

APPENDIX

INFORMATION ON HALLEY'S COMMET

Halley's comet is now coming back to us after the lapse of 76 years. The Hydrographic Department of Japan has been making information on the position of the comet available to the masses in Japan and actively engaged in replying to telephone and letter inquiries about the comet since its first approaching this time in November last year. The Department also published three issues of Halley's Comet Newsletters giving information on date, local standard time, altitude, azimuth and magnitude of the comet.

The attached tables are such information predicted for Jakarta, Seoul, Kuala Lumpur, Manila and Bangkok.

DJAKARTA							DJAKARTA							DJAKARTA							DJAKARTA							DJAKARTA						
DATE			LST				DATE			LST				DATE			LST				DATE			LST				DATE			LST			
Y	M	D	H	Alt	Az	Mag	Y	M	D	H	Alt	Az	Mag	Y	M	D	H	Alt	Az	Mag	Y	M	D	H	Alt	Az	Mag	Y	M	D	H	Alt	Az	Mag
1986	3	10	4	17.1	109°	4.5	1986	3	25	2	14.3	119°	4.4	1986	4	6	23	17.8	137°	3.9	1986	4	15	19	20.4	132°	4.3	1986	4	24	19	53.1	126°	5.3
1986	3	10	5	31.3	109	4.5	1986	3	25	3	27.3	121	4.3	1986	4	6	25	37.2	146	3.9	1986	4	15	21	41.5	142	4.3	1986	4	24	21	70.3	173	5.3
1986	3	11	4	18.6	109	4.5	1986	3	25	4	40.0	125	4.3	1986	4	6	27	49.1	170	3.9	1986	4	15	23	54.5	171	4.3	1986	4	24	23	57.2	231	5.4
1986	3	11	5	32.7	110	4.5	1986	3	25	5	51.7	133	4.3	1986	4	6	29	45.9	201	3.9	1986	4	15	25	49.4	207	4.3	1986	4	24	25	31.5	244	5.4
1986	3	12	4	20.0	110	4.5	1986	3	26	2	16.4	121	4.3	1986	4	7	23	22.2	139	3.9	1986	4	15	29	8.3	230	4.3	1986	4	25	19	55.8	126	5.5
1986	3	12	5	34.1	111	4.5	1986	3	26	3	29.2	122	4.3	1986	4	7	25	40.3	151	3.9	1986	4	16	19	24.9	131	4.4	1986	4	25	23	55.8	235	5.5
1986	3	13	4	21.5	110	4.5	1986	3	26	4	41.6	127	4.3	1986	4	7	27	49.1	177	3.9	1986	4	16	21	45.9	144	4.4	1986	4	25	25	29.4	246	5.5
1986	3	13	5	35.4	112	4.5	1986	3	27	2	18.5	122	4.3	1986	4	8	23	26.7	141	3.9	1986	4	16	25	48.1	214	4.4	1986	4	26	19	58.3	125	5.6
1986	3	14	3	8.9	111	4.5	1986	3	27	3	31.1	124	4.3	1986	4	8	25	43.1	156	3.9	1986	4	16	27	27.6	229	4.4	1986	4	26	21	72.9	188	5.6
1986	3	14	4	22.9	111	4.5	1986	3	27	4	43.2	129	4.3	1986	4	8	27	48.5	185	3.9	1986	4	17	19	29.2	130	4.5	1986	4	26	25	27.4	247	5.6
1986	3	14	5	36.8	113	4.5	1986	3	27	5	54.0	140	4.3	1986	4	8	29	38.8	210	3.9	1986	4	17	21	50.1	146	4.5	1986	4	27	19	60.7	125	5.7
1986	3	15	3	10.5	112	4.5	1986	3	28	1	8.1	123	4.3	1986	4	9	21	11.5	137	4.0	1986	4	17	23	58.6	185	4.5	1986	4	27	21	73.6	195	5.7
1986	3	15	4	24.4	112	4.5	1986	3	28	2	54.9	144	4.3	1986	4	9	23	31.3	143	4.0	1986	4	17	25	46.4	220	4.5	1986	4	27	23	52.9	241	5.7
1986	3	15	5	38.2	114	4.5	1986	3	29	1	10.5	124	4.2	1986	4	9	29	34.8	214	4.0	1986	4	18	19	33.3	129	4.6	1986	4	28	19	62.9	125	5.8
1986	3	16	3	12.0	112	4.5	1986	3	29	3	35.0	128	4.2	1986	4	10	21	16.7	138	4.0	1986	4	18	23	59.8	193	4.6	1986	4	28	21	73.9	203	5.8
1986	3	16	4	25.9	113	4.5	1986	3	29	5	55.6	149	4.2	1986	4	10	23	35.8	146	4.0	1986	4	18	25	44.4	225	4.6	1986	4	28	23	51.4	244	5.8
1986	3	16	5	39.6	115	4.5	1986	3	30	1	13.1	125	4.2	1986	4	10	25	47.8	169	4.0	1986	4	18	27	21.1	235	4.7	1986	4	28	25	23.6	250	5.8
1986	3	17	3	13.6	113	4.5	1986	3	30	3	37.0	131	4.2	1986	4	10	27	45.5	199	4.0	1986	4	19	19	37.1	128	4.7	1986	4	29	19	65.0	125	5.9
1986	3	17	4	27.4	113	4.5	1986	3	30	5	56.1	154	4.2	1986	4	10	29	30.5	217	4.0	1986	4	19	21	57.5	151	4.7	1986	4	29	21	73.9	211	5.9
1986	3	17	5	41.0	116	4.5	1986	3	31	1	15.8	127	4.1	1986	4	11	21	21.8	138	4.0	1986	4	19	23	60.4	200	4.8	1986	4	29	23	49.9	246	5.9
1986	3	18	3	15.2	114	4.5	1986	3	31	3	39.0	134	4.1	1986	4	11	23	40.1	150	4.0	1986	4	19	25	42.4	229	4.8	1986	4	29	25	21.8	251	6.0
1986	3	18	4	28.9	114	4.5	1986	3	31	5	56.3	159	4.1	1986	4	11	25	49.4	177	4.0	1986	4	19	27	18.0	237	4.8	1986	4	30	19	67.0	126	6.0
1986	3	19	3	16.7	114	4.5	1986	4	1	1	18.6	128	4.1	1986	4	11	29	26.1	221	4.0	1986	4	20	19	40.7	128	4.9	1986	4	30	21	73.6	218	6.1
1986	3	19	4	30.3	115	4.5	1986	4	1	3	41.0	137	4.1	1986	4	12	21	27.0	139	4.1	1986	4	20	23	60.5	208	4.9	1986	4	30	23	48.4	248	6.1
1986	3	19	5	43.7	119	4.5	1986	4	1	5	56.2	165	4.1	1986	4	12	23	44.3	154	4.1	1986	4	20	25	40.2	233	4.9	1986	4	30	25	20.0	252	6.1
1986	3	20	3	18.5	115	4.5	1986	4	2	1	21.5	130	4.1	1986	4	12	25	50.4	184	4.1	1986	4	21	27	15.0	239	4.9							
1986	3	20	4	32.0	117	4.5	1986	4	2	5	55.7	171	4.1	1986	4	12	29	21.6	223	4.1	1986	4	21	19	44.1	127	5.0							
1986	3	20	5	45.2	121	4.5	1986	4	3	1	24.5	133	4.0	1986	4	13	19	10.9	134	4.1	1986	4	21	23	60.1	214	5.0							
1986	3	21	3	20.2	116	4.4	1986	4	3	3	44.7	146	4.0	1986	4	13	21	32.0	140	4.1	1986	4	21	25	38.0	236	5.0							
1986	3	21	4	33.6	118	4.4	1986	4	3	5	54.7	178	4.0	1986	4	13	23	48.1	159	4.1	1986	4	21	27	12.1	241	5.0							
1986	3	21	5	46.5	123	4.4	1986	4	3	23	5.5	132	4.0	1986	4	13	25	50.7	192	4.2	1986	4	22	19	47.3	127	5.1							
1986	3	22	3	21.9	117	4.4	1986	4	3	25	27.6	135	4.0	1986	4	13	27	37.5	217	4.2	1986	4	22	21	66.2	162	5.1							
1986	3	22	4	35.1	119	4.4	1986	4	3	27	46.3	151	4.0	1986	4	13	29	17.1	226	4.2	1986	4	22	23	59.4	221	5.1							
1986	3	22	5	47.9	125	4.4	1986	4	3	29	53.3	184	4.0	1986	4	14	19	15.8	133	4.2	1986	4	22	25	35.8	239	5.1							
1986	3	23	2	10.4	118	4.4	1986	4	4	23	9.5	133	4.0	1986	4	14	23	51.5	165	4.2	1986	4	22	27	9.4	242	5.1							
1986	3	23	3	23.7	118	4.4	1986	4	4	25	30.8	138	4.0	1986	4	14	25	50.3	200	4.2	1986	4	23	19	50.3	126	5.2							
1986	3	23	4	36.7	121	4.4	1986	4	4	27	47.6	157	4.0	1986	4	14	27	34.3	221	4.2</td														

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DATE				JST				DATE				JST				DATE				JST				DATE				JST			
Y	M	D	H	Alt	Az	Mag	Y	M	D	H	Alt	Az	Mag	Y	M	D	H	Alt	Az	Mag	Y	M	D	H	Alt	Az	Mag				
1986	3	10	5	13.2	127°	4.5	1986	4	1	3	7.9	151°	4.1	1986	4	15	22	10.8	165°	4.3	1986	4	23	20	24.8	163°	5.2				
1986	3	11	5	13.8	128	4.5	1986	4	1	4	12.8	162	4.1	1986	4	15	23	12.8	176	4.3	1986	4	23	21	26.9	178	5.2				
1986	3	12	5	14.4	130	4.5	1986	4	2	3	8.2	154	4.1	1986	4	16	21	9.9	157	4.4	1986	4	23	23	25.9	192	5.2				
1986	3	13	5	15.0	131	4.5	1986	4	2	4	12.4	165	4.1	1986	4	16	22	13.6	169	4.4	1986	4	24	20	26.8	165	5.3				
1986	3	14	5	15.6	133	4.5	1986	4	3	3	8.4	158	4.0	1986	4	16	24	13.4	193	4.4	1986	4	24	21	28.4	180	5.3				
1986	3	15	4	6.6	124	4.5	1986	4	3	4	11.9	169	4.0	1986	4	16	25	9.6	204	4.4	1986	4	24	23	26.8	195	5.3				
1986	3	15	5	16.1	134	4.5	1986	4	3	5	12.9	181	4.0	1986	4	17	20	7.7	149	4.5	1986	4	24	24	22.2	210	5.4				
1986	3	16	4	7.3	125	4.5	1986	4	4	3	8.5	162	4.0	1986	4	17	21	13.1	160	4.5	1986	4	25	20	28.6	167	5.5				
1986	3	16	5	16.6	136	4.5	1986	4	4	4	11.1	173	4.0	1986	4	17	22	16.1	172	4.5	1986	4	25	21	29.7	183	5.5				
1986	3	17	4	8.0	127	4.5	1986	4	5	3	8.4	166	4.0	1986	4	17	24	14.2	197	4.5	1986	4	25	22	27.5	198	5.5				
1986	3	17	5	17.0	137	4.5	1986	4	5	4	10.2	177	4.0	1986	4	17	25	9.5	208	4.5	1986	4	25	24	14.7	225	5.5				
1986	3	18	4	8.6	128	4.5	1986	4	6	3	8.2	170	4.0	1986	4	18	20	11.2	152	4.6	1986	4	26	20	30.2	169	5.6				
1986	3	18	5	17.4	139	4.5	1986	4	6	4	9.1	181	4.0	1986	4	18	21	16.0	163	4.6	1986	4	26	21	30.8	185	5.6				
1986	3	19	4	9.1	130	4.5	1986	4	7	2	5.7	165	3.9	1986	4	18	22	18.4	176	4.6	1986	4	26	22	28.1	201	5.6				
1986	3	19	5	17.7	141	4.5	1986	4	7	3	7.8	175	3.9	1986	4	18	24	17.9	189	4.6	1986	4	26	23	22.3	215	5.6				
1986	3	20	4	9.8	132	4.5	1986	4	7	4	7.7	186	3.9	1986	4	18	25	9.3	213	4.6	1986	4	26	24	14.3	227	5.6				
1986	3	20	5	18.1	143	4.5	1986	4	8	2	6.1	169	3.9	1986	4	19	20	14.4	154	4.7	1986	4	27	20	31.7	172	5.7				
1986	3	20	5	18.1	143	4.5	1986	4	8	3	7.3	180	3.9	1986	4	19	21	18.7	166	4.7	1986	4	27	21	31.8	188	5.7				
1986	3	21	4	10.4	134	4.4	1986	4	8	4	6.2	190	3.9	1986	4	19	22	20.4	179	4.7	1986	4	27	22	28.5	204	5.7				
1986	3	21	5	18.4	145	4.4	1986	4	9	2	6.5	174	3.9	1986	4	19	23	19.1	193	4.7	1986	4	27	23	22.2	218	5.7				
1986	3	22	4	10.9	136	4.4	1986	4	9	3	6.6	185	3.9	1986	4	19	24	15.2	205	4.7	1986	4	27	24	13.8	229	5.7				
1986	3	22	5	18.6	147	4.4	1986	4	9	4	4.4	195	3.9	1986	4	19	25	9.0	216	4.8	1986	4	28	20	33.0	174	5.8				
1986	3	23	4	11.4	138	4.4	1986	4	10	1	5.4	169	4.0	1986	4	20	20	17.4	156	4.8	1986	4	28	21	32.6	191	5.8				
1986	3	23	5	18.7	149	4.4	1986	4	10	2	6.7	179	4.0	1986	4	20	22	22.1	183	4.9	1986	4	28	22	28.8	206	5.8				
1986	3	24	4	11.4	138	4.4	1986	4	11	3	5.7	190	4.0	1986	4	20	23	20.1	196	4.9	1986	4	28	23	22.1	220	5.8				
1986	3	24	5	18.8	151	4.4	1986	4	11	4	4.6	195	4.0	1986	4	20	24	15.4	209	4.9	1986	4	28	24	13.3	232	5.8				
1986	3	25	4	12.3	142	4.4	1986	4	11	1	6.5	174	4.0	1986	4	20	25	8.5	220	4.9	1986	4	29	20	34.2	176	5.9				
1986	3	25	5	18.8	154	4.3	1986	4	11	2	6.7	185	4.0	1986	4	21	20	20.1	158	5.0	1986	4	29	21	33.3	193	5.9				
1986	3	26	4	12.6	144	4.3	1986	4	11	3	7.5	179	4.0	1986	4	21	21	23.3	172	5.0	1986	4	29	22	28.9	209	5.9				
1986	3	26	5	18.7	156	4.3	1986	4	11	4	6.5	190	4.0	1986	4	21	22	23.6	186	5.0	1986	4	29	23	21.9	222	5.9				
1986	3	27	4	12.9	147	4.3	1986	4	12	24	8.1	174	4.1	1986	4	22	20	22.5	161	5.1	1986	4	30	20	35.2	178	6.0				
1986	3	27	5	18.5	159	4.3	1986	4	12	25	8.3	185	4.1	1986	4	22	21	25.2	175	5.1	1986	4	30	23	21.6	224	6.1				
1986	3	28	4	13.1	149	4.3	1986	4	13	23	8.2	168	4.1	1986	4	22	22	24.9	189	5.1	1986	4	30	24	12.2	236	6.1				
1986	3	28	5	18.1	161	4.3	1986	4	13	24	9.7	179	4.1	1986	4	22	23	21.5	203	5.1	1986	4	30	22	29.0	211	6.0				
1986	3	29	4	13.2	152	4.2	1986	4	13	25	8.9	190	4.1	1986	4	22	24	15.5	216	5.1	1986	4	30	21	33.8	195	6.0				
1986	3	29	5	17.7	164	4.2	1986	4	14	22	7.7	161	4.2	1986	4	14	23	10.6	172	4.2	1986	4	30	24	12.2	236	6.1				
1986	3	30	4	13.2	155	4.2	1986	4	14	24	11.2	183	4.2	1986	4	15	25	9.3	195	4.2	1986	4	30	22	29.0	211	6.0				
1986	3	30	5	17.1	167	4.2	1986	4	14	25	9.3	195	4.2	1986	4	16	26	13.2	158	4.1	1986	4	31	20	26.9	178	5.9				
1986	3	31	4	13.1	158	4.1	1986	4	14	26	7.7	161	4.2	1986	4	17	27	10.6	172	4.2	1986	4	31	21	26.9	180	5.9				
1986	3	31	5	16.3	170	4.1	1986	4	14	27	9.3	195	4.2	1986	4	18	28	12.2	172	4.2	1986	4	31	22	26.9	182	5.9				

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	DATE	LST	Y	M	D	H	Alt	Az	Mag		DATE	LST	Y	M	D	H	Alt	Az	Mag		DATE	LST	Y	M	D	H	Alt	Az	Mag		DATE	LST	Y	M	D	H	Alt	Az	Mag
1986	3	10	6	13	°	6	129	°	4.5	1986	4	1	4	7	°	2	153	°	4.1	1986	4	15	23	9	°	6	167	°	4.3	1986	4	24	20	21	°	5	153	°	5.3
1986	3	11	6	14	.2	130			4.5	1986	4	1	5	11	.7	164			4.1	1986	4	15	24	11	.2	178			4.3	1986	4	24	21	25	.6	168		5.3	
1986	3	12	6	14	.7	132			4.5	1986	4	2	4	7	.4	156			4.1	1986	4	15	26	7	.2	201			4.3	1986	4	24	22	26	.7	183		5.3	
1986	3	13	6	15	.3	133			4.5	1986	4	3	4	7	.4	160			4.0	1986	4	16	22	9	.0	159			4.4	1986	4	24	24	19	.7	211		5.4	
1986	3	14	6	15	.7	135			4.5	1986	4	3	5	10	.4	171			4.0	1986	4	16	24	13	.1	183			4.4	1986	4	25	20	23	.7	155		5.5	
1986	3	15	5	7	.2	125			4.5	1986	4	4	4	7	.3	164			4.0	1986	4	16	25	11	.3	195			4.4	1986	4	25	21	27	.3	170		5.5	
1986	3	15	6	16	.2	136			4.5	1986	4	4	5	9	.5	175			4.0	1986	4	16	26	7	.2	206			4.4	1986	4	25	22	27	.9	185		5.5	
1986	3	16	5	7	.8	127			4.5	1986	4	5	4	7	.1	168			4.0	1986	4	17	21	7	.3	151			4.5	1986	4	25	24	19	.8	214		5.5	
1986	3	16	6	16	.6	138			4.5	1986	4	5	5	8	.5	179			4.0	1986	4	17	22	12	.1	162			4.5	1986	4	25	25	12	.1	226		5.5	
1986	3	17	5	8	.4	129			4.5	1986	4	6	4	6	.7	172			4.0	1986	4	17	24	14	.6	187			4.5	1986	4	26	20	25	.6	157		5.6	
1986	3	17	6	17	.0	140			4.5	1986	4	6	5	7	.2	183			4.0	1986	4	17	25	12	.0	199			4.5	1986	4	26	21	28	.9	172		5.6	
1986	3	18	5	9	.0	130			4.5	1986	4	7	4	6	.2	177			3.9	1986	4	18	21	10	.7	154			4.6	1986	4	26	23	25	.7	203		5.6	
1986	3	18	6	17	.3	141			4.5	1986	4	7	5	5	.7	187			3.9	1986	4	18	23	16	.8	178			4.6	1986	4	26	25	11	.7	229		5.6	
1986	3	19	5	9	.4	132			4.5	1986	4	8	4	5	.5	182			3.9	1986	4	18	25	12	.5	203			4.6	1986	4	27	20	27	.4	159		5.7	
1986	3	19	6	17	.5	143			4.5	1986	4	8	5	4	0	192			3.9	1986	4	19	21	13	.8	156			4.7	1986	4	27	21	30	.2	174		5.7	
1986	3	20	5	10	.0	134			4.5	1986	4	9	3	4	9	176			3.9	1986	4	19	22	17	.5	168			4.7	1986	4	27	22	29	.8	190		5.7	
1986	3	20	6	17	.8	145			4.5	1986	4	9	4	4	6	187			3.9	1986	4	19	23	18	.7	182			4.7	1986	4	27	23	26	.1	206		5.7	
1986	3	21	5	10	.5	136			4.4	1986	4	9	5	2	1	197			3.9	1986	4	19	24	17	0	195			4.7	1986	4	27	24	19	.7	219		5.7	
1986	3	21	6	18	.0	147			4.4	1986	4	10	2	4	1	171			4.0	1986	4	20	20	11	0	146			4.8	1986	4	28	20	29	.0	160		5.8	
1986	3	22	5	11	.0	138			4.4	1986	4	10	3	4	9	181			4.0	1986	4	20	21	16	.6	158			4.9	1986	4	28	21	31	.5	177		5.8	
1986	3	22	6	18	.1	149			4.4	1986	4	10	4	3	5	192			4.0	1986	4	20	22	19	8	171			4.9	1986	4	28	23	26	.3	208		5.8	
1986	3	23	5	11	.4	140			4.4	1986	4	11	2	5	0	176			4.0	1986	4	20	24	17	9	198			4.9	1986	4	28	24	19	.5	222		5.8	
1986	3	23	6	18	.1	151			4.4	1986	4	11	3	2	3	197			4.0	1986	4	20	25	13	0	211			4.9	1986	4	29	25	10	.7	233		5.8	
1986	3	24	5	11	.7	142			4.4	1986	4	12	1	4	9	171			4.0	1986	4	21	20	13	9	148			5.0	1986	4	29	21	32	.5	179		5.9	
1986	3	24	6	18	.1	154			4.4	1986	4	12	2	5	8	181			4.0	1986	4	21	22	21	9	174			5.0	1986	4	29	22	31	.1	195		5.9	
1986	3	25	5	12	.0	144			4.3	1986	4	12	3	4	4	192			4.0	1986	4	21	23	21	7	188			5.0	1986	4	29	24	19	.3	224		5.9	
1986	3	25	6	18	.0	156			4.3	1986	4	13	0	4	5	165			4.1	1986	4	21	24	18	6	202			5.0	1986	4	29	25	10	.2	235		5.9	
1986	3	26	4	4	7	136			4.3	1986	4	13	1	6	5	176			4.1	1986	4	21	26	13	0	214			5.0	1986	4	30	20	31	.9	164		6.0	
1986	3	26	5	12	.2	146			4.3	1986	4	13	2	6	4	186			4.1	1986	4	21	26	5	4	225			5.0	1986	4	30	21	33	.5	181		6.0	
1986	3	27	4	5	3	138			4.3	1986	4	13	23	3	6	6	159			4.1	1986	4	22	20	16	7	150			5.1	1986	4	30	22	31	.6	198		6.0
1986	3	27	5	12	.4	149			4.3	1986	4	13	24	6	9	170			4.1	1986	4	22	22	23	7	177			5.1	1986	4	30	24	19	0	226		6.1	
1986	3	28	4	5	8	141			4.3	1986	4	13	25	8	0	181			4.1	1986	4	22	23	22	8	192			5.1	1986	4	30	25	9	6	237		6.1	
1986	3	28	5	12	.5	152			4.3	1986	4	14	23	6	7	163			4.2	1986	4	22	25	12	9	217			5.1	1986	4	31	20	31	.9	164		6.0	
1986	3	29	4	6	.3	143			4.2	1986	4	14	24	9	2	174			4.2	1986	4	23	20	19	2	152			5.2	1986	4	31	21	32	.6	198		6.0	
1986	3	29	5	12	.4	154			4.2	1986	4	14	25	9	3	185			4.2	1986	4	23	21	23	7	165			5.2	1986	4	31	23	26	.5	213		6.1	
1986	3	30	4	6	.7	146			4.2	1986	4	14	26	7	1	196			4.2	1986	4	23	22	23	7	180			5.2	1986	4	31	24	19	0	226		6.1	
1986	3	30	5	12	.3	157			4.2	1986	4	14	27	6	8	191			4.2	1986	4	22	24	19	1	205			5.1	1986	4	31	24	19	5	208		6.1	
1986	3	31	4	7	0	149			4.1	1986	4	14	28	6	7	163			4.2	1986	4	22	25	12	9	217			5.1	1986	4	31	25	12	7	221		6.1	
1986	3	31	5	12	.1	160			4.1	1986	4	14	29	9	2	174			4.2	1986	4	23	20	19	2														

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DATE				LST				Alt Az Mag				DATE				LST				Alt Az Mag				DATE				LST				Alt Az Mag				DATE				LST				Alt Az Mag						
Y	M	D	H					Alt	Az	Mag		Y	M	D	H	Alt	Az	Mag		Y	M	D	H	Alt	Az	Mag		Y	M	D	H	Alt	Az	Mag		Y	M	D	H	Alt	Az	Mag		Y	M	D	H	Alt	Az	Mag
1986	3	10	5	9.2	111	°	4.5	1986	3	27	4	21	5	127	°	4.3	1986	4	9	0	16	3	142	°	3.9	1986	4	18	20	23	3	131	°	4.6	1986	4	28	20	53	0	132	°	5.8							
1986	3	10	6	23.1	113	4.5		1986	3	27	5	33	2	132	4.3		1986	4	9	2	32	5	156	3.9		1986	4	18	22	43	3	149	4.6		1986	4	28	22	65	9	184	5.8								
1986	3	11	5	10.5	111	4.5		1986	3	27	6	43	5	142	4.3		1986	4	9	4	39	4	180	3.9		1986	4	18	24	51	3	183	4.6		1986	4	28	24	50	8	231	5.8								
1986	3	11	6	24.4	114	4.5		1986	3	28	3	11	2	125	4.3		1986	4	9	6	32	9	204	3.9		1986	4	18	26	40	6	216	4.6		1986	4	28	26	24	9	245	5.8								
1986	3	12	5	11.9	112	4.5		1986	3	28	4	23	3	129	4.3		1986	4	10	0	20	7	144	4.0		1986	4	19	20	27	2	131	4.7		1986	4	29	20	55	1	133	5.9								
1986	3	12	6	25.7	115	4.5		1986	3	28	5	34	6	135	4.3		1986	4	10	2	35	2	161	4.0		1986	4	19	22	46	9	151	4.7		1986	4	29	24	49	7	234	5.9								
1986	3	13	5	13.2	113	4.5		1986	3	29	3	13	3	127	4.2		1986	4	10	22	6	3	138	4.0		1986	4	19	26	39	4	221	4.8		1986	4	30	20	57	1	133	6.0								
1986	3	13	6	27.0	116	4.5		1986	3	29	4	25	1	131	4.2		1986	4	10	24	25	1	147	4.0		1986	4	19	28	16	9	234	4.8		1986	4	30	22	67	3	193	6.1								
1986	3	14	5	14.6	114	4.5		1986	3	29	5	36	0	138	4.2		1986	4	10	26	37	6	166	4.0		1986	4	20	20	30	8	131	4.9		1986	4	30	24	48	7	237	6.1								
1986	3	14	6	28.2	117	4.5		1986	3	29	6	45	0	149	4.2		1986	4	10	28	37	9	193	4.0		1986	4	20	22	50	1	153	4.9		1986	4	30	26	21	8	248	6.1								
1986	3	15	5	16.0	114	4.5		1986	3	30	3	15	5	129	4.2		1986	4	10	30	25	8	212	4.0		1986	4	20	24	53	6	195	4.9		1986	4	30	26	37	9	225	4.9								
1986	3	15	6	29.5	118	4.5		1986	3	30	4	27	0	133	4.2		1986	4	11	22	11	4	139	4.0		1986	4	20	26	37	9	225	4.9		1986	4	30	26	14	3	236	4.9								
1986	3	16	5	17.4	115	4.5		1986	3	31	3	17	8	131	4.1		1986	4	11	24	29	5	150	4.0		1986	4	21	20	34	2	131	5.0		1986	4	31	20	36	5	156	5.0								
1986	3	16	6	30.8	119	4.5		1986	3	31	4	28	8	136	4.1		1986	4	11	30	22	0	216	4.0		1986	4	21	24	54	2	201	5.0		1986	4	31	20	38	5	145	5.0								
1986	3	17	5	18.8	116	4.5		1986	3	31	5	38	5	145	4.1		1986	4	12	22	16	5	140	4.1		1986	4	21	26	36	4	229	5.0		1986	4	31	20	45	8	121	5.0								
1986	3	17	6	32.0	121	4.5		1986	3	31	6	45	8	158	4.1		1986	4	12	24	33	6	154	4.1		1986	4	21	28	11	8	239	5.0		1986	4	31	20	41	2	122	5.0								
1986	3	18	5	20.2	117	4.5		1986	4	1	2	8	7	130	4.1		1986	4	12	26	41	2	179	4.1		1986	4	22	20	37	5	131	5.1		1986	4	31	20	42	1	177	5.1								
1986	3	18	6	33.3	122	4.5		1986	4	1	4	30	6	139	4.1		1986	4	12	28	34	7	205	4.1		1986	4	22	22	55	7	159	5.1		1986	4	31	20	43	2	175	5.1								
1986	3	19	5	21.5	119	4.5		1986	4	1	6	45	8	162	4.1		1986	4	12	30	18	0	220	4.1		1986	4	22	24	54	3	206	5.1		1986	4	31	20	42	2	126	5.1								
1986	3	19	6	34.4	124	4.5		1986	4	2	2	11	5	132	4.1		1986	4	13	22	21	5	141	4.1		1986	4	22	28	9	4	241	5.1		1986	4	31	20	43	1	179	5.1								
1986	3	20	4	9.8	117	4.5		1986	4	2	4	32	4	143	4.1		1986	4	13	24	37	5	158	4.1		1986	4	23	20	40	5	131	5.2		1986	4	31	20	44	2	177	5.2								
1986	3	20	5	23.0	120	4.5		1986	4	2	6	45	6	167	4.1		1986	4	13	26	42	2	186	4.2		1986	4	23	22	58	1	162	5.2		1986	4	31	20	45	3	201	5.2								
1986	3	20	6	35.8	125	4.5		1986	4	3	2	14	4	134	4.0		1986	4	13	30	14	0	223	4.2		1986	4	23	24	54	2	211	5.2		1986	4	31	20	46	4	226	5.2								
1986	3	21	4	11.4	118	4.4		1986	4	3	6	45	0	173	4.0		1986	4	14	22	26	4	142	4.2		1986	4	24	20	43	3	131	5.3		1986	4	31	20	47	1	177	5.3								
1986	3	21	5	24.5	121	4.4		1986	4	4	4	37	0	156	4.0		1986	4	14	24	41	1	162	4.2		1986	4	24	22	60	2	166	5.3		1986	4	31	20	48	2	175	5.3								
1986	3	21	6	37.0	127	4.4		1986	4	4	2	17	4	137	4.0		1986	4	14	26	42	8	192	4.2		1986	4	24	22	62	0	170	5.5		1986	4	31	20	49	3	221	5.5								
1986	3	22	4	13.0	119	4.4		1986	4	4	4	44	6	178	4.0		1986	4	14	28	30	1	215	4.2		1986	4	24	24	53	9	216	5.4		1986	4	31	20	50	4	237	5.4								
1986	3	22	5	25.9	123	4.4		1986	4	4	6	44	0	178	4.0		1986	4	14	30	10	0	226	4.2		1986	4	24	26	31	4	237	5.4		1986	4	31	20	51	5	237	5.4								
1986	3	22	6	38.2	129	4.4		1986	4	5	2	20	4	140	4.0		1986	4	15	20	10	3	133	4.3		1986	4	25	20	46	0	131	5.5		1986	4	31	20	52	1	177	5.5								
1986	3	23	4	14.6	120	4.4		1986	4	5	6	42	6	183	4.0		1986	4	15	24	44	3	167	4.3		1986	4	25	24	53	3	220	5.5		1986	4	31	20	53	2	177	5.5								
1986	3	23	5	27.4	124	4.4		1986	4	6	2	23	5	143</																																				

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Y	M	D	H	Alt	Az	Mag	Y	M	D	H	Alt	Az	Mag	Y	M	D	H	Alt	Az	Mag	Y	M	D	H	Alt	Az	Mag	Y	M	D	H	Alt	Az	Mag	
1986	3	10	4	8.8	113°	4.5	1986	3	27	3	17°6'	131°	4.3	1986	4	8	23	9°5'	145°	3.9	1986	4	19	19	22°1'	137°	4.7	1986	4	29	19	49°0'	147°	5.9	
1986	3	10	5	21.9	119	4.5	1986	3	27	4	27.9	140	4.3	1986	4	8	25	23.4	160	3.9	1986	4	19	21	38.1	159	4.7	1986	4	29	21	54.6	193	5.9	
1986	3	11	4	10.0	114	4.5	1986	3	27	5	36.2	151	4.3	1986	4	8	27	27.8	183	3.9	1986	4	19	23	40.5	192	4.7	1986	4	29	23	39.2	228	5.9	
1986	3	11	5	23.0	120	4.5	1986	3	28	3	18.9	134	4.3	1986	4	8	29	20.7	204	3.9	1986	4	19	25	27.8	218	4.8	1986	4	29	25	14.7	245	6.0	
1986	3	11	5	23.0	120	4.5	1986	3	28	4	28.7	142	4.3	1986	4	9	23	13.4	148	4.0	1986	4	20	19	25.7	138	4.8	1986	4	30	19	50.8	149	6.0	
1986	3	12	4	11.2	115	4.5	1986	3	28	5	36.4	154	4.3	1986	4	9	25	25.4	166	4.0	1986	4	20	21	40.9	162	4.9	1986	4	30	23	38.4	231	6.1	
1986	3	12	5	24.0	121	4.5	1986	3	29	3	20.3	136	4.2	1986	4	9	29	17.4	208	4.0	1986	4	20	25	26.6	222	4.9	1986	4	30	25	13.4	246	6.1	
1986	3	13	4	12.4	116	4.5	1986	3	29	4	29.6	145	4.2	1986	4	10	23	17.3	151	4.0	1986	4	21	19	29.1	138	5.0								
1986	3	13	5	25.1	122	4.5	1986	3	29	5	36.6	158	4.2	1986	4	10	25	27.1	171	4.0	1986	4	21	21	43.5	165	5.0								
1986	3	14	4	13.5	117	4.5	1986	3	30	2	11.3	132	4.2	1986	4	10	27	25.8	194	4.0	1986	4	21	23	41.8	201	5.0								
1986	3	14	5	26.1	124	4.5	1986	3	30	3	21.6	139	4.2	1986	4	10	29	13.9	212	4.0	1986	4	21	25	25.4	226	5.0								
1986	3	15	4	14.7	118	4.5	1986	3	30	5	36.5	161	4.2	1986	4	11	23	21.0	155	4.0	1986	4	22	19	32.3	139	5.1								
1986	3	15	5	27.1	125	4.5	1986	3	31	2	13.1	134	4.1	1986	4	11	25	28.5	177	4.0	1986	4	22	21	45.7	169	5.1								
1986	3	16	4	15.9	120	4.5	1986	3	31	3	22.9	142	4.1	1986	4	11	29	10.3	216	4.0	1986	4	22	25	24.1	229	5.1								
1986	3	16	5	28.1	127	4.5	1986	3	31	4	30.9	152	4.1	1986	4	12	21	10.0	143	4.1	1986	4	23	19	35.2	140	5.2								
1986	3	17	4	17.0	121	4.5	1986	4	1	2	14.9	137	4.1	1986	4	12	23	24.6	159	4.1	1986	4	23	21	47.7	172	5.2								
1986	3	17	5	29.0	128	4.5	1986	4	1	3	24.1	145	4.1	1986	4	12	25	29.6	182	4.1	1986	4	23	23	42.1	209	5.2								
1986	3	18	4	18.2	122	4.5	1986	4	1	4	31.3	156	4.1	1986	4	13	21	14.7	145	4.1	1986	4	24	19	37.9	141	5.3								
1986	3	18	5	30.0	130	4.5	1986	4	1	5	35.7	169	4.1	1986	4	13	23	27.9	163	4.1	1986	4	24	21	49.4	175	5.3								
1986	3	19	4	19.2	124	4.5	1986	4	2	2	16.7	140	4.1	1986	4	13	25	30.3	188	4.2	1986	4	24	23	41.9	213	5.4								
1986	3	19	5	30.8	132	4.5	1986	4	2	3	25.2	149	4.1	1986	4	13	27	20.5	210	4.2	1986	4	24	25	21.4	234	5.4								
1986	3	20	3	8.1	119	4.5	1986	4	2	5	35.0	173	4.1	1986	4	14	21	19.3	147	4.2	1986	4	25	19	40.5	142	5.5								
1986	3	20	4	20.4	125	4.5	1986	4	3	2	18.5	144	4.0	1986	4	14	23	31.0	168	4.2	1986	4	25	21	50.9	179	5.5								
1986	3	20	5	31.7	134	4.5	1986	4	3	3	26.2	153	4.0	1986	4	14	25	30.6	194	4.2	1986	4	25	23	41.6	217	5.5								
1986	3	21	3	9.4	121	4.4	1986	4	3	4	31.6	164	4.0	1986	4	14	27	18.3	214	4.2	1986	4	25	25	20.1	237	5.5								
1986	3	21	4	21.6	127	4.4	1986	4	3	5	33.9	177	4.0	1986	4	15	21	23.6	149	4.3	1986	4	26	19	42.8	143	5.6								
1986	3	21	5	32.6	136	4.4	1986	4	4	1	11.5	140	4.0	1986	4	15	25	30.6	199	4.3	1986	4	26	23	41.1	220	5.6								
1986	3	22	3	10.8	122	4.4	1986	4	4	3	27.1	157	4.0	1986	4	15	27	16.0	219	4.3	1986	4	26	25	18.7	239	5.6								
1986	3	22	4	22.7	129	4.4	1986	4	4	5	32.5	182	4.0	1986	4	16	19	9.8	136	4.4	1986	4	27	19	45.0	144	5.7								
1986	3	22	5	33.4	138	4.4	1986	4	5	1	14.0	143	4.0	1986	4	16	21	27.6	152	4.4	1986	4	27	21	53.2	186	5.7								
1986	3	23	3	12.1	124	4.4	1986	4	5	3	27.8	162	4.0	1986	4	16	23	35.9	177	4.4	1986	4	27	23	40.6	223	5.7								
1986	3	23	4	23.8	130	4.4	1986	4	5	5	30.9	186	4.0	1986	4	16	25	30.2	205	4.4	1986	4	27	25	17.3	241	5.7								
1986	3	23	5	34.1	140	4.4	1986	4	6	1	16.4	147	4.0	1986	4	16	27	13.7	223	4.4	1986	4	28	19	47.1	146	5.8								
1986	3	24	3	13.5	125	4.4	1986	4	6	3	28.2	167	4.0	1986	4	17	19	14.1	136	4.5	1986	4	28	21	54.0	189	5.8								
1986	3	24	4	24.9	132	4.4	1986	4	6	5	28.8	191	4.0	1986	4	17	21	31.4	154	4.5	1986	4	28	23	39.9	226	5.8								
1986	3	24	5	34.7	143	4.4	1986	4	7	1	18.8	151	3.9	1986	4	17	25	29.6	210	4.5	1986	4	28	25	16.0	243	5.8								
1986	3	25	3	14.9	127	4.4	1986	4	7	3	28.4	172	3.9	1986	4	17	27	11.3	226	4.5	1986	4	18	19	18.2	136	4.6								
1986	3	25	4	25.9	135	4.3	1986	4	7	5	26.4	195	3.9	1986	4	18	19	34.9	157	4.6	1986	4	18	21	49.0	189	5.8								
1986	3	25	5	35.3	145	4.3	1986	4	8	1	21.2	156	3.9	1986	4	18	21	34.9	157	4.6	1986	4	18	23	39.3	187	4.6								

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DATE				LST				DATE				LST				DATE				LST				DATE				LST		
Y	M	D	H	Alt	Az	Mag	Y	M	D	H	Alt	Az	Mag	Y	M	D	H	Alt	Az	Mag	Y	M	D	H	Alt	Az	Mag			
1986	3	10	5	17. ⁷	116. ⁰	4.5	1986	3	29	3	17. ²	133. ⁰	4.2	1986	4	10	23	15. ⁶	149. ⁰	4.0	1986	4	20	19	22. ⁸	134. ⁰	4.9			
1986	3	11	5	18.8	117	4.5	1986	3	29	4	27.2	141	4.2	1986	4	10	25	27.1	167	4.0	1986	4	20	21	40.0	157	4.9			
1986	3	12	5	19.9	119	4.5	1986	3	30	3	18.7	136	4.2	1986	4	10	27	27.8	190	4.0	1986	4	20	23	43.5	191	4.9			
1986	3	13	5	21.0	120	4.5	1986	3	30	5	35.4	156	4.2	1986	4	11	23	19.7	152	4.0	1986	4	21	19	26.3	135	5.0			
1986	3	14	5	22.1	121	4.5	1986	3	31	2	9.9	132	4.1	1986	4	11	25	29.0	173	4.0	1986	4	21	21	42.8	159	5.0			
1986	3	15	4	10.5	116	4.5	1986	3	31	3	20.2	139	4.1	1986	4	11	27	26.7	196	4.0	1986	4	21	23	44.4	196	5.0			
1986	3	15	5	23.2	122	4.5	1986	3	31	5	35.5	160	4.1	1986	4	11	29	13.9	214	4.0	1986	4	21	25	29.7	223	5.0			
1986	3	16	4	11.7	117	4.5	1986	4	1	2	11.9	135	4.1	1986	4	12	21	7.6	141	4.1	1986	4	22	19	29.4	135	5.1			
1986	3	16	5	24.3	124	4.5	1986	4	1	3	21.7	142	4.1	1986	4	12	23	23.6	156	4.1	1986	4	22	21	45.4	162	5.1			
1986	3	17	4	12.9	119	4.5	1986	4	1	5	35.3	164	4.1	1986	4	12	27	25.4	202	4.1	1986	4	22	23	45.0	200	5.1			
1986	3	17	5	25.4	125	4.5	1986	4	2	2	14.0	138	4.1	1986	4	12	29	10.4	218	4.1	1986	4	22	25	28.6	226	5.1			
1986	3	18	4	14.2	120	4.5	1986	4	2	3	23.1	145	4.1	1986	4	13	21	12.5	143	4.1	1986	4	23	19	32.4	136	5.2			
1986	3	18	5	26.4	127	4.5	1986	4	2	4	30.4	156	4.1	1986	4	13	23	27.3	160	4.1	1986	4	23	21	47.6	165	5.2			
1986	3	19	4	15.3	121	4.5	1986	4	2	5	35.0	168	4.1	1986	4	13	25	31.8	184	4.2	1986	4	23	23	45.3	204	5.2			
1986	3	19	5	27.3	128	4.5	1986	4	3	2	16.0	141	4.0	1986	4	13	27	23.7	207	4.2	1986	4	23	25	27.4	229	5.2			
1986	3	20	4	16.6	123	4.5	1986	4	3	4	30.8	160	4.0	1986	4	14	21	17.2	144	4.2	1986	4	24	19	35.2	136	5.3			
1986	3	20	5	28.4	130	4.5	1986	4	3	5	34.3	173	4.0	1986	4	14	23	30.7	164	4.2	1986	4	24	21	49.6	168	5.3			
1986	3	21	4	17.8	124	4.4	1986	4	4	2	18.1	144	4.0	1986	4	15	21	21.7	146	4.3	1986	4	25	21	51.4	171	5.5			
1986	3	21	5	29.4	132	4.4	1986	4	4	3	25.7	153	4.0	1986	4	15	23	33.7	168	4.3	1986	4	25	23	45.3	212	5.5			
1986	3	22	4	19.1	126	4.4	1986	4	4	4	31.1	164	4.0	1986	4	15	25	33.0	195	4.3	1986	4	25	25	24.9	235	5.5			
1986	3	22	5	30.3	134	4.4	1986	4	4	5	33.4	177	4.0	1986	4	15	27	19.9	216	4.3	1986	4	26	19	40.3	138	5.6			
1986	3	23	4	20.3	128	4.4	1986	4	5	1	11.5	141	4.0	1986	4	16	19	6.8	134	4.4	1986	4	26	21	52.9	174	5.6			
1986	3	23	5	31.2	136	4.4	1986	4	5	3	26.8	158	4.0	1986	4	16	21	25.9	148	4.4	1986	4	26	23	45.1	215	5.6			
1986	3	24	3	9.7	123	4.4	1986	4	6	1	14.3	145	4.0	1986	4	16	23	36.4	172	4.4	1986	4	26	25	23.6	237	5.6			
1986	3	24	4	21.5	129	4.4	1986	4	6	3	27.7	163	4.0	1986	4	17	19	11.2	134	4.5	1986	4	27	19	42.5	138	5.7			
1986	3	24	5	32.1	138	4.4	1986	4	6	5	30.5	187	4.0	1986	4	17	21	29.9	150	4.5	1986	4	27	23	44.7	219	5.7			
1986	3	25	3	11.2	125	4.3	1986	4	7	1	17.1	148	3.9	1986	4	17	23	38.8	177	4.5	1986	4	27	25	22.3	239	5.7			
1986	3	25	4	22.7	131	4.3	1986	4	7	3	28.4	168	3.9	1986	4	17	25	32.9	206	4.5	1986	4	28	19	44.7	139	5.8			
1986	3	25	5	32.9	141	4.3	1986	4	7	5	28.5	192	3.9	1986	4	17	27	15.6	225	4.5	1986	4	28	21	55.4	181	5.8			
1986	3	26	3	12.7	127	4.3	1986	4	8	1	19.8	153	3.9	1986	4	18	19	15.3	134	4.6	1986	4	28	23	44.2	222	5.8			
1986	3	26	4	23.9	134	4.3	1986	4	8	3	28.7	173	3.9	1986	4	18	23	40.7	182	4.6	1986	4	29	19	46.7	140	5.9			
1986	3	26	5	33.6	143	4.3	1986	4	8	5	26.1	196	3.9	1986	4	18	25	32.4	211	4.6	1986	4	29	21	56.3	184	5.9			
1986	3	27	3	14.2	129	4.3	1986	4	9	1	22.4	157	3.9	1986	4	18	27	13.5	228	4.7	1986	4	29	23	43.6	224	5.9			
1986	3	27	4	25.0	136	4.3	1986	4	9	3	28.8	179	3.9	1986	4	19	19	19.2	134	4.7	1986	4	30	19	48.6	142	6.0			
1986	3	27	5	34.2	146	4.3	1986	4	9	5	23.5	201	3.9	1986	4	19	21	36.9	154	4.7	1986	4	30	21	57.1	188	6.1			
1986	3	28	3	15.7	131	4.3	1986	4	9	23	11.4	146	4.0	1986	4	19	25	31.6	215	4.8	1986	4	30	23	42.9	227	6.1			
1986	3	28	4	26.1	139	4.3	1986	4	9	25	24.8	162	4.0	1986	4	19	27	11.3	231	4.8	1986	4	30	25	18.5	244	6.1			
1986	3	28	5	34.8	149	4.3	1986	4	9	27	28.4	185	4.0	1986	4	9	29	20.5	205	4.0										