

MAS Eclipsing Binary Ephemeris for June 2024

all times in U.T.

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	RT	TW	UU	WZ	XZ	AB	AB	AD	BD	BX	DS	QX	QX	CX	CZ	EK	EK	XZ	KO	KP	OO	OO	V342	
	AND	AND	AND	AND	AND	AND	AND	AND	AND	AND	AND	AND	AND	AQR	AQR	AQR	AQR	AQL	AQL	AQL	AQL	AQL	AQL	
MAX	9.3	8.8	11.2	11.6	10.0	9.3	9.3	11.1	11.3	8.6	10.8	11.3	11.3	10.7	10.3	10.8	10.8	9.3	8.3	9.7	9.2	9.2	9.0	
MIN	10.2	11.0	14.1	12.6	13.0	10.2	10.2	11.6	11.7	9.5	11.4	11.6	11.6	12.0	11.2	11.3	11.3	11.2	9.3	10.5	10.1	10.1	12.5	
DUR	3	11	8	4	3	3	3	4	3	4	4	3	3	3	3	3	3	7	5	4	3	3	7	
TOT		2																					3	
							(S)	(S)					(S)				(S)						(S)	
0- 1		9.0		7.5			6.5		6.5	8.5													5.5	
1- 2	8.5						6.5		5.0				8.0	8.0					8.0				6.0	
2- 3				9.5			6.0					8.5		11.0			10.0						6.5	
3- 4	5.5						6.0	11.0		10.0			9.5			8.0							6.5	
4- 5							6.0	10.5	10.5						8.5				5.0	3.5			7.0	
5- 6					8.0		6.0	10.0	9.0														7.5	
6- 7	9.0						6.0	10.0	7.0					8.0		9.5							7.5	
7- 8			11.0				5.5	9.5	5.5					11.0									8.0	
8- 9	6.5						5.5	9.0	3.5				8.0										8.0	8.0
9-10				8.5	9.5		5.5	9.0				8.5						5.5					8.5	
10-11	3.5		10.0				5.5	8.5					9.5		9.5		9.5						9.0	
11-12	10.0			10.5			5.5	8.0	9.5	8.0				8.5				9.0				3.0	9.0	
12-13							5.0	8.0	7.5													3.5	9.5	
13-14	7.0		9.5				5.0	7.5	5.5								11.0					4.0	10.0	
14-15							5.0	7.0	4.0	9.5						9.0				6.0		4.0	10.0	
15-16	4.5						5.0	7.0					8.0									4.5	10.5	3.0
16-17	10.5		9.0	7.5				6.5				9.0		8.5	10.5							5.0	11.0	
17-18							6.0	9.5	10.5				9.5			10.5							5.0	
18-19	8.0			9.5			6.0	8.0									8.5						5.5	
19-20			8.0				5.5	6.0															5.5	
20-21	5.0						5.0	4.5															6.0	
21-22							5.0					7.5		8.5			10.0		9.5				6.5	
22-23			7.5				4.5		7.5				8.5			8.0							6.5	
23-24	8.5						4.0	10.0				9.0			8.0								7.0	
24-25					8.0	8.0		8.5		7.5		10.0						5.0	6.0	8.5		7.5		
25-26	6.0		7.0	8.5		8.0		6.5	9.0	8.0						9.5						7.5	7.0	
26-27						7.5		5.0		8.0				8.5				8.5					8.0	
27-28	3.0			10.5		7.5				8.5									3.0				8.5	
28-29	9.5				10.0	7.5			10.0	8.5	8.0												8.5	
29-30						7.5			10.5	9.0			8.5		9.0		9.5						9.0	

	V343	V346	RX	SS	SS	AP	AP	EP	V459	SS	SS	SS	TU	TU	TY	TY	TZ	TZ	VW	VW	ZZ	AD	AD
	AQL	AQL	ARI	ARI	ARI	AUR	AUR	AUR	AUR	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO
MAX	10.6	9.0	9.4	10.1	10.1	10.9	10.9	10.8	7.7	10.3	10.3	10.3	11.7	11.7	11.8	11.8	10.6	10.6	10.5	10.5	6.8	9.8	9.8
MIN	12.3	10.4	9.9	11.1	11.1	11.4	11.4	11.3	8.1	11.0	11.0	11.0	12.7	12.7	12.3	12.3	11.1	11.1	11.0	11.0	7.6	10.4	10.2
DUR	4	4	4	3	3	4	4	3	4	18	18	18	3	3	3	3	3	3	3	3	5	4	4
TOT										6	6	6											
					(S)		(S)		(S)	(2)		(3)		(S)		(S)		(S)		(S)			(S)
0- 1								2.0					3.0	7.0	7.0	3.5	6.0	2.5	6.0	2.0			
1- 2	8.0												2.5	6.0	6.0	2.0	3.5		6.5	2.5			
2- 3											4.0	7.0		5.5	5.0			4.5	7.0	3.0	7.0		
3- 4	4.5								2.0					5.0	3.5	7.5	5.5	2.0	8.0	3.5			
4- 5														4.5	2.5	6.5	3.0	6.5		4.5			
5- 6		3.5											7.5	3.5		5.0		4.0		5.0			
6- 7		6.0					3.5						7.0	3.0		4.0	5.0			5.5			
7- 8		8.5											6.0	2.5	6.5	3.0	2.5	6.0	2.0	6.5	6.5		
8- 9				8.5		3.0							5.5		5.5		7.0	3.0	3.0	7.0		2.0	
9-10					9.0								5.0		4.0		4.0		3.5	7.5			2.5
10-11				9.0		3.0							4.0		3.0	7.0		5.0	4.0			3.5	
11-12					9.5								3.5	7.5	2.0	5.5	6.0	2.5	5.0				4.5
12-13	9.5					3.0							3.0	7.0		4.5	3.5	7.0	5.5		6.5	5.0	
13-14			9.0										2.5	6.0	7.0	3.5		4.5	6.0	2.0			6.0
14-15	6.0		9.5				2.5							5.5	6.0	2.0	5.5	2.0	6.5	2.5		7.0	
15-16			10.0											5.0	5.0		3.0	6.5	7.5	3.5			7.5
16-17		5.0				2.5								4.0	3.5	7.5		4.0	8.0	4.0		8.5	
17-18		7.5								6.5	9.5		7.5	3.5	2.5	6.5	4.5			4.5	6.0		9.0
18-19		10.0					2.5						7.0	3.0		5.0	2.0	5.5		5.0			
19-20													6.0	2.5		4.0	6.5	3.0	1.5	6.0			
20-21						2.0			2.0				5.5		6.5	3.0	4.0		2.5	6.5			
21-22													5.0		5.5			5.0	3.0	7.0			
22-23					8.5		2.0						4.0		4.5		6.0	2.5	3.5	8.0	6.0		
23-24			9.0										3.5	7.5	3.0	7.0	3.5	7.0	4.5				
24-25					9.5	2.0							3.0	7.0	2.0	6.0		4.5	5.0				
25-26	7.5											3.0	2.5	6.0		4.5	5.5	1.5	5.5				
26-27		4.0												5.5	7.5	3.5	2.5	6.5	6.5	2.0			
27-28	4.0	6.5												5.0	6.0	2.5		3.5	7.0	3.0	6.0		
28-29		9.0												4.0	5.0		4.5		7.5	3.5			
29-30													7.5	3.5	4.0	7.5	2.0	5.5	8.0	4.0			

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	BW	BW	44	44	Y	SV	AL	CD	CD	XZ	AM	RW	TY	RZ	TV	TW	ZZ	AB	CW	CW	DZ	GT	IR
	BOO	BOO	BOO	BOO	CAM	CAM	CAM	CAM	CAM	CMI	CMI	CAP	CAP	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS
MAX	7.1	7.1	4.7	4.7	10.6	8.6	10.5	11.6	11.6	9.7	10.0	9.8	10.5	6.4	7.3	8.3	10.7	10.2	11.8	11.8	11.6	11.9	10.8
MIN	7.5	7.5	4.9	4.8	12.4	9.4	11.3	11.8	11.8	10.2	10.4	10.8	11.6	7.8	8.4	8.9	11.1	12.2	12.5	12.5	12.3	12.8	12.1
DUR	5	5	3	3	6	3	5	5	5	3	6	5	4	4	4	5	4	4	3	3	4	5	4
TOT																							
		(S)		(S)					(S)		(S)												
0- 1				4.0		4.5		2.0					9.5		3.0					4.5		4.5	7.5
1- 2			2.5	6.0		9.0			5.5			6.5				7.0			7.5	3.5			
2- 3			4.5				3.5	9.0										8.5	6.5	2.5			8.5
3- 4			6.0	3.0	6.0	4.0		3.5					6.0	5.0					5.5		6.0	4.5	
4- 5				4.5		8.0			7.0					10.0		3.5	7.0		4.5				9.5
5- 6		8.0	3.0	6.5				10.5										2.0	3.5	7.0			
6- 7			5.0			3.0	3.5	5.0										10.5	2.0	6.0	9.5	4.0	10.5
7- 8	7.0			3.5		7.5			8.5						9.0					5.0	4.0		3.0
8- 9			2.0	5.0					2.5							10.5				4.0			
9-10			3.5			2.0		6.0						4.5	4.5		6.5	4.5	7.0	3.0		4.0	4.0
10-11			5.0	2.0		6.5	3.0		9.5	2.0	2.0		8.5	9.0					5.5	2.0	7.5		
11-12				3.5			11.0		4.0			10.5				7.0			4.5				5.0
12-13			2.0	5.5				7.5											3.5	7.5		3.5	
13-14			4.0		4.0	5.5		2.0				5.0						6.5	2.5	6.5	11.0		6.0
14-15			5.5	2.5		10.0	2.5		5.5							3.5	5.5			5.5	5.5		
15-16		8.0		4.0			10.5	9.0						4.0						4.5		3.5	7.0
16-17			2.5	6.0		5.0		3.5						8.5	10.5				7.0	3.5			
17-18	7.0		4.5			9.5			7.0									9.0	6.0	2.0	9.0		8.0
18-19			6.0	3.0			2.5	10.5			5.5				6.0	10.5			5.0		4.0		
19-20				4.5		4.0	10.0	4.5											5.0	4.0			9.0
20-21			3.0	6.5		8.5			8.0				8.0						11.0	2.5	3.0	7.0	
21-22			5.0						2.5	2.0				3.5		7.0			2.0	5.5	7.0		10.0
22-23				3.5		3.0	2.0	6.0						8.0						4.5			
23-24			1.5	5.0	2.0	7.5	10.0		9.5										7.5	3.5			
24-25			3.5						4.0							3.5	4.5	5.0	6.5	2.5	10.5		3.5
25-26		8.0	5.0	2.0		2.5		7.5									10.5		5.5		5.5		
26-27				3.5	9.5	7.0			11.0										4.5				4.5
27-28	7.0		2.0	5.5			9.5		5.0				10.5	3.0	7.5				3.5	7.0			
28-29			4.0					8.5				9.5		7.5		10.5		7.5	2.5	6.0	8.5		5.5
29-30			5.5	2.5		6.0		3.0							3.0		4.0			5.0	3.5		

all times in U.T.

	IS	IT	MM	OR	OX	OX	PV	PV	V364	V364	V375	V380	U	SU	WW	WZ	WZ	XX	ZZ	CW	CW	DL	DV
	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CEP
MAX	11.6	11.0	11.3	11.4	10.1	10.1	10.0	10.0	11.2	11.2	10.1	10.4	6.7	8.8	11.1	11.7	11.7	8.5	9.3	7.6	7.6	12.4	11.6
MIN	12.6	11.8	11.9	12.4	10.9	10.9	10.6	10.6	11.7	11.7	10.9	11.1	9.8	9.8	11.9	11.3	11.1	9.6	10.0	8.0	8.0	13.2	12.4
DUR	5	5	5	4	5	5	3	3	4	4	5	5	4	4	4	3	3	4	5	5	5	5	4
TOT													2										
						(S)		(S)		(S)							(S)			(S)			
0- 1			7.5				7.5			7.5						2.0	7.0						
1- 2						6.0		5.0			4.0					8.0	3.0			7.0			
2- 3												9.5				4.0	9.0	9.0				8.0	
3- 4				3.5						9.5						10.0	5.0						
4- 5	10.0			9.5							2.5			10.5		6.0			4.0				
5- 6												3.0		8.0		2.0	7.0			9.5		4.5	
6- 7	6.5					5.5								6.0		8.0	3.0		7.0			8.0	
7- 8			6.0				7.5		6.0				11.0	3.5	8.0	4.0	9.0					5.0	
8- 9	2.5		10.0	3.0				5.0									5.0		10.5	3.0			
9-10				9.0														9.5					
10-11										8.5							2.0	7.0					
11-12						4.5											8.5	3.5					
12-13													10.5				4.5	9.5			5.0	2.5	3.5
13-14									10.5			6.5		11.0			5.5						7.5
14-15			5.0	8.5			7.5				10.0			8.5		6.5							
15-16			9.0					5.0						6.0		2.5	7.5					9.0	
16-17							4.0							3.5		8.5	3.5	9.5		7.5			
17-18	7.5									7.0	9.0	8.0	10.0			4.5	9.5						
18-19																	5.5						
19-20	4.0			8.0															3.5				3.0
20-21										9.0	7.5					2.5	7.5				9.5	6.0	7.0
21-22						3.5	7.5					10.0			3.0	8.5	3.5	2.0	7.0				10.5
22-23			7.5					5.0					10.0			5.0	10.0						
23-24											6.5			9.0			6.0	10.0	10.5		3.0		
24-25				7.5					5.5			3.0		6.5		7.0	2.0						
25-26														4.0		3.0	8.0					3.5	
26-27		10.5					3.0					5.0				9.0	4.0						2.5
27-28					10.5				7.5				9.5			5.0	10.0			5.5			6.0
28-29	9.0						7.5										6.0	2.0				10.0	10.0
29-30			6.5	7.5				5.0			3.5					7.0	2.0						

	EG	EK	GK	TT	TX	RW	RW	RZ	RZ	SS	SS	CC	CC	U	RW	TW	W	W	RV	RV	SX	SX	V
	CEP	CEP	CEP	CET	CET	COM	COM	COM	COM	COM	COM	COM	COM	CRB	CRB	CRB	CRV	CRV	CRV	CRV	CRV	CRV	CRT
MAX	9.6	8.2	6.9	10.8	10.9	11.0	11.0	10.0	10.0	10.9	10.9	11.0	11.0	7.6	10.1	10.5	10.6	10.6	9.0	9.0	8.9	8.9	9.5
MIN	10.6	9.5	7.4	11.3	11.5	11.6	11.6	10.7	10.7	11.5	11.5	11.9	11.9	8.8	10.6	11.3	11.2	11.2	10.0	10.0	9.2	9.2	10.2
DUR	3	6	4	3	4	3	3	3	3	4	4	2	2	5	4	4	4	4	4	4	3	3	4
TOT					1																		
							(S)		(S)		(S)		(S)				(S)		(S)		(S)		
0- 1	9.0					4.0		5.5		7.5	3.0		3.5		9.5	9.0		4.5		3.5	4.0		
1- 2				10.5		3.0		6.0	2.0	3.5		3.5			3.0		4.0				2.5		
2- 3							4.5	6.0	2.0		4.5		3.0			3.5		3.0				5.5	3.5
3- 4	2.5						3.5	6.5	2.5	5.0		3.0			7.5	7.5	2.5			3.0		4.0	
4- 5	4.5					5.0	2.0	7.0	3.0		6.0		3.0	7.5								3.0	
5- 6	7.0				10.5	3.5		7.5	3.5	6.5		2.5	5.5			2.0							
6- 7	9.0	4.0				2.5	5.5	7.5	3.5	2.5	7.5	5.0	2.5		5.0	6.5	5.0			3.0	4.5		
7- 8			9.5				4.0		4.0	3.0	2.5	5.0				10.5		4.0			3.0		
8- 9			8.0		10.0		3.0		4.5	4.0		5.0	2.0		9.5		3.5				2.0		
9-10	2.5		6.5			4.5	1.5		5.0		4.5	2.0	4.5		3.0	5.0		2.5		2.5		4.5	3.5
10-11	4.5		5.0			3.5			5.0	5.5		4.5	2.0			9.5	2.0					3.5	
11-12	6.5		3.5			2.0	5.0		5.5		6.5		4.5	5.0	7.0							2.0	
12-13	8.5		2.0				4.0	2.0	6.0	7.0	2.0	4.0				3.5		5.5		2.5	4.5		
13-14	11.0					5.5	2.5	2.0	6.5	3.0			4.0			8.0	4.5					3.5	
14-15						4.0		2.5	6.5		3.5	4.0			5.0		4.0					2.5	
15-16	2.0					3.0		3.0	7.0	4.5			3.5			2.5	3.0			2.0		5.0	
16-17	4.0					2.0	4.5	3.5	7.5		5.0	3.5			9.0	6.5		2.5				3.5	4.0
17-18	6.5						3.5	3.5		6.0			3.5		2.5	11.0						2.5	
18-19	8.5			10.5		5.0	2.0	4.0		2.0	6.5	3.0		3.0						2.0	5.0		
19-20	10.5	10.5		10.0		4.0		4.5		7.5	2.5		3.0		7.0	5.5		5.0			4.0		
20-21						2.5	5.5	5.0		3.5		3.0				9.5	4.0					2.5	
21-22	2.0		10.5				4.5	5.0			4.0	5.5	2.5					3.5				5.0	2.0
22-23	4.0		9.0				3.0	5.5		5.0		2.5	5.0		4.5	4.0	3.0		5.0			4.0	
23-24	6.0		7.5			4.5	2.0	6.0	2.0		5.5	5.0	2.5			8.5		2.0				3.0	
24-25	8.5		6.0			3.5		6.5	2.5	6.5		2.0	5.0		9.0						5.5		
25-26	10.5		4.5		10.5	2.0	5.0	6.5	2.5	2.0	7.0	4.5	2.0		2.5	2.5	5.5		5.0		4.0		
26-27			3.0				4.0	7.0	3.0		3.0	2.0	4.5			7.0		4.5			3.0		
27-28						5.5	2.5	7.5	3.5	3.5		4.5			6.5		4.0				2.0		
28-29	4.0	7.0			10.0	4.5			3.5		4.5		4.0					3.0	4.5			4.5	2.5
29-30	6.0					3.0			4.0	5.5		4.0				5.5	2.5					3.0	

	Y	SW	WW	ZZ	AE	BR	CG	DK	KR	KV	V346	V387	V388	V401	V456	V466	V466	V477	V477	V548	V704	1034	W	
	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	DEL
MAX	7.0	9.3	9.9	10.7	11.8	9.4	11.0	10.3	9.2	11.5	11.8	11.5	9.7	10.8	10.8	10.8	10.8	8.3	8.3	8.9	13.8	9.6	9.4	
MIN	7.6	11.8	13.2	12.0	12.8	10.5	11.8	10.8	10.0	12.6	13.6	12.3	10.3	11.6	11.9	11.6	11.6	9.2	8.7	9.7	14.6	10.6	12.7	
DUR	6	5	5	4	4	4	3	4	4	5	5	3	3	4	3	4	4	4	4	5	4	4	7	
TOT		2																					2	
																		(S)	(S)					
0- 1	10.0													8.5	6.0	5.0						8.5	4.0	
1- 2			8.0	2.5			4.0	10.0					5.0	5.0	10.0	2.5		8.0		11.0			3.5	
2- 3				8.5			10.0	8.5	11.0	2.0													3.0	
3- 4	9.5					9.0		7.0	7.0				3.5		4.0		10.5		2.5			5.0	2.5	
4- 5				6.0			7.5	6.0	3.5				10.0		8.0			3.0				8.5		
5- 6								4.5											10.5					
6- 7	9.5			3.0			5.0						8.0	8.5	2.0	11.0	5.0			3.5	10.5			
7- 8				9.5		9.0					7.0		5.5	6.0	8.0								5.0	
8- 9		10.0							9.0				6.5		10.0	5.5		7.0			5.5	8.5		
9-10	9.5			6.5			9.0	10.0	5.0						3.0								9.5	
10-11								8.5					4.5		4.0		9.5		3.5					
11-12			7.0	4.0		9.0	6.5	7.0							8.0			2.0				5.0		
12-13	9.5			10.0				6.0						9.0								8.0		
13-14							3.5	4.5	10.5	10.5			9.5	5.5	2.0		4.0			4.5				
14-15				7.5			10.0		7.0						6.0								5.0	
15-16	9.5					9.0			3.0				7.5	10.0	8.5		6.0				11.0	4.5		
16-17				4.5	11.0		7.5			7.0					6.0								8.0	
17-18				11.0	10.0			10.0					5.5		4.0	3.5	8.5		4.0		6.0			
18-19	9.0			2.0	9.5		5.0	8.5			6.0			9.5	8.0									
19-20				8.0	8.5	8.5		7.5	8.5	3.0				3.5	6.0							4.5		
20-21					8.0			6.0	5.0					10.5	2.5		3.0			5.5		8.0		
21-22	9.0		6.0	5.5	7.0		8.5	4.5							5.5									
22-23		3.0			6.5								8.5		9.5			5.0						
23-24				2.5	6.0	8.5	6.0								9.0							4.5		
24-25	9.0			8.5	5.0				10.0				6.5	9.5	3.5	6.5	7.5		5.0			8.0		
25-26					4.5		3.5	10.0	6.5					6.5	7.5	4.0								
26-27				6.0	3.5		10.0	8.5	3.0				5.0	3.0				9.5			7.0			
27-28	9.0					8.5		7.5									2.0			6.5		4.5		
28-29				3.5			7.0	6.0						3.0	5.5						2.0	7.5		
29-30				9.5				4.5					5.5	9.5	9.5			4.0						



all times in U.T.

	HS	HS	LT	V728	68	WY	AV	DF	DF	DI	DK	V470	V470	SW	SW	VX	AR	AW	CM	CO	CO	DG	GX
	HER	HER	HER	HER	HER	HYA	HYA	HYA	HYA	HYA	HYA	HYA	HYA	LAC	LAC	LAC	LAC	LAC	LAC	LAC	LAC	LAC	LAC
MAX	8.5	8.5	10.7	10.9	4.7	10.3	10.2	11.0	11.0	11.0	10.5	13.0	13.0	9.2	9.2	10.9	7.3	10.6	8.5	10.5	10.5	10.8	10.1
MIN	9.0	9.0	11.1	11.5	5.4	11.1	10.6	11.5	11.5	12.0	11.0	13.5	13.5	10.0	10.0	12.3	8.2	11.3	9.5	11.0	11.0	12.0	10.4
DUR	4	4	4	3	5	3	4	4	4	4	4	3	3	3	3	4	6	5	4	5	5	4	6
TOT																	2						
		(S)		6.0			3.0		(S)				(S)		(S)						(S)		
0- 1																							
1- 2	8.5			4.5				3.0								7.0	5.5	5.5					
2- 3		5.5	3.0	3.5				3.0					2.0			6.0	7.0		9.0	8.0			
3- 4			5.0	2.0				2.5				2.0				5.0	9.0	5.0					
4- 5			7.0					2.5									11.0					6.5	
5- 6			9.0	10.5				2.0						7.0			5.0	4.0		10.0			
6- 7	6.5		11.0	9.0				2.0		1.5				6.0				7.5			4.0		
7- 8		3.0		8.0				2.0						5.0			4.5	10.5	4.5				
8- 9				6.5																			
9-10				5.0							2.0					7.0	4.0				6.0		
10-11		10.0		3.5												6.5		9.5					
11-12	4.5			2.5												5.5							8.0
12-13																4.5					8.0		
13-14				11.0			2.5							7.5			3.0	4.0		3.0		2.5	
14-15				9.5										6.5				7.5					
15-16		7.5	3.0	8.0	2.5		3.5							5.5		4.5		10.5	5.0		10.0	7.5	
16-17	2.5		5.0	6.5										4.5		6.5				5.0			
17-18			7.0	5.5	3.5	2.0										7.5	8.0						
18-19			9.0	4.0												6.5	10.0		10.0				
19-20	9.0			2.5	5.0								2.0			6.0					7.0		
20-21		5.5										2.0				5.0							
21-22					6.0			3.0		2.0								4.0					
22-23				9.5		2.0		3.0						7.0				7.5		9.0			
23-24				8.5	7.0			2.5						6.0				10.5	5.5		3.0		
24-25	7.0			7.0				2.5						5.0								3.0	
25-26		3.5		5.5	8.5			2.5															
26-27				4.0			2.0	2.0								7.0		10.5		5.0	8.0		
27-28				3.0	9.5			2.0								6.5							
28-29		10.0	3.0				3.5									5.5							
29-30	5.0		5.0		11.0											4.5		4.0			7.0		



	MZ	MZ	Y	UU	UV	VZ	WZ	XY	XZ	AM	T	SS	DELT	RY	UZ	EW	FL	U	SX	V501	V508	V839	1010			
	LAC	LAC	LEO	LEO	LEO	LEO	LEO	LEO	LEO	LEO	LMI	LIB	LIB	LYN	LYR	LYR	LYR	OPH	OPH	OPH	OPH	OPH	OPH			
MAX	11.2	11.2	9.5	11.4	9.5	10.6	11.3	9.5	10.6	9.2	10.2	10.4	4.8	11.9	9.8	11.2	8.7	5.8	10.5	10.9	10.1	8.8	6.2			
MIN	12.1	12.1	12.7	12.7	10.2	11.7	12.0	9.9	11.2	9.8	12.6	11.3	5.9	13.3	11.0	13.6	9.5	6.5	11.2	11.8	10.7	9.4	7.0			
DUR	4	4	5	4	3	4	5	2	3	3	6	6	7	4	5	5	4	5	5	4	3	3	4			
TOT	(S)																									
0- 1	10.0				4.5												4.5		10.0		4.0					
1- 2							4.0				8.5				2.0				10.0		9.0		4.5		7.0 3.0	
2- 3			2.0						5.0		4.0		4.0		2.0		8.5				8.5		5.5		2.5	
3- 4					4.5				3.5		4.0										7.5		6.5		8.0 3.0	
4- 5					4.0		3.0		3.5				5.5				10.0				7.0		7.0		3.5	
5- 6	4.5								3.5		3.0		2.0								6.0		8.0		9.0 2.5	
6- 7					4.5		2.0		2.5		4.5						2.0				5.0				4.5	
7- 8			3.0				4.0		3.0		2.0				2.5						4.5				2.0	
8- 9	8.5																				3.5		2.0		6.0	
9-10					4.5				3.0		3.0		3.5				10.5				3.0		3.0			
10-11									5.0												2.0		4.0		7.0 9.5	
11-12							4.0		2.5								2.0		3.0				4.5		2.5	
12-13			4.5		4.5										3.0		10.0						5.5		8.0 9.0	
13-14									2.0		3.5						6.0						6.5		3.5	
14-15											7.0				7.5								7.0		9.0 8.5	
15-16					4.5				2.0								10.5				8.0		4.5			
16-17	5.0												3.0		5.0				3.5						8.5	
17-18									4.0		4.5						10.0								5.5	
18-19					4.5		1.5										2.5						2.0		8.0	
19-20	9.0						4.0																3.0		7.0	
20-21									4.5		2.0												4.0		2.5 7.5	
21-22					4.5						4.5												4.5		8.0	
22-23									4.5		5.0				4.0								5.5		3.5 7.0	
23-24									4.0				2.5				6.0						6.0		9.0	
24-25	3.5				4.5				4.0		3.5		2.5				3.5		2.5				7.0		4.5 7.0	
25-26									3.0		5.0		2.0				5.0						8.0			
26-27									4.0		2.5						8.0		5.0		4.0				5.5 6.5	
27-28	7.5				4.5				2.0				6.0				3.5									
28-29									3.5		3.5		2.5						5.5				2.0		7.0 6.0	
29-30															10.5		2.5				11.0		3.0		2.5	

all times in U.T.

	1010	U	U	TY	UX	AQ	AQ	BB	BB	BG	BX	DI	GP	KW	KW	Z	RT	ST	XZ	IQ	IQ	IT	KW
	OPH	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PER	PER	PER	PER	PER	PER	PER	PER
MAX	6.2	9.7	9.7	10.5	10.7	10.3	10.3	10.6	10.6	10.5	10.9	9.6	10.2	12.1	12.1	9.9	10.6	9.7	10.6	7.7	7.7	9.9	10.5
MIN	7.0	10.5	10.5	12.6	12.0	13.0	13.0	11.2	11.2	11.8	11.5	10.8	11.0	12.4	12.4	12.4	12.0	13.2	12.7	8.3	7.9	10.5	11.5
DUR	4	3	3	6	5	12	12	3	3	4	3	2	4	3	3	6	4	5	4	5	5	4	4
TOT						4	4			1						2		1					
	(S)	(S)				(2)	(3)		(S)					(S)						(S)			
0- 1	3.5		8.0					7.0			5.0	8.5	7.5						9.5				
1- 2				7.0									7.0		7.0			10.0				8.0	
2- 3	3.0								7.0		4.0			6.5									
3- 4			7.5											6.0	8.0								
4- 5	2.5				9.5			6.5						5.0								10.0	
5- 6								8.5			6.0	8.0				9.0							
6- 7	2.5		7.5						6.0							4.5				10.0			10.0
7- 8									8.5		5.5			10.0									8.0
8- 9	2.0					11.0		6.0							5.5								6.5
9-10	9.5		7.5					8.0			4.5					11.0		8.5					
10-11									5.5		7.5					6.5		9.5					
11-12	9.5								7.5														
12-13			7.5					5.5			6.5	11.0		7.5								10.5	
13-14	9.0							7.5												9.5			
14-15											5.5					8.5							
15-16	8.5		7.5						7.0	10.0		7.0				4.0			9.0				
16-17											4.5				9.5		8.0	8.5					
17-18	8.0							7.0		9.0		10.5			5.0								
18-19			7.5		7.0											10.5							
19-20	8.0								6.5	8.0						6.0	9.5				10.0		11.0
20-21		9.0							8.5			7.0								9.0			9.0
21-22	7.5		7.5		9.0			6.5		7.0	6.0				7.0			10.5					7.5
22-23								8.5				10.0				11.0							
23-24	7.0	9.0							6.0		5.0					8.0			10.5				
24-25			7.5						8.0														8.5
25-26	6.5						6.5	5.5			4.0				9.0								
26-27		9.0		8.0				7.5							4.5						9.0		
27-28	6.0		7.5						5.5			9.5				10.0		9.5				10.0	
28-29									7.5		6.0					5.5							
29-30	6.0	9.0		10.5												11.0							

all times in U.T.

	V432	Y	RV	U	V505	1968	RS	AO	CC	CC	Y	V	X	RS	RV	W	W	TX	TY	TY	UX	UX	VV
	PER	PSC	PSC	SGE	SGR	SGR	SER	SER	SER	SER	SEX	TRI	TRI	TRI	TRI	UMA	UMA	UMA	UMA	UMA	UMA	UMA	UMA
MAX	11.0	9.0	11.3	6.4	6.4	12.3	10.8	10.6	11.1	11.1	9.8	10.9	8.9	10.3	11.4	9.1	9.1	6.8	11.7	11.7	12.7	12.7	10.1
MIN	11.7	12.0	12.0	9.1	7.6	13.3	11.5	12.1	11.7	11.7	10.2	11.9	12.0	11.0	12.5	9.9	9.9	8.9	12.4	12.4	13.8	13.8	11.0
DUR	3	7	3	6	5	4	4	4	4	4	3	4	4	4	4	3	3	6	3	3	1	1	3
TOT				2																			
										(S)							(S)		(S)				
0- 1			9.0			5.5		9.0	3.5	9.5	3.5				11.0	3.5	7.5		8.5	4.0	8.0	3.0	3.0
1- 2						8.5	3.5	6.5	4.5			8.5				4.0	8.0			5.5	3.0	7.5	
2- 3		7.0					8.5	3.5	5.0							4.0	8.0	6.0	3.0	7.0	7.0	2.5	4.5
3- 4					4.5				6.0		2.0					4.0	8.0		4.5		2.0	6.5	
4- 5				2.5	9.0	4.0	3.5		6.5							4.0	8.0		6.0	2.0	6.5		6.0
5- 6	9.0		8.5			7.0	8.0		7.5							4.0	8.0	7.5	7.5	3.5		6.0	
6- 7						10.5			8.0	2.0						4.0				5.0	5.5		7.5
7- 8							3.0	10.0	9.0	2.5						4.0			2.0	6.5		5.0	
8- 9							8.0	7.0	9.5	3.5	3.0	9.5				4.0			3.5	8.0	4.5		
9-10						6.0		4.0		4.5						4.0			5.0		9.0	4.5	
10-11	8.5		8.0		7.0	9.0	3.0			5.0						4.0			6.5	2.5	4.0	8.5	
11-12			11.0				7.5			6.0						4.0			8.0	4.0	8.0	3.5	3.0
12-13										6.5						4.0				5.5	3.0	8.0	
13-14						4.5	3.0			7.5	4.0					4.0			3.0	7.0	7.5	2.5	4.5
14-15				6.0		7.5	7.5		2.0	8.0						4.0			4.5		2.5	7.0	
15-16			8.0			10.5		8.0	2.5	9.0		10.0	10.5			4.0			6.0		6.5	2.0	6.0
16-17			10.5		5.0			5.0	3.5	9.5	2.5		10.0			4.0			7.5	3.0		6.0	
17-18		8.5			9.5		7.5	2.0	4.0				9.5			4.0				4.5	6.0		7.5
18-19						6.0			5.0			8.0	8.5			4.0			2.0	6.0		5.5	
19-20						9.0			6.0							4.0			3.5	7.5	5.0		
20-21			7.5				7.0		6.5					9.5		4.0			5.0		9.5	4.5	
21-22			10.0						7.5		3.5					4.0			6.5	2.0	4.0	9.0	
22-23						5.0		9.0	8.0	2.0		10.5				4.0			8.0	4.0	8.5	4.0	3.0
23-24					7.0	8.0	7.0	6.0	9.0	2.5						4.0				5.5	3.5	8.0	
24-25				9.5		11.0		3.0	9.5	3.5	2.0					4.0			2.5	7.0	8.0	3.0	4.5
25-26										4.0		8.5				4.5			4.0	8.5	2.5	7.5	
26-27			10.0			3.5	6.5			5.0						4.5			5.5		7.0	2.5	5.5
27-28						6.5				5.5						4.5			7.0	3.0	2.0	6.5	
28-29	9.0					9.5				6.5					8.0	4.5				4.5	6.0		7.0
29-30					5.0		6.5	9.5		7.5	2.5	11.0				4.5				6.0		6.0	

all times in U.T.

	XZ	ZZ	AF	W	RU	VV	AG	AH	AH	AK	AW	AW	AX	AZ	AZ	BH	MS	MS	NY	Z	AW	AX	AY
	UMA	UMA	UMA	UMI	UMI	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VUL	VUL	VUL	VUL
MAX	10.1	9.8	10.8	8.6	10.7	11.7	8.8	9.7	9.7	10.0	10.8	10.8	10.0	11.0	11.0	9.9	9.4	9.4	13.3	7.4	10.8	11.0	11.0
MIN	11.7	11.2	11.6	9.7	11.4	13.5	9.4	10.2	10.2	11.5	11.9	11.9	10.8	11.8	11.8	11.3	9.7	9.7	14.2	9.2	11.9	12.5	12.9
DUR	3	4	8	7	4	4	4	4	4	4	3	3	4	3	3	4	3	3	1	6	5	5	4
TOT																							
									(S)			(S)			(S)			(S)					
0- 1				4.5	4.5	5.0	3.5				2.5	7.0	6.0		5.0			4.0			8.0	7.5	
1- 2		9.5		6.0				3.5	3.0	4.0				2.0	6.0		6.0	2.5			3.5		
2- 3				7.0		3.0	4.0			5.5				3.0	7.5		4.5					8.5	9.0
3- 4	5.5			8.0	7.0			4.5		7.0	3.0			4.5		6.5	3.0	6.5	2.0	9.0			
4- 5				7.5	9.5	4.5		5.0			4.5			5.5		2.0		5.0	2.0		9.0	9.0	
5- 6				10.5	2.0			5.5			6.0	4.0	6.5	2.5				3.5	2.5		4.0		
6- 7								6.0			3.0	7.5	8.0	3.5		6.0	2.0					9.5	
7- 8						6.5		6.5	2.0	4.5		7.0		5.0		4.5							5.0
8- 9	3.0	7.0			5.0			2.0	7.0	6.0	2.0		2.0	6.0	4.0	3.0	6.5		6.5	9.5	10.0		
9-10			5.5	10.0	3.0	2.5	5.0	2.5		7.5	3.5		3.0	7.0				5.0			5.0		
10-11				4.0				3.0			5.0	2.0	4.0					3.5				10.5	
11-12				2.5	5.0		3.0	3.5		2.0	6.5		5.5			6.0	2.0						
12-13				6.5	5.5			4.0		3.5		5.0	6.5	2.5	6.0	4.5					10.5		
13-14				7.5	3.0			4.5		5.0			7.5	3.5		3.0	6.5	2.0	4.5	5.5			
14-15	5.5			9.0				4.5	6.0	6.5	2.5	7.5		4.5			5.0	2.0					10.5
15-16		4.5		10.0				5.0			3.5			6.0			3.5	2.5					
16-17				5.0		5.5	6.5	5.5			5.0		3.0	7.0			6.0	2.0					
17-18					3.0			6.0			2.5	6.5	3.0	4.0		3.5	4.5				6.5		
18-19						4.5		6.5		4.0			5.0			3.0	6.5		2.5				
19-20	3.0			2.0				2.0		5.5		5.5	6.5	2.0			5.0						6.5
20-21				3.5	6.0	3.0	2.5		5.5	7.0	2.5		7.5	3.5			3.5						
21-22				7.5	4.5	3.5		3.0		4.0			4.5	5.5	6.0	2.0					7.0		
22-23		2.0		6.0				3.5			5.5		5.5			4.5							
23-24				7.0				4.0		3.0	7.0		2.5	7.0		3.0	6.5	2.0					
24-25		9.5		8.0	6.5			4.5		4.5		3.5	4.0				5.0	2.0					
25-26	5.5			9.5	4.0	6.5		5.0		6.0			5.0		7.5		3.5	2.5			8.0		
26-27				10.0	10.5			5.0		4.5	7.5	3.0	6.0	6.0	2.0	3.5	6.0	2.0			3.5		
27-28							4.5	5.5			4.5		7.5	3.0		4.5							
28-29				3.0		7.0		6.0		2.0	6.0			4.5		3.0	6.5						
29-30						4.0	3.0		6.5		3.5			5.5			5.0				8.5		

all times in U.T.

	BE	BO	BS	BT	BU	CD	V495	V495
	VUL	VUL	VUL	VUL	VUL	VUL	VUL	VUL
MAX	9.9	10.4	11.0	11.8	10.6	11.5	9.6	9.6
MIN	11.4	13.3	11.5	12.5	11.4	12.6	10.0	10.0
DUR	5	4	3	3	3	4	4	4
TOT								
								(S)
0- 1		3.5	4.0	10.5			5.5	
1- 2			3.0			3.5		2.5
2- 3					5.0			
3- 4					8.0	4.5		
4- 5								9.0
5- 6			10.0			6.0	3.0	
6- 7			8.5	3.5	4.5			
7- 8	3.5		7.5	7.0	7.5	7.0		
8- 9			6.5	10.5			9.5	
9-10			5.0			8.5		7.0
10-11	6.0		4.0		4.0			
11-12			3.0		7.5	9.5		
12-13					10.5			
13-14	8.5					11.0	7.5	
14-15			11.0	3.0	3.5	3.5		4.5
15-16			9.5	6.5	7.0			
16-17			8.5	10.0	10.0	4.5		
17-18			7.5					
18-19			6.0		3.0	5.5	5.0	
19-20			5.0		6.5			
20-21			4.0		10.0	7.0		
21-22	2.5		3.0					
22-23				3.0		8.0		9.0
23-24				6.5	6.0		3.0	
24-25	5.0		10.5	9.5	9.5	9.5		
25-26		10.5	9.5					
26-27			8.5			10.5	9.0	
27-28	7.5	9.0	7.5		5.5	3.0		6.5
28-29			6.0		9.0			
29-30		8.0	5.0			4.5		