

MAS Eclipsing Binary Ephemeris for March 2025

all times in U.T.

Page 1

	RT	WZ	XZ	AB	AD	AD	BD	BX	DS	QX	QX	RY	XZ	KO	KP	OO	OO	V342	V343	V346	RX	SS	SS
	AND	AND	AND	AND	AND	AND	AND	AND	AND	AND	AND	AQR	AQL	AQL	AQL	AQL	AQL	AQL	AQL	AQL	ARI	ARI	ARI
MAX	9.3	11.6	10.0	9.3	11.1	11.1	11.3	8.6	10.8	11.3	11.3	8.8	9.3	8.3	9.7	9.2	9.2	9.0	10.6	9.0	9.4	10.1	10.1
MIN	10.2	12.6	13.0	10.2	11.6	11.6	11.7	9.5	11.4	11.6	11.6	10.1	11.2	9.3	10.5	10.1	10.1	12.5	12.3	10.4	9.9	11.1	11.1
DUR	3	4	3	3	4	4	3	4	4	3	3	5	7	5	4	3	3	7	4	4	4	3	3
TOT																		3					
						(S)					(S)						(S)						(S)
0- 1	1.0							2.0		3.5		12.0		10.5			9.5					1.5	
1- 2			2.0										11.5				10.0						1.5
2- 3		2.5															10.0					2.0	
3- 4								3.0		1.0							10.5						2.5
4- 5	10.5						2.0				1.5						11.0					3.0	
5- 6	2.0		3.5				0.5			2.5							11.0		10.0				3.0
6- 7					2.5		10.0	4.0			3.0						11.5						
7- 8					2.0					4.0							12.0				1.0		
8- 9				1.0	2.0												12.0				2.0		
9-10	11.5	1.0		1.0	1.5						0.5										2.5		
10-11	2.5			1.0	1.0					1.0											3.0		
11-12				1.0	1.0		1.0	1.5	0.5		2.0											0.5	
12-13				1.0	0.5	12.5	10.0		0.5	2.5									9.5				1.0
13-14				0.5		12.0			1.0		3.5							10.0				1.0	
14-15	12.0			0.5		11.5		2.5	1.0														1.5
15-16				0.5		11.5			1.5													2.0	
16-17	9.5					11.0			1.5		0.5	11.0								11.5			2.0
17-18	0.5					10.5	1.5	4.0	2.0	1.5					9.0							2.5	
18-19		2.5				10.5	10.5		2.0		2.0						9.5						3.0
19-20									2.5	3.0							9.5						3.5
20-21			2.0						2.5		3.5			11.5			10.0						
21-22	10.5								3.0								10.5						
22-23	1.5							1.0	3.0								10.5						
23-24							1.5		3.5		1.0			8.0			11.0		11.0				
24-25			3.5				11.0		3.5	1.5							11.0						
25-26		1.0						2.0	4.0		2.0						11.5						0.5
26-27	11.0									3.0							12.0		10.5		1.0		
27-28	2.0										3.5			11.5									1.5
28-29								3.5														1.5	
29-30							2.0																2.0
30-31											1.0							9.0				2.5	

MAS Eclipsing Binary Ephemeris for March 2025

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Page 2

	RY	SX	WW	WW	AP	AP	AR	AR	CL	EM	EP	HP	HP	IM	V459	V459	SS	SS	SS	TU	TU	TY	TY	
	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	BOO	BOO	BOO	BOO	BOO	BOO	BOO	
MAX	11.7	8.2	5.7	5.7	10.9	10.9	6.0	6.0	11.7	11.0	10.8	10.8	10.8	7.9	7.7	7.7	10.3	10.3	10.3	11.7	11.7	11.8	11.8	
MIN	14.0	9.0	6.4	6.4	11.4	11.4	6.7	6.7	13.2	11.9	11.3	11.5	11.5	8.5	8.1	8.1	11.0	11.0	11.0	12.7	12.7	12.3	12.3	
DUR	6	4	5	5	4	4	5	5	4	4	3	3	3	4	4	4	18	18	18	3	3	3	3	
TOT																	6	6	6					
				(S)		(S)		(S)				(S)				(S)	(2)		(3)		(S)		(S)	
0- 1						4.5		2.0			3.0										4.0		5.0	
1- 2					1.0	8.0			4.5		7.5			1.5	1.5						3.5	7.5	7.5	3.5
2- 3					4.5		4.0							7.0	3.0						3.0	6.5	6.5	
3- 4	3.0	1.5			7.5	1.0				6.5	2.0		3.5		4.5			3.0			6.0	5.0		
4- 5		6.5		4.5		4.0		5.5			6.0				6.0							5.5	4.0	
5- 6					0.5	7.5				2.0		7.0			7.5							4.5		6.5
6- 7					4.0		7.0		4.0		0.5			1.0								4.0		5.5
7- 8					7.5	0.5					5.0			7.0							7.5	3.5		4.0
8- 9						4.0						3.0									6.5	3.0	7.0	3.0
9-10		3.0		5.5		7.0									1.0						6.0		5.5	
10-11					3.5						4.0		6.5		2.5		11.5				5.5		4.5	
11-12	7.0				7.0				3.5					1.0	4.0						4.5		3.5	7.0
12-13						3.5								6.5	5.5						4.0			6.0
13-14			0.5			7.0					3.0		2.5		7.0						3.5	7.5		5.0
14-15	0.5			7.0	3.5					4.5	7.5				8.5						3.0	6.5	7.5	3.5
15-16		4.0			6.5							6.0										6.0	6.5	
16-17						3.0			3.0	0.5	2.0			0.5								5.5	5.0	
17-18						6.5					6.0			6.5								4.5	4.0	
18-19			2.0		3.0							2.0				1.5		5.0	8.0			4.0	3.0	6.5
19-20				8.0	6.5						1.0					3.0					7.5	3.5		5.5
20-21						3.0					5.0		5.5			4.5					6.5	2.5		4.5
21-22		5.0				6.0			2.5							6.0					6.0		7.0	3.0
22-23	4.5				2.5									6.0		7.5					5.5		6.0	
23-24			3.0		6.0						4.0		1.5								4.5		4.5	
24-25					9.5	2.5															4.0		3.5	7.5
25-26						6.0				3.0		5.0									3.5	7.5		6.0
26-27		1.5			2.5	9.0			2.0		3.0				1.0						2.5	6.5		5.0
27-28		6.5			5.5						7.5			6.0	2.5							6.0	7.5	4.0
28-29			4.0		9.0	2.0						1.0			4.0							5.5	6.5	
29-30						5.5		1.0			2.0				5.5							4.5	5.0	
30-31					2.0	9.0					6.5		4.5		7.0							4.0	4.0	

all times in U.T.

	TZ	TZ	UW	VW	VW	ZZ	AD	AD	BW	BW	44	44	Y	SV	AL	AN	CD	CD	R	RT	SX	TU	TZ
	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	CAM	CAM	CAM	CAM	CAM	CAM	CMA	CMA	CMA	CMA	CMA
MAX	10.6	10.6	10.4	10.5	10.5	6.8	9.8	9.8	7.1	7.1	4.7	4.7	10.6	8.6	10.5	9.7	11.6	11.6	6.2	11.4	10.3	9.7	9.8
MIN	11.1	11.1	11.4	11.0	11.0	7.6	10.4	10.2	7.5	7.5	4.9	4.8	12.4	9.4	11.3	10.5	11.8	11.8	6.8	12.9	11.4	10.7	10.5
DUR	3	3	3	3	3	5	4	4	5	5	3	3	6	3	5	8	5	5	4	5	4	4	4
TOT																							
		(S)			(S)	(S)		(S)		(S)		(S)					(S)						
0- 1		5.0	3.5		6.0						5.0	2.0			3.0			7.0	4.0				
1- 2	6.0		4.0		6.5	8.0						3.5	7.5	4.5	11.0		10.5	1.0			1.0		
2- 3	3.0	7.0	4.0		7.0				7.0	2.0	5.5			9.0			4.5			2.5			
3- 4		4.0	4.0	3.5	7.5					4.0								8.0					
4- 5	5.0		4.0	4.5					6.0	5.5	2.5		3.5	3.0		11.5	2.5						
5- 6		6.0	4.5	5.0						4.0		8.0	11.0			6.0							
6- 7	7.0	3.5	4.5	5.5		8.0				2.5	6.0							9.5			3.0		
7- 8	4.5		4.5	6.0						4.5			3.0					4.0					
8- 9		5.5	4.5	7.0			4.0			6.0	3.0		7.5	2.5		7.5		2.5					
9-10	6.5	3.0	4.5	7.5	3.5			4.5			4.5		12.0	10.5		1.5	11.0	6.0			4.0		
10-11	3.5		5.0	8.0	4.0		5.5			3.0	6.0			2.0			5.0						
11-12		4.5	5.0		4.5	7.5		6.5		4.5		5.5	6.5			8.5			4.0				
12-13	5.5		5.0		5.5		7.0		7.0	6.5	3.0		11.0	2.0		3.0	12.0						
13-14	3.0	6.5	5.0		6.0			8.0		5.0			1.0	10.0			6.5						
14-15		4.0	5.5		6.5		8.5		6.0	3.5			5.5			10.0	1.0				1.0	0.5	
15-16	5.0		5.5		7.5			9.5		5.0	2.0		10.0			4.5			1.0			4.0	
16-17		6.0	5.5	4.0	8.0	7.5	10.5			3.5				2.0			8.0	1.5					
17-18	7.0	3.5	5.5	4.5				11.0		2.0	5.5		5.0	9.5		11.5	2.5	5.0					4.5
18-19	4.5		5.5	5.0			12.0			4.0			9.5			6.0							
19-20		5.5	6.0	5.5						5.5	2.5						9.5						
20-21	6.0	2.5	6.0	6.5						4.0			4.0	1.5	10.5		3.5						
21-22	3.5		6.0	7.0		7.0				2.5	5.5	3.5	8.5	9.5		7.0							0.5
22-23		4.5	6.0	7.5	3.5				7.0	4.0						1.5	10.5				3.5		
23-24	5.5		6.5		4.0					6.0	2.5		3.0				5.0					1.0	
24-25	3.0	6.5	6.5		5.0				6.0	4.5	11.0		7.5	1.0		8.5			2.5			4.5	
25-26		4.0	6.5		5.5					3.0	6.0		12.0	9.0		3.0	12.0	3.5					
26-27	5.0		6.5		6.0	7.0				4.5			2.5				6.5						
27-28		6.0	7.0		7.0					6.5	3.0		7.0			10.0	0.5				0.5		
28-29	7.0	3.0	7.0	3.5	7.5						5.0		11.5	0.5		4.0							
29-30	4.0		7.0	4.0	8.0					3.5			1.5	8.5			7.5						
30-31		5.0	7.0	4.5						5.0	2.0		6.0			11.0	2.0						

	TZ	UU	XZ	YY	AC	AK	AM	AM	TY	RZ	TV	TW	ZZ	AB	CW	CW	DZ	GT	IR	IS	IT	IV	MM
	CMA	CMA	CMI	CMI	CMI	CMI	CMI	CMI	CAP	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS
MAX	9.8	10.0	9.7	8.5	11.0	10.1	10.0	10.0	10.5	6.4	7.3	8.3	10.7	10.2	11.8	11.8	11.6	11.9	10.8	11.6	11.0	11.2	11.3
MIN	10.5	12.5	10.2	9.1	11.5	11.5	10.7	10.4	11.6	7.8	8.4	8.9	11.1	12.2	12.5	12.5	12.3	12.8	12.1	12.6	11.8	12.5	11.9
DUR	4	5	3	4	3	4	5	6	4	4	4	5	4	4	3	3	4	5	4	5	5	5	5
TOT																							
	(S)							(S)							(S)								
0- 1	1.0					2.0		0.5		8.0					7.0	3.5							
1- 2		0.5	0.5	1.0	6.5	5.0		1.0				2.5	3.5	8.5	6.0	2.5	0.5						
2- 3			4.5	3.0	3.5			1.5					9.0		5.0	1.5				3.0			
3- 4		4.5		5.5				2.0							4.0		9.0						0.5
4- 5				8.0		1.0		2.5		11.0				2.0	3.0	7.0							4.5
5- 6			2.0			4.0		3.0		3.0		9.5		11.0	2.0	6.0			1.0				
6- 7			5.5			7.0		3.5		7.5			2.5		1.0	5.0			9.5				12.0
7- 8								4.0		12.5			8.5		7.5	3.5			2.0				
8- 9					5.0			4.5			2.0	6.0		4.5	6.5	2.5	2.5		10.5				
9-10			3.0		2.0	3.0		5.0							5.5	1.5				12.0			
10-11			7.0			6.5		5.5							4.5	0.5	11.0		11.5				
11-12								5.5		2.5		2.5	2.0		3.5	7.0				8.0			3.0
12-13			0.5					6.0		7.0			8.0	7.0	2.5	6.0	0.5						
13-14			4.5	2.0		2.0		6.5	12.5	12.0	12.5				1.5	5.0				4.5			
14-15		0.5		4.0	7.0	5.5		7.0								4.0					12.5		
15-16				6.5	3.5			7.5				9.5		0.5	7.0	3.0	4.0			0.5			12.5
16-17		4.5	2.0		0.5								1.5	9.5	6.0	2.0							12.5
17-18			5.5			1.5				2.0	3.5		7.0		5.0	1.0	12.5						12.5
18-19						4.5				6.5		6.0			4.0	7.5							12.5
19-20	4.0					7.5				11.0				3.0	2.5	6.5	2.0						12.5
20-21			3.0											12.0	1.5	5.5		4.5					12.5
21-22			7.0		5.5							2.5	1.0		0.5	4.5	10.5		9.0				12.5
22-23					2.0	3.5							6.5		7.0	3.5			1.5	9.5			12.5
23-24			0.5			6.5			11.5	1.5			12.5	5.5	6.0	2.5		4.5	10.0				12.0
24-25			4.5							6.0	9.5				5.0	1.5			2.5				12.0
25-26			8.0	2.5						10.5		9.5			4.0				11.0				12.0
26-27				5.0		2.5					5.0				3.0	7.0	3.5	4.0		1.5			12.0
27-28		0.5	2.0	7.0	7.0	5.5	1.0						6.0	8.0	2.0	6.0			12.0				12.0
28-29			5.5		4.0		1.5					6.0	12.0		1.0	5.0	12.0						12.0
29-30		4.5			0.5		2.0			0.5					7.5	4.0		4.0					12.0
30-31						1.5	2.0			5.5				1.5	6.5	2.5	1.5				2.5	12.0	

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	GK	TT	TX	RW	RW	RZ	RZ	SS	SS	CC	CC	U	RW	TW	W	W	RV	RV	SX	SX	V	SW	WW
	CEP	CET	CET	COM	COM	COM	COM	COM	COM	COM	COM	CRB	CRB	CRB	CRV	CRV	CRV	CRV	CRV	CRV	CRT	CYG	CYG
MAX	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	9.3	9.9
MIN	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	11.8	13.2
DUR	4	3	4	3	3	3	3	4	4	2	2	5	4	4	4	4	4	4	3	3	4	5	5
TOT			1																			2	
					(S)		(S)		(S)		(S)					(S)		(S)		(S)			
0- 1	6.5			3.0		1.5	5.5	4.5	9.5		3.0				5.0		7.0			6.0	3.0		9.5
1- 2	5.0			1.5	4.5	2.0	6.0		5.5	3.0			6.5	5.0	9.0	4.0		9.0		5.0			
2- 3	3.5	0.5			3.5	2.5	6.5	6.0			3.0			9.0	3.5	8.0			7.5	3.5	5.5		
3- 4	2.0			5.0	2.0	3.0	7.0	2.0	7.0	2.5	5.5		10.5		7.5	2.5	6.5		6.5				
4- 5				3.5	1.0	3.0	7.0	8.0	3.0	5.0	2.5		4.0			6.5		9.0	5.0		8.0		
5- 6			2.0	2.5	5.5	3.5	7.5	3.5	8.5	2.5	5.0			8.0	6.0				4.0				
6- 7				1.5	4.0	4.0	8.0	9.5	4.5	5.0	2.0		8.5	12.0		5.0	6.5			6.5			
7- 8					3.0	4.5		5.0		2.0	4.5	11.5			4.5	9.0		8.5		5.5	3.5		
8- 9			1.0	4.5	1.5	4.5			6.0	4.5	2.0			6.5	8.5	4.0				4.0			
9-10				3.5		5.0		6.5	1.5	1.5	4.5		6.0	11.0	3.0	8.0	6.0		6.5		6.0		
10-11				2.0	5.0	5.5	1.5	2.5	7.5	4.0	1.5				7.0			8.5	5.5				8.5
11-12	12.0			1.0	4.0	6.0	1.5	8.0	3.5	1.5	4.0		10.5	5.0		6.5			4.5		8.5		
12-13	10.5			5.5	2.5	6.0	2.0	4.0	9.0	4.0	1.0		4.0	9.5	5.5		6.0			7.0			
13-14	9.0			4.0	1.5	6.5	2.5	9.5	5.0	1.0	3.5					5.0		8.0		5.5			
14-15	7.5			3.0		7.0	3.0	5.5		3.5	1.0	9.5	8.0		4.0	9.0				4.5	4.0	9.0	
15-16	6.0			2.0	4.5	7.5	3.0		6.5		3.5			8.0	8.0	3.5	5.5		7.0				
16-17	4.5				3.5	7.5	3.5	7.0	2.0	3.0			12.5	12.5	2.5	7.5		8.0	6.0		6.5		
17-18	3.0			5.0	2.0	8.0	4.0	3.0	8.0		3.0		6.0		6.5				4.5				
18-19	1.5			4.0	1.0		4.5	8.5	3.5	3.0				7.0		6.0	5.5			7.5	9.0		
19-20			1.0	2.5	5.5		4.5	4.5	9.5	5.5	2.5		10.0	11.0	5.5			7.5		6.0			
20-21				1.5	4.5		5.0		5.0	2.5	5.0				9.0	4.5	11.0			5.0			7.5
21-22					3.0	1.5	5.5	6.0		5.0	2.5	7.0		5.5	4.0	8.5	5.0		7.5	3.5	4.5		
22-23				4.5	2.0	2.0	6.0	2.0	7.0	2.0	5.0		8.0	9.5	8.0	3.0		7.0	6.0				
23-24				3.5		2.0	6.0	7.5	2.5	4.5	2.0					7.0	11.0		5.0		7.0	12.5	
24-25				2.0	5.0	2.5	6.5	3.5	8.5	2.0	4.5		12.0		6.5		5.0		4.0				
25-26			2.0	1.0	4.0	3.0	7.0	9.0	4.0	4.5	1.5		5.5	8.5		5.5		7.0		6.5	9.5		
26-27	11.5			5.5	2.5	3.0	7.5	5.0	10.0	1.5	4.0				5.0		10.5			5.0	2.5		
27-28	10.0			4.5	1.5	3.5	7.5		5.5	4.0	1.5		10.0		9.0	4.0	4.5			4.0			
28-29	8.5		1.0	3.0		4.0	8.0	6.5		1.0	4.0	5.0		7.0	3.5	8.0		6.5	6.5		5.0		
29-30	7.0			2.0	4.5	4.5		2.0	7.0	3.5	1.0			11.5	7.5	3.0	10.5		5.5				
30-31	5.5				3.5	4.5		8.0	3.0	1.0	3.5		7.5			6.5	4.5		4.0		7.5		

all times in U.T.

	RZ	TW	UZ	UZ	AI	BH	S	TZ	YY	YY	RW	SX	TX	WW	AF	AL	RX	SZ	TT	TU	UX	CC	CT
	DRA	DRA	DRA	DRA	DRA	DRA	EQU	ERI	ERI	ERI	GEM	GEM	GEM	GEM	GEM	GEM	HER	HER	HER	HER	HER	HER	HER
MAX	10.0	7.8	9.9	9.9	7.2	8.0	8.0	9.8	8.4	8.4	9.6	10.8	10.0	9.8	10.2	9.3	7.1	10.2	9.7	10.6	8.9	9.5	9.9
MIN	10.9	9.5	10.7	10.7	8.2	8.6	10.0	12.6	9.1	9.1	11.6	11.7	11.9	10.5	11.3	10.0	7.7	12.0	10.4	13.4	9.8	12.8	11.2
DUR	3	5	5	5	4	5	5	4	3	3	5	5	6	4	4	4	5	4	4	5	5	4	4
TOT		1						1			1									1			
				(S)						(S)													
0- 1	7.0	8.5			3.0		12.0			3.0					2.0								
1- 2	9.5		11.0		8.0					2.0						1.0		11.5			10.0	10.5	7.5
2- 3	12.0									1.0								7.0					
3- 4		4.0		2.0								5.5											
4- 5	4.0					11.0			3.0				6.5	1.0							12.5		
5- 6	6.0							0.5	2.5		4.0			7.0	1.5	5.0							
6- 7	8.5			8.5		6.5			1.5						7.5		8.0	9.5		6.0			
7- 8	11.0				7.5				0.5				1.5						10.5				
8- 9					12.5						1.0								8.5			9.0	11.0
9-10										3.0									6.0				
10-11	5.0									2.0		1.5		5.5	1.0			11.5					6.0
11-12	7.5		6.0							1.0					7.0			7.0					
12-13	10.0															4.0							
13-14	12.5				7.5				3.5								10.5						
14-15		9.5	12.0		12.5				2.5		4.0												
15-16	4.0					8.5			1.5					4.5				9.5		8.0	8.5	7.5	
16-17	6.5			3.0					0.5						6.0								
17-18	9.0	5.0																					
18-19	11.5							1.5		3.0		6.0	6.5						11.0				9.5
19-20				9.5	7.5					2.0						3.0		11.5	7.0		11.0		
20-21					12.0					1.0				3.5				7.0					12.0
21-22	5.5		0.5										1.5		5.5								
22-23	8.0								3.5								8.0					5.5	
23-24	10.5								2.5							7.5							
24-25			7.0			10.5			1.5									9.0		9.5			
25-26					7.5				1.0		5.5	2.5		2.0									
26-27	4.5				12.0	6.0									5.0	2.0							8.0
27-28	7.0									3.0									12.0			10.5	
28-29	9.5	10.5								2.0	2.0							11.5	10.0				
29-30	12.0			4.5						1.0		4.5					11.0	7.0	8.0		7.0		
30-31														1.0		6.0							

MAS Eclipsing Binary Ephemeris for March 2025

all times in U.T.

Page 9

	DI	DI	HS	HS	LT	V728	68	WY	WY	AV	DF	DF	DI	DK	V470	V470	SW	SW	VX	AW	CM	CO	CO
	HER	HER	HER	HER	HER	HER	HER	HYA	HYA	HYA	HYA	HYA	HYA	HYA	HYA	HYA	LAC	LAC	LAC	LAC	LAC	LAC	LAC
MAX	8.4	8.4	8.5	8.5	10.7	10.9	4.7	10.3	10.3	10.2	11.0	11.0	11.0	10.5	13.0	13.0	9.2	9.2	10.9	10.6	8.5	10.5	10.5
MIN	9.1	9.1	9.0	9.0	11.1	11.5	5.4	11.1	11.1	10.6	11.5	11.5	12.0	11.0	13.5	13.5	10.0	10.0	12.3	11.3	9.5	11.0	11.0
DUR	6	6	4	4	4	3	5	3	3	4	4	4	4	4	3	3	3	3	4	5	4	5	5
TOT																							
		(S)		(S)					(S)		(S)				(S)		(S)					(S)	
0- 1		10.0									1.5	5.5	1.5		4.0	3.0	8.0						
1- 2								3.0		4.0	5.0	1.0	2.0	5.5	7.5	3.0							12.5
2- 3					7.0				5.0		5.0	1.0	7.5	6.5	2.5	7.5							
3- 4			11.0		9.0	10.5		6.5		5.0	4.5	0.5		7.5	7.0	2.5							1.5
4- 5				7.5	11.0	9.0					4.5	0.5	4.0	8.5	2.0	7.0							
5- 6						7.5			1.5	6.5	4.5				6.5	1.5			10.5		9.0	9.5	
6- 7						6.5		3.5			4.0				1.5	6.0		0.5	12.5	10.5			
7- 8						5.0			5.0	7.5	4.0	8.0	5.5		6.0	1.0							
8- 9			8.5					7.0			3.5	7.5			1.0	5.5						11.5	
9-10										8.5	3.5	7.5	2.0	1.0	5.5	0.5							
10-11									2.0	1.0	3.5	7.5	7.5	2.0		5.0	0.5						
11-12						10.5		3.5			3.0	7.0		3.5	5.0								
12-13				12.0		9.5			5.5	2.5	3.0	7.0	3.5	4.5		4.5							
13-14	9.5					8.0		7.0			2.5	6.5		5.5	4.5						9.5	2.5	
14-15						6.5				3.5	2.5	6.5		6.5		4.0		1.0		10.5			
15-16					7.0	5.0			2.0		2.5	6.5	5.5	7.5	3.5								9.5
16-17						9.5		4.0		4.5	2.0	6.0			8.0	3.5							
17-18				10.0	11.5				5.5		2.0	6.0	1.5		3.0	8.0							
18-19								7.5		6.0	1.5	5.5	7.0		7.5	3.0							11.5
19-20						11.0		0.5			1.5	5.5			2.5	7.5							
20-21						9.5			2.5	7.0	1.5	5.5	3.5		7.0	2.5			11.5				0.5
21-22		12.5	11.0			8.5		4.0			1.0	5.0		1.5	2.0	7.0					10.5		
22-23					7.5	7.0			6.0	8.5	1.0	5.0		2.5	6.5	2.0				10.5		8.5	
23-24						5.5		8.0		1.0	0.5	4.5	5.0	3.5	1.5	6.5		0.5					2.5
24-25								1.0		9.5	0.5	4.5		4.5	6.0	1.0							
25-26									2.5	2.0		4.5	1.5	5.5	1.0	5.5						10.5	
26-27			9.0					4.5			4.0	7.0	6.5	5.5	0.5								
27-28									6.5	3.0	8.0	4.0		7.5		5.0	0.5						
28-29					7.5	10.0		8.0			7.5	3.5	3.0		5.0								
29-30					9.5	8.5	6.0	1.0		4.5	7.5	3.5			4.5						11.0		
30-31				12.0	11.5	7.0			3.0		7.5	3.5			4.5					10.5		1.5	

all times in U.T.

	BO	EP	U	SX	V501	V508	V839	1010	1010	EF	EF	EQ	ER	ER	ET	FH	FL	FR	FT	FZ	FZ	GU	GU
	MON	MON	OPH	OPH	OPH	OPH	OPH	OPH	OPH	ORI	ORI	ORI	ORI	ORI	ORI	ORI	ORI	ORI	ORI	ORI	ORI	ORI	ORI
MAX	10.8	10.5	5.8	10.5	10.9	10.1	8.8	6.2	6.2	12.6	12.6	10.3	9.5	9.5	11.2	10.5	10.5	11.0	9.1	10.7	10.7	12.6	12.6
MIN	12.1	11.1	6.5	11.2	11.8	10.7	9.4	7.0	7.0	14.1	12.8	13.3	10.2	10.2	12.4	11.5	13.2	11.9	9.7	11.3	11.3	13.5	13.5
DUR	5	5	5	5	4	3	3	4	4	6	6	4	3	3	5	5	3	4	4	3	3	4	4
TOT	1																						
								(S)		(S)				(S)						(S)		(S)	
0- 1		6.0			9.0									3.5							4.0	3.5	
1- 2			11.0		8.0															4.0			2.5
2- 3					7.5	7.5	7.5			5.5		1.0	1.0								4.0	6.5	1.0
3- 4						8.0					1.0			2.5						4.0		5.0	
4- 5	5.0						8.5						4.0					4.5			4.0	3.5	
5- 6																		2.0		4.0		2.5	
6- 7			12.0				10.0				6.5			1.5							4.0	1.0	6.5
7- 8		3.5								2.0			3.0						4.0	4.0			5.0
8- 9														4.5							4.0		4.0
9-10												1.0		0.5							4.0		2.5
10-11													2.0				1.0				4.0	6.5	1.0
11-12							7.5				3.0			3.5		0.5				4.0		5.0	
12-13						7.5												3.5			4.0	4.0	
13-14	2.5					8.0	8.5						1.0		4.5	4.0	3.5	0.5		4.0		2.5	
14-15		0.5						12.5						2.5	3.5						4.0	1.0	6.5
15-16		4.0					10.0	12.5	4.5				4.0		2.0					4.0			5.0
16-17								12.0							1.0						4.0		4.0
17-18				6.5				12.0						2.0							4.0		2.5
18-19								11.5					3.0								4.0	6.5	1.0
19-20				8.0				11.5		5.5			4.5					5.0		4.0		5.0	
20-21							7.5	11.5	1.0					1.0				2.0			4.0	4.0	
21-22				9.5				11.0					2.5								4.0		2.5
22-23		1.5				7.5	8.5	11.0						3.5							4.0	1.0	6.5
23-24		5.0		11.0		8.0		11.0	6.5												4.0		5.0
24-25	5.5						9.5	10.5		2.0			1.5								4.0		4.0
25-26								10.5						3.0							4.0		2.5
26-27					12.0			10.0					4.0			2.0			1.5		4.0	6.5	1.0
27-28					11.5			10.0					0.5				2.5	4.0			4.0		5.5
28-29			7.5		10.5			10.0	3.0					2.0		5.5		1.0			4.0	4.0	
29-30					10.0		7.5	9.5					3.5						5.0	4.0		2.5	
30-31		2.5			9.0			9.5									5.0				4.0	1.0	6.5

all times in U.T.

	U	UX	AQ	AQ	DI	GP	KW	KW	Z	RT	RV	ST	XZ	IQ	IQ	IT	IU	KW	V432	BETA	RV	UZ	UZ
	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PER	PER	PER	PER	PER	PER	PER	PER	PER	PER	PER	PER	PSC	PUP	PUP
MAX	9.7	10.7	10.3	10.3	9.6	10.2	12.1	12.1	9.9	10.6	10.3	9.7	10.6	7.7	7.7	9.9	10.5	10.5	11.0	2.2	11.3	9.7	9.7
MIN	10.5	12.0	13.0	13.0	10.8	11.0	12.4	12.4	12.4	12.0	12.7	13.2	12.7	8.3	7.9	10.5	11.6	11.5	11.7	3.5	12.0	10.6	10.3
DUR	3	5	12	12	2	4	3	3	6	4	8	5	4	5	5	4	5	4	3	8	3	4	4
TOT			4	4					2			1											
	(S)			(3)				(S)								(S)							(S)
0- 1						11.5			1.5					4.5								3.5	
1- 2						11.0						4.5						1.5		1.0			
2- 3																		5.0					3.0
3- 4									3.0														
4- 5										3.0							3.5		3.0			3.0	
5- 6	1.0						11.0																
6- 7									4.0				2.0		5.0				1.0		0.5		2.5
7- 8				12.0				12.0					6.0	3.5				5.0	5.0				
8- 9	1.0				12.5													3.0				2.5	
9-10										5.0		3.5						1.5	3.0				7.0
10-11										1.5							3.5						2.0
11-12	0.5																	1.0	3.5			6.5	
12-13		12.5											6.0			2.0			4.5		3.0	1.5	
13-14															4.0								6.5
14-15	0.5						10.5						5.0	3.5	3.0				2.5				1.5
15-16										4.0							3.5					6.0	
16-17								11.5					4.5				3.5	12.5				1.0	
17-18	0.5											2.0							4.0		2.5		5.5
18-19			12.0				12.5						4.0						5.0				1.0
19-20						0.5																5.5	
20-21	0.5									6.0	3.5					3.5			5.5			0.5	
21-22										2.5			1.5	2.5				4.0					5.0
22-23											2.5		5.0				3.5	2.5	3.5		2.0		
23-24	0.5						10.0											1.0				5.0	
24-25												2.0							1.5				
25-26								11.0				0.5							5.0				4.5
26-27	0.5									5.0	1.5												
27-28							12.0			1.5						3.0			3.0		2.0	4.0	
28-29											0.5			2.0			3.5						
29-30	0.5	12.0											3.0						1.0				4.0
30-31													6.5						5.0				

all times in U.T.

	AV	U	V505	1968	RS	AO	CC	CC	Y	RW	RZ	TY	WY	AC	AM	AQ	CT	EQ	EQ	HU	V	X	RS	
	PUP	SGE	SGR	SGR	SER	SER	SER	SER	SEX	TAU	TAU	TAU	TAU	TAU	TAU	TAU	TAU	TAU	TAU	TAU	TAU	TRI	TRI	TRI
MAX	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	10.5	10.4	12.0	10.2	10.3	10.3	6.0	10.9	8.9	10.3	
MIN	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	12.3	12.3	12.9	11.5	11.0	11.0	6.8	11.9	12.0	11.0	
DUR	3	6	5	4	4	4	4	4	3	4	3	2	4	6	5	5	5	3	3	6	4	4	4	
TOT		2								1														
								(S)											(S)					
0- 1				10.0				9.5	0.5										3.5					
1- 2	5.5				12.0			10.0	7.0		3.5						5.0		4.0		1.5			
2- 3	2.5						4.5	11.0	3.0									0.5	4.5					
3- 4						12.0	5.5	11.5	9.5		5.5	2.0			4.0	5.0	1.0							
4- 5	6.5				12.0	9.0	6.0		5.5		1.5							1.5						
5- 6	3.5			11.5		6.0	7.0		1.5			4.0					5.0	2.0					2.5	
6- 7	0.5						8.0		8.0		3.5							3.0						
7- 8					11.5		8.5		4.0			6.0					5.0	3.5					0.5	
8- 9	4.5						9.5			1.5	5.5					0.5		4.0			2.0			
9-10	1.5			10.0			10.0		6.5		1.0	1.5				5.5	5.0	4.5						
10-11					11.5		11.0	4.5	2.5			3.5							1.0					
11-12	5.5					10.0	11.5	5.5	8.5		3.0	5.0					5.0		1.5					
12-13	2.5					7.0		6.0	5.0			2.5							2.0					
13-14					11.0			7.0	1.0		5.0						5.0		2.5	1.0				
14-15	7.0				11.5			7.5	7.5		1.0		4.0			2.5			3.5					
15-16	3.5							8.5	3.5								5.0		4.0	2.0	2.5			
16-17	0.5		10.5		11.0			9.5	9.5		3.0	6.0	1.0						4.5					
17-18								10.0	6.0								5.0	1.0		3.5				
18-19	5.0	11.5		10.5		10.5	4.5	11.0	2.0		4.5			2.5				1.5			1.0			
19-20	1.5				10.5	8.0	5.5	11.5	8.0	3.5	0.5		0.5				5.0	2.0		5.0				
20-21						5.0	6.0	12.5	4.5					3.5		4.5			2.5					
21-22	6.0						7.0		0.5		2.5		2.5				5.0	3.0						
22-23	2.5				10.5		7.5		6.5					4.5					4.0					
23-24				12.0			8.5		3.0		4.5	1.5	4.5		1.0		5.0	4.5						
24-25	7.0						9.0		9.0			3.5								1.0				
25-26	4.0				10.0	11.5	10.0		5.0			5.5	6.0		2.0	1.0	5.0		1.5		1.5			
26-27	0.5					8.5	11.0	4.5	1.5		2.5					6.0			2.0			3.0	2.5	
27-28				10.5		5.5	11.5	5.5	7.5						3.0		5.0		2.5			2.5		
28-29	5.0				10.0		12.5	6.0	4.0		4.0		0.5						3.0			1.5	0.5	
29-30	2.0		11.0					7.0	10.0						4.5		5.0		4.0			1.0		
30-31								7.5	6.0	5.0			2.5						4.5					

all times in U.T.

	RV	W	W	TX	TY	TY	UX	UX	VV	XZ	ZZ	AF	W	RU	VV	AG	AH	AH	AK	AW	AW	AX	AZ
	TRI	UMA	UMA	UMA	UMA	UMA	UMA	UMA	UMA	UMA	UMA	UMA	UMI	UMI	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VIR
MAX	11.4	9.1	9.1	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
MIN	12.5	9.9	9.9	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
DUR	4	3	3	6	3	3	1	1	3	3	4	8	7	4	4	4	4	4	4	3	3	4	3
TOT																							
			(S)			(S)												(S)			(S)		
0- 1		1.5	5.5			4.5	7.5	2.5		8.5			2.0	3.5	5.5	8.0	4.5	9.0	6.5		5.5		
1- 2	1.0	1.5	5.5		1.5	6.0	2.5	7.0	9.0					5.0			9.5	5.0	11.0		7.0	6.0	4.0
2- 3		1.5	5.5		3.0	7.5	6.5	2.0	1.5					6.0		6.0	5.0			4.0	8.5		5.0
3- 4		1.5	5.5		4.5	0.5	1.5	6.0	10.5				11.5	7.5	8.5			5.5		5.5		8.5	6.5
4- 5	1.5	1.5	5.5		6.0	2.0	6.0	1.0	3.0	0.5	7.5	8.5		8.5	5.5	4.5	6.0			7.0			7.5
5- 6		1.5	5.5		8.0	3.5	0.5	5.5	12.0	6.0			4.5	9.5		11.5	1.5	6.5		8.5	4.0	11.0	
6- 7		1.5	5.5		1.0	5.0	5.0		4.5	11.5				11.0		3.0	7.0	2.0	5.5		5.5	4.0	
7- 8	1.5	1.5	5.5		2.5	6.5	9.5	4.5						12.0	8.5	9.5	2.5	7.5	10.0		7.0		
8- 9		2.0	6.0		4.0	8.0	4.0	9.0	6.0					0.5	6.0		8.0	3.0		4.5		6.5	4.0
9-10		2.0	6.0		5.5	1.0	8.5	4.0						2.0		8.0	3.5	8.5		6.0			5.0
10-11	2.0	2.0	6.0		7.0	2.5	3.5	8.0	7.5	3.5			7.0	3.0			9.0	4.0		7.5	3.0	9.0	6.5
11-12		2.0	6.0	1.5	8.5	4.0	8.0	3.0		8.5	5.0			4.5	9.0	6.0	4.5	9.5			4.5		7.5
12-13		2.0	6.0		1.5	5.5	2.5	7.5	9.0					5.5	6.5		10.0	5.0			6.0	11.5	
13-14	2.5	2.0	6.0		3.0	7.0	7.0	2.0	1.5		12.0			6.5		4.5	5.5		9.5	3.5	7.5	4.5	
14-15		2.0	6.0	3.0	4.5		2.0	6.5	10.5					8.0		11.5		6.0		5.0			
15-16		2.0	6.0		6.0	2.0	6.0	1.5	3.0	0.5			9.5	9.0	9.5	2.5	6.0			6.5		7.0	3.5
16-17	2.5	2.0	6.0		7.5	3.5	1.0	6.0	12.0	6.0				10.5	7.0	9.5	2.0	6.5		8.0	3.5		5.0
17-18		2.0	6.0	4.5	0.5	5.0	5.5	0.5	4.5	11.5			2.5	11.5			7.0	2.0			5.0	9.5	6.0
18-19		2.0	6.0		2.0	6.5		5.0			2.5					8.0	2.5	7.5			6.5		7.5
19-20	3.0	2.0	6.0		3.5	8.0	4.5	9.5	6.0					1.5	9.5		8.0	3.0	8.5	4.0	8.0	12.0	
20-21		2.0	6.0	6.5	5.0	1.0	9.0	4.0			9.5	3.0	12.0	2.5	7.0	6.0	3.5	8.5		5.5		5.0	
21-22		2.0	6.0		6.5	2.5	4.0	8.5	7.5	3.5				3.5	4.5		9.0	4.0		7.0			
22-23	3.5	2.0	6.0		8.0	4.0	8.0	3.5		8.5			5.0	5.0		4.5	4.5	9.5		8.5	4.0	7.5	3.5
23-24		2.0	6.0	8.0	1.0	5.5	3.0	7.5	9.0					6.0	10.0	11.0		5.0			5.5		5.0
24-25		2.0	6.0		3.0	7.0	7.5	2.5	1.5					7.0	7.5	2.5	5.5				7.0	10.0	6.0
25-26	3.5	2.0	6.0		4.5		2.0	7.0	10.5		9.5			8.5	5.0	9.5		6.0	8.0	4.0		3.0	7.0
26-27		2.0	6.0	9.5	6.0	1.5	6.5	2.0	3.0	0.5				9.5			6.5	1.5		5.5			8.5
27-28		2.0	6.0		7.5	3.0	1.5	6.0	12.0	6.0	7.0		7.0	11.0	10.5	8.0	2.0	6.5		7.0		5.5	
28-29	4.0	2.0	6.0		4.5	5.5	1.0	4.5	11.5					12.0	8.0		7.0	2.5			4.5		
29-30		2.0	6.0	11.0	2.0	6.0	0.5	5.5						0.5	5.5	6.0	3.0	7.5			6.0	8.0	3.5
30-31		2.0	6.0		3.5	7.5	5.0		6.0					2.0			8.0	3.0		3.0	7.5		4.5

	AZ	BH	MS	MS	Z	AW	AY	BE	BO	BS	BT	BU	CD	V495	V495
	VIR	VIR	VIR	VIR	VUL	VUL	VUL	VUL	VUL	VUL	VUL	VUL	VUL	VUL	VUL
MAX	11.0	9.9	9.4	9.4	7.4	10.8	11.0	9.9	10.4	11.0	11.8	10.6	11.5	9.6	9.6
MIN	11.8	11.3	9.7	9.7	9.2	11.9	12.9	11.4	13.3	11.5	12.5	11.4	12.6	10.0	10.0
DUR	3	4	3	3	6	5	4	5	4	3	3	3	4	4	4
TOT															
	(S)			(S)											(S)
0- 1	7.0			5.5	10.0					9.0					
1- 2	8.5	11.0													
2- 3		7.0	6.0								11.0				
3- 4									11.5			11.0			
4- 5	3.5			7.0									9.0		11.0
5- 6	4.5			5.5					10.0						
6- 7	5.5	9.0											10.5		
7- 8	7.0	4.5	6.0						8.5			10.5			
8- 9	8.0									11.5			11.5	12.0	
9-10				7.0						10.0					8.5
10-11		11.0		5.5		9.5		10.0		9.0	11.0				
11-12	3.0	6.5										10.0			
12-13	4.5		6.0												
13-14	5.5								12.5						9.5
14-15	7.0			7.0		10.5									
15-16	8.0	8.5		5.5								9.5			
16-17		4.0					10.5								
17-18			6.0											9.0	
18-19						11.0				11.0	10.5				
19-20	4.5	10.5		7.0						10.0		9.5	10.0		
20-21	5.5	6.0		5.5						9.0					
21-22	6.5												11.5		
22-23	8.0		6.0		12.0	12.0									10.5
23-24															
24-25		8.0		7.0				9.0				12.0			
25-26				5.5											
26-27	4.0										10.5			11.5	
27-28	5.5		6.0		10.0			11.5							
28-29	6.5	10.0					12.0			11.0		12.0			
29-30	7.5	6.0		7.0						10.0					
30-31				5.5						9.0					