46.44 ^{''} 48	57.575 ^s 143	59.05 ^{''} 50	43.370 ^s 139	28.40 ^{''} 38
15.7	36.191 ^s 108	43.92 ^{''} 18	47.799 ^s 115	45.96 ^{''} 71	57.432 ^s 116	58.55 ^{''} 72	43.231 ^s 113	28.02 ^{''} 56
25.6	36.083 ^s 70	44.10 ^{''} 29	47.684 ^s 80	45.25 ^{''} 91	57.316 ^s 80	57.83 ^{''} 93	43.118 ^s 76	27.46 ^{''} 75
Май 5.6	36.013 ^s 30	44.39 ^{''} 39	47.604 ^s 40	44.34 ^{''} 110	57.236 ^s 40	56.90 ^{''} 113	43.042 ^s 38	26.71 ^{''} 91
15.6	35.983 ^s 11	44.78 ^{''} 50	47.564 ^s 0	43.24 ^{''} 128	57.196 ^s 1	55.77 ^{''} 130	43.004 ^s 3	25.80 ^{''} 107
Июнь 25.6	35.994 ^s 57	45.28 ^{''} 60	47.564 ^s 44	41.96 ^{''} 144	57.195 ^s 44	54.47 ^{''} 147	43.007 ^s 47	24.73 ^{''} 122
4.5	36.051 ^s 97	45.88 ^{''} 70	47.608 ^s 84	40.52 ^{''} 155	57.239 ^s 84	53.00 ^{''} 157	43.054 ^s 88	23.51 ^{''} 132
14.5	36.148 ^s 137	46.58 ^{''} 81	47.692 ^s 124	38.97 ^{''} 165	57.323 ^s 123	51.43 ^{''} 168	43.142 ^s 126	22.19 ^{''} 143
24.5	36.285 ^s 176	47.39 ^{''} 87	47.816 ^s 162	37.32 ^{''} 168	57.446 ^s 162	49.75 ^{''} 171	43.268 ^s 165	20.76 ^{''} 146
Июль 4.4	36.461 ^s 207	48.26 ^{''} 90	47.978 ^s 193	35.64 ^{''} 167	57.608 ^s 193	48.04 ^{''} 169	43.433 ^s 195	19.30 ^{''} 147
14.4	36.668 ^s 236	49.16 ^{''} 91	48.171 ^s 222	33.97 ^{''} 162	57.801 ^s 221	46.35 ^{''} 164	43.628 ^s 224	17.83 ^{''} 143
24.4	36.904 ^s 258	50.07 ^{''} 86	48.393 ^s 245	32.35 ^{''} 148	58.022 ^s 246	44.71 ^{''} 150	43.852 ^s 247	16.40 ^{''} 132
Авг. 3.4	37.162 ^s 274	50.93 ^{''} 79	48.638 ^s 263	30.87 ^{''} 131	58.268 ^s 262	43.21 ^{''} 133	44.099 ^s 264	15.08 ^{''} 117
13.3	37.436 ^s 289	51.72 ^{''} 69	48.901 ^s 277	29.56 ^{''} 109	58.530 ^s 277	41.88 ^{''} 110	44.363 ^s 279	13.91 ^{''} 98
23.3	37.725 ^s 297	52.41 ^{''} 53	49.178 ^s 286	28.47 ^{''} 80	58.807 ^s 286	40.78 ^{''} 80	44.642 ^s 287	12.93 ^{''} 73
Сент. 2.3	38.022 ^s 301	52.94 ^{''} 37	49.464 ^s 291	27.67 ^{''} 50	59.093 ^s 291	39.98 ^{''} 50	44.929 ^s 291	12.20 ^{''} 46
12.3	38.323 ^s 303	53.31 ^{''} 17	49.755 ^s 293	27.17 ^{''} 16	59.384 ^s 293	39.48 ^{''} 16	45.220 ^s 295	11.74 ^{''} 16
22.2	38.626 ^s 300	53.48 ^{''} 4	50.048 ^s 290	27.01 ^{''} 20	59.677 ^s 290	39.32 ^{''} 21	45.515 ^s 291	11.58 ^{''} 16
Окт. 2.2	38.926 ^s 293	53.44 ^{''} 24	50.338 ^s 284	27.21 ^{''} 54	59.967 ^s 283	39.53 ^{''} 55	45.806 ^s 285	11.74 ^{''} 45
12.2	39.219 ^s 286	53.20 ^{''} 43	50.622 ^s 275	27.75 ^{''} 87	60.250 ^s 275	40.08 ^{''} 89	46.091 ^s 277	12.19 ^{''} 76
Нояб. 22.1	39.505 ^s 270	52.77 ^{''} 59	50.897 ^s 258	28.62 ^{''} 118	60.525 ^s 259	40.97 ^{''} 119	46.368 ^s 261	12.95 ^{''} 103
1.1	39.775 ^s 254	52.18 ^{''} 73	51.155 ^s 241	29.80 ^{''} 140	60.784 ^s 240	42.16 ^{''} 143	46.629 ^s 244	13.98 ^{''} 122
11.1	40.029 ^s 230	51.45 ^{''} 83	51.396 ^s 218	31.20 ^{''} 161	61.024 ^s 217	43.59 ^{''} 163	46.873 ^s 221	15.20 ^{''} 141
21.1	40.259 ^s 201	50.62 ^{''} 88	51.614 ^s 187	32.81 ^{''} 173	61.241 ^s 187	45.22 ^{''} 176	47.094 ^s 191	16.61 ^{''} 151
Дек. 1.0	40.460 ^s 169	49.74 ^{''} 89	51.801 ^s 155	34.54 ^{''} 177	61.428 ^s 154	46.98 ^{''} 180	47.285 ^s 159	18.12 ^{''} 155
11.0	40.629 ^s 129	48.85 ^{''} 88	51.956 ^s 116	36.31 ^{''} 178	61.582 ^s 116	48.78 ^{''} 181	47.444 ^s 121	19.67 ^{''} 154
20.9	40.758 ^s 86	47.97 ^{''} 81	52.072 ^s 72	38.09 ^{''} 170	61.698 ^s 71	50.59 ^{''} 173	47.565 ^s 77	21.21 ^{''} 147
30.9	40.844 ^s 42	47.16 ^{''} 74	52.144 ^s 30	39.79 ^{''} 159	61.769 ^s 29	52.32 ^{''} 161	47.642 ^s 35	22.68 ^{''} 137
40.9	40.886 ^s 5	46.42 ^{''} 65	52.174 ^s 17	41.38 ^{''} 143	61.798 ^s 17	53.93 ^{''} 146	47.677 ^s 12	24.05 ^{''} 122
Средн. место J1990.5	36.844	41.81	48.436	43.72	58.070	56.18	43.863	26.92
Sec δ , tg δ	1.015	+0.175	1.004	-0.094	1.005	-0.104	1.000	-0.021
a, a'	+0.165	+0.111	+0.147	+0.110	+0.146	+0.109	+0.152	+0.106
b, b'	+0.001	-0.994	-0.001	-0.994	-0.001	-0.994	0.000	-0.994

Верхняя кульминация в Гриниче

Дата	607) δ Lep		166) ξ Aur		165) ζ Cam		167) α Ori		
	$3^m 90$	XII-19 KO	$4^m 92$	XII-20 A2	$5^m 26$	XII-20 A0	$0^m 1$ 1.2	XII-20 M0	
	h^m 5 50	$-20^{\circ} 52'$	h^m 5 54	$+55^{\circ} 42'$	h^m 5 54	$+59^{\circ} 53'$	h^m 5 54	$+7^{\circ} 24'$	
	s	$''$	s	$''$	s	$''$	s	$''$	
Янв.	—4.1	55.493 ⁴⁴	41.32 ²⁴⁶	03.949 ¹⁰⁷	28.00 ¹⁹³	07.911 ¹¹⁰	21.37 ²¹⁵	39.885 ⁷⁷	26.77 ⁹⁶
	5.9	55.537 ³	43.78 ²²⁶	04.056 ²⁸	29.93 ¹⁸⁸	08.021 ²¹	23.52 ²⁰⁸	39.962 ³¹	25.81 ⁸⁴
	15.9	55.534 ⁵⁰	46.04 ²⁰³	04.084 ⁵²	31.81 ¹⁷⁷	08.042 ⁶⁸	25.60 ¹⁹⁶	39.993 ¹⁶	24.97 ⁷⁴
	25.9	55.484 ⁹⁵	48.07 ¹⁷³	04.032 ¹³¹	33.58 ¹⁵⁷	07.974 ¹⁵⁵	27.56 ¹⁷³	39.977 ⁶¹	24.23 ⁶⁰
Февр.	4.9	55.389 ¹³²	49.80 ¹³⁹	03.901 ¹⁹⁵	35.15 ¹³¹	07.819 ²²⁷	29.29 ¹⁴⁴	39.916 ⁹⁹	23.63 ⁴⁸
	14.8	55.257 ¹⁶⁴	51.19 ¹⁰⁷	03.706 ²⁵¹	36.46 ¹⁰⁰	07.592 ²⁸⁷	30.73 ¹¹⁰	39.817 ¹³²	23.15 ³⁷
	24.8	55.093 ¹⁸⁶	52.26 ⁶⁹	03.455 ²⁹⁰	37.46 ⁶²	07.305 ³³³	31.83 ⁶⁹	39.685 ¹⁵⁶	22.78 ²⁵
Март	6.8	54.907 ¹⁹⁶	52.95 ³⁴	03.165 ³¹⁰	38.08 ²⁴	06.972 ³⁵³	32.52 ²⁷	39.529 ¹⁶⁸	22.53 ¹⁶
	16.8	54.711 ²⁰⁰	53.29 ¹	02.855 ³¹⁵	38.32 ¹⁵	06.619 ³⁶⁰	32.79 ¹⁵	39.361 ¹⁷¹	22.37 ⁵
	26.7	54.511 ¹⁹⁰	53.28 ³⁹	02.540 ³⁰⁰	38.17 ⁵⁵	06.259 ³⁴³	32.64 ⁶⁰	39.190 ¹⁶²	22.32 ⁶
Апр.	5.7	54.321 ¹⁷¹	52.89 ⁷²	02.240 ²⁶⁸	37.62 ⁹⁰	05.916 ³⁰⁷	32.04 ⁹⁷	39.028 ¹⁴⁴	22.38 ¹⁵
	15.7	54.150 ¹⁴⁶	52.17 ¹⁰⁴	01.972 ²²⁵	36.72 ¹²¹	05.609 ²⁶⁰	31.07 ¹³²	38.884 ¹¹⁹	22.53 ²⁵
	25.7	54.004 ¹¹¹	51.13 ¹³⁵	01.747 ¹⁶⁶	35.51 ¹⁴⁹	05.349 ¹⁹⁵	29.75 ¹⁶²	38.765 ⁸⁴	22.78 ³⁸
Май	5.6	53.893 ⁷³	49.78 ¹⁶²	01.581 ¹⁰¹	34.02 ¹⁶⁷	05.154 ¹²²	28.13 ¹⁸⁴	38.681 ⁴⁶	23.16 ⁴⁸
	15.6	53.820 ³³	48.16 ¹⁸⁶	01.480 ³⁴	32.35 ¹⁸²	05.032 ⁴⁶	26.29 ²⁰⁰	38.635 ⁷	23.64 ⁵⁹
Июнь	25.6	53.787 ¹²	46.30 ²⁰⁷	01.446 ⁴³	30.53 ¹⁹⁰	04.986 ³⁸	24.29 ²⁰⁹	38.628 ³⁷	24.23 ⁷⁰
	4.5	53.799 ⁵⁵	44.23 ²²¹	01.489 ¹¹⁴	28.63 ¹⁹¹	05.024 ¹¹⁷	22.20 ²¹¹	38.665 ⁷⁸	24.93 ⁷⁸
	14.5	53.854 ⁹⁵	42.02 ²³¹	01.603 ¹⁸¹	26.72 ¹⁸⁸	05.141 ¹⁹⁴	20.09 ²⁰⁹	38.743 ¹¹⁶	25.71 ⁸⁸
	24.5	53.949 ¹³⁷	39.71 ²³⁴	01.784 ²⁵⁰	24.84 ¹⁷⁹	05.335 ²⁷⁰	18.00 ¹⁹⁹	38.859 ¹⁵⁶	26.59 ⁹⁴
Июль	4.5	54.086 ¹⁷¹	37.37 ²³⁰	02.034 ³⁰⁶	23.05 ¹⁶⁵	05.605 ³³³	16.01 ¹⁸⁵	39.015 ¹⁸⁷	27.53 ⁹⁶
	14.4	54.257 ²⁰⁴	35.07 ²²¹	02.340 ³⁵⁸	21.40 ¹⁵⁰	05.938 ³⁹³	14.16 ¹⁶⁹	39.202 ²¹⁷	28.49 ⁹⁵
	24.4	54.461 ²³²	32.86 ²⁰⁰	02.698 ⁴⁰⁵	19.90 ¹³⁰	06.331 ⁴⁴⁵	12.47 ¹⁴⁶	39.419 ²⁴¹	29.44 ⁹⁰
Авг.	3.4	54.693 ²⁵⁴	30.86 ¹⁷⁶	03.103 ⁴³⁷	18.60 ¹⁰⁸	06.776 ⁴⁸³	11.01 ¹²³	39.660 ²⁶⁰	30.34 ⁸⁰
	13.4	54.947 ²⁷³	29.10 ¹⁴⁵	03.540 ⁴⁷⁰	17.52 ⁸⁷	07.259 ⁵²⁰	09.78 ⁹⁸	39.920 ²⁷⁷	31.14 ⁶⁸
	23.3	55.220 ²⁸⁷	27.65 ¹⁰⁵	04.010 ⁴⁹⁰	16.65 ⁶²	07.779 ⁵⁴⁵	08.80 ⁷¹	40.197 ²⁸⁷	31.82 ⁵⁰
Сент.	2.3	55.507 ²⁹⁴	26.60 ⁶⁴	04.500 ⁵⁰³	16.03 ³⁸	08.324 ⁵⁵⁸	08.09 ⁴³	40.484 ²⁹⁴	32.32 ³¹
	12.3	55.801 ³⁰¹	25.96 ¹⁷	05.003 ⁵¹⁵	15.65 ¹³	08.882 ⁵⁷²	07.66 ¹⁶	40.778 ³⁰¹	32.63 ¹⁰
	22.2	56.102 ³⁰⁰	25.79 ³²	05.518 ⁵¹³	15.52 ¹²	09.454 ⁵⁷²	07.50 ¹⁴	41.079 ²⁹⁹	32.73 ¹⁵
Окт.	2.2	56.402 ²⁹⁶	26.11 ⁷⁷	06.031 ⁵⁰⁷	15.64 ³⁷	10.026 ⁵⁶⁴	07.64 ⁴²	41.378 ²⁹⁷	32.58 ³⁶
	12.2	56.698 ²⁸⁷	26.88 ¹²⁵	06.538 ⁴⁹⁸	16.01 ⁶²	10.590 ⁵⁵²	08.06 ⁷¹	41.675 ²⁹¹	32.22 ⁵⁸
Нояб.	22.2	56.985 ²⁷¹	28.13 ¹⁶⁷	07.036 ⁴⁷³	16.63 ⁸⁸	11.142 ⁵²⁵	08.77 ¹⁰⁰	41.966 ²⁷⁹	31.64 ⁷⁷
	1.1	57.256 ²⁵³	29.80 ²⁰⁰	07.509 ⁴⁴⁵	17.51 ¹¹¹	11.667 ⁴⁹²	09.77 ¹²⁵	42.245 ²⁶⁵	30.87 ⁹²
	11.1	57.509 ²⁹⁷	31.80 ²³¹	07.954 ⁴⁰⁸	18.62 ¹³⁴	12.159 ⁴⁴⁹	11.02 ¹⁵¹	42.510 ²⁴⁴	29.95 ¹⁰⁵
	21.1	57.736 ¹²⁵	34.11 ²⁵⁰	08.362 ³⁵⁵	19.96 ¹⁵⁴	12.608 ³⁹⁰	12.53 ¹⁷⁴	42.754 ²¹⁶	28.90 ¹¹⁰
Дек.	1.1	57.931 ¹⁶⁰	36.61 ²⁶⁰	08.717 ²⁹⁹	21.50 ¹⁷¹	12.998 ³²⁷	14.27 ¹⁹¹	42.970 ¹⁸⁵	27.80 ¹¹²
	11.0	58.091 ¹¹⁸	39.21 ²⁶⁴	09.016 ²³¹	23.21 ¹⁸⁴	13.325 ²⁴⁹	16.18 ²⁰⁶	43.155 ¹⁴⁷	26.68 ¹¹⁰
	20.9	58.209 ⁷¹	41.85 ²⁵⁶	09.247 ¹⁵³	25.05 ¹⁸⁹	13.574 ¹⁶²	18.24 ²¹¹	43.302 ¹⁰³	25.58 ¹⁰²
	30.9	58.280 ²⁶	44.41 ²⁴⁰	09.400 ⁷⁷	26.94 ¹⁹⁰	13.736 ⁷⁶	20.35 ²¹¹	43.405 ⁵⁹	24.56 ⁹⁴
	40.9	58.306 ²³	46.81 ²²¹	09.477 ⁷	28.84 ¹⁸⁴	13.812 ¹⁷	22.46 ²⁰⁴	43.464 ¹⁰	23.62 ⁸²
Средн. место J1990.5		54.759	46.10	02.965	20.35	06.727	13.57	39.430	21.04
Sec δ , tg δ	1.070	—0.381	1.775	+1.466	1.993	+1.724	1.008	+0.130	
a, a'	+0.128	+0.040	+0.251	+0.026	+0.268	+0.026	+0.162	+0.023	
b, b'	—0.001	—0.999	+0.003	—1.000	+0.003	—1.000	0.000	—1.000	

Дата	608) α Car		184) 48 Aur		185) 13 Mon		609) ξ^2 C Ma										
	—0 ^m 86 XII-27 F0		5 ^m 0 XII-28 G0 5.6		4 ^m 50 XII-29 A0p		4 ^m 54 XII-30 A0										
	h m	° ′	h m	° ′	h m	° ′	h m	° ′									
	6 23	—52 41	6 27	+30 29	6 32	+7 20	6 34	—22 57									
	^s	″	^s	″	^s	″	^s	″									
Янв.	—4.0	46.303	17	18.21	358	57.991	130	64.37	38	23.874	113	31.85	108	40.223	86	17.72	272
	5.9	46.320	55	21.79	313	58.121	76	64.75	47	23.987	66	30.77	95	40.309	37	20.44	255
	15.9	46.265	123	25.17	313	58.197	20	65.22	53	24.053	17	29.82	82	40.346	14	22.99	235
	25.9	46.142	191	28.30	276	58.217	37	65.75	54	24.070	32	29.00	66	40.332	65	25.34	206
Февр.	4.9	45.951	245	31.06	233	58.180	85	66.29	51	24.038	74	28.34	52	40.267	106	27.40	174
	14.9	45.706	293	33.39	190	58.095	129	66.80	46	23.964	112	27.82	40	40.161	145	29.14	141
	24.8	45.413	330	35.29	138	57.966	163	67.26	35	23.852	142	27.42	26	40.016	175	30.55	103
Март	6.8	45.083	349	36.67	86	57.803	182	67.61	24	23.710	160	27.16	15	39.841	192	31.58	67
	16.8	44.734	360	37.53	36	57.621	194	67.85	10	23.550	169	27.01	4	39.649	202	32.25	30
	26.8	44.374	356	37.89	20	57.427	190	67.95	5	23.381	168	26.97	6	39.447	200	32.55	9
	5.7	44.018	337	37.69	68	57.237	174	67.90	19	23.213	154	27.03	15	39.247	188	32.46	44
	15.7	43.681	313	37.01	117	57.063	152	67.71	31	23.059	135	27.18	24	39.059	169	32.02	78
	25.7	43.368	273	35.84	164	56.911	116	67.40	42	22.924	106	27.42	35	38.890	141	31.24	113
Май	5.7	43.095	227	34.20	204	56.795	77	66.98	49	22.818	71	27.77	43	38.749	107	30.11	141
	15.6	42.868	178	32.16	241	56.718	34	66.49	55	22.747	36	28.20	53	38.642	71	28.70	170
	25.6	42.690	118	29.75	273	56.684	14	65.94	58	22.711	6	28.73	62	38.571	30	27.00	194
Июнь	4.6	42.572	58	27.02	295	56.698	61	65.36	58	22.717	44	29.35	69	38.541	11	25.06	210
	14.5	42.514	0	24.07	313	56.759	104	64.78	53	22.761	83	30.04	76	38.552	51	22.96	226
	24.5	42.514	65	20.94	320	56.863	144	64.25	55	22.844	120	30.80	81	38.603	92	20.70	232
Июль	4.5	42.579	122	17.74	318	57.007	187	63.70	52	22.964	153	31.61	83	38.695	129	18.38	232
	14.5	42.701	178	14.56	309	57.194	221	63.18	47	23.117	185	32.44	82	38.824	163	16.06	227
	24.4	42.879	234	11.47	287	57.415	254	62.71	42	23.302	213	33.26	75	38.987	195	13.79	211
Авг.	3.4	43.113	277	08.60	256	57.669	277	62.29	39	23.515	234	34.01	66	39.182	222	11.68	190
	13.4	43.390	322	06.04	220	57.946	300	61.90	36	23.749	254	34.67	54	39.404	247	09.78	161
	23.4	43.712	356	03.84	169	58.246	317	61.54	35	24.003	271	35.21	36	39.651	267	08.17	124
	2.3	44.068	382	02.15	116	58.563	330	61.19	33	24.274	283	35.57	17	39.918	282	06.93	83
	12.3	44.450	403	00.99	57	58.893	342	60.86	34	24.557	294	35.74	4	40.200	296	06.10	38
	22.3	44.853	412	00.42	10	59.235	348	60.52	32	24.851	300	35.70	29	40.496	304	05.72	13
Окт.	2.2	45.265	410	00.52	71	59.583	349	60.20	32	25.151	302	35.41	50	40.800	305	05.85	61
	12.2	45.675	404	01.23	136	59.932	350	59.88	30	25.453	303	34.91	73	41.105	306	06.46	111
	22.2	46.079	380	02.59	197	60.282	341	59.58	26	25.756	297	34.18	92	41.411	297	07.57	157
	1.2	46.459	349	04.56	247	60.623	330	59.32	21	26.053	286	33.26	107	41.708	283	09.14	196
	11.1	46.808	310	07.03	295	60.953	312	59.11	13	26.339	272	32.19	120	41.991	264	11.10	232
	21.1	47.118	257	09.98	330	61.265	284	58.98	2	26.611	247	30.99	126	42.255	235	13.42	256
Дек.	1.1	47.375	199	13.28	352	61.549	251	58.96	7	26.858	219	29.73	127	42.490	203	15.98	273
	11.1	47.574	133	16.80	366	61.800	210	59.03	26	27.077	182	28.46	124	42.693	161	18.71	281
	21.0	47.707	61	20.46	364	62.010	160	59.23	30	27.259	140	27.22	115	42.854	115	21.52	278
	30.9	47.768	9	24.10	353	62.170	109	59.53	41	27.399	95	26.07	105	42.969	67	24.30	268
	40.9	47.759	82	27.63	333	62.279	51	59.94	48	27.494	45	25.02	92	43.036	16	26.98	250
Средн. место J1990.5		44.454		24.92		57.460		58.42		23.402		25.67		39.469		24.66	
Sec δ , tg δ		1.650		—1.312		1.161		+0.589		1.008		+0.129		1.086		—0.424	
a, a'		+0.066		—0.103		+0.192		—0.122		+0.162		—0.141		+0.125		—0.151	
b, b'		+0.009		—0.995		—0.005		—0.993		—0.001		—0.990		+0.004		—0.989	

Верхняя кульминация в Гриниче

Дата	186) γ Gem		187) S Mon		188) ϵ Gem		190) α C Ma ¹		
	1 ^m 93 XII-31 A0		4 ^m 68 XII-31 Oe5		3 ^m 18 I-1 G5		—1 ^m 58 I-1 A0		
	h m 6 37	+16 24 ^o /	h m 6 40	+9 54 ^o /	h m 6 43	+25 08 ^o /	h m 6 44	—16 41 ^o /	
Янв.	—4.0	10.265 ^s ₁₂₅	34.80 ^o ₅₃	27.757 ^s ₁₂₃	24.26 ^o ₉₄	21.369 ^s ₁₄₁	33.78 ^o ₀	44.429 ^s ₉₉	63.00 ^o ₂₄₈
	5.9	10.390 ^s ₇₇	34.27 ^o ₄₁	27.880 ^s ₇₆	23.32 ^o ₈₂	21.510 ^s ₈₉	33.78 ^o ₁₂	44.528 ^s ₅₀	65.48 ^o ₂₃₂
	15.9	10.467 ^s ₂₆	33.86 ^o ₃₀	27.956 ^s ₂₆	22.50 ^o ₆₉	21.599 ^s ₃₅	33.90 ^o ₂₀	44.578 ^s ₀	67.80 ^o ₂₁₃
	25.9	10.493 ^s ₂₆	33.56 ^o ₂₀	27.982 ^s ₂₄	21.81 ^o ₅₄	21.634 ^s ₂₀	34.10 ^o ₂₈	44.578 ^s ₄₉	69.93 ^o ₁₈₇
Февр.	4.9	10.467 ^s ₇₀	33.36 ^o ₁₁	27.958 ^s ₆₈	21.27 ^o ₄₁	21.614 ^s ₆₈	34.38 ^o ₃₁	44.529 ^s ₉₁	71.80 ^o ₁₅₇
	14.9	10.397 ^s ₁₁₀	33.25 ^o ₅	27.890 ^s ₁₀₇	20.86 ^o ₃₀	21.546 ^s ₁₁₂	34.69 ^o ₃₀	44.438 ^s ₁₂₉	73.37 ^o ₁₂₈
	24.9	10.287 ^s ₁₄₂	33.20 ^o ₁	27.783 ^s ₁₃₈	20.56 ^o ₁₉	21.434 ^s ₁₄₇	34.99 ^o ₂₈	44.309 ^s ₁₆₀	74.65 ^o ₉₃
Март	6.8	10.145 ^s ₁₆₂	33.21 ^o ₂	27.645 ^s ₁₅₇	20.37 ^o ₁₀	21.287 ^s ₁₆₈	35.27 ^o ₂₁	44.149 ^s ₁₇₇	75.58 ^o ₆₂
	16.8	09.983 ^s ₁₇₂	33.23 ^o ₄	27.488 ^s ₁₆₉	20.27 ^o ₂	21.119 ^s ₁₈₁	35.48 ^o ₁₄	43.972 ^s ₁₈₉	76.20 ^o ₃₀
	26.8	09.811 ^s ₁₇₁	33.27 ^o ₄	27.319 ^s ₁₆₈	20.25 ^o ₇	20.938 ^s ₁₈₁	35.62 ^o ₆	43.783 ^s ₁₈₈	76.50 ^o ₅
Апр.	5.7	09.640 ^s ₁₅₈	33.31 ^o ₄	27.151 ^s ₁₅₆	20.32 ^o ₁₂	20.757 ^s ₁₆₉	35.68 ^o ₄	43.595 ^s ₁₇₆	76.45 ^o ₃₄
	15.7	09.482 ^s ₁₃₉	33.35 ^o ₆	26.995 ^s ₁₃₈	20.44 ^o ₁₉	20.588 ^s ₁₄₉	35.64 ^o ₁₂	43.419 ^s ₁₅₈	76.11 ^o ₆₄
	25.7	09.343 ^s ₁₀₉	33.41 ^o ₆	26.857 ^s ₁₀₉	20.63 ^o ₂₇	20.439 ^s ₁₁₉	35.52 ^o ₁₉	43.261 ^s ₁₃₂	75.47 ^o ₉₄
Май	5.7	09.234 ^s ₇₃	33.47 ^o ₈	26.748 ^s ₇₆	20.90 ^o ₃₃	20.320 ^s ₈₃	35.33 ^o ₂₄	43.129 ^s ₉₉	74.53 ^o ₁₁₉
	15.6	09.161 ^s ₃₇	33.55 ^o ₁₂	26.672 ^s ₄₁	21.23 ^o ₄₁	20.237 ^s ₄₄	35.09 ^o ₂₇	43.030 ^s ₆₄	73.34 ^o ₁₄₄
Июнь	25.6	09.124 ^s ₆	33.67 ^o ₁₆	26.631 ^s ₁	21.64 ^o ₄₇	20.193 ^s ₁	34.82 ^o ₃₀	42.966 ^s ₂₄	71.90 ^o ₁₆₄
	4.6	09.130 ^s ₄₆	33.83 ^o ₁₈	26.632 ^s ₃₉	22.11 ^o ₅₄	20.194 ^s ₄₄	34.52 ^o ₂₉	42.942 ^s ₁₅	70.26 ^o ₁₇₉
	14.6	09.176 ^s ₈₆	34.01 ^o ₂₁	26.671 ^s ₇₇	22.65 ^o ₅₉	20.238 ^s ₈₇	34.23 ^o ₂₈	42.957 ^s ₅₂	68.47 ^o ₁₉₄
	24.5	09.262 ^s ₁₂₂	34.22 ^o ₂₅	26.748 ^s ₁₁₅	23.24 ^o ₆₂	20.325 ^s ₁₁₅	33.95 ^o ₁₈	43.009 ^s ₉₃	66.53 ^o ₁₉₉
Июль	4.5	09.384 ^s ₁₅₉	34.47 ^o ₃₂	26.863 ^s ₁₄₈	23.86 ^o ₆₇	20.440 ^s ₁₆₇	33.77 ^o ₃₄	43.102 ^s ₁₂₇	64.54 ^o ₁₉₉
	14.5	09.543 ^s ₁₉₁	34.79 ^o ₂₉	27.011 ^s ₁₈₀	24.53 ^o ₆₅	20.607 ^s ₁₉₈	33.43 ^o ₂₅	43.229 ^s ₁₆₀	62.55 ^o ₁₉₅
	24.4	09.734 ^s ₂₂₀	35.08 ^o ₂₇	27.191 ^s ₂₀₉	25.18 ^o ₅₉	20.805 ^s ₂₂₈	33.18 ^o ₂₃	43.389 ^s ₁₉₁	60.60 ^o ₁₈₁
Авг.	3.4	09.954 ^s ₂₄₂	35.35 ^o ₂₁	27.400 ^s ₂₃₁	25.77 ^o ₅₁	21.033 ^s ₂₅₂	32.95 ^o ₂₄	43.580 ^s ₂₁₅	58.79 ^o ₁₆₂
	13.4	10.196 ^s ₂₆₄	35.56 ^o ₁₄	27.631 ^s ₂₅₂	26.28 ^o ₄₀	21.285 ^s ₂₇₅	32.71 ^o ₂₆	43.795 ^s ₂₄₀	57.17 ^o ₁₃₇
	23.4	10.460 ^s ₂₈₁	35.70 ^o ₅	27.883 ^s ₂₇₀	26.68 ^o ₂₄	21.560 ^s ₂₉₅	32.45 ^o ₂₉	44.035 ^s ₂₅₉	55.80 ^o ₁₀₃
Сент.	2.3	10.741 ^s ₂₉₂	35.75 ^o ₈	28.153 ^s ₂₈₂	26.92 ^o ₈	21.855 ^s ₃₀₇	32.16 ^o ₃₄	44.294 ^s ₂₇₄	54.77 ^o ₆₇
	12.3	11.033 ^s ₃₀₅	35.67 ^o ₂₀	28.435 ^s ₂₉₄	27.00 ^o ₁₂	22.162 ^s ₃₂₂	31.82 ^o ₃₉	44.568 ^s ₂₈₈	54.10 ^o ₂₅
	22.3	11.338 ^s ₃₁₂	35.47 ^o ₃₅	28.729 ^s ₃₀₂	26.88 ^o ₃₂	22.484 ^s ₃₂₉	31.43 ^o ₄₄	44.856 ^s ₂₉₆	53.85 ^o ₂₀
Окт.	2.3	11.650 ^s ₃₁₅	35.12 ^o ₄₈	29.031 ^s ₃₀₅	26.56 ^o ₅₃	22.813 ^s ₃₃₄	30.99 ^o ₄₈	45.152 ^s ₂₉₉	54.05 ^o ₆₃
	12.2	11.965 ^s ₃₁₆	34.64 ^o ₆₂	29.336 ^s ₃₀₈	26.03 ^o ₇₂	23.147 ^s ₃₃₇	30.51 ^o ₅₃	45.451 ^s ₃₀₀	54.68 ^o ₁₀₉
Нояб.	22.2	12.281 ^s ₃₁₁	34.02 ^o ₇₁	29.644 ^s ₃₀₃	25.31 ^o ₈₉	23.484 ^s ₃₃₂	29.98 ^o ₅₃	45.751 ^s ₂₉₄	55.77 ^o ₁₅₀
	1.2	12.592 ^s ₃₀₂	33.31 ^o ₇₉	29.947 ^s ₂₉₃	24.42 ^o ₁₀₃	23.816 ^s ₃₂₃	29.45 ^o ₅₂	46.045 ^s ₂₈₂	57.27 ^o ₁₈₅
	11.1	12.894 ^s ₂₈₆	32.52 ^o ₈₂	30.240 ^s ₂₈₀	23.39 ^o ₁₁₂	24.139 ^s ₃₀₈	28.93 ^o ₄₉	46.327 ^s ₂₆₆	59.12 ^o ₂₁₇
	21.1	13.180 ^s ₂₆₃	31.70 ^o ₈₃	30.520 ^s ₂₅₆	22.27 ^o ₁₁₆	24.447 ^s ₂₈₄	28.44 ^o ₄₂	46.593 ^s ₂₃₉	61.29 ^o ₂₃₉
Дек.	1.1	13.443 ^s ₂₃₄	30.87 ^o ₇₈	30.776 ^s ₂₂₉	21.11 ^o ₁₁₆	24.731 ^s ₂₅₄	28.02 ^o ₃₂	46.832 ^s ₂₀₉	63.68 ^o ₂₅₂
	11.1	13.677 ^s ₁₉₇	30.09 ^o ₇₂	31.005 ^s ₁₉₃	19.95 ^o ₁₁₂	24.985 ^s ₂₁₇	27.70 ^o ₂₁	47.041 ^s ₁₇₀	66.20 ^o ₂₅₉
	21.0	13.874 ^s ₁₅₂	29.37 ^o ₆₁	31.198 ^s ₁₅₀	18.83 ^o ₁₀₃	25.202 ^s ₁₆₉	27.49 ^o ₉	47.211 ^s ₁₂₆	68.79 ^o ₂₅₅
	31.0	14.026 ^s ₁₀₇	28.76 ^o ₅₁	31.348 ^s ₁₀₄	17.80 ^o ₉₂	25.371 ^s ₁₂₁	27.40 ^o ₃	47.337 ^s ₈₀	71.34 ^o ₂₄₄
	40.9	14.133 ^s ₅₅	28.25 ^o ₃₈	31.452 ^s ₅₅	16.88 ^o ₇₉	25.492 ^s ₆₆	27.43 ^o ₁₄	47.417 ^s ₂₉	73.78 ^o ₂₂₈
Средн. место J1990.5		09.799	28.79	27.291	18.09	20.867	28.08	43.771	70.49
Sec δ , tg δ		1.042	+0.294	1.015	+0.175	1.105	+0.469	1.044	—0.300
a, a'		+0.173	—0.161	+0.165	—0.176	+0.184	—0.188	+0.134	—0.194
b, b'		—0.003	—0.987	—0.002	—0.984	—0.006	—0.982	+0.004	—0.981

¹ Двойная. Эфемериды дает положение более яркой звезды.

ВИДИМЫЕ МЕСТА ЗВЕЗД 1990
Верхняя кульминация в Гриниче

Дата	197) 15 Лун m 4 ^m 54 I-4 G0		198) ε С Ма 1 ^m 63 I-5 В1		195) 24 Н Сам 4 ^m 75 I-5 К5		611) α ² С Ма 3 ^m 12 I-6 В5p	
	h m 6 56	+58 ^o 25'	h m 6 58	-28 ^o 57'	h m 6 58	+76 ^o 59'	h m 7 02	-23 ^o 48'
Янв. —4.0	^s 28.620 ₂₂₂	^{''} 73.93 ₁₉₃	^s 15.961 ₁₀₅	^{''} 22.90 ₃₀₅	^s 45.548 ₃₉₅	^{''} 31.64 ₂₇₆	^s 38.371 ₁₁₅	^{''} 59.93 ₂₈₄
5.9 ¹	28.842 ₁₃₄	75.86 ₂₀₁	16.066 ₅₃	25.95 ₂₉₀	45.943 ₁₉₈	34.40 ₂₈₂	38.486 ₆₅	62.77 ₂₇₁
15.9	28.976 ₄₅	77.87 ₂₀₅	16.119 ₀	28.85 ₂₇₁	46.141 ₃	37.22 ₂₈₂	38.551 ₁₃	65.48 ₂₅₂
25.9	29.021 ₅₀	79.92 ₁₉₈	16.119 ₅₄	31.56 ₂₄₄	46.138 ₂₁₀	40.04 ₂₆₉	38.564 ₄₀	68.00 ₂₂₇
Февр. 4.9	28.971 ₁₃₀	81.90 ₁₈₂	16.065 ₁₀₁	34.00 ₂₁₁	45.928 ₃₈₈	42.73 ₂₄₄	38.524 ₈₅	70.27 ₁₉₅
14.9	28.841 ₂₀₅	83.72 ₁₆₁	15.964 ₁₄₂	36.11 ₁₇₇	45.540 ₅₅₃	45.17 ₂₁₁	38.439 ₁₂₇	72.22 ₁₆₄
24.9	28.636 ₂₆₇	85.33 ₁₂₉	15.822 ₁₇₇	37.88 ₁₃₆	44.987 ₆₉₂	47.28 ₁₆₈	38.312 ₁₆₁	73.86 ₁₂₆
Март 6.8	28.369 ₃₀₇	86.62 ₉₂	15.645 ₁₉₉	39.24 ₉₆	44.295 ₇₈₁	48.96 ₁₁₉	38.151 ₁₈₂	75.12 ₈₉
16.8	28.062 ₃₃₄	87.54 ₅₅	15.446 ₂₁₃	40.20 ₅₇	43.514 ₈₄₄	50.15 ₆₈	37.969 ₁₉₈	76.01 ₅₃
26.8	27.728 ₃₄₀	88.09 ₁₁	15.233 ₂₁₅	40.77 ₁₃	42.670 ₈₆₃	50.83 ₉	37.771 ₂₀₀	76.54 ₁₃
Апр. 5.8	27.388 ₃₂₅	88.20 ₂₉	15.018 ₂₀₇	40.90 ₂₆	41.807 ₈₃₅	50.92 ₄₄	37.571 ₁₉₃	76.67 ₂₂
15.7	27.063 ₂₉₉	87.91 ₆₈	14.811 ₁₉₂	40.64 ₆₅	40.972 ₇₈₄	50.48 ₉₆	37.378 ₁₇₉	76.45 ₅₈
25.7	26.764 ₂₅₃	87.23 ₁₀₇	14.619 ₁₆₇	39.99 ₁₀₄	40.188 ₆₈₈	49.52 ₁₄₇	37.199 ₁₅₄	75.87 ₉₄
Май 5.7	26.511 ₁₉₇	86.16 ₁₃₇	14.452 ₁₃₅	38.95 ₁₃₇	39.500 ₅₆₉	48.05 ₁₈₈	37.045 ₁₂₄	74.93 ₁₂₃
15.6	26.314 ₁₃₆	84.79 ₁₆₄	14.317 ₁₀₂	37.58 ₁₆₉	38.931 ₄₃₇	46.17 ₂₂₄	36.921 ₉₃	73.70 ₁₅₄
Июнь 25.6	26.178 ₆₃	83.15 ₁₈₇	14.215 ₆₁	35.89 ₁₉₈	38.494 ₂₇₅	43.93 ₂₅₅	36.828 ₅₃	72.16 ₁₈₀
4.6	26.115 ₈	81.28 ₂₀₀	14.154 ₂₀	33.91 ₂₁₈	38.219 ₁₁₅	41.38 ₂₇₃	36.775 ₁₄	70.36 ₁₉₈
14.6	26.123 ₇	79.28 ₂₁₁	14.134 ₁₉	31.73 ₂₃₈	38.104 ₄₇	38.65 ₂₈₈	36.761 ₂₃	68.38 ₂₁₇
24.5	26.201 ₁₅₂	77.17 ₂₁₅	14.153 ₆₂	29.35 ₂₄₇	38.151 ₂₂₁	35.77 ₂₉₃	36.784 ₆₄	66.21 ₂₂₆
Июль 4.5	26.353 ₂₁₆	75.02 ₂₁₃	14.215 ₁₀₀	26.88 ₂₄₉	38.372 ₃₇₅	32.84 ₂₉₀	36.848 ₁₀₁	63.95 ₂₂₈
14.5	26.569 ₂₇₈	72.89 ₂₀₈	14.315 ₁₃₇	24.39 ₂₄₈	38.747 ₅₂₅	29.94 ₂₈₃	36.949 ₁₃₅	61.67 ₂₂₇
24.5	26.847 ₃₃₇	70.81 ₁₉₉	14.452 ₁₇₄	21.91 ₂₃₃	39.272 ₆₇₁	27.11 ₂₆₈	37.084 ₁₇₀	59.40 ₂₁₃
Авг. 3.4	27.184 ₃₈₄	68.82 ₁₈₄	14.626 ₂₀₃	19.58 ₂₁₂	39.943 ₇₉₀	24.43 ₂₄₈	37.254 ₁₉₈	57.27 ₁₉₅
13.4	27.568 ₄₃₀	66.98 ₁₆₉	14.829 ₂₃₃	17.46 ₁₈₆	40.733 ₉₀₆	21.95 ₂₂₅	37.452 ₂₂₆	55.32 ₁₆₉
23.4	27.998 ₄₆₇	65.29 ₁₄₉	15.062 ₂₅₉	15.60 ₁₄₇	41.639 ₁₀₀₄	19.70 ₁₉₃	37.678 ₂₅₁	53.63 ₁₃₄
Сент. 2.3	28.465 ₄₉₆	63.80 ₁₂₈	15.321 ₂₇₉	14.13 ₁₀₅	42.643 ₁₀₇₅	17.77 ₁₆₂	37.929 ₂₇₀	52.29 ₉₅
12.3	28.961 ₅₂₃	62.52 ₁₀₅	15.600 ₂₉₈	13.08 ₅₈	43.718 ₁₁₄₅	16.15 ₁₂₆	38.199 ₂₈₈	51.34 ₅₁
22.3	29.484 ₅₄₀	61.47 ₇₇	15.898 ₃₁₀	12.50 ₃	44.863 ₁₁₈₅	14.89 ₈₆	38.487 ₃₀₁	50.83 ₀
Окт. 2.3	30.024 ₅₅₀	60.70 ₅₂	16.208 ₃₁₇	12.47 ₄₈	46.048 ₁₂₀₅	14.03 ₄₆	38.788 ₃₀₈	50.83 ₄₉
12.2	30.574 ₅₅₆	60.18 ₂₁	16.525 ₃₂₁	12.95 ₁₀₂	47.253 ₁₂₁₄	13.57 ₃	39.096 ₃₁₃	51.32 ₉₉
Нояб. 22.2	31.130 ₅₄₇	59.97 ₁₀	16.846 ₃₁₅	13.97 ₁₅₅	48.467 ₁₁₈₆	13.54 ₄₃	39.409 ₃₀₉	52.31 ₁₄₈
1.2	31.677 ₅₃₁	60.07 ₄₀	17.161 ₃₀₅	15.52 ₁₉₉	49.653 ₁₁₄₀	13.97 ₈₅	39.718 ₃₀₀	53.79 ₁₈₉
11.2	32.208 ₅₀₃	60.47 ₇₂	17.466 ₂₈₇	17.51 ₂₄₁	50.793 ₁₀₇₂	14.82 ₁₃₀	40.018 ₂₈₅	55.68 ₂₂₈
21.1	32.715 ₄₆₇	61.19 ₁₀₅	17.753 ₂₅₈	19.92 ₂₇₂	51.865 ₉₆₃	16.12 ₁₇₁	40.303 ₂₅₉	57.96 ₂₅₇
Дек. 1.1	33.178 ₄₁₃	62.24 ₁₃₃	18.011 ₂₂₆	22.64 ₂₉₃	52.828 ₈₄₁	17.83 ₂₀₆	40.562 ₂₂₉	60.53 ₂₇₆
11.1	33.591 ₃₄₈	63.57 ₁₆₀	18.237 ₁₈₅	25.57 ₃₀₇	53.669 ₆₈₈	19.89 ₂₃₉	40.791 ₁₉₁	63.29 ₂₈₉
21.0	33.939 ₂₆₉	65.17 ₁₈₀	18.422 ₁₃₆	28.64 ₃₀₉	54.357 ₅₀₅	22.28 ₂₆₃	40.982 ₁₄₄	66.18 ₂₈₈
31.0	34.208 ₁₈₉	66.97 ₁₉₅	18.558 ₈₆	31.73 ₃₀₁	54.862 ₃₂₀	24.91 ₂₇₇	41.126 ₉₇	69.06 ₂₈₁
40.9	34.397 ₉₆	68.92 ₂₀₃	18.644 ₃₁	34.74 ₂₈₇	55.182 ₁₁₅	27.68 ₂₈₄	41.223 ₄₃	71.87 ₂₆₈
Средн. место J1990.5	27.325	69.54	15.133	31.50	41.512	27.64	37.650	68.44
Sec δ, tg δ	1.910	+1.628	1.143	-0.553	4.442	+4.328	1.093	-0.441
a, a'	+0.258	-0.244	+0.118	-0.251	+0.432	-0.253	+0.125	-0.270
b, b'	-0.026	-0.970	+0.009	-0.968	-0.073	-0.967	+0.008	-0.963

¹ Для звезды 611) янв. 6.0.

Верхняя кульминация в Гриниче

Дата	212) ν Gem		213) α C Mi ¹		214) 24 Lyn		215) κ Gem		
	4 ^m 22 I-14 K5		0 ^m 48 I-15 F5		4 ^m 96 I-16 A2		3 ^m 70 I-16 G5		
	h m 7 35	+ ° ' / +26 54	h m 7 38	+ ° ' / +5 14	h m 7 42	+ ° ' / +58 43	h m 7 43	+ ° ' / +24 25	
Янв.	—3.9	20.769 ^s ₁₉₈	67.20 ["] ₉	48.706 ^s ₁₇₀	65.44 ["] ₁₄₆	13.758 ^s ₃₀₂	61.89 ["] ₁₇₂	52.948 ^s ₂₀₃	21.26 ["] ₂₈
	6.0	20.967 ^s ₁₄₅	67.11 ["] ₈	48.876 ^s ₁₂₄	63.98 ["] ₁₂₉	14.060 ^s ₂₁₇	63.61 ["] ₁₉₁	53.151 ^s ₁₅₁	20.98 ["] ₁₀
	16.0 ²	21.112 ^s ₉₀	67.19 ["] ₅	49.000 ^s ₇₄	62.69 ["] ₁₁₃	14.277 ^s ₁₂₆	65.52 ["] ₂₀₆	53.302 ^s ₉₇	20.88 ["] ₇
	25.9	21.202 ^s ₃₁	67.44 ["] ₃₈	49.074 ^s ₂₂	61.56 ["] ₉₃	14.403 ^s ₂₉	67.58 ["] ₂₁₀	53.399 ^s ₃₉	20.95 ["] ₂₃
Февр.	4.9	21.233 ^s ₂₂	67.82 ["] ₄₆	49.096 ^s ₂₆	60.63 ["] ₇₄	14.432 ^s ₆₀	69.68 ["] ₂₀₅	53.438 ^s ₁₃	21.18 ["] ₃₄
	14.9	21.211 ^s ₇₂	68.28 ["] ₅₂	49.070 ^s ₇₀	59.89 ["] ₅₆	14.372 ^s ₁₄₃	71.73 ["] ₁₉₂	53.425 ^s ₆₄	21.52 ["] ₄₁
	24.9	21.139 ^s ₁₁₆	68.80 ["] ₅₂	49.000 ^s ₁₀₉	59.33 ["] ₃₈	14.229 ^s ₂₁₇	73.65 ["] ₁₆₉	53.361 ^s ₁₀₇	21.93 ["] ₄₃
Март	6.9	21.023 ^s ₁₄₆	69.32 ["] ₄₉	48.891 ^s ₁₃₄	58.95 ["] ₂₃	14.012 ^s ₂₇₁	75.34 ["] ₁₃₉	53.254 ^s ₁₃₇	22.38 ["] ₄₅
	16.8	20.877 ^s ₁₆₉	69.81 ["] ₄₁	48.757 ^s ₁₅₄	58.72 ["] ₉	13.741 ^s ₃₁₂	76.73 ["] ₁₀₄	53.117 ^s ₁₆₁	22.81 ["] ₄₁
	26.8	20.708 ^s ₁₇₈	70.22 ["] ₃₃	48.603 ^s ₁₆₃	58.63 ["] ₄	13.429 ^s ₃₃₄	77.77 ["] ₆₃	52.956 ^s ₁₇₃	23.22 ["] ₃₃
	5.8	20.530 ^s ₁₇₆	70.55 ["] ₂₀	48.440 ^s ₁₅₉	58.67 ["] ₁₄	13.095 ^s ₃₃₄	78.40 ["] ₂₂	52.783 ^s ₁₇₁	23.55 ["] ₂₅
	15.8	20.354 ^s ₁₆₆	70.75 ["] ₁₀	48.281 ^s ₁₅₁	58.81 ["] ₂₅	12.761 ^s ₃₂₃	78.62 ["] ₁₉	52.612 ^s ₁₆₂	23.80 ["] ₁₆
	25.7	20.188 ^s ₁₄₃	70.85 ["] ₃	48.130 ^s ₁₃₁	59.06 ["] ₃₄	12.438 ^s ₂₉₂	78.43 ["] ₆₁	52.450 ^s ₁₄₃	23.96 ["] ₅
Май	5.7	20.045 ^s ₁₁₅	70.82 ["] ₁₄	47.999 ^s ₁₀₅	59.40 ["] ₄₂	12.146 ^s ₂₄₇	77.82 ["] ₉₉	52.307 ^s ₁₁₆	24.01 ["] ₄
	15.7	19.930 ^s ₈₃	70.68 ["] ₂₃	47.894 ^s ₇₈	59.82 ["] ₅₁	11.899 ^s ₁₉₈	76.83 ["] ₁₃₂	52.191 ^s ₈₅	23.97 ["] ₁₁
	25.6	19.847 ^s ₄₄	70.45 ["] ₃₃	47.816 ^s ₄₃	60.33 ["] ₅₈	11.701 ^s ₁₃₃	75.51 ["] ₁₆₃	52.106 ^s ₄₉	23.86 ["] ₂₀
Июнь	4.6	19.803 ^s ₄	70.12 ["] ₃₈	47.773 ^s ₉	60.91 ["] ₆₃	11.568 ^s ₆₈	73.88 ["] ₁₈₆	52.057 ^s ₁₁	23.66 ["] ₂₅
	14.6	19.799 ^s ₃₄	69.74 ["] ₄₄	47.764 ^s ₂₅	61.54 ["] ₆₈	11.500 ^s ₄	72.02 ["] ₂₀₆	52.046 ^s ₂₆	23.41 ["] ₃₁
	24.6	19.833 ^s ₇₆	69.30 ["] ₄₇	47.789 ^s ₆₁	62.22 ["] ₆₉	11.496 ^s ₆₉	69.96 ["] ₂₁₉	52.072 ^s ₆₇	23.10 ["] ₃₅
Июль	4.5	19.909 ^s ₁₀₈	68.83 ["] ₄₅	47.850 ^s ₉₂	62.91 ["] ₆₉	11.565 ^s ₁₃₃	67.77 ["] ₂₂₇	52.139 ^s ₁₀₃	22.75 ["] ₂₉
	14.5	20.017 ^s ₁₄₃	68.38 ["] ₆₂	47.942 ^s ₁₂₃	63.60 ["] ₆₈	11.698 ^s ₁₉₆	65.50 ["] ₂₃₁	52.242 ^s ₁₂₅	22.46 ["] ₅₁
	24.5	20.160 ^s ₁₈₁	67.76 ["] ₆₂	48.065 ^s ₁₅₄	64.28 ["] ₆₁	11.894 ^s ₂₅₉	63.19 ["] ₂₂₉	52.367 ^s ₁₆₉	21.95 ["] ₅₁
Авг.	3.5	20.341 ^s ₂₀₈	67.14 ["] ₆₃	48.219 ^s ₁₈₀	64.89 ["] ₅₁	12.153 ^s ₃₁₁	60.90 ["] ₂₂₃	52.536 ^s ₁₉₆	21.44 ["] ₅₃
	13.4	20.549 ^s ₂₃₅	66.51 ["] ₆₈	48.399 ^s ₂₀₅	65.40 ["] ₃₇	12.464 ^s ₃₆₃	58.67 ["] ₂₁₆	52.732 ^s ₂₂₃	20.91 ["] ₆₀
	23.4	20.784 ^s ₂₆₁	65.83 ["] ₇₃	48.604 ^s ₂₂₈	65.77 ["] ₁₈	12.827 ^s ₄₁₀	56.51 ["] ₂₀₁	52.955 ^s ₂₄₉	20.31 ["] ₆₈
	2.4	21.045 ^s ₂₈₁	65.10 ["] ₇₇	48.832 ^s ₂₄₇	65.95 ["] ₂	13.237 ^s ₄₄₇	54.50 ["] ₁₈₄	53.204 ^s ₂₇₀	19.63 ["] ₇₄
	12.3	21.326 ^s ₃₀₃	64.33 ["] ₈₄	49.079 ^s ₂₆₇	65.93 ["] ₂₅	13.684 ^s ₄₈₆	52.66 ["] ₁₆₆	53.474 ^s ₂₉₁	18.89 ["] ₈₂
	22.3	21.629 ^s ₃₁₉	63.49 ["] ₈₈	49.346 ^s ₂₈₂	65.68 ["] ₅₁	14.170 ^s ₅₁₅	51.00 ["] ₁₄₂	53.765 ^s ₃₀₉	18.07 ["] ₉₀
Окт.	2.3	21.948 ^s ₃₃₁	62.61 ["] ₉₂	49.628 ^s ₂₉₄	65.17 ["] ₇₆	14.685 ^s ₅₃₆	49.58 ["] ₁₁₇	54.074 ^s ₃₂₃	17.17 ["] ₉₆
	12.3	22.279 ^s ₃₄₄	61.69 ["] ₉₄	49.922 ^s ₃₀₆	64.41 ["] ₁₀₀	15.221 ^s ₅₅₆	48.41 ["] ₈₈	54.397 ^s ₃₃₆	16.21 ["] ₁₀₂
	22.2	22.623 ^s ₃₄₈	60.75 ["] ₉₃	50.228 ^s ₃₀₉	63.41 ["] ₁₂₃	15.777 ^s ₅₆₀	47.53 ["] ₅₄	54.733 ^s ₃₄₂	15.19 ["] ₁₀₂
	1.2	22.971 ^s ₃₄₈	59.82 ["] ₉₀	50.537 ^s ₃₀₉	62.18 ["] ₁₄₀	16.337 ^s ₅₅₇	46.99 ["] ₂₃	55.075 ^s ₃₄₃	14.17 ["] ₁₀₂
	11.2	23.319 ^s ₃₄₁	58.92 ["] ₈₂	50.846 ^s ₃₀₃	60.78 ["] ₁₅₅	16.894 ^s ₅₄₄	46.76 ["] ₁₅	55.418 ^s ₃₃₉	13.15 ["] ₉₇
	21.2	23.660 ^s ₃₂₄	58.10 ["] ₇₁	51.149 ^s ₂₈₆	59.23 ["] ₁₆₃	17.438 ^s ₅₁₄	46.91 ["] ₅₂	55.757 ^s ₃₂₂	12.18 ["] ₈₇
Дек.	1.1	23.984 ^s ₃₀₁	57.39 ["] ₅₇	51.435 ^s ₂₆₅	57.60 ["] ₁₆₅	17.952 ^s ₄₇₄	47.43 ["] ₈₇	56.079 ^s ₃₀₁	11.31 ["] ₇₅
	11.1	24.285 ^s ₂₆₇	56.82 ["] ₄₀	51.700 ^s ₂₃₅	55.95 ["] ₁₆₃	18.426 ^s ₄₁₈	48.30 ["] ₁₂₂	56.380 ^s ₂₇₀	10.56 ["] ₆₀
	21.1	24.552 ^s ₂₂₅	56.42 ["] ₂₂	51.935 ^s ₁₉₅	54.32 ["] ₁₅₃	18.844 ^s ₃₄₆	49.52 ["] ₁₅₄	56.650 ^s ₂₂₈	09.96 ["] ₄₀
	31.0	24.777 ^s ₁₇₇	56.20 ["] ₄	52.130 ^s ₁₅₃	52.79 ["] ₁₄₁	19.190 ^s ₂₆₉	51.06 ["] ₁₇₇	56.878 ^s ₁₈₂	09.56 ["] ₂₃
	41.0	24.954 ^s ₁₂₂	56.16 ["] ₁₄	52.283 ^s ₁₀₃	51.38 ["] ₁₂₅	19.459 ^s ₁₇₈	52.83 ["] ₁₉₈	57.060 ^s ₁₂₉	09.33 ["] ₄
Средн. место J1990.5		20.270	62.76	48.259	58.27	12.406	60.32	52.480	16.81
Sec δ , tg δ		1.122	+0.508	1.004	+0.092	1.927	+1.647	1.098	+0.454
a, a'		+0.184	-0.404	+0.159	-0.418	+0.252	-0.431	+0.180	-0.438
b, b'		-0.014	-0.915	-0.003	-0.908	-0.047	-0.902	-0.013	-0.899

¹ Двойная. Эфемериды дает положение более яркой звезды.

² Для звезд 212) и 213) янв. 15.9.

ВИДИМЫЕ МЕСТА ЗВЕЗД 1990
 Верхняя кульминация в Гриниче

Дата	216) β Gem		217) ξ Pup		218) 26 Lyn		219) Grb 1385	
	1 ^m 21 I-17 K0		3 ^m 47 I-18 G0p		5 ^m 69 I-19 K0		5 ^m 79 I-21 F2	
	h ^m 7 44	+28 02'	h ^m 7 48	-24 49'	h ^m 7 54	+47 35'	h ^m 8 00	+59 04'
	^s	"	^s	"	^s	"	^s	"
Янв. —3.9	44.647 ²⁰⁷	62.96 ⁶	54.272 ¹⁶⁵	57.15 ²⁹⁹	02.184 ²⁶⁷	25.34 ¹⁰⁵	34.584 ³³⁵	26.49 ¹⁶¹
6.0	44.854 ¹⁵⁴	62.90 ¹³	54.437 ¹¹⁴	60.14 ²⁹⁰	02.451 ²⁰¹	26.39 ¹²⁷	34.919 ²⁵⁰	28.10 ¹⁸⁵
16.0	45.008 ⁹⁹	63.03 ³⁰	54.551 ⁶²	63.04 ²⁷⁶	02.652 ¹³¹	27.66 ¹⁴⁵	35.169 ¹⁶⁰	29.95 ²⁰⁵
25.9	45.107 ³⁹	63.33 ⁴⁵	54.613 ⁶	65.80 ²⁵⁵	02.783 ⁵³	29.11 ¹⁵⁶	35.329 ⁶²	32.00 ²¹³
Февр. 4.9	45.146 ¹⁶	63.78 ⁵³	54.619 ⁴³	68.35 ²²⁶	02.836 ¹⁷	30.67 ¹⁵⁷	35.391 ²⁹	34.13 ²¹²
14.9	45.130 ⁶⁷	64.31 ⁶⁰	54.576 ⁹⁰	70.61 ¹⁹⁷	02.819 ⁸³	32.24 ¹⁵⁴	35.362 ¹¹⁵	36.25 ²⁰⁴
24.9	45.063 ¹¹²	64.91 ⁶⁰	54.486 ¹³⁰	72.58 ¹⁶¹	02.736 ¹⁴⁵	33.78 ¹⁴²	35.247 ¹⁹⁵	38.29 ¹⁸⁴
Март 6.9	44.951 ¹⁴³	65.51 ⁵⁶	54.356 ¹⁵⁸	74.19 ¹²⁵	02.591 ¹⁸⁷	35.20 ¹²¹	35.052 ²⁵⁴	40.13 ¹⁵⁶
16.8	44.808 ¹⁶⁸	66.07 ⁵⁰	54.198 ¹⁸⁰	75.44 ⁹⁰	02.404 ²²³	36.41 ⁹⁸	34.798 ³⁰¹	41.69 ¹²⁴
26.8	44.640 ¹⁸⁰	66.57 ³⁸	54.018 ¹⁹¹	76.34 ⁵⁰	02.181 ²⁴²	37.39 ⁶⁹	34.497 ³²⁹	42.93 ⁸⁵
Апр. 5.8	44.460 ¹⁷⁹	66.95 ²⁶	53.827 ¹⁹¹	76.84 ¹⁴	01.939 ²⁴³	38.08 ³⁶	34.168 ³³⁶	43.78 ⁴³
15.8	44.281 ¹⁶⁹	67.21 ¹⁴	53.636 ¹⁸⁵	76.98 ²²	01.696 ²³⁷	38.44 ⁵	33.832 ³³⁰	44.21 ¹
25.7	44.112 ¹⁵⁰	67.35 ¹	53.451 ¹⁶⁸	76.76 ⁶⁰	01.459 ²¹⁵	38.49 ²⁸	33.502 ³⁰⁶	44.22 ⁴²
Май 5.7	43.962 ¹²²	67.34 ¹³	53.283 ¹⁴⁵	76.16 ⁹¹	01.244 ¹⁸¹	38.21 ⁵⁹	33.196 ²⁶⁶	43.80 ⁸¹
15.7	43.840 ⁹⁰	67.21 ²⁴	53.138 ¹¹⁹	75.25 ¹²³	01.063 ¹⁴⁴	37.62 ⁸⁶	32.930 ²²¹	42.99 ¹¹⁸
25.7	43.750 ⁵³	66.97 ³⁵	53.019 ⁸⁶	74.02 ¹⁵³	00.919 ⁹⁷	36.76 ¹¹²	32.709 ¹⁶¹	41.81 ¹⁵²
Июнь 4.6	43.697 ¹³	66.62 ⁴⁴	52.933 ⁵²	72.49 ¹⁷⁴	00.822 ⁴⁸	35.64 ¹³²	32.548 ⁹⁹	40.29 ¹⁷⁷
14.6	43.684 ²⁴	66.18 ⁴⁹	52.881 ¹⁹	70.75 ¹⁹⁷	00.774 ¹	34.32 ¹⁴⁹	32.449 ³⁵	38.52 ²⁰¹
24.6	43.708 ⁶⁶	65.69 ⁵⁶	52.862 ²⁰	68.78 ²¹⁰	00.775 ⁵⁵	32.83 ¹⁶³	32.413 ³⁶	36.51 ²¹⁹
Июль 4.5	43.774 ¹⁰¹	65.13 ⁵⁶	52.882 ⁵⁵	66.68 ²¹⁷	00.830 ¹⁰³	31.20 ¹⁷¹	32.448 ⁹⁸	34.32 ²²⁹
14.5	43.875 ¹³³	64.57 ⁶⁸	52.937 ⁸⁹	64.51 ²²⁰	00.933 ¹⁴⁹	29.49 ¹⁷⁹	32.546 ¹⁶²	32.03 ²³⁸
24.5	44.008 ¹⁷²	63.89 ⁷³	53.026 ¹²⁵	62.31 ²¹³	01.082 ¹⁹⁸	27.70 ¹⁸²	32.708 ²²⁶	29.65 ²⁴⁰
Авг. 3.5	44.180 ²⁰⁰	63.16 ⁷⁴	53.151 ¹⁵⁶	60.18 ¹⁹⁹	01.280 ²³⁶	25.88 ¹⁸⁰	32.934 ²⁸⁰	27.25 ²³⁷
13.4	44.380 ²²⁹	62.42 ⁷⁹	53.307 ¹⁸⁷	58.19 ¹⁸⁰	01.516 ²⁷⁷	24.08 ¹⁷⁹	33.214 ³³⁴	24.88 ²³²
23.4	44.609 ²⁵⁵	61.63 ⁸⁴	53.494 ²¹⁷	56.39 ¹⁴⁷	01.793 ³¹³	22.29 ¹⁷³	33.548 ³⁸⁵	22.56 ²²⁰
Сент. 2.4	44.864 ²⁷⁶	60.79 ⁸⁸	53.711 ²⁴²	54.92 ¹¹³	02.106 ³⁴²	20.56 ¹⁶⁵	33.933 ⁴²⁶	20.36 ²⁰⁶
12.4	45.140 ²⁹⁹	59.91 ⁹⁴	53.953 ²⁶⁷	53.79 ⁷¹	02.448 ³⁷⁴	18.91 ¹⁵⁶	34.359 ⁴⁶⁹	18.30 ¹⁸⁹
22.3	45.439 ³¹⁷	58.97 ⁹⁸	54.220 ²⁸⁸	53.08 ²²	02.822 ³⁹⁹	17.35 ¹⁴²	34.828 ⁵⁰²	16.41 ¹⁶⁶
Окт. 2.3	45.756 ³³¹	57.99 ¹⁰⁰	54.508 ³⁰⁴	52.86 ²⁶	03.221 ⁴¹⁸	15.93 ¹²⁷	35.330 ⁵²⁹	14.75 ¹⁴²
12.3	46.087 ³⁴⁵	56.99 ¹⁰²	54.812 ³¹⁷	53.12 ⁷⁷	03.639 ⁴³⁷	14.66 ¹⁰⁹	35.859 ⁵⁵³	13.33 ¹¹⁵
22.2	46.432 ³⁵⁰	55.97 ⁹⁹	55.129 ³²²	53.89 ¹²⁸	04.076 ⁴⁴⁵	13.57 ⁸⁷	36.412 ⁵⁶³	12.18 ⁸⁰
Нояб. 1.2	46.782 ³⁵¹	54.98 ⁹⁵	55.451 ³²¹	55.17 ¹⁷²	04.521 ⁴⁴⁶	12.70 ⁶²	36.975 ⁵⁶⁶	11.38 ⁴⁸
11.2	47.133 ³⁴⁷	54.03 ⁸⁶	55.772 ³¹⁴	56.89 ²¹⁶	04.967 ⁴⁴²	12.08 ³⁵	37.541 ⁵⁵⁹	10.90 ⁹
21.2	47.480 ³³¹	53.17 ⁷²	56.086 ²⁹⁵	59.05 ²⁴⁹	05.409 ⁴²²	11.73 ⁴	38.100 ⁵³³	10.81 ³⁰
Дек. 1.1	47.811 ³⁰⁸	52.45 ⁵⁸	56.381 ²⁷⁰	61.54 ²⁷⁴	05.831 ³⁹⁴	11.69 ²⁵	38.633 ⁴⁹⁷	11.11 ⁶⁸
11.1	48.119 ²⁷⁶	51.87 ⁴⁰	56.651 ²³⁶	64.28 ²⁹³	06.225 ³⁵⁵	11.94 ⁵⁷	39.130 ⁴⁴⁷	11.79 ¹⁰⁶
21.1	48.395 ²³³	51.47 ¹⁹	56.887 ¹⁹²	67.21 ²⁹⁹	06.580 ³⁰⁰	12.51 ⁸⁷	39.577 ³⁷⁷	12.85 ¹⁴¹
31.1	48.628 ¹⁸⁶	51.28 ¹	57.079 ¹⁴⁷	70.20 ²⁹⁷	06.880 ²⁴¹	13.38 ¹¹²	39.954 ³⁰²	14.26 ¹⁶⁹
41.0	48.814 ¹³¹	51.27 ¹⁹	57.226 ⁹³	73.17 ²⁸⁸	07.121 ¹⁷¹	14.50 ¹³⁴	40.256 ²¹²	15.95 ¹⁹⁴
Средн. место J1990.5	44.122	58.94	53.671	68.04	01.327	23.69	33.225	26.13
Sec δ , tg δ	1.133	+0.533	1.102	-0.463	1.483	+1.095	1.946	+1.669
a, a'	+0.185	-0.441	+0.126	-0.457	+0.217	-0.477	+0.249	-0.502
b, b'	-0.016	-0.897	+0.014	-0.889	-0.035	-0.879	-0.056	-0.865

Дата	222) β Спс		223) β Луп		617) ϵ Саг		224) Br 1197 Hyа		
	$3^m 76$	1-24 K2	$4^m 43$	1-26 K5	$1^m 74$	1-26 K0 B	$3^m 95$	1-27 A0	
	h m	$+9^\circ 12'$	h m	$+43^\circ 12'$	h m	$-59^\circ 28'$	h m	$-3^\circ 52'$	
	8 15	" "	8 22	" "	8 22	" "	8 25	" "	
Янв.	-3.9	60.376 ^s ₂₁₄	61.13 ^s ₁₃₃	11.934 ^s ₂₈₅	69.88 ^s ₆₂	20.757 ^s ₂₂₆	26.55 ^s ₃₈₀	11.467 ^s ₂₁₀	21.58 ^s ₂₀₇
	6.1	60.590 ^s ₁₆₇	59.80 ^s ₁₁₅	12.219 ^s ₂₂₅	70.50 ^s ₈₈	20.983 ^s ₁₄₂	30.35 ^s ₃₈₆	11.677 ^s ₁₆₆	23.65 ^s ₁₉₅
	16.0	60.757 ^s ₁₁₉	58.65 ^s ₉₈	12.444 ^s ₁₆₂	71.38 ^s ₁₁₂	21.125 ^s ₅₇	34.21 ^s ₃₈₇	11.843 ^s ₁₁₇	25.60 ^s ₁₇₈
	26.0 ¹	60.876 ^s ₆₄	57.67 ^s ₇₆	12.606 ^s ₈₉	72.50 ^s ₁₃₀	21.182 ^s ₃₃	38.08 ^s ₃₇₆	11.960 ^s ₆₅	27.38 ^s ₁₅₇
Февр.	4.9	60.940 ^s ₁₅	56.91 ^s ₅₆	12.695 ^s ₂₃	73.80 ^s ₁₄₀	21.149 ^s ₁₁₄	41.84 ^s ₃₅₂	12.025 ^s ₁₅	28.95 ^s ₁₃₄
	14.9	60.955 ^s ₃₃	56.35 ^s ₃₈	12.718 ^s ₄₂	75.20 ^s ₁₄₃	21.035 ^s ₁₈₉	45.36 ^s ₃₂₅	12.040 ^s ₃₁	30.29 ^s ₁₁₂
	24.9	60.922 ^s ₇₆	55.97 ^s ₂₁	12.676 ^s ₁₀₁	76.63 ^s ₁₄₀	20.846 ^s ₂₅₈	48.61 ^s ₂₈₉	12.009 ^s ₇₃	31.41 ^s ₈₆
Март	6.9	60.846 ^s ₁₀₉	55.76 ^s ₇	12.575 ^s ₁₄₈	78.03 ^s ₁₂₇	20.588 ^s ₃₀₉	51.50 ^s ₂₄₆	11.936 ^s ₁₀₆	32.27 ^s ₆₄
	16.9	60.737 ^s ₁₃₃	55.69 ^s ₄	12.427 ^s ₁₈₄	79.30 ^s ₁₁₀	20.279 ^s ₃₅₂	53.96 ^s ₂₀₃	11.830 ^s ₁₃₁	32.91 ^s ₄₂
	26.8	60.604 ^s ₁₄₉	55.73 ^s ₁₅	12.243 ^s ₂₀₈	80.40 ^s ₈₇	19.927 ^s ₃₈₂	55.99 ^s ₁₅₂	11.699 ^s ₁₄₇	33.33 ^s ₁₉
Апр.	5.8	60.455 ^s ₁₅₂	55.88 ^s ₂₁	12.035 ^s ₂₁₇	81.27 ^s ₆₁	19.545 ^s ₃₉₄	57.51 ^s ₁₀₂	11.552 ^s ₁₅₁	33.52 ^s ₀
	15.8	60.303 ^s ₁₅₀	56.09 ^s ₂₇	11.818 ^s ₂₁₅	81.88 ^s ₃₃	19.151 ^s ₃₉₉	58.53 ^s ₅₀	11.401 ^s ₁₅₀	33.52 ^s ₁₈
	25.8	60.153 ^s ₁₃₇	56.36 ^s ₃₃	11.603 ^s ₂₀₂	82.21 ^s ₂	18.752 ^s ₃₈₉	59.03 ^s ₅	11.251 ^s ₁₄₀	33.34 ^s ₃₇
Май	5.7	60.016 ^s ₁₁₇	56.69 ^s ₃₆	11.401 ^s ₁₇₇	82.23 ^s ₂₆	18.363 ^s ₃₆₆	58.98 ^s ₅₄	11.111 ^s ₁₂₂	32.97 ^s ₅₂
	15.7	59.899 ^s ₉₄	57.05 ^s ₃₉	11.224 ^s ₁₄₇	81.97 ^s ₅₂	17.997 ^s ₃₃₉	58.44 ^s ₁₀₄	10.989 ^s ₁₀₂	32.45 ^s ₆₇
Июнь	25.7	59.805 ^s ₆₅	57.44 ^s ₄₂	11.077 ^s ₁₀₉	81.45 ^s ₈₀	17.658 ^s ₂₉₈	57.40 ^s ₁₅₃	10.887 ^s ₇₅	31.78 ^s ₈₁
	4.6	59.740 ^s ₃₅	57.86 ^s ₄₃	10.968 ^s ₆₇	80.65 ^s ₁₀₁	17.360 ^s ₂₅₁	55.87 ^s ₁₉₂	10.812 ^s ₄₇	30.97 ^s ₉₁
	14.6	59.705 ^s ₄	58.29 ^s ₄₅	10.901 ^s ₂₅	79.64 ^s ₁₂₀	17.109 ^s ₂₀₂	53.95 ^s ₂₃₂	10.765 ^s ₁₈	30.06 ^s ₁₀₁
	24.6	59.701 ^s ₃₀	58.74 ^s ₄₄	10.876 ^s ₂₁	78.44 ^s ₁₃₇	16.907 ^s ₁₄₀	51.63 ^s ₂₆₃	10.747 ^s ₁₄	29.05 ^s ₁₀₆
Июль	4.6	59.731 ^s ₆₀	59.18 ^s ₄₀	10.897 ^s ₆₄	77.07 ^s ₁₅₀	16.767 ^s ₇₉	49.00 ^s ₂₈₅	10.761 ^s ₄₃	27.99 ^s ₁₀₉
Авг.	14.5	59.791 ^s ₈₉	59.58 ^s ₃₆	10.961 ^s ₁₀₅	75.57 ^s ₁₆₁	16.688 ^s ₁₆	46.15 ^s ₃₀₁	10.804 ^s ₇₃	26.90 ^s ₁₀₉
	24.5	59.880 ^s ₁₁₉	59.94 ^s ₃₂	11.066 ^s ₁₄₉	73.96 ^s ₁₆₉	16.672 ^s ₅₅	43.14 ^s ₃₀₆	10.877 ^s ₁₀₃	25.81 ^s ₁₀₂
	3.5	59.999 ^s ₁₄₇	60.26 ^s ₂₂	11.215 ^s ₁₈₇	72.27 ^s ₁₇₄	16.727 ^s ₁₁₉	40.08 ^s ₂₉₉	10.980 ^s ₁₂₉	24.79 ^s ₉₂
	13.5	60.146 ^s ₁₇₅	60.48 ^s ₉	11.402 ^s ₂₈₄	70.53 ^s ₁₇₈	16.846 ^s ₁₈₈	37.09 ^s ₂₈₇	11.109 ^s ₁₅₈	23.87 ^s ₇₈
	23.4	60.321 ^s ₂₀₂	60.57 ^s ₈	11.626 ^s ₂₆₀	68.75 ^s ₁₇₇	17.034 ^s ₂₅₅	34.22 ^s ₂₅₈	11.267 ^s ₁₈₆	23.09 ^s ₅₆
Сент.	2.4	60.523 ^s ₂₂₃	60.49 ^s ₂₆	11.886 ^s ₂₉₁	66.98 ^s ₁₇₆	17.289 ^s ₃₁₄	31.64 ^s ₂₂₂	11.453 ^s ₂₀₉	22.53 ^s ₃₂
	12.4	60.746 ^s ₂₄₉	60.23 ^s ₄₇	12.177 ^s ₃₂₄	65.22 ^s ₁₇₂	17.603 ^s ₃₇₂	29.42 ^s ₁₇₉	11.662 ^s ₂₃₆	22.21 ^s ₃
	22.3	60.995 ^s ₂₆₉	59.76 ^s ₆₉	12.501 ^s ₃₅₂	63.50 ^s ₁₆₄	17.975 ^s ₄₂₁	27.63 ^s ₁₂₂	11.898 ^s ₂₅₈	22.18 ^s ₂₉
Окт.	2.3	61.264 ^s ₂₈₇	59.07 ^s ₈₉	12.853 ^s ₃₇₄	61.86 ^s ₁₅₅	18.396 ^s ₄₅₇	26.41 ^s ₆₃	12.156 ^s ₂₇₇	22.47 ^s ₆₁
	12.3	61.551 ^s ₃₀₅	58.18 ^s ₁₁₁	13.227 ^s ₃₉₈	60.31 ^s ₁₄₃	18.853 ^s ₄₈₉	25.78 ^s ₀	12.433 ^s ₂₉₆	23.08 ^s ₉₅
Нояб.	22.3	61.856 ^s ₃₁₆	57.07 ^s ₁₃₀	13.625 ^s ₄₁₂	58.88 ^s ₁₂₄	19.342 ^s ₅₀₁	25.78 ^s ₇₀	12.729 ^s ₃₀₈	24.03 ^s ₁₂₇
	1.2	62.172 ^s ₃₂₁	55.77 ^s ₁₄₄	14.037 ^s ₄₂₀	57.64 ^s ₁₀₄	19.843 ^s ₅₀₁	26.48 ^s ₁₃₂	13.037 ^s ₃₁₆	25.30 ^s ₁₅₅
	11.2	62.493 ^s ₃₂₃	54.33 ^s ₁₅₆	14.457 ^s ₄₂₃	56.60 ^s ₈₁	20.344 ^s ₄₈₉	27.80 ^s ₁₉₆	13.353 ^s ₃₁₇	26.85 ^s ₁₈₁
	21.2	62.816 ^s ₃₁₃	52.77 ^s ₁₆₀	14.880 ^s ₄₁₀	55.79 ^s ₅₁	20.833 ^s ₄₅₄	29.76 ^s ₂₅₃	13.670 ^s ₃₀₈	28.66 ^s ₁₉₈
Дек.	1.2	63.129 ^s ₂₉₇	51.17 ^s ₁₆₀	15.290 ^s ₃₉₀	55.28 ^s ₂₃	21.287 ^s ₄₀₉	32.29 ^s ₂₉₉	13.978 ^s ₂₉₂	30.64 ^s ₂₀₉
	11.1	63.426 ^s ₂₇₂	49.57 ^s ₁₅₄	15.680 ^s ₃₅₉	55.05 ^s ₁₀	21.696 ^s ₃₅₁	35.28 ^s ₃₄₁	14.270 ^s ₂₆₈	32.73 ^s ₂₁₆
	21.1	63.698 ^s ₂₃₆	48.03 ^s ₁₄₃	16.039 ^s ₃₁₃	55.15 ^s ₄₂	22.047 ^s ₂₇₅	38.69 ^s ₃₆₇	14.538 ^s ₂₃₃	34.89 ^s ₂₁₂
	31.1	63.934 ^s ₁₉₅	46.60 ^s ₁₂₈	16.352 ^s ₂₆₁	55.57 ^s ₇₀	22.322 ^s ₁₉₈	42.36 ^s ₃₈₃	14.771 ^s ₁₉₃	37.01 ^s ₂₀₃
	41.0	64.129 ^s ₁₄₈	45.32 ^s ₁₁₀	16.613 ^s ₁₉₉	56.27 ^s ₉₈	22.520 ^s ₁₁₁	46.19 ^s ₃₉₁	14.964 ^s ₁₄₆	39.04 ^s ₁₉₁
Средн. место J1990.5		60.042	55.02	11.239	69.14	19.172	43.79	11.154	30.06
Sec δ , tg δ		1.013	+0.162	1.372	+0.940	1.969	-1.696	1.002	-0.068
a, a'		+0.162	-0.559	+0.204	-0.581	+0.061	-0.582	+0.150	-0.592
b, b'		-0.006	-0.829	-0.036	-0.814	+0.066	-0.813	+0.003	-0.806

¹ Для звезды 222) янв. 25.9.

Верхняя кульминация в Гриниче

Дата	238) Pi 8 ^h 245 Lyn 4 ^m 71 II-6 G5		621) λ Vel 2 ^m 22 II-7 K5		239) σ ² U Ma 4 ^m 87 II-7 F8		240) τ U Ma 4 ^m 74 II-7 F5 A5	
	h m 9 05	+38 29	h m 9 07	—43 23	h m 9 09	+67 10	h m 9 10	+63 32
Янв. —3.9	56.121 ^s ₃₁₁	25.66 ⁴	39.276 ^s ₂₆₃	20.84 ³⁴⁷	35.525 ^s ₅₄₁	20.89 ¹³⁹	10.022 ^s ₄₈₇	66.37 ¹²²
6.1	56.432 ₂₆₂	25.70 ³⁷	39.539 ₂₀₇	24.31 ³⁵⁶	36.066 ₄₄₇	22.28 ¹⁷⁸	10.509 ₄₀₄	67.59 ¹⁶²
16.1	56.694 ₂₀₅	26.07 ⁶⁷	39.746 ₁₄₇	27.87 ³⁶⁰	36.513 ₃₄₂	24.06 ²¹⁴	10.913 ₃₁₂	69.21 ¹⁹⁷
26.0	56.899 ₁₄₀	26.74 ⁹⁴	39.893 ₈₁	31.47 ³⁵²	36.855 ₂₁₉	26.20 ²³⁹	11.225 ₂₀₅	71.18 ²²⁴
Февр. 5.0	57.039 ₇₆	27.68 ¹¹³	39.974 ₂₀	34.99 ³³⁴	37.074 ₁₀₀	28.59 ²⁵²	11.430 ₉₉	73.42 ²³⁷
14.9	57.115 ₁₅	28.81 ¹²⁸	39.994 ₄₀	38.33 ³¹³	37.174 ₂₀	31.11 ²⁵⁷	11.529 ₆	75.79 ²⁴⁴
24.9	57.130 ₄₆	30.09 ¹³⁴	39.954 ₉₅	41.46 ²⁸¹	37.154 ₁₃₇	33.68 ²⁴⁹	11.523 ₁₁₀	78.23 ²³⁹
Март 6.9	57.084 ₉₄	31.43 ¹³²	39.859 ₁₃₉	44.27 ²⁴⁶	37.017 ₂₃₄	36.17 ²²⁹	11.413 ₁₉₄	80.62 ²²¹
16.9	56.990 ₁₃₅	32.75 ¹²⁵	39.720 ₁₇₇	46.73 ²⁰⁹	36.783 ₃₁₉	38.46 ²⁰³	11.219 ₂₆₈	82.83 ¹⁹⁷
26.9	56.855 ₁₆₆	34.00 ¹¹¹	39.543 ₂₀₅	48.82 ¹⁶⁴	36.464 ₃₈₆	40.49 ¹⁶⁵	10.951 ₃₂₇	84.80 ¹⁶²
Апр. 5.8	56.689 ₁₈₁	35.11 ⁹¹	39.338 ₂₂₁	50.46 ¹²¹	36.078 ₄₂₆	42.14 ¹²³	10.624 ₃₆₁	86.42 ¹²³
15.8	56.508 ₁₉₀	36.02 ⁶⁹	39.117 ₂₃₁	51.67 ⁷⁷	35.652 ₄₅₀	43.37 ⁷⁸	10.263 ₃₈₂	87.65 ⁸⁰
25.8	56.318 ₁₈₆	36.71 ⁴³	38.886 ₂₃₁	52.44 ²⁸	35.202 ₄₅₂	44.15 ²⁶	09.881 ₃₈₃	88.45 ³²
Май 5.8	56.132 ₁₇₂	37.14 ¹⁷	38.655 ₂₂₁	52.72 ¹⁶	34.750 ₄₃₁	44.41 ²²	09.498 ₃₆₄	88.77 ¹⁵
15.7	55.960 ₁₅₃	37.31 ⁹	38.434 ₂₀₈	52.56 ⁶⁰	34.319 ₄₀₁	44.19 ⁶⁹	09.134 ₃₃₇	88.62 ⁶⁰
Июнь 25.7	55.807 ₁₂₅	37.22 ³⁶	38.226 ₁₈₆	51.96 ¹⁰⁵	33.918 ₃₄₉	43.50 ¹¹⁷	08.797 ₂₉₂	88.02 ¹⁰⁵
4.7	55.682 ₉₃	36.86 ⁵⁹	38.040 ₁₅₉	50.91 ¹⁴²	33.569 ₂₈₉	42.33 ¹⁵⁸	08.505 ₂₃₉	86.97 ¹⁴⁵
14.7	55.589 ₆₂	36.27 ⁸²	37.881 ₁₃₁	49.49 ¹⁸⁰	33.280 ₂₂₃	40.75 ¹⁹⁵	08.266 ₁₈₃	85.52 ¹⁸¹
24.6	55.527 ₂₃	35.45 ¹⁰⁴	37.750 ₉₅	47.69 ²¹⁰	33.057 ₁₄₅	38.80 ²²⁸	08.083 ₁₁₅	83.71 ²¹³
Июль 4.6	55.504 ₁₃	34.41 ¹²⁰	37.655 ₅₉	45.59 ²³³	32.912 ₆₈	36.52 ²⁵⁴	07.968 ₄₉	81.58 ²³⁸
14.6	55.517 ₄₈	33.21 ¹³⁷	37.596 ₂₂	43.26 ²⁵²	32.844 ₁₀	33.98 ²⁷⁶	07.919 ₁₈	79.20 ²⁶¹
24.5	55.565 ₈₇	31.84 ¹⁵¹	37.574 ₂₃	40.74 ²⁶⁰	32.854 ₉₆	31.22 ²⁹¹	07.937 ₉₁	76.59 ²⁷⁶
Авг. 3.5	55.652 ₁₂₁	30.33 ¹⁶³	37.597 ₆₄	38.14 ²⁶⁰	32.950 ₁₇₁	28.31 ²⁹⁹	08.028 ₁₅₇	73.83 ²⁸⁵
13.5	55.773 ₁₅₆	28.70 ¹⁷⁴	37.661 ₁₀₈	35.54 ²⁵³	33.121 ₂₄₉	25.32 ³⁰⁴	08.185 ₂₂₄	70.98 ²⁹¹
23.5	55.929 ₁₉₄	26.96 ¹⁸²	37.769 ₁₅₅	33.01 ²³²	33.370 ₃₂₈	22.28 ³⁰²	08.409 ₂₉₁	68.07 ²⁹¹
Сент. 2.4	56.123 ₂₂₅	25.14 ¹⁸⁶	37.924 ₁₉₇	30.69 ²⁰⁴	33.698 ₃₉₆	19.26 ²⁹³	08.700 ₃₅₀	65.16 ²⁸⁴
12.4	56.348 ₂₆₀	23.28 ¹⁹²	38.121 ₂₄₂	28.65 ¹⁶⁸	34.094 ₄₆₆	16.33 ²⁸³	09.050 ₄₁₂	62.32 ²⁷⁵
22.4	56.608 ₂₉₃	21.36 ¹⁹¹	38.363 ₂₈₃	26.97 ¹²⁰	34.560 ₅₃₂	13.50 ²⁶¹	09.462 ₄₆₉	59.57 ²⁵⁷
Окт. 2.4	56.901 ₃₂₁	19.45 ¹⁸⁸	38.646 ₃₁₈	25.77 ⁷⁰	35.092 ₅₈₄	10.89 ²³⁸	09.931 ₅₁₆	57.00 ²³⁵
12.3	57.222 ₃₅₁	17.57 ¹⁸⁴	38.964 ₃₅₂	25.07 ¹²	35.676 ₆₄₀	08.51 ²⁰⁹	10.447 ₅₆₄	54.65 ²¹⁰
Нояб. 22.3	57.573 ₃₇₃	15.73 ¹⁷¹	39.316 ₃₇₅	24.95 ⁴⁹	36.316 ₆₇₇	06.42 ¹⁷²	11.011 ₆₀₀	52.55 ¹⁷⁵
1.3	57.946 ₃₈₉	14.02 ¹⁵⁷	39.691 ₃₈₉	25.44 ¹⁰⁷	36.993 ₇₀₄	04.70 ¹³⁴	11.611 ₆₂₃	50.80 ¹⁴⁰
11.2	58.335 ₄₀₂	12.45 ¹³⁸	40.080 ₃₉₅	26.51 ¹⁶⁶	37.697 ₇₂₁	03.36 ⁸⁹	12.234 ₆₄₁	49.40 ⁹⁷
21.2	58.737 ₄₀₀	11.07 ¹¹²	40.475 ₃₈₆	28.17 ²²⁰	38.418 ₇₁₅	02.47 ³⁹	12.875 ₆₃₆	48.43 ⁵⁰
Дек. 1.2	59.137 ₃₉₀	09.95 ⁸⁴	40.861 ₃₆₇	30.37 ²⁶⁵	39.133 ₆₉₂	02.08 ⁹	13.511 ₆₁₈	47.93 ⁵
11.2	59.527 ₃₇₀	09.11 ⁵²	41.228 ₃₃₈	33.02 ³⁰⁵	39.825 ₆₅₁	02.17 ⁶⁰	14.129 ₅₈₃	47.88 ⁴⁶
21.1	59.897 ₃₃₄	08.59 ¹⁷	41.566 ₂₉₂	36.07 ³³⁴	40.476 ₅₈₄	02.77 ¹¹⁰	14.712 ₅₂₃	48.34 ⁹⁴
31.1	60.231 ₂₉₂	08.42 ¹⁵	41.858 ₂₄₃	39.41 ³⁵⁰	41.060 ₅₀₄	03.87 ¹⁵³	15.235 ₄₅₄	49.28 ¹³⁶
41.1	60.523 ₂₃₈	08.57 ⁴⁸	42.101 ₁₈₅	42.91 ³⁶¹	41.564 ₄₀₄	05.40 ¹⁹³	15.689 ₃₆₇	50.64 ¹⁷⁷
Средн. место J1990.5	55.639	26.31	38.779	38.34	33.637	25.54	08.511	70.76
Sec δ, tg δ	1.278	+0.795	1.376	—0.945	2.578	+2.376	2.245	+2.010
a, a'	+0.190	—0.725	+0.110	—0.730	+0.260	—0.736	+0.244	—0.738
b, b'	—0.038	—0.689	+0.046	—0.683	—0.117	—0.677	—0.099	—0.675

Дата	622) β Car		715) 36 Lyn		241) θ Hya		242) 18 e U Ma	
	$1^m 80$ II-8 A0		$5^m 30$ II-8 B8		$3^m 84$ II-8 A0		$4^m 89$ II-9 A5	
	$9^h 13^m$	$-69^{\circ} 40'$	$9^h 13^m$	$+43^{\circ} 15'$	$9^h 13^m$	$+2^{\circ} 21'$	$9^h 15^m$	$+54^{\circ} 03'$
Янв. —3.9	^s 07.758 408	19.28 359	^s 11.653 337	24.98 23	^s 52.359 255	24.14 189	^s 31.509 399	38.18 75
6.1	08.166 295	22.87 379	11.990 283	25.21 58	52.614 215	22.25 173	31.908 335	38.93 113
16.1	08.461 180	26.66 395	12.273 225	25.79 91	52.829 169	20.52 156	32.243 265	40.06 148
26.0	08.641 55	30.61 398	12.498 156	26.70 120	52.998 118	18.96 132	32.508 181	41.54 178
Февр. 5.0	08.696 61	34.59 388	12.654 88	27.90 139	53.116 68	17.64 110	32.689 100	43.32 195
14.9	08.635 171	38.47 374	12.742 22	29.29 153	53.184 20	16.54 86	32.789 18	45.27 206
24.9	08.464 278	42.21 349	12.764 44	30.82 159	53.204 27	15.68 63	32.807 62	47.33 207
6.9	08.186 363	45.70 314	12.720 96	32.41 155	53.177 64	15.05 42	32.745 127	49.40 195
16.9	07.823 438	48.84 280	12.624 141	33.96 145	53.113 95	14.63 23	32.618 185	51.35 180
26.9	07.385 500	51.64 233	12.483 176	35.41 128	53.018 119	14.40 5	32.433 229	53.15 153
Апр. 5.8	06.885 539	53.97 186	12.307 196	36.69 104	52.899 129	14.35 8	32.204 256	54.68 121
15.8	06.346 570	55.83 138	12.111 206	37.73 79	52.770 137	14.43 21	31.948 271	55.89 87
25.8	05.776 581	57.21 82	11.905 205	38.52 48	52.633 133	14.64 33	31.677 271	56.76 45
Май 5.8	05.195 574	58.03 31	11.700 191	39.00 17	52.500 124	14.97 41	31.406 258	57.21 6
15.7	04.621 561	58.34 23	11.509 174	39.17 12	52.376 110	15.38 50	31.148 236	57.27 33
25.7	04.060 526	58.11 78	11.335 145	39.05 45	52.266 90	15.88 57	30.912 204	56.94 73
4.7	03.534 481	57.33 126	11.190 112	38.60 72	52.176 68	16.45 60	30.708 163	56.21 108
14.7	03.053 428	56.07 173	11.078 79	37.88 99	52.108 45	17.05 66	30.545 122	55.13 140
24.6	02.625 356	54.34 217	10.999 39	36.89 123	52.063 19	17.71 66	30.423 72	53.73 171
Июль 4.6	02.269 280	52.17 248	10.960 1	35.66 143	52.044 8	18.37 65	30.351 24	52.02 194
14.6	01.989 195	49.69 279	10.959 37	34.23 162	52.052 34	19.02 62	30.327 25	50.08 216
24.5	01.794 96	46.90 298	10.996 79	32.61 178	52.086 61	19.64 54	30.352 77	47.92 233
3.5	01.698 7	43.92 304	11.075 116	30.83 190	52.147 87	20.18 45	30.429 126	45.59 244
13.5	01.699 106	40.88 307	11.191 154	28.93 202	52.234 115	20.63 34	30.555 175	43.15 255
23.5	01.805 214	37.81 291	11.345 195	26.91 208	52.349 146	20.97 15	30.730 226	40.60 257
Сент. 2.4	02.019 312	34.90 268	11.540 229	24.83 212	52.495 172	21.12 7	30.956 269	38.03 256
12.4	02.331 414	32.22 236	11.769 268	22.71 215	52.667 201	21.05 30	31.225 317	35.47 254
22.4	02.745 505	29.86 189	12.037 303	20.56 212	52.868 229	20.75 58	31.542 361	32.93 242
Окт. 2.4	03.250 579	27.97 137	12.340 334	18.44 205	53.097 255	20.17 84	31.903 400	30.51 229
12.3	03.829 645	26.60 78	12.674 368	16.39 197	53.352 280	19.33 113	32.303 438	28.22 211
Нояб. 22.3	04.474 687	25.82 10	13.042 392	14.42 181	53.632 301	18.20 139	32.741 469	26.11 184
1.3	05.161 707	25.72 54	13.434 411	12.61 162	53.933 316	16.81 161	33.210 490	24.27 157
11.2	05.868 711	26.26 121	13.845 425	10.99 138	54.249 327	15.20 181	33.700 507	22.70 122
21.2	06.579 681	27.47 188	14.270 425	09.61 107	54.576 327	13.39 194	34.207 506	21.48 82
Дек. 1.2	07.260 633	29.35 242	14.695 416	08.54 76	54.903 319	11.45 201	34.713 494	20.66 42
11.2	07.893 565	31.77 296	15.111 395	07.78 39	55.222 303	09.44 202	35.207 471	20.24 3
21.1	08.458 471	34.73 336	15.506 360	07.39 1	55.525 274	07.42 196	35.678 476	20.27 47
31.1	08.929 371	38.09 366	15.866 315	07.38 35	55.799 239	05.46 184	36.104 324	20.74 88
41.1	09.300 256	41.75 389	16.181 259	07.73 72	56.038 197	03.62 168	36.478 306	21.62 128
Средн. место J1990.5	05.872	40.83	11.091	26.80	52.234	16.85	30.599	41.85
Sec δ , tg δ	2.879	-2.700	1.373	+0.941	1.001	+0.041	1.704	+1.379
a, a'	+0.033	-0.746	+0.195	-0.747	+0.155	-0.749	+0.214	-0.753
b, b'	+0.134	-0.666	-0.047	-0.665	-0.002	-0.663	-0.069	-0.658

Верхняя кульминация в Гриниче

Дата	623) ι Car		243) 38 Lyn		244) α Lyn		245) α Hya		
	2 ^m 25 II-9 F0		3 ^m 82 II-9 A2		3 ^m 30 II-10 K5		2 ^m 16 II-11 K2		
	h m	° ′	h m	° ′	h m	° ′	h m	° ′	
	9 16	—59 13	9 18	+36 50	9 20	+34 25	9 27	—8 36	
Янв. —3.9	51.100 ^s ₃₂₈	46.32 ^s ₃₅₉	15.730 ^s ₃₁₇	34.90 ^s ₁₄	29.063 ^s ₃₁₁	58.77 ^s ₂₈	07.302 ^s ₂₆₁	51.83 ^s ₂₃₉	
6.1	51.428 ₂₅₁	49.91 ₃₇₇	16.047 ₂₆₉	34.76 ₁₉	29.374 ₂₆₅	58.49 ₅	07.563 ₂₂₀	54.22 ₂₃₀	
16.1	51.679 ₁₇₁	53.68 ₃₈₉	16.316 ₂₁₅	34.95 ₅₁	29.639 ₂₁₃	58.54 ₃₆	07.783 ₁₇₆	56.52 ₂₁₈	
26.0	51.850 ₈₃	57.57 ₃₈₉	16.531 ₁₅₂	35.46 ₈₁	29.852 ₁₅₁	58.90 ₆₆	07.959 ₁₂₄	58.70 ₁₉₉	
Февр. 5.0	51.933 ₀	61.46 ₃₇₈	16.683 ₉₁	36.27 ₁₀₂	30.003 ₉₁	59.56 ₈₈	08.083 ₇₅	60.69 ₁₇₇	
	14.9	51.933 ₇₉	65.24 ₃₆₁	16.774 ₂₉	37.29 ₁₁₉	30.094 ₃₂	60.44 ₁₀₆	08.158 ₂₇	62.46 ₁₅₃
	24.9	51.854 ₁₅₄	68.85 ₃₃₃	16.803 ₃₁	38.48 ₁₂₉	30.126 ₂₇	61.50 ₁₁₈	08.185 ₂₀	63.99 ₁₂₆
Март 6.9	51.700 ₂₁₅	72.18 ₂₉₉	16.772 ₇₈	39.77 ₁₂₉	30.099 ₇₃	62.68 ₁₂₀	08.165 ₅₇	65.25 ₁₀₀	
16.9	51.485 ₂₆₇	75.17 ₂₆₂	16.694 ₁₂₁	41.06 ₁₂₆	30.026 ₁₁₄	63.88 ₁₁₈	08.108 ₈₉	66.25 ₇₆	
26.9	51.218 ₃₁₁	77.79 ₂₁₇	16.573 ₁₅₂	42.32 ₁₁₄	29.912 ₁₄₅	65.06 ₁₀₈	08.019 ₁₁₄	67.01 ₅₀	
Апр. 5.9	50.907 ₃₃₇	79.96 ₁₇₁	16.421 ₁₇₁	43.46 ₉₆	29.767 ₁₆₃	66.14 ₉₄	07.905 ₁₂₇	67.51 ₂₆	
15.8	50.570 ₃₅₆	81.67 ₁₂₂	16.250 ₁₈₀	44.42 ₇₈	29.604 ₁₇₃	67.08 ₇₇	07.778 ₁₃₆	67.77 ₅	
25.8	50.214 ₃₆₂	82.89 ₆₉	16.070 ₁₈₀	45.20 ₅₃	29.431 ₁₇₂	67.85 ₅₅	07.642 ₁₃₅	67.82 ₁₇	
Май 5.8	49.852 ₃₅₆	83.58 ₁₈	15.890 ₁₆₈	45.73 ₂₇	29.259 ₁₆₁	68.40 ₃₂	07.507 ₁₂₈	67.65 ₃₆	
15.7	49.496 ₃₄₄	83.76 ₃₃	15.722 ₁₅₂	46.00 ₃	29.098 ₁₄₇	68.72 ₉	07.379 ₁₁₇	67.29 ₅₅	
Июнь 25.7	49.152 ₃₂₀	83.43 ₈₅	15.570 ₁₂₇	46.03 ₂₃	28.951 ₁₂₂	68.81 ₁₅	07.262 ₁₀₀	66.74 ₇₁	
4.7	48.832 ₂₈₈	82.58 ₁₃₀	15.443 ₉₈	45.80 ₄₈	28.829 ₉₅	68.66 ₃₈	07.162 ₈₁	66.03 ₈₅	
14.7	48.544 ₂₅₃	81.28 ₁₇₆	15.345 ₆₉	45.32 ₇₀	28.734 ₆₇	68.28 ₅₈	07.081 ₆₀	65.18 ₉₈	
24.6	48.291 ₂₀₄	79.52 ₂₁₅	15.276 ₃₃	44.62 ₉₂	28.667 ₃₂	67.70 ₈₀	07.021 ₃₅	64.20 ₁₀₇	
Июль 4.6	48.087 ₁₅₄	77.37 ₂₄₅	15.243 ₁	43.70 ₁₁₀	28.635 ₁	66.90 ₉₇	06.986 ₁₀	63.13 ₁₁₃	
14.6	47.933 ₉₉	74.92 ₂₇₂	15.244 ₃₄	42.60 ₁₂₇	28.634 ₃₂	65.93 ₁₁₄	06.976 ₁₅	62.00 ₁₁₅	
24.6	47.834 ₃₅	72.20 ₂₈₉	15.278 ₇₁	41.33 ₁₄₄	28.666 ₆₇	64.79 ₁₂₉	06.991 ₄₂	60.85 ₁₁₂	
Авг. 3.5	47.799 ₂₇	69.31 ₂₉₃	15.349 ₁₀₃	39.89 ₁₅₆	28.733 ₉₈	63.50 ₁₄₃	07.033 ₆₉	59.73 ₁₀₅	
13.5	47.826 ₉₅	66.38 ₂₉₃	15.452 ₁₃₉	38.33 ₁₇₀	28.831 ₁₃₃	62.07 ₁₅₇	07.102 ₉₈	58.68 ₉₃	
23.5	47.921 ₁₆₆	63.45 ₂₇₇	15.591 ₁₇₅	36.63 ₁₇₉	28.964 ₁₆₇	60.50 ₁₆₇	07.200 ₁₂₈	57.75 ₇₅	
Сент. 2.4	48.087 ₂₃₀	60.68 ₂₅₂	15.766 ₂₀₇	34.84 ₁₈₇	29.131 ₁₉₉	58.83 ₁₇₆	07.328 ₁₅₆	57.00 ₅₂	
12.4	48.317 ₂₉₉	58.16 ₂₁₉	15.973 ₂₄₂	32.97 ₁₉₃	29.330 ₂₃₃	57.07 ₁₈₄	07.484 ₁₈₈	56.48 ₂₄	
22.4	48.616 ₃₆₀	55.97 ₁₇₁	16.215 ₂₇₅	31.04 ₁₉₅	29.563 ₂₆₆	55.23 ₁₈₈	07.672 ₂₁₉	56.24 ₉	
Окт. 2.4	48.976 ₄₁₂	54.26 ₁₁₉	16.490 ₃₀₆	29.09 ₁₉₅	29.829 ₂₉₆	53.35 ₁₉₀	07.891 ₂₄₆	56.33 ₄₂	
12.3	49.388 ₄₆₁	53.07 ₆₁	16.796 ₃₃₆	27.14 ₁₉₂	30.125 ₃₂₆	51.45 ₁₉₀	08.137 ₂₇₅	56.75 ₇₉	
Нояб. 22.3	49.849 ₄₉₂	52.46 ₆	17.132 ₃₆₀	25.22 ₁₈₃	30.451 ₃₅₀	49.55 ₁₈₂	08.412 ₂₉₇	57.54 ₁₁₆	
1.3	50.341 ₅₁₁	52.52 ₆₉	17.492 ₃₇₉	23.39 ₁₇₀	30.801 ₃₆₉	47.73 ₁₇₃	08.709 ₃₁₄	58.70 ₁₄₉	
11.3	50.852 ₅₁₉	53.21 ₁₃₄	17.871 ₃₉₄	21.69 ₁₅₃	31.170 ₃₈₃	46.00 ₁₅₇	09.023 ₃₂₆	60.19 ₁₈₀	
21.2	51.371 ₅₀₃	54.55 ₁₉₈	18.265 ₃₉₅	20.16 ₁₂₈	31.553 ₃₈₅	44.43 ₁₃₆	09.349 ₃₂₈	61.99 ₂₀₅	
Дек. 1.2	51.874 ₄₇₅	56.53 ₂₅₁	18.660 ₃₈₇	18.88 ₁₀₂	31.938 ₃₇₉	43.07 ₁₁₂	09.677 ₃₂₂	64.04 ₂₂₄	
11.2	52.349 ₄₃₃	59.04 ₃₀₁	19.047 ₃₇₀	17.86 ₇₁	32.317 ₃₆₃	41.95 ₈₂	09.999 ₃₀₇	66.28 ₂₃₆	
21.1	52.782 ₃₇₀	62.05 ₃₃₉	19.417 ₃₃₈	17.15 ₃₅	32.680 ₃₃₁	41.13 ₄₈	10.306 ₂₇₈	68.64 ₂₄₀	
31.1	53.152 ₃₀₂	65.44 ₃₆₅	19.755 ₂₉₈	16.80 ₃	33.011 ₂₉₂	40.65 ₁₇	10.584 ₂₄₅	71.04 ₂₃₆	
41.1	53.454 ₂₂₃	69.09 ₃₈₅	20.053 ₂₄₇	16.77 ₃₂	33.303 ₂₄₄	40.48 ₁₇	10.829 ₂₀₃	73.40 ₂₂₇	
Средн. место J1990.5	50.151	66.88	15.319	35.72	28.694	59.29	07.236	61.74	
Sec δ , tg δ	1.955	—1.680	1.250	+0.749	1.212	+0.686	1.011	—0.152	
a, a'	+0.080	—0.757	+0.186	—0.761	+0.183	—0.767	+0.147	—0.786	
b, b'	+0.085	—0.653	—0.038	—0.649	—0.035	—0.641	+0.008	—0.619	

Верхняя кульминация в Гриниче

Дата	261) α Leo		627) λ Hya		728) ω Car		262) ζ Leo		
	1 ^m 34 II-22 B8		3 ^m 83 II-22 K0		3 ^m 56 II-23 B8		3 ^m 65 II-24 F0		
	h^m 10 07	$+12^{\circ} 0'$	h^m 10 10	$-12^{\circ} 18'$	h^m 10 13	$-69^{\circ} 59'$	h^m 10 16	$+23^{\circ} 27'$	
Янв.	—3.8	51.944 ^s ₃₀₀	53.64 ^s ₁₆₂	07.326 ^s ₂₉₁	13.81 ^s ₂₅₂	31.369 ^s ₅₆₆	01.99 ^s ₃₁₂	09.770 ^s ₃₂₃	53.75 ^s ₁₁₉
	6.1	52.244 ^s ₂₆₆	52.02 ^s ₁₄₀	07.617 ^s ₂₅₅	16.33 ^s ₂₄₉	31.935 ^s ₄₇₀	05.11 ^s ₃₄₇	10.093 ^s ₂₈₈	52.56 ^s ₈₇
	16.1	52.510 ^s ₂₂₅	50.62 ^s ₁₁₅	07.872 ^s ₂₁₅	18.82 ^s ₂₄₁	32.405 ^s ₃₆₈	08.58 ^s ₃₇₄	10.381 ^s ₂₄₇	51.69 ^s ₅₅
	26.1	52.735 ^s ₁₇₆	49.47 ^s ₈₆	08.087 ^s ₁₆₇	21.23 ^s ₂₂₅	32.773 ^s ₂₄₉	12.32 ^s ₃₉₃	10.628 ^s ₁₉₆	51.14 ^s ₂₁
Февр.	5.1	52.911 ^s ₁₂₆	48.61 ^s ₅₉	08.254 ^s ₁₁₈	23.48 ^s ₂₀₄	33.022 ^s ₁₃₅	16.25 ^s ₃₉₆	10.824 ^s ₁₄₄	50.93 ^s ₉
	15.0	53.037 ^s ₇₆	48.02 ^s ₃₄	08.372 ^s ₆₉	25.52 ^s ₁₈₃	33.157 ^s ₂₂	20.21 ^s ₃₉₆	10.968 ^s ₉₁	51.02 ^s ₃₇
	24.9	53.113 ^s ₂₇	47.68 ^s ₈	08.441 ^s ₂₂	27.35 ^s ₁₅₆	33.179 ^s ₉₁	24.17 ^s ₃₈₂	11.059 ^s ₃₈	51.39 ^s ₆₀
Март	6.9	53.140 ^s ₁₅	47.60 ^s ₁₁	08.463 ^s ₁₈	28.91 ^s ₁₃₀	33.088 ^s ₁₈₈	27.99 ^s ₃₆₁	11.097 ^s ₈	51.99 ^s ₇₆
	16.9	53.125 ^s ₅₁	47.71 ^s ₂₇	08.445 ^s ₅₄	30.21 ^s ₁₀₅	32.900 ^s ₂₇₈	31.60 ^s ₃₃₅	11.089 ^s ₄₉	52.75 ^s ₈₈
	26.9	53.074 ^s ₈₃	47.98 ^s ₄₀	08.391 ^s ₈₃	31.26 ^s ₇₆	32.622 ^s ₃₅₉	34.95 ^s ₂₉₈	11.040 ^s ₈₄	53.63 ^s ₉₄
Апр.	5.9	52.991 ^s ₁₀₂	48.38 ^s ₄₈	08.308 ^s ₁₀₂	32.02 ^s ₅₂	32.263 ^s ₄₁₈	37.93 ^s ₂₅₉	10.956 ^s ₁₀₆	54.57 ^s ₉₂
	15.9	52.889 ^s ₁₁₇	48.86 ^s ₅₃	08.206 ^s ₁₁₆	32.54 ^s ₂₈	31.845 ^s ₄₇₁	40.52 ^s ₂₁₆	10.850 ^s ₁₂₄	55.49 ^s ₈₉
	25.8	52.772 ^s ₁₂₃	49.39 ^s ₅₅	08.090 ^s ₁₂₄	32.82 ^s ₃	31.374 ^s ₅₀₉	42.68 ^s ₁₆₅	10.726 ^s ₁₃₃	56.38 ^s ₈₀
Май	5.8	52.649 ^s ₁₂₂	49.94 ^s ₅₃	07.966 ^s ₁₂₂	32.85 ^s ₁₇	30.865 ^s ₅₂₈	44.33 ^s ₁₁₅	10.593 ^s ₁₃₂	57.18 ^s ₆₆
	15.8	52.527 ^s ₁₁₆	50.47 ^s ₅₂	07.844 ^s ₁₂₀	32.68 ^s ₃₉	30.337 ^s ₅₄₁	45.48 ^s ₆₃	10.461 ^s ₁₂₈	57.84 ^s ₅₄
Июнь	25.8	52.411 ^s ₁₀₅	50.99 ^s ₄₇	07.724 ^s ₁₁₀	32.29 ^s ₅₉	29.796 ^s ₅₃₆	46.11 ^s ₆	10.333 ^s ₁₁₈	58.38 ^s ₃₇
	4.7	52.306 ^s ₈₉	51.46 ^s ₄₀	07.614 ^s ₉₆	31.70 ^s ₇₄	29.260 ^s ₅₁₅	46.17 ^s ₄₅	10.215 ^s ₁₀₂	58.75 ^s ₂₀
	14.7	52.066 ^s ₇₂	51.86 ^s ₃₅	07.518 ^s ₈₃	30.96 ^s ₉₁	28.745 ^s ₄₉₀	45.72 ^s ₉₈	10.113 ^s ₈₆	58.95 ^s ₄
	24.7	52.143 ^s ₅₄	52.21 ^s ₂₅	07.435 ^s ₆₃	30.05 ^s ₁₀₃	28.255 ^s ₄₄₂	44.74 ^s ₁₄₈	10.027 ^s ₆₄	58.99 ^s ₁₅
Июль	4.6	52.091 ^s ₃₁	52.46 ^s ₁₇	07.372 ^s ₄₄	29.02 ^s ₁₁₂	27.813 ^s ₃₈₅	43.26 ^s ₁₉₀	09.963 ^s ₄₂	58.84 ^s ₃₂
Авг.	14.6	52.060 ^s ₁₀	52.63 ^s ₇	07.328 ^s ₂₃	27.90 ^s ₁₁₈	27.428 ^s ₃₂₁	41.36 ^s ₂₃₀	09.921 ^s ₁₉	58.52 ^s ₄₉
	24.6	52.050 ^s ₁₆	52.70 ^s ₆	07.305 ^s ₂	26.72 ^s ₁₁₈	27.107 ^s ₂₃₅	39.06 ^s ₂₆₂	09.902 ^s ₇	58.03 ^s ₆₈
	3.6	52.066 ^s ₄₁	52.64 ^s ₁₉	07.307 ^s ₂₇	25.54 ^s ₁₁₄	26.872 ^s ₁₄₇	36.44 ^s ₂₈₃	09.909 ^s ₃₄	57.35 ^s ₈₃
	13.5	52.107 ^s ₄₅	52.45 ^s ₃₇	07.334 ^s ₅₄	24.40 ^s ₁₀₆	26.725 ^s ₄₈	33.61 ^s ₂₉₉	09.943 ^s ₆₀	56.52 ^s ₁₀₁
	23.5	52.152 ^s ₁₁₂	52.82 ^s ₁₂₀	07.388 ^s ₈₄	23.34 ^s ₉₀	26.677 ^s ₆₂	30.62 ^s ₂₉₉	10.003 ^s ₉₁	55.51 ^s ₁₂₂
Сент.	2.5	52.264 ^s ₁₂₆	51.62 ^s ₇₀	07.472 ^s ₁₁₆	22.44 ^s ₇₁	26.739 ^s ₁₆₇	27.63 ^s ₂₉₀	10.094 ^s ₁₂₂	54.29 ^s ₁₃₈
	12.5	52.390 ^s ₁₅₇	50.92 ^s ₉₂	07.588 ^s ₁₄₉	21.73 ^s ₄₅	26.906 ^s ₂₈₀	24.73 ^s ₂₇₂	10.216 ^s ₁₅₇	52.91 ^s ₁₅₆
	22.4	52.547 ^s ₁₉₀	50.00 ^s ₁₁₂	07.737 ^s ₁₈₅	21.28 ^s ₁₃	27.186 ^s ₃₉₀	22.01 ^s ₂₃₉	10.373 ^s ₁₉₂	51.35 ^s ₁₇₁
Окт.	2.4	52.737 ^s ₂₂₁	48.88 ^s ₁₃₂	07.922 ^s ₂₁₈	21.15 ^s ₂₁	27.576 ^s ₄₈₅	19.62 ^s ₁₉₈	10.565 ^s ₂₂₄	49.64 ^s ₁₈₄
	12.4	52.958 ^s ₂₅₃	47.56 ^s ₁₅₄	08.140 ^s ₂₅₁	21.36 ^s ₅₇	28.061 ^s ₅₇₉	17.64 ^s ₁₄₈	10.789 ^s ₂₆₀	47.80 ^s ₁₉₇
Нояб.	22.3	53.211 ^s ₂₈₃	46.02 ^s ₁₇₀	08.391 ^s ₂₈₂	21.93 ^s ₉₇	28.640 ^s ₆₅₁	16.16 ^s ₈₇	11.049 ^s ₂₉₂	45.83 ^s ₂₀₃
	1.3	53.494 ^s ₃₀₇	44.32 ^s ₁₈₅	08.673 ^s ₃₀₅	22.90 ^s ₁₃₂	29.291 ^s ₇₀₂	15.29 ^s ₂₅	11.341 ^s ₃₁₈	43.80 ^s ₂₀₇
	11.3	53.801 ^s ₃₂₈	42.47 ^s ₁₉₅	08.978 ^s ₃₂₆	24.22 ^s ₁₆₈	29.993 ^s ₇₃₉	15.04 ^s ₄₀	11.659 ^s ₃₄₁	41.73 ^s ₂₀₅
	21.3	54.129 ^s ₃₃₈	40.52 ^s ₁₉₉	09.304 ^s ₃₃₅	25.90 ^s ₁₉₉	30.732 ^s ₇₄₃	15.44 ^s ₁₁₀	12.000 ^s ₃₅₅	39.68 ^s ₁₉₆
Дек.	1.2	54.467 ^s ₃₄₀	38.53 ^s ₁₉₆	09.639 ^s ₃₃₅	27.89 ^s ₂₂₁	31.475 ^s ₇₂₅	16.54 ^s ₁₇₀	12.355 ^s ₃₅₉	37.72 ^s ₁₈₃
	11.2	54.807 ^s ₃₃₃	36.57 ^s ₁₈₉	09.974 ^s ₃₂₈	30.10 ^s ₂₄₀	32.200 ^s ₆₈₆	18.24 ^s ₂₃₁	12.714 ^s ₃₅₅	35.89 ^s ₁₆₂
	21.2	55.140 ^s ₃₁₄	34.68 ^s ₁₇₄	10.302 ^s ₃₀₆	32.50 ^s ₂₅₀	32.886 ^s ₆₁₆	20.55 ^s ₂₈₃	13.069 ^s ₃₃₅	34.27 ^s ₁₃₆
	31.2	55.454 ^s ₂₈₆	32.94 ^s ₁₅₄	10.608 ^s ₂₇₇	35.00 ^s ₂₅₁	33.502 ^s ₅₃₅	23.38 ^s ₃₂₃	13.404 ^s ₃₀₉	32.91 ^s ₁₀₈
	41.1	55.740 ^s ₂₄₉	31.40 ^s ₁₃₁	10.885 ^s ₂₄₀	37.51 ^s ₂₄₇	34.037 ^s ₄₃₆	26.61 ^s ₃₆₀	13.713 ^s ₂₇₁	31.83 ^s ₇₄
Средн. место J1990.5		52.000	50.00	07.479	24.84	30.684	26.35	09.782	53.62
Sec δ , tg δ		1.022	+0.213	1.024	-0.218	2.922	-2.746	1.090	+0.434
a, a'		+0.160	-0.883	+0.147	-0.887	+0.071	-0.894	+0.166	-0.899
b, b'		-0.013	-0.470	+0.013	-0.461	+0.164	-0.448	-0.026	-0.438

Верхняя кульминация в Гриниче

Дата	718) 47 U Ma		277) β U Ma		278) α U Ma		279) χ Leo	
	5 ^m 14 III-7 G0		2 ^m 44 III-7 A0		1 ^m 95 III-8 K0		4 ^m 66 III-8 F0	
	h m	o /	h m	o /	h m	o /	h m	o /
	10 58	+40 28	11 01	+56 25	11 03	+61 47	11 04	+7 22
	^s	"	^s	"	^s	"	^s	"
Янв. —3.8	56.221 ₃₉₃	46.10 ₈₄	16.791 ₅₀₃	50.97 ₂₉	09.525 ₅₇₀	57.97 ₁₃	31.277 ₃₂₄	78.73 ₁₉₇
6.2	56.614 ₃₆₁	45.26 ₃₈	17.294 ₄₆₄	50.68 ₂₅	10.095 ₅₂₆	57.84 ₄₂	31.601 ₂₉₈	76.76 ₁₇₉
16.1	56.975 ₃₂₁	44.88 ₇	17.758 ₄₁₃	50.93 ₇₇	10.621 ₄₆₉	58.26 ₉₈	31.899 ₂₆₅	74.97 ₁₅₅
26.1	57.296 ₂₆₉	44.95 ₅₄	18.171 ₃₄₆	51.70 ₁₂₉	11.090 ₃₉₂	59.24 ₁₄₉	32.164 ₂₂₃	73.42 ₁₂₈
Февр. 5.1	57.565 ₂₁₂	45.49 ₉₂	18.517 ₂₆₉	52.99 ₁₆₉	11.482 ₃₀₆	60.73 ₁₉₀	32.387 ₁₇₈	72.14 ₉₉
15.1	57.777 ₁₅₂	46.41 ₁₂₇	18.786 ₁₉₂	54.68 ₂₀₃	11.788 ₂₁₅	62.63 ₂₂₅	32.565 ₁₃₂	71.15 ₇₁
25.0	57.929 ₈₈	47.68 ₁₅₅	18.978 ₁₀₅	56.71 ₂₂₉	12.003 ₁₁₆	64.88 ₂₄₉	32.697 ₈₄	70.44 ₄₂
Март 7.0	58.017 ₃₁	49.23 ₁₇₀	19.083 ₂₇	59.00 ₂₄₀	12.119 ₂₄	67.37 ₂₅₈	32.781 ₄₁	70.02 ₁₇
16.9	58.048 ₂₁	50.93 ₁₈₂	19.110 ₄₇	61.40 ₂₄₄	12.143 ₆₂	69.95 ₂₆₁	32.822 ₂	69.85 ₄
26.9	58.027 ₇₀	52.75 ₁₈₂	19.063 ₁₁₆	63.84 ₂₃₆	12.081 ₁₄₄	72.56 ₂₅₀	32.824 ₃₂	69.89 ₂₄
Апр. 5.9	57.957 ₁₀₆	54.57 ₁₇₃	18.947 ₁₆₈	66.20 ₂₁₇	11.937 ₂₀₇	75.06 ₂₂₈	32.792 ₅₈	70.13 ₃₇
15.9	57.851 ₁₃₆	56.30 ₁₆₀	18.779 ₂₁₃	68.37 ₁₉₃	11.730 ₂₆₂	77.34 ₂₀₁	32.734 ₇₈	70.50 ₄₈
25.9	57.715 ₁₅₆	57.90 ₁₃₇	18.566 ₂₄₆	70.30 ₁₅₈	11.468 ₃₀₂	79.35 ₁₆₂	32.656 ₉₄	70.98 ₅₅
Май 5.8	57.559 ₁₆₆	59.27 ₁₁₁	18.320 ₂₆₃	71.88 ₁₁₉	11.166 ₃₂₃	80.97 ₁₂₀	32.562 ₁₀₀	71.53 ₅₈
15.8	57.393 ₁₇₂	60.38 ₈₃	18.057 ₂₇₃	73.07 ₇₉	10.843 ₃₃₈	82.17 ₇₆	32.462 ₁₀₅	72.11 ₆₁
25.8	57.221 ₁₆₈	61.21 ₄₈	17.784 ₂₇₁	73.86 ₃₂	10.505 ₃₃₆	82.93 ₂₆	32.357 ₁₀₃	72.72 ₅₈
Июнь 4.8	57.053 ₁₅₈	61.69 ₁₆	17.513 ₂₅₈	74.18 ₁₂	10.169 ₃₂₃	83.19 ₂₁	32.254 ₉₇	73.30 ₅₆
14.7	56.895 ₁₄₆	61.85 ₁₈	17.255 ₂₄₂	74.06 ₅₆	09.846 ₃₀₄	82.98 ₆₈	32.157 ₉₁	73.86 ₅₁
24.7	56.749 ₁₂₆	61.67 ₅₃	17.013 ₂₁₄	73.50 ₁₀₂	09.542 ₂₇₂	82.30 ₁₁₇	32.066 ₇₉	74.37 ₄₅
Июль 4.7	56.623 ₁₀₅	61.14 ₈₄	16.799 ₁₈₃	72.48 ₁₄₀	09.270 ₂₃₅	81.13 ₁₅₇	31.987 ₆₆	74.82 ₃₇
14.6	56.518 ₈₃	60.30 ₁₁₄	16.616 ₁₅₀	71.08 ₁₇₉	09.035 ₁₉₅	79.56 ₁₉₈	31.921 ₅₃	75.19 ₂₉
24.6	56.435 ₅₄	59.16 ₁₄₅	16.466 ₁₀₇	69.29 ₂₁₄	08.840 ₁₄₅	77.58 ₂₃₄	31.868 ₃₃	75.48 ₁₆
Авг. 3.6	56.381 ₂₅	57.71 ₁₇₀	16.359 ₆₅	67.15 ₂₄₃	08.695 ₉₄	75.24 ₂₆₄	31.835 ₁₃	75.64 ₄
13.6	56.356 ₆	56.01 ₁₉₆	16.294 ₂₀	64.72 ₂₇₀	08.601 ₄₀	72.60 ₂₉₁	31.822 ₁₀	75.68 ₁₂
23.5	56.362 ₄₃	54.05 ₂₁₈	16.274 ₃₄	62.02 ₂₉₁	08.561 ₂₃	69.69 ₃₁₃	31.832 ₄₂	75.56 ₃₀
Сент. 2.5	56.405 ₇₉	51.87 ₂₃₅	16.308 ₈₃	59.11 ₃₀₆	08.584 ₈₂	66.56 ₃₂₅	31.874 ₅₃	75.26 ₄₃
12.5	56.484 ₁₂₁	49.52 ₂₅₃	16.391 ₁₄₀	56.05 ₃₂₀	08.666 ₁₄₈	63.31 ₃₃₈	31.927 ₁₀₁	74.83 ₇₅
22.5	56.605 ₁₆₄	46.99 ₂₆₄	16.531 ₁₉₉	52.85 ₃₂₃	08.814 ₂₁₈	59.93 ₃₃₉	32.028 ₁₃₅	74.08 ₉₅
Окт. 2.4	56.769 ₂₀₆	44.35 ₂₇₀	16.730 ₂₅₅	49.62 ₃₂₁	09.032 ₂₈₁	56.54 ₃₃₅	32.163 ₁₆₉	73.13 ₁₁₉
12.4	56.975 ₂₅₁	41.65 ₂₇₅	16.985 ₃₁₅	46.41 ₃₁₆	09.313 ₃₅₁	53.19 ₃₂₇	32.332 ₂₀₇	71.94 ₁₄₃
22.4	57.226 ₂₉₅	38.90 ₂₆₉	17.300 ₃₇₀	43.25 ₂₉₈	09.664 ₄₁₅	49.92 ₃₀₅	32.539 ₂₄₄	70.51 ₁₆₆
Нояб. 1.3	57.521 ₃₃₂	36.21 ₂₆₀	17.670 ₄₁₉	40.27 ₂₇₇	10.079 ₄₇₁	46.87 ₂₈₁	32.783 ₂₇₆	68.85 ₁₈₄
11.3	57.853 ₃₆₇	33.61 ₂₄₄	18.089 ₄₆₆	37.50 ₂₄₉	10.550 ₅₂₄	44.06 ₂₄₈	33.059 ₃₀₅	67.01 ₂₀₂
21.3	58.220 ₃₉₃	31.17 ₂₁₉	18.555 ₄₉₇	35.01 ₂₀₉	11.074 ₅₆₁	41.58 ₂₀₅	33.364 ₃₂₆	64.99 ₂₁₂
Дек. 1.3	58.613 ₄₀₆	28.98 ₁₉₀	19.052 ₅₁₈	32.92 ₁₆₇	11.635 ₅₈₄	39.53 ₁₆₀	33.690 ₃₃₇	62.87 ₂₁₇
11.2	59.019 ₄₁₃	27.08 ₁₅₄	19.570 ₅₂₅	31.25 ₁₁₇	12.219 ₅₉₅	37.93 ₁₀₆	34.027 ₃₄₁	60.70 ₂₁₅
21.2	59.432 ₄₀₁	25.54 ₁₁₀	20.095 ₅₁₃	30.08 ₆₃	12.814 ₅₈₀	36.87 ₄₉	34.368 ₃₃₂	58.55 ₂₀₅
31.2	59.833 ₃₇₉	24.44 ₆₇	20.608 ₄₈₆	29.45 ₁₀	13.394 ₅₅₁	36.38 ₇	34.700 ₃₁₃	56.50 ₁₉₀
41.2	60.212 ₃₄₅	23.77 ₂₀	21.094 ₄₄₄	29.35 ₄₇	13.945 ₅₀₄	36.45 ₆₅	35.013 ₂₈₅	54.60 ₁₇₀
Средн. место J1990.5	56.187	52.19	16.356	60.58	08.836	68.50	31.650	74.93
Sec δ, tg δ	1.315	+0.854	1.809	+1.507	2.116	+1.865	1.008	+0.130
a, a'	+0.168	-0.965	+0.179	-0.967	+0.184	-0.969	+0.155	-0.971
b, b'	-0.055	-0.263	-0.097	-0.253	-0.121	-0.246	-0.008	-0.240

ВИДИМЫЕ МЕСТА ЗВЕЗД 1990
Верхняя кульминация в Гриниче

Дата	293) β Leo		294) β Vir		295) γ U Ma		296) π Vir		
	2 ^m 23 III-19 A2		3 ^m 80 III-20 F8		2 ^m 54 III-21 A0		4 ^m 57 III-22 A3		
	h m	+ $^{\circ}$ /	h m	+ $^{\circ}$ /	h m	+ $^{\circ}$ /	h m	+ $^{\circ}$ /	
	11 48	+14 37	11 50	+14 48	11 53	+53 44	12 00	+6 39	
	^s	^{''}	^s	^{''}	^s	^{''}	^s	^{''}	
Янв.	—3.8	33.977 ³⁴³	30.73 ¹⁹⁴	11.318 ³³⁸	70.35 ²¹⁸	19.991 ⁴⁹¹	40.14 ¹⁰⁰	22.475 ³⁴⁰	64.67 ²¹¹
	6.2	34.320 ³²⁴	28.79 ¹⁶⁷	11.656 ³¹⁸	68.17 ²⁰⁵	20.482 ⁴⁶⁹	39.14 ⁴³	22.815 ³²³	62.56 ¹⁹³
	16.2	34.644 ²⁹⁹	27.12 ¹³⁹	11.974 ²⁹³	66.12 ¹⁸⁷	20.951 ⁴³⁶	38.71 ¹⁴	23.138 ²⁹⁹	60.63 ¹⁷²
	26.1	34.943 ²⁶²	25.73 ¹⁰³	12.267 ²⁵⁸	64.25 ¹⁶²	21.387 ³⁸⁶	38.85 ⁷²	23.437 ²⁶⁶	58.91 ¹⁴²
Февр.	5.1	35.205 ²²⁰	24.70 ⁶⁹	12.525 ²¹⁷	62.63 ¹³⁷	21.773 ³²⁴	39.57 ¹²²	23.703 ²²⁶	57.49 ¹¹³
	15.1	35.425 ¹⁷⁷	24.01 ³⁵	12.742 ¹⁷⁵	61.26 ¹⁰⁹	22.097 ²⁵⁹	40.79 ¹⁶⁶	23.929 ¹⁸⁶	56.36 ⁸³
	25.1	35.602 ¹³⁰	23.66 ²	12.917 ¹³⁰	60.17 ⁷⁹	22.356 ¹⁸³	42.45 ²⁰⁵	24.115 ¹⁴⁰	55.53 ⁵¹
Март	7.0	35.732 ⁸⁵	23.64 ²⁶	13.047 ⁸⁹	59.38 ⁵³	22.539 ¹¹¹	44.50 ²⁴⁸	24.255 ⁶⁰	55.02 ²³
	17.0	35.817 ⁴⁶	23.90 ⁵⁰	13.136 ⁵⁰	58.85 ²⁸	22.650 ⁴¹	46.78 ²⁴⁵	24.354 ⁶⁹	54.79 ²
	26.9	35.863 ⁶	24.40 ⁷⁰	13.186 ¹³	58.57 ⁵	22.691 ²⁷	49.23 ²⁵¹	24.414 ²²	54.81 ²⁵
Апр.	5.9	35.869 ²³	25.10 ⁸¹	13.199 ¹⁴	58.52 ¹²	22.664 ⁸⁴	51.74 ²⁴³	24.436 ⁸	55.06 ⁴¹
	15.9	35.846 ⁵⁰	25.91 ⁹¹	13.185 ⁴⁰	58.64 ²⁸	22.580 ¹³⁵	54.17 ²²⁹	24.428 ³³	55.47 ⁵⁴
	25.9	35.796 ⁷¹	26.82 ⁹³	13.145 ⁵⁹	58.92 ⁴¹	22.445 ¹⁷⁷	56.46 ²⁰⁴	24.395 ⁵⁵	56.01 ⁶⁴
Май	5.9	35.725 ⁸⁵	27.75 ⁹¹	13.086 ⁷³	59.33 ⁴⁸	22.268 ²⁰⁵	58.50 ¹⁷²	24.340 ⁶⁹	56.65 ⁶⁸
	15.8	35.640 ⁹⁵	28.66 ⁸⁷	13.013 ⁸³	59.81 ⁵⁵	22.063 ²²⁸	60.22 ¹³⁸	24.271 ⁸²	57.33 ⁷¹
	25.8	35.545 ¹⁰¹	29.53 ⁷⁸	12.930 ⁹⁰	60.36 ⁵⁹	21.835 ²⁴²	61.60 ⁹⁴	24.189 ⁹⁰	58.04 ⁷⁰
Июнь	4.8	35.444 ¹⁰²	30.31 ⁶⁶	12.840 ⁹¹	60.95 ⁵⁹	21.593 ²⁴³	62.54 ⁵¹	24.099 ⁹²	58.74 ⁶⁵
	14.8	35.342 ¹⁰³	30.97 ⁵⁵	12.749 ⁹³	61.54 ⁶⁰	21.350 ²⁴³	63.05 ⁷	24.007 ⁹⁶	59.39 ⁶²
	24.7	35.239 ⁹⁸	31.52 ³⁹	12.656 ⁸⁹	62.14 ⁵⁷	21.107 ²³²	63.12 ⁴⁰	23.911 ⁹⁴	60.01 ⁵³
Июль	4.7	35.141 ⁹⁰	31.91 ²³	12.567 ⁸³	62.71 ⁵²	20.875 ²¹⁵	62.72 ⁸³	23.817 ⁸⁹	60.54 ⁴⁴
	14.7	35.051 ⁸¹	32.14 ⁸	12.484 ⁷⁶	63.23 ⁴⁸	20.660 ¹⁹⁷	61.89 ¹²⁶	23.728 ⁸³	60.98 ³⁵
	24.7	34.970 ⁶⁸	32.22 ¹²	12.408 ⁶²	63.71 ³⁸	20.463 ¹⁶⁸	60.63 ¹⁶⁷	23.645 ⁷¹	61.33 ²²
Авг.	3.6	34.902 ⁵¹	32.10 ³⁰	12.346 ⁴⁸	64.09 ²⁹	20.295 ¹³⁷	58.96 ²⁰³	23.574 ⁵⁸	61.55 ⁸
	13.6	34.851 ³²	31.80 ⁵⁰	12.298 ³⁰	64.38 ¹⁶	20.158 ¹⁰²	56.93 ²³⁷	23.516 ⁴⁰	61.63 ⁸
	23.6	34.819 ⁶	31.30 ⁷²	12.268 ⁴	64.54 ¹	20.056 ⁵⁸	54.56 ²⁶⁸	23.476 ¹⁶	61.55 ²⁶
Сент.	2.5	34.813 ¹⁹	30.58 ⁹¹	12.264 ²⁴	64.53 ¹⁹	19.998 ¹⁴	51.88 ²⁹¹	23.460 ¹¹	61.29 ⁴⁴
	12.5	34.832 ⁵¹	29.67 ¹¹⁶	12.288 ³⁹	64.34 ²⁵	19.984 ³⁷	48.97 ³¹⁴	23.471 ³⁸	60.85 ⁶¹
	22.5	34.883 ⁸⁹	28.51 ¹⁴¹	12.327 ⁹⁹	64.09 ⁷⁵	20.021 ⁹⁵	45.83 ³²⁷	23.509 ⁷⁶	60.24 ⁹⁷
Окт.	2.5	34.972 ¹²⁷	27.10 ¹⁶¹	12.426 ¹²⁸	63.34 ⁸⁹	20.116 ¹⁴⁹	42.56 ³³⁵	23.585 ¹¹⁵	59.27 ¹¹⁶
	12.4	35.099 ¹⁶⁹	25.49 ¹⁸⁴	12.554 ¹⁷⁰	62.45 ¹¹⁶	20.265 ²¹²	39.21 ³³⁹	23.700 ¹⁵⁷	58.11 ¹⁴¹
	22.4	35.268 ²¹⁰	23.65 ²⁰²	12.724 ²¹¹	61.29 ¹⁴²	20.477 ²⁷³	35.82 ³³²	23.857 ¹⁹⁹	56.70 ¹⁶⁵
Нояб.	1.4	35.478 ²⁴⁸	21.63 ²¹⁶	12.935 ²⁴⁷	59.87 ¹⁶⁵	20.750 ³²⁸	32.50 ³¹⁹	24.056 ²³⁸	55.05 ¹⁸⁵
	11.4	35.726 ²⁸⁴	19.47 ²²⁸	13.182 ²⁸⁴	58.22 ¹⁸⁹	21.078 ³⁸⁴	29.31 ³⁰⁰	24.294 ²⁷⁵	53.20 ²⁰⁴
	21.3	36.010 ³¹⁴	17.19 ²³²	13.466 ³¹¹	56.33 ²⁰⁵	21.462 ⁴²⁸	26.31 ²⁶⁶	24.569 ³⁰⁵	51.16 ²¹⁶
Дек.	1.3	36.324 ³³³	14.87 ²³⁰	13.777 ³³⁰	54.28 ²¹⁷	21.890 ⁴⁶²	23.65 ²³¹	24.874 ³²⁶	49.00 ²²³
	11.3	36.657 ³⁴⁶	12.57 ²²³	14.107 ³⁴³	52.11 ²²³	22.352 ⁴⁸⁵	21.34 ¹⁸⁵	25.200 ³⁴¹	46.77 ²²⁵
	21.2	37.003 ³⁴⁵	10.34 ²⁰⁵	14.450 ³⁴⁰	49.88 ²²⁰	22.837 ⁴⁹⁰	19.49 ¹³²	25.541 ³⁴¹	44.52 ²¹⁷
	31.2	37.348 ³³⁴	08.29 ¹⁸⁴	14.790 ³²⁹	47.68 ²¹³	23.327 ⁴⁸⁰	18.17 ⁷⁹	25.882 ³³²	42.35 ²⁰⁴
	41.2	37.682 ³¹⁴	06.45 ¹⁵⁷	15.119 ³⁰⁹	45.55 ¹⁹⁷	23.807 ⁴⁵⁷	17.38 ²⁰	26.214 ³¹⁴	40.31 ¹⁸⁵
Средн. место J1990.5		34.533	30.62	12.024	65.68	20.039	51.36	23.183	62.13
Sec δ , tg δ		1.033	+0.261	1.001	+0.032	1.691	+1.364	1.007	+0.117
a, a'		+0.154	-0.999	+0.153	-0.999	+0.156	-1.000	+0.153	-1.000
b, b'		-0.017	-0.050	-0.002	-0.043	-0.091	-0.029	-0.008	+0.002

Дата	300) Br 1634 Cam		636) δ Cru		301) δ U Ma		302) γ Crv	
	5 ^m 12 III-25 A5		3 ^m 08 III-26 B3		3 ^m 44 III-26 A2		2 ^m 78 III-26 B8	
	h m	+ ° /	h m	- ° /	h m	+ ° /	h m	- ° /
	12 11	+77 39	12 14	-58 41	12 14	+57 04	12 15	-17 29
Янв. —3.8	47.096 ^s ₁₁₄₆	53.37 ^s ₅₈	36.621 ^s ₅₄₉	23.28 ^s ₁₉₁	57.395 ^s ₅₂₄	54.73 ^s ₁₁₆	18.006 ^s ₃₅₂	10.42 ^s ₂₂₈
6.2	48.242 ^s ₁₁₁₄	52.79 ^s ₇₆	37.170 ^s ₅₁₈	25.19 ^s ₂₃₇	57.919 ^s ₅₀₇	53.57 ^s ₅₇	18.358 ^s ₃₃₆	12.70 ^s ₂₃₅
16.2	49.356 ^s ₁₀₅₅	52.85 ^s ₇₀	37.688 ^s ₄₈₀	27.56 ^s ₂₇₇	58.426 ^s ₄₈₀	53.00 ^s ₃	18.694 ^s ₃₁₃	15.05 ^s ₂₃₈
26.2	50.411 ^s ₉₄₈	53.55 ^s ₁₃₄	38.168 ^s ₄₂₅	30.33 ^s ₃₁₀	58.906 ^s ₄₃₂	53.03 ^s ₆₅	19.007 ^s ₂₇₉	17.43 ^s ₂₃₃
Февр. 5.1	51.359 ^s ₈₀₉	54.89 ^s ₁₈₇	38.593 ^s ₃₆₂	33.43 ^s ₃₃₀	59.338 ^s ₃₇₂	53.68 ^s ₁₁₇	19.286 ^s ₂₄₁	19.76 ^s ₂₂₂
15.1	52.168 ^s ₆₅₃	56.76 ^s ₂₃₃	38.955 ^s ₂₉₉	36.73 ^s ₃₄₇	59.710 ^s ₃₀₆	54.85 ^s ₁₆₇	19.527 ^s ₂₀₂	21.98 ^s ₂₀₉
25.1	52.821 ^s ₄₆₂	59.09 ^s ₂₇₂	39.254 ^s ₂₂₇	40.20 ^s ₃₅₂	60.016 ^s ₂₂₈	56.52 ^s ₂₀₉	19.729 ^s ₁₅₇	24.07 ^s ₁₈₈
7.1	53.283 ^s ₂₆₉	61.81 ^s ₂₉₂	39.481 ^s ₁₆₀	43.72 ^s ₃₅₀	60.244 ^s ₁₅₀	58.61 ^s ₂₃₇	19.886 ^s ₁₁₆	25.95 ^s ₁₆₇
17.0	53.552 ^s ₇₇	64.73 ^s ₃₀₅	39.641 ^s ₉₆	47.22 ^s ₃₄₂	60.394 ^s ₇₆	60.98 ^s ₂₅₈	20.002 ^s ₇₈	27.62 ^s ₁₄₅
26.9	53.629 ^s ₁₂₃	67.78 ^s ₃₀₆	39.737 ^s ₃₀	50.64 ^s ₃₂₅	60.470 ^s ₇	63.56 ^s ₂₆₆	20.080 ^s ₄₀	29.07 ^s ₁₂₀
Апр. 5.9	53.506 ^s ₂₉₆	70.83 ^s ₂₈₉	39.767 ^s ₂₅	53.89 ^s ₃₀₃	60.469 ^s ₆₆	66.22 ^s ₂₆₁	20.120 ^s ₁₁	30.27 ^s ₉₇
15.9	53.210 ^s ₄₅₇	73.72 ^s ₂₆₈	39.742 ^s ₇₇	56.92 ^s ₂₇₈	60.403 ^s ₁₂₄	68.83 ^s ₂₅₁	20.131 ^s ₁₇	31.24 ^s ₇₆
25.9	52.753 ^s ₆₀₁	76.40 ^s ₂₃₂	39.665 ^s ₁₂₆	59.70 ^s ₂₄₃	60.279 ^s ₁₇₆	71.34 ^s ₂₂₆	20.114 ^s ₄₀	32.00 ^s ₅₁
Май 5.9	52.152 ^s ₇₀₇	78.72 ^s ₁₉₀	39.539 ^s ₁₆₅	62.13 ^s ₂₀₇	60.103 ^s ₂₁₃	73.60 ^s ₁₉₅	20.074 ^s ₅₈	32.51 ^s ₃₁
15.9	51.445 ^s ₇₉₆	80.62 ^s ₁₄₄	39.374 ^s ₂₀₁	64.20 ^s ₁₆₈	59.890 ^s ₂₄₄	75.55 ^s ₁₆₁	20.016 ^s ₇₄	32.82 ^s ₁₁
Июнь 25.8	50.649 ^s ₈₅₇	82.06 ^s ₉₀	39.173 ^s ₂₃₂	65.88 ^s ₁₂₂	59.646 ^s ₂₆₆	77.16 ^s ₁₁₆	19.942 ^s ₈₆	32.93 ^s ₁₁
4.8	49.792 ^s ₈₈₂	82.96 ^s ₃₆	38.941 ^s ₂₅₃	67.10 ^s ₇₈	59.380 ^s ₂₇₄	78.32 ^s ₇₂	19.856 ^s ₉₃	32.82 ^s ₂₇
14.8	48.910 ^s ₈₉₄	83.32 ^s ₁₉	38.688 ^s ₂₇₁	67.88 ^s ₃₁	59.106 ^s ₂₈₀	79.04 ^s ₂₆	19.763 ^s ₁₀₀	32.55 ^s ₄₆
24.8	48.016 ^s ₈₇₄	83.13 ^s ₇₆	38.417 ^s ₂₇₉	68.19 ^s ₁₉	58.826 ^s ₂₇₅	79.30 ^s ₂₅	19.663 ^s ₁₀₃	32.09 ^s ₆₁
Июль 4.7	47.142 ^s ₈₃₀	82.37 ^s ₁₂₇	38.138 ^s ₂₇₇	68.00 ^s ₆₄	58.551 ^s ₂₆₁	79.05 ^s ₇₀	19.560 ^s ₁₀₁	31.48 ^s ₇₅
14.7	46.312 ^s ₇₇₉	81.10 ^s ₁₇₈	37.861 ^s ₂₇₂	67.36 ^s ₁₁₀	58.290 ^s ₂₄₆	78.35 ^s ₁₁₅	19.459 ^s ₁₀₀	30.73 ^s ₈₈
24.7	45.533 ^s ₆₉₄	79.32 ^s ₂₂₅	37.589 ^s ₂₅₀	66.26 ^s ₁₅₂	58.044 ^s ₂₂₀	77.20 ^s ₁₆₁	19.359 ^s ₉₀	29.85 ^s ₉₆
Авг. 3.6	44.839 ^s ₆₀₂	77.07 ^s ₂₆₅	37.339 ^s ₂₂₀	64.74 ^s ₁₈₇	57.824 ^s ₁₈₈	75.59 ^s ₁₉₉	19.269 ^s ₇₇	28.89 ^s ₁₀₁
13.6	44.237 ^s ₅₀₁	74.42 ^s ₃₀₃	37.119 ^s ₁₈₃	62.87 ^s ₂₂₀	57.636 ^s ₁₅₅	73.60 ^s ₂₃₈	19.192 ^s ₆₁	27.88 ^s ₁₀₃
23.6	43.736 ^s ₃₇₂	71.39 ^s ₃₃₃	36.936 ^s ₁₂₈	60.67 ^s ₂₄₁	57.481 ^s ₁₀₉	71.22 ^s ₂₇₁	19.131 ^s ₃₆	26.85 ^s ₉₈
Сент. 2.6	43.364 ^s ₂₄₆	68.06 ^s ₃₅₅	36.808 ^s ₇₀	58.26 ^s ₂₅₅	57.372 ^s ₆₂	68.51 ^s ₂₉₇	19.095 ^s ₉	25.87 ^s ₈₉
12.5	43.118 ^s ₁₀₆	64.51 ^s ₃₇₅	36.738 ^s ₁	55.71 ^s ₂₆₆	57.310 ^s ₉	65.54 ^s ₃₂₃	19.086 ^s ₂₅	24.98 ^s ₇₆
22.5	43.012 ^s ₄₉	60.76 ^s ₃₈₄	36.737 ^s ₇₇	53.11 ^s ₂₅₃	57.301 ^s ₅₃	62.31 ^s ₃₃₉	19.111 ^s ₆₄	24.22 ^s ₅₄
Окт. 2.5	43.061 ^s ₁₉₆	56.92 ^s ₃₈₄	36.814 ^s ₁₅₅	50.58 ^s ₂₃₆	57.354 ^s ₁₁₄	58.92 ^s ₃₄₈	19.175 ^s ₁₀₅	23.68 ^s ₃₂
12.5	43.257 ^s ₃₅₇	53.08 ^s ₃₈₁	36.969 ^s ₂₃₉	48.22 ^s ₂₁₀	57.468 ^s ₁₈₁	55.44 ^s ₃₅₅	19.280 ^s ₁₅₂	23.36 ^s ₃
Нояб. 22.4	43.614 ^s ₅₁₆	49.27 ^s ₃₆₃	37.208 ^s ₃₁₉	46.12 ^s ₁₇₀	57.649 ^s ₂₅₁	51.89 ^s ₃₅₀	19.432 ^s ₁₉₉	23.33 ^s ₃₃
1.4	44.130 ^s ₆₅₉	45.64 ^s ₃₄₀	37.527 ^s ₃₈₈	44.42 ^s ₁₂₆	57.900 ^s ₃₁₃	48.39 ^s ₃₃₇	19.631 ^s ₂₃₉	23.66 ^s ₆₇
11.4	44.789 ^s ₈₀₅	42.24 ^s ₃₀₉	37.915 ^s ₄₅₆	43.16 ^s ₇₄	58.213 ^s ₃₇₇	45.02 ^s ₃₁₈	19.870 ^s ₂₈₁	24.33 ^s ₁₀₃
21.3	45.594 ^s ₉₂₇	39.15 ^s ₂₆₄	38.371 ^s ₅₀₅	42.42 ^s ₁₆	58.590 ^s ₄₃₁	41.84 ^s ₂₈₆	20.151 ^s ₃₁₃	25.36 ^s ₁₃₈
Дек. 1.3	46.521 ^s ₁₀₂₁	36.51 ^s ₂₁₈	38.876 ^s ₅₃₈	42.26 ^s ₄₁	59.021 ^s ₄₇₂	38.98 ^s ₂₅₀	20.464 ^s ₃₃₆	26.74 ^s ₁₆₇
11.3	47.542 ^s ₁₀₉₉	34.33 ^s ₁₆₀	39.414 ^s ₅₅₈	42.67 ^s ₁₀₁	59.493 ^s ₅₀₅	36.48 ^s ₂₀₄	20.800 ^s ₃₅₂	28.41 ^s ₁₉₆
21.3	48.641 ^s ₁₁₃₁	32.73 ^s ₉₇	39.972 ^s ₅₅₆	43.68 ^s ₁₅₇	59.998 ^s ₅₁₈	34.44 ^s ₁₄₉	21.152 ^s ₃₅₃	30.37 ^s ₂₁₆
31.2	49.772 ^s ₁₁₂₉	31.76 ^s ₃₅	40.528 ^s ₅₃₉	45.25 ^s ₂₀₆	60.516 ^s ₅₁₄	32.95 ^s ₉₄	21.505 ^s ₃₄₅	32.53 ^s ₂₂₈
41.2	50.901 ^s ₁₀₉₃	31.41 ^s ₃₃	41.067 ^s ₅₀₇	47.31 ^s ₂₅₂	61.030 ^s ₄₉₇	32.01 ^s ₃₃	21.850 ^s ₃₂₇	34.81 ^s ₂₃₇
Средн. место J1990.5	45.705	68.46	38.165	45.98	57.526	67.33	18.990	21.22
Sec δ , tg δ	4.683	+4.575	1.925	-1.644	1.840	+1.545	1.048	-0.315
a, a'	+0.138	-0.999	+0.160	-0.998	+0.147	-0.998	+0.155	-0.998
b, b'	-0.305	+0.051	+0.109	+0.064	-0.103	+0.065	+0.021	+0.067

Дата	637) α Cru A		307) γ Com		308) 74 U Ma		638) γ Cru	
	1 ^m 58 III-29 VI		4 ^m 56 III-29 KO		5 ^m 44 III-30 A5		1 ^m 61 III-30 M3	
	h m	° ′	h m	° ′	h m	° ′	h m	° ′
	12 26	-63 02	12 26	+28 18	12 29	+58 26	12 30	-57 03
Янв. —3.7	01.981 ^s 619	24.12 ^{''} 169	27.213 ^s 370	70.87 ^{''} 189	30.656 ^s 537	75.34 ^{''} 130	36.334 ^s 538	14.31 ^{''} 176
6.2	02.600 590	25.81 217	27.583 358	68.98 150	31.193 524	74.04 70	36.872 515	16.07 220
16.2	03.190 550	27.98 262	27.941 339	67.48 108	31.717 502	73.34 9	37.387 481	18.27 260
26.2	03.740 492	30.60 299	28.280 308	66.40 61	32.219 458	73.25 54	37.868 434	20.87 295
Февр. 5.1	04.232 425	33.59 325	28.588 269	65.79 16	32.677 400	73.79 110	38.302 376	23.82 316
15.1	04.657 356	36.84 345	28.857 226	65.63 27	33.077 335	74.89 161	38.678 319	26.98 334
25.1	05.013 277	40.29 356	29.083 178	65.90 69	33.412 257	76.50 207	38.997 251	30.32 341
Март 7.1	05.290 202	43.85 267	29.261 131	66.59 100	33.669 178	78.57 238	39.248 189	33.73 340
17.0	05.492 130	47.42 354	29.392 86	67.59 129	33.847 101	80.95 261	39.437 127	37.13 335
27.0	05.622 54	50.96 340	29.478 42	68.88 150	33.948 22	83.56 274	39.564 65	40.48 321
Апр. 5.9	05.676 10	54.36 321	29.520 4	70.38 159	33.970 48	86.30 270	39.629 11	43.69 300
15.9	05.666 72	57.57 299	29.524 28	71.97 165	33.922 110	89.00 262	39.640 40	46.69 278
25.9	05.594 132	60.56 266	29.496 59	73.62 162	33.812 168	91.62 240	39.600 90	49.47 246
Май 5.9	05.462 179	63.22 231	29.437 79	75.24 150	33.644 210	94.02 210	39.510 128	51.93 212
15.9	05.283 226	65.53 192	29.358 98	76.74 138	33.434 247	96.12 177	39.382 167	54.05 176
Июнь 25.8	05.057 265	67.45 147	29.260 112	78.12 116	33.187 274	97.89 132	39.215 199	55.81 132
4.8	04.792 294	68.92 102	29.148 119	79.28 93	32.913 287	99.21 88	39.016 223	57.13 90
14.8	04.498 319	69.94 54	29.029 125	80.21 69	32.626 298	100.09 42	38.793 245	58.03 44
24.8	04.179 333	70.48 2	28.904 127	80.90 39	32.328 297	100.51 10	38.548 258	58.47 3
Июль 4.7	03.846 334	70.50 44	28.777 123	81.29 10	32.031 287	100.41 56	38.290 260	58.44 48
14.7	03.512 332	70.06 94	28.654 120	81.39 18	31.744 275	99.85 104	38.030 261	57.96 92
24.7	03.180 310	69.12 140	28.534 109	81.21 50	31.469 251	98.81 151	37.769 244	57.04 136
Авг. 3.7	02.870 278	67.72 178	28.425 95	80.71 78	31.218 222	97.30 191	37.525 221	55.68 170
13.6	02.592 238	65.94 215	28.330 79	79.93 107	30.996 189	95.39 231	37.304 190	53.98 204
23.6	02.354 177	63.79 242	28.251 54	78.86 137	30.807 145	93.08 267	37.114 141	51.94 228
Сент. 2.6	02.177 110	61.37 259	28.197 28	77.49 163	30.662 97	90.41 296	36.973 88	49.66 243
12.5	02.067 33	58.78 270	28.169 5	75.86 190	30.565 43	87.45 323	36.885 25	47.23 252
22.5	02.034 58	56.08 267	28.174 45	73.96 214	30.522 21	84.22 341	36.860 50	44.71 247
Окт. 2.5	02.092 147	53.41 253	28.219 85	71.82 235	30.543 84	80.81 354	36.910 125	42.24 233
12.5	02.239 242	50.88 232	28.304 132	69.47 254	30.627 154	77.27 361	37.035 205	39.91 210
Нояб. 22.4	02.481 336	48.56 195	28.436 179	66.93 267	30.781 228	73.66 358	37.240 285	37.81 174
1.4	02.817 418	46.61 153	28.615 223	64.26 275	31.009 294	70.08 347	37.525 355	36.07 133
11.4	03.235 496	45.08 103	28.838 268	61.51 278	31.303 363	66.61 330	37.880 423	34.74 83
21.4	03.731 556	44.05 44	29.106 306	58.73 271	31.666 423	63.31 299	38.303 476	33.91 28
Дек. 1.3	04.287 596	43.61 12	29.412 335	56.02 258	32.089 469	60.32 263	38.779 513	33.63 28
11.3	04.883 624	43.73 74	29.747 357	53.44 239	32.558 508	57.69 219	39.292 538	33.91 85
21.3	05.507 626	44.47 133	30.104 366	51.05 208	33.066 527	55.50 163	39.830 542	34.76 141
31.2	06.133 609	45.80 184	30.470 363	48.97 174	33.593 529	53.87 108	40.372 530	36.17 189
41.2	06.742 579	47.64 234	30.833 351	47.23 134	34.122 517	52.79 45	40.902 505	38.06 236
Средн. место J1990.5	03.844	47.31	27.882	76.43	30.870	88.65	38.054	36.32
Sec δ , tg δ	2.206	-1.967	1.136	+0.539	1.912	+1.629	1.839	-1.543
a, a'	+0.168	-0.994	+0.149	-0.993	+0.139	-0.992	+0.167	-0.991
b, b'	+0.130	+0.113	-0.036	+0.115	-0.108	+0.128	+0.102	+0.133

Верхняя кульминация в Гриниче

Дата	315) γ C Vn		642) β Cru		316) ϵ U Ma		317) δ Vir		
	$4^m 8$ 6.0	IV-3 N3	$1^m. 50$	IV-3 B1	$1^m 68$	IV-5 A0p	$3^m 66$	IV-5 M0	
	h^m 12 44	$^{\circ}'$ +45 28	h^m 12 47	$^{\circ}'$ -59 37	h^m 12 53	$^{\circ}'$ +56 00	h^m 12 55	$^{\circ}'$ +3 26	
Янв.	—3.7	40.549	80.68	07.592	51.20	36.284	27.30	06.438	58.20
	6.2	40.978	78.94	08.170	52.68	36.788	25.66	06.780	56.01
	16.2	41.401	77.72	08.727	54.64	37.288	24.61	07.115	53.95
	26.2	41.807	77.04	09.255	57.03	37.774	24.15	07.435	52.08
Февр.	5.2	42.182	76.97	09.737	59.80	38.226	24.35	07.731	50.46
	15.1	42.515	77.43	10.163	62.83	38.630	25.13	07.994	49.12
	25.1	42.800	78.41	10.530	66.07	38.980	26.45	08.224	48.07
Март	7.1	43.028	79.87	10.829	69.44	39.260	28.29	08.414	47.35
	17.1	43.198	81.68	11.062	72.83	39.470	30.48	08.565	46.92
	27.0	43.312	83.79	11.231	76.22	39.610	32.97	08.680	46.76
Апр.	5.9	43.368	86.10	11.333	79.50	39.676	35.65	08.757	46.86
	15.9	43.374	88.47	11.375	82.61	39.676	38.37	08.803	47.16
	25.9	43.333	90.84	11.362	85.52	39.616	41.06	08.821	47.63
Май	5.9	43.251	93.10	11.292	88.15	39.498	43.60	08.812	48.22
	15.9	43.136	95.15	11.176	90.47	39.336	45.89	08.782	48.89
Июнь	25.9	42.993	96.97	11.016	92.43	39.135	47.89	08.733	49.62
	4.8	42.828	98.45	10.815	93.98	38.902	49.49	08.668	50.35
	14.8	42.650	99.58	10.584	95.11	38.650	50.67	08.592	51.07
	24.8	42.460	100.33	10.324	95.79	38.381	51.42	08.504	51.77
Июль	4.8	42.266	100.64	10.045	95.98	38.105	51.66	08.408	52.41
Авг.	14.7	42.074	100.54	09.758	95.72	37.831	51.44	08.308	52.97
	24.7	41.886	100.03	09.465	94.99	37.561	50.74	08.205	53.45
	3.7	41.710	99.08	09.185	93.81	37.306	49.56	08.106	53.81
	13.6	41.550	97.76	08.925	92.24	37.073	47.96	08.013	54.06
	23.6	41.410	96.05	08.696	90.31	36.865	45.93	07.930	54.16
Сент.	2.6	41.300	93.97	08.515	88.09	36.694	43.51	07.866	54.10
	12.6	41.222	91.59	08.389	85.67	36.564	40.77	07.824	53.85
	22.5	41.184	88.91	08.329	83.12	36.482	37.72	07.810	53.41
Окт.	2.5	41.193	85.98	08.349	80.57	36.458	34.43	07.831	52.75
	12.5	41.251	82.88	08.448	78.11	36.493	30.98	07.887	51.83
Нояб.	22.5	41.364	79.61	08.635	75.83	36.596	27.38	07.990	50.63
	1.4	41.535	76.29	08.909	73.88	36.769	23.77	08.138	49.19
	11.4	41.761	72.97	09.262	72.30	37.009	20.21	08.330	47.53
	21.4	42.043	69.72	09.691	71.19	37.318	16.77	08.565	45.65
Дек.	1.3	42.374	66.66	10.182	70.62	37.689	13.58	08.838	43.60
	11.3	42.744	63.85	10.717	70.60	38.109	10.70	09.140	41.44
	21.3	43.147	61.38	11.285	71.15	38.574	08.22	09.466	39.21
	31.3	43.568	59.36	11.862	72.28	39.064	06.27	09.803	37.00
	41.2	43.992	57.82	12.432	73.91	39.563	04.84	10.140	34.87
Средн. место J1990.5		41.140	91.61	09.628	72.98	36.787	40.71	07.481	56.15
Sec δ , tg δ a, a' b, b'		1.427 +0.140 -0.067	+1.017 -0.981 +0.194	1.978 +0.177 +0.111	-1.707 -0.979 +0.204	1.789 +0.130 -0.096	+1.483 -0.973 +0.232	1.002 +0.152 -0.004	+0.060 -0.971 +0.238

ВИДИМЫЕ МЕСТА ЗВЕЗД 1990

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Верхняя кульминация в Гриниче

Дата	326) α Vir		327) 69 H U Ma		329) 24 C Vn		328) ζ Vir	
	1 ^m 21 IV-13 B2		5 ^m 41 IV-14 A0		4 ^m 63 IV-15 A3		3 ^m 44 IV-15 A2	
	h m 13 24	° / —11 06	h m 13 28	° / +59 59	h m 13 34	° / +49 03	h m 13 34	° / —0 32
Янв. —3.7	^s 40.124 ₃₄₈	^{''} 36.82 ₂₀₂	^s 05.472 ₅₂₇	^{''} 26.26 ₁₉₆	^s 03.091 ₄₃₀	^{''} 39.09 ₂₁₇	^s 11.192 ₃₃₈	^{''} 49.24 ₂₁₄
6.3	40.472 ₃₄₅	38.84 ₂₀₆	05.999 ₅₃₇	24.30 ₁₃₆	03.521 ₄₃₈	36.92 ₁₆₃	11.530 ₃₃₇	51.38 ₂₀₅
16.2	40.817 ₃₃₄	40.90 ₂₀₄	06.536 ₅₃₆	22.94 ₇₅	03.959 ₄₃₆	35.29 ₁₀₈	11.867 ₃₃₀	53.43 ₁₉₃
26.2	41.151 ₃₁₅	42.94 ₁₉₆	07.072 ₅₁₂	22.19 ₇	04.395 ₄₁₇	34.21 ₄₃	12.197 ₃₁₃	55.36 ₁₇₃
Февр. 5.2	41.466 ₂₈₆	44.90 ₁₈₁	07.584 ₄₇₂	22.12 ₅₆	04.812 ₃₈₄	33.78 ₁₆	12.510 ₂₈₆	57.09 ₁₄₈
15.2	41.752 ₂₅₆	46.71 ₁₆₄	08.056 ₄₂₁	22.68 ₁₁₆	05.196 ₃₄₆	33.94 ₇₄	12.796 ₂₅₈	58.57 ₁₂₁
25.1	42.008 ₂₂₀	48.35 ₁₄₃	08.477 ₃₅₅	23.84 ₁₇₂	05.542 ₂₉₄	34.68 ₁₃₁	13.054 ₂₂₃	59.78 ₉₂
Март 7.1	42.228 ₁₈₄	49.78 ₁₂₀	08.832 ₂₈₃	25.56 ₂₁₅	05.836 ₂₄₀	35.99 ₁₇₅	13.277 ₁₈₇	60.70 ₆₂
17.1	42.412 ₁₄₉	50.98 ₉₈	09.115 ₂₀₈	27.71 ₂₅₂	06.076 ₁₈₄	37.74 ₂₁₄	13.464 ₁₅₄	61.32 ₃₆
27.1	42.561 ₁₁₄	51.96 ₇₄	09.323 ₁₂₇	30.23 ₂₇₇	06.260 ₁₂₃	39.88 ₂₄₃	13.618 ₁₁₈	61.68 ₉
Апр. 6.0	42.675 ₈₂	52.70 ₅₄	09.450 ₅₁	33.00 ₂₈₈	06.383 ₆₉	42.31 ₂₅₇	13.736 ₈₇	61.77 ₁₁
15.9	42.757 ₅₃	53.24 ₃₅	09.501 ₁₉	35.88 ₂₉₁	06.452 ₁₅	44.88 ₂₆₇	13.823 ₅₇	61.66 ₃₁
25.9	42.810 ₂₅	53.59 ₁₇	09.482 ₉₀	38.79 ₂₈₁	06.467 ₃₆	47.55 ₂₆₂	13.880 ₂₉	61.35 ₄₆
Май 5.9	42.835 ₁	53.76 ₂	09.392 ₁₄₇	41.60 ₂₆₀	06.431 ₇₈	50.17 ₂₄₈	13.909 ₅	60.89 ₅₅
15.9	42.836 ₂₁	53.78 ₁₂	09.245 ₂₀₀	44.20 ₂₃₅	06.353 ₁₁₇	52.65 ₂₂₈	13.914 ₁₈	60.34 ₆₄
25.9	42.815 ₄₃	53.66 ₂₃	09.045 ₂₄₅	46.55 ₁₉₇	06.236 ₁₅₃	54.93 ₁₉₈	13.896 ₃₉	59.70 ₆₈
Июнь 4.9	42.772 ₅₉	53.43 ₃₃	08.800 ₂₇₈	48.52 ₁₅₅	06.083 ₁₇₇	56.91 ₁₆₂	13.857 ₅₆	59.02 ₆₈
14.8	42.713 ₇₆	53.10 ₄₃	08.522 ₃₀₇	50.07 ₁₁₃	05.906 ₂₀₁	58.53 ₁₂₆	13.801 ₇₄	58.34 ₇₀
24.8	42.637 ₉₀	52.67 ₄₉	08.215 ₃₂₆	51.20 ₆₀	05.705 ₂₁₉	59.79 ₈₀	13.727 ₈₈	57.64 ₆₆
Июль 4.8	42.547 ₁₀₀	52.18 ₅₆	07.889 ₃₃₄	51.80 ₁₃	05.486 ₂₂₆	60.59 ₃₇	13.639 ₉₉	56.98 ₆₁
14.8	42.447 ₁₀₈	51.62 ₆₀	07.555 ₃₃₉	51.93 ₃₈	05.260 ₂₃₅	60.96 ₈	13.540 ₁₀₈	56.37 ₅₆
24.7	42.339 ₁₁₁	51.02 ₆₃	07.216 ₃₃₁	51.55 ₈₉	05.025 ₂₃₂	60.88 ₅₆	13.432 ₁₁₁	55.81 ₄₇
Авг. 3.7	42.228 ₁₀₉	50.39 ₆₄	06.885 ₃₁₅	50.66 ₁₃₆	04.793 ₂₂₃	60.32 ₉₉	13.321 ₁₁₀	55.34 ₃₉
13.7	42.119 ₁₀₂	49.75 ₆₂	06.570 ₂₉₅	49.30 ₁₈₂	04.570 ₂₁₂	59.33 ₁₄₃	13.211 ₁₀₆	54.95 ₂₇
23.6	42.017 ₈₇	49.13 ₅₆	06.275 ₂₆₀	47.48 ₂₂₆	04.358 ₁₈₇	57.90 ₁₈₅	13.105 ₉₃	54.68 ₁₄
Сент. 2.6	41.930 ₆₇	48.57 ₄₉	06.015 ₂₁₉	45.22 ₂₆₂	04.171 ₁₅₈	56.05 ₂₂₂	13.012 ₇₄	54.54 ₂
12.6	41.863 ₄₀	48.08 ₃₆	05.796 ₁₇₁	42.60 ₂₉₈	04.013 ₁₂₃	53.83 ₂₅₈	12.938 ₄₉	54.56 ₂₀
22.6	41.823 ₄	47.72 ₁₈	05.625 ₁₀₉	39.62 ₃₂₈	03.890 ₇₅	51.25 ₂₉₀	12.889 ₁₄	54.76 ₄₀
Окт. 2.5	41.819 ₃₇	47.54 ₅	05.516 ₄₅	36.34 ₃₄₈	03.815 ₂₅	48.35 ₃₁₃	12.875 ₂₂	55.16 ₆₀
12.5	41.856 ₆₉	47.59 ₁₈	05.471 ₂₈	32.86 ₃₆₇	03.790 ₃₂	45.22 ₃₃₆	12.897 ₆₁	55.76 ₈₇
22.5	41.925 ₁₃₂	47.77 ₅₀	05.499 ₁₀₈	29.19 ₃₇₃	03.822 ₉₆	41.86 ₃₄₈	12.958 ₁₁₂	56.63 ₁₁₅
Нояб. 1.5	42.057 ₁₇₅	48.27 ₇₈	05.607 ₁₈₄	25.46 ₃₇₃	03.918 ₁₅₈	38.38 ₃₅₃	13.070 ₁₅₈	57.78 ₁₃₈
11.4	42.232 ₂₂₂	49.05 ₁₀₈	05.791 ₂₆₆	21.73 ₃₆₅	04.076 ₂₂₂	34.85 ₃₅₂	13.228 ₂₀₅	59.16 ₁₆₂
21.4	42.454 ₂₆₃	50.13 ₁₃₄	06.057 ₃₄₁	18.08 ₃₄₃	04.298 ₂₈₃	31.33 ₃₃₈	13.433 ₂₄₈	60.78 ₁₈₁
Дек. 1.4	42.717 ₂₉₇	51.47 ₁₅₈	06.398 ₄₀₅	14.65 ₃₁₅	04.581 ₃₃₅	27.95 ₃₁₇	13.681 ₂₈₂	62.59 ₁₉₇
11.3	43.014 ₃₂₅	53.05 ₁₈₀	06.803 ₄₆₄	11.50 ₂₇₇	04.916 ₃₈₁	24.78 ₂₈₆	13.963 ₃₁₁	64.56 ₂₀₉
21.3	43.339 ₃₄₀	54.85 ₁₉₄	07.267 ₅₀₄	08.73 ₂₂₇	05.297 ₄₁₂	21.92 ₂₄₃	14.274 ₃₂₉	66.65 ₂₁₁
31.3	43.679 ₃₄₅	56.79 ₂₀₂	07.771 ₅₂₈	06.46 ₁₇₃	05.709 ₄₃₁	19.49 ₁₉₇	14.603 ₃₃₆	68.76 ₂₁₀
41.3	44.024 ₃₄₁	58.81 ₂₀₄	08.299 ₅₃₈	04.73 ₁₁₂	06.140 ₄₃₇	17.52 ₁₄₁	14.939 ₃₃₅	70.86 ₂₀₀
Средн. место J1990.5	41.497	42.96	06.222	40.99	04.005	51.83	12.503	51.32
Sec δ , tg δ	1.019	—0.196	2.000	+1.732	1.526	+1.153	1.000	—0.010
a, a'	+0.158	—0.932	+0.110	—0.927	+0.123	—0.917	+0.154	—0.917
b, b'	+0.012	+0.361	—0.107	+0.375	—0.070	+0.399	+0.001	+0.400

Верхняя кульминация в Гриниче

Дата	333) η U Ma		646) 89 Vir		335) ϵ 10 Dra		334) PGC 3584		
	1 ^m 91 IV-18 B3		5 ^m 11 IV-19 K0		4 ^m 77 IV-19 M0		4 ^m 96 IV-20 Ma		
	^h ^m 13 47	^o ['] +49 21	^h ^m 13 49	^o ['] -18 05	^h ^m 13 51	^o ['] +64 45	^h ^m 13 51	^o ['] +34 28	
Янв.	—3.7 6.3 16.3 26.2	^s 08.997 ⁴²⁵ 09.422 ⁴³⁶ 09.858 ⁴³⁷ 10.295 ⁴²³	["] 25.00 ²²⁸ 22.72 ¹⁷⁷ 20.95 ¹²⁰ 19.75 ⁵⁶	^s 19.626 ³⁵⁴ 19.980 ³⁵⁴ 20.334 ³⁴⁹ 20.683 ³³²	["] 06.29 ¹⁷⁷ 08.06 ¹⁸⁹ 09.95 ¹⁹⁶ 11.91 ¹⁹⁶	^s 08.312 ⁵⁷⁴ 08.886 ⁵⁹⁸ 09.484 ⁶⁰⁷ 10.091 ⁵⁹³	["] 56.56 ²¹⁴ 54.42 ¹⁵⁴ 52.88 ⁹² 51.96 ²³	^s 21.200 ³⁶⁴ 21.564 ³⁷² 21.936 ³⁷¹ 22.307 ³⁵⁸	["] 78.38 ²³⁹ 75.99 ¹⁹⁸ 74.01 ¹⁵² 72.49 ⁹⁸
Февр.	5.2	10.718 ³⁹³	19.19 ⁴	21.015 ³⁰⁷	13.87 ¹⁸⁹	10.684 ⁵⁵⁶	51.73 ⁴³	22.665 ³³³	71.51 ⁴⁴
Март	15.2 25.1 7.1 17.1 27.1	11.111 ³⁵⁸ 11.469 ³⁰⁹ 11.778 ²⁵⁶ 12.034 ²⁰² 12.236 ¹⁴²	19.23 ⁶⁴ 19.87 ¹²² 21.09 ¹⁶⁹ 22.78 ²¹⁰ 24.88 ²⁴²	21.322 ²⁸¹ 21.603 ²⁴⁶ 21.849 ²¹² 22.061 ¹⁷⁹ 22.240 ¹⁴³	15.76 ¹⁸⁰ 17.56 ¹⁶⁴ 19.20 ¹⁴⁸ 20.68 ¹³⁰ 21.98 ¹¹⁰	11.240 ⁵⁰⁸ 11.748 ⁴⁴⁰ 12.188 ³⁶⁰ 12.548 ²⁷⁹ 12.827 ¹⁸⁵	52.16 ¹⁰⁵ 53.21 ¹⁶⁶ 54.87 ²¹³ 57.00 ²⁵³ 59.53 ²⁸⁴	22.998 ³⁰³ 23.301 ²⁶⁵ 23.566 ²²³ 23.789 ¹⁸² 23.971 ¹³⁵	71.07 ⁹ 71.16 ⁶² 71.78 ¹⁰⁷ 72.85 ¹⁴⁸ 74.33 ¹⁸¹
Апр.	6.0 16.0 25.9	12.378 ⁸⁷ 12.465 ³⁴ 12.499 ²⁰	27.30 ²⁵⁹ 29.89 ²⁷⁰ 32.59 ²⁶⁹	22.383 ¹¹² 22.495 ⁸² 22.577 ⁵¹	23.08 ⁹¹ 23.99 ⁷³ 24.72 ⁵⁴	13.012 ⁹⁶ 13.108 ¹⁰ 13.118 ⁷⁷	62.37 ²⁹⁸ 65.35 ³⁰⁵ 68.40 ²⁹⁸	24.106 ⁹⁴ 24.200 ⁵⁵ 24.255 ¹⁴	76.14 ²⁰² 78.16 ²¹⁸ 80.34 ²²²
Май	5.9 15.9	12.479 ⁶⁴ 12.415 ¹⁰⁵	35.28 ²⁵⁶ 37.84 ²³⁹	22.628 ²⁶ 22.654 ¹	25.26 ³⁹ 25.65 ²⁴	13.041 ¹⁵⁰ 12.891 ²¹⁹	71.38 ²⁸⁰ 74.18 ²⁵⁷	24.269 ¹⁸ 24.251 ⁵⁰	82.56 ²¹⁸ 84.74 ²⁰⁸
Июнь	25.9 4.9 14.8 24.8	12.310 ¹⁴³ 12.167 ¹⁷¹ 11.996 ¹⁹⁸ 11.798 ²¹⁷	40.23 ²¹⁰ 42.33 ¹⁷⁶ 44.09 ¹⁴⁰ 45.49 ⁹⁴	22.653 ²⁵ 22.628 ⁴⁶ 22.582 ⁶⁸ 22.514 ⁸⁷	25.89 ⁸ 25.97 ⁵ 25.92 ¹⁸ 25.74 ³²	12.672 ²⁸⁰ 12.392 ³²⁷ 12.065 ³⁶⁹ 11.696 ³⁹⁹	76.75 ²²⁰ 78.95 ¹⁸⁰ 80.75 ¹³⁶ 82.11 ⁸⁴	24.201 ⁷⁹ 24.122 ¹⁰² 24.020 ¹²⁴ 23.896 ¹⁴²	86.82 ¹⁸⁹ 88.71 ¹⁶⁴ 90.35 ¹³⁸ 91.73 ¹⁰³
Июль	4.8	11.581 ²³⁰	46.43 ⁵²	22.427 ¹⁰⁰	25.42 ⁴²	11.297 ⁴¹⁶	82.95 ³⁵	23.754 ¹⁵³	92.76 ⁶⁹
Авг.	14.8 24.7 3.7 13.7 23.7	11.351 ²⁴¹ 11.110 ²⁴¹ 10.869 ²³⁶ 10.633 ²²⁶ 10.407 ²⁰⁴	46.95 ⁶ 47.01 ⁴² 46.59 ⁸⁶ 45.73 ¹³¹ 44.42 ¹⁷⁵	22.327 ¹¹⁵ 22.212 ¹²¹ 22.091 ¹²³ 21.968 ¹²¹ 21.847 ¹⁰⁸	25.00 ⁵³ 24.47 ⁶³ 23.84 ⁶⁹ 23.15 ⁷⁶ 22.39 ⁷⁶	10.881 ⁴²⁹ 10.452 ⁴²⁷ 10.025 ⁴¹⁴ 09.611 ³⁹⁵ 09.216 ³⁶⁰	83.30 ¹⁷ 83.13 ⁷¹ 82.42 ¹²⁰ 81.22 ¹⁶⁸ 79.54 ²¹⁶	23.601 ¹⁶⁵ 23.436 ¹⁶⁹ 23.267 ¹⁶⁷ 23.100 ¹⁶³ 22.937 ¹⁴⁷	93.45 ³³ 93.78 ⁷ 93.71 ⁴³ 93.28 ⁸² 92.46 ¹²⁰
Сент.	2.6 12.6 22.6	10.203 ¹⁷⁷ 10.026 ¹⁴² 09.884 ⁹⁷	42.67 ²¹³ 40.54 ²⁵¹ 38.03 ²⁸⁴	21.739 ⁸⁹ 21.650 ⁶⁴ 21.586 ²⁸	21.63 ⁷⁴ 20.89 ⁶⁹ 20.20 ⁵⁷	08.856 ³¹⁷ 08.539 ²⁶⁴ 08.275 ¹⁹⁶	77.38 ²⁵⁴ 74.84 ²⁹⁴ 71.90 ³²⁶	22.790 ¹²⁷ 22.663 ¹⁰¹ 22.562 ⁶⁴	91.26 ¹⁵³ 89.73 ¹⁹⁰ 87.83 ²²¹
Окт.	2.5 12.5	09.787 ⁴⁷ 09.740 ¹⁰	35.19 ³⁰⁹ 32.10 ³³⁴	21.558 ¹¹ 21.569 ⁵⁶	19.63 ⁴¹ 19.22 ¹⁸	08.079 ¹²⁴ 07.955 ⁴¹	68.64 ³⁴⁹ 65.15 ³⁷¹	22.498 ²⁴ 22.474 ²⁴	85.62 ²⁴⁹ 83.13 ²⁷⁵
Нояб.	22.5 1.5 11.4 21.4	09.750 ⁷⁴ 09.824 ¹³⁷ 09.961 ²⁰³ 10.164 ²⁶⁶	28.76 ³⁴⁸ 25.28 ³⁵⁵ 21.73 ³⁵⁷ 18.16 ³⁴⁴	21.625 ¹⁰⁵ 21.730 ¹⁵⁸ 21.888 ²⁰⁹ 22.097 ²⁵⁴	19.04 ² 19.02 ²⁷ 19.29 ⁵⁸ 19.87 ⁸⁸	07.914 ⁵² 07.966 ¹⁴⁰ 08.106 ²³⁸ 08.344 ³²⁹	61.44 ³⁸⁰ 57.64 ³⁸¹ 53.83 ³⁷⁷ 50.06 ³⁵⁸	22.498 ⁷⁷ 22.575 ¹²⁹ 22.704 ¹⁸⁵ 22.889 ²³⁷	80.38 ²⁹⁵ 77.43 ³⁰⁸ 74.35 ³¹⁸ 71.17 ³¹⁴
Дек.	1.4 11.4 21.3 31.3 41.3	10.430 ³²⁰ 10.750 ³⁶⁹ 11.119 ⁴⁰⁵ 11.524 ⁴²⁶ 11.950 ⁴³⁷	14.72 ³²⁵ 11.47 ²⁹⁶ 08.51 ²⁵⁵ 05.96 ²⁰⁹ 03.87 ¹⁵⁴	22.351 ²⁹¹ 22.642 ³²³ 22.965 ³⁴⁴ 23.309 ³⁵² 23.661 ³⁵³	20.75 ¹¹⁷ 21.92 ¹⁴³ 23.35 ¹⁶⁴ 24.99 ¹⁷⁹ 26.78 ¹⁹¹	08.673 ⁴⁰⁹ 09.082 ⁴⁸⁵ 09.567 ⁵⁴² 10.109 ⁵⁷⁹ 10.688 ⁶⁰³	46.48 ³³⁰ 43.18 ²⁹⁵ 40.23 ²⁴⁴ 37.79 ¹⁹² 35.87 ¹³⁰	23.126 ²⁸⁰ 23.406 ³²¹ 23.727 ³⁴⁸ 24.075 ³⁶⁵ 24.440 ³⁷²	68.03 ³⁰⁶ 64.97 ²⁸⁸ 62.09 ²⁵⁸ 59.51 ²²⁴ 57.27 ¹⁷⁹
Средн. место J1990.5		10.013	37.96	21.232	13.71	09.270	72.17	22.347	87.80
Sec δ , tg δ		1.535	+1.165	1.052	-0.327	2.346	+2.122	1.213	+0.687
a, a'		+0.118	-0.893	+0.163	-0.888	+0.087	-0.885	+0.132	-0.884
b, b'		-0.069	+0.451	+0.019	+0.459	-0.125	+0.466	-0.041	+0.467

Дата	336) η Boo		647) ζ Cen		337) τ Vir		648) β Cen	
	2 ^m 80	IV-20 G0	3 ^m 06	IV-20 B2p	4 ^m 34	IV-22 A2	0 ^m 86	IV-23 B1
	h m	+18 26'	h m	-47 14'	h m	+1 35'	h m	-60 19'
	^s	"	^s	"	^s	"	^s	"
Янв. —3.7	12.662 ₃₃₇	37.62 ₂₃₆	54.314 ₄₆₀	15.40 ₉₄	08.296 ₃₃₁	25.19 ₂₁₃	05.723 ₅₉₁	21.56 ₄₃
6.3	12.999 ₃₄₃	35.26 ₂₀₈	54.774 ₄₆₂	16.34 ₁₃₃	08.627 ₃₃₅	23.06 ₂₀₄	06.314 ₅₉₈	21.99 ₉₂
16.3	13.342 ₃₄₀	33.18 ₁₇₆	55.236 ₄₅₆	17.67 ₁₇₀	08.962 ₃₃₃	21.02 ₁₉₀	06.912 ₅₉₄	22.91 ₁₃₉
26.2	13.682 ₃₂₆	31.42 ₁₃₆	55.692 ₄₃₇	19.37 ₂₀₁	09.295 ₃₂₁	19.12 ₁₆₇	07.506 ₅₇₄	24.30 ₁₈₂
Февр. 5.2	14.008 ₃₀₄	30.06 ₉₅	56.129 ₄₀₇	21.38 ₂₂₄	09.616 ₂₉₈	17.45 ₁₄₁	08.080 ₅₃₇	26.12 ₂₁₇
	15.2	29.11 ₅₂	56.536 ₃₇₃	23.62 ₂₄₃	09.914 ₂₇₅	16.04 ₁₁₃	08.617 ₄₉₇	28.29 ₂₄₇
	25.2	28.59 ₆	56.909 ₃₃₁	26.05 ₂₅₅	10.189 ₂₄₃	14.91 ₈₁	09.114 ₄₄₅	30.76 ₂₇₁
Март 7.1	14.833 ₂₀₇	28.53 ₃₂	57.240 ₂₈₇	28.60 ₂₆₀	10.432 ₂₁₀	14.10 ₅₀	09.559 ₃₈₈	33.47 ₂₈₇
17.1	15.040 ₁₇₃	28.85 ₆₈	57.527 ₂₄₄	31.20 ₂₆₂	10.642 ₁₇₉	13.60 ₂₂	09.947 ₃₃₃	36.34 ₂₉₈
27.1	15.213 ₁₃₄	29.53 ₁₀₁	57.771 ₁₉₇	33.82 ₂₅₇	10.821 ₁₄₅	13.38 ₇	10.280 ₂₆₉	39.32 ₃₀₂
Апр. 6.0	15.347 ₉₉	30.54 ₁₂₂	57.968 ₁₅₄	36.39 ₂₄₇	10.966 ₁₁₃	13.45 ₂₉	10.549 ₂₀₉	42.34 ₂₉₉
16.0	15.446 ₆₇	31.76 ₁₄₁	58.122 ₁₁₁	38.86 ₂₃₆	11.079 ₈₄	13.74 ₄₈	10.758 ₁₅₀	45.33 ₂₉₃
25.9	15.513 ₃₄	33.17 ₁₅₂	58.233 ₆₆	41.22 ₂₁₉	11.163 ₅₄	14.22 ₆₃	10.908 ₈₅	48.26 ₂₇₉
Май 5.9	15.547 ₇	34.69 ₁₅₄	58.299 ₂₈	43.41 ₁₉₈	11.217 ₂₈	14.85 ₇₂	10.993 ₃₀	51.05 ₂₆₀
15.9	15.554 ₁₉	36.23 ₁₅₃	58.327 ₁₂	45.39 ₁₇₆	11.245 ₄	15.57 ₈₀	11.023 ₂₉	53.65 ₂₃₉
	25.9	37.76 ₁₄₅	58.315 ₅₁	47.15 ₁₄₈	11.249 ₂₂	16.37 ₈₃	10.994 ₈₇	56.04 ₂₀₈
Июнь 4.9	15.490 ₆₄	39.21 ₁₃₁	58.264 ₈₄	48.63 ₁₁₉	11.227 ₄₁	17.20 ₈₁	10.907 ₁₃₇	58.12 ₁₇₇
14.9	15.426 ₈₅	40.52 ₁₁₆	58.180 ₁₁₉	49.82 ₈₇	11.186 ₆₂	18.01 ₈₀	10.770 ₁₈₇	59.89 ₁₄₀
24.8	15.341 ₁₀₁	41.68 ₉₄	58.061 ₁₄₈	50.69 ₅₂	11.124 ₈₁	18.81 ₇₄	10.583 ₂₃₀	61.29 ₉₉
Июль 4.8	15.240 ₁₁₄	42.62 ₇₃	57.913 ₁₇₀	51.21 ₁₈	11.043 ₉₅	19.55 ₆₆	10.353 ₂₆₃	62.28 ₅₇
	14.8	43.35 ₄₉	57.743 ₁₉₁	51.39 ₁₉	10.948 ₁₀₉	20.21 ₅₉	10.090 ₂₉₄	62.85 ₁₃
	24.7	43.84 ₂₂	57.552 ₂₀₁	51.20 ₅₅	10.839 ₁₁₇	20.80 ₄₇	09.796 ₃₀₇	62.98 ₃₄
Авг. 3.7	14.869 ₁₃₂	44.06 ₃	57.351 ₂₀₃	50.65 ₈₈	10.722 ₁₂₀	21.27 ₃₆	09.489 ₃₁₀	62.64 ₇₇
13.7	14.737 ₁₃₀	44.03 ₃₀	57.148 ₁₉₈	49.77 ₁₂₁	10.602 ₁₁₉	21.63 ₂₃	09.179 ₃₀₄	61.87 ₁₂₀
23.7	14.607 ₁₁₇	43.73 ₆₀	56.950 ₁₇₈	48.56 ₁₄₉	10.483 ₁₁₀	21.86 ₇	08.875 ₂₇₇	60.67 ₁₅₈
	2.6	43.13 ₈₅	56.772 ₁₅₁	47.07 ₁₆₉	10.373 ₉₄	21.93 ₉	08.598 ₂₃₇	59.09 ₁₉₀
	12.6	42.28 ₁₄₅	56.621 ₁₁₃	45.38 ₁₈₇	10.279 ₇₂	21.84 ₂₈	08.361 ₁₈₇	57.19 ₂₁₉
	22.6	41.13 ₁₄₄	56.508 ₆₁	43.51 ₁₉₄	10.207 ₄₁	21.56 ₅₀	08.174 ₁₁₅	55.00 ₂₃₅
Окт. 2.6	14.267 ₉	39.69 ₁₆₉	56.447 ₄	41.57 ₁₉₄	10.166 ₅	21.06 ₇₀	08.059 ₃₉	52.65 ₂₄₃
12.5	14.258 ₃₅	38.00 ₁₉₆	56.443 ₅₉	39.63 ₁₈₆	10.161 ₃₆	20.36 ₉₄	08.020 ₄₈	50.22 ₂₄₄
	22.5	36.04 ₂₁₉	56.502 ₁₃₁	37.77 ₁₆₇	10.197 ₈₃	19.42 ₁₂₂	08.068 ₁₄₃	47.78 ₂₃₀
Нояб. 1.5	14.376 ₁₃₀	33.85 ₂₃₈	56.633 ₁₉₇	36.10 ₁₄₂	10.280 ₁₃₁	18.20 ₁₄₄	08.211 ₂₃₃	45.48 ₂₀₈
11.4	14.506 ₁₈₁	31.47 ₂₅₅	56.830 ₂₆₆	34.68 ₁₀₉	10.411 ₁₇₉	16.76 ₁₆₈	08.444 ₃₂₄	43.40 ₁₇₉
21.4	14.687 ₂₂₇	28.92 ₂₆₂	57.096 ₃₂₉	33.59 ₆₉	10.590 ₂₂₅	15.08 ₁₈₅	08.768 ₄₀₉	41.61 ₁₃₇
Дек. 1.4	14.914 ₂₆₆	26.30 ₂₆₅	57.425 ₃₇₇	32.90 ₂₆	10.815 ₂₆₃	13.23 ₂₀₁	09.177 ₄₇₅	40.24 ₉₄
	11.4	23.65 ₂₆₀	57.802 ₄₂₁	32.64 ₁₈	11.078 ₂₉₇	11.22 ₂₁₀	09.652 ₅₃₅	39.30 ₄₄
	21.3	21.05 ₂₄₅	58.223 ₄₄₈	32.82 ₆₅	11.375 ₃₁₉	09.12 ₂₁₂	10.187 ₅₇₃	38.86 ₉
	31.3	18.60 ₂₂₄	58.671 ₄₅₉	33.47 ₁₀₅	11.694 ₃₃₀	07.00 ₂₀₉	10.760 ₅₉₂	38.95 ₅₈
	41.3	16.34 ₃₃₇	59.130 ₄₆₂	34.52 ₁₄₆	12.024 ₃₃₅	04.91 ₁₉₈	11.352 ₆₀₀	39.53 ₁₀₈
Средн. место J1990.5	13.929	42.28	56.608	30.87	09.750	24.76	08.794	39.17
Sec δ , tg δ	1.054	+0.334	1.473	-1.081	1.000	+0.028	2.020	-1.755
a, a'	+0.143	-0.878	+0.188	-0.877	+0.152	-0.863	+0.213	-0.859
b, b'	-0.020	+0.478	+0.063	+0.481	-0.002	+0.504	+0.101	+0.512

Верхняя кульминация в Гриниче

Дата	338) α Дра 3 ^м 64 IV-23 A0p		649) π Нуа 3 ^м 48 IV-23 K0		650) θ Cen 2 ^м 26 IV-23 K0		339) 9 Н Boo 5 ^м 44 IV-24 M3		
	h m 14 04	° ′ +64 24	h m 14 05	° ′ -26 38	h m 14 06	° ′ -36 19	h m 14 07	° ′ +43 53	
Янв.	-3.7	06.774 ^s 554	60.37 ^s 229	47.877 ^s 369	03.59 ^s 144	05.222 ^s 399	12.68 ^s 117	31.784 ^s 386	46.03 ^s 250
	6.3	07.328 ^s 582	58.08 ^s 170	48.246 ^s 372	05.03 ^s 165	05.621 ^s 403	13.85 ^s 146	32.170 ^s 399	43.53 ^s 202
	16.3	07.910 ^s 597	56.38 ^s 109	48.618 ^s 369	06.68 ^s 181	06.024 ^s 400	15.31 ^s 172	32.569 ^s 405	41.51 ^s 150
	26.2	08.507 ^s 590	55.29 ^s 39	48.987 ^s 355	08.49 ^s 192	06.424 ^s 385	17.03 ^s 194	32.974 ^s 396	40.01 ^s 89
Февр.	5.2	09.097 ^s 558	54.90 ^s 26	49.342 ^s 332	10.41 ^s 194	06.809 ^s 360	18.97 ^s 206	33.370 ^s 374	39.12 ^s 30
	15.2	09.655 ^s 515	55.16 ^s 91	49.674 ^s 307	12.35 ^s 194	07.169 ^s 332	21.03 ^s 216	33.744 ^s 345	38.82 ^s 28
Март	25.2	10.170 ^s 453	56.07 ^s 152	49.981 ^s 274	14.29 ^s 188	07.501 ^s 297	23.19 ^s 219	34.089 ^s 305	39.10 ^s 88
	7.1	10.623 ^s 378	57.59 ^s 202	50.255 ^s 239	16.17 ^s 178	07.798 ^s 260	25.38 ^s 216	34.394 ^s 260	39.98 ^s 137
	17.1	11.001 ^s 300	59.61 ^s 246	50.494 ^s 207	17.95 ^s 167	08.058 ^s 225	27.54 ^s 212	34.654 ^s 215	41.35 ^s 181
	27.1	11.301 ^s 210	62.07 ^s 279	50.701 ^s 170	19.62 ^s 152	08.283 ^s 184	29.66 ^s 202	34.869 ^s 162	43.16 ^s 217
Апр.	6.0	11.511 ^s 123	64.86 ^s 296	50.871 ^s 137	21.14 ^s 136	08.467 ^s 149	31.68 ^s 191	35.031 ^s 114	45.33 ^s 240
	16.0	11.634 ^s 38	67.82 ^s 307	51.008 ^s 106	22.50 ^s 121	08.616 ^s 113	33.59 ^s 177	35.145 ^s 67	47.73 ^s 256
Май	25.9	11.672 ^s 48	70.89 ^s 303	51.114 ^s 73	23.71 ^s 104	08.729 ^s 76	35.36 ^s 160	35.212 ^s 19	50.29 ^s 262
	5.9	11.624 ^s 123	73.92 ^s 288	51.187 ^s 44	24.75 ^s 87	08.805 ^s 44	36.96 ^s 142	35.231 ^s 22	52.91 ^s 254
15.9	11.501 ^s 194	76.80 ^s 268	51.231 ^s 15	25.62 ^s 70	08.849 ^s 11	38.38 ^s 123	35.209 ^s 61	55.45 ^s 243	
Июнь	25.9	11.307 ^s 258	79.48 ^s 233	51.246 ^s 14	26.32 ^s 51	08.860 ^s 22	39.61 ^s 101	35.148 ^s 98	57.88 ^s 219
	4.9	11.049 ^s 307	81.81 ^s 195	51.232 ^s 38	26.83 ^s 35	08.838 ^s 51	40.62 ^s 78	35.050 ^s 127	60.07 ^s 191
	14.9	10.742 ^s 354	83.76 ^s 152	51.194 ^s 65	27.18 ^s 16	08.787 ^s 80	41.40 ^s 54	34.923 ^s 155	61.98 ^s 160
Июль	24.8	10.388 ^s 388	85.28 ^s 102	51.129 ^s 88	27.34 ^s 3	08.707 ^s 106	41.94 ^s 27	34.768 ^s 178	63.58 ^s 119
	4.8	10.000 ^s 409	86.30 ^s 53	51.041 ^s 106	27.31 ^s 21	08.601 ^s 127	42.21 ^s 2	34.590 ^s 194	64.77 ^s 79
Авг.	14.8	09.591 ^s 427	86.83 ^s 2	50.935 ^s 124	27.10 ^s 39	08.474 ^s 147	42.23 ^s 25	34.396 ^s 210	65.56 ^s 37
	24.7	09.164 ^s 430	86.85 ^s 53	50.811 ^s 135	26.71 ^s 56	08.327 ^s 159	41.98 ^s 52	34.186 ^s 215	65.93 ^s 9
	3.7	08.734 ^s 421	86.32 ^s 102	50.676 ^s 139	26.15 ^s 72	08.168 ^s 162	41.46 ^s 76	33.971 ^s 215	65.84 ^s 51
	13.7	08.313 ^s 408	85.30 ^s 152	50.537 ^s 139	25.43 ^s 85	08.006 ^s 162	40.70 ^s 99	33.756 ^s 211	65.33 ^s 94
	23.7	07.905 ^s 376	83.78 ^s 200	50.398 ^s 127	24.58 ^s 96	07.844 ^s 149	39.71 ^s 118	33.545 ^s 196	64.39 ^s 139
Сент.	2.6	07.529 ^s 337	81.78 ^s 240	50.271 ^s 110	23.62 ^s 101	07.695 ^s 128	38.53 ^s 131	33.349 ^s 175	63.00 ^s 177
	12.6	07.192 ^s 288	79.38 ^s 282	50.161 ^s 84	22.61 ^s 103	07.567 ^s 99	37.22 ^s 142	33.174 ^s 147	61.23 ^s 217
Окт.	22.6	06.904 ^s 223	76.56 ^s 315	50.077 ^s 47	21.58 ^s 99	07.468 ^s 57	35.80 ^s 143	33.027 ^s 107	59.06 ^s 252
	2.6	06.681 ^s 153	73.41 ^s 342	50.030 ^s 6	20.59 ^s 89	07.411 ^s 10	34.37 ^s 139	32.920 ^s 64	56.54 ^s 280
	12.5	06.528 ^s 72	69.99 ^s 365	50.024 ^s 43	19.70 ^s 74	07.401 ^s 43	32.98 ^s 128	32.856 ^s 11	53.74 ^s 309
Нояб.	22.5	06.456 ^s 19	66.34 ^s 378	50.067 ^s 95	18.96 ^s 53	07.444 ^s 103	31.70 ^s 109	32.845 ^s 47	50.65 ^s 328
	1.5	06.475 ^s 108	62.56 ^s 382	50.162 ^s 150	18.43 ^s 30	07.547 ^s 161	30.61 ^s 85	32.892 ^s 106	47.37 ^s 339
	11.4	06.583 ^s 204	58.74 ^s 380	50.312 ^s 205	18.13 ^s 0	07.708 ^s 221	29.76 ^s 54	32.998 ^s 168	43.98 ^s 348
Дек.	21.4	06.787 ^s 298	54.94 ^s 363	50.517 ^s 255	18.13 ^s 34	07.929 ^s 277	29.22 ^s 19	33.166 ^s 228	40.50 ^s 341
	1.4	07.085 ^s 379	51.31 ^s 340	50.772 ^s 296	18.47 ^s 65	08.206 ^s 321	29.03 ^s 18	33.394 ^s 281	37.09 ^s 329
	11.4	07.464 ^s 459	47.91 ^s 305	51.068 ^s 333	19.12 ^s 97	08.527 ^s 361	29.21 ^s 55	33.675 ^s 328	33.80 ^s 307
	21.3	07.923 ^s 519	44.86 ^s 259	51.401 ^s 356	20.09 ^s 126	08.888 ^s 386	29.76 ^s 93	34.003 ^s 365	30.73 ^s 271
	31.3	08.442 ^s 561	42.27 ^s 207	51.757 ^s 368	21.35 ^s 150	09.274 ^s 399	30.69 ^s 125	34.368 ^s 388	28.02 ^s 232
	41.3	09.003 ^s 590	40.20 ^s 146	52.125 ^s 372	22.85 ^s 170	09.673 ^s 403	31.94 ^s 156	34.756 ^s 403	25.70 ^s 181
Средн. место J1990.5	07.881	75.98	49.725	12.89	07.253	24.92	32.988	57.98	
Sec δ, tg δ	2.316	+2.089	1.119	-0.502	1.241	-0.735	1.388	+0.962	
a, a'	+0.081	-0.857	+0.171	-0.853	+0.179	-0.852	+0.119	-0.849	
b, b'	-0.119	+0.516	+0.029	+0.522	+0.042	+0.523	-0.054	+0.528	

Верхняя кульминация в Гриниче

Дата	345) α Boo		344) ι Vir		346) ι Boo		347) λ Boo	
	0^m24 IV-26 K0		4^m16 IV-26 F5		4^m87 IV-26 A5		4^m26 IV-26 A0	
	h^m 14 15	$^{\circ}'$ +19 13	h^m 14 15	$^{\circ}'$ -5 57	h^m 14 15	$^{\circ}'$ +51 24	h^m 14 16	$^{\circ}'$ +46 07
Янв. —3.7	^s 12.321 ₃₂₇	"49.25 ₂₄₇	^s 29.361 ₃₃₀	"17.44 ₁₉₅	^s 48.520 ₄₁₆	"25.53 ₂₅₂	^s 00.122 ₃₈₉	"41.60 ₂₅₄
6.3	12.648 ₃₃₇	46.78 ₂₁₉	29.691 ₃₃₇	19.39 ₁₉₄	48.936 ₄₃₆	23.01 ₂₀₁	00.511 ₄₀₅	39.06 ₂₀₇
16.3	12.985 ₃₃₈	44.59 ₁₈₈	30.028 ₃₃₇	21.33 ₁₈₉	49.372 ₄₄₇	21.00 ₁₄₆	00.916 ₄₁₅	36.99 ₁₅₄
26.2	13.323 ₃₂₉	42.71 ₁₄₈	30.365 ₃₂₇	23.22 ₁₇₅	49.819 ₄₄₁	19.54 ₈₀	01.331 ₄₀₇	35.45 ₉₂
Февр. 5.2	13.652 ₃₁₁	41.23 ₁₀₄	30.692 ₃₀₆	24.97 ₁₅₆	50.260 ₄₁₉	18.74 ₁₉	01.738 ₃₈₇	34.53 ₃₁
15.2	13.963 ₂₈₇	40.19 ₆₁	30.998 ₂₈₅	26.53 ₁₃₆	50.679 ₃₉₀	18.55 ₄₅	02.125 ₃₆₀	34.22 ₂₉
25.2	14.250 ₂₅₆	39.58 ₁₅	31.283 ₂₅₅	27.89 ₁₁₀	51.069 ₃₄₇	19.00 ₁₀₆	02.485 ₃₂₀	34.51 ₈₉
Март 7.1	14.506 ₂₂₃	39.43 ₂₇	31.538 ₂₂₄	28.99 ₈₅	51.416 ₂₉₆	20.06 ₁₅₈	02.805 ₂₇₆	35.40 ₁₄₀
17.1	14.729 ₁₉₀	39.70 ₆₅	31.762 ₁₉₅	29.84 ₆₀	51.712 ₂₄₆	21.64 ₂₀₄	03.081 ₂₂₉	36.80 ₁₈₆
27.1	14.919 ₁₅₃	40.35 ₁₀₀	31.957 ₁₆₁	30.44 ₃₅	51.958 ₁₈₅	23.68 ₂₄₁	03.310 ₁₇₅	38.66 ₂₂₄
Апр. 6.1	15.072 ₁₁₈	41.35 ₁₂₄	32.118 ₁₃₁	30.79 ₁₄	52.143 ₁₂₈	26.09 ₂₆₅	03.485 ₁₂₅	40.90 ₂₄₈
16.0	15.190 ₈₇	42.59 ₁₄₄	32.249 ₁₀₂	30.93 ₅	52.271 ₇₂	28.74 ₂₈₁	03.610 ₇₆	43.38 ₂₆₆
26.0	15.277 ₅₂	44.03 ₁₅₇	32.351 ₇₂	30.88 ₂₁	52.343 ₁₅	31.55 ₂₈₄	03.686 ₂₅	46.04 ₂₇₁
Май 5.9	15.329 ₂₃	45.60 ₁₆₁	32.423 ₄₆	30.67 ₃₃	52.358 ₃₅	34.39 ₂₇₇	03.711 ₁₉	48.75 ₂₆₄
15.9	15.352 ₄	47.21 ₁₆₁	32.469 ₁₉	30.34 ₄₃	52.323 ₈₂	37.16 ₂₆₃	03.692 ₆₀	51.39 ₂₅₄
Июнь 25.9	15.348 ₃₂	48.82 ₁₅₃	32.488 ₆	29.91 ₅₀	52.241 ₁₂₇	39.79 ₂₃₇	03.632 ₁₀₀	53.93 ₂₃₁
4.9	15.316 ₅₅	50.35 ₁₄₀	32.482 ₂₉	29.41 ₅₃	52.114 ₁₆₃	42.16 ₂₀₆	03.532 ₁₃₂	56.24 ₂₀₁
14.9	15.261 ₇₉	51.75 ₁₂₅	32.453 ₅₂	28.88 ₅₇	51.951 ₁₉₇	44.22 ₁₇₁	03.400 ₁₆₃	58.25 ₁₇₀
24.8	15.182 ₉₈	53.00 ₁₀₃	32.401 ₇₃	28.31 ₅₈	51.754 ₂₂₅	45.93 ₁₂₆	03.237 ₁₈₉	59.95 ₁₂₈
Июль 4.8	15.084 ₁₁₄	54.03 ₈₁	32.328 ₉₀	27.73 ₅₆	51.529 ₂₄₄	47.19 ₈₃	03.048 ₂₀₆	61.23 ₈₇
14.8	14.970 ₁₃₀	54.84 ₅₆	32.238 ₁₀₇	27.17 ₅₆	51.285 ₂₆₂	48.02 ₃₈	02.842 ₂₂₄	62.10 ₄₅
24.8	14.840 ₁₃₉	55.40 ₂₉	32.131 ₁₁₇	26.61 ₅₂	51.023 ₂₆₉	48.40 ₁₄	02.618 ₂₃₁	62.55 ₄
Авг. 3.7	14.701 ₁₄₂	55.69 ₁	32.014 ₁₂₃	26.09 ₄₆	50.754 ₂₇₀	48.26 ₅₈	02.387 ₂₃₃	62.51 ₄₆
13.7	14.559 ₁₄₄	55.70 ₂₆	31.891 ₁₂₅	25.63 ₄₁	50.484 ₂₆₅	47.68 ₁₀₆	02.154 ₂₃₀	62.05 ₉₂
23.7	14.415 ₁₃₄	55.44 ₅₇	31.766 ₁₁₆	25.22 ₃₂	50.219 ₂₄₈	46.62 ₁₅₃	01.924 ₂₁₅	61.13 ₁₃₈
Сент. 2.6	14.281 ₁₂₁	54.87 ₈₅	31.650 ₁₀₃	24.90 ₂₁	49.971 ₂₂₅	45.09 ₁₉₄	01.709 ₁₉₅	59.75 ₁₇₇
12.6	14.160 ₉₉	54.02 ₁₁₅	31.547 ₈₃	24.69 ₈	49.746 ₁₉₄	43.15 ₂₃₅	01.514 ₁₆₇	57.98 ₂₁₇
22.6	14.061 ₆₈	52.87 ₁₄₄	31.464 ₅₁	24.61 ₉	49.552 ₁₄₉	40.80 ₂₇₃	01.347 ₁₂₇	55.81 ₂₅₄
Окт. 2.6	13.993 ₃₃	51.43 ₁₇₁	31.413 ₁₆	24.70 ₂₇	49.403 ₁₀₀	38.07 ₃₀₁	01.220 ₈₂	53.27 ₂₈₄
12.5	13.960 ₉	49.72 ₂₀₀	31.397 ₂₈	24.97 ₄₆	49.303 ₄₃	35.06 ₃₃₀	01.138 ₂₉	50.43 ₃₁₃
Нояб. 22.5	13.969 ₅₇	47.72 ₂₂₃	31.425 ₇₀	25.43 ₇₁	49.260 ₂₄	31.76 ₃₄₈	01.109 ₃₂	47.30 ₃₃₂
1.5	14.026 ₁₀₆	45.49 ₂₄₃	31.495 ₁₂₂	26.14 ₁₀₀	49.284 ₈₉	28.28 ₃₆₀	01.141 ₉₂	43.98 ₃₄₆
11.5	14.132 ₁₅₇	43.06 ₂₆₂	31.617 ₁₇₂	27.14 ₁₂₂	49.373 ₁₆₀	24.68 ₃₆₅	01.233 ₁₅₆	40.52 ₃₅₃
21.4	14.289 ₂₀₅	40.44 ₂₇₀	31.789 ₂₁₉	28.36 ₁₄₅	49.533 ₂₂₉	21.03 ₃₅₇	01.389 ₂₂₀	36.99 ₃₄₈
Дек. 1.4	14.494 ₂₄₇	37.74 ₂₇₃	32.008 ₂₅₈	29.81 ₁₆₃	49.762 ₂₈₉	17.46 ₃₄₁	01.609 ₂₇₄	33.51 ₃₃₄
11.4	14.741 ₂₈₅	35.01 ₂₇₀	32.266 ₂₉₄	31.44 ₁₈₀	50.051 ₃₄₇	14.05 ₃₁₆	01.883 ₃₂₇	30.17 ₃₁₃
21.3	15.026 ₃₁₂	32.31 ₂₅₅	32.560 ₃₁₇	33.24 ₁₈₉	50.398 ₃₉₀	10.89 ₂₇₇	02.210 ₃₆₆	27.04 ₂₇₇
31.3	15.338 ₃₂₉	29.76 ₂₃₆	32.877 ₃₃₁	35.13 ₁₉₃	50.788 ₄₂₁	08.12 ₂₃₃	02.576 ₃₉₂	24.27 ₂₃₇
41.3	15.667 ₃₃₇	27.40 ₂₀₇	33.208 ₃₃₈	37.06 ₁₉₁	51.209 ₄₄₁	05.79 ₁₇₉	02.968 ₄₁₀	21.90 ₁₈₆
Средн. место J1990.5	13.663	53.81	30.967	19.97	49.751	39.16	01.368	54.20
Sec δ , tg δ	1.059	+0.349	1.005	-0.104	1.603	+1.253	1.443	+1.040
a, a'	+0.140	-0.831	+0.157	-0.830	+0.107	-0.829	+0.114	-0.829
b, b'	-0.019	+0.556	+0.006	+0.557	-0.069	+0.559	-0.057	+0.559

Верхняя кульминация в Гриниче

Дата	350) γ Boo		351) σ Boo		652) η Cen		653) α Cen ¹	
	3 ^m 00 IV-30 F0		4 ^m 48 IV-30 F0		2 ^m 65 V-1 B3p A2p		0 ^m 33 V-2 G0 K5	
	h m	° /	h m	° /	h m	° /	h m	° /
	14 31	+38 20	14 34	+29 46	14 34	-42 06	14 38	-60 47
Янв. —3.7	40.349 ^s ₃₅₀	47.43 ["] ₂₆₅	14.565 ^s ₃₃₂	61.06 ["] ₂₅₉	51.624 ^s ₄₁₆	48.10 ["] ₆₅	54.356 ^s ₅₇₇	25.78 ["] ₁
6.3	40.699 ₃₆₈	44.78 ₂₂₄	14.897 ₃₄₇	58.47 ₂₂₅	52.040 ₄₂₈	48.75 ₁₀₀	54.933 ₅₉₄	25.79 ₅₀
16.3	41.067 ₃₇₈	42.54 ₁₇₇	15.244 ₃₅₅	56.22 ₁₈₅	52.468 ₄₃₂	49.75 ₁₃₁	55.527 ₆₀₀	26.29 ₉₄
26.3	41.445 ₃₇₄	40.77 ₁₂₁	15.599 ₃₅₀	54.37 ₁₃₅	52.900 ₄₂₃	51.06 ₁₅₉	56.127 ₅₉₀	27.23 ₁₄₀
Февр. 5.2	41.819 ₃₅₈	39.56 ₆₄	15.949 ₃₃₅	53.02 ₈₅	53.323 ₄₀₂	52.65 ₁₇₉	56.717 ₅₆₁	28.63 ₁₇₆
15.2	42.177 ₃₃₆	38.92 ₇	16.284 ₃₁₆	52.17 ₃₂	53.725 ₃₈₀	54.44 ₁₉₅	57.278 ₅₂₈	30.39 ₂₀₈
25.2	42.513 ₃₀₅	38.85 ₅₂	16.600 ₂₈₅	51.85 ₂₂	54.105 ₃₄₇	56.39 ₂₀₇	57.806 ₄₈₂	32.47 ₂₃₆
Март 7.2	42.818 ₂₆₆	39.37 ₁₀₃	16.885 ₂₅₂	52.07 ₇₀	54.452 ₃₁₂	58.46 ₂₁₁	58.288 ₄₃₀	34.83 ₂₅₅
17.1	43.084 ₂₂₉	40.40 ₁₅₀	17.137 ₂₁₈	52.77 ₁₁₅	54.764 ₂₇₇	60.57 ₂₁₅	58.718 ₃₇₉	37.38 ₂₇₀
27.1	43.313 ₁₈₃	41.90 ₁₉₀	17.355 ₁₇₈	53.92 ₁₅₃	55.041 ₂₃₇	62.72 ₂₁₁	59.097 ₃₁₇	40.08 ₂₇₉
Апр. 6.1	43.496 ₁₄₁	43.80 ₂₁₇	17.533 ₁₄₁	55.45 ₁₈₂	55.278 ₂₀₀	64.83 ₂₀₆	59.414 ₂₅₈	42.87 ₂₈₁
16.0	43.637 ₉₉	45.97 ₂₃₉	17.674 ₁₀₄	57.27 ₂₀₃	55.478 ₁₆₂	66.89 ₁₉₈	59.672 ₁₉₈	45.68 ₂₈₀
26.0	43.736 ₅₅	48.36 ₂₅₀	17.778 ₆₆	59.30 ₂₁₇	55.640 ₁₂₁	68.87 ₁₈₆	59.870 ₁₃₃	48.48 ₂₇₁
Май 5.9	43.791 ₁₇	50.86 ₂₄₉	17.844 ₃₃	61.47 ₂₁₉	55.761 ₈₄	70.73 ₁₇₁	60.003 ₇₃	51.19 ₂₅₈
15.9	43.808 ₂₀	53.35 ₂₄₃	17.877 ₀	63.66 ₂₁₇	55.845 ₄₅	72.44 ₁₅₆	60.076 ₁₁	53.77 ₂₄₁
25.9	43.788 ₅₇	55.78 ₂₂₇	17.877 ₃₃	65.83 ₂₀₅	55.890 ₆	74.00 ₁₃₅	60.087 ₅₂	56.18 ₂₁₇
Июнь 4.9	43.731 ₈₇	58.05 ₂₀₄	17.844 ₆₁	67.88 ₁₈₆	55.896 ₃₀	75.35 ₁₁₄	60.035 ₁₀₈	58.35 ₁₈₉
14.9	43.644 ₁₁₇	60.09 ₁₇₇	17.783 ₈₈	69.74 ₁₆₅	55.866 ₆₆	76.49 ₉₀	59.927 ₁₆₆	60.24 ₁₅₉
24.9	43.527 ₁₄₃	61.86 ₁₄₂	17.695 ₁₁₂	71.39 ₁₃₇	55.800 ₁₀₁	77.39 ₆₂	59.761 ₂₁₇	61.83 ₁₂₁
Июль 4.8	43.384 ₁₆₃	63.28 ₁₀₆	17.583 ₁₃₂	72.76 ₁₀₅	55.699 ₁₂₉	78.01 ₃₅	59.544 ₂₅₉	63.04 ₈₂
14.8	43.221 ₁₈₃	64.34 ₆₉	17.451 ₁₅₁	73.81 ₇₄	55.570 ₁₅₇	78.36 ₆	59.285 ₂₉₇	63.86 ₄₁
24.8	43.038 ₁₉₄	65.03 ₂₅	17.300 ₁₆₃	74.55 ₃₇	55.413 ₁₇₅	78.42 ₂₆	58.988 ₃₂₃	64.27 ₅
Авг. 3.7	42.844 ₁₉₉	65.28 ₁₄	17.137 ₁₆₉	74.92 ₂	55.238 ₁₈₆	78.16 ₅₄	58.665 ₃₃₄	64.22 ₄₆
13.7	42.645 ₂₀₁	65.14 ₅₇	16.968 ₁₇₂	74.94 ₃₄	55.052 ₁₉₂	77.62 ₈₃	58.331 ₃₃₇	63.76 ₉₁
23.7	42.444 ₁₉₂	64.57 ₉₉	16.796 ₁₆₆	74.60 ₇₄	54.860 ₁₈₃	76.79 ₁₀₉	57.994 ₃₁₈	62.85 ₁₃₂
Сент. 2.7	42.252 ₁₇₇	63.58 ₁₃₈	16.630 ₁₅₂	73.86 ₁₀₇	54.677 ₁₆₅	75.70 ₁₃₀	57.676 ₂₈₇	61.53 ₁₆₆
12.6	42.075 ₁₅₄	62.20 ₁₇₇	16.478 ₁₃₂	72.79 ₁₄₄	54.512 ₁₃₈	74.40 ₁₄₉	57.389 ₂₄₃	59.87 ₁₉₉
22.6	41.921 ₁₂₁	60.43 ₂₁₅	16.346 ₁₀₁	71.35 ₁₇₈	54.374 ₉₆	72.91 ₁₅₈	57.146 ₁₇₆	57.88 ₂₂₂
Окт. 2.6	41.800 ₈₁	58.28 ₂₄₅	16.245 ₆₅	69.57 ₂₀₈	54.278 ₄₉	71.33 ₁₆₂	56.970 ₁₀₃	55.66 ₂₃₅
12.5	41.719 ₃₅	55.83 ₂₇₇	16.180 ₂₂	67.49 ₂₄₀	54.229 ₈	69.71 ₁₆₀	56.867 ₁₇	53.31 ₂₄₃
22.5	41.684 ₂₁	53.06 ₃₀₁	16.158 ₂₉	65.09 ₂₆₄	54.237 ₇₃	68.11 ₁₄₇	56.850 ₇₉	50.88 ₂₃₇
Нояб. 1.5	41.705 ₇₅	50.05 ₃₁₇	16.187 ₈₀	62.45 ₂₈₃	54.310 ₁₃₅	66.64 ₁₂₈	56.929 ₁₇₂	48.51 ₂₂₂
11.5	41.780 ₁₃₄	46.88 ₃₃₁	16.267 ₁₃₅	59.62 ₂₉₉	54.445 ₂₀₂	65.36 ₁₀₄	57.101 ₂₆₉	46.29 ₁₉₉
21.4	41.914 ₁₉₃	43.57 ₃₃₂	16.402 ₁₈₈	56.63 ₃₀₅	54.647 ₂₆₅	64.32 ₇₂	57.370 ₃₅₉	44.30 ₁₆₅
Дек. 1.4	42.107 ₂₄₃	40.25 ₃₂₆	16.590 ₂₃₅	53.58 ₃₀₄	54.912 ₃₁₈	63.60 ₃₇	57.729 ₄₃₅	42.65 ₁₂₆
11.4	42.350 ₂₉₁	36.99 ₃₁₁	16.825 ₂₇₉	50.54 ₂₉₅	55.230 ₃₆₅	63.23 ₁	58.164 ₅₀₃	41.39 ₈₁
21.4	42.641 ₃₃₀	33.88 ₂₈₃	17.104 ₃₁₃	47.59 ₂₇₃	55.595 ₃₉₈	63.24 ₄₀	58.667 ₅₅₂	40.58 ₃₂
31.3	42.971 ₃₅₄	31.05 ₂₄₉	17.417 ₃₃₆	44.86 ₂₄₆	55.993 ₄₁₉	63.64 ₇₅	59.219 ₅₈₂	40.26 ₁₆
41.3	43.325 ₃₇₂	28.56 ₂₀₆	17.753 ₃₅₀	42.40 ₂₀₉	56.412 ₄₃₁	64.39 ₁₁₀	59.801 ₅₉₉	40.42 ₆₅
Средн. место J1990.5	41.729	58.39	16.002	69.98	54.051	59.67	57.533	40.65
Sec δ , tg δ	1.275	+0.791	1.152	+0.572	1.348	-0.904	2.050	-1.789
a, a'	+0.121	-0.789	+0.129	-0.782	+0.191	-0.780	+0.230	-0.769
b, b'	-0.042	+0.615	-0.030	+0.623	+0.047	+0.626	+0.092	+0.639

¹ Двойная. Эфемериды дает положение более яркой звезды.

Верхняя кульминация в Гриниче

Дата	355) 34 Boo 4 ^m 93 V-3 M0		356) ε Boo 2 ^m 70 V-3 K0		357) 109 Vir 3 ^m 76 V-3 A0		655) α ² Lib 2 ^m 90 V-4 A3	
	h ^h m ^m	° ′	h ^h m ^m	° ′	h ^h m ^m	° ′	h ^h m ^m	° ′
Янв. —3.7	58.813 ^s ₃₂₂	+26 33 [″] ₂₆₀	32.822 ^s ₃₂₁	41.92 [″] ₂₆₁	44.401 ^s ₃₁₂	55.75 [″] ₂₀₈	19.188 ^s ₃₂₉	06.01 [″] ₁₄₈
6.3	59.135 ^s ₃₃₇	53.71 [″] ₂₂₈	33.143 ^s ₃₃₇	39.31 [″] ₂₂₉	44.713 ^s ₃₂₅	53.67 [″] ₁₉₉	19.517 ^s ₃₄₁	07.49 [″] ₁₅₈
16.3	59.472 ^s ₃₄₇	51.43 [″] ₁₉₃	33.480 ^s ₃₄₇	37.02 [″] ₁₉₃	45.038 ^s ₃₃₀	51.68 [″] ₁₈₆	19.858 ^s ₃₄₇	09.07 [″] ₁₆₃
26.3	59.819 ^s ₃₄₃	49.50 [″] ₁₄₅	33.827 ^s ₃₄₅	35.09 [″] ₁₄₆	45.368 ^s ₃₂₆	49.82 [″] ₁₆₄	20.205 ^s ₃₄₂	10.70 [″] ₁₆₂
Февр. 5.2	60.162 ^s ₃₃₀	48.05 [″] ₉₈	34.172 ^s ₃₃₁	33.63 [″] ₉₇	45.694 ^s ₃₁₂	48.18 [″] ₁₃₈	20.547 ^s ₃₂₈	12.32 [″] ₁₅₅
15.2	60.492 ^s ₃₁₂	47.07 [″] ₄₇	34.503 ^s ₃₁₃	32.66 [″] ₄₆	46.006 ^s ₂₉₅	46.80 [″] ₁₁₀	20.875 ^s ₃₁₀	13.87 [″] ₁₄₆
25.2	60.804 ^s ₂₈₅	46.60 [″] ₆	34.816 ^s ₂₈₇	32.20 [″] ₇	46.301 ^s ₂₇₀	45.70 [″] ₇₆	21.185 ^s ₂₈₇	15.33 [″] ₁₃₀
Март 7.2	61.089 ^s ₂₅₄	46.66 [″] ₅₃	35.103 ^s ₂₅₆	32.27 [″] ₅₅	46.571 ^s ₂₄₃	44.94 [″] ₄₆	21.472 ^s ₂₅₉	16.63 [″] ₁₁₄
17.1	61.343 ^s ₂₂₂	47.19 [″] ₉₇	35.359 ^s ₂₂₃	32.82 [″] ₉₉	46.814 ^s ₂₁₆	44.48 [″] ₁₅	21.731 ^s ₂₃₂	17.77 [″] ₉₆
27.1	61.565 ^s ₁₈₅	48.16 [″] ₁₃₆	35.582 ^s ₁₈₇	33.81 [″] ₁₃₉	47.030 ^s ₁₈₅	44.33 [″] ₁₅	21.963 ^s ₂₀₂	18.73 [″] ₇₈
Апр. 6.1	61.750 ^s ₁₄₉	49.52 [″] ₁₆₆	35.769 ^s ₁₅₀	35.20 [″] ₁₆₈	47.215 ^s ₁₅₅	44.48 [″] ₃₈	22.165 ^s ₁₇₃	19.51 [″] ₆₁
16.0	61.899 ^s ₁₁₅	51.18 [″] ₁₈₉	35.919 ^s ₁₁₇	36.88 [″] ₁₉₁	47.370 ^s ₁₂₇	44.86 [″] ₆₀	22.338 ^s ₁₄₄	20.12 [″] ₄₅
26.0	62.014 ^s ₇₉	53.07 [″] ₂₀₃	36.036 ^s ₇₉	38.79 [″] ₂₀₇	47.497 ^s ₉₇	45.46 [″] ₇₅	22.482 ^s ₁₁₃	20.57 [″] ₃₀
Май 5.9	62.093 ^s ₄₅	55.10 [″] ₂₀₈	36.115 ^s ₄₆	40.86 [″] ₂₁₁	47.594 ^s ₆₉	46.21 [″] ₈₄	22.595 ^s ₈₅	20.87 [″] ₁₇
15.9	62.138 ^s ₁₄	57.18 [″] ₂₀₉	36.161 ^s ₁₄	42.97 [″] ₂₁₂	47.663 ^s ₄₁	47.07 [″] ₉₄	22.680 ^s ₅₇	21.04 [″] ₇
Июнь 25.9	62.152 ^s ₁₉	59.27 [″] ₁₉₉	36.175 ^s ₁₉	45.09 [″] ₂₀₁	47.704 ^s ₁₃	48.01 [″] ₉₆	22.737 ^s ₂₆	21.11 [″] ₄
4.9	62.133 ^s ₄₇	61.26 [″] ₁₈₃	36.156 ^s ₄₆	47.10 [″] ₁₈₆	47.717 ^s ₁₂	48.97 [″] ₉₅	22.763 ^s ₁	21.07 [″] ₁₂
14.9	62.086 ^s ₇₄	63.09 [″] ₁₆₅	36.110 ^s ₇₅	48.96 [″] ₁₆₇	47.705 ^s ₃₈	49.92 [″] ₉₂	22.762 ^s ₃₀	20.95 [″] ₂₀
24.9	62.012 ^s ₁₀₁	64.74 [″] ₁₃₈	36.035 ^s ₁₀₂	50.63 [″] ₁₄₁	47.667 ^s ₆₄	50.84 [″] ₈₄	22.732 ^s ₅₇	20.75 [″] ₂₇
Июль 4.8	61.911 ^s ₁₂₁	66.12 [″] ₁₁₁	35.933 ^s ₁₂₁	52.04 [″] ₁₁₂	47.603 ^s ₈₃	51.68 [″] ₇₆	22.675 ^s ₈₀	20.48 [″] ₃₃
Авг. 14.8	61.790 ^s ₁₄₁	67.23 [″] ₈₂	35.812 ^s ₁₄₃	53.16 [″] ₈₃	47.520 ^s ₁₀₅	52.44 [″] ₆₈	22.595 ^s ₁₀₃	20.15 [″] ₄₀
24.8	61.649 ^s ₁₅₅	68.05 [″] ₄₆	35.669 ^s ₁₅₇	53.99 [″] ₄₈	47.415 ^s ₁₂₀	53.12 [″] ₅₄	22.492 ^s ₁₂₁	19.75 [″] ₄₅
3.7	61.494 ^s ₁₆₃	68.51 [″] ₁₅	35.512 ^s ₁₆₄	54.47 [″] ₁₄	47.295 ^s ₁₂₉	53.66 [″] ₄₂	22.371 ^s ₁₃₂	19.30 [″] ₄₉
13.7	61.331 ^s ₁₆₈	68.66 [″] ₂₁	35.348 ^s ₁₇₁	54.61 [″] ₂₀	47.166 ^s ₁₃₇	54.08 [″] ₂₈	22.239 ^s ₁₄₀	18.81 [″] ₅₃
23.7	61.163 ^s ₁₆₃	68.45 [″] ₅₇	35.177 ^s ₁₆₅	54.41 [″] ₅₈	47.029 ^s ₁₃₂	54.36 [″] ₁₂	22.099 ^s ₁₃₈	18.28 [″] ₅₄
Сент. 2.7	61.000 ^s ₁₅₂	67.88 [″] ₉₀	35.012 ^s ₁₅₄	53.83 [″] ₉₁	46.897 ^s ₁₂₄	54.48 [″] ₅	21.961 ^s ₁₂₇	17.74 [″] ₅₃
12.6	60.848 ^s ₁₃₄	66.98 [″] ₁₂₅	34.858 ^s ₁₃₆	52.92 [″] ₁₂₆	46.773 ^s ₁₀₇	54.43 [″] ₂₃	21.834 ^s ₁₁₁	17.21 [″] ₄₉
22.6	60.714 ^s ₁₀₄	65.73 [″] ₁₆₀	34.722 ^s ₁₀₇	51.66 [″] ₁₆₁	46.666 ^s ₇₉	54.20 [″] ₄₅	21.723 ^s ₈₁	16.72 [″] ₄₁
Окт. 2.6	60.610 ^s ₇₀	64.13 [″] ₁₈₉	34.615 ^s ₇₂	50.05 [″] ₁₉₁	46.587 ^s ₄₇	53.75 [″] ₆₅	21.642 ^s ₄₇	16.31 [″] ₃₀
12.6	60.540 ^s ₂₈	62.24 [″] ₂₂₁	34.543 ^s ₃₁	48.14 [″] ₂₂₃	46.540 ^s ₈	53.10 [″] ₈₈	21.595 ^s ₄	16.01 [″] ₁₅
Нояб. 22.5	60.512 ^s ₂₁	60.03 [″] ₂₄₆	34.512 ^s ₁₉	45.91 [″] ₂₄₈	46.532 ^s ₃₉	52.22 [″] ₁₁₂	21.591 ^s ₄₈	15.86 [″] ₅
1.5	60.533 ^s ₇₁	57.57 [″] ₂₆₇	34.531 ^s ₆₈	43.43 [″] ₂₆₉	46.571 ^s ₈₆	51.10 [″] ₁₃₅	21.639 ^s ₈₁	15.91 [″] ₁₇
11.5	60.604 ^s ₁₂₅	54.90 [″] ₂₈₅	34.599 ^s ₁₂₃	40.74 [″] ₂₈₈	46.657 ^s ₁₃₆	49.75 [″] ₁₅₉	21.720 ^s ₁₅₃	16.08 [″] ₅₂
21.4	60.729 ^s ₁₇₈	52.05 [″] ₂₉₄	34.722 ^s ₁₇₇	37.86 [″] ₂₉₅	46.793 ^s ₁₈₆	48.16 [″] ₁₇₇	21.873 ^s ₂₀₀	16.60 [″] ₇₄
Дек. 1.4	60.907 ^s ₂₂₄	49.11 [″] ₂₉₅	34.899 ^s ₂₂₂	34.91 [″] ₂₉₇	46.979 ^s ₂₂₈	46.39 [″] ₁₉₂	22.073 ^s ₂₄₂	17.34 [″] ₉₆
11.4	61.131 ^s ₂₆₈	46.16 [″] ₂₈₉	35.121 ^s ₂₆₈	31.94 [″] ₂₉₁	47.207 ^s ₂₆₇	44.47 [″] ₂₀₃	22.315 ^s ₂₈₃	18.30 [″] ₁₁₈
21.4	61.399 ^s ₃₀₂	43.27 [″] ₂₇₂	35.389 ^s ₃₀₁	29.03 [″] ₂₇₃	47.474 ^s ₂₉₆	42.44 [″] ₂₀₅	22.598 ^s ₃₁₃	19.48 [″] ₁₃₇
31.3	61.701 ^s ₃₂₅	40.55 [″] ₂₄₇	35.690 ^s ₃₂₅	26.30 [″] ₂₄₈	47.770 ^s ₃₁₅	40.39 [″] ₂₀₃	22.911 ^s ₃₃₁	20.85 [″] ₁₄₉
41.3	62.026 ^s ₃₄₁	38.08 [″] ₂₁₅	36.015 ^s ₃₄₁	23.82 [″] ₂₁₅	48.085 ^s ₃₂₇	38.36 [″] ₁₉₃	23.242 ^s ₃₄₄	22.34 [″] ₁₅₉
Средн. место J1990.5	60.310	64.40	34.322	50.20	46.077	57.02	21.102	09.74
Sec δ, tg δ	1.118	+0.500	1.123	+0.512	1.001	+0.034	1.040	—0.287
a, a'	+0.131	—0.758	+0.131	—0.753	+0.152	—0.750	+0.166	—0.736
b, b'	—0.025	+0.653	—0.026	+0.658	—0.002	+0.662	+0.014	+0.677

Дата	360) β U Mi		358) ξ Boo ¹		359) Grb 2164 Dra		361) 2 H U Mi		
	2 ^m 24 V-5 K5		4 ^m 64 V-5 G5		5 ^m 67 V-5 K2		4 ^m 86 V-6 M3		
	h m	+74° 11'	h m	+19° 07'	h m	+59° 19'	h m	+65° 57'	
	14 50		14 50		14 51		14 57		
	s	"	s	"	s	"	s	"	
Янв.	—3.6	41.612 ⁷⁰²	23.43 ²⁶³	55.484 ³¹²	76.16 ²⁴⁸	10.335 ⁴³⁶	41.91 ²⁷⁹	24.057 ⁵⁰²	57.15 ²⁷⁹
	6.3	42.314 ⁷⁸⁰	20.80 ²⁰⁷	55.796 ³²⁷	73.68 ²²⁴	10.771 ⁴⁷⁵	39.12 ²²⁸	24.559 ⁵⁵⁴	54.36 ²²⁷
	16.3	43.094 ⁸⁴¹	18.73 ¹⁴⁸	56.123 ³³⁵	71.44 ¹⁹⁵	11.246 ⁵⁰²	36.84 ¹⁷²	25.113 ⁵⁹⁵	52.09 ¹⁷⁰
	26.3	43.935 ⁸⁶⁷	17.25 ⁷⁸	56.458 ³³³	69.49 ¹⁵⁵	11.748 ⁵¹²	35.12 ¹⁰⁶	25.708 ⁶¹²	50.39 ¹⁰²
Февр.	5.2	44.802 ⁸⁵⁶	16.47 ¹²	56.791 ³²¹	67.94 ¹¹²	12.260 ⁵⁰¹	34.06 ⁴⁰	26.320 ⁶⁰³	49.37 ³⁵
	15.2	45.658 ⁸²⁵	16.35 ⁵⁶	57.112 ³⁰⁴	66.82 ⁶⁸	12.761 ⁴⁸⁰	33.66 ²⁶	26.923 ⁵⁸⁴	49.02 ³²
	25.2	46.483 ⁷⁵⁸	16.91 ¹²³	57.416 ²⁸⁰	66.14 ²⁰	13.241 ⁴⁴¹	33.92 ⁹⁴	27.507 ⁵³⁹	49.34 ¹⁰¹
Март	7.2	47.241 ⁶⁶⁶	18.14 ¹⁷⁹	57.696 ²⁵¹	65.94 ²³	13.682 ³⁹⁰	34.86 ¹⁵⁰	28.046 ⁴⁷⁸	50.35 ¹⁵⁸
	17.1	47.907 ⁶⁶³	19.93 ²³⁰	57.947 ²²¹	66.17 ⁶⁵	14.072 ³³⁵	36.36 ²⁰³	28.524 ⁴¹²	51.93 ²¹¹
	27.1	48.470 ⁴³²	22.23 ²⁷¹	58.168 ¹⁸⁸	66.82 ¹⁰²	14.407 ²⁶⁸	38.39 ²⁴⁷	28.936 ³²⁷	54.04 ²⁵⁷
Апр.	6.1	48.902 ²⁹⁹	24.94 ²⁹⁷	58.356 ¹⁵⁵	67.84 ¹³⁰	14.675 ¹⁹⁹	40.86 ²⁷⁷	29.263 ²⁴⁰	56.61 ²⁸⁵
	16.1	49.201 ¹⁶³	27.91 ³¹⁶	58.511 ¹²⁴	69.14 ¹⁵⁵	14.874 ¹³¹	43.63 ²⁹⁹	29.503 ¹⁵⁴	59.46 ³⁰⁹
	26.0	49.364 ¹⁶	31.07 ³²²	58.635 ⁹⁰	70.69 ¹⁷⁰	15.005 ⁵⁷	46.62 ³⁰⁹	29.657 ⁵⁹	62.55 ³¹⁸
Май	5 ²	49.380 ¹¹⁶	34.29 ³¹³	58.725 ⁶⁰	72.39 ¹⁷⁸	15.062 ⁹	49.71 ³⁰⁶	29.716 ²⁷	65.73 ³¹⁴
	15.9	49.264 ²⁴³	37.42 ²⁹⁹	58.785 ²⁹	74.17 ¹⁸⁰	15.053 ⁷³	52.77 ²⁹⁶	29.689 ¹¹⁰	68.87 ³⁰⁴
Июнь	25.9	49.021 ³⁶⁸	40.41 ²⁷²	58.814 ²	75.97 ¹⁷⁶	14.980 ¹³⁷	55.73 ²⁷⁴	29.579 ¹⁹³	71.91 ²⁸¹
	4.9	48.653 ⁴⁶⁸	43.13 ²³⁷	58.812 ²⁸	77.73 ¹⁶³	14.843 ¹⁸⁹	58.47 ²⁴³	29.386 ²⁶⁰	74.72 ²⁴⁹
	14.9	48.185 ⁵⁶⁴	45.50 ¹⁹⁹	58.784 ⁵⁶	79.36 ¹⁵¹	14.654 ²³⁹	60.90 ²¹⁰	29.126 ³²⁶	77.21 ²¹⁴
	24.9	47.621 ⁶⁴³	47.49 ¹⁵¹	58.728 ⁸²	80.87 ¹²⁹	14.415 ²⁸³	63.00 ¹⁶⁶	28.800 ³⁸²	79.35 ¹⁶⁹
Июль	4.8	46.978 ⁶⁹⁸	49.00 ¹⁰²	58.646 ¹⁰³	82.16 ¹⁰⁷	14.132 ³¹⁵	64.66 ¹²¹	28.418 ⁴²³	81.04 ¹²²
	14.8	46.280 ⁷⁴⁹	50.02 ⁵¹	58.543 ¹²³	83.23 ⁸³	13.817 ³⁴⁶	65.87 ⁷⁴	27.995 ⁴⁶²	82.26 ⁷⁴
	24.8	45.531 ⁷⁷⁴	50.53 ⁵	58.420 ¹³⁹	84.06 ⁵⁴	13.471 ³⁶⁴	66.61 ²⁰	27.533 ⁴⁸⁴	83.00 ¹⁹
Авг.	3.8	44.757 ⁷⁷⁹	50.48 ⁵⁵	58.281 ¹⁴⁹	84.60 ²⁸	13.107 ³⁷²	66.81 ²⁸	27.049 ⁴⁹³	83.19 ³²
	13.7	43.978 ⁷⁷⁷	49.93 ¹⁰⁸	58.132 ¹⁵⁴	84.88 ²	12.735 ³⁷⁵	66.53 ⁷⁹	26.556 ⁴⁹⁸	82.87 ⁸³
	23.7	43.201 ⁷⁴⁵	48.85 ¹⁶⁰	57.978 ¹⁵²	84.86 ³⁴	12.360 ³⁶²	65.74 ¹³¹	26.058 ⁴⁸¹	82.04 ¹³⁶
Сент.	2.7	42.456 ⁶⁹⁹	47.25 ²⁰⁵	57.826 ¹⁴²	84.52 ⁶²	11.998 ³⁴⁰	64.43 ¹⁷⁵	25.577 ⁴⁵⁴	80.68 ¹⁸²
	12.6	41.757 ⁶⁴⁰	45.20 ²⁵⁰	57.684 ¹²⁵	83.90 ⁹⁴	11.658 ³¹⁰	62.68 ²²²	25.123 ⁴¹⁸	78.86 ²²⁸
	22.6	41.117 ⁵⁵¹	42.70 ²⁸⁹	57.559 ⁹⁸	82.96 ¹²⁴	11.348 ²⁶³	60.46 ²⁶³	24.705 ³⁶⁰	76.58 ²⁷¹
Окт.	2.6	40.566 ⁴⁵⁵	39.81 ³²¹	57.461 ⁶⁵	81.72 ¹⁵²	11.085 ²⁰⁹	57.83 ²⁹⁷	24.345 ²⁹⁵	73.87 ³⁰⁴
	12.6	40.111 ³⁴¹	36.60 ³⁵¹	57.396 ²⁶	80.20 ¹⁸²	10.876 ¹⁴⁴	54.86 ³³⁰	24.050 ²¹⁸	70.83 ³³⁷
Нояб.	22.5	39.770 ²⁰⁵	33.09 ³⁷⁰	57.370 ²²	78.38 ²⁰⁸	10.732 ⁶⁸	51.56 ³⁵³	23.832 ¹²⁵	67.46 ³⁶¹
	1.5	39.565 ⁷¹	29.39 ³⁸⁰	57.392 ⁷¹	76.30 ²³⁰	10.664 ⁹	48.03 ³⁶⁸	23.707 ³¹	63.85 ³⁷⁴
	11.5	39.494 ⁷³¹	25.59 ³⁸⁶	57.463 ¹²²	74.00 ²⁵⁰	10.673 ⁹⁴	44.35 ³⁷³	23.676 ⁷²	60.11 ³⁸⁴
	21.5	39.573 ²³⁹	21.73 ³⁷⁵	57.585 ¹⁷³	71.50 ²⁶²	10.767 ¹⁸¹	40.56 ³⁷⁹	23.748 ¹⁷⁷	56.27 ³⁷⁹
Дек.	1.4	39.804 ³⁷⁰	17.98 ³⁵⁹	57.758 ²¹⁸	68.88 ²⁶⁷	10.948 ²⁵⁷	36.83 ³⁶²	23.925 ²⁷⁴	52.48 ³⁶⁵
	11.4	40.174 ⁵¹¹	14.39 ³³⁰	57.976 ²⁶¹	66.21 ²⁶⁸	11.205 ³³⁵	33.21 ³⁴⁰	24.199 ³⁷²	48.83 ³⁴²
	21.4	40.685 ⁶³²	11.09 ²⁸⁹	58.237 ²⁹³	63.53 ²⁵⁶	11.540 ³⁹⁹	29.81 ³⁰²	24.571 ⁴⁵⁴	45.41 ³⁰⁴
	31.3	41.317 ⁷²⁸	08.20 ²⁴²	58.530 ³¹⁵	60.97 ²³⁹	11.939 ⁴⁴⁸	26.79 ²⁶⁰	25.025 ⁵¹⁸	42.37 ²⁶⁰
	41.3	42.045 ⁸⁰⁷	05.78 ¹⁸⁴	58.845 ³³⁰	58.58 ²¹²	12.387 ⁴⁸⁷	24.19 ²⁰⁶	25.543 ⁵⁷²	39.77 ²⁰⁴
Средн. место J1990.5		43.567	39.65	57.059	82.48	11.904	56.68	25.802	72.58
Средн. δ , tg δ		3.671	+3.533	1.059	+0.347	1.961	+1.686	2.456	+2.243
a, a'		—0.006	—0.735	+0.138	—0.734	+0.077	—0.734	+0.049	—0.715
b, b'		—0.173	+0.678	—0.017	+0.679	—0.082	+0.679	—0.107	+0.699

¹ Двойная. Эфемериды дает положение более яркой звезды.² Для звезды 361) май 6.0.

ВИДИМЫЕ МЕСТА ЗВЕЗД 1990

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Верхняя кульминация в Гриниче

Дата	373) α Cr B		660) γ Lup m		661) ν Lib		374) ζ^2 Cr B	
	2 ^m 31 V-16 A0		2 ^m 95 V-16 B3		3 ^m 78 V-16 K2		5 ^m 07 V-17 B8	
	^h ^m 15 34	^o ['] +26 44	^h ^m 15 34	^o ['] -41 08	^h ^m 15 36	^o ['] -28 06	^h ^m 15 38	^o ['] +36 39
Янв. —3.6	15.364 ²⁸⁷	38.08 ²⁷⁵	27.564 ³⁷⁷	00.83 ⁸	24.396 ³³⁰	10.79 ⁶⁷	59.411 ²⁹²	48.12 ²⁹⁷
6.4	15.651 ³¹⁰	35.33 ²⁴⁸	27.941 ⁴⁰⁰	00.91 ³⁷	24.726 ³⁵⁰	11.46 ⁸⁶	59.703 ³²³	45.15 ²⁶⁴
16.3	15.961 ³²⁹	32.85 ²¹⁶	28.341 ⁴¹⁷	01.28 ⁶⁶	25.076 ³⁶⁵	12.32 ¹⁰²	60.026 ³⁴⁵	42.51 ²²⁵
26.3	16.290 ³³⁷	30.69 ¹⁷¹	28.758 ⁴²³	01.94 ⁹¹	25.441 ³⁶⁸	13.34 ¹¹⁵	60.371 ³⁵⁷	40.26 ¹⁷⁴
Февр. 5.3	16.627 ³³⁴	28.98 ¹²⁴	29.181 ⁴¹⁵	02.85 ¹¹²	25.809 ³⁶²	14.49 ¹²²	60.728 ³⁵⁶	38.52 ¹¹⁹
15.2	16.961 ³²⁵	27.74 ⁷⁴	29.596 ⁴⁰⁵	03.97 ¹³⁰	26.171 ³⁵³	15.71 ¹²⁶	61.084 ³⁵⁰	37.33 ⁶³
25.2	17.286 ³⁰⁹	27.00 ¹⁹	30.001 ³⁸⁵	05.27 ¹⁴³	26.524 ³³⁵	16.97 ¹²⁵	61.434 ³³³	36.70 ⁰
Март 7.2	17.595 ²⁸⁵	26.81 ³²	30.386 ³⁵⁹	06.70 ¹⁵²	26.859 ³¹³	18.22 ¹²²	61.767 ³⁰⁹	36.70 ⁵⁵
17.2	17.880 ²⁶¹	27.13 ⁸⁰	30.745 ³³⁵	08.22 ¹⁵⁹	27.172 ²⁹⁰	19.44 ¹¹⁶	62.076 ²⁸²	37.25 ¹⁰⁹
27.1	18.141 ²³¹	27.93 ¹²⁶	31.080 ³⁰²	09.81 ¹⁶²	27.462 ²⁶⁴	20.60 ¹¹⁰	62.358 ²⁴⁸	38.34 ¹⁵⁸
Апр. 6.1	18.372 ¹⁹⁸	29.19 ¹⁶⁰	31.382 ²⁷⁰	11.43 ¹⁶²	27.726 ²³⁵	21.70 ¹⁰¹	62.606 ²¹²	39.92 ¹⁹⁷
16.1	18.570 ¹⁶⁸	30.79 ¹⁹¹	31.652 ²³⁸	13.05 ¹⁶²	27.961 ²⁰⁸	22.71 ⁹⁴	62.818 ¹⁷⁶	41.89 ²²⁹
26.1	18.738 ¹³¹	32.70 ²¹²	31.890 ¹⁹⁹	14.67 ¹⁵⁷	28.169 ¹⁷⁶	23.65 ⁸⁴	62.994 ¹³⁵	44.18 ²⁵²
Май 6.0	18.869 ⁹⁸	34.82 ²²³	32.089 ¹⁶²	16.24 ¹⁵²	28.345 ¹⁴⁴	24.49 ⁷⁷	63.129 ⁹⁶	46.70 ²⁶²
16.0	18.967 ⁶³	37.05 ²³⁹	32.251 ¹²³	17.76 ¹⁴⁴	28.489 ¹¹²	25.26 ⁶⁸	63.225 ⁵⁶	49.32 ²⁶⁸
Июнь 25.9	19.030 ²⁸	39.34 ²²⁵	32.374 ⁷⁹	19.20 ¹³³	28.601 ⁷⁶	25.94 ⁵⁹	63.281 ¹⁵	52.00 ²⁶¹
4.9	19.058 ⁶	41.59 ²¹⁴	32.453 ³⁹	20.53 ¹²¹	28.677 ⁴²	26.53 ⁵⁰	63.296 ²²	54.61 ²⁴⁶
14.9	19.052 ³⁹	43.73 ¹⁹⁹	32.492 ⁴	21.74 ¹⁰⁶	28.719 ⁶	27.03 ⁴⁰	63.274 ⁶¹	57.07 ²²⁹
24.9	19.013 ⁷²	45.72 ¹⁷⁵	32.488 ⁴⁷	22.80 ⁸⁷	28.725 ³¹	27.43 ²⁹	63.213 ⁹⁸	59.36 ¹⁹⁹
Июль 4.9	18.941 ¹⁰¹	47.47 ¹⁴⁹	32.441 ⁸⁵	23.67 ⁶⁷	28.694 ⁶³	27.72 ¹⁷	63.115 ¹²⁸	61.35 ¹⁶⁹
14.8	18.840 ¹²⁹	48.96 ¹²¹	32.356 ¹²³	24.34 ⁴⁴	28.631 ⁹⁷	27.89 ³	62.987 ¹⁶⁰	63.04 ¹³⁵
24.8	18.711 ¹⁵¹	50.17 ⁸⁶	32.233 ¹⁵⁵	24.78 ¹⁸	28.534 ¹²³	27.92 ¹⁰	62.827 ¹⁸⁴	64.39 ⁹³
Авг. 3.8	18.560 ¹⁶⁸	51.03 ⁵⁴	32.078 ¹⁷⁷	24.96 ⁷	28.411 ¹⁴⁴	27.82 ²⁴	62.643 ²⁰²	65.32 ⁵⁵
13.8	18.392 ¹⁸²	51.57 ¹⁸	31.901 ¹⁹⁷	24.89 ³⁵	28.267 ¹⁶¹	27.58 ⁴⁰	62.441 ²¹⁷	65.87 ¹³
23.7	18.210 ¹⁸⁵	51.75 ²⁰	31.704 ²⁰¹	24.54 ⁶¹	28.106 ¹⁶⁷	27.18 ⁵²	62.224 ²²⁰	66.00 ³²
Сент. 2.7	18.025 ¹⁸²	51.55 ⁵⁴	31.503 ¹⁹⁶	23.93 ⁸⁵	27.939 ¹⁶²	26.66 ⁶⁵	62.004 ²¹⁶	65.68 ⁷²
12.7	17.843 ¹⁷¹	51.01 ⁹³	31.307 ¹⁸¹	23.08 ¹⁰⁷	27.777 ¹⁵²	26.01 ⁷⁴	61.788 ²⁰⁶	64.96 ¹¹⁵
22.6	17.672 ¹⁴⁸	50.08 ¹²⁹	31.126 ¹⁵⁰	22.01 ¹²⁴	27.625 ¹²⁵	25.27 ⁸⁰	61.582 ¹⁸¹	63.81 ¹⁵⁷
Окт. 2.6	17.524 ¹¹⁹	48.79 ¹⁶¹	30.976 ¹¹²	20.77 ¹³⁶	27.500 ⁹³	24.47 ⁸¹	61.401 ¹⁵⁰	62.24 ¹⁹³
12.6	17.405 ⁸¹	47.18 ¹⁹⁷	30.864 ⁶²	19.41 ¹⁴²	27.407 ⁵¹	23.66 ⁸⁰	61.251 ¹¹¹	60.31 ²³²
Нояб. 22.6	17.324 ³⁵	45.21 ²²⁶	30.802 ¹	17.99 ¹⁴²	27.356 ¹	22.86 ⁷⁰	61.140 ⁶¹	57.99 ²⁶³
1.5	17.289 ¹³	42.95 ²⁵¹	30.801 ⁵⁹	16.57 ¹³³	27.357 ⁵⁴	22.16 ⁵⁷	61.079 ⁹	55.36 ²⁸⁹
11.5	17.302 ⁶⁸	40.44 ²⁷⁵	30.860 ¹²⁶	15.24 ¹¹⁹	27.411 ¹⁰⁸	21.59 ⁴⁰	61.070 ⁴⁹	52.47 ³¹²
21.5	17.370 ¹²²	37.69 ²⁸⁸	30.986 ¹⁹²	14.05 ¹⁰⁰	27.519 ¹⁶⁸	21.19 ²⁴	61.119 ¹⁰⁹	49.35 ³²⁴
Дек. 1.5	17.492 ¹⁷²	34.81 ²⁹⁵	31.178 ²⁵¹	13.05 ⁷⁴	27.687 ²²⁰	20.95 ⁰	61.228 ¹⁶³	46.11 ³²⁸
11.4	17.664 ²⁶¹	31.86 ²⁹⁵	31.429 ³⁰⁷	12.31 ⁴⁶	27.907 ²⁶⁹	20.95 ²⁶	61.391 ²¹⁸	42.83 ³²⁶
21.4	17.885 ²⁶²	28.91 ²⁸³	31.736 ³⁵¹	11.85 ¹⁴	28.176 ³⁰⁷	21.21 ⁵⁰	61.609 ²⁶⁵	39.57 ³⁰⁸
31.4	18.147 ²⁹³	26.08 ²⁶⁵	32.087 ³⁸³	11.71 ¹⁶	28.483 ³³⁵	21.71 ⁷²	61.874 ³⁰²	36.49 ²⁸⁴
41.3	18.440 ³¹⁸	23.43 ²³⁵	32.470 ⁴⁰⁸	11.87 ⁴⁶	28.818 ³⁵⁶	22.43 ⁹⁰	62.176 ³³¹	33.65 ²⁴⁹
Средн. место J1990.5	17.126	46.72	30.309	07.62	26.757	14.75	61.190	58.72
Sec δ , tg δ	1.120	+0.504	1.328	-0.873	1.134	-0.534	1.247	+0.744
a, a'	+0.126	-0.594	+0.200	-0.593	+0.182	-0.586	+0.113	-0.577
b, b'	-0.020	+0.805	+0.035	+0.805	+0.021	+0.810	-0.029	+0.817

Верхняя кульминация в Гриниче

Дата	399) η Dra		398) ω Her		402) A Dra		666) α Sco ¹	
	2 ^m 89 V-28 G5		4 ^m 53 V-28 A0p		4 ^m 98 V-29 B8p		1 ^m 22 V-29 M0 A3	
	h m	° ′	h m	° ′	h m	° ′	h m	° ′
	16 23	+61 31	16 24	+14 02	16 27	+68 46	16 28	—26 24
Янв. —3.6	49.211 ^s ₃₀₈	55.29 [″] ₃₃₉	56.629 ^s ₂₄₃	70.12 [″] ₂₃₇	57.006 ^s ₃₅₁	66.26 [″] ₃₃₉	46.941 ^s ₂₈₆	41.44 [″] ₃₇
6.4	49.519 ^s ₃₇₇	51.90 [″] ₃₀₃	56.872 ^s ₂₇₀	67.75 [″] ₂₂₄	57.357 ^s ₄₄₄	62.87 [″] ₃₀₄	47.227 ^s ₃₁₃	41.81 [″] ₅₂
16.4	49.896 ^s ₄₃₆	48.87 [″] ₂₆₁	57.142 ^s ₂₉₃	65.51 [″] ₂₀₅	57.801 ^s ₅₂₆	59.83 [″] ₂₆₁	47.540 ^s ₃₃₆	42.33 [″] ₆₄
26.3	50.332 ^s ₄₈₁	46.26 [″] ₂₀₄	57.435 ^s ₃₀₈	63.46 [″] ₁₇₅	58.327 ^s ₅₉₃	57.22 [″] ₂₀₃	47.876 ^s ₃₅₁	42.97 [″] ₇₃
Февр. 5.3	50.813 ^s ₅₀₆	44.22 [″] ₁₄₃	57.743 ^s ₃₁₁	61.71 [″] ₁₄₁	58.920 ^s ₆₃₀	55.19 [″] ₁₄₂	48.227 ^s ₃₅₃	43.70 [″] ₇₉
15.3	51.319 ^s ₅₁₉	42.79 [″] ₇₈	58.054 ^s ₃₁₃	60.30 [″] ₁₀₂	59.550 ^s ₆₅₄	53.77 [″] ₇₇	48.580 ^s ₃₅₂	44.49 [″] ₈₁
25.3	51.838 ^s ₅₁₅	42.01 [″] ₆	58.367 ^s ₃₀₅	59.28 [″] ₅₇	60.204 ^s ₆₅₃	53.00 [″] ₄	48.932 ^s ₃₄₆	45.30 [″] ₇₉
Март 7.2	52.353 ^s ₄₉₂	41.95 [″] ₅₉	58.672 ^s ₂₉₂	58.71 [″] ₁₄	60.857 ^s ₆₂₇	52.96 [″] ₆₁	49.278 ^s ₃₃₂	46.09 [″] ₇₆
17.2	52.845 ^s ₄₆₂	42.54 [″] ₁₂₄	58.964 ^s ₂₇₈	58.57 [″] ₂₈	61.484 ^s ₅₉₀	53.57 [″] ₁₂₆	49.610 ^s ₃₁₈	46.85 [″] ₇₁
27.2	53.307 ^s ₄₁₅	43.78 [″] ₁₈₃	59.242 ^s ₂₅₇	58.85 [″] ₇₀	62.074 ^s ₅₂₈	54.83 [″] ₁₈₆	49.928 ^s ₂₉₈	47.56 [″] ₆₅
Апр. 6.1	53.722 ^s ₃₅₉	45.61 [″] ₂₃₁	59.499 ^s ₂₃₅	59.55 [″] ₁₀₄	62.602 ^s ₄₅₄	56.69 [″] ₂₃₄	50.226 ^s ₂₇₇	48.21 [″] ₅₉
16.1	54.081 ^s ₃₀₀	47.92 [″] ₂₇₃	59.734 ^s ₂₁₁	60.59 [″] ₁₃₅	63.056 ^s ₃₇₅	59.03 [″] ₂₇₆	50.503 ^s ₂₅₄	48.80 [″] ₅₄
26.1	54.381 ^s ₂₂₇	50.65 [″] ₃₀₄	59.945 ^s ₁₈₃	61.94 [″] ₁₅₉	63.431 ^s ₂₇₆	61.79 [″] ₃₀₈	50.757 ^s ₂₂₆	49.34 [″] ₄₈
Май 6.1	54.608 ^s ₁₅₆	53.69 [″] ₃₂₀	60.128 ^s ₁₅₅	63.53 [″] ₁₇₅	63.707 ^s ₁₈₀	64.87 [″] ₃₂₄	50.983 ^s ₁₉₈	49.82 [″] ₄₅
16.0	54.764 ^s ₈₃	56.89 [″] ₃₃₁	60.283 ^s ₁₂₅	65.28 [″] ₁₈₆	63.887 ^s ₈₂	68.11 [″] ₃₃₄	51.181 ^s ₁₆₆	50.27 [″] ₄₀
26.0	54.847 ^s ₄	60.20 [″] ₃₂₈	60.408 ^s ₉₀	67.14 [″] ₁₈₉	63.969 ^s ₂₆	71.45 [″] ₃₃₂	51.347 ^s ₁₃₀	50.67 [″] ₃₇
Июнь 4.9	54.851 ^s ₆₇	63.48 [″] ₃₁₄	60.498 ^s ₅₇	69.03 [″] ₁₆₆	63.943 ^s ₁₂₀	74.77 [″] ₃₁₈	51.477 ^s ₉₄	51.04 [″] ₃₄
14.9	54.784 ^s ₁₃₉	66.62 [″] ₂₉₇	60.555 ^s ₂₃	70.89 [″] ₁₇₉	63.823 ^s ₂₁₆	77.95 [″] ₂₆₉	51.571 ^s ₅₆	51.38 [″] ₃₁
24.9	54.645 ^s ₂₀₈	69.59 [″] ₂₆₅	60.578 ^s ₁₃	72.68 [″] ₁₆₅	63.607 ^s ₃₀₉	80.94 [″] ₂₉₉	51.627 ^s ₁₄	51.69 [″] ₂₆
Июль 4.9	54.437 ^s ₂₆₇	72.24 [″] ₂₃₁	60.565 ^s ₄₇	74.33 [″] ₁₄₈	63.298 ^s ₃₆₅	83.63 [″] ₂₃₂	51.641 ^s ₂₃	51.95 [″] ₂₀
14.9	54.170 ^s ₃₂₄	74.55 [″] ₁₉₁	60.518 ^s ₈₀	75.81 [″] ₁₂₉	62.913 ^s ₄₆₀	85.95 [″] ₁₉₄	51.618 ^s ₆₃	52.15 [″] ₁₄
24.8	53.846 ^s ₃₇₂	76.46 [″] ₁₄₄	60.438 ^s ₁₁₀	77.10 [″] ₁₀₅	62.453 ^s ₅₂₁	87.89 [″] ₁₄₆	51.555 ^s ₉₈	52.29 [″] ₅
Авг. 3.8	53.474 ^s ₄₀₇	77.90 [″] ₉₈	60.328 ^s ₁₃₁	78.15 [″] ₈₂	61.932 ^s ₅₆₆	89.35 [″] ₉₈	51.457 ^s ₁₂₇	52.34 [″] ₄
13.8	53.067 ^s ₄₃₈	78.88 [″] ₄₈	60.194 ^s ₁₅₅	78.97 [″] ₅₆	61.366 ^s ₆₀₅	90.33 [″] ₄₈	51.330 ^s ₁₅₂	52.30 [″] ₁₅
23.8	52.629 ^s ₄₅₁	79.36 [″] ₇	60.039 ^s ₁₆₉	79.53 [″] ₂₇	60.761 ^s ₆₂₃	90.81 [″] ₆	51.178 ^s ₁₆₈	52.15 [″] ₂₆
Сент. 2.7	52.178 ^s ₄₅₃	79.29 [″] ₅₅	59.870 ^s ₁₇₂	79.80 [″] ₁	60.138 ^s ₆₂₄	90.75 [″] ₅₆	51.010 ^s ₁₇₄	51.89 [″] ₃₆
12.7	51.725 ^s ₄₄₆	78.74 [″] ₁₀₈	59.698 ^s ₁₇₁	79.81 [″] ₂₉	59.514 ^s ₆₁₅	90.19 [″] ₁₀₉	50.836 ^s ₁₇₁	51.53 [″] ₄₆
22.7	51.279 ^s ₄₁₈	77.66 [″] ₁₅₉	59.527 ^s ₁₅₆	79.52 [″] ₅₈	58.899 ^s ₅₈₁	89.10 [″] ₁₆₀	50.665 ^s ₁₅₆	51.07 [″] ₅₃
Окт. 2.7	50.861 ^s ₃₈₁	76.07 [″] ₂₀₃	59.371 ^s ₁₃₄	78.94 [″] ₈₆	58.318 ^s ₅₃₄	87.50 [″] ₂₀₄	50.509 ^s ₁₃₁	50.54 [″] ₅₈
12.6	50.480 ^s ₃₃₀	74.04 [″] ₂₄₉	59.237 ^s ₁₀₅	78.08 [″] ₁₁₆	57.784 ^s ₄₇₂	85.46 [″] ₂₅₁	50.378 ^s ₉₆	49.96 [″] ₆₁
22.6	50.150 ^s ₂₆₂	71.55 [″] ₂₉₈	59.132 ^s ₆₄	76.92 [″] ₁₄₄	57.312 ^s ₃₈₆	82.95 [″] ₂₉₀	50.282 ^s ₅₀	49.35 [″] ₅₇
Нояб. 1.6	49.888 ^s ₁₉₀	68.67 [″] ₃₁₉	59.068 ^s ₂₂	75.48 [″] ₁₆₉	56.926 ^s ₂₉₅	80.05 [″] ₃₂₁	50.232 ^s ₂	48.78 [″] ₅₂
11.5	49.698 ^s ₁₀₅	65.48 [″] ₃₄₈	59.046 ^s ₂₈	73.79 [″] ₁₉₅	56.631 ^s ₁₈₈	76.84 [″] ₃₄₉	50.230 ^s ₅₄	48.26 [″] ₄₀
21.5	49.593 ^s ₁₀₂	62.00 [″] ₃₆₄	59.074 ^s ₈₀	71.84 [″] ₂₁₄	56.443 ^s ₇₀	73.35 [″] ₃₆₅	50.284 ^s ₁₀₈	47.86 [″] ₁₉
Дек. 1.5	49.581 ^s ₇₆	58.36 [″] ₃₇₀	59.154 ^s ₁₂₇	69.70 [″] ₂₂₈	56.373 ^s ₄₄	69.70 [″] ₃₇₂	50.392 ^s ₁₆₀	47.67 [″] ₂₁
11.5	49.657 ^s ₁₆₉	54.66 [″] ₃₇₀	59.281 ^s ₁₇₅	67.42 [″] ₂₃₈	56.417 ^s ₁₆₅	65.98 [″] ₃₇₀	50.552 ^s ₂₁₆	47.46 [″] ₅
21.4	49.826 ^s ₂₅₆	50.96 [″] ₃₅₁	59.456 ^s ₂₁₇	65.04 [″] ₂₃₈	56.582 ^s ₂₈₂	62.28 [″] ₃₅₂	50.768 ^s ₂₆₀	47.51 [″] ₂₃
31.4	50.082 ^s ₃₀₁	47.45 [″] ₃₂₅	59.673 ^s ₂₅₀	62.66 [″] ₂₃₁	56.864 ^s ₃₈₂	58.76 [″] ₃₂₅	51.028 ^s ₂₉₃	47.74 [″] ₄₀
41.4	50.413 ^s ₄₃₁	44.20 [″] ₂₈₈	59.923 ^s ₂₇₉	60.35 [″] ₂₁₆	57.246 ^s ₄₇₉	55.51 [″] ₂₈₈	51.321 ^s ₃₂₂	48.14 [″] ₅₅
Средн. место J1990.5	51.663	68.17	58.630	76.85	59.927	79.38	49.444	41.45
Sec δ , tg δ	2.098	+1.845	1.031	+0.250	2.764	+2.577	1.117	—0.497
a, a'	+0.041	—0.407	+0.138	—0.403	—0.005	—0.391	+0.184	—0.387
b, b'	—0.050	+0.913	—0.007	+0.915	—0.067	+0.921	+0.013	+0.922

¹ Двойная. Эфемерида дает положение более яркой звезды.

ВИДИМЫЕ МЕСТА ЗВЕЗД 1990

Верхняя кульминация в Гриниче

Дата	407) Grb 2377 Dra		668) α Tr A		408) 52 Her		669) ϵ Sco		
	4 ^m 88 VI-3 F0		1 ^m 88 VI-3 K2		4 ^m 86 VI-4 A2p		2 ^m 36 VI-4 K0		
	h m 16 45	+56 47'	h m 16 47	-69 00'	h m 16 48	+45 59'	h m 16 49	-34 16'	
	^s	"	^s	"	^s	"	^s	"	
Янв.	—3.6	04.505 ²⁵⁴	43.44 ³⁴⁶	33.417 ⁵⁶⁰	37.58 ¹⁹⁴	55.332 ²²⁸	47.62 ³³⁴	30.089 ²⁸⁵	36.22 ²¹
	6.4	04.759 ³¹⁵	39.98 ³¹⁵	33.977 ⁶⁴⁰	35.64 ¹⁵⁹	55.560 ²⁷⁵	44.28 ³⁰⁴	30.374 ³²⁰	36.01 ³
	16.4	05.074 ³⁷⁰	36.83 ²⁷⁸	34.617 ⁷⁰⁹	34.05 ¹²²	55.835 ³¹⁷	41.20 ²⁷⁸	30.694 ³⁴⁶	35.98 ¹⁵
	26.4	05.444 ⁴¹⁵	34.05 ²²⁵	35.326 ⁷⁶¹	32.83 ⁷⁹	56.152 ³⁵¹	38.46 ²²⁶	31.040 ³⁶⁶	36.13 ³⁰
Февр.	5.3	05.859 ⁴⁴¹	31.80 ¹⁶⁸	36.087 ⁷⁸⁶	32.04 ³⁹	56.503 ³⁶⁸	36.20 ¹⁷³	31.406 ³⁷³	36.43 ⁴²
	15.3	06.300 ⁴⁵⁸	30.12 ¹⁰⁵	36.873 ⁸⁰³	31.65 ¹	56.871 ³⁸¹	34.47 ¹¹⁴	31.779 ³⁷⁷	36.85 ⁵²
	25.3	06.758 ⁴⁶⁰	29.07 ³⁵	37.676 ⁸⁰¹	31.66 ⁴³	57.252 ³⁸²	33.33 ⁴⁷	32.156 ³⁷³	37.37 ⁶⁰
Март	7.2	07.218 ⁴⁴⁶	28.72 ³¹	38.477 ⁷⁸²	32.09 ⁸⁰	57.634 ³⁷¹	32.86 ¹⁵	32.529 ³⁶³	37.97 ⁶⁴
	17.2	07.664 ⁴²⁸	29.03 ⁹⁵	39.259 ⁷⁵⁹	32.89 ¹¹⁴	58.005 ³⁵⁷	33.01 ⁷⁸	32.892 ³⁵²	38.61 ⁶⁹
	27.2	08.092 ³⁹²	29.98 ¹⁵⁹	40.018 ⁷¹⁷	34.03 ¹⁴⁷	58.362 ³³²	33.79 ¹³⁸	33.244 ³³³	39.30 ⁷¹
Апр.	6.2	08.484 ³⁵⁰	31.57 ²⁰⁸	40.735 ⁶⁶⁵	35.50 ¹⁷⁵	58.694 ²⁹⁹	35.17 ¹⁸⁸	33.577 ³¹³	40.01 ⁷³
	16.1	08.834 ³⁰³	33.65 ²⁵⁵	41.400 ⁶⁰⁹	37.25 ²⁰⁰	58.993 ²⁶⁷	37.05 ²³²	33.890 ²⁹²	40.74 ⁷⁴
	26.1	09.137 ²⁴⁵	36.20 ²⁹⁰	42.009 ⁵³⁶	39.25 ²²²	59.260 ²⁹³	39.37 ²⁶⁹	34.182 ²⁶²	41.48 ⁷⁵
Май	6.1	09.382 ¹⁸⁶	39.10 ³¹²	42.545 ⁴⁵⁸	41.47 ²³⁶	59.483 ¹⁷⁹	42.06 ²⁹¹	34.444 ²³³	42.23 ⁷⁷
	16.1	09.568 ¹²⁵	42.22 ³²⁷	43.003 ³⁷⁶	43.83 ²⁴⁸	59.662 ¹³⁴	44.97 ³⁰⁸	34.677 ²⁰⁰	43.00 ⁷⁷
Июнь	26.0	09.693 ⁵⁶	45.49 ³³⁰	43.379 ²⁷⁶	46.31 ²⁵⁴	59.796 ⁸¹	48.05 ³¹²	34.877 ¹⁶⁰	43.77 ⁷⁷
	4.9	09.749 ⁶	48.79 ³²²	43.655 ¹⁸²	48.85 ²⁵³	59.877 ³³	51.17 ³⁰⁶	35.037 ¹²¹	44.54 ⁷⁵
	14.9	09.743 ⁷¹	52.01 ³⁰⁹	43.837 ⁸⁰	51.38 ²⁴⁸	59.910 ¹⁸	54.23 ²⁹⁵	35.158 ⁷⁸	45.29 ⁷⁴
	24.9	09.672 ¹³⁵	55.10 ²⁸²	43.917 ²⁷	53.86 ²³⁴	59.892 ⁷⁰	57.18 ²⁷³	35.236 ³²	46.03 ⁶⁸
Июль	4.9	09.537 ¹⁹⁰	57.92 ²⁵¹	43.890 ¹²³	56.20 ²¹⁴	59.822 ¹¹⁵	59.91 ²⁴⁴	35.268 ¹¹	46.71 ⁶²
	14.9	09.347 ²⁴⁶	60.43 ²¹⁷	43.767 ²²³	58.34 ¹⁸⁹	59.707 ¹⁶¹	62.35 ²¹⁴	35.257 ⁵⁶	47.33 ⁵³
	24.9	09.101 ²⁹⁴	62.60 ¹⁷³	43.544 ³¹¹	60.23 ¹⁵⁴	59.546 ²⁰²	64.49 ¹⁷²	35.201 ⁹⁸	47.86 ⁴⁰
Авг.	3.8	08.503 ³³⁰	64.33 ¹²⁸	43.233 ³⁸³	61.77 ¹¹⁸	59.344 ²³⁴	66.21 ¹³²	35.103 ¹³¹	48.26 ²⁶
	13.8	08.477 ³⁶⁴	65.61 ⁸¹	42.850 ⁴⁴⁶	62.95 ⁷⁵	59.110 ²⁶⁴	67.53 ⁸⁸	34.972 ¹⁶⁴	48.52 ¹¹
	23.8	08.113 ³⁸³	66.42 ²⁸	42.404 ⁴⁸⁵	63.70 ²⁷	58.846 ²⁸¹	68.41 ³⁹	34.808 ¹⁸³	48.63 ⁸
Сент.	2.8	07.730 ³⁹⁰	66.70 ²¹	41.919 ⁵⁰¹	63.97 ¹⁹	58.565 ²⁹⁰	68.80 ⁷	34.625 ¹⁹³	48.55 ²⁵
	12.7	07.339 ³⁹¹	66.49 ⁷²	41.418 ⁵⁰¹	63.78 ⁶⁸	58.275 ²⁹²	68.73 ⁵⁵	34.432 ¹⁹⁵	48.30 ⁴⁴
	22.7	06.949 ³⁷¹	65.77 ¹²⁴	40.917 ⁴⁶⁷	63.10 ¹¹⁶	57.983 ²⁷⁷	68.18 ¹⁰⁵	34.237 ¹⁸²	47.86 ⁶⁰
Окт.	2.7	06.578 ³⁴³	64.53 ¹⁷⁰	40.450 ⁴¹³	61.94 ¹⁵⁷	57.706 ²⁵⁴	67.13 ¹⁴⁹	34.055 ¹⁵⁸	47.26 ⁷³
	12.6	06.235 ³⁰²	62.83 ²¹⁹	40.037 ³³⁸	60.37 ¹⁹⁷	57.452 ²²²	65.64 ¹⁹⁶	33.897 ¹²⁴	46.53 ⁸⁴
Нояб.	22.6	05.933 ²⁴⁶	60.64 ²⁶⁰	39.699 ²³⁶	58.40 ²²⁷	57.230 ¹⁷⁵	63.68 ²³⁷	33.773 ⁷⁷	45.69 ⁹¹
	1.6	05.687 ¹⁸⁴	58.04 ²⁹⁵	39.463 ¹²⁵	56.13 ²⁴⁸	57.055 ¹²⁴	61.31 ²⁷¹	33.696 ²⁵	44.78 ⁹¹
	11.6	05.503 ¹¹¹	55.09 ³²⁸	39.338 ²	53.65 ²⁶²	56.931 ⁶⁵	58.60 ³⁰¹	33.671 ³¹	43.87 ⁸⁸
	21.5	05.392 ³¹	51.81 ³⁴⁹	39.336 ¹³²	51.03 ²⁶³	56.866 ⁰	55.55 ³²⁷	33.702 ⁹³	42.99 ⁷⁸
Дек.	1.5	05.361 ⁴⁶	48.32 ³⁶¹	39.468 ²⁵⁴	48.40 ²⁵⁵	56.866 ⁶⁴	52.28 ³⁴¹	33.795 ¹⁴⁷	42.21 ⁶⁸
	11.5	05.407 ¹²⁹	44.71 ³⁶⁶	39.722 ³⁸⁰	45.85 ²⁴¹	56.930 ¹²⁹	48.87 ³⁴⁹	33.942 ²⁰⁵	41.53 ⁵⁴
	21.5	05.536 ²⁰⁶	41.05 ³⁵³	40.102 ⁴⁹³	43.44 ²¹⁴	57.059 ¹⁹¹	45.38 ³⁴⁰	34.147 ²⁵⁶	40.99 ³⁵
	31.4	05.742 ²⁷⁴	37.52 ³³⁴	40.595 ⁵⁸⁴	41.30 ¹⁸⁴	57.250 ²⁴²	41.98 ³²³	34.403 ²⁹⁵	40.64 ¹⁶
	41.4	06.016 ³³⁸	34.18 ³⁰²	41.179 ⁶⁶⁷	39.46 ¹⁴⁹	57.492 ²⁹³	38.75 ²⁹⁶	34.698 ³³⁰	40.48 ⁷
Средн. место J1990.5		06.937	55.21	39.143	40.78	57.540	58.32	32.825	35.92
Sec δ , tg δ		1.826	+1.528	2.792	-2.607	1.440	+1.036	1.210	-0.682
a, a'		+0.057	-0.321	+0.318	-0.310	+0.088	-0.305	+0.197	-0.303
b, b'		-0.033	+0.947	+0.054	+0.951	-0.021	+0.952	+0.014	+0.953

ВИДИМЫЕ МЕСТА ЗВЕЗД 1990
Верхняя кульминация в Гриниче

Дата	412) 60 Her 4 ^m 91 VI-8 A3		414) ζ Dra 3 ^m 22 VI-9 B5		413) η Oph m 2 ^m 63 VI-9 A2		415) α Her pr 3 ^m 48 VI-10 M3		
	h ^m 17 04	+12 44'	h ^m 17 08	+65 43'	h ^m 17 09	—15 42'	h ^m 17 14	+14 23'	
Янв.	—3.6	54.121 ^s ₂₀₈	65.15 ["] ₂₂₅	42.407 ^s ₂₃₅	23.61 ["] ₃₅₅	47.577 ^s ₂₃₁	53.32 ["] ₇₄	10.726 ^s ₁₉₈	55.27 ["] ₂₃₂
	6.4	54.329 ^s ₂₃₉	62.90 ["] ₂₁₇	42.642 ^s ₃₂₆	20.06 ["] ₃₂₈	47.808 ^s ₂₆₂	54.06 ["] ₇₈	10.924 ^s ₂₃₁	52.95 ["] ₂₂₂
	16.4	54.568 ^s ₂₆₇	60.73 ["] ₂₀₁	42.968 ^s ₄₀₈	16.78 ["] ₂₉₅	48.070 ^s ₂₈₇	54.84 ["] ₈₀	11.155 ^s ₂₆₀	50.73 ["] ₂₀₆
	26.4	54.835 ^s ₂₈₈	58.72 ["] ₁₇₅	43.376 ^s ₄₇₉	13.83 ["] ₂₄₅	48.357 ^s ₃₀₈	55.66 ["] ₈₂	11.415 ^s ₂₈₂	48.67 ["] ₁₈₀
Февр.	5.3	55.123 ^s ₂₉₈	56.97 ["] ₁₄₃	43.855 ^s ₅₂₇	11.38 ["] ₁₈₉	48.665 ^s ₃₁₆	56.46 ["] ₇₃	11.697 ^s ₂₉₄	46.87 ["] ₁₄₈
	15.3	55.421 ^s ₃₀₅	55.54 ["] ₁₀₈	44.382 ^s ₅₆₄	09.49 ["] ₁₂₈	48.981 ^s ₃₂₃	57.19 ["] ₆₅	11.991 ^s ₃₀₃	45.39 ["] ₁₁₁
	25.3	55.726 ^s ₃₀₅	54.46 ["] ₆₅	44.946 ^s ₅₈₁	08.21 ["] ₅₈	49.304 ^s ₃₂₂	57.84 ["] ₅₁	12.294 ^s ₃₀₅	44.28 ["] ₆₇
Март	7.3	56.031 ^s ₂₉₉	53.81 ["] ₂₂	45.527 ^s ₅₇₅	07.63 ["] ₁₀	49.626 ^s ₃₁₇	58.35 ["] ₃₇	12.599 ^s ₃₀₁	43.61 ["] ₂₄
	17.2	56.330 ^s ₂₉₂	53.59 ["] ₁₉	46.102 ^s ₅₅₉	07.73 ["] ₇₆	49.943 ^s ₃₁₀	58.72 ["] ₂₂	12.900 ^s ₂₉₄	43.37 ["] ₂₁
	27.2	56.622 ^s ₂₇₇	53.78 ["] ₆₂	46.661 ^s ₅₂₂	08.49 ["] ₁₄₂	50.253 ^s ₂₉₇	58.94 ["] ₆	13.194 ^s ₂₈₂	43.58 ["] ₆₄
Апр.	6.2	56.899 ^s ₂₆₀	54.40 ["] ₉₇	47.183 ^s ₄₇₁	09.91 ["] ₁₉₆	50.550 ^s ₂₈₂	59.00 ["] ₇	13.476 ^s ₂₆₆	44.22 ["] ₁₀₁
	16.1	57.159 ^s ₂₄₂	55.37 ["] ₁₃₀	47.654 ^s ₄₁₃	11.87 ["] ₂₄₆	50.832 ^s ₂₆₅	58.93 ["] ₁₉	13.742 ^s ₂₄₈	45.23 ["] ₁₃₆
	26.1	57.401 ^s ₂₁₇	56.67 ["] ₁₅₇	48.067 ^s ₃₃₇	14.33 ["] ₂₈₆	51.097 ^s ₂₄₃	58.74 ["] ₂₉	13.990 ^s ₂₂₄	46.59 ["] ₁₆₄
Май	6.1	57.618 ^s ₁₉₁	58.24 ["] ₁₇₅	48.404 ^s ₂₅₉	17.19 ["] ₃₁₃	51.340 ^s ₂₁₉	58.45 ["] ₃₅	14.214 ^s ₁₉₉	48.23 ["] ₁₈₃
	16.1	57.809 ^s ₁₆₃	59.99 ["] ₁₈₉	48.663 ^s ₁₇₆	20.32 ["] ₃₃₃	51.559 ^s ₁₉₁	58.10 ["] ₄₀	14.413 ^s ₁₇₀	50.06 ["] ₁₉₈
Июнь	26.0	57.972 ^s ₁₂₉	61.88 ["] ₁₉₅	48.839 ^s ₈₃	23.65 ["] ₃₄₁	51.750 ^s ₁₅₉	57.70 ["] ₄₁	14.583 ^s ₁₃₇	52.04 ["] ₂₀₆
	5.0	58.101 ^s ₉₆	63.83 ["] ₁₉₄	48.922 ^s ₄	27.06 ["] ₃₃₆	51.909 ^s ₁₂₅	57.29 ["] ₄₀	14.720 ^s ₁₀₃	54.10 ["] ₂₀₅
	14.9	58.197 ^s ₅₉	65.77 ["] ₁₈₉	48.918 ^s ₉₁	30.42 ["] ₃₂₇	52.034 ^s ₈₉	56.89 ["] ₃₉	14.823 ^s ₆₆	56.15 ["] ₂₀₁
	24.9	58.256 ^s ₂₁	67.66 ["] ₁₇₈	48.827 ^s ₁₈₂	33.69 ["] ₃₀₅	52.123 ^s ₄₇	56.50 ["] ₃₆	14.889 ^s ₂₇	58.16 ["] ₁₈₉
Июль	4.9	58.277 ^s ₁₆	69.44 ["] ₁₆₃	48.645 ^s ₂₅₈	36.74 ["] ₂₇₆	52.170 ^s ₁₀	56.14 ["] ₃₂	14.916 ^s ₁₁	60.05 ["] ₁₇₄
	14.9	58.261 ^s ₅₃	71.07 ["] ₁₄₆	48.387 ^s ₃₃₅	39.50 ["] ₂₄₄	52.180 ^s ₃₀	55.82 ["] ₃₀	14.905 ^s ₄₉	61.79 ["] ₁₅₆
	24.9	58.208 ^s ₁₁₈	72.53 ["] ₁₂₃	48.052 ^s ₄₀₃	41.94 ["] ₂₀₁	52.150 ^s ₆₈	55.52 ["] ₂₅	14.856 ^s ₈₅	63.35 ["] ₁₃₃
Авг.	3.8	58.120 ^s ₈₈	73.76 ["] ₁₀₀	47.649 ^s ₄₅₆	43.95 ["] ₁₅₈	52.082 ^s ₁₀₁	55.27 ["] ₂₄	14.771 ^s ₁₁₆	64.68 ["] ₁₀₉
	13.8	58.002 ^s ₁₄₅	74.76 ["] ₇₆	47.193 ^s ₅₀₄	45.53 ["] ₁₁₂	51.981 ^s ₁₃₀	55.03 ["] ₂₃	14.655 ^s ₁₄₅	65.77 ["] ₈₄
	23.8	57.857 ^s ₁₆₄	75.52 ["] ₄₈	46.689 ^s ₅₃₆	46.65 ["] ₅₈	51.851 ^s ₁₅₂	54.80 ["] ₂₀	14.510 ^s ₁₆₅	66.61 ["] ₅₅
Сент.	2.8	57.693 ^s ₁₇₅	76.00 ["] ₂₃	46.153 ^s ₅₅₁	47.23 ["] ₉	51.699 ^s ₁₆₃	54.60 ["] ₂₁	14.345 ^s ₁₇₇	67.16 ["] ₂₈
	12.7	57.518 ^s ₁₇₉	76.23 ["] ₆	45.602 ^s ₅₅₈	47.32 ["] ₄₄	51.536 ^s ₁₆₉	54.39 ["] ₁₉	14.168 ^s ₁₈₃	67.44 ["] ₂
	22.7	57.339 ^s ₁₇₁	76.17 ["] ₃₅	45.044 ^s ₅₄₁	46.88 ["] ₉₇	51.367 ^s ₁₆₁	54.20 ["] ₁₇	13.985 ^s ₁₇₆	67.42 ["] ₃₃
Окт.	2.7	57.168 ^s ₁₅₄	75.82 ["] ₆₂	44.503 ^s ₅₁₁	45.91 ["] ₁₄₆	51.206 ^s ₁₄₅	54.03 ["] ₁₄	13.809 ^s ₁₆₁	67.09 ["] ₆₁
	12.7	57.014 ^s ₁₃₀	75.20 ["] ₉₂	43.992 ^s ₄₆₈	44.45 ["] ₁₉₆	51.061 ^s ₁₁₈	53.89 ["] ₁₀	13.648 ^s ₁₃₉	66.48 ["] ₉₂
Нояб.	22.6	56.884 ^s ₉₅	74.28 ["] ₁₂₀	43.524 ^s ₄₀₂	42.49 ["] ₂₄₂	50.943 ^s ₈₁	53.79 ["] ₃	13.509 ^s ₁₀₃	65.56 ["] ₁₂₁
	1.6	56.789 ^s ₅₄	73.08 ["] ₁₄₅	43.122 ^s ₃₂₉	40.07 ["] ₂₈₀	50.862 ^s ₃₉	53.76 ["] ₅	13.406 ^s ₆₅	64.35 ["] ₁₄₈
	11.6	56.735 ^s ₉	71.63 ["] ₁₇₁	42.793 ^s ₂₄₂	37.27 ["] ₃₁₇	50.823 ^s ₉	53.81 ["] ₁₇	13.341 ^s ₂₀	62.87 ["] ₁₇₄
	21.5	56.726 ^s ₄₁	69.92 ["] ₁₉₂	42.551 ^s ₁₄₁	34.10 ["] ₃₄₂	50.832 ^s ₆₂	53.98 ["] ₂₇	13.321 ^s ₃₁	61.13 ["] ₁₉₆
Дек.	1.5	56.767 ^s ₈₈	68.00 ["] ₂₀₈	42.410 ^s ₄₃	30.68 ["] ₃₅₈	50.894 ^s ₁₀₇	54.25 ["] ₃₇	13.352 ^s ₇₇	59.17 ["] ₂₁₃
	11.5	56.855 ^s ₁₃₇	65.92 ["] ₂₂₁	42.367 ^s ₆₆	27.10 ["] ₃₆₈	51.001 ^s ₁₅₈	54.62 ["] ₅₈	13.429 ^s ₁₂₅	57.04 ["] ₂₂₇
	21.5	56.992 ^s ₁₈₁	63.71 ["] ₂₂₄	42.433 ^s ₁₇₁	23.42 ["] ₃₆₀	51.159 ^s ₂₀₄	55.20 ["] ₆₆	13.554 ^s ₁₇₁	54.77 ["] ₂₂₉
	31.4	57.173 ^s ₂₁₇	61.47 ["] ₂₂₁	42.604 ^s ₂₆₆	19.82 ["] ₃₄₅	51.363 ^s ₂₃₉	55.86 ["] ₇₄	13.725 ^s ₂₀₈	52.48 ["] ₂₂₇
	41.4	57.390 ^s ₂₄₉	59.26 ["] ₂₁₁	42.870 ^s ₃₆₀	16.37 ["] ₃₁₆	51.602 ^s ₂₇₂	56.60 ["] ₇₈	13.933 ^s ₂₄₁	50.21 ["] ₂₁₆
Средн. место J1990.5		56.239	72.26	45.457	34.79	49.960	49.26	12.859	62.65
Sec δ, tg δ		1.025	+0.226	2.433	+2.217	1.039	—0.281	1.032	+0.257
a, a'		+0.139	—0.238	+0.009	—0.222	+0.172	—0.217	+0.136	—0.198
b, b'		—0.004	+0.971	—0.033	+0.975	+0.004	+0.976	—0.003	+0.980

Верхняя кульминация в Гриниче

Дата	422) λ Her		673) α Ara		674) λ Sco		424) α Oph	
	4^m48 VI-14 K0		2^m97 VI-14 B3p		1^m71 VI-15 B2		2^m14 VI-15 A5	
	h^m 17 30	$^{\circ}$ +26 06	h^m 17 31	$^{\circ}$ -49 52	h^m 17 32	$^{\circ}$ -37 05	h^m 17 34	$^{\circ}$ +12 33
Янв. —3.5	^s 19.090 ₁₇₇	["] 54.29 ₂₇₉	^s 02.892 ₂₉₄	["] 12.61 ₁₃₉	^s 54.882 ₂₄₈	["] 54.96 ₆₈	^s 27.419 ₁₈₁	["] 51.95 ₂₁₉
6.4	19.267 ₂₁₅	51.50 ₂₆₅	03.186 ₃₄₄	11.22 ₁₁₉	55.130 ₂₈₉	54.28 ₅₃	27.600 ₂₁₅	49.76 ₂₁₁
16.4	19.482 ₂₄₉	48.85 ₂₄₇	03.530 ₃₈₇	10.03 ₉₈	55.419 ₃₂₃	53.75 ₃₉	27.815 ₂₄₅	47.65 ₁₉₉
26.4	19.731 ₂₇₇	46.38 ₂₁₅	03.917 ₄₂₃	09.05 ₇₄	55.742 ₃₅₀	53.36 ₂₄	28.060 ₂₇₀	45.66 ₁₇₆
Февр. 5.4	20.008 ₂₉₄	44.23 ₁₇₅	04.340 ₄₄₃	08.31 ₅₁	56.092 ₃₆₆	53.12 ₁₂	28.330 ₂₈₄	43.90 ₁₄₅
15.3	20.302 ₃₀₉	42.48 ₁₃₁	04.783 ₄₅₉	07.80 ₂₈	56.458 ₃₇₉	53.00 ₁	28.614 ₂₉₆	42.45 ₁₁₁
25.3	20.611 ₃₁₅	41.17 ₇₈	05.242 ₄₆₆	07.52 ₅	56.837 ₃₈₄	52.99 ₁₀	28.910 ₃₀₂	41.34 ₆₉
Март 7.3	20.926 ₃₁₃	40.39 ₂₆	05.708 ₄₆₃	07.47 ₁₆	57.221 ₃₈₁	53.09 ₁₇	29.212 ₃₀₀	40.65 ₂₈
17.2	21.239 ₃₁₀	40.13 ₂₇	06.171 ₄₅₉	07.63 ₃₆	57.602 ₃₇₈	53.26 ₂₅	29.512 ₂₉₇	40.37 ₁₅
27.2	21.549 ₂₉₉	40.40 ₈₁	06.630 ₄₄₆	07.99 ₅₆	57.980 ₃₆₈	53.51 ₃₃	29.809 ₂₈₈	40.52 ₅₈
Апр. 6.2	21.848 ₂₈₃	41.21 ₁₂₆	07.076 ₄₂₇	08.55 ₇₃	58.348 ₃₅₂	53.84 ₃₉	30.097 ₂₇₅	41.10 ₉₄
16.2	22.131 ₂₆₆	42.47 ₁₆₈	07.503 ₄₀₆	09.28 ₉₁	58.700 ₃₃₇	54.23 ₄₅	30.372 ₂₆₁	42.04 ₁₂₉
26.1	22.397 ₂₃₉	44.15 ₂₀₃	07.909 ₃₇₄	10.19 ₁₀₇	59.037 ₃₁₃	54.68 ₅₃	30.633 ₂₃₉	43.33 ₁₅₇
Май 6.1	22.636 ₂₁₂	46.18 ₂₂₉	08.283 ₃₃₉	11.26 ₁₂₀	59.350 ₂₈₅	55.21 ₆₀	30.872 ₂₁₆	44.90 ₁₇₇
16.1	22.848 ₁₈₂	48.47 ₂₄₉	08.622 ₃₀₀	12.46 ₁₃₃	59.635 ₂₅₅	55.81 ₆₆	31.088 ₁₈₉	46.67 ₁₉₃
26.1	23.030 ₁₄₅	50.96 ₂₅₉	08.922 ₂₅₀	13.79 ₁₄₂	59.890 ₂₁₅	56.47 ₇₃	31.277 ₁₅₆	48.60 ₂₀₂
Июнь 5.0	23.175 ₁₀₈	53.55 ₂₆₀	09.172 ₂₀₀	15.21 ₁₄₉	60.105 ₁₇₆	57.20 ₇₇	31.433 ₁₂₃	50.62 ₂₀₁
15.0 ¹	23.283 ₆₈	56.15 ₂₅₇	09.372 ₁₄₅	16.70 ₁₅₃	60.281 ₁₃₀	57.97 ₈₁	31.556 ₈₇	52.63 ₁₉₉
24.9	23.351 ₂₄	58.72 ₂₄₄	09.517 ₈₂	18.23 ₁₅₁	60.411 ₈₁	58.78 ₈₂	31.643 ₄₆	54.62 ₁₈₉
Июль 4.9	23.375 ₁₆	61.16 ₂₂₆	09.599 ₂₄	19.74 ₁₄₆	60.492 ₃₃	59.60 ₈₁	31.689 ₈	56.51 ₁₇₅
14.9	23.359 ₅₈	63.42 ₂₀₅	09.623 ₃₈	21.20 ₁₃₆	60.525 ₁₈	60.41 ₇₆	31.697 ₃₂	58.26 ₁₅₈
24.9	23.301 ₉₇	65.47 ₁₇₆	09.585 ₉₈	22.56 ₁₁₉	60.507 ₆₇	61.17 ₆₇	31.665 ₇₀	59.84 ₁₃₆
Авг. 3.9	23.204 ₁₃₁	67.23 ₁₄₆	09.487 ₁₄₇	23.75 ₁₀₀	60.440 ₁₀₈	61.84 ₅₇	31.595 ₁₀₃	61.20 ₁₁₄
13.8	23.073 ₁₆₃	68.69 ₁₁₄	09.340 ₁₉₆	24.75 ₇₆	60.332 ₁₄₉	62.41 ₄₂	31.492 ₁₃₄	62.34 ₉₀
23.8	22.910 ₁₈₇	69.83 ₇₇	09.144 ₂₃₁	25.51 ₄₇	60.183 ₁₇₈	62.83 ₂₅	31.358 ₁₅₈	63.24 ₆₂
Сент. 2.8	22.723 ₂₀₀	70.60 ₄₁	08.913 ₂₅₃	25.98 ₁₇	60.005 ₁₉₇	63.08 ₅	31.200 ₁₇₂	63.86 ₃₆
12.8	22.523 ₂₁₀	71.01 ₄	08.660 ₂₆₆	26.15 ₁₇	59.808 ₂₀₈	63.13 ₁₅	31.028 ₁₈₂	64.22 ₈
22.7	22.313 ₂₀₅	71.05 ₃₇	08.394 ₂₅₈	25.98 ₄₉	59.600 ₂₀₄	62.98 ₃₅	30.846 ₁₇₈	64.30 ₂₁
Окт. 2.7	22.108 ₁₉₂	70.68 ₇₃	08.136 ₂₃₉	25.49 ₈₀	59.396 ₁₈₇	62.63 ₅₅	30.668 ₁₆₅	64.09 ₄₇
12.7	21.916 ₁₇₁	69.95 ₁₁₃	07.897 ₂₀₆	24.69 ₁₁₀	59.209 ₁₆₀	62.08 ₇₂	30.503 ₁₄₆	63.62 ₇₈
22.6	21.745 ₁₃₇	68.82 ₁₅₀	07.691 ₁₅₆	23.59 ₁₃₄	59.049 ₁₂₀	61.36 ₈₆	30.357 ₁₁₄	62.84 ₁₀₆
Нояб. 1.6	21.608 ₉₉	67.32 ₁₈₁	07.535 ₉₈	22.25 ₁₅₂	58.929 ₇₂	60.50 ₉₅	30.243 ₇₇	61.78 ₁₃₁
11.6	21.509 ₅₄	65.51 ₂₁₅	07.437 ₃₁	20.73 ₁₆₆	58.857 ₁₇	59.55 ₁₀₁	30.166 ₃₄	60.47 ₁₅₈
21.6	21.455 ₂	63.36 ₂₄₁	07.406 ₄₃	19.07 ₁₇₁	58.840 ₄₄	58.54 ₁₀₀	30.132 ₁₄	58.89 ₁₇₉
Дек. 1.5	21.453 ₄₆	60.95 ₂₆₀	07.449 ₁₁₃	17.36 ₁₇₀	58.884 ₁₀₁	57.54 ₉₅	30.146 ₆₀	57.10 ₁₉₇
11.5	21.499 ₉₈	58.35 ₂₇₅	07.562 ₁₈₆	15.66 ₁₆₄	58.985 ₁₅₉	56.59 ₈₉	30.206 ₁₀₈	55.13 ₂₁₁
21.5	21.597 ₁₄₇	55.60 ₂₇₈	07.748 ₂₅₂	14.02 ₁₅₁	59.144 ₂₁₄	55.70 ₇₉	30.314 ₁₅₄	53.02 ₂₁₆
31.5	21.744 ₁₈₉	52.82 ₂₇₃	08.000 ₃₀₉	12.51 ₁₃₄	59.358 ₂₆₀	54.91 ₆₄	30.468 ₁₉₀	50.86 ₂₁₅
41.4	21.933 ₂₂₈	50.09 ₂₅₉	08.309 ₃₆₀	11.17 ₁₁₄	59.618 ₃₀₀	54.27 ₅₀	30.658 ₂₂₆	48.71 ₂₀₇
Средн. место J1990.5	21.264	62.62	06.384	09.98	57.788	51.30	29.598	59.26
Sec δ , tg δ	1.114	+0.490	1.552	-1.186	1.254	-0.756	1.025	+0.223
a, a'	+0.121	-0.129	+0.232	-0.126	+0.203	-0.118	+0.138	-0.111
b, b'	-0.004	+0.992	+0.010	+0.992	+0.006	+0.993	-0.002	+0.994

¹ Для звезд 422) и 673) июнь 14.9.

Верхняя кульминация в Гриниче

Дата	434) γ Dra		435) ξ Her		436) ν Oph		437) 67 Oph		
	2^m42 VI-21 K5		3^m82 VI-21 K0		3^m50 VI-21 K0		3^m95 VI-22 B5p		
	h^m 17 56	$^{\circ}$ +51 28	h^m 17 57	$^{\circ}$ +29 14	h^m 17 58	$^{\circ}$ -9 46	h^m 18 00	$^{\circ}$ +2 55	
Янв.	-3.5 6.5 16.4 26.4	s 20.510 ¹³⁴ 20.644 ¹⁹⁶ 20.840 ²⁵³ 21.093 ³⁰⁵	" 74.76 ³⁴⁷ 71.29 ³³⁴ 67.95 ³¹² 64.83 ²⁷⁴	s 21.484 ¹⁴⁷ 21.631 ¹⁸⁸ 21.819 ²²⁵ 22.044 ²⁵⁹	" 46.57 ²⁸⁷ 43.70 ²⁷⁶ 40.94 ²⁶¹ 38.33 ²²⁹	s 27.858 ¹⁷⁷ 28.035 ²¹¹ 28.246 ²⁴² 28.488 ²⁶⁷	" 29.67 ⁸⁸ 30.55 ⁹⁰ 31.45 ⁸⁷ 32.32 ⁸⁰	s 07.914 ¹⁶³ 08.077 ¹⁹⁷ 08.274 ²²⁸ 08.502 ²⁵⁴	" 46.08 ¹⁶¹ 44.47 ¹⁵⁸ 42.89 ¹⁵¹ 41.38 ¹³⁵
Февр.	5.4	21.398 ³⁴³	62.09 ²²⁸	22.303 ²⁸¹	36.04 ¹⁹²	28.755 ²⁸³	33.12 ⁶⁸	08.756 ²⁷¹	40.03 ¹¹⁴
Март	15.3 25.3 7.3 17.3 27.2	21.741 ³⁷⁵ 22.116 ³⁹⁸ 22.514 ⁴⁰⁵ 22.919 ⁴⁰⁷ 23.326 ³⁹⁸	59.81 ¹⁷⁶ 58.05 ¹¹¹ 56.94 ⁴⁷ 56.47 ¹⁷ 56.64 ⁸⁵	22.584 ³⁰¹ 22.885 ³¹³ 23.198 ³¹⁷ 23.515 ³¹⁹ 23.834 ³¹³	34.12 ¹⁴⁸ 32.64 ⁹⁴ 31.70 ⁴¹ 31.29 ¹⁴ 31.43 ⁷¹	29.038 ²⁹⁷ 29.335 ³⁰⁵ 29.640 ³⁰⁶ 29.946 ³⁰⁸ 30.254 ³⁰⁴	33.80 ⁵³ 34.33 ³⁴ 34.67 ¹³ 34.80 ⁷ 34.73 ²⁹	09.027 ²⁸⁶ 09.313 ²⁹⁴ 09.607 ²⁹⁷ 09.904 ²⁹⁹ 10.203 ²⁹⁴	38.89 ⁸⁸ 38.01 ⁵⁷ 37.44 ²³ 37.21 ⁹ 37.30 ⁴⁵
Апр.	6.2 16.2 26.2	23.724 ³⁷⁸ 24.102 ³⁵³ 24.455 ³¹⁵	57.49 ¹⁴³ 58.92 ¹⁹⁷ 60.89 ²⁴⁶	24.147 ³⁰⁰ 24.447 ²⁸⁷ 24.734 ²⁶³	32.14 ¹¹⁹ 33.33 ¹⁶⁶ 34.99 ²⁰⁵	30.558 ²⁹⁴ 30.852 ²⁸⁶ 31.138 ²⁶⁸	34.44 ⁴⁸ 33.96 ⁶⁴ 33.32 ⁷⁷	10.497 ²⁸⁶ 10.783 ²⁷⁶ 11.059 ²⁵⁹	37.75 ⁷⁴ 38.49 ¹⁰² 39.51 ¹²⁵
Май	6.1 16.1	24.770 ²⁷⁴ 25.044 ²²⁸	63.35 ²⁸¹ 66.16 ³¹⁰	24.997 ²³⁷ 25.234 ²⁰⁸	37.04 ²³⁵ 39.39 ²⁵⁹	31.406 ²⁴⁹ 31.655 ²²⁶	32.55 ⁸⁶ 31.69 ⁹²	11.318 ²³⁹ 11.557 ²¹⁶	40.76 ¹⁴² 42.18 ¹⁵⁵
Июнь	26.1 5.0 15.0 24.9	25.272 ¹⁷¹ 25.443 ¹¹⁶ 25.559 ⁵⁸ 25.617 ⁶	69.26 ³²⁹ 72.55 ³³⁴ 75.89 ³³⁶ 79.25 ³²⁵	25.442 ¹⁷¹ 25.613 ¹³³ 25.746 ⁹² 25.838 ⁴⁶	41.98 ²⁷⁴ 44.72 ²⁷⁷ 47.49 ²⁷⁹ 50.28 ²⁶⁸	31.881 ¹⁹⁶ 32.077 ¹⁶⁵ 32.242 ¹²⁹ 32.371 ⁸⁸	30.77 ⁹⁴ 29.83 ⁹¹ 28.92 ⁸⁸ 28.04 ⁸⁰	11.773 ¹⁸⁶ 11.959 ¹⁵⁵ 12.114 ¹¹⁹ 12.233 ⁷⁹	43.73 ¹⁶¹ 45.34 ¹⁶¹ 46.95 ¹⁶⁰ 48.55 ¹⁵¹
Июль	4.9	25.611 ⁶³	82.50 ³⁰⁵	25.884 ⁴	52.96 ²⁵¹	32.459 ⁴⁸	27.24 ⁷²	12.312 ⁴¹	50.06 ¹³⁹
Авг.	14.9 24.9 3.9 13.9 23.8	25.548 ¹²³ 25.425 ¹⁷⁹ 25.246 ²²⁵ 25.021 ²⁷¹ 24.750 ³⁰⁵	85.55 ²⁸³ 88.38 ²⁴⁹ 90.87 ²¹² 92.99 ¹⁷³ 94.72 ¹²⁵	25.888 ⁴¹ 25.847 ⁸⁵ 25.762 ¹²² 25.640 ¹⁵⁹ 25.481 ¹⁸⁶	55.47 ²³² 57.79 ²⁰⁴ 59.83 ¹⁷⁴ 61.57 ¹⁴² 62.99 ¹⁰³	32.507 ⁶ 32.513 ³⁵ 32.478 ⁷³ 32.405 ¹⁰⁷ 32.298 ¹³⁶	26.52 ⁶³ 25.89 ⁵² 25.37 ⁴⁴ 24.93 ³⁵ 24.58 ²⁵	12.353 ² 12.351 ⁴¹ 12.310 ⁷⁸ 12.232 ¹¹¹ 12.121 ¹³⁹	51.45 ¹²⁷ 52.72 ¹¹⁰ 53.82 ⁹³ 54.75 ⁷⁶ 55.51 ⁵⁶
Сент.	2.8 12.8 22.7	24.445 ³²⁸ 24.117 ³⁴⁴ 23.773 ³⁴⁴	95.97 ⁷⁹ 96.76 ³⁰ 97.06 ²³	25.295 ²⁰⁵ 25.090 ²¹⁸ 24.872 ²¹⁸	64.02 ⁶⁷ 64.69 ²⁷ 64.96 ¹⁶	32.162 ¹⁵⁴ 32.008 ¹⁶⁸ 31.840 ¹⁶⁹	24.33 ¹⁸ 24.15 ¹¹ 24.04 ²	11.982 ¹⁵⁸ 11.824 ¹⁷¹ 11.653 ¹⁷¹	56.07 ³⁷ 56.44 ¹⁸ 56.62 ³
Окт.	2.7 12.7	23.429 ³³³ 23.096 ³¹³	96.83 ⁷¹ 96.12 ¹²³	24.654 ²¹⁰ 24.444 ¹⁹³	64.80 ⁵⁴ 64.26 ⁹⁶	31.671 ¹⁵⁹ 31.512 ¹⁴²	24.02 ⁴ 24.06 ¹³	11.482 ¹⁶³ 11.319 ¹⁴⁷	56.59 ²² 56.37 ⁴³
Нояб.	22.7 1.6 11.6 21.6	22.783 ²⁷⁶ 22.507 ²³² 22.275 ¹⁷⁸ 22.097 ¹¹³	94.89 ¹⁷² 93.17 ²¹⁵ 91.02 ²⁵⁹ 88.43 ²⁹⁴	24.251 ¹⁶² 24.089 ¹²⁸ 23.961 ⁸⁵ 23.876 ³⁵	63.30 ¹³⁶ 61.94 ¹⁷¹ 60.23 ²⁰⁷ 58.16 ²³⁷	31.370 ¹¹³ 31.257 ⁷⁷ 31.180 ³⁶ 31.144 ¹²	24.19 ²² 24.41 ³² 24.73 ⁴³ 25.16 ⁵³	11.172 ¹¹⁹ 11.053 ⁸⁵ 10.968 ⁴⁵ 10.923 ¹	55.94 ⁶³ 55.31 ⁸² 54.49 ¹⁰³ 53.46 ¹²¹
Дек.	1.6	21.984 ⁴⁹	85.49 ³¹⁹	23.841 ¹⁴	55.79 ²⁵⁹	31.156 ⁵⁷	25.69 ⁶⁴	10.924 ⁴⁵	52.25 ¹³⁵
	11.5 21.5 31.5 41.4	21.935 ²⁰ 21.955 ⁹² 22.047 ¹⁵⁴ 22.201 ²¹⁹	82.30 ³⁴⁰ 78.90 ³⁴⁵ 75.45 ³⁴¹ 72.04 ³²⁷	23.855 ⁶⁵ 23.920 ¹¹⁵ 24.035 ¹⁶⁰ 24.195 ²⁰²	53.20 ²⁷⁸ 50.42 ²⁸³ 47.59 ²⁸² 44.77 ²⁷²	31.213 ¹⁰³ 31.316 ¹⁴⁹ 31.465 ¹⁸⁶ 31.651 ²²²	26.33 ⁷⁴ 27.07 ⁸³ 27.90 ⁸⁷ 28.77 ⁸⁸	10.969 ⁹¹ 11.060 ¹³⁵ 11.195 ¹⁷³ 11.368 ²⁰⁸	50.90 ¹⁴⁹ 49.41 ¹⁵⁷ 47.84 ¹⁵⁸ 46.26 ¹⁵⁶
Средн. место J1990.5		23.114	83.31	23.731	54.63	30.204	22.97	10.156	53.34
Сек δ , tg δ a, a' b, b'		1.606 +0.069 -0.001	+1.257 -0.016 +1.000	1.146 +0.116 0.000	+0.560 -0.011 +1.000	1.015 +0.165 0.000	-0.172 -0.007 +1.000	1.001 +0.150 0.000	+0.051 +0.001 +1.000

Верхняя кульминация в Гриниче

Дата	449) χ Dra		447) 109 Her		680) ϵ Sgr		450) 39 Dra		
	3 ^m 69 VI-27 F8		3 ^m 92 VI-27 K0		1 ^m 95 VI-28 A0		4 ^m 85 VI-28 A2		
	h m 18 21	+72 43	h m 18 23	+21 45	h m 18 23	-34 23	h m 18 23	+58 47	
Янв. —3.5	09.182 ^s 49	37.06 ^{''} 355	15.342 ^s 125	46.40 ^{''} 250	29.716 ^s 182	31.01 ^{''} 79	43.267 ^s 80	34.82 ^{''} 353	
6.5	09.231 ^s 187	33.51 ^{''} 347	15.467 ^s 164	43.90 ^{''} 245	29.898 ^s 226	30.22 ^{''} 71	43.347 ^s 156	31.29 ^{''} 344	
16.4	09.418 ^s 321	30.04 ^{''} 331	15.631 ^s 201	41.45 ^{''} 233	30.124 ^s 265	29.51 ^{''} 64	43.503 ^s 230	27.85 ^{''} 329	
26.4	09.739 ^s 452	26.73 ^{''} 299	15.832 ^s 233	39.12 ^{''} 210	30.389 ^s 298	28.87 ^{''} 57	43.733 ^s 301	24.56 ^{''} 296	
Февр. 5.4	10.191 ^s 554	23.74 ^{''} 255	16.065 ^s 256	37.02 ^{''} 178	30.687 ^s 320	28.30 ^{''} 50	44.034 ^s 354	21.60 ^{''} 254	
	15.4	10.745 ^s 646	21.19 ^{''} 205	16.321 ^s 277	35.24 ^{''} 141	31.007 ^s 341	27.80 ^{''} 44	44.388 ^s 404	19.06 ^{''} 204
25.3	11.391 ^s 715	19.14 ^{''} 142	16.598 ^s 293	33.83 ^{''} 95	31.348 ^s 354	27.36 ^{''} 39	44.792 ^s 440	17.02 ^{''} 142	
7.3	12.106 ^s 752	17.72 ^{''} 79	16.891 ^s 301	32.88 ^{''} 47	31.702 ^s 362	26.97 ^{''} 34	45.232 ^s 460	15.60 ^{''} 79	
17.3	12.858 ^s 774	16.93 ^{''} 12	17.192 ^s 307	32.41 ^{''} 3	32.064 ^s 367	26.63 ^{''} 30	45.692 ^s 474	14.81 ^{''} 12	
27.3	13.632 ^s 764	16.81 ^{''} 57	17.499 ^s 305	32.44 ^{''} 54	32.431 ^s 366	26.33 ^{''} 24	46.166 ^s 470	14.69 ^{''} 57	
Апр. 6.2	14.396 ^s 729	17.38 ^{''} 119	17.804 ^s 300	32.98 ^{''} 99	32.797 ^s 361	26.09 ^{''} 18	46.636 ^s 453	15.26 ^{''} 118	
16.2	15.125 ^s 680	18.57 ^{''} 178	18.104 ^s 291	33.97 ^{''} 142	33.158 ^s 354	25.91 ^{''} 12	47.089 ^s 430	16.44 ^{''} 178	
26.2	15.805 ^s 601	20.35 ^{''} 232	18.395 ^s 274	35.39 ^{''} 180	33.512 ^s 337	25.79 ^{''} 3	47.519 ^s 390	18.22 ^{''} 231	
Май 6.1	16.406 ^s 510	22.67 ^{''} 272	18.669 ^s 253	37.19 ^{''} 208	33.849 ^s 317	25.76 ^{''} 6	47.909 ^s 343	20.53 ^{''} 271	
16.1	16.916 ^s 409	25.39 ^{''} 307	18.922 ^s 230	39.27 ^{''} 233	34.166 ^s 294	25.82 ^{''} 16	48.252 ^s 290	23.24 ^{''} 308	
Июнь 26.1	17.325 ^s 288	28.46 ^{''} 333	19.152 ^s 197	41.60 ^{''} 247	34.460 ^s 260	25.98 ^{''} 28	48.542 ^s 224	26.32 ^{''} 332	
5.1	17.613 ^s 168	31.79 ^{''} 344	19.349 ^s 163	44.07 ^{''} 254	34.720 ^s 224	26.26 ^{''} 37	48.766 ^s 158	29.64 ^{''} 344	
15.0	17.781 ^s 43	35.23 ^{''} 350	19.512 ^s 126	46.61 ^{''} 256	34.944 ^s 182	26.63 ^{''} 49	48.924 ^s 88	33.08 ^{''} 351	
25.0	17.824 ^s 90	38.73 ^{''} 345	19.638 ^s 82	49.17 ^{''} 248	35.126 ^s 133	27.12 ^{''} 57	49.012 ^s 11	36.59 ^{''} 346	
Июль 4.9	17.734 ^s 209	42.18 ^{''} 330	19.720 ^s 40	51.65 ^{''} 235	35.259 ^s 86	27.69 ^{''} 63	49.023 ^s 59	40.05 ^{''} 331	
Авг. 14.9	17.525 ^s 330	45.48 ^{''} 312	19.760 ^s 4	54.00 ^{''} 219	35.345 ^s 34	28.32 ^{''} 68	48.964 ^s 132	43.36 ^{''} 313	
24.9	17.195 ^s 445	48.60 ^{''} 281	19.756 ^s 48	56.19 ^{''} 196	35.379 ^s 18	29.00 ^{''} 68	48.832 ^s 202	46.49 ^{''} 282	
3.9	16.750 ^s 538	51.41 ^{''} 247	19.708 ^s 86	58.15 ^{''} 169	35.361 ^s 64	29.68 ^{''} 65	48.630 ^s 261	49.31 ^{''} 249	
13.9	16.212 ^s 631	53.88 ^{''} 209	19.622 ^s 124	59.84 ^{''} 142	35.297 ^s 110	30.33 ^{''} 58	48.369 ^s 318	51.80 ^{''} 212	
23.8	15.581 ^s 701	55.97 ^{''} 163	19.498 ^s 155	61.26 ^{''} 109	35.187 ^s 148	30.91 ^{''} 49	48.051 ^s 364	53.92 ^{''} 165	
Сент. 2.8	14.880 ^s 751	57.60 ^{''} 117	19.343 ^s 177	62.35 ^{''} 77	35.039 ^s 175	31.40 ^{''} 35	47.687 ^s 397	55.57 ^{''} 120	
12.8	14.129 ^s 793	58.77 ^{''} 67	19.166 ^s 193	63.12 ^{''} 43	34.864 ^s 196	31.75 ^{''} 19	47.290 ^s 423	56.77 ^{''} 71	
22.8	13.336 ^s 803	59.44 ^{''} 13	18.973 ^s 199	63.55 ^{''} 6	34.668 ^s 202	31.94 ^{''} 2	46.867 ^s 430	57.48 ^{''} 16	
Окт. 2.7	12.533 ^s 795	59.57 ^{''} 37	18.774 ^s 193	63.61 ^{''} 28	34.466 ^s 196	31.96 ^{''} 16	46.437 ^s 425	57.64 ^{''} 34	
12.7	11.738 ^s 772	59.20 ^{''} 92	18.581 ^s 182	63.33 ^{''} 65	34.270 ^s 180	31.80 ^{''} 34	46.012 ^s 410	57.30 ^{''} 88	
Нояб. 22.7	10.966 ^s 715	58.28 ^{''} 145	18.399 ^s 156	62.68 ^{''} 101	34.090 ^s 150	31.46 ^{''} 50	45.602 ^s 375	56.42 ^{''} 141	
1.7	10.251 ^s 646	56.83 ^{''} 192	18.243 ^s 126	61.67 ^{''} 133	33.940 ^s 111	30.96 ^{''} 64	45.227 ^s 330	55.01 ^{''} 187	
11.6	09.605 ^s 556	54.91 ^{''} 240	18.117 ^s 87	60.34 ^{''} 166	33.829 ^s 66	30.32 ^{''} 75	44.897 ^s 276	53.14 ^{''} 237	
21.6	09.049 ^s 441	52.51 ^{''} 280	18.030 ^s 43	58.68 ^{''} 194	33.763 ^s 11	29.57 ^{''} 81	44.621 ^s 205	50.77 ^{''} 276	
Дек. 1.6	08.608 ^s 322	49.71 ^{''} 312	17.987 ^s 1	56.74 ^{''} 217	33.752 ^s 42	28.76 ^{''} 84	44.416 ^s 135	48.01 ^{''} 307	
	11.5	08.286 ^s 186	46.59 ^{''} 338	17.988 ^s 49	54.57 ^{''} 237	33.794 ^s 96	27.92 ^{''} 82	44.281 ^s 55	44.94 ^{''} 335
21.5	08.100 ^s 40	43.21 ^{''} 350	18.037 ^s 96	52.20 ^{''} 245	33.890 ^s 148	27.10 ^{''} 81	44.226 ^s 29	41.59 ^{''} 346	
31.5	08.060 ^s 98	39.71 ^{''} 351	18.133 ^s 137	49.75 ^{''} 247	34.038 ^s 195	26.29 ^{''} 78	44.255 ^s 106	38.13 ^{''} 349	
41.5	08.158 ^s 242	36.20 ^{''} 343	18.270 ^s 178	47.28 ^{''} 242	34.233 ^s 240	25.51 ^{''} 70	44.361 ^s 186	34.64 ^{''} 340	
Средн. место J1990.5	13.697	44.12	17.586	53.90	32.504	23.34	46.265	42.03	
Sec δ , tg δ	3.368	+3.216	1.077	+0.399	1.212	-0.684	1.930	+1.651	
a, a'	-0.060	+0.092	+0.127	+0.101	+0.199	+0.103	+0.044	+0.104	
b, b'	+0.020	+0.996	+0.003	+0.995	-0.005	+0.995	+0.011	+0.995	

Дата	451) λ Sgr 2 ^m 94 VI-29 K0		452) PGC 4702 5 ^m 37 VI-30 B8		453) α Lyr 0 ^m 14 VII-1 A0		681) ϵ Sct 5 ^m 09 VII-2 G5	
	^h _{18 27} ^m	[°] _{-25 25} [']	^h _{18 32} ^m	[°] _{+30 32} [']	^h _{18 36} ^m	[°] _{+38 46} [']	^h _{18 42} ^m	[°] _{-8 17} [']
Янв. —3.5	^s _{20.510} ₁₅₉	["] _{47.41} ₄₁	^s _{25.837} ₁₀₇	["] _{40.30} ₂₈₃	^s _{34.610} ₉₅	["] _{20.81} ₃₀₉	^s _{57.901} ₁₃₁	["] _{15.01} ₈₀
6.5	_{20.669} ₂₀₈	_{47.00} ₁₉	_{25.944} ₁₄₉	_{37.47} ₂₇₉	_{34.705} ₁₄₃	_{17.72} ₃₀₃	_{58.032} ₁₆₈	_{15.81} ₈₀
16.5	_{20.877} ₂₄₁	_{46.81} ₁₅	_{26.093} ₁₉₁	_{34.68} ₂₆₆	_{34.848} ₁₈₉	_{14.69} ₂₉₂	_{58.200} ₂₀₁	_{16.61} ₇₈
26.4	_{21.118} ₂₇₁	_{46.66} ₁₄	_{26.284} ₂₂₇	_{32.02} ₂₄₁	_{35.037} ₂₃₃	_{11.77} ₂₆₅	_{58.401} ₂₃₀	_{17.39} ₆₈
Февр. 5.4	_{21.389} ₂₉₂	_{46.52} ₁₄	_{26.511} ₂₅₆	_{29.61} ₂₀₇	_{35.270} ₂₆₅	_{09.12} ₂₂₇	_{58.631} ₂₅₂	_{18.07} ₅₅
15.4	_{21.681} ₃₁₀	_{46.38} ₁₆	_{26.767} ₂₈₁	_{27.54} ₁₆₆	_{35.535} ₂₉₆	_{06.85} ₁₈₅	_{58.883} ₂₇₀	_{18.62} ₃₈
25.3	_{21.991} ₃₂₄	_{46.22} ₁₉	_{27.048} ₃₀₀	_{25.88} ₁₁₄	_{35.831} ₃₁₉	_{05.00} ₁₂₉	_{59.153} ₂₈₆	_{19.00} ₁₉
7.3	_{22.315} ₃₃₀	_{46.03} ₂₄	_{27.348} ₃₁₂	_{24.74} ₆₂	_{36.150} ₃₃₂	_{03.71} ₇₂	_{59.439} ₂₉₅	_{19.19} ₄
17.3	_{22.645} ₃₃₇	_{45.79} ₂₉	_{27.660} ₃₂₀	_{24.12} ₇	_{36.482} ₃₄₃	_{02.99} ₁₃	_{59.734} ₃₀₂	_{19.15} ₂₆
27.3	_{22.982} ₃₃₇	_{45.50} ₃₄	_{27.980} ₃₂₁	_{24.05} ₅₁	_{36.825} ₃₄₅	_{02.86} ₅₀	_{60.036} ₃₀₆	_{18.89} ₄₉
Апр. 6.2	_{23.319} ₃₃₂	_{45.16} ₃₆	_{28.301} ₃₁₅	_{24.56} ₁₀₂	_{37.170} ₃₃₇	_{03.36} ₁₀₆	_{60.342} ₃₀₄	_{18.40} ₆₈
16.2	_{23.651} ₃₂₆	_{44.80} ₃₈	_{28.616} ₃₀₆	_{25.58} ₁₅₁	_{37.507} ₃₂₈	_{04.42} ₁₅₉	_{60.646} ₃₀₁	_{17.72} ₈₇
26.2	_{23.977} ₃₁₂	_{44.42} ₃₇	_{28.922} ₂₈₉	_{27.09} ₁₉₆	_{37.835} ₃₀₇	_{06.01} ₂₀₈	_{60.947} ₂₉₀	_{16.85} ₁₀₂
Май 6.2	_{24.289} ₂₉₅	_{44.05} ₃₄	_{29.211} ₂₆₇	_{29.05} ₂₂₉	_{38.142} ₂₈₂	_{08.09} ₂₄₅	_{61.237} ₂₇₅	_{15.83} ₁₁₁
16.1	_{24.584} ₂₇₃	_{43.71} ₃₀	_{29.478} ₂₄₁	_{31.34} ₂₅₈	_{38.424} ₂₅₂	_{10.54} ₂₇₈	_{61.512} ₂₅₈	_{14.72} ₁₁₈
26.1	_{24.857} ₂₄₃	_{43.41} ₂₂	_{29.719} ₂₀₅	_{33.92} ₂₇₈	_{38.676} ₂₁₂	_{13.32} ₃₀₁	_{61.770} ₂₃₀	_{13.54} ₁₂₀
Июнь 5.1	_{25.100} ₂₁₀	_{43.19} ₁₅	_{29.924} ₁₆₉	_{36.70} ₂₈₇	_{38.888} ₁₇₂	_{16.33} ₃₁₂	_{62.000} ₂₀₂	_{12.34} ₁₁₆
15.0	_{25.310} ₁₇₂	_{43.04} ₅	_{30.093} ₁₂₈	_{39.57} ₂₉₁	_{39.060} ₁₂₅	_{19.45} ₃₁₉	_{62.202} ₁₆₈	_{11.18} ₁₁₂
25.0	_{25.482} ₁₂₈	_{42.99} ₃	_{30.221} ₈₂	_{42.48} ₂₈₆	_{39.185} ₇₅	_{22.64} ₃₁₄	_{62.370} ₁₂₇	_{10.06} ₁₀₃
Июль 4.9	_{25.610} ₈₄	_{43.02} ₁₁	_{30.303} ₃₇	_{45.34} ₂₇₄	_{39.260} ₂₅	_{25.78} ₃₀₁	_{62.497} ₈₇	_{09.03} ₉₂
14.9	_{25.694} ₃₇	_{43.13} ₁₉	_{30.340} ₁₁	_{48.08} ₂₅₇	_{39.285} ₂₆	_{28.79} ₂₈₆	_{62.584} ₄₄	_{08.11} ₈₀
24.9	_{25.731} ₁₂	_{43.32} ₂₃	_{30.329} ₅₇	_{50.65} ₂₃₂	_{39.259} ₇₇	_{31.65} ₂₅₈	_{62.628} ₂	_{07.31} ₆₇
Авг. 3.9	_{25.719} ₅₄	_{43.55} ₂₆	_{30.272} ₉₉	_{52.97} ₂₀₄	_{39.182} ₁₂₁	_{34.23} ₂₂₉	_{62.626} ₄₁	_{06.64} ₅₅
13.9	_{25.665} ₉₇	_{43.81} ₂₆	_{30.173} ₁₄₀	_{55.01} ₁₇₄	_{39.061} ₁₆₅	_{36.52} ₁₉₆	_{62.585} ₈₁	_{06.09} ₄₃
23.9	_{25.568} ₁₃₂	_{44.07} ₂₃	_{30.033} ₁₇₂	_{56.75} ₁₃₆	_{38.896} ₂₀₁	_{38.48} ₁₅₅	_{62.504} ₁₁₅	_{05.66} ₃₀
Сент. 2.8	_{25.436} ₁₅₇	_{44.30} ₁₈	_{29.861} ₁₉₇	_{58.11} ₁₀₀	_{38.695} ₂₂₇	_{40.03} ₁₁₆	_{62.389} ₁₃₉	_{05.36} ₂₀
12.8	_{25.279} ₁₇₇	_{44.48} ₁₂	_{29.664} ₂₁₆	_{59.11} ₆₀	_{38.468} ₂₄₇	_{41.19} ₇₂	_{62.250} ₁₆₀	_{05.16} ₁₀
22.8	_{25.102} ₁₈₂	_{44.60} ₃	_{29.448} ₂₂₃	_{59.71} ₁₇	_{38.221} ₂₅₆	_{41.91} ₂₄	_{62.090} ₁₆₈	_{05.06} ₀
Окт. 2.7	_{24.920} ₁₇₈	_{44.63} ₆	_{29.225} ₂₁₉	_{59.88} ₂₂	_{37.965} ₂₅₃	_{42.15} ₁₉	_{61.922} ₁₆₅	_{05.06} ₈
12.7	_{24.742} ₁₆₅	_{44.57} ₁₄	_{29.006} ₂₀₉	_{59.66} ₆₅	_{37.712} ₂₄₂	_{41.96} ₆₇	_{61.757} ₁₅₆	_{05.14} ₁₇
Нояб. 22.7	_{24.577} ₁₃₆	_{44.43} ₂₂	_{28.797} ₁₈₅	_{59.01} ₁₀₇	_{37.470} ₂₁₈	_{41.29} ₁₁₃	_{61.601} ₁₃₄	_{05.31} ₂₇
1.7	_{24.441} ₁₀₂	_{44.21} ₂₈	_{28.612} ₁₅₄	_{57.94} ₁₄₅	_{37.252} ₁₈₆	_{40.16} ₁₅₆	_{61.467} ₁₀₅	_{05.58} ₃₄
11.6	_{24.339} ₆₁	_{43.93} ₃₁	_{28.458} ₁₁₆	_{56.49} ₁₈₄	_{37.066} ₁₄₆	_{38.60} ₁₉₉	_{61.362} ₆₉	_{05.92} ₄₅
21.6	_{24.278} ₁₁	_{43.62} ₃₄	_{28.342} ₇₁	_{54.65} ₂₁₇	_{36.920} ₉₈	_{36.61} ₂₃₅	_{61.293} ₂₆	_{06.37} ₅₄
Дек. 1.6	_{24.267} ₃₈	_{43.28} ₃₂	_{28.271} ₂₄	_{52.48} ₂₄₃	_{36.822} ₄₉	_{34.26} ₂₆₄	_{61.267} ₁₆	_{06.91} ₆₂
11.6	_{24.305} ₉₀	_{42.96} ₂₈	_{28.247} ₂₄	_{50.05} ₂₆₆	_{36.773} ₅	_{31.62} ₂₉₀	_{61.283} ₆₀	_{07.53} ₆₉
21.5	_{24.395} ₁₂₄	_{42.68} ₂₁	_{28.271} ₇₆	_{47.39} ₂₇₇	_{36.778} ₆₁	_{28.72} ₃₀₃	_{61.343} ₁₀₄	_{08.22} ₇₅
31.5	_{24.519} ₁₈₂	_{42.47} ₂₈	_{28.347} ₁₂₀	_{44.62} ₂₈₁	_{36.839} ₁₁₀	_{25.69} ₃₀₆	_{61.447} ₁₄₁	_{08.97} ₈₀
41.5	_{24.701} ₂₁₉	_{42.19} ₁₉	_{28.467} ₁₆₄	_{41.81} ₂₇₅	_{36.949} ₁₆₀	_{22.63} ₃₀₁	_{61.588} ₁₇₉	_{09.77} ₇₉
Средн. место J1990.5	23.075	39.33	28.137	47.60	37.024	28.03	60.219	06.62
Sec δ , tg δ	1.107	-0.475	1.161	+0.590	1.283	+0.803	1.011	-0.146
a, a'	+0.185	+0.119	+0.114	+0.141	+0.100	+0.159	+0.163	+0.187
b, b'	-0.004	+0.993	+0.006	+0.990	+0.009	+0.987	-0.002	+0.982

Дата	460) ν Dra		682) σ Sgr		459) R Lyr		458) θ Ser pr		
	4 ^m 91 VII-5 K0		2 ^m 14 VII-5 B3		4 ^m 0 4.5 VII-6 M3		4 ^m 50 VII-6 A5		
	h m 18 54	° ′ +71 16	h m 18 54	° ′ -26 18	h m 18 55	° ′ +43 55	h m 18 55	° ′ +4 11	
Янв.	—3.5	26.612 ^s ₄₉	59.70 ^s ₃₄₆	38.068 ^s ₁₂₈	42.55 ^s ₃₃	00.235 ^s ₆₁	53.73 ^s ₃₁₇	42.616 ^s ₁₀₈	18.40 ^s ₁₄₉
	6.5	26.563 ^s ₇₈	56.24 ^s ₃₄₇	38.196 ^s ₁₈₀	42.22 ^s ₄₂	00.296 ^s ₁₁₄	50.56 ^s ₃₁₇	42.724 ^s ₁₄₅	16.91 ^s ₁₄₈
	16.5	26.641 ^s ₂₀₆	52.77 ^s ₃₄₀	38.376 ^s ₂₁₅	41.80 ^s ₃₆	00.410 ^s ₁₆₆	47.39 ^s ₃₀₈	42.869 ^s ₁₇₈	15.43 ^s ₁₄₃
	26.4	26.847 ^s ₃₃₄	49.37 ^s ₃₁₇	38.591 ^s ₂₄₇	41.44 ^s ₃₇	00.576 ^s ₂₁₆	44.31 ^s ₂₈₄	43.047 ^s ₂₀₉	14.00 ^s ₁₂₈
Февр.	5.4	27.181 ^s ₄₃₈	46.20 ^s ₂₈₁	38.838 ^s ₂₇₂	41.07 ^s ₃₈	00.792 ^s ₂₅₆	41.47 ^s ₂₅₀	43.256 ^s ₂₃₂	12.72 ^s ₁₀₉
	15.4	27.619 ^s ₅₃₆	43.39 ^s ₂₃₇	39.110 ^s ₂₉₄	40.69 ^s ₄₀	01.048 ^s ₂₉₂	38.97 ^s ₂₀₇	43.488 ^s ₂₅₄	11.63 ^s ₈₄
	25.4	28.155 ^s ₆₁₆	41.02 ^s ₁₈₀	39.404 ^s ₃₁₂	40.29 ^s ₄₄	01.340 ^s ₃₂₃	36.90 ^s ₁₅₃	43.742 ^s ₂₇₁	10.79 ^s ₅₃
Март	7.3	28.771 ^s ₆₆₇	39.22 ^s ₁₂₀	39.716 ^s ₃₂₃	39.85 ^s ₄₉	01.663 ^s ₃₄₃	35.37 ^s ₉₅	44.013 ^s ₂₈₂	10.26 ^s ₂₀
	17.3	29.438 ^s ₇₀₇	38.02 ^s ₅₅	40.039 ^s ₃₃₃	39.36 ^s ₅₃	02.006 ^s ₃₅₉	34.42 ^s ₃₆	44.295 ^s ₂₉₃	10.06 ^s ₁₄
	27.3	30.145 ^s ₇₁₈	37.47 ^s ₁₄	40.372 ^s ₃₃₉	38.83 ^s ₅₆	02.365 ^s ₃₆₅	34.06 ^s ₃₀	44.588 ^s ₂₉₈	10.20 ^s ₅₀
Апр.	6.2	30.863 ^s ₇₀₄	37.61 ^s ₇₉	40.711 ^s ₃₃₈	38.27 ^s ₅₉	02.730 ^s ₃₆₂	34.36 ^s ₈₉	44.886 ^s ₂₉₇	10.70 ^s ₈₁
	16.2	31.567 ^s ₆₇₇	38.40 ^s ₁₄₀	41.049 ^s ₃₃₇	37.68 ^s ₅₈	03.092 ^s ₃₅₅	35.25 ^s ₁₄₆	45.183 ^s ₂₉₆	11.51 ^s ₁₁₂
	26.2	32.244 ^s ₆₂₂	39.80 ^s ₁₉₉	41.386 ^s ₃₂₈	37.10 ^s ₅₆	03.447 ^s ₃₃₆	36.71 ^s ₁₉₉	45.479 ^s ₂₈₇	12.63 ^s ₁₃₈
Май	6.2	32.866 ^s ₅₅₀	41.79 ^s ₂₄₆	41.714 ^s ₃₁₃	36.54 ^s ₅₂	03.783 ^s ₃₁₁	38.70 ^s ₂₄₁	45.766 ^s ₂₇₃	14.01 ^s ₁₅₆
	16.1	33.416 ^s ₄₇₀	44.25 ^s ₂₈₇	42.027 ^s ₂₉₅	36.02 ^s ₄₄	04.094 ^s ₂₈₁	41.11 ^s ₂₇₈	46.039 ^s ₂₅₆	15.57 ^s ₁₇₃
	26.1	33.886 ^s ₃₆₆	47.12 ^s ₃₂₀	42.322 ^s ₂₆₈	35.58 ^s ₃₅	04.375 ^s ₂₃₉	43.89 ^s ₃₀₅	46.295 ^s ₂₃₀	17.30 ^s ₁₈₁
Июнь	5.1	34.252 ^s ₂₆₁	50.32 ^s ₃₄₀	42.590 ^s ₂₃₇	35.23 ^s ₂₅	04.614 ^s ₁₉₅	46.94 ^s ₃₂₂	46.525 ^s ₂₀₁	19.11 ^s ₁₈₄
	15.1	34.513 ^s ₁₄₉	53.72 ^s ₃₅₅	42.827 ^s ₂₀₀	34.98 ^s ₁₃	04.809 ^s ₁₄₈	50.16 ^s ₃₃₂	46.726 ^s ₁₆₉	20.95 ^s ₁₈₃
	25.0	34.662 ^s ₂₆	57.27 ^s ₃₅₇	43.027 ^s ₁₅₇	34.85 ^s ₀	04.957 ^s ₉₂	53.48 ^s ₃₃₂	46.895 ^s ₁₂₈	22.78 ^s ₁₇₅
Июль	5.0	34.688 ^s ₈₈	60.84 ^s ₃₄₉	43.184 ^s ₁₁₂	34.85 ^s ₁₀	05.049 ^s ₃₉	56.80 ^s ₃₂₂	47.023 ^s ₈₈	24.53 ^s ₁₆₅
	14.9	34.600 ^s ₂₀₄	64.33 ^s ₃₃₉	43.296 ^s ₆₄	34.95 ^s ₂₀	05.088 ^s ₁₇	60.02 ^s ₃₁₀	47.111 ^s ₄₅	26.18 ^s ₁₅₁
	24.9	34.396 ^s ₃₁₈	67.72 ^s ₃₁₅	43.360 ^s ₁₄	35.15 ^s ₂₈	05.071 ^s ₇₃	63.12 ^s ₂₈₄	47.156 ^s ₁	27.69 ^s ₁₃₄
Авг.	3.9	34.078 ^s ₄₁₅	70.87 ^s ₂₈₆	43.374 ^s ₃₂	35.43 ^s ₃₃	04.998 ^s ₁₂₁	65.96 ^s ₂₅₇	47.157 ^s ₃₉	29.03 ^s ₁₁₆
	13.9	33.663 ^s ₅₁₀	73.73 ^s ₂₅₄	43.342 ^s ₇₇	35.76 ^s ₃₆	04.877 ^s ₁₇₁	68.53 ^s ₂₂₅	47.118 ^s ₇₉	30.19 ^s ₉₆
	23.9	33.153 ^s ₅₉₀	76.27 ^s ₂₁₂	43.265 ^s ₁₁₆	36.12 ^s ₃₅	04.706 ^s ₂₁₁	70.78 ^s ₁₈₄	47.039 ^s ₁₁₂	31.15 ^s ₇₅
Сент.	2.8	32.563 ^s ₆₄₈	78.39 ^s ₁₇₀	43.149 ^s ₁₄₆	36.47 ^s ₃₁	04.495 ^s ₂₄₂	72.62 ^s ₁₄₅	46.927 ^s ₁₃₉	31.90 ^s ₅₅
	12.8	31.915 ^s ₇₀₁	80.09 ^s ₁₂₂	43.003 ^s ₁₇₀	36.78 ^s ₂₆	04.253 ^s ₂₆₉	74.07 ^s ₁₀₀	46.788 ^s ₁₆₀	32.45 ^s ₃₄
	22.8	31.214 ^s ₇₂₇	81.31 ^s ₆₉	42.833 ^s ₁₈₂	37.04 ^s ₁₆	03.984 ^s ₂₈₀	75.07 ^s ₅₁	46.628 ^s ₁₆₉	32.79 ^s ₁₂
Окт.	2.8	30.487 ^s ₇₃₃	82.00 ^s ₁₉	42.651 ^s ₁₈₁	37.20 ^s ₇	03.704 ^s ₂₈₂	75.58 ^s ₅	46.459 ^s ₁₇₀	32.91 ^s ₈
	12.7	29.754 ^s ₇₂₈	82.19 ^s ₃₇	42.470 ^s ₁₇₄	37.27 ^s ₃	03.422 ^s ₂₇₅	75.63 ^s ₄₅	46.289 ^s ₁₆₂	32.83 ^s ₂₉
	22.7	29.026 ^s ₆₉₀	81.82 ^s ₉₂	42.296 ^s ₁₅₀	37.24 ^s ₁₃	03.147 ^s ₂₅₃	75.18 ^s ₉₆	46.127 ^s ₁₄₃	32.54 ^s ₅₀
Нояб.	1.7	28.336 ^s ₆₃₉	80.90 ^s ₁₄₃	42.146 ^s ₁₂₀	37.11 ^s ₂₃	02.894 ^s ₂₂₅	74.22 ^s ₁₄₀	45.984 ^s ₁₁₇	32.04 ^s ₆₉
	11.6	27.697 ^s ₄₇₁	79.47 ^s ₁₉₅	42.026 ^s ₈₃	36.88 ^s ₂₉	02.669 ^s ₁₈₇	72.82 ^s ₁₂₈	45.867 ^s ₈₄	31.35 ^s ₉₀
	21.6	27.126 ^s ₄₇₆	77.52 ^s ₂₄₂	41.943 ^s ₃₆	36.59 ^s ₃₅	02.482 ^s ₁₃₈	70.94 ^s ₂₂₈	45.783 ^s ₄₄	30.45 ^s ₁₀₈
Дек.	1.6	26.650 ^s ₃₇₆	75.10 ^s ₂₇₉	41.907 ^s ₁₀	36.24 ^s ₃₈	02.344 ^s ₈₉	68.66 ^s ₂₆₂	45.739 ^s ₄	29.37 ^s ₁₂₂
	11.6	26.274 ^s ₂₅₉	72.31 ^s ₃₁₅	41.917 ^s ₅₉	35.86 ^s ₃₉	02.255 ^s ₃₃	66.04 ^s ₂₉₂	45.735 ^s ₃₈	28.15 ^s ₁₃₇
	21.5	26.015 ^s ₁₂₉	69.16 ^s ₃₃₅	41.976 ^s ₁₀₉	35.47 ^s ₃₂	02.222 ^s ₂₅	63.12 ^s ₃₀₈	45.773 ^s ₈₂	26.78 ^s ₁₄₄
	31.5	25.886 ^s ₄	65.81 ^s ₃₄₆	42.085 ^s ₁₄₀	35.15 ^s ₄₃	02.247 ^s ₇₈	60.04 ^s ₃₁₇	45.855 ^s ₁₁₈	25.34 ^s ₁₄₆
	41.5	25.882 ^s ₁₃₀	62.35 ^s ₃₄₇	42.225 ^s ₁₉₁	34.72 ^s ₄₀	02.325 ^s ₁₃₄	56.87 ^s ₃₁₅	45.973 ^s ₁₅₆	23.86 ^s ₁₄₈
Средн. место J1990.5		30.973	64.68	40.608	32.95	02.759	59.79	44.852	26.56
Sec δ , tg δ		3.117	+2.952	1.116	-0.494	1.389	+0.963	1.003	+0.073
a, a'		-0.038	+0.236	+0.185	+0.236	+0.091	+0.238	+0.149	+0.241
b, b'		+0.046	+0.972	-0.008	+0.972	+0.015	+0.971	+0.001	+0.971

ВИДИМЫЕ МЕСТА ЗВЕЗД 1990

Верхняя кульминация в Гриниче

Дата	482) α Aql		484) η Aql		485) β Aql		487) ρ 371		
	0 ^m 89 VII-20 A5		3 ^m 7 4.4 VII-20 G0p		3 ^m 90 VII-21 K0		5 ^m 13 VII-21 K2		
	h m	+ ^o 50'	h m	+ ^o 58'	h m	+ ^o 22'	h m	+ ^o 48'	
	19 50		19 51		19 54		19 55		
	^s	"	^s	"	^s	"	^s	"	
Янв. —3.4	17.020 ⁵⁴	25.84 ¹⁵⁴	57.194 ⁵⁷	41.89 ¹¹²	48.656 ⁵¹	49.21 ¹⁴³	41.385 ⁸²	71.64 ³¹²	
6.5	17.074 ⁹¹	24.30 ¹⁵⁵	57.251 ⁹²	40.77 ¹¹²	48.707 ⁸⁶	47.78 ¹⁴²	41.303 ⁹	68.52 ³²⁶	
16.5	17.165 ¹²⁴	22.75 ¹⁵²	57.343 ¹²⁵	39.65 ¹⁰⁹	48.793 ¹¹⁹	46.36 ¹⁴⁰	41.294 ⁶⁵	65.26 ³³³	
26.5	17.289 ¹⁵⁹	21.23 ¹⁴⁰	57.468 ¹⁵⁹	38.56 ⁹⁷	48.912 ¹⁵³	44.96 ¹²⁸	41.359 ¹⁴⁴	61.93 ³²⁵	
Февр. 5.5	17.448 ¹⁸⁶	19.83 ¹²¹	57.627 ¹⁸⁶	37.59 ⁸¹	49.065 ¹⁸²	43.68 ¹¹¹	41.503 ²¹³	58.68 ³⁰¹	
	15.4	17.634 ²¹⁴	18.62 ⁹⁶	57.813 ²¹³	36.78 ⁶¹	49.247 ²⁰⁸	42.57 ⁸⁷	41.716 ²⁷⁹	55.67 ²⁷¹
	25.4	17.848 ²³⁹	17.66 ⁶⁵	58.026 ²³⁶	36.17 ³³	49.455 ²³³	41.70 ⁵⁸	41.995 ³⁴¹	52.96 ²²⁴
Март 7.4	18.087 ²⁵⁷	17.01 ³⁰	58.262 ²⁵⁶	35.84 ⁵	49.688 ²⁵⁴	41.12 ²⁴	42.336 ³⁸⁹	50.72 ¹⁷²	
17.3	18.344 ²⁷⁶	16.71 ⁷	58.518 ²⁷⁴	35.79 ²⁶	49.942 ²⁷²	40.88 ⁹	42.725 ⁴³¹	49.00 ¹¹⁴	
27.3	18.620 ²⁹⁰	16.78 ⁴⁶	58.792 ²⁸⁸	36.05 ⁵⁸	50.214 ²⁸⁷	40.97 ⁴⁸	43.156 ⁴⁶⁰	47.86 ⁴⁷	
Апр. 6.3	18.910 ²⁹⁹	17.24 ⁸³	59.080 ²⁹⁷	36.63 ⁸⁷	50.501 ²⁹⁶	41.45 ⁸¹	43.616 ⁴⁷⁴	47.39 ¹⁵	
16.3	19.209 ³⁰⁵	18.07 ¹¹⁷	59.377 ³⁰⁵	37.50 ¹¹⁵	50.797 ³⁰⁴	42.26 ¹¹³	44.090 ⁴⁸⁰	47.54 ⁸⁰	
26.2	19.514 ³⁰³	19.24 ¹⁴⁹	59.682 ³⁰⁴	38.65 ¹³⁹	51.101 ³⁰⁴	43.39 ¹⁴⁴	44.570 ⁴⁷⁰	48.34 ¹⁴²	
Май 6.2	19.817 ²⁹⁷	20.73 ¹⁷³	59.986 ²⁹⁹	40.04 ¹⁵⁷	51.405 ²⁹⁸	44.83 ¹⁶⁶	45.040 ⁴⁴⁶	49.76 ¹⁹⁶	
16.2	20.114 ²⁸⁶	22.46 ¹⁹⁵	60.285 ²⁸⁹	41.61 ¹⁷³	51.703 ²⁸⁸	46.49 ¹⁸⁶	45.486 ⁴¹⁶	51.72 ²⁴⁵	
Июнь 26.2	20.400 ²⁶⁶	24.41 ²⁰⁹	60.574 ²⁷¹	43.34 ¹⁸⁰	51.991 ²⁶⁹	48.35 ¹⁹⁹	45.902 ³⁶⁷	54.17 ²⁸⁸	
5.1	20.666 ²⁴⁰	26.50 ²¹⁶	60.845 ²⁴⁶	45.14 ¹⁸³	52.260 ²⁴⁶	50.34 ²⁰⁴	46.269 ³¹⁴	57.05 ³¹⁷	
15.1	20.906 ²¹¹	28.66 ²¹⁸	61.091 ²¹⁸	46.97 ¹⁸³	52.506 ²¹⁶	52.38 ²⁰⁶	46.583 ²⁵³	60.22 ³⁴⁴	
25.1	21.117 ¹⁷⁴	30.84 ²¹⁵	61.309 ¹⁸¹	48.80 ¹⁷⁴	52.722 ¹⁷⁹	54.44 ²⁰¹	46.836 ¹⁸⁰	63.66 ³⁵⁷	
Июль 5.0	21.291 ¹³⁴	32.99 ²⁰⁵	61.490 ¹⁴²	50.54 ¹⁶⁴	52.901 ¹⁴⁰	56.45 ¹⁹²	47.016 ¹⁰⁹	67.23 ³⁶²	
Авг. 15.0	21.425 ⁹¹	35.04 ¹⁹³	61.632 ¹⁰⁰	52.18 ¹⁵¹	53.041 ⁹⁸	58.37 ¹⁷⁹	47.125 ³⁴	70.85 ³⁶¹	
24.9	21.516 ⁴⁴	36.97 ¹⁷⁵	61.732 ⁵⁴	53.69 ¹³⁴	53.139 ⁵²	60.16 ¹⁶²	47.159 ⁴⁴	74.46 ³⁴⁸	
3.9	21.560 ³	38.72 ¹⁵⁶	61.786 ¹¹	55.03 ¹¹⁵	53.191 ⁸	61.78 ¹⁴³	47.115 ¹¹⁵	77.94 ³³⁰	
13.9	21.563 ⁴¹	40.28 ¹³⁵	61.797 ³³	56.18 ⁹⁷	53.199 ³⁴	63.21 ¹²³	47.000 ¹⁸⁵	81.24 ³⁶⁷	
23.9	21.522 ⁸¹	41.63 ¹¹⁰	61.764 ⁷³	57.15 ⁷⁶	53.165 ⁷⁵	64.44 ⁹⁹	46.815 ²⁴⁹	84.31 ²⁷²	
Сент. 2.9	21.441 ¹¹¹	42.73 ⁸⁷	61.691 ¹⁰⁴	57.91 ⁵⁷	53.090 ¹⁰⁶	65.43 ⁷⁸	46.566 ³⁰¹	87.03 ²³⁶	
12.9	21.330 ¹⁴⁰	43.60 ⁶³	61.587 ¹³³	58.48 ³⁹	52.984 ¹³⁵	66.21 ⁵⁵	46.265 ³⁴⁸	89.39 ¹⁹⁶	
22.8	21.190 ¹⁵⁷	44.23 ³⁶	61.454 ¹⁵¹	58.87 ¹⁸	52.849 ¹⁵⁴	66.76 ³¹	45.917 ³⁸¹	91.35 ¹⁴⁷	
Окт. 2.8	21.033 ¹⁶⁵	44.59 ¹⁴	61.303 ¹⁶⁰	59.05 ²	52.695 ¹⁶²	67.07 ⁹	45.536 ³⁹⁹	92.82 ⁹⁹	
12.8	20.868 ¹⁶⁷	44.73 ¹²	61.143 ¹⁶²	59.07 ¹⁷	52.533 ¹⁶⁵	67.16 ¹⁴	45.137 ⁴¹⁰	93.81 ⁴⁶	
Нояб. 22.7	20.701 ¹⁵⁵	44.61 ³⁷	60.981 ¹⁵¹	58.90 ³³	52.368 ¹⁵⁴	67.02 ³⁶	44.727 ⁴⁰³	94.27 ¹⁰	
1.7	20.546 ¹³⁸	44.24 ⁵⁹	60.830 ¹³⁴	58.57 ⁴⁸	52.214 ¹³⁸	66.66 ⁵⁶	44.324 ³⁸³	94.17 ⁶³	
11.7	20.408 ¹¹⁴	43.65 ⁸⁴	60.696 ¹¹⁰	58.09 ⁶⁵	52.076 ¹¹⁵	66.10 ⁷⁸	43.941 ³⁵⁵	93.54 ¹¹⁸	
21.7	20.294 ⁸¹	42.81 ¹⁰³	60.586 ⁷⁷	57.44 ⁷⁹	51.961 ⁸³	65.32 ⁹⁶	43.586 ³⁰⁹	92.36 ¹⁷¹	
Дек. 1.6	20.213 ⁴⁸	41.78 ¹²²	60.509 ⁴⁴	56.65 ⁹¹	51.878 ⁵⁰	64.36 ¹¹³	43.277 ²⁵⁸	90.65 ²¹⁷	
	11.6	20.165 ¹⁰	40.56 ¹³⁸	60.465 ⁷	55.74 ¹⁰²	63.23 ¹²⁷	43.019 ¹⁹⁷	88.48 ²⁶¹	
	21.6	20.155 ²⁹	39.18 ¹⁴⁸	60.458 ³²	54.72 ¹⁰⁸	61.96 ¹³⁷	42.822 ¹²⁶	85.87 ²⁹⁴	
	31.6	20.184 ⁶⁵	37.70 ¹⁵⁵	60.490 ⁶⁷	53.64 ¹¹²	60.59 ¹⁴²	42.696 ⁵⁷	82.93 ³¹⁷	
	41.5	20.249 ¹⁰²	36.15 ¹⁵⁴	60.557 ¹⁰³	52.52 ¹¹¹	59.17 ¹⁴²	42.639 ¹⁹	79.76 ³³¹	
Средн. место J1990.5	19.198	34.03	59.350	50.87	50.804	57.22	44.505	73.27	
Sec δ , tg δ	1.012	+0.156	1.000	+0.017	1.006	+0.112	1.932	+1.653	
a, a'	+0.144	+0.463	+0.152	+0.469	+0.147	+0.480	+0.057	+0.484	
b, b'	+0.005	+0.886	+0.001	+0.883	+0.004	+0.877	+0.053	+0.875	

ВИДИМЫЕ МЕСТА ЗВЕЗД 1990

Верхняя кульминация в Гриниче

Дата	689) α Pav		498) δ Cyg		499) θ Cep		500) ε Del		
	2 ^m 12	VII-28 B3	4 ^m 09	VII-29 F5p	4 ^m 28	VII-29 A5	3 ^m 98	VII-30 B5	
	^h ^m	^o /	^h ^m	^o /	^h ^m	^o /	^h ^m	^o /	
	20 24	-56 45	20 28	+30 19	20 29	+62 57	20 32	+11 15	
Янв.	-3.4	50.891 ^s 17	76.15 ^o 222	58.218 ^s 16	67.75 ^o 231	22.008 ^s 172	44.15 ^o 289	43.491 ^s 11	66.99 ^o 151
	6.6	50.908 ^s 85	73.93 ^o 236	58.202 ^s 24	65.44 ^o 241	21.836 ^s 92	41.26 ^o 312	43.502 ^s 45	65.48 ^o 155
	16.5	50.993 ^s 147	71.57 ^o 248	58.226 ^s 63	63.03 ^o 247	21.744 ^s 11	38.14 ^o 327	43.547 ^s 78	63.93 ^o 155
	26.5	51.140 ^s 213	69.09 ^o 253	58.289 ^s 105	60.56 ^o 240	21.733 ^s 80	34.87 ^o 329	43.625 ^s 112	62.38 ^o 146
Февр.	5.5	51.353 ^s 268	66.56 ^o 250	58.394 ^s 141	58.16 ^o 223	21.813 ^s 162	31.58 ^o 315	43.737 ^s 142	60.92 ^o 129
	15.5	51.621 ^s 320	64.06 ^o 246	58.535 ^s 179	55.93 ^o 198	21.975 ^s 243	28.43 ^o 292	43.879 ^s 173	59.63 ^o 109
	25.4	51.941 ^s 370	61.60 ^o 234	58.714 ^s 214	53.95 ^o 161	22.218 ^s 324	25.51 ^o 254	44.052 ^s 203	58.54 ^o 77
Март	7.4	52.311 ^s 409	59.26 ^o 219	58.928 ^s 245	52.34 ^o 119	22.542 ^s 387	22.97 ^o 207	44.255 ^s 227	57.77 ^o 44
	17.4	52.720 ^s 446	57.07 ^o 202	59.173 ^s 273	51.15 ^o 73	22.929 ^s 445	20.90 ^o 154	44.482 ^s 252	57.33 ^o 8
	27.3	53.166 ^s 477	55.05 ^o 178	59.446 ^s 298	50.42 ^o 19	23.374 ^s 492	19.36 ^o 91	44.734 ^s 274	57.25 ^o 33
Апр.	6.3	53.643 ^s 498	53.27 ^o 153	59.744 ^s 314	50.23 ^o 33	23.866 ^s 519	18.45 ^o 28	45.008 ^s 289	57.58 ^o 70
	16.3	54.141 ^s 517	51.74 ^o 125	60.058 ^s 328	50.56 ^o 84	24.385 ^s 539	18.17 ^o 35	45.297 ^s 303	58.28 ^o 108
	26.3	54.658 ^s 522	50.49 ^o 91	60.386 ^s 332	51.40 ^o 135	24.924 ^s 537	18.52 ^o 101	45.600 ^s 309	59.36 ^o 143
Май	6.2	55.180 ^s 519	49.58 ^o 59	60.718 ^s 329	52.75 ^o 177	25.461 ^s 521	19.53 ^o 157	45.909 ^s 309	60.79 ^o 171
	16.2	55.699 ^s 510	48.99 ^o 24	61.047 ^s 321	54.52 ^o 217	25.982 ^s 496	21.10 ^o 212	46.218 ^s 304	62.50 ^o 195
Июнь	26.2	56.209 ^s 484	48.75 ^o 13	61.368 ^s 302	56.69 ^o 250	26.478 ^s 450	23.22 ^o 261	46.522 ^s 290	64.45 ^o 215
	5.2	56.693 ^s 449	48.88 ^o 47	61.670 ^s 277	59.19 ^o 272	26.928 ^s 395	25.83 ^o 297	46.812 ^s 270	66.60 ^o 225
	15.1	57.142 ^s 406	49.35 ^o 82	61.947 ^s 245	61.91 ^o 292	27.323 ^s 332	28.80 ^o 329	47.082 ^s 244	68.85 ^o 232
	25.1	57.548 ^s 347	50.17 ^o 114	62.192 ^s 205	64.83 ^o 300	27.655 ^s 255	32.09 ^o 352	47.326 ^s 210	71.17 ^o 232
Июль	5.1	57.895 ^s 285	51.31 ^o 141	62.397 ^s 163	67.83 ^o 302	27.910 ^s 178	35.61 ^o 364	47.536 ^s 172	73.49 ^o 225
Авг.	15.0	58.180 ^s 214	52.72 ^o 165	62.560 ^s 117	70.85 ^o 298	28.088 ^s 94	39.25 ^o 371	47.708 ^s 131	75.74 ^o 215
	25.0	58.394 ^s 134	54.37 ^o 183	62.677 ^s 65	73.83 ^o 286	28.182 ^s 7	42.96 ^o 365	47.839 ^s 84	77.89 ^o 199
	3.9	58.528 ^s 57	56.20 ^o 192	62.742 ^s 18	76.69 ^o 268	28.189 ^s 75	46.61 ^o 354	47.923 ^s 41	79.88 ^o 181
	13.9	58.585 ^s 22	58.12 ^o 197	62.760 ^s 30	79.37 ^o 248	28.114 ^s 156	50.15 ^o 337	47.964 ^s 4	81.69 ^o 161
	23.9	58.563 ^s 99	60.09 ^o 191	62.730 ^s 77	81.85 ^o 219	27.958 ^s 232	53.52 ^o 310	47.960 ^s 47	83.30 ^o 136
Сент.	2.9	58.464 ^s 164	62.00 ^o 178	62.653 ^s 114	84.04 ^o 189	27.726 ^s 296	56.62 ^o 277	47.913 ^s 82	84.66 ^o 112
	12.9	58.300 ^s 225	63.78 ^o 158	62.539 ^s 149	85.93 ^o 157	27.430 ^s 356	59.39 ^o 242	47.831 ^s 114	85.78 ^o 87
	22.8	58.075 ^s 271	65.36 ^o 130	62.390 ^s 174	87.50 ^o 118	27.074 ^s 402	61.81 ^o 196	47.717 ^s 139	86.65 ^o 59
Окт.	2.8	57.804 ^s 299	66.66 ^o 96	62.216 ^s 190	88.68 ^o 82	26.672 ^s 433	63.77 ^o 151	47.578 ^s 152	87.24 ^o 35
	12.8	57.505 ^s 317	67.62 ^o 57	62.026 ^s 200	89.50 ^o 41	26.239 ^s 456	65.28 ^o 100	47.426 ^s 161	87.59 ^o 7
Нояб.	22.8	57.188 ^s 313	68.19 ^o 15	61.826 ^s 197	89.91 ^o 1	25.783 ^s 460	66.28 ^o 43	47.265 ^s 158	87.66 ^o 19
	1.7	56.875 ^s 295	68.34 ^o 28	61.629 ^s 186	89.90 ^o 41	25.323 ^s 451	66.71 ^o 10	47.107 ^s 147	87.47 ^o 43
	11.7	56.580 ^s 264	68.06 ^o 71	61.443 ^s 171	89.49 ^o 83	24.872 ^s 431	66.61 ^o 69	46.960 ^s 131	87.04 ^o 70
	21.7	56.316 ^s 215	67.35 ^o 113	61.272 ^s 143	88.66 ^o 123	24.441 ^s 393	65.92 ^o 125	46.829 ^s 106	86.34 ^o 92
Дек.	1.7	56.101 ^s 161	66.22 ^o 149	61.129 ^s 114	87.43 ^o 157	24.048 ^s 347	64.67 ^o 175	46.723 ^s 78	85.42 ^o 111
	11.6	55.940 ^s 99	64.73 ^o 182	61.015 ^s 80	85.86 ^o 191	23.701 ^s 289	62.92 ^o 226	46.645 ^s 47	84.31 ^o 132
	21.6	55.841 ^s 29	62.91 ^o 208	60.935 ^s 41	83.95 ^o 216	23.412 ^s 217	60.66 ^o 266	46.598 ^s 12	82.99 ^o 144
	31.6	55.812 ^s 37	60.83 ^o 227	60.894 ^s 3	81.79 ^o 234	23.195 ^s 145	58.00 ^o 297	46.586 ^s 21	81.55 ^o 152
	41.5	55.849 ^s 104	58.56 ^o 244	60.891 ^s 37	79.45 ^o 246	23.050 ^s 61	55.03 ^o 320	46.607 ^s 55	80.03 ^o 157
Средн. место J1990.5		54.032	58.31	60.433	71.45	25.390	43.27	45.551	74.14
Sec δ , tg δ		1.825	-1.526	1.159	+0.585	2.200	+1.959	1.020	+0.199
a, a'		+0.235	+0.591	+0.122	+0.605	+0.049	+0.607	+0.143	+0.618
b, b'		-0.060	+0.807	+0.024	+0.796	+0.079	+0.795	+0.008	+0.786

ВИДИМЫЕ МЕСТА ЗВЕЗД 1990

Верхняя кульминация в Гриниче

Дата	505) α Del		690) ν Cap		506) α Cyg		507) δ Del		
	3 ^m 86 VIII-1 B8		5 ^m 33 VIII-1 M0		1 ^m 33 VIII-1 A2p		4 ^m 53 VIII-2 A5		
	h m 20 39	° / +15 52	h m 20 39	° / -18 10	h m 20 41	° / +45 14	h m 20 42	° / +15 02	
Янв.	—3.4	09.750 ^s	35.15 ^s	28.474 ^s	34.26 ^s	03.995 ^s	45.39 ^s	58.879 ^s	18.17 ^s
	6.6	09.750 ⁰	33.46 ¹⁶⁹	28.498 ²⁴	34.20 ⁶	03.924 ⁷¹	42.78 ²⁶¹	58.877 ³¹	16.53 ¹⁶⁴
	16.5	09.784 ³⁴	31.71 ¹⁷⁵	28.558 ⁶⁰	34.20 ¹⁴	03.900 ²⁴	39.99 ²⁷⁹	58.908 ⁶⁴	14.83 ¹⁷⁰
	26.5	09.851 ⁶⁷	29.93 ¹⁷⁸	28.670 ¹¹²	33.68 ³⁸	03.926 ²⁶	37.06 ²⁹²	58.972 ⁹⁹	13.11 ¹⁷²
Февр.	5.5	09.954 ¹⁰³	28.24 ¹⁶⁹	28.769 ⁹⁹	33.51 ¹⁷	04.005 ⁷⁹	34.14 ²⁹³	59.071 ⁹⁹	11.48 ¹⁶³
	15.5	10.088 ¹³⁴	26.71 ¹⁵³	28.927 ¹⁵⁸	33.05 ⁴⁶	04.133 ¹²⁸	31.37 ²⁷⁷	59.202 ¹³¹	09.99 ¹⁴⁹
	25.4	10.254 ¹⁶⁶	25.39 ¹³²	29.113 ¹⁸⁶	33.05 ⁶⁰	04.310 ¹⁷⁷	28.81 ²⁵⁶	59.364 ¹⁶²	08.72 ¹²⁷
Март	7.4	10.451 ¹⁹⁷	24.39 ¹⁰⁰	29.328 ²¹⁵	32.45 ⁷⁴	04.536 ²²⁶	26.63 ²¹⁸	59.558 ¹⁹⁴	07.75 ⁹⁷
	17.4	10.675 ²²⁴	23.75 ⁶⁴	29.567 ²³⁹	31.71 ⁸⁹	04.803 ²⁶⁷	24.88 ¹⁷⁵	59.778 ²⁴⁷	07.14 ⁶¹
	27.3	10.926 ²⁵¹	23.49 ²⁶	29.830 ²⁶³	30.82 ¹⁰⁴	05.108 ³⁰⁵	23.64 ¹²⁴	60.025 ²⁷¹	06.90 ²⁴
	6.3	11.199 ²⁷³	23.67 ¹⁸	30.116 ²⁸⁶	29.78 ¹¹⁸	05.446 ³³⁸	22.98 ⁶⁶	60.296 ²⁸⁸	07.09 ⁶⁰
Апр.	16.3	11.489 ²⁹⁰	24.25 ⁵⁸	30.418 ³⁰²	28.60 ¹²⁹	05.806 ³⁶⁰	22.90 ⁸	60.584 ³⁰⁴	07.69 ¹⁰⁰
	26.3	11.794 ³⁰⁵	25.25 ¹⁰⁰	30.736 ³¹⁸	27.31 ¹³⁸	06.185 ³⁷⁹	23.41 ⁵¹	60.888 ³¹¹	08.69 ¹³⁹
Май	6.2	12.106 ³¹³	26.65 ¹⁴⁰	31.061 ³²⁵	25.93 ¹⁴³	06.569 ³⁸⁴	24.52 ¹⁶³	61.199 ³¹³	10.08 ¹⁷⁰
	16.2	12.419 ³⁰⁹	28.36 ²⁰¹	31.389 ³²⁷	23.06 ¹⁴²	06.949 ³⁷⁰	26.15 ²¹¹	61.512 ³⁰⁹	11.78 ¹⁹⁹
	26.2	12.728 ²⁹⁴	30.37 ²²⁴	31.716 ³¹⁴	21.64 ¹³⁴	07.319 ³⁴⁶	28.26 ²⁵⁵	61.821 ²⁹⁶	13.77 ²²¹
Июнь	5.2	13.022 ²⁷⁵	32.61 ²³⁷	32.030 ²⁹⁶	20.30 ¹²³	07.665 ³¹⁶	30.81 ²⁸⁷	62.117 ²⁷⁷	15.98 ²³⁶
	15.1	13.297 ²⁴⁹	34.98 ²⁴⁹	32.326 ²⁷²	19.07 ¹¹⁰	07.981 ²⁷³	33.68 ³¹³	62.394 ²⁵¹	18.34 ²⁴⁵
	25.1	13.546 ²¹⁴	37.47 ²⁵⁰	32.598 ²³⁸	17.97 ⁹²	08.259 ²³⁰	36.83 ³³⁵	62.645 ²¹⁷	20.79 ²⁴⁸
Июль	5.1	13.760 ¹⁷⁶	39.97 ²⁴⁷	32.836 ²⁰¹	17.05 ⁷⁴	08.489 ¹⁷⁹	40.16 ³⁴⁰	62.862 ¹⁸¹	23.27 ²⁴³
	15.0	13.936 ¹³⁵	42.44 ²³⁹	33.037 ¹⁵⁹	16.31 ⁵⁴	08.668 ¹²⁵	43.56 ³⁴⁶	63.043 ¹³⁸	25.70 ²³⁶
Авг.	25.0	14.071 ⁸⁸	44.83 ²²⁴	33.196 ¹¹¹	15.77 ³³	08.793 ⁶⁵	47.02 ³³⁷	63.181 ⁹²	28.06 ²²⁰
	3.9	14.159 ⁴⁴	47.07 ²⁰⁶	33.307 ⁶⁴	15.44 ¹⁶	08.858 ⁹	50.39 ³²⁴	63.273 ⁴⁹	30.26 ²⁰³
	13.9	14.203 ²	49.13 ¹⁸⁷	33.371 ¹⁶	15.28 ¹	08.867 ⁴⁸	53.63 ³⁰⁶	63.322 ²	32.29 ¹⁸³
	23.9	14.201 ⁴⁵	51.00 ¹⁶⁰	33.387 ²⁹	15.29 ¹⁷	08.819 ¹⁰³	56.69 ²⁷⁹	63.324 ⁴¹	34.12 ¹⁵⁸
	2.9	14.156 ⁸¹	52.60 ¹³⁵	33.358 ⁶⁹	15.46 ²⁷	08.716 ¹⁴⁷	59.48 ²⁴⁸	63.283 ⁷⁷	35.70 ¹³³
Сент.	12.9	14.075 ¹¹⁵	53.95 ¹⁰⁸	33.289 ¹⁰⁵	15.73 ³⁶	08.569 ¹⁹⁰	61.96 ²¹⁴	63.206 ¹¹¹	37.03 ¹⁰⁶
	22.9	13.960 ¹³⁹	55.03 ⁷⁸	33.184 ¹³¹	16.09 ⁴¹	08.379 ²²²	64.10 ¹⁷¹	63.095 ¹³⁶	38.09 ⁷⁷
Окт.	2.8	13.821 ¹⁵⁵	55.81 ⁵⁰	33.053 ¹⁴⁸	16.50 ⁴¹	08.157 ²⁴³	65.81 ¹³⁰	62.959 ¹⁵¹	38.86 ⁴⁹
	12.8	13.666 ¹⁶⁴	56.31 ²⁰	32.905 ¹⁵⁹	16.91 ⁴²	07.914 ²⁵⁹	67.11 ⁸²	62.808 ¹⁶³	39.35 ¹⁹
	22.8	13.502 ¹⁶³	56.51 ¹²	32.746 ¹⁵⁶	17.33 ³⁸	07.655 ²⁶⁰	67.93 ³²	62.645 ¹⁶⁰	39.54 ¹⁰
Нояб.	1.7	13.339 ¹⁵³	56.39 ³⁹	32.590 ¹⁴⁵	17.71 ³³	07.395 ²⁵⁴	68.25 ¹⁶	62.485 ¹⁵³	39.44 ³⁸
	11.7	13.186 ¹³⁹	56.00 ⁶⁹	32.445 ¹²⁹	18.04 ²⁷	07.141 ²³⁹	68.09 ⁶⁸	62.332 ¹³⁸	39.06 ⁶⁷
	21.7	13.047 ¹¹⁵	55.31 ⁹⁷	32.316 ¹⁰¹	18.31 ²⁰	06.902 ²¹³	67.41 ¹¹⁸	62.194 ¹¹⁴	38.39 ⁹⁴
Дек.	1.7	12.932 ⁸⁷	54.34 ¹²⁰	32.215 ⁷²	18.51 ¹³	06.689 ¹⁸²	66.23 ¹⁶²	62.080 ⁸⁹	37.45 ¹¹⁶
	11.6	12.845 ⁵⁸	53.14 ¹⁴⁴	32.143 ³⁸	18.64 ⁶	06.507 ¹⁴⁶	64.61 ²⁰⁶	61.991 ⁵⁹	36.29 ¹⁴⁰
	21.6	12.787 ²³	51.70 ¹⁶⁰	32.105 ¹	18.70 ²	06.361 ¹⁰⁰	62.55 ²⁴¹	61.932 ²⁵	34.89 ¹⁵⁵
	31.6	12.764 ¹⁰	50.10 ¹⁷²	32.104 ³³	18.68 ⁹	06.261 ⁵⁵	60.14 ²⁶⁸	61.907 ⁸	33.34 ¹⁶⁶
	41.6	12.774 ⁴⁵	48.38 ¹⁷⁷	32.137 ⁷¹	18.59 ¹⁹	06.206 ⁶	57.46 ²⁸⁷	61.915 ⁴¹	31.68 ¹⁷²
Средн. место J1990.5		11.814	41.29	30.562	21.26	06.472	46.09	60.924	24.39
Sec δ , tg δ		1.040	+0.284	1.052	-0.328	1.420	+1.009	1.035	+0.269
a, a'		+0.139	+0.640	+0.170	+0.641	+0.102	+0.646	+0.140	+0.653
b, b'		+0.012	+0.768	-0.014	+0.767	+0.043	+0.763	+0.012	+0.758

Дата	693) γ Cap		531) ι Ser		532) ϵ Peg		533) κ Peg m		
	$3^m 80$ VIII-16 F0p		$4^m 85$ VIII-17 K0		$2^m 54$ VIII-17 K0		$4^m 27$ VIII-17 F5		
	h^m 21 39	$^{\circ}$ —16 42	h^m 21 41	$^{\circ}$ +71 15	h^m 21 43	$^{\circ}$ +9 49	h^m 21 44	$^{\circ}$ +25 35	
Янв.	—3.4 6.6 16.6 26.6	s 32.147 32.118 32.119 32.148	s 33.76 33.79 33.69 33.47	s 43.047 42.599 42.242 41.985	s 69.90 67.77 65.23 62.34	s 41.369 41.326 41.311 41.322	s 45.69 44.51 43.28 42.03	s 10.958 10.891 10.854 10.847	s 61.76 60.07 58.22 56.24
Февр.	5.5	32.213	33.11	41.847	59.22	41.364	40.83	10.875	54.25
Март	15.5 25.5 7.4 17.4 27.4	32.294 32.417 32.572 32.755 32.969	32.64 31.90 31.01 29.96 28.73	41.828 41.933 42.168 42.517 42.976	56.02 52.84 49.83 47.13 44.80	41.436 41.539 41.676 41.844 42.044	39.75 38.82 38.14 37.74 37.65	10.938 11.036 11.173 11.346 11.555	52.34 50.56 49.03 47.82 46.98
Апр.	6.4 16.3 26.3	33.213 33.482 33.775	27.33 25.79 24.13	43.534 44.163 44.855	42.98 41.71 41.03	42.275 42.532 42.814	37.94 38.56 39.54	11.799 12.071 12.370	46.59 46.64 47.15
Май	6.3 16.3	34.086 34.410	22.40 20.63	45.583 46.321	41.00 41.57	43.114 43.426	40.86 42.46	12.688 13.017	48.13 49.53
Июнь	26.2 5.2 15.2	34.741 35.070 35.390	18.87 17.17 15.57	47.056 47.759 48.411	42.74 44.50 46.75	43.744 44.060 44.366	44.32 46.39 48.58	13.352 13.683 14.000	51.31 53.45 55.83
Июль	25.1 5.1	35.694 35.972	14.11 12.85	49.002 49.506	49.46 52.55	44.656 44.919	50.87 53.17	14.300 14.569	58.45 61.20
Авг.	15.1 25.1 4.0 14.0 23.9	36.219 36.429 36.595 36.717 36.791	11.78 10.95 10.36 09.99 09.86	49.917 50.227 50.423 50.510 50.484	55.91 59.52 63.26 67.04 70.83	45.151 45.348 45.502 45.613 45.680	55.43 57.63 59.68 61.56 63.26	14.805 15.001 15.152 15.258 15.316	64.01 66.84 69.61 72.27 74.78
Сент.	2.9 12.9 22.9	36.818 36.803 36.748	09.94 10.18 10.58	50.346 50.109 49.773	74.50 77.99 81.26	45.702 45.685 45.630	64.73 65.97 66.97	15.328 15.298 15.229	77.07 79.12 80.91
Окт.	2.9 12.8	36.659 36.546	11.07 11.63	49.351 48.861	84.19 86.76	45.544 45.435	67.72 68.23	15.126 14.999	82.37 83.54
Нояб.	22.8 1.8 11.8 21.7	36.414 36.273 36.133 35.998	12.22 12.81 13.35 13.84	48.306 47.709 47.088 46.451	88.89 90.50 91.61 92.13	45.308 45.172 45.036 44.903	68.50 68.52 68.33 67.91	14.852 14.695 14.536 14.379	84.36 84.81 84.93 84.67
Дек.	1.7 11.7 21.7 31.6 41.6	35.879 35.779 35.702 35.653 35.632	14.24 14.55 14.77 14.86 14.85	45.826 45.226 44.667 44.177 43.762	92.04 91.37 90.11 88.29 86.01	44.782 44.678 44.593 44.534 44.498	67.28 66.48 65.49 64.39 63.18	14.234 14.104 13.994 13.910 13.852	84.06 83.12 81.84 80.31 78.56
Средн. место J1990.5		33.936	20.07	47.103	63.44	43.166	52.09	12.880	63.89
Sec δ , tg δ		1.044	—0.300	3.114	+2.949	1.015	+0.173	1.109	+0.479
a, a'		+0.165	+0.818	+0.042	+0.824	+0.147	+0.828	+0.135	+0.830
b, b'		—0.016	+0.575	+0.162	+0.567	+0.010	+0.560	+0.026	+0.558

Верхняя кульминация в Гриниче

Дата	540) ϵ Peg		696) α Gru		542) π Peg		543) 24 Cep	
	$3^m 96$	VIII-23 F5	$2^m 16$	VIII-23 B5	$4^m 38$	VIII-24 F5	$4^m 99$	VIII-24 G5
	h^m 22 06	$^{\circ}'$ +25 17	h^m 22 07	$^{\circ}'$ -47 00	h^m 22 09	$^{\circ}'$ +33 07	h^m 22 09	$^{\circ}'$ +72 17
Янв. —3.3	32.264 ⁷⁹	52.94 ¹⁵⁴	36.474 ¹⁰²	47.48 ¹²⁹	31.968 ¹⁰²	53.73 ¹⁶⁸	33.587 ⁵²⁴	47.96 ¹⁸⁰
6.6	32.185 ⁵⁴	51.40 ¹⁷¹	36.372 ⁶²	46.19 ¹⁶¹	31.866 ⁷⁴	52.05 ¹⁹²	33.063 ⁴⁴¹	46.16 ²²⁵
16.6	32.131 ²⁶	49.69 ¹⁸⁶	36.310 ²²	44.58 ¹⁸⁹	31.792 ⁴⁵	50.13 ²¹²	32.622 ³⁴⁷	43.91 ²⁶⁷
26.6	32.105 ⁷	47.83 ¹⁸⁹	36.288 ²³	42.69 ²¹⁶	31.747 ⁹	48.01 ²²⁰	32.275 ²²⁹	41.24 ²⁹⁷
Февр. 5.5	32.112 ⁴⁰	45.94 ¹⁸⁵	36.311 ⁶⁷	40.53 ²³⁴	31.738 ²⁸	45.81 ²²⁰	32.046 ¹⁰⁷	38.27 ³¹¹
15.5	32.152 ⁷⁶	44.09 ¹⁷⁴	36.378 ¹¹⁰	38.19 ²⁵⁰	31.766 ⁶⁷	43.61 ²¹¹	31.939 ²²	35.16 ³¹⁹
25.5	32.228 ¹¹⁴	42.35 ¹⁵¹	36.488 ¹⁵⁸	35.69 ²⁶¹	31.833 ¹¹⁰	41.50 ¹⁹¹	31.961 ¹⁶²	31.97 ³⁰⁸
Март 7.5	32.342 ¹⁵²	40.84 ¹²³	36.646 ²⁰⁰	33.08 ²⁶⁶	31.943 ¹⁵²	39.59 ¹⁶²	32.123 ²⁸⁷	28.89 ²⁸⁶
17.4	32.494 ¹⁸⁹	39.61 ⁸⁹	36.846 ²⁴³	30.42 ²⁶⁸	32.095 ¹⁹⁴	37.97 ¹²⁷	32.410 ⁴¹²	26.03 ²⁵⁵
27.4	32.683 ²²⁷	38.72 ⁴⁶	37.089 ²⁸⁷	27.74 ²⁶²	32.289 ²³⁵	36.70 ⁸³	32.822 ⁵²⁶	23.48 ²⁰⁹
Апр. 6.4	32.910 ²⁵⁹	38.26 ⁴	37.376 ³²⁴	25.12 ²⁵³	32.524 ²⁶⁹	35.87 ³⁷	33.348 ⁶¹⁵	21.39 ¹⁵⁹
16.4	33.169 ²⁸⁸	38.22 ⁴¹	37.700 ³⁶⁰	22.59 ²⁴⁰	32.793 ³⁰²	35.50 ¹¹	33.963 ⁶⁹³	19.80 ¹⁰⁴
26.3	33.457 ³¹²	38.63 ⁸⁸	38.060 ³⁸⁹	20.19 ²¹⁹	33.095 ³²⁸	35.61 ⁶²	34.656 ⁷⁴⁸	18.76 ⁴⁰
Май 6.3	33.769 ³²⁶	39.51 ¹²⁸	38.449 ⁴⁰⁹	18.00 ¹⁹⁵	33.423 ³⁴³	36.23 ¹⁰⁹	35.404 ⁷⁷³	18.36 ²⁰
16.3	34.095 ³³⁷	40.79 ¹⁶⁷	38.858 ⁴²⁶	16.05 ¹⁶⁷	33.766 ³⁵⁴	37.32 ¹⁵⁴	36.177 ⁷⁸⁶	18.56 ⁸⁰
Июнь 26.2	34.432 ³³⁷	42.46 ²⁰³	39.284 ⁴²⁹	14.38 ¹³²	34.120 ³⁵³	38.86 ¹⁹⁵	36.963 ⁷⁶⁶	19.36 ¹⁴⁰
5.2	34.769 ³²⁷	44.49 ²²⁹	39.713 ⁴²³	13.06 ⁹⁸	34.473 ³⁴³	40.81 ²²⁹	37.729 ⁷²⁷	20.76 ¹⁹²
15.2	35.096 ³¹²	46.78 ²⁵³	40.136 ⁴¹⁰	12.08 ⁵⁹	34.816 ³²⁷	43.10 ²⁵⁸	38.456 ⁶⁷⁴	22.68 ²⁴²
25.2	35.408 ²⁸⁶	49.31 ²⁶⁸	40.546 ³⁸¹	11.49 ¹⁸	35.143 ²⁹⁸	45.68 ²⁸⁰	39.130 ⁵⁹⁴	25.10 ²⁸⁵
Июль 5.1	35.694 ²⁵⁵	51.99 ²⁷⁶	40.927 ³⁴⁵	11.31 ¹⁹	35.441 ²⁶⁵	48.48 ²⁹⁴	39.724 ⁵⁰⁵	27.95 ³¹⁷
Авг. 15.1	35.949 ²¹⁸	54.75 ²⁸⁰	41.272 ³⁰¹	11.50 ⁵⁹	35.706 ²²⁷	51.42 ³⁰³	40.229 ⁴⁰⁷	31.12 ³⁴⁷
25.1	36.167 ¹⁷⁴	57.55 ²⁷⁶	41.573 ²⁴⁵	12.09 ⁹⁵	35.933 ¹⁸⁰	54.45 ³⁰³	40.636 ²⁹³	34.59 ³⁶⁶
4.1	36.341 ¹³⁰	60.31 ²⁶⁵	41.818 ¹⁸⁸	13.04 ¹²⁵	36.113 ¹³⁴	57.48 ²⁹⁷	40.929 ¹⁸²	38.25 ³⁷⁷
14.0	36.471 ⁸⁴	62.96 ²⁵³	42.006 ¹²⁶	14.29 ¹⁵²	36.247 ⁸⁵	60.45 ²⁸⁸	41.111 ⁶⁶	42.02 ³⁸²
24.0 ¹	36.555 ³⁷	65.49 ²³²	42.132 ⁵⁹	15.81 ¹⁷²	36.332 ³⁵	63.33 ²⁷⁰	41.177 ⁵³	45.84 ³⁷⁷
Сент. 2.9	36.592 ⁵	67.81 ²¹¹	42.191 ⁰	17.53 ¹⁸³	36.367 ⁸	66.03 ²⁴⁹	41.124 ¹⁵⁹	49.61 ³⁶⁵
12.9	36.587 ⁴⁵	69.92 ¹⁸⁵	42.191 ⁶⁰	19.36 ¹⁸⁹	36.359 ⁵²	68.52 ²²⁴	40.965 ²⁶⁷	53.26 ³⁴⁸
22.9	36.542 ⁸¹	71.77 ¹⁵⁴	42.131 ¹¹⁴	21.25 ¹⁸³	36.307 ⁹⁰	70.76 ¹⁹²	40.698 ³⁶⁵	56.74 ³¹⁹
Окт. 2.9	36.461 ¹⁰⁶	73.31 ¹²⁶	42.017 ¹⁵⁵	23.08 ¹⁷⁰	36.217 ¹¹⁸	72.68 ¹⁶²	40.333 ⁴⁴⁴	59.93 ²⁸⁷
12.9	36.355 ¹³⁰	74.57 ⁹³	41.862 ¹⁹¹	24.78 ¹⁵²	36.099 ¹⁴³	74.30 ¹²⁵	39.889 ⁵²²	62.80 ²⁴⁸
Нояб. 22.8	36.225 ¹⁴³	75.50 ⁵⁷	41.671 ²¹²	26.30 ¹²³	35.956 ¹⁵⁹	75.55 ⁸⁷	39.367 ⁵⁷⁹	65.28 ²⁰⁰
1.8	36.082 ¹⁴⁹	76.07 ²⁵	41.459 ²²²	27.53 ⁹¹	35.797 ¹⁶⁷	76.42 ⁴⁸	38.788 ⁶¹⁹	67.28 ¹⁵⁰
11.8	35.933 ¹⁵¹	76.32 ¹²	41.237 ²²⁴	28.44 ⁵⁴	35.630 ¹⁷¹	76.90 ⁶	38.169 ⁶⁵⁰	68.78 ⁹⁴
21.8	35.782 ¹⁴³	76.20 ⁴⁶	41.013 ²¹¹	28.98 ¹²	35.459 ¹⁶⁵	76.96 ³⁵	37.519 ⁶⁵⁴	69.72 ³³
Дек. 1.7	35.639 ¹³²	75.74 ⁷⁹	40.802 ¹⁹¹	29.10 ²⁶	35.294 ¹⁵⁵	76.61 ⁷⁴	36.865 ⁶⁴³	70.05 ²⁴
11.7	35.507 ¹¹⁷	74.95 ¹¹¹	40.611 ¹⁶⁵	28.84 ⁶⁷	35.139 ¹⁴⁰	75.87 ¹¹⁴	36.222 ⁶¹⁷	69.81 ⁸⁷
21.7	35.390 ⁹⁵	73.84 ¹³⁹	40.446 ¹²⁸	28.17 ¹⁰⁶	34.999 ¹¹⁷	74.73 ¹⁴⁸	35.605 ⁵⁶¹	68.94 ¹⁴⁶
31.6	35.295 ⁷²	72.45 ¹⁶¹	40.318 ⁹²	27.11 ¹³⁹	34.882 ⁹⁴	73.25 ¹⁷⁷	35.044 ⁴⁹⁴	67.48 ¹⁹⁶
41.6	35.223 ⁴⁵	70.84 ¹⁷⁹	40.226 ⁵²	25.72 ¹⁷³	34.788 ⁶⁶	71.48 ²⁰²	34.550 ⁴⁰⁷	65.52 ²⁴⁴
Средн. место J1990.5	34.101	54.44	38.278	26.26	33.878	52.91	37.580	39.62
Sec δ , tg δ	1.106	+0.473	1.466	-1.073	1.194	+0.653	3.288	+3.132
a, a'	+0.138	+0.880	+0.187	+0.882	+0.133	+0.886	+0.057	+0.886
b, b'	+0.028	+0.475	-0.063	+0.471	+0.039	+0.463	+0.185	+0.463

¹ Для звезд 540) и 696) авг. 23.9.

Дата	562) λ Aqr		701) δ Aqr		563) Grb 3933		702) α Ps A		
	3 ^m 84 IX-4 M0		3 ^m 51 IX-4 A2		5 ^m 20 IX-5 B3		1 ^m 29 IX-5 A3		
	^h ^m	[°] [']	^h ^m	[°] [']	^h ^m	[°] [']	^h ^m	[°] [']	
	22 52	-7 37	22 54	-15 52	22 56	+48 37	22 57	-29 40	
	^s	"	^s	"	^s	"	^s	"	
Янв.	-3.3	05.777 ⁷⁵	59.89 ⁴⁵	07.483 ⁸⁰	30.77 ¹⁸	37.228 ¹⁹⁷	66.17 ¹³⁸	06.348 ⁹⁷	39.41 ²⁹
	6.7	05.702 ⁵⁶	60.34 ³⁶	07.403 ⁶⁰	30.95 ²	37.031 ¹⁷²	64.79 ¹⁷⁷	06.251 ⁷⁵	39.12 ⁵⁸
	16.6	05.646 ³⁸	60.70 ²⁵	07.343 ⁴¹	30.97 ¹⁵	36.859 ¹⁴²	63.02 ²¹²	06.176 ⁵²	38.54 ⁸³
	26.6	05.608 ¹³	60.95 ¹⁰	07.302 ¹⁵	30.82 ³⁵	36.717 ¹⁰²	60.90 ²⁴⁰	06.124 ²³	37.71 ¹¹²
Февр.	5.6	05.595 ¹²	61.05 ⁵	07.287 ¹²	30.47 ⁵³	36.615 ⁵⁸	58.50 ²⁵⁴	06.101 ⁶	36.59 ¹³⁴
	15.6	05.607 ⁴⁴	61.00 ²⁵	07.299 ³⁸	29.94 ⁷⁰	36.557 ⁸	55.96 ²⁶¹	06.107 ³⁶	35.25 ¹⁵⁷
	25.5	05.651 ⁶⁰	60.75 ³⁸	07.337 ⁶⁹	29.24 ⁹⁷	36.549 ⁵⁰	53.35 ²⁵⁴	06.143 ⁷³	33.68 ¹⁸⁰
Март	7.5	05.711 ¹⁰⁸	60.37 ⁶⁹	07.406 ¹⁰⁴	28.27 ¹¹⁹	36.599 ¹⁰⁶	50.81 ²³⁵	06.216 ¹⁰⁹	31.88 ¹⁹⁷
	17.5	05.819 ¹³⁹	59.68 ⁹⁰	07.510 ¹⁴⁰	27.08 ¹³⁸	36.705 ¹⁶⁵	48.46 ²¹¹	06.325 ¹⁴⁷	29.91 ²¹³
	27.4	05.958 ¹⁷⁶	58.78 ¹¹⁵	07.650 ¹⁷⁷	25.70 ¹⁵⁸	36.870 ²²⁴	46.35 ¹⁷²	06.472 ¹⁸⁷	27.78 ²²⁵
Апр.	6.4	06.134 ²⁰⁸	57.63 ¹³⁶	07.827 ²¹⁰	24.12 ¹⁷³	37.094 ²⁷⁶	44.63 ¹²⁹	06.659 ²²³	25.53 ²³¹
	16.4	06.342 ²⁴¹	56.27 ¹⁵⁷	08.037 ²⁴⁴	22.39 ¹⁹⁰	37.370 ³²⁵	43.34 ⁸¹	06.882 ²⁵⁹	23.22 ²³⁷
	26.4	06.583 ²⁹¹	54.70 ¹⁷⁶	08.281 ²⁷⁴	20.49 ²⁰⁰	37.695 ³⁶⁷	42.53 ²⁶	07.141 ²⁹²	20.85 ²³⁵
Май	6.3	06.854 ²⁷²	52.94 ¹⁸⁸	08.555 ²⁹⁷	18.49 ²⁰⁵	38.062 ³⁹⁵	42.27 ²⁷	07.433 ³¹⁸	18.50 ²²⁸
	16.3	07.146 ³¹²	51.06 ²⁰⁰	08.852 ³¹⁷	16.44 ²⁰⁹	38.457 ⁴¹⁷	42.54 ⁷⁹	07.751 ³³⁹	16.22 ²¹⁸
	26.3	07.458 ³²²	49.06 ²⁰³	09.169 ³²⁸	14.35 ²⁰⁴	38.874 ⁴²⁶	43.33 ¹³³	08.090 ³⁵²	14.04 ²⁰⁰
Июнь	5.3	07.780 ³²³	47.03 ²⁰²	09.497 ³³¹	12.31 ¹⁹⁵	39.300 ⁴²³	44.66 ¹⁷⁸	08.442 ³⁵⁶	12.04 ¹⁷⁸
	15.2	08.103 ³¹⁹	45.01 ¹⁹⁸	09.828 ³²⁷	10.36 ¹⁸²	39.723 ⁴¹¹	46.44 ²²¹	08.798 ³⁵³	10.26 ¹⁵³
	25.2	08.422 ³⁰⁴	43.03 ¹⁸⁵	10.155 ³¹²	08.54 ¹⁶³	40.134 ³⁸⁵	48.65 ²⁵⁹	09.151 ³³⁸	08.73 ¹²¹
Июль	5.2	08.726 ²⁸³	41.18 ¹⁷¹	10.467 ²⁹¹	06.91 ¹⁴¹	40.519 ³⁵²	51.24 ²⁸⁷	09.489 ³¹⁶	07.52 ⁸⁹
	15.1	09.009 ²⁵⁵	39.47 ¹⁵¹	10.758 ²⁶⁴	05.50 ¹¹⁷	40.871 ³¹¹	54.11 ³¹²	09.805 ²⁸⁷	06.63 ⁵⁵
	25.1	09.264 ²²⁰	37.96 ¹²⁹	11.022 ²²⁷	04.33 ⁸⁷	41.182 ²⁶²	57.23 ³²⁸	10.092 ²⁴⁸	06.08 ¹⁹
Авг.	4.1	09.484 ¹⁸¹	36.67 ¹⁰⁴	11.249 ¹⁸⁸	03.46 ⁶⁰	41.444 ²⁰⁹	60.51 ³³⁵	10.340 ²⁰⁶	05.89 ¹⁴
	14.1	09.665 ¹³⁹	35.63 ⁸⁰	11.437 ¹⁴⁶	02.86 ³²	41.653 ¹⁵⁵	63.86 ³³⁹	10.546 ¹⁶⁰	06.03 ⁴⁸
	24.0	09.804 ⁹⁶	34.83 ⁵³	11.583 ¹⁰⁰	02.54 ⁴	41.808 ⁹⁶	67.25 ³³³	10.706 ¹⁰⁹	06.51 ⁷⁶
Сент.	3.0	09.900 ⁵⁴	34.30 ³⁰	11.683 ⁵⁷	02.50 ¹⁹	41.904 ⁴³	70.58 ³²¹	10.815 ⁶²	07.27 ⁹⁹
	12.9	09.954 ¹⁴	34.00 ⁸	11.740 ¹⁵	02.69 ⁴²	41.947 ¹¹	73.79 ³⁰⁶	10.877 ¹⁴	08.26 ¹²⁰
	22.9	09.968 ²³	33.92 ¹³	11.755 ²⁴	03.11 ⁵⁹	41.936 ⁶⁰	76.85 ²⁸⁰	10.891 ³⁰	09.46 ¹³²
Окт.	2.9	09.945 ⁵²	34.05 ²⁹	11.731 ⁵⁵	03.70 ⁷⁰	41.876 ¹⁰²	79.65 ²⁵²	10.861 ⁶⁶	10.78 ¹³⁶
	12.9	09.893 ⁷⁹	34.34 ⁴²	11.676 ⁸³	04.40 ⁸⁰	41.774 ¹⁴²	82.17 ²¹⁹	10.795 ⁹⁸	12.14 ¹³⁷
	22.9	09.814 ⁹⁷	34.76 ⁵³	11.593 ¹⁰²	05.20 ⁸³	41.632 ¹⁷²	84.36 ¹⁷⁸	10.697 ¹²²	13.51 ¹²⁸
Нояб.	1.8	09.717 ¹⁰⁹	35.29 ⁵⁸	11.491 ¹¹⁵	06.03 ⁸¹	41.460 ¹⁹⁴	86.14 ¹³⁷	10.575 ¹³⁶	14.79 ¹¹⁴
	11.8	09.608 ¹¹⁵	35.87 ⁶²	11.376 ¹²²	06.84 ⁷⁷	41.266 ²¹⁴	87.51 ⁸⁹	10.439 ¹⁴⁶	15.93 ⁹⁶
	21.8	09.493 ¹¹⁴	36.49 ⁶²	11.254 ¹²¹	07.61 ⁶⁸	41.052 ²²¹	88.40 ⁴⁰	10.293 ¹⁴⁵	16.89 ⁷²
Дек.	1.8	09.379 ¹⁰⁹	37.11 ⁶⁰	11.133 ¹¹⁵	08.29 ⁵⁷	40.831 ²²⁴	88.80 ⁸	10.148 ¹³⁹	17.61 ⁴⁷
	11.7	09.270 ¹⁰¹	37.71 ⁵⁷	11.018 ¹⁰⁷	08.86 ⁴⁵	40.607 ²²¹	88.72 ⁶¹	10.009 ¹²⁹	18.08 ¹⁹
	21.7	09.169 ⁸⁷	38.28 ⁵⁰	10.911 ⁹²	09.31 ²⁸	40.386 ²⁰⁷	88.11 ¹⁰⁹	09.880 ¹¹¹	18.27 ¹¹
	31.7	09.082 ⁷¹	38.78 ⁴³	10.819 ⁷⁵	09.59 ¹⁴	40.179 ¹⁸⁹	87.02 ¹⁵²	09.769 ⁹³	18.16 ³⁸
	41.7	09.011 ⁵³	39.21 ³³	10.744 ⁵⁷	09.73 ³	39.990 ¹⁶⁴	85.50 ¹⁹⁴	09.676 ⁷¹	17.78 ⁶⁶
Средн. место J1990.5		07.150	49.13	08.815	17.37	39.212	59.42	07.652	21.89
Sec δ , tg δ		1.009	-0.134	1.040	-0.284	1.513	+1.136	1.151	-0.570
a, a'		+0.156	+0.956	+0.159	+0.959	+0.133	+0.962	+0.164	+0.963
b, b'		-0.009	+0.292	-0.018	+0.283	+0.073	+0.273	-0.037	+0.271

Верхняя кульминация в Гриниче

Дата	564) α And		565) β Peg		566) α Peg		568) γ Cas	
	$3^m 5$ 4.0	IX-6 B5 A2p	$2^m 1$ 3.0	IX-7 M0	$2^m 57$	IX-7 A0	$4^m 93$	IX-7 B1
	h^m 23 01	$^{\circ}'$ +42 16	h^m 23 03	$^{\circ}'$ +28 01	h^m 23 04	$^{\circ}'$ +15 09	h^m 23 06	$^{\circ}'$ +59 21
Янв. —3.3	27.136^{163}	34.65^{132}	17.184^{114}	53.40^{120}	15.786^{92}	11.67^{101}	10.312^{299}	75.55^{122}
6.7	26.973^{142}	33.33^{167}	17.070^{97}	52.20^{143}	15.694^{76}	10.66^{112}	10.013^{268}	74.33^{169}
16.6	26.831^{118}	31.66^{199}	16.973^{98}	50.77^{164}	15.618^{59}	09.54^{121}	09.745^{232}	72.64^{213}
26.6	26.713^{84}	29.67^{222}	16.895^{51}	49.13^{175}	15.559^{35}	08.33^{124}	09.513^{179}	70.51^{249}
Февр. 5.6	26.629^{46}	27.45^{232}	16.844^{22}	47.38^{179}	15.524^9	07.09^{118}	09.334^{119}	68.02^{270}
15.6	26.583^3	25.13^{238}	16.822^{12}	45.59^{176}	15.515^{19}	05.91^{110}	09.215^{54}	65.32^{285}
25.5	26.580^{47}	22.75^{230}	16.834^{51}	43.83^{163}	15.534^{54}	04.81^{93}	09.161^{24}	62.47^{283}
7.5	26.627^{96}	20.45^{210}	16.885^{91}	42.20^{142}	15.588^{89}	03.88^{71}	09.185^{100}	59.62^{275}
17.5	26.723^{149}	18.35^{185}	16.976^{134}	40.78^{116}	15.677^{127}	03.17^{45}	09.285^{178}	56.89^{251}
27.4	26.872^{202}	16.50^{148}	17.110^{178}	39.62^{80}	15.804^{168}	02.72^{12}	09.463^{257}	54.38^{216}
Апр. 6.4	27.074^{249}	15.02^{106}	17.288^{218}	38.82^{41}	15.972^{203}	02.60^{22}	09.720^{325}	52.22^{175}
16.4	27.323^{294}	13.96^{60}	17.506^{257}	38.41^0	16.175^{240}	02.82^{58}	10.045^{389}	50.47^{127}
26.4	27.617^{333}	13.36^8	17.763^{291}	38.41^{46}	16.415^{271}	03.40^{94}	10.434^{443}	49.20^{71}
Май 6.3	27.950^{360}	13.28^{42}	18.054^{316}	38.87^{86}	16.686^{295}	04.34^{127}	10.877^{480}	48.49^{16}
16.3	28.310^{383}	13.70^{92}	18.370^{337}	39.73^{128}	16.981^{315}	05.61^{157}	11.357^{509}	48.33^{40}
26.3	28.693^{392}	14.62^{141}	18.707^{347}	41.01^{167}	17.296^{326}	07.18^{186}	11.866^{522}	48.73^{99}
5.3	29.085^{391}	16.03^{182}	19.054^{347}	42.68^{198}	17.622^{329}	09.04^{205}	12.388^{517}	49.72^{149}
15.2	29.476^{383}	17.85^{222}	19.401^{342}	44.66^{226}	17.951^{324}	11.09^{223}	12.905^{504}	51.21^{199}
25.2	29.859^{361}	20.07^{256}	19.743^{325}	46.92^{249}	18.275^{309}	13.32^{233}	13.409^{474}	53.20^{244}
Июль 5.2	30.220^{332}	22.63^{280}	20.068^{301}	49.41^{263}	18.584^{288}	15.65^{237}	13.883^{432}	55.64^{278}
15.1	30.552^{296}	25.43^{301}	20.369^{271}	52.04^{273}	18.872^{260}	18.02^{238}	14.315^{385}	58.42^{312}
25.1	30.848^{252}	28.44^{314}	20.640^{232}	54.77^{276}	19.132^{225}	20.40^{230}	14.700^{323}	61.54^{334}
Авг. 4.1	31.100^{204}	31.58^{318}	20.872^{192}	57.53^{273}	19.357^{187}	22.70^{218}	15.023^{261}	64.88^{349}
14.1	31.304^{155}	34.76^{319}	21.064^{148}	60.26^{265}	19.544^{147}	24.88^{205}	15.284^{193}	68.37^{361}
24.0	31.459^{102}	37.95^{311}	21.212^{103}	62.91^{252}	19.691^{103}	26.93^{186}	15.477^{121}	71.98^{361}
Сент. 3.0	31.561^{54}	41.06^{298}	21.315^{59}	65.43^{233}	19.794^{63}	28.79^{164}	15.598^{55}	75.59^{354}
12.9	31.615^5	44.04^{281}	21.374^{18}	67.76^{214}	19.857^{23}	30.43^{143}	15.653^{13}	79.13^{344}
22.9	31.620^{41}	46.85^{255}	21.392^{22}	69.90^{187}	19.880^{14}	31.86^{117}	15.640^{78}	82.57^{321}
Окт. 2.9	31.579^{78}	49.40^{228}	21.370^{53}	71.77^{161}	19.866^{43}	33.03^{93}	15.562^{132}	85.78^{297}
12.9	31.501^{113}	51.68^{195}	21.317^{83}	73.38^{132}	19.823^{71}	33.96^{67}	15.430^{186}	88.75^{265}
22.9	31.388^{141}	53.63^{157}	21.234^{105}	74.70^{98}	19.752^{90}	34.63^{42}	15.244^{230}	91.40^{224}
1.8	31.247^{160}	55.20^{119}	21.129^{120}	75.68^{68}	19.662^{104}	35.05^{19}	15.014^{263}	93.64^{182}
11.8	31.087^{178}	56.39^{75}	21.009^{132}	76.36^{31}	19.558^{114}	35.24^7	14.751^{295}	95.46^{132}
21.8	30.909^{184}	57.14^{29}	20.877^{137}	76.67^3	19.444^{117}	35.17^{31}	14.456^{312}	96.78^{78}
Дек. 1.8	30.725^{186}	57.43^{16}	20.740^{137}	76.64^{36}	19.327^{115}	34.86^{52}	14.144^{320}	97.56^{26}
11.7	30.539^{184}	57.27^{62}	20.603^{133}	76.28^{72}	19.212^{111}	34.34^{73}	13.824^{323}	97.82^{33}
21.7	30.355^{173}	56.65^{107}	20.470^{123}	75.56^{102}	19.101^{100}	33.61^{92}	13.501^{309}	97.49^{89}
31.7	30.182^{157}	55.58^{145}	20.347^{110}	74.54^{130}	19.001^{89}	32.69^{105}	13.192^{289}	96.60^{139}
41.7	30.025^{136}	54.13^{182}	20.237^{93}	73.24^{153}	18.912^{72}	31.64^{118}	12.903^{257}	95.21^{189}
Средн. место J1990.5	28.943	29.27	18.767	52.13	17.231	14.44	12.618	66.09
Sec δ , tg δ	1.351	+0.909	1.133	+0.532	1.036	+0.271	1.963	+1.689
a, a'	+0.138	+0.968	+0.145	+0.970	+0.149	+0.971	+0.127	+0.973
b, b'	+0.059	+0.253	+0.034	+0.245	+0.018	+0.241	+0.109	+0.233

N 4

 α U Mi $m = 2.12$

F8

Двойная нижняя кульминация IV-27

Дата	α	δ	Дата	α	δ	Дата	α	δ	Дата	α	δ
	^{h m} 2 20	^{° ' "} +89 13		^{h m} 2 19	^{° ' "} +89 13		^{h m} 2 19	^{° ' "} +89 13		^{h m} 2 19	^{° ' "} +89 13
Янв.	0.8 106.86	36.16	Февр.	15.7 98.15	38.63	Апр.	1.6 50.47	29.26	Май	16.4 56.29	15.91
	1.8 105.32	36.36		16.7 96.82	38.50		2.6 50.03	29.02		17.4 56.85	15.66
	2.8 103.79	36.53		17.7 95.53	38.38		3.6 49.49	28.77		18.4 57.42	15.40
	3.8 102.34	36.67		18.7 94.26	38.27		4.6 48.88	28.52		19.4 58.03	15.12
	4.8 101.00	36.80		19.7 92.98	38.18		5.6 48.23	28.24		20.4 58.75	14.82
	5.8 99.79	36.93		20.7 91.64	38.09		6.6 47.60	27.94		21.4 59.62	14.51
	6.8 98.67	37.06		21.7 90.24	38.01		7.6 47.03	27.62		22.4 60.68	14.21
	7.8 97.60	37.21		22.7 88.74	37.92		8.6 46.54	27.28		23.4 61.89	13.93
	8.8 96.51	37.39		23.7 87.16	37.83		9.5 46.17	26.93		24.4 63.20	13.67
	9.8 95.31	37.58		24.7 85.53	37.70		10.5 45.92	26.58		25.4 64.50	13.46
	10.8 93.97	37.78		25.7 83.90	37.55		11.5 45.77	26.24		26.4 65.73	13.27
	11.8 92.49	37.98		26.7 82.35	37.37		12.5 45.70	25.90		27.4 66.84	13.09
	12.8 90.88	38.15		27.7 80.93	37.16		13.5 45.69	25.58		28.4 67.82	12.92
	13.8 89.19	38.30		28.7 79.66	36.94		14.5 45.71	25.28		29.4 68.72	12.73
	14.8 87.49	38.42	Март	1.7 78.56	36.72		15.5 45.72	24.99		30.4 69.59	12.53
	15.8 85.81	38.51		2.7 77.56	36.52		16.5 45.69	24.71		31.4 70.48	12.30
	16.8 84.19	38.58		3.7 76.60	36.34		17.5 45.61	24.44	Июнь	1.4 71.44	12.06
	17.8 82.65	38.64		4.6 75.62	36.17		18.5 45.47	24.17		2.4 72.49	11.81
	18.8 81.18	38.69		5.6 74.55	36.03		19.5 45.28	23.90		3.4 73.64	11.56
	19.8 79.78	38.74		6.6 73.39	35.88		20.5 45.06	23.61		4.4 74.90	11.31
	20.8 78.42	38.79		7.6 72.12	35.73		21.5 44.86	23.29		5.4 76.24	11.08
	21.8 77.09	38.86		8.6 70.78	35.56		22.5 44.74	22.95		6.4 77.64	10.86
	22.8 75.74	38.93		9.6 69.41	35.36		23.5 44.76	22.60		7.4 79.08	10.67
	23.8 74.34	39.02		10.6 68.06	35.14		24.5 44.97	22.23		8.4 80.52	10.49
	24.8 72.87	39.12		11.6 66.77	34.89		25.5 45.37	21.88		9.4 81.93	10.34
	25.8 71.29	39.21		12.6 65.58	34.63		26.5 45.89	21.55		10.4 83.28	10.20
	26.7 69.60	39.30		13.6 64.50	34.35		27.5 46.46	21.25		11.4 84.57	10.06
	27.7 67.82	39.37		14.6 63.53	34.07		28.5 46.99	20.99		12.4 85.78	09.93
	28.7 66.00	39.40		15.6 62.65	33.80		29.5 47.42	20.73		13.4 86.94	09.80
	29.7 64.20	39.41		16.6 61.84	33.54		30.5 47.74	20.49		14.4 88.08	09.65
	30.7 62.47	39.39		17.6 61.08	33.28	Май	1.5 47.97	20.23		15.4 89.24	09.48
	31.7 60.87	39.35		18.6 60.32	33.04		2.5 48.15	19.96		16.4 90.47	09.30
Февр.	1.7 59.40	39.30		19.6 59.54	32.82		3.5 48.33	19.67		17.4 91.83	09.11
	2.7 58.06	39.25		20.6 58.71	32.60		4.5 48.55	19.36		18.4 93.33	08.92
	3.7 56.79	39.22		21.6 57.82	32.38		5.5 48.85	19.03		19.4 94.99	08.74
	4.7 55.52	39.21		22.6 56.85	32.16		6.5 49.26	18.70		20.4 96.77	08.58
	5.7 54.21	39.22		23.6 55.83	31.92		7.5 49.78	18.36		21.4 98.58	08.47
	6.7 52.78	39.23		24.6 54.80	31.66		8.5 50.40	18.03		22.3 100.36	08.39
	7.7 51.23	39.25		25.6 53.81	31.37		9.5 51.11	17.71		23.3 102.02	08.33
	8.7 49.57	39.25		26.6 52.94	31.06		10.5 51.89	17.41		24.3 103.55	08.28
	9.7 47.83	39.23		27.6 52.24	30.73		11.5 52.70	17.12		25.3 104.95	08.23
	10.7 46.06	39.18		28.6 51.73	30.39		12.5 53.51	16.86		26.3 106.29	08.16
	11.7 44.32	39.11		29.6 51.37	30.07		13.5 54.29	16.61		27.3 107.61	08.07
	12.7 42.64	39.00		30.6 51.09	29.78		14.5 55.02	16.37		28.3 108.98	07.96
	13.7 41.05	38.88		31.6 50.81	29.51		15.5 55.68	16.14		29.3 110.42	07.84
	14.7 39.55	38.76		32.6 50.47	29.26		16.4 56.29	15.91		30.3 111.95	07.72
	15.7 38.15	38.63								31.3 113.58	07.60
	δ	sec δ		tg δ			δ	sec δ		tg δ	
	^{° ' "} +89 13 00	73.1458		73.1390			^{° ' "} +89 13 20	73.6683		73.6615	
	10	73.4061		73.3993			30	73.9323		73.9255	

α J1990.5
h m s
2 21 43.62

N 4

α U Mi

$m = 2.12$

F8

Двойная верхняя кульминация X-27

Дата	α	δ	Дата	α	δ	Дата	α	δ	Дата	α	δ	
	^{h m} 2 20	[°] +89 13'		^{h m} 2 22	[°] +89 13'		^{h m} 2 23	[°] +89 13'		^{h m} 2 23	[°] +89 13'	
Июль	^s	^{''}	Авг.	^s	^{''}	Окт.	^s	^{''}	Нояб.	^s	^{''}	
1.3	53.58	07.60	16.2	12.16	09.76	1.1	14.81	21.76	16.9	35.87	38.63	
2.3	55.29	07.49	17.2	13.92	09.98	2.1	15.55	22.09	17.9	35.87	38.98	
3.3	57.07	07.40	18.2	15.54	10.21	3.1	16.30	22.41	18.9	35.83	39.35	
4.3	58.88	07.33	19.2	17.03	10.44	4.1	17.12	22.70	19.9	35.72	39.73	
5.3	60.68	07.28	20.2	18.43	10.64	5.1	18.05	22.99	20.9	35.52	40.12	
6.3	62.46	07.26	21.2	19.80	10.83	6.1	19.11	23.28	21.9	35.20	40.51	
7.3	64.18	07.25	22.2	21.20	11.00	7.1	20.26	23.60	22.9	34.78	40.90	
8.3	65.83	07.25	23.2	22.66	11.16	8.1	21.44	23.94	23.9	34.26	41.28	
9.3	67.39	07.26	24.2	24.20	11.31	9.1	22.57	24.31	24.9	33.66	41.64	
10.3	68.87	07.26	25.2	25.82	11.47	10.0	23.58	24.71	25.9	33.02	41.98	
11.3	70.31	07.25	26.2	27.50	11.64	11.0	24.45	25.11	26.9	32.39	42.30	
12.3	71.75	07.23	27.2	29.22	11.83	12.0	25.16	25.52	27.9	31.81	42.61	
13.3	73.24	07.19	28.2	30.94	12.04	13.0	25.74	25.92	28.9	31.33	42.89	
14.3	74.82	07.14	29.2	32.64	12.26	14.0	26.25	26.29	29.9	30.96	43.18	
15.3	76.52	07.09	30.2	34.29	12.51	15.0	26.72	26.65	30.9	30.70	43.48	
16.3	78.37	07.05	31.2	35.85	12.78	16.0	27.22	26.99	Дек.	1.9	30.48	43.81
17.3	80.33	07.03	Сент.	1.2	37.31	13.05	17.0	27.76	27.31	2.9	30.22	44.16
18.3	82.35	07.03	2.2	38.67	13.33	18.0	28.37	27.63	3.9	29.82	44.54	
19.3	84.35	07.08	3.1	39.95	13.60	19.0	29.04	27.95	4.9	29.24	44.93	
20.3	86.27	07.15	4.1	41.16	13.85	20.0	29.75	28.28	5.9	28.49	45.31	
21.3	88.06	07.24	5.1	42.36	14.09	21.0	30.48	28.63	6.9	27.61	45.66	
22.3	89.70	07.33	6.1	43.61	14.31	22.0	31.20	28.99	7.9	26.65	45.99	
23.3	91.24	07.42	7.1	44.95	14.52	23.0	31.86	29.37	8.9	25.69	46.28	
24.3	92.73	07.48	8.1	46.42	14.73	24.0	32.46	29.77	9.9	24.76	46.56	
25.3	94.22	07.53	9.1	48.00	14.95	25.0	32.95	30.17	10.9	23.88	46.82	
26.3	95.77	07.55	10.1	49.65	15.19	26.0	33.34	30.58	11.9	23.07	47.07	
27.3	97.40	07.58	11.1	51.31	15.46	27.0	33.61	30.99	12.9	22.31	47.33	
28.2	99.12	07.60	12.1	52.91	15.77	27.9	33.80	31.39	13.9	21.59	47.59	
29.2	100.92	07.63	13.1	54.39	16.09	28.9	33.92	31.77	14.9	20.87	47.86	
30.2	102.78	07.67	14.1	55.73	16.43	29.9	34.01	32.13	15.9	20.12	48.14	
31.2	104.67	07.74	15.1	56.93	16.76	30.9	34.14	32.47	16.9	19.32	48.44	
Авг.	^s	^{''}	16.1	58.02	17.09	31.9	34.35	32.79	17.9	18.43	48.74	
1.2	106.57	07.83	17.1	59.06	17.39	Нояб.	1.9	34.69	33.11	18.9	17.44	49.05
2.2	108.44	07.94	18.1	60.09	17.67	2.9	35.14	33.44	19.9	16.34	49.35	
3.2	110.25	08.06	19.1	61.16	17.94	3.9	35.66	33.80	20.9	15.15	49.64	
4.2	111.98	08.21	20.1	62.29	18.20	4.9	36.17	34.18	21.8	13.87	49.91	
5.2	113.61	08.36	21.1	63.50	18.46	5.9	36.58	34.59	22.8	12.55	50.16	
6.2	115.16	08.51	22.1	64.77	18.73	6.9	36.84	35.02	23.8	11.22	50.39	
7.2	116.63	08.65	23.1	66.08	19.01	7.9	36.92	35.45	24.8	09.94	50.60	
8.2	118.08	08.77	24.1	67.41	19.30	8.9	36.85	35.87	25.8	08.73	50.78	
9.2	119.54	08.88	25.1	68.71	19.62	9.9	36.68	36.27	26.8	07.64	50.96	
10.2	61.08	08.97	26.1	69.96	19.96	10.9	36.46	36.64	27.8	06.66	51.15	
11.2	62.73	09.06	27.1	71.13	20.31	11.9	36.25	36.99	28.8	05.75	51.35	
12.2	64.51	09.15	28.1	72.20	20.67	12.9	36.07	37.32	29.8	04.86	51.57	
13.2	66.39	09.26	29.1	73.17	21.04	13.9	35.95	37.65	30.8	03.89	51.82	
14.2	68.34	09.40	30.1	74.03	21.40	14.9	35.88	37.97	31.8	02.78	52.09	
15.2	70.29	09.57	31.1	74.81	21.76	15.9	35.87	38.30	32.8	01.49	52.35	
16.2	72.16	09.76				16.9	35.87	38.63				

δ

sec δ

tg δ

δ

sec δ

tg δ

+89° 13' 40''
50

74.1982
74.4661

74.1915
74.4594

+89° 14' 00''
10

74.7359
75.0076

74.7292
75.0009

$\delta_{J1990.5}$

+89° 13' 18.14''

Таблица 1. Первая поправка

Аргумент — местное звездное время наблюдения

s	0 ^h	1 ^h	2 ^h	3 ^h	4 ^h	5 ^h	6 ^h	s
0 ^m	-0 38 37	-0 44 14	-0 46 50	-0 46 15	-0 42 31	-0 35 52	-0 26 47	0 ^m
1	-0 38 44	-0 44 18	-0 46 51	-0 46 13	-0 42 25	-0 35 44	-0 26 37	1
2	-0 38 51	-0 44 22	-0 46 52	-0 46 11	-0 42 20	-0 35 36	-0 26 27	2
3	-0 38 58	-0 44 26	-0 46 53	-0 46 08	-0 42 15	-0 35 28	-0 26 17	3
4	-0 39 05	-0 44 30	-0 46 54	-0 46 06	-0 42 09	-0 35 20	-0 26 07	4
5	-0 39 12	-0 44 34	-0 46 55	-0 46 03	-0 42 04	-0 35 12	-0 25 56	5
6	-0 39 18	-0 44 38	-0 46 55	-0 46 01	-0 41 58	-0 35 04	-0 25 46	6
7	-0 39 25	-0 44 42	-0 46 56	-0 45 58	-0 41 53	-0 34 56	-0 25 36	7
8	-0 39 32	-0 44 46	-0 46 57	-0 45 56	-0 41 47	-0 34 47	-0 25 26	8
9	-0 39 38	-0 44 49	-0 46 57	-0 45 53	-0 41 41	-0 34 39	-0 25 15	9
10	-0 39 45	-0 44 53	-0 46 58	-0 45 50	-0 41 36	-0 34 31	-0 25 05	10
11	-0 39 51	-0 44 57	-0 46 58	-0 45 48	-0 41 30	-0 34 22	-0 24 54	11
12	-0 39 58	-0 45 00	-0 46 59	-0 45 45	-0 41 24	-0 34 14	-0 24 44	12
13	-0 40 04	-0 45 04	-0 46 59	-0 45 42	-0 41 18	-0 34 06	-0 24 33	13
14	-0 40 11	-0 45 07	-0 46 59	-0 45 39	-0 41 12	-0 33 57	-0 24 23	14
15	-0 40 17	-0 45 11	-0 47 00	-0 45 36	-0 41 06	-0 33 49	-0 24 12	15
16	-0 40 24	-0 45 14	-0 47 00	-0 45 33	-0 41 00	-0 33 40	-0 24 02	16
17	-0 40 30	-0 45 17	-0 47 00	-0 45 30	-0 40 54	-0 33 31	-0 23 51	17
18	-0 40 36	-0 45 21	-0 47 00	-0 45 27	-0 40 48	-0 33 23	-0 23 41	18
19	-0 40 42	-0 45 24	-0 47 00	-0 45 24	-0 40 42	-0 33 14	-0 23 30	19
20	-0 40 48	-0 45 27	-0 47 00	-0 45 21	-0 40 36	-0 33 05	-0 23 19	20
21	-0 40 54	-0 45 30	-0 47 00	-0 45 17	-0 40 30	-0 32 57	-0 23 09	21
22	-0 41 00	-0 45 33	-0 47 00	-0 45 14	-0 40 24	-0 32 48	-0 22 58	22
23	-0 41 06	-0 45 36	-0 47 00	-0 45 11	-0 40 17	-0 32 39	-0 22 47	23
24	-0 41 12	-0 45 39	-0 46 59	-0 45 07	-0 40 11	-0 32 30	-0 22 36	24
25	-0 41 18	-0 45 42	-0 46 59	-0 45 04	-0 40 04	-0 32 21	-0 22 26	25
26	-0 41 24	-0 45 45	-0 46 59	-0 45 00	-0 39 58	-0 32 12	-0 22 15	26
27	-0 41 30	-0 45 48	-0 46 58	-0 44 57	-0 39 51	-0 32 03	-0 22 04	27
28	-0 41 36	-0 45 50	-0 46 58	-0 44 53	-0 39 45	-0 31 54	-0 21 53	28
29	-0 41 41	-0 45 53	-0 46 57	-0 44 49	-0 39 38	-0 31 45	-0 21 42	29
30	-0 41 47	-0 45 56	-0 46 57	-0 44 46	-0 39 32	-0 31 36	-0 21 31	30
31	-0 41 53	-0 45 58	-0 46 56	-0 44 42	-0 39 25	-0 31 27	-0 21 20	31
32	-0 41 58	-0 46 01	-0 46 55	-0 44 38	-0 39 18	-0 31 18	-0 21 09	32
33	-0 42 04	-0 46 03	-0 46 55	-0 44 34	-0 39 12	-0 31 09	-0 20 58	33
34	-0 42 09	-0 46 06	-0 46 54	-0 44 30	-0 39 05	-0 30 59	-0 20 47	34
35	-0 42 15	-0 46 08	-0 46 53	-0 44 26	-0 38 58	-0 30 50	-0 20 36	35
36	-0 42 20	-0 46 11	-0 46 52	-0 44 22	-0 38 51	-0 30 41	-0 20 25	36
37	-0 42 25	-0 46 13	-0 46 51	-0 44 18	-0 38 44	-0 30 31	-0 20 14	37
38	-0 42 31	-0 46 15	-0 46 50	-0 44 14	-0 38 37	-0 30 22	-0 20 03	38
39	-0 42 36	-0 46 17	-0 46 49	-0 44 10	-0 38 30	-0 30 13	-0 19 52	39
40	-0 42 41	-0 46 19	-0 46 48	-0 44 06	-0 38 23	-0 30 03	-0 19 41	40
41	-0 42 46	-0 46 21	-0 46 47	-0 44 01	-0 38 16	-0 29 54	-0 19 29	41
42	-0 42 51	-0 46 23	-0 46 46	-0 43 57	-0 38 09	-0 29 44	-0 19 18	42
43	-0 42 56	-0 46 25	-0 46 45	-0 43 53	-0 38 01	-0 29 35	-0 19 07	43
44	-0 43 01	-0 46 27	-0 46 43	-0 43 48	-0 37 54	-0 29 25	-0 18 56	44
45	-0 43 06	-0 46 29	-0 46 42	-0 43 44	-0 37 47	-0 29 15	-0 18 44	45
46	-0 43 11	-0 46 31	-0 46 40	-0 43 39	-0 37 40	-0 29 06	-0 18 33	46
47	-0 43 16	-0 46 33	-0 46 39	-0 43 35	-0 37 32	-0 28 56	-0 18 22	47
48	-0 43 21	-0 46 34	-0 46 37	-0 43 30	-0 37 25	-0 28 46	-0 18 11	48
49	-0 43 25	-0 46 36	-0 46 36	-0 43 25	-0 37 17	-0 28 37	-0 17 59	49
50	-0 43 30	-0 46 37	-0 46 34	-0 43 21	-0 37 10	-0 28 27	-0 17 48	50
51	-0 43 35	-0 46 39	-0 46 33	-0 43 16	-0 37 02	-0 28 17	-0 17 36	51
52	-0 43 39	-0 46 40	-0 46 31	-0 43 11	-0 36 55	-0 28 07	-0 17 25	52
53	-0 43 44	-0 46 42	-0 46 29	-0 43 06	-0 36 47	-0 27 57	-0 17 14	53
54	-0 43 48	-0 46 43	-0 46 27	-0 43 01	-0 36 39	-0 27 47	-0 17 02	54
55	-0 43 53	-0 46 45	-0 46 25	-0 42 56	-0 36 32	-0 27 38	-0 16 51	55
56	-0 43 57	-0 46 46	-0 46 23	-0 42 51	-0 36 24	-0 27 28	-0 16 39	56
57	-0 44 01	-0 46 47	-0 46 21	-0 42 46	-0 36 16	-0 27 18	-0 16 28	57
58	-0 44 06	-0 46 48	-0 46 19	-0 42 41	-0 36 08	-0 27 08	-0 16 16	58
59	-0 44 10	-0 46 49	-0 46 17	-0 42 36	-0 36 00	-0 26 57	-0 16 04	59
60	-0 44 14	-0 46 50	-0 46 15	-0 42 31	-0 35 52	-0 26 47	-0 15 53	60
s	12 ^h	13 ^h	14 ^h	15 ^h	16 ^h	17 ^h	18 ^h	s

Если часы звездного времени внизу таблицы, то знак поправки меняется на обратный.

Таблица 1. Первая поправка

Аргумент — местное звездное время наблюдения

s	6 ^h	7 ^h	8 ^h	9 ^h	10 ^h	11 ^h	12 ^h	s
m	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	m
0	-0 26 47	-0 15 53	-0 03 54	+0 08 22	+0 20 03	+0 30 22	+0 38 37	0
1	-0 26 37	-0 15 41	-0 03 41	+0 08 34	+0 20 14	+0 30 31	+0 38 44	1
2	-0 26 27	-0 15 30	-0 03 29	+0 08 46	+0 20 25	+0 30 41	+0 38 51	2
3	-0 26 17	-0 15 18	-0 03 17	+0 08 58	+0 20 36	+0 30 50	+0 38 58	3
4	-0 26 07	-0 15 06	-0 03 04	+0 09 10	+0 20 47	+0 30 59	+0 39 05	4
5	-0 25 56	-0 14 55	-0 02 52	+0 09 22	+0 20 58	+0 31 09	+0 39 12	5
6	-0 25 46	-0 14 43	-0 02 40	+0 09 34	+0 21 09	+0 31 18	+0 39 18	6
7	-0 25 36	-0 14 31	-0 02 28	+0 09 46	+0 21 20	+0 31 27	+0 39 25	7
8	-0 25 26	-0 14 20	-0 02 15	+0 09 58	+0 21 31	+0 31 36	+0 39 32	8
9	-0 25 15	-0 14 08	-0 02 03	+0 10 10	+0 21 42	+0 31 45	+0 39 38	9
10	-0 25 05	-0 13 56	-0 01 51	+0 10 22	+0 21 53	+0 31 54	+0 39 45	10
11	-0 24 54	-0 13 44	-0 01 38	+0 10 34	+0 22 04	+0 32 03	+0 39 51	11
12	-0 24 44	-0 13 33	-0 01 26	+0 10 46	+0 22 15	+0 32 12	+0 39 58	12
13	-0 24 33	-0 13 21	-0 01 14	+0 10 58	+0 22 26	+0 32 21	+0 40 04	13
14	-0 24 23	-0 13 09	-0 01 02	+0 11 10	+0 22 36	+0 32 30	+0 40 11	14
15	-0 24 12	-0 12 57	-0 00 49	+0 11 22	+0 22 47	+0 32 39	+0 40 17	15
16	-0 24 02	-0 12 45	-0 00 37	+0 11 34	+0 22 58	+0 32 48	+0 40 24	16
17	-0 23 51	-0 12 34	-0 00 25	+0 11 46	+0 23 09	+0 32 57	+0 40 30	17
18	-0 23 41	-0 12 22	-0 00 12	+0 11 58	+0 23 19	+0 33 05	+0 40 36	18
19	-0 23 30	-0 12 10	00 00	+0 12 10	+0 23 30	+0 33 14	+0 40 42	19
20	-0 23 19	-0 11 58	+0 00 12	+0 12 22	+0 23 41	+0 33 23	+0 40 48	20
21	-0 23 09	-0 11 46	+0 00 25	+0 12 34	+0 23 51	+0 33 31	+0 40 54	21
22	-0 22 58	-0 11 34	+0 00 37	+0 12 45	+0 24 02	+0 33 40	+0 41 00	22
23	-0 22 47	-0 11 22	+0 00 49	+0 12 57	+0 24 12	+0 33 49	+0 41 06	23
24	-0 22 36	-0 11 10	+0 01 02	+0 13 09	+0 24 23	+0 33 57	+0 41 12	24
25	-0 22 26	-0 10 58	+0 01 14	+0 13 21	+0 24 33	+0 34 06	+0 41 18	25
26	-0 22 15	-0 10 46	+0 01 26	+0 13 33	+0 24 44	+0 34 14	+0 41 24	26
27	-0 22 04	-0 10 34	+0 01 38	+0 13 44	+0 24 54	+0 34 22	+0 41 30	27
28	-0 21 53	-0 10 22	+0 01 51	+0 13 56	+0 25 05	+0 34 31	+0 41 36	28
29	-0 21 42	-0 10 10	+0 02 03	+0 14 08	+0 25 15	+0 34 39	+0 41 41	29
30	-0 21 31	-0 09 58	+0 02 15	+0 14 20	+0 25 26	+0 34 47	+0 41 47	30
31	-0 21 20	-0 09 46	+0 02 28	+0 14 31	+0 25 36	+0 34 56	+0 41 53	31
32	-0 21 09	-0 09 34	+0 02 40	+0 14 43	+0 25 46	+0 35 04	+0 41 58	32
33	-0 20 58	-0 09 22	+0 02 52	+0 14 55	+0 25 56	+0 35 12	+0 42 04	33
34	-0 20 47	-0 09 10	+0 03 04	+0 15 06	+0 26 07	+0 35 20	+0 42 09	34
35	-0 20 36	-0 08 58	+0 03 17	+0 15 18	+0 26 17	+0 35 28	+0 42 15	35
36	-0 20 25	-0 08 46	+0 03 29	+0 15 30	+0 26 27	+0 35 36	+0 42 20	36
37	-0 20 14	-0 08 34	+0 03 41	+0 15 41	+0 26 37	+0 35 44	+0 42 25	37
38	-0 20 03	-0 08 22	+0 03 54	+0 15 53	+0 26 47	+0 35 52	+0 42 31	38
39	-0 19 52	-0 08 10	+0 04 06	+0 16 04	+0 26 57	+0 36 00	+0 42 36	39
40	-0 19 41	-0 07 58	+0 04 18	+0 16 16	+0 27 08	+0 36 08	+0 42 41	40
41	-0 19 29	-0 07 45	+0 04 30	+0 16 28	+0 27 18	+0 36 16	+0 42 46	41
42	-0 19 18	-0 07 33	+0 04 43	+0 16 39	+0 27 28	+0 36 24	+0 42 51	42
43	-0 19 07	-0 07 21	+0 04 55	+0 16 51	+0 27 38	+0 36 32	+0 42 56	43
44	-0 18 56	-0 07 09	+0 05 07	+0 17 02	+0 27 47	+0 36 39	+0 43 01	44
45	-0 18 44	-0 06 57	+0 05 19	+0 17 14	+0 27 57	+0 36 47	+0 43 06	45
46	-0 18 33	-0 06 45	+0 05 31	+0 17 25	+0 28 07	+0 36 55	+0 43 11	46
47	-0 18 22	-0 06 32	+0 05 44	+0 17 36	+0 28 17	+0 37 02	+0 43 16	47
48	-0 18 11	-0 06 20	+0 05 56	+0 17 48	+0 28 27	+0 37 10	+0 43 21	48
49	-0 17 59	-0 06 08	+0 06 08	+0 17 59	+0 28 37	+0 37 17	+0 43 25	49
50	-0 17 48	-0 05 56	+0 06 20	+0 18 11	+0 28 46	+0 37 25	+0 43 30	50
51	-0 17 36	-0 05 44	+0 06 32	+0 18 22	+0 28 56	+0 37 32	+0 43 35	51
52	-0 17 25	-0 05 31	+0 06 45	+0 18 33	+0 29 06	+0 37 40	+0 43 39	52
53	-0 17 14	-0 05 19	+0 06 57	+0 18 44	+0 29 15	+0 37 47	+0 43 44	53
54	-0 17 02	-0 05 07	+0 07 09	+0 18 56	+0 29 25	+0 37 54	+0 43 48	54
55	-0 16 51	-0 04 55	+0 07 21	+0 19 07	+0 29 35	+0 38 01	+0 43 53	55
56	-0 16 39	-0 04 43	+0 07 33	+0 19 18	+0 29 44	+0 38 09	+0 43 57	56
57	-0 16 28	-0 04 30	+0 07 45	+0 19 29	+0 29 54	+0 38 16	+0 44 01	57
58	-0 16 16	-0 04 18	+0 07 58	+0 19 41	+0 30 03	+0 38 23	+0 44 06	58
59	-0 16 04	-0 04 06	+0 08 10	+0 19 52	+0 30 13	+0 38 30	+0 44 10	59
60	-0 15 53	-0 03 54	+0 08 22	+0 20 03	+0 30 22	+0 38 37	+0 44 14	60
s	18 ^h	19 ^h	20 ^h	21 ^h	22 ^h	23 ^h	24 ^h	s

Если часы звездного времени внизу таблицы, то знак поправки меняется на обратный.

Таблица II. Вторая поправка (всегда положительная)

Аргумент — местное звездное время s и высота h

$s \backslash h$	h^m 0 00	h^m 0 20	h^m 0 40	h^m 1 00	h^m 1 20	h^m 1 40	h^m 2 00	h^m 2 20	h^m 2 40	h^m 3 00	s h
10°	0 01	0 01	0 01	0 00	0 00	0 00	0 00	0 00	0 00	0 00	10°
20°	0 02	0 02	0 01	0 01	0 00	0 00	0 00	0 00	0 00	0 00	20°
30°	0 04	0 03	0 02	0 01	0 01	0 00	0 00	0 00	0 00	0 00	30°
35°	0 04	0 03	0 02	0 02	0 01	0 00	0 00	0 00	0 00	0 00	35°
40°	0 05	0 04	0 03	0 02	0 01	0 00	0 00	0 00	0 00	0 01	40°
45°	0 06	0 05	0 03	0 02	0 01	0 01	0 00	0 00	0 00	0 01	45°
50°	0 07	0 06	0 04	0 03	0 01	0 01	0 00	0 00	0 00	0 01	50°
55°	0 09	0 07	0 05	0 03	0 02	0 01	0 00	0 00	0 00	0 01	55°
60°	0 11	0 08	0 06	0 04	0 02	0 01	0 00	0 00	0 00	0 01	60°
65°	0 13	0 10	0 07	0 05	0 03	0 01	0 00	0 00	0 00	0 01	65°
70°	0 17	0 13	0 09	0 06	0 03	0 02	0 00	0 00	0 00	0 02	70°
72°	0 19	0 15	0 10	0 07	0 04	0 02	0 00	0 00	0 00	0 02	72°
74°	0 22	0 17	0 12	0 08	0 04	0 02	0 00	0 00	0 01	0 02	74°
76°	0 25	0 19	0 14	0 09	0 05	0 02	0 01	0 00	0 01	0 02	76°
78°	0 29	0 22	0 16	0 10	0 06	0 03	0 01	0 00	0 01	0 03	78°
80°	0 36	0 27	0 19	0 12	0 07	0 03	0 01	0 00	0 01	0 03	80°
81°	0 40	0 30	0 21	0 14	0 08	0 03	0 01	0 00	0 01	0 04	81°
82°	0 45	0 34	0 24	0 16	0 09	0 04	0 01	0 00	0 01	0 04	82°
83°	0 51	0 39	0 28	0 18	0 10	0 05	0 01	0 00	0 01	0 05	83°
84°	1 00	0 45	0 32	0 21	0 12	0 05	0 01	0 00	0 02	0 06	84°
$h \backslash s$	h^m 12 00	h^m 12 20	h^m 12 40	h^m 13 00	h^m 13 20	h^m 13 40	h^m 14 00	h^m 14 20	h^m 14 40	h^m 15 00	h s

$s \backslash h$	h^m 3 00	h^m 3 20	h^m 3 40	h^m 4 00	h^m 4 20	h^m 4 40	h^m 5 00	h^m 5 20	h^m 5 40	h^m 6 00	s h
10°	0 00	0 00	0 00	0 01	0 01	0 01	0 01	0 02	0 02	0 02	10°
20°	0 00	0 00	0 01	0 01	0 02	0 02	0 03	0 04	0 04	0 05	20°
30°	0 00	0 01	0 01	0 02	0 03	0 04	0 05	0 06	0 07	0 08	30°
35°	0 00	0 01	0 02	0 02	0 03	0 04	0 06	0 07	0 08	0 09	35°
40°	0 01	0 01	0 02	0 03	0 04	0 05	0 07	0 08	0 10	0 11	40°
45°	0 01	0 01	0 02	0 04	0 05	0 06	0 08	0 10	0 11	0 13	45°
50°	0 01	0 02	0 03	0 04	0 06	0 08	0 10	0 12	0 14	0 16	50°
55°	0 01	0 02	0 03	0 05	0 07	0 09	0 11	0 14	0 16	0 19	55°
60°	0 01	0 02	0 04	0 06	0 08	0 11	0 14	0 17	0 20	0 23	60°
65°	0 01	0 03	0 05	0 08	0 10	0 14	0 17	0 21	0 24	0 28	65°
70°	0 02	0 04	0 06	0 10	0 13	0 18	0 22	0 27	0 31	0 36	70°
72°	0 02	0 04	0 07	0 11	0 15	0 20	0 25	0 30	0 35	0 40	72°
74°	0 02	0 05	0 08	0 12	0 17	0 22	0 28	0 34	0 40	0 45	74°
76°	0 02	0 05	0 09	0 14	0 20	0 26	0 32	0 39	0 46	0 52	76°
78°	0 03	0 06	0 11	0 17	0 23	0 30	0 38	0 46	0 54	1 01	78°
80°	0 03	0 08	0 13	0 20	0 28	0 36	0 46	0 55	1 05	1 14	80°
81°	0 04	0 08	0 15	0 22	0 31	0 41	0 51	1 01	1 12	1 22	81°
82°	0 04	0 09	0 16	0 25	0 35	0 46	0 57	1 09	1 21	1 33	82°
83°	0 05	0 11	0 19	0 29	0 40	0 52	1 06	1 19	1 33	1 46	83°
84°	0 06	0 13	0 22	0 33	0 47	1 01	1 17	1 33	1 48	2 04	84°
$h \backslash s$	h^m 15 00	h^m 15 20	h^m 15 40	h^m 16 00	h^m 16 20	h^m 16 40	h^m 17 00	h^m 17 20	h^m 17 40	h^m 18 00	h s

Таблица II. Вторая поправка (всегда положительная)

Аргумент — местное звездное время s и высота h

s h	h_m 6 00	h_m 6 20	h_m 6 40	h_m 7 00	h_m 7 20	h_m 7 40	h_m 8 00	h_m 8 20	h_m 8 40	h_m 9 00	s h
10 0'	0 02"	0 03"	0 03"	0 03"	0 03"	0 03"	0 03"	0 03"	0 03"	0 03"	10 0'
20 0	0 05	0 05	0 06	0 06	0 07	0 07	0 07	0 07	0 07	0 07	20 0
30 0	0 08	0 08	0 09	0 10	0 10	0 11	0 11	0 11	0 11	0 11	30 0
35 0	0 09	0 10	0 11	0 12	0 13	0 13	0 13	0 13	0 13	0 13	35 0
40 0	0 11	0 12	0 13	0 14	0 15	0 16	0 16	0 16	0 16	0 16	40 0
45 0	0 13	0 15	0 16	0 17	0 18	0 19	0 19	0 19	0 19	0 19	45 0
50 0	0 16	0 17	0 19	0 20	0 21	0 22	0 23	0 23	0 23	0 22	50 0
55 0	0 19	0 21	0 23	0 24	0 26	0 27	0 27	0 28	0 27	0 27	55 0
60 0	0 23	0 25	0 28	0 30	0 31	0 32	0 33	0 33	0 33	0 32	60 0
65 0	0 28	0 31	0 34	0 37	0 39	0 40	0 41	0 41	0 41	0 40	65 0
70 0	0 36	0 40	0 44	0 47	0 50	0 51	0 53	0 53	0 53	0 51	70 0
72 0	0 40	0 45	0 49	0 53	0 55	0 58	0 59	0 59	0 59	0 57	72 0
74 0	0 45	0 51	0 55	1 00	1 03	1 05	1 07	1 07	1 07	1 05	74 0
76 0	0 52	0 58	1 04	1 08	1 12	1 15	1 17	1 17	1 17	1 15	76 0
78 0	1 01	1 08	1 15	1 20	1 25	1 28	1 30	1 31	1 30	1 28	78 0
80 0	1 14	1 22	1 30	1 37	1 42	1 46	1 49	1 49	1 48	1 46	80 0
81 0	1 22	1 32	1 40	1 48	1 54	1 58	2 01	2 02	2 01	1 58	81 0
82 0	1 33	1 43	1 53	2 02	2 08	2 13	2 16	2 17	2 16	2 13	82 0
83 0	1 46	1 58	2 09	2 19	2 27	2 32	2 36	2 37	2 36	2 32	83 0
84 0	2 04	2 18	2 31	2 42	2 52	2 58	3 02	3 03	3 02	2 58	84 0
h s	h_m 18 00	h_m 18 20	h_m 18 40	h_m 19 00	h_m 19 20	h_m 19 40	h_m 20 00	h_m 20 20	h_m 20 40	h_m 21 00	h s

s h	h_m 9 00	h_m 9 20	h_m 9 40	h_m 10 00	h_m 10 20	h_m 10 40	h_m 11 00	h_m 11 20	h_m 11 40	h_m 12 00	s h
10 0'	0 03"	0 03"	0 03"	0 03"	0 03"	0 02"	0 02"	0 02"	0 01"	0 01"	10 0'
20 0	0 07	0 07	0 06	0 06	0 05	0 05	0 04	0 03	0 03	0 02	20 0
30 0	0 11	0 10	0 10	0 09	0 08	0 07	0 06	0 06	0 05	0 04	30 0
35 0	0 13	0 13	0 12	0 11	0 10	0 09	0 08	0 07	0 06	0 04	35 0
40 0	0 16	0 15	0 14	0 13	0 12	0 11	0 09	0 08	0 07	0 05	40 0
45 0	0 19	0 18	0 17	0 16	0 14	0 13	0 11	0 10	0 08	0 06	45 0
50 0	0 22	0 21	0 20	0 19	0 17	0 15	0 13	0 11	0 09	0 07	50 0
55 0	0 27	0 26	0 24	0 23	0 21	0 18	0 16	0 14	0 11	0 09	55 0
60 0	0 32	0 31	0 29	0 27	0 25	0 22	0 19	0 17	0 14	0 11	60 0
65 0	0 40	0 38	0 36	0 34	0 31	0 28	0 24	0 20	0 17	0 13	65 0
70 0	0 51	0 49	0 47	0 43	0 40	0 35	0 31	0 26	0 22	0 17	70 0
72 0	0 57	0 55	0 52	0 49	0 44	0 40	0 35	0 29	0 24	0 19	72 0
74 0	1 05	1 03	0 59	0 55	0 50	0 45	0 39	0 33	0 27	0 22	74 0
76 0	1 15	1 12	1 08	1 03	0 58	0 52	0 45	0 38	0 32	0 25	76 0
78 0	1 28	1 24	1 20	1 14	1 08	1 00	0 53	0 45	0 37	0 29	78 0
80 0	1 46	1 42	1 36	1 29	1 22	1 13	1 04	0 54	0 45	0 36	80 0
81 0	1 58	1 53	1 47	1 40	1 31	1 21	1 11	1 00	0 50	0 40	81 0
82 0	2 13	2 08	2 01	1 52	1 42	1 31	1 20	1 08	0 56	0 45	82 0
83 0	2 32	2 26	2 18	2 08	1 57	1 45	1 31	1 18	1 04	0 51	83 0
84 0	2 58	2 51	2 41	2 30	2 17	2 02	1 47	1 31	1 15	1 00	84 0
h s	h_m 21 00	h_m 21 20	h_m 21 40	h_m 22 00	h_m 22 20	h_m 22 40	h_m 23 00	h_m 23 20	h_m 23 40	h_m 24 00	h s

Таблица III. Третья поправка

Аргумент — местное звездное время наблюдения s и дата

s	1 января	1 февраля	1 марта	1 апреля	1 мая	1 июня	1 июля	s
0 ^h	+49"	+46"	+39"	+30"	+22"	+18"	+20"	0 ^h
1	+46	+45	+40	+31	+22	+16	+15	1
2	+39	+41	+38	+30	+21	+13	+9	2
3	+30	+34	+33	+27	+18	+9	+3	3
4	+18	+25	+26	+22	+14	+5	-3	4
5	+6	+14	+17	+15	+9	0	-9	5
6	-7	+2	+8	+8	+3	-5	-15	6
7	-20	-10	-3	0	-3	-10	-20	7
8	-31	-21	-13	-8	-8	-14	-23	8
9	-40	-31	-23	-16	-13	-17	-24	9
10	-46	-39	-30	-22	-18	-19	-24	10
11	-49	-44	-36	-27	-21	-19	-23	11
12	-49	-46	-39	-30	-22	-18	-20	12
13	-46	-45	-40	-31	-22	-16	-15	13
14	-39	-41	-38	-30	-21	-13	-9	14
15	-30	-34	-33	-27	-18	-9	-3	15
16	-18	-25	-26	-22	-14	-5	+3	16
17	-6	-14	-17	-15	-9	0	+9	17
18	+7	-2	-8	-8	-3	+5	+15	18
19	+20	+10	+3	0	+3	+10	+20	19
20	+31	+21	+13	+8	+8	+14	+23	20
21	+40	+31	+23	+16	+13	+17	+24	21
22	+46	+39	+30	+22	+18	+19	+24	22
23	+49	+44	+36	+27	+21	+19	+23	23
24	+49	+46	+39	+30	+22	+18	+20	24
s	1 июля	1 августа	1 сентября	1 октября	1 ноября	1 декабря	31 декабря	s
0 ^h	+20"	+26"	+36"	+48"	+59"	+68"	+71"	0 ^h
1	+15	+19	+27	+38	+50	+60	+66	1
2	+9	+11	+17	+26	+38	+48	+56	2
3	+3	+2	+5	+12	+22	+33	+43	3
4	-3	-8	-7	-3	+6	+16	+26	4
5	-9	-16	-19	-17	-11	-3	+8	5
6	-15	-24	-29	-31	-28	-21	-11	6
7	-20	-30	-38	-42	-42	-38	-29	7
8	-23	-34	-44	-50	-54	-52	-45	8
9	-24	-35	-46	-55	-62	-63	-58	9
10	-24	-34	-46	-57	-65	-69	-67	10
11	-23	-31	-43	-54	-64	-71	-72	11
12	-20	-26	-36	-48	-59	-68	-71	12
13	-15	-19	-27	-38	-50	-60	-66	13
14	-9	-11	-17	-26	-38	-48	-56	14
15	-3	-2	-5	-12	-22	-33	-43	15
16	+3	+8	+7	+3	-6	-16	-26	16
17	+9	+16	+19	+17	+11	+3	-8	17
18	+15	+24	+29	+31	+28	+21	+11	18
19	+20	+30	+38	+42	+42	+38	+29	19
20	+23	+34	+44	+50	+54	+52	+45	20
21	+24	+35	+46	+55	+62	+63	+58	21
22	+24	+34	+46	+57	+65	+69	+67	22
23	+23	+31	+43	+54	+64	+71	+72	23
24	+20	+26	+36	+48	+59	+68	+71	24

ХІ. РЕФРАКЦИЯ (точность 1'')

Средняя рефракция ($T=10^{\circ}\text{C}$, $B=760$ мм)

z	Рефр.	z	Рефр.	z	Рефр.	z	Рефр.	z	Рефр.	z	Рефр.
0	0	42 00	0 52	60 00	1 41	65 00	2 04	70 00	2 38	75 00	3 33
5	5	30	0 53	10	1 41	10	2 05	10	2 40	10	3 36
10	10	43 00	0 54	20	1 42	20	2 06	20	2 41	20	3 38
14	14	30	0 55	30	1 43	30	2 07	30	2 43	30	3 41
15	16	44 00	0 56	40	1 43	40	2 08	40	2 44	40	3 43
16	17	30	0 57	50	1 44	50	2 09	50	2 46	50	3 46
17	18	45 00	0 58								
18	19	30	0 59	61 00	1 45	66 00	2 10	71 00	2 47	76 00	3 49
19	20	46 00	1 00	10	1 45	10	2 11	10	2 49	10	3 51
20	21	30	1 01	20	1 46	20	2 12	20	2 50	20	3 54
21	22	47 00	1 02	30	1 47	30	2 13	30	2 52	30	3 57
22	24	30	1 03	40	1 47	40	2 14	40	2 53	40	4 00
23	25	48 00	1 05	50	1 48	50	2 15	50	2 55	50	4 03
24	26	30	1 06								
25	27	49 00	1 07	62 00	1 49	67 00	2 16	72 00	2 57	77 00	4 06
26	28	30	1 08	10	1 50	10	2 17	10	2 59	10	4 09
27	30	50 00	1 09	20	1 50	20	2 18	20	3 00	20	4 13
28	31	30	1 10	30	1 51	30	2 19	30	3 02	30	4 16
29	32	51 00	1 12	40	1 52	40	2 20	40	3 04	40	4 19
30	34	30	1 13	50	1 53	50	2 22	50	3 06	50	4 23
		52 00	1 14								
31	35	30	1 15	63 00	1 54	68 00	2 23	73 00	3 08	78 00	4 27
32	36	53 00	1 17	10	1 54	10	2 24	10	3 10	10	4 30
33	38	30	1 18	20	1 55	20	2 25	20	3 12	20	4 34
34	39	54 00	1 20	30	1 56	30	2 26	30	3 14	30	4 38
35	41	30	1 22	40	1 57	40	2 28	40	3 16	40	4 42
36	42	55 00	1 23	50	1 58	50	2 29	50	3 18	50	4 46
37	44	30	1 24								
38	45	56 00	1 26	64 00	1 59	69 00	2 30	74 00	3 20	79 00	4 50
39	47	30	1 27	10	2 00	10	2 32	10	3 22	10	4 55
40	49	57 00	1 29	20	2 01	20	2 33	20	3 24	20	4 59
		30	1 31	30	2 02	30	2 34	30	3 26	30	5 04
41°00'	51	58 00	1 33	40	2 02	40	2 36	40	3 29	40	5 08
30	52	30	1 34	50	2 03	50	2 37	50	3 31	50	5 13
42 00	52	59 00	1 36								
		30	1 38	65 00	2 04	70 00	2 38	75 00	3 33	80 00	5 18

Поправки за температуру T и барометрическое давление B

z	T													z	B				
	-20°	-15°	-10°	-5°	0°	+5°	+10°	+15°	+20°	+25°	+30°	+35°	760		750	740	730	720	
0	+	+	+	+	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"
10	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"
20	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	3	2	2	1	0	0	0	0	1	1	2	2	2	2	2	2	2	2	2
40	4	3	3	2	1	1	0	0	2	2	3	3	3	3	3	3	3	3	3
45	6	4	4	3	2	1	0	0	3	3	4	4	4	4	4	4	4	4	4
50	7	5	5	3	2	1	0	0	4	4	5	5	5	5	5	5	5	5	5
55	8	6	5	4	3	1	0	0	5	5	6	6	6	6	6	6	6	6	6
60	10	8	6	4	3	2	0	0	6	6	7	7	7	7	7	7	7	7	7
65	12	10	7	5	4	2	0	0	7	7	8	8	8	8	8	8	8	8	8
70	15	12	10	7	5	2	0	0	8	8	9	9	9	9	9	9	9	9	9
75	19	15	12	9	6	3	0	0	9	9	10	10	10	10	10	10	10	10	10
80	20	16	12	9	6	3	0	0	10	10	11	11	11	11	11	11	11	11	11
85	21	17	13	10	6	4	0	0	11	11	12	12	12	12	12	12	12	12	12
90	23	18	14	11	7	4	0	0	12	12	13	13	13	13	13	13	13	13	13
95	24	19	15	12	7	4	0	0	13	13	14	14	14	14	14	14	14	14	14
100	26	20	16	13	8	4	0	0	14	14	15	15	15	15	15	15	15	15	15
105	28	22	17	14	8	4	0	0	15	15	16	16	16	16	16	16	16	16	16
110	30	24	19	15	9	4	0	0	16	16	17	17	17	17	17	17	17	17	17
115	33	26	21	16	10	5	0	0	17	17	18	18	18	18	18	18	18	18	18
120	36	29	23	17	11	5	0	0	18	18	19	19	19	19	19	19	19	19	19
125	40	32	25	19	12	6	0	0	19	19	20	20	20	20	20	20	20	20	20
130	+	+	+	+	+	+	-	-	20	20	21	21	21	21	21	21	21	21	21

Пример: Средняя рефракция 3'55"
 Поправка за T -10
 » за B -5
 Рефракция 3'40"

**ИСПРАВЛЕНИЯ И ОПЕЧАТКИ
К «АСТРОНОМИЧЕСКОМУ ЕЖЕГОДНИКУ СССР НА 1990 ГОД»**

<i>Страница</i>	<i>Строка, столбец</i>	<i>Напечатано</i>	<i>Должно быть</i>
409	Авг. 10.2, <i>a</i>	61.08	121.08
409	» 11.2, <i>a</i>	62.73	122.73
409	» 12.2, <i>a</i>	64.51	124.51
409	» 13.2, <i>a</i>	66.39	126.39
409	» 14.2, <i>a</i>	68.34	128.34
409	» 15.2, <i>a</i>	70.29	130.29
409	» 16.2, <i>a</i>	72.16	132.16
615	1 снизу	<i>T</i>	<i>T</i> ²