

MAS Eclipsing Binary Ephemeris for June 2016

all times in U.T.

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	RT	TW	UU	WZ	XZ	AB	AB	AD	BD	BX	DS	QX	QX	RY	CX	CZ	XZ	KO	KP	OO	OO	V342	V343
	AND	AND	AND	AND	AND	AND	AND	AND	AND	AND	AND	AND	AND	AQR	AQR	AQR	AQL	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	8.8	10.7	10.3	9.3	8.3	9.7	9.2	9.2	9.0	10.6
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	10.1	12.0	11.2	11.2	9.3	10.5	10.1	10.1	12.5	12.3
DUR	3	11	8	4	3	3	3	4	3	4	4	3	3	5	3	3	7	5	4	3	3	7	4
TOT		2																					3

						(S)				(S)		(S)										(S)		
0- 1	2.0					7.5	10.0	10.5				9.5								8.0				
1- 2	8.0		9.5			7.5	9.5	8.5				10.0								8.0				
2- 3					8.5	7.0	9.5	7.0	9.5		11.0									8.5	2.5			
3- 4	5.5			7.0		7.0	9.0	5.0				6.5		7.0	9.0					8.5	2.5		8.0	
4- 5			9.0			7.0	8.5	3.5				7.5		9.5						9.0	3.0			
5- 6	3.0			9.5		11.0	7.0	8.5	11.0			8.0								9.5	3.5		4.5	
6- 7	9.0				10.5	11.0	7.0	8.0	11.0			8.5								9.5	3.5			
7- 8			8.0			10.5	6.5	7.5	9.0	7.0		9.5								10.0	4.0	7.0		
8- 9	6.0					10.5	6.5	7.5	7.5			10.0		7.0				5.5		10.5	4.5			
9-10						10.5	6.5	7.0	5.5			11.0		10.0	9.5					10.5	4.5			
10-11	3.5		7.5	6.0		10.5	6.5	6.5	4.0	8.0		6.5											5.0	
11-12	9.5					10.5	6.5	6.5	2.0		6.5		7.5				6.0						5.5	
12-13				8.0		10.0	6.0	6.0			6.5	8.0											5.5	
13-14	7.0		7.0			10.0	6.0	5.5	9.5	9.0	7.0		9.0		7.0		9.5	11.0					6.0	
14-15				10.5		10.0	6.0	5.5	8.0		7.0	9.5		10.0									6.5	9.5
15-16	4.5					10.0	6.0	5.0	6.0		7.5		10.5			10.5							6.5	
16-17	10.5		6.5			9.5	5.5	4.5	4.0	10.5	7.5					7.5		7.5					7.0	6.0
17-18					7.0	9.5	5.5	4.5	2.5		8.0	7.0											7.0	
18-19	8.0					9.5	5.5	4.0		6.5	8.0		7.5		7.5			8.0					7.5	2.0
19-20				7.0		9.5	5.5	3.5	10.0		8.5	8.5		10.0				4.5					8.0	
20-21	5.0					9.5	5.5	3.5	8.0		8.5		9.0										8.0	
21-22				9.5	8.5	9.0	5.0	3.0	6.5	7.5	9.0	10.0										2.5	8.5	
22-23	2.5					9.0	5.0	2.5	4.5		9.0		10.5			8.5						3.0	9.0	
23-24	8.5					9.0	5.0	2.5	3.0		9.5		6.5	10.5	7.5							3.0	9.0	
24-25						9.0	5.0			9.0	9.5	7.0			10.0							3.5	9.5	5.5
25-26	6.0				10.5	9.0	5.0		10.5		10.0		8.0	9.5								4.0	10.0	
26-27				6.0		8.5	4.5		8.5		10.0	8.5					5.5					4.0	10.0	
27-28	3.0					8.5	4.5		7.0	10.0	10.5		9.0	8.5								4.5	10.5	7.5
28-29	9.5	5.0		8.0		8.5	4.5		5.0		10.5	10.0			7.5	9.5	8.5		10.5		4.5	11.0		
29-30						8.5	4.5		3.5		11.0		10.5	8.0	10.0							5.0		4.0

	V346	RX	SS	SS	RY	SX	TT	WW	AP	AP	AR	CL	EP	HP	HP	SS	SS	SS	TU	TU	TY	TY	TZ		
	AQL	ARI	ARI	ARI	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO		
MAX	9.0	9.4	10.1	10.1	11.7	8.2	8.7	5.7	10.9	10.9	6.0	11.7	10.8	10.8	10.8	10.3	10.3	10.3	11.7	11.7	11.8	11.8	10.6		
MIN	10.4	9.9	11.1	11.1	14.0	9.0	9.7	6.4	11.4	11.4	6.7	13.2	11.3	11.5	11.5	11.0	11.0	11.0	12.7	12.7	12.3	12.3	11.1		
DUR	4	4	3	3	6	4	5	5	4	4	5	4	3	3	3	18	18	18	3	3	3	3	3		
TOT																6	6	6							
				(S)				(S)		(S)					(S)	(2)		(3)		(S)		(S)			
0- 1			10.5																8.0	4.0	3.0	7.0	6.5		
1- 2				11.0					4.0						2.0				7.0	3.5	2.0	5.5	4.0		
2- 3																			6.5	2.5	8.5	4.5	8.5		
3- 4						10.5				3.5			2.0			7.0	10.0		6.0	2.0	7.0	3.5	6.0		
4- 5	3.5																		5.0	9.0	6.0	2.0	3.5		
5- 6	6.0								3.5										4.5	8.5	5.0	8.5	8.0		
6- 7	8.5			8.0															4.0	8.0	3.5	7.5	5.5		
7- 8			8.0			2.0				3.5									3.5	7.0	2.5	6.5	2.5		
8- 9				8.5															2.5	6.5	9.0	5.0	7.0		
9-10			9.0		10.0					3.0									2.0	6.0	8.0	4.0	4.5		
10-11				9.5				2.0											9.0	5.0	6.5	3.0	2.0		
11-12			9.5							3.0										3.5	8.5	4.5	5.5	9.0	6.5
12-13				10.0															8.0	4.0	4.5	8.0	4.0		
13-14			10.5						2.5		11.0								7.0	3.5	3.0	7.0	8.5		
14-15		8.0		10.5															6.5	2.5	2.0	6.0	6.0		
15-16	5.0	8.5								2.5									6.0	2.0	8.5	4.5	3.5		
16-17	7.5	9.5											2.0						5.0	9.0	7.0	3.5	8.0		
17-18	10.0	10.0					11.0		2.5					10.5					4.5	8.5	6.0	2.5	5.0		
18-19		10.5										2.0							4.0	8.0	5.0	8.5	2.5		
19-20				7.5						2.0									3.5	7.0	3.5	7.5	7.0		
20-21			8.0			9.5													2.5	6.5	2.5	6.5	4.5		
21-22				8.5			11.0		2.0										2.0	6.0	9.0	5.0	2.0		
22-23			8.5											10.0					9.0	5.0	8.0	4.0	6.5		
23-24				9.0						2.0									8.5	4.5	6.5	3.0	4.0		
24-25			9.5																8.0	4.0	5.5	9.5	8.5		
25-26	4.0			10.0			11.0												7.0	3.0	4.5	8.0	5.5		
26-27	6.5		10.0			10.5										2.5	5.5	8.5	6.5	2.5	3.0	7.0	3.0		
27-28	9.0			10.5									9.5						6.0	2.0	2.0	6.0	7.5		
28-29			11.0																5.0	9.0	8.5	4.5	5.0		
29-30							11.0						2.0						4.5	8.5	7.5	3.5	2.5		

	TZ	UW	VW	VW	ZZ	AD	AD	BW	BW	Y	SV	AL	CD	CD	XZ	YY	AK	AM	RW	TY	RZ	TV	TW
	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	CAM	CAM	CAM	CAM	CAM	CMI	CMI	CMI	CMI	CAP	CAP	CAS	CAS	CAS
MAX	10.6	10.4	10.5	10.5	6.8	9.8	9.8	7.1	7.1	10.6	8.6	10.5	11.6	11.6	9.7	8.5	10.1	10.0	9.8	10.5	6.4	7.3	8.3
MIN	11.1	11.4	11.0	11.0	7.6	10.4	10.2	7.5	7.5	12.4	9.4	11.3	11.8	11.8	10.2	9.1	11.5	10.4	10.8	11.6	7.8	8.4	8.9
DUR	3	3	3	3	5	4	4	5	5	6	3	5	5	5	3	4	4	6	5	4	4	4	5
TOT	(S)			(S)			(S)		(S)					(S)			(S)						
0- 1	3.0	4.5	6.0	2.0							3.0			6.0							11.0	5.5	
1- 2	7.5	4.5	7.0	2.5					3.0		7.5		10.0						11.0				
2- 3	5.0	4.5	7.5	3.5									4.0										8.5
3- 4	2.5	4.5	8.0	4.0				2.5			2.5	3.5		7.5									
4- 5	7.0	5.0	9.0	4.5	2.5						6.5			2.0					7.0				
5- 6	4.5	5.0	9.5	5.5									5.5								5.5		5.0
6- 7	1.5	5.0	2.0	6.0				10.5		7.5				9.0							10.5		
7- 8	6.5	5.0	2.5	6.5							6.0	3.0		3.5									
8- 9	3.5	5.5	3.0	7.0							10.5	11.0	7.0										
9-10	8.0	5.5	4.0	8.0	2.0									10.5	2.0	2.0		8.5				7.0	
10-11	5.5	5.5	4.5	8.5							5.0			4.5									
11-12	3.0	5.5	5.0	9.0					3.0		9.5	2.5	8.0						10.0	5.0	2.5		
12-13	7.5	6.0	5.5									10.5	2.5								9.5		8.5
13-14	5.0	6.0	6.5	2.5				2.0			4.0			6.0			2.0						
14-15	2.5	6.0	7.0	3.0	2.0		2.0				8.5		9.5				2.5		6.5				
15-16	7.0	6.0	7.5	3.5		3.0						2.0	4.0										5.0
16-17	4.0	6.0	8.5	4.0			4.0	10.0		5.5	3.5	10.0		7.5									
17-18	9.0	6.5	9.0	5.0		4.5					8.0		11.0	1.5							4.5		
18-19	6.0	6.5	9.5	5.5			5.5						5.5								9.0	8.5	
19-20	3.5	6.5	2.0	6.0	2.0	6.5					2.5	2.0		9.0									
20-21	8.0	6.5	2.5	7.0			7.0				7.0	9.5		3.0	2.0	2.5						4.0	
21-22	5.5	7.0	3.5	7.5		8.0		3.0					6.5							9.0			
22-23	3.0	7.0	4.0	8.0			9.0				1.5			10.0		2.0							8.0
23-24	7.5	7.0	4.5	8.5		9.5	2.0				6.0			4.5							4.0		
24-25	5.0	7.0	5.5	9.5		10.5		11.0			10.5	9.5	8.0							5.5	8.5		
25-26	2.0	7.0	6.0	2.0									2.5										5.0
26-27	6.5	7.5	6.5	2.5				10.0		3.5	5.5			6.0				7.5					
27-28	4.0	7.5	7.0	3.0							10.0			9.5								10.0	
28-29	8.5	7.5	8.0	3.5								9.0	3.5										
29-30	6.0	7.5	8.5	4.5						10.5	4.5			7.0							3.5	5.5	

	ZZ	AB	CW	CW	DZ	GT	IR	IS	IT	IV	MM	OR	OX	OX	PV	V364	V364	V375	V380	SU	WW	WZ	WZ	
	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CEP	CEP	CEP	CEP	
MAX	10.7	10.2	11.8	11.8	11.6	11.9	10.8	11.6	11.0	11.2	11.3	11.4	10.1	10.1	10.0	11.2	11.2	10.1	10.4	8.8	11.1	11.7	11.7	
MIN	11.1	12.2	12.5	12.5	12.3	12.8	12.1	12.6	11.8	12.5	11.9	12.4	10.9	10.9	10.6	11.7	11.7	10.9	11.1	9.8	11.9	11.3	11.1	
DUR	4	4	3	3	4	5	4	5	5	5	5	4	5	5	3	4	4	5	5	4	4	3	3	
TOT																								
				(S)									(S)			(S)							(S)	
0- 1	7.0		8.5	4.5			3.0	6.0		7.5		5.5											6.0	
1- 2			7.5	3.5		3.5				7.5							7.0	8.0		9.5			2.0	7.0
2- 3			6.5	2.5	8.5		4.0	2.0		7.5									5.0	7.0			8.0	3.0
3- 4		7.5	5.5	9.0	3.0					7.5				6.0						4.5	4.5	4.5	9.5	
4- 5			4.5	8.0		3.5	5.0			7.5	2.5				6.5		9.0	6.5		2.5			10.5	5.5
5- 6	6.5		3.5	7.0						7.5	6.0	5.0				3.5							6.5	
6- 7			2.0	6.0	6.5		6.0			7.5	10.0	11.0											2.5	7.5
7- 8		10.0	9.0	5.0		3.0				7.5									5.5				8.5	3.5
8- 9			8.0	4.0			7.0			7.5				5.5		5.5							4.5	9.5
9-10			7.0	3.0	10.0					7.5													10.5	5.5
10-11	6.0	3.5	5.5	2.0	5.0	3.0	8.0		8.5	7.5		4.5							4.0	8.5	9.5		6.5	
11-12			4.5	8.5				7.0		7.5		10.5			6.5	7.5				7.5			2.5	7.5
12-13			3.5	7.5			9.0			7.5	5.0									5.0	9.5	8.5	3.5	
13-14			2.5	6.5	8.0	2.5		3.5		7.0	8.5			5.0					3.0	2.5			4.5	9.5
14-15		6.0	9.0	5.5	3.0		10.0		6.5	7.0			10.5			9.5			10.0				11.0	6.0
15-16	5.0		8.0	4.5			2.5			7.0		4.0					4.5						7.0	2.0
16-17			7.0	3.5		2.5				7.0		10.0											3.0	8.0
17-18			6.0	2.0	6.5		3.5			7.0									3.5				9.0	4.0
18-19		8.5	5.0	9.0					4.0	7.0				4.5	6.5		6.5						5.0	10.0
19-20			4.0	8.0		2.0	4.5			7.0	3.5		10.0							10.0				6.0
20-21	4.5		3.0	7.0	9.5					7.0	7.5	3.5								7.5			7.0	2.0
21-22	10.5	2.0	2.0	5.5	4.5		5.5			7.0		9.5					8.5		5.0	5.5			3.0	8.0
22-23		10.5	8.5	4.5		2.0		8.5		7.0										3.0			9.0	4.0
23-24			7.5	3.5			6.5			7.0				4.0				10.5					5.0	10.0
24-25			6.5	2.5	8.0			4.5		7.0			9.5			10.5								6.0
25-26	4.0	4.5	5.5	9.0	2.5		7.5			7.0		3.0		6.5	5.0				6.5				7.5	2.5
26-27	10.0		4.5	8.0						7.0	2.5	9.0							9.0		4.5		3.5	8.5
27-28			3.5	7.0			8.5			6.5	6.5												9.5	4.5
28-29			2.5	6.0	6.0					6.5	10.0			3.5		7.0				10.5			5.5	10.5
29-30		6.5	9.0	5.0			9.5			6.5			9.0					8.0	8.5	8.0				6.5

	XX	ZZ	DK	DL	DV	EG	EK	GK	TT	TW	TW	TX	RW	RW	RZ	RZ	SS	SS	CC	CC	U	RW	TW	
	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CET	CET	CET	CET	COM	COM	COM	COM	COM	COM	COM	COM	COM	CRB	CRB	CRB
MAX	8.5	9.3	12.2	12.4	11.6	9.6	8.2	6.9	10.8	10.4	10.4	10.9	11.0	11.0	10.0	10.0	10.9	10.9	11.0	11.0	7.6	10.1	10.5	
MIN	9.6	10.0	14.2	13.2	12.4	10.6	9.5	7.4	11.3	11.2	11.2	11.5	11.6	11.6	10.7	10.7	11.5	11.5	11.9	11.9	8.8	10.6	11.3	
DUR	4	5	4	5	4	3	6	4	3	3	3	4	3	3	3	3	4	4	2	2	5	4	4	
TOT												1												
										(S)			(S)		(S)		(S)		(S)					
0- 1	8.0				4.0			2.5	10.5			9.0	4.5	7.5	5.5			4.5	4.5	7.0			9.0	
1- 2					8.0		9.5		9.5				3.5	6.0	6.0	2.0	5.5		7.0	4.0				
2- 3						3.0				11.0			2.0	5.0	6.0	2.0		6.0	4.0	6.5	6.5	5.5	3.5	
3- 4						5.0							6.5	3.5	6.5	2.5	7.0	2.0	6.5	4.0			7.5	
4- 5			3.0			7.5							5.5	2.5	7.0	3.0	2.5	7.5	3.5	6.5		10.0		
5- 6						9.5							4.0	7.0	7.5	3.5	8.5	3.5	6.0	3.5		3.5	2.0	
6- 7										10.0			3.0	6.0	7.5	3.5	4.0		3.5	6.0			6.5	
7- 8	8.5			9.0	3.5								7.5	4.5	8.0	4.0		5.0	6.0	3.0		7.5	10.5	
8- 9					7.0	3.0							6.0	3.5	8.5	4.5	5.5		3.0	5.5				
9-10						5.0				10.0			5.0	2.0		5.0		6.5	5.5	3.0	4.0		5.0	
10-11						7.0	6.0	9.5					4.0	6.5		5.0	7.0	2.5	2.5	5.5		5.5	9.5	
11-12		4.0				9.5		8.0					2.5	5.5		5.5	3.0	8.0	5.0	2.5				
12-13				6.5				6.5			10.5		7.0	4.0	2.0	6.0		4.0	2.5	5.0		9.5	3.5	
13-14		7.5						5.0					6.0	3.0	2.0	6.5	4.5		5.0	2.0		3.0	8.0	
14-15	9.0				2.5	2.5		3.5				11.0	4.5	1.5	2.5	6.5		5.5	2.0	4.5				
15-16		11.0			6.5	5.0		2.0		10.5			3.5	6.0	3.0	7.0	6.0		4.5	2.0		7.5	2.5	
16-17					10.5	7.0							2.0	5.0	3.5	7.5	2.0	7.0	7.0	4.5	2.0		6.5	
17-18				4.0		9.0			10.5			10.0	6.5	4.0	3.5	8.0	7.5	2.5	4.0	7.0			11.0	
18-19								10.0		11.0			5.5	2.5	4.0	8.0	3.5	8.5	6.5	4.0		5.0		
19-20			11.0				2.5		9.0				4.0	7.0	4.5	8.5		4.0	4.0	6.5			5.5	
20-21			10.5	10.5		2.5					9.0		3.0	6.0	5.0		5.0		6.5	3.5		9.5	9.5	
21-22	9.0		10.0		2.0	4.5							2.0	4.5	5.0			6.0	3.5	6.0		3.0		
22-23			10.0		6.0	6.5				10.0			6.5	3.5	5.5		6.5		6.0	3.5			4.0	
23-24			9.5		9.5	9.0							5.0	2.0	6.0	2.0	2.5	7.5	3.0	6.0		7.0	8.0	
24-25			9.0					10.5					4.0	6.5	6.5	2.5	8.0	3.0	5.5	3.0				
25-26			9.0	7.5				9.0			10.0		2.5	5.5	6.5	2.5	4.0		3.0	5.5			2.5	
26-27		4.0	8.5			2.0		7.5					7.0	4.5	7.0	3.0		4.5	5.5	2.5	10.5	5.0	7.0	
27-28			8.0			4.5		6.0					6.0	3.0	7.5	3.5	5.5		2.5	5.0				
28-29	9.5	7.5	8.0			6.5		4.5		10.5			4.5	2.0	8.0	3.5		6.0	5.0	2.5		9.0		
29-30			7.5		5.0	8.5		3.0					3.5	6.5	8.0	4.0	7.0	2.0	2.0	5.0		2.5	5.5	

	W	W	RV	RV	V	SW	WW	ZZ	AE	BR	CG	DK	KR	KV	V346	V387	V388	V401	V456	V466	V466	V477	V548
	CRV	CRV	CRV	CRV	CRT	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG
MAX	10.6	10.6	9.0	9.0	9.5	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	8.9
MIN	11.2	11.2	10.0	10.0	10.2	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	9.7
DUR	4	4	4	4	4	5	5	4	4	4	3	4	4	5	5	3	3	4	3	4	4	4	5
TOT						2																	
		(S)		(S)																	(S)		
0- 1	3.5			3.5		8.0				9.5	8.0	9.0	5.0			4.5				8.5		8.5	
1- 2		2.5		4.0				7.5				8.0											
2- 3	2.0										5.5	6.5			4.0	2.5		5.0			10.5		4.0
3- 4	6.0							4.5				5.0				9.0	9.5	9.0		3.5		2.5	
4- 5		5.0		4.0				11.0		9.5	3.0	3.5	10.5				6.0		11.0				
5- 6	4.5							2.0			9.5		7.0			7.5	2.5	3.0	8.0		5.5	11.0	
6- 7		3.5						8.0					3.0					7.0	5.5				
7- 8	3.0			3.5	4.0						7.0	10.5				5.5			3.0	7.5			
8- 9		2.5				5.5		5.5		9.5		9.0		10.5									
9-10		6.0									4.0	8.0					3.5	9.5	5.0		9.5		9.0
10-11	5.5			3.5		7.0	2.5				10.5	6.5	8.5		9.5	10.5	6.0	9.0		2.5	3.5		
11-12		5.0						9.0				5.0	5.0	6.5			3.0						4.5
12-13	4.0				2.0					9.5	8.0	3.5					8.5		3.0		4.5		
13-14		3.5		3.0				6.0	11.0			2.0			3.5			7.0	8.5				
14-15	2.5				4.5				10.0		5.5			2.5			6.5		11.0	6.0	6.5		
15-16		2.0						3.5	9.5			10.5	10.5				10.0		3.5				
16-17		6.0		3.0				9.5	8.5	9.5	3.0	9.5	6.5			4.5	6.5	4.5			8.5		
17-18	5.0		6.0			9.0			8.0		9.0	8.0	3.0				3.0	8.5				4.5	
18-19		4.5						7.0	7.0			6.5					3.0			10.5			10.0
19-20	3.5			2.5	2.5				6.5		6.5	5.0				9.5		2.5			3.5		
20-21		3.0	6.0			6.0	4.0	5.5	9.0			3.5						6.5					5.0
21-22	2.5				5.0		10.0	5.0			4.0	2.0	8.5		9.0	7.5	10.5	10.5	9.0	5.5			
22-23	6.0			2.5					4.0		10.5		4.5				7.0		6.5				
23-24		5.5	5.5					7.5	3.5			10.5				5.5	3.5	4.5	4.0		7.5		
24-25	5.0								2.5	9.0	7.5	9.5			3.0			8.5				5.5	
25-26		4.0		2.0				5.0				8.0					4.0			9.5			
26-27	3.5		5.5		3.0			11.0			5.0	6.5	10.0			10.5		2.5			2.5		
27-28		2.5							2.0			5.0	6.5			2.0	10.5	6.5					10.5
28-29	2.0			2.0				8.0		9.0	2.5	3.5	2.5	7.5		8.5	7.0	10.5		4.5			
29-30	6.0		5.0								9.0	2.5						4.0	9.5				6.0

	V704	1034	W	TT	TY	YY	FZ	Z	RZ	TW	UZ	UZ	AI	BH	S	SX	AL	RX	SZ	TT	TU	UX	CC	
	CYG	CYG	DEL	DEL	DEL	DEL	DEL	DRA	DRA	DRA	DRA	DRA	DRA	DRA	EQU	GEM	GEM	HER	HER	HER	HER	HER	HER	
MAX	13.8	9.6	9.4	10.6	9.6	11.0	10.2	10.8	10.0	7.8	9.9	9.9	7.2	8.0	8.0	10.8	9.3	7.1	10.2	9.7	10.6	8.9	9.5	
MIN	14.6	10.6	12.7	12.5	10.8	12.0	11.3	13.6	10.9	9.5	10.7	10.7	8.2	8.6	10.0	11.7	10.0	7.7	12.0	10.4	13.4	9.8	12.8	
DUR	4	4	7	5	4	4	3	4	3	5	5	5	4	5	5	5	4	5	4	4	5	5	4	
TOT			2							1											1			
											(S)													
0- 1	8.5	4.0		7.0			6.5		5.0		9.0		6.5			2.5		4.0	3.0	7.5				
1- 2		3.0							7.5	6.5				2.5										
2- 3		2.5				9.5			10.0														6.0	
3- 4	5.0	2.0		4.0	4.0	4.5	10.0	6.5							8.0			11.0	11.0					
4- 5	8.0				8.5		4.5			2.0									6.5			4.0		
5- 6									4.0			6.5						5.5	2.0					
6- 7						9.0			6.5				6.5											
7- 8	4.5					4.0	8.0	8.5	9.0											10.5	2.5	6.0		
8- 9	8.0													9.0					8.5	8.0				
9-10			8.0																4.0	6.0	9.0		4.5	
10-11					7.5	8.0			3.0		4.0			5.0	5.0					4.0		8.5		
11-12	4.5					3.0	6.0	10.0	5.5											2.0				
12-13	8.0								8.0									8.5	11.0					
13-14									10.5		10.0								6.5			11.0		
14-15			3.5			7.0	9.0	3.0										3.0	2.0				9.5	
15-16	4.5						4.0		2.0	7.5														
16-17	8.0				6.5				4.5												4.5		3.0	
17-18									7.0										8.5					
18-19						6.5	7.0	5.0	9.5	3.0		7.5	6.0						4.0	9.0	10.5	2.5		
19-20	4.5												11.0	7.0						7.0				
20-21	7.5			9.5																5.0				
21-22						10.5	10.0		3.5					2.5				6.0	10.5	2.5		4.5	8.0	
22-23					5.5	5.5	5.0	6.5	6.0										6.5					
23-24	4.0			6.5	10.0				8.5		5.0								2.0					
24-25	7.5								11.0													7.0		
25-26	11.0					9.5	8.0						10.5								6.0			
26-27				3.0		4.5		8.5	2.5										8.5					
27-28	4.0								5.0						9.0	2.0			4.0			9.5		
28-29	7.5				4.5				7.5		2.5			9.0					8.5	10.0			6.5	
29-30	11.0				9.0	9.0	6.0		10.0	8.5										7.5				

	CT	DI	DI	HS	HS	LT	V728	WY	WY	AV	DF	DF	DI	DK	SW	SW	VX	AW	CM	CO	CO	DG	GX
	HER	HER	HER	HER	HER	HER	HER	HYA	HYA	HYA	HYA	HYA	HYA	HYA	LAC	LAC	LAC	LAC	LAC	LAC	LAC	LAC	LAC
MAX	9.9	8.4	8.4	8.5	8.5	10.7	10.9	10.3	10.3	10.2	11.0	11.0	11.0	10.5	9.2	9.2	10.9	10.6	8.5	10.5	10.5	10.8	10.1
MIN	11.2	9.1	9.1	9.0	9.0	11.1	11.5	11.1	11.1	10.6	11.5	11.5	12.0	11.0	10.0	10.0	12.3	11.3	9.5	11.0	11.0	12.0	10.4
DUR	4	6	6	4	4	4	3	3	3	4	4	4	4	4	3	3	4	5	4	5	5	4	6
TOT			(S)		(S)				(S)			(S)				(S)					(S)		
0- 1							4.5								10.0	6.0		7.0		7.5		11.0	
1- 2		3.5			9.5		3.5								9.0	5.0		10.5					
2- 3	7.0			4.5			2.0							2.0	8.0	4.0			5.5				
3- 4									2.0					3.0	7.0	3.5				9.5			
4- 5	1.5						10.5								6.5	10.0					3.5		
5- 6							9.0				4.0	3.0			5.5	9.0		10.5					
6- 7					7.5		7.5				3.5				4.5	8.5							
7- 8				2.5			6.5				3.5				3.5	7.5		4.0			5.5		
8- 9						2.0	5.0		2.5	2.0					10.5	6.5		7.0					
9-10	10.5		6.5			4.0	3.5								9.5	5.5	4.5	10.5				6.5	
10-11				9.0		6.0	2.0			3.5					8.5	4.5	6.5		6.0		7.5		
11-12	5.0				5.5	8.0									7.5	4.0	8.0			2.5			
12-13						10.0	10.5			4.5					6.5	10.5	10.0						
13-14							9.5		2.5				3.0		6.0	9.5					9.5		
14-15							8.0							2.0	5.0	8.5				4.5			
15-16			7.0				6.5							3.0	4.0	8.0		4.0	2.0				
16-17					3.5		5.0								11.0	7.0		7.0				6.5	
17-18							4.0								10.0	6.0		10.5		6.5			
18-19	8.5						2.5		3.0						9.0	5.0			7.0			2.5	
19-20					10.0										8.0	4.0							
20-21	3.5			5.0											7.0	3.5				8.5		7.5	
21-22						2.0	9.5					2.5			6.0	10.0					2.5		
22-23		6.0				4.0	8.5								5.5	9.0							
23-24						6.0	7.0			3.0					4.5	8.5	4.0	4.0	2.5	10.5			
24-25					8.0	8.0	5.5								3.5	7.5	5.5	7.0			4.5		
25-26			3.0			10.0	4.0			4.0	4.0				10.5	6.5	7.5	10.5					
26-27							3.0							2.0	9.5	5.5	9.0		7.5				
27-28	7.0							2.0			3.5			3.0	8.5	4.5					6.5		
28-29				9.5							3.5				7.5	3.5							
29-30	2.0				5.5		10.0				3.0		2.5		6.5	10.5						3.0	

	Y	UU	UV	VZ	WZ	XY	XZ	AM	SS	DELT	RY	UZ	EW	FL	BO	U	SX	V501	V508	V839	1010	FT	U
	LEO	LEO	LEO	LEO	LEO	LEO	LEO	LEO	LIB	LIB	LYN	LYR	LYR	LYR	MON	OPH	OPH	OPH	OPH	OPH	OPH	ORI	PEG
MAX	9.5	11.4	9.5	10.6	11.3	9.5	10.6	9.2	10.4	4.8	11.9	9.8	11.2	8.7	10.8	5.8	10.5	10.9	10.1	8.8	6.2	9.1	9.7
MIN	12.7	12.7	10.2	11.7	12.0	9.9	11.2	9.8	11.3	5.9	13.3	11.0	13.6	9.5	12.1	6.5	11.2	11.8	10.7	9.4	7.0	9.7	10.5
DUR	5	4	3	4	5	2	3	3	6	7	4	5	5	4	5	5	5	4	3	3	4	4	3
TOT																							
0- 1							5.0											4.5	9.5	3.0	8.5	9.0	
1- 2						4.0	4.5	2.0	7.5			2.0		6.5		2.5		3.5	2.0	8.5			
2- 3	2.5		4.0				4.0	4.0										2.5	3.0	4.5	8.0		
3- 4						3.5	3.0			8.5								2.0	3.5	9.5		9.0	
4- 5					4.0		2.5		4.5										4.5	5.5	8.0		
5- 6			4.0			3.5	2.0	2.5											5.0	11.0			
6- 7								5.0								3.5			6.0	6.5	7.5	8.5	
7- 8	3.5			2.5		3.0			2.0										7.0	2.0			
8- 9			4.0	5.0							4.5								7.5	7.5	7.0		
9-10						3.0		3.0											8.5	3.0		8.5	
10-11		2.0						5.5		8.5		10.0							9.5	8.5	6.5		
11-12			4.0		5.0	2.5			9.5								4.0		2.0	4.0			
12-13	5.0											10.5	9.0	4.0			2.0		2.5	9.5	6.5	8.5	
13-14						2.5		3.5											3.5	5.5			
14-15			4.0			5.5		6.0	6.5			8.0	7.5	8.5			3.5		4.5	11.0	6.0		
15-16		3.0				2.0													5.0	6.5		8.5	
16-17						5.5		2.0				5.5	6.5			5.0	5.0		6.0	2.0	5.5		
17-18			4.0			2.0		4.0	3.5	8.0					2.0				7.0	7.5		2.0	
18-19						5.0					5.5	2.5	5.0					6.5		7.5	3.0	5.0	8.5
19-20				2.5			5.5												8.5	8.5			
20-21		4.0	4.0	4.5		5.0	5.0	2.5					4.0				8.0		9.5	4.0	5.0		
21-22							4.5	4.5			2.5							6.0		2.0	9.5		8.5
22-23						4.5	4.0						2.5				9.5	10.5	2.5	5.5	4.5		
23-24			4.0				3.0											10.0	3.5	10.5			
24-25						4.5	2.5	3.0	8.0	7.5									9.0	4.5	6.5	4.0	8.5
25-26		5.0					2.0	5.5						6.0					8.5	5.0	2.0		
26-27			4.0			4.0										6.5			7.5	6.0	7.5	3.5	
27-28									5.0					10.0					6.5	7.0	3.0		8.5
28-29				2.5	4.0			3.5			7.0								6.0	7.5	8.5	3.5	
29-30	2.0		4.0					6.0											5.0	8.5	4.0		

	RV	AV	U	V505	1968	RS	AO	CC	CC	Y	RW	RZ	TY	WY	AQ	EQ	EQ	V	X	RS	RV	W	W	
	PSC	PUP	SGE	SGR	SGR	SER	SER	SER	SER	SEX	TAU	TAU	TAU	TAU	TAU	TAU	TAU	TAU	TRI	TRI	TRI	TRI	UMA	UMA
MAX	11.3	10.2	6.4	6.4	12.3	10.8	10.6	11.1	11.1	9.8	8.0	10.5	11.5	11.5	12.0	10.3	10.3	10.9	8.9	10.3	11.4	9.1	9.1	
MIN	12.0	10.8	9.1	7.6	13.3	11.5	12.1	11.7	11.7	10.2	12.5	11.2	12.0	11.7	12.9	11.0	11.0	11.9	12.0	11.0	12.5	9.9	9.9	
DUR	3	3	6	5	4	4	4	4	4	3	4	3	2	4	5	3	3	4	4	4	4	4	3	3
TOT			2								1													
									(S)								(S)						(S)	
0- 1					2.5		7.5	8.5	2.0	4.5												5.0	9.0	
1- 2				4.5	5.5	6.5	4.5	9.0	3.0									10.5				5.0	9.0	
2- 3	7.0			9.0	8.5			10.0	3.5													5.0	9.0	
3- 4	10.0							10.5	4.5	3.0				2.0		9.5			10.5			5.0	9.0	
4- 5						6.0			5.0							10.0		8.5	10.0			5.0	9.0	
5- 6			5.0		4.0	11.0			6.0							10.5			9.0			5.0	9.0	
6- 7					7.0				6.5	2.0		10.5		10.5					8.5			5.0	9.0	
7- 8	7.0				10.0	6.0	8.0		7.5									7.0	8.0		7.0	5.0	9.0	
8- 9	9.5			7.0		10.5	5.5	2.0	8.0	4.0								11.0		9.5		5.5	9.5	
9-10					2.5		2.5	3.0	9.0													5.5	9.5	
10-11					5.5	5.5		3.5	10.0								9.5			7.0	7.0	5.5	9.5	
11-12		2.0			8.5	10.5		4.5	10.5	2.5							10.0	9.0				5.5	9.5	
12-13	6.5							5.0					2.0				10.5					5.5	9.5	
13-14	9.0					5.5		6.0			10.5										7.5	5.5	9.5	
14-15				5.0	4.0	10.0	9.0	6.5										7.5				5.5	9.5	
15-16			8.5	9.5	7.5		6.0	7.5														5.5	9.5	
16-17		2.0			10.5	5.0	3.5	8.0	2.0	3.5											8.0	5.5	9.5	
17-18						10.0		9.0	3.0			11.0				9.5						5.5	9.5	
18-19	8.5				3.0			9.5	3.5							10.0		9.5				5.5	9.5	
19-20					6.0	5.0	10.5	4.5	2.0							10.5					8.5	5.5	9.5	
20-21					9.0	9.5		5.0					11.0									5.5	9.5	
21-22		2.0		7.0			10.0	6.0	4.5					2.0				8.0				5.5	9.5	
22-23			3.0			4.5	7.0	6.5				10.5									8.5	5.5	9.5	
23-24	8.5				4.5	9.5	4.0	7.5							11.0							5.5	9.5	
24-25					7.5			2.0	8.0	3.0							9.5					5.5	9.5	
25-26					10.5	4.5		2.5	9.0								10.0	10.0			9.0	5.5	9.5	
26-27						9.0		3.5	9.5								10.5					5.5	9.5	
27-28				5.0	3.0			4.5	10.5													5.5	9.5	
28-29	8.0			9.5	6.0	4.5	10.5	5.0										8.5			9.5	5.5	9.5	
29-30	10.5				9.0	9.0	8.0	6.0		4.0										9.0		5.5	9.5	

	TX	TY	TY	UX	UX	VV	XZ	ZZ	AF	W	RU	VV	AG	AH	AH	AK	AW	AW	AX	AZ	AZ	BH	MS
	UMA	UMA	UMA	UMA	UMA	UMA	UMA	UMA	UMA	UMI	UMI	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VIR
MAX	6.8	11.7	11.7	12.7	12.7	10.1	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
MIN	8.9	12.4	12.4	13.8	13.8	11.0	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
DUR	6	3	3	1	1	3	3	4	8	7	4	4	4	4	4	4	3	3	4	3	3	4	3
TOT																							

		(S)												(S)		(S)				(S)			
0- 1		2.5	6.5	4.5	9.0	2.0	6.0			8.5	11.0		2.0	4.5		5.0				5.5		2.0	
1- 2		4.0	8.0	9.0	4.0							8.0		4.5	5.0	6.5	2.5	3.5	2.5	6.5			
2- 3		5.5	9.5	3.5	8.5	3.5						5.5	5.0			8.0	4.0		3.5	7.5		6.5	
3- 4		7.0	2.5	8.0	3.5		8.0			2.0	3.0	7.5		5.5			5.5	6.0	4.5		7.5	5.0	
4- 5		8.5	4.0	3.0	7.5	5.0				3.0			6.0			2.5	7.0		6.0		3.5	3.5	
5- 6		10.0	5.5	7.0	2.5		3.5			4.5		5.5		6.5		4.0	8.5		7.0	3.0		2.0	
6- 7		3.0	7.0	2.0	7.0	6.5				5.5	6.0		7.0	2.0		5.5			8.5	4.0		8.0	
7- 8		4.5	9.0	6.5						4.0	6.5	3.5	4.0	2.5	7.5	4.5	7.0	3.0		5.0		6.5	
8- 9		6.0	2.0	11.0	6.0	8.0				8.0				3.0			4.5	4.0	2.0	6.5	5.5	5.0	
9-10		7.5	3.5	5.5	10.5					9.0		2.0	3.5				6.0		3.5	7.5		3.5	
10-11		9.0	5.0	10.0	5.0	9.5		5.5		10.0	6.5			4.0		3.0	7.5	6.5	4.5	9.0		2.0	
11-12		2.0	6.5	5.0	9.5	2.0	6.0					3.5		4.5		4.5			5.5			8.0	
12-13		3.5	8.0	9.0	4.5					6.5			7.0		5.0		6.0	2.0		7.0	2.5	7.5	6.5
13-14		5.0	9.5	4.0	9.0	3.5			5.0					5.5		3.5	7.5	3.5	2.0	8.0	4.0	3.0	5.0
14-15		6.5	2.5	8.5	3.5						2.5	6.5	5.5		5.5			5.0		5.0		3.5	
15-16		8.0	4.0	3.0	8.0	5.0					3.5	4.0		6.0		2.0	6.5	4.5	2.0	6.5		2.0	
16-17		10.0	5.5	7.5	3.0		3.5				5.0		3.5		6.5		3.5	8.0		3.0	7.5	8.0	
17-18	3.0	3.0	7.0	2.5	7.0	6.5		3.0		9.0	6.0			7.0	2.0		5.0		7.0	4.5	8.5	5.0	6.5
18-19		4.5	8.5	7.0	2.0						7.0	7.0	2.0	2.5	7.5		6.5	2.0		5.5		5.0	
19-20		6.0	10.0		6.5	8.0		10.5			8.5	4.5			3.0	3.0	8.0	3.5		7.0	2.5	3.5	
20-21	4.5	7.5	3.0	6.0	10.5						9.5	2.0		3.5		7.5		5.0	2.5	8.0	3.5	2.0	
21-22		9.0	4.5	10.5	5.5	9.5					11.0		7.0		4.0		2.5	6.5		5.0	7.0	8.0	
22-23		2.0	6.0	5.0	10.0	2.0	6.5					7.5		4.5		4.0	8.0	5.0	2.0	6.0	2.5	6.5	
23-24	6.0	3.5	7.5	9.5	5.0	11.0						5.0	5.5		5.0		5.5		3.0	7.5		5.0	
24-25		5.0	9.0	4.5	9.0	3.5				4.0	2.0	2.0		5.5			7.0	2.5	7.5	4.0	8.5	3.5	
25-26		6.5	2.0	8.5	4.0						3.0		3.5		6.0	2.0	8.5	4.0		5.5		2.0	
26-27	7.5	8.0	4.0	3.5	8.5	5.0		8.0			4.0	8.0		6.0		7.0		5.5		6.5	2.5	4.5	8.0
27-28		9.5	5.5	8.0	3.0		3.5				5.5	5.0	2.0	2.0	6.5		3.0	7.0	3.0	8.0	3.5	6.5	
28-29		2.5	7.0	3.0	7.5	6.5					6.5	2.5		7.0	2.5		4.5				5.0	5.0	
29-30		4.0	8.5	7.0	2.5					6.5	8.0			2.5	7.5		6.0		5.5		6.0	3.5	

	MS	NY	Z	AW	AY	BE	BO	BS	BT	BU	CD
	VIR	VIR	VUL	VUL	VUL	VUL	VUL	VUL	VUL	VUL	VUL
MAX	9.4	13.3	7.4	10.8	11.0	9.9	10.4	11.0	11.8	10.6	11.5
MIN	9.7	14.2	9.2	11.9	12.9	11.4	13.3	11.5	12.5	11.4	12.6
DUR	3	1	6	5	4	5	4	3	3	3	4
TOT	(S)										
0- 1	5.5	4.0				10.5		4.5		3.5	3.5
1- 2	4.0	4.0		9.5			8.5	3.5		7.0	
2- 3	2.5	2.0		5.0				2.5	2.5	10.5	4.5
3- 4		2.0					7.0		6.0		
4- 5	7.0	2.5							9.0	3.0	6.0
5- 6	5.5	2.5		10.0	10.0	2.5	6.0	10.5		6.5	
6- 7	4.0	3.0		5.5				9.0		10.0	7.0
7- 8	2.5	3.0					4.5	8.0			
8- 9		3.5				5.0		7.0		3.0	8.5
9-10	7.0	3.5					3.5	5.5		6.0	
10-11	5.5	4.0		6.5	6.0			4.5	2.0	9.5	9.5
11-12	4.0	4.0	9.0			7.5	2.0	3.5	5.5		2.0
12-13	2.5	2.0						2.0	9.0	2.5	10.5
13-14		2.0								5.5	3.0
14-15	7.0	2.5		7.0		10.0				9.0	
15-16	5.5	2.5		2.5				10.0			4.5
16-17	4.0	3.0	6.5					9.0		2.0	
17-18	2.5	3.0						8.0		5.5	5.5
18-19		3.5		8.0				6.5	2.0	8.5	
19-20	7.0	3.5		3.0				5.5	5.5		7.0
20-21	5.5	4.0						4.5	8.5		
21-22	4.0	4.0	4.5					3.5		5.0	8.0
22-23	2.5	2.0		8.5	7.5	4.0		2.0		8.0	
23-24		2.0		4.0							9.5
24-25	7.0	2.5									
25-26	5.5	2.5				6.5		10.0		4.5	10.5
26-27	4.0	3.0	2.5	9.5				9.0		8.0	3.0
27-28	2.5	3.0		5.0	3.0			8.0	5.0		
28-29		3.5				9.0		6.5	8.5		4.0
29-30	7.0	3.5						5.5		4.0	