

MAS RR Lyrae Ephemeris for July 2015

all times in U.T.

Page 1

	SW	XX	AT	SW	TZ	YZ	AA	BO	BR	DN	TZ	BH	RS	ST	SW	SZ	TV	TW	UU	UY	UY	RW	TT	
	AND	AND	AND	AQR	AQR	AQR	AQR	AQR	AQR	AQR	AUR	AUR	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	CAM	CNC	CNC	
MAX	9.3	10.3	10.8	10.5	11.6	12.1	11.4	11.6	10.8	10.7	11.2	11.1	9.8	10.6	11.3	12.0	10.8	10.8	11.2	10.6	11.5	10.7	11.0	
MIN	10.8	11.6	11.5	12.1	12.4	12.9	13.0	12.6	11.9	11.5	12.8	12.6	11.3	11.8	12.7	13.4	11.5	12.1	12.7	12.0	11.9	12.6	12.3	
RISE	2	3	3	1	3	2	2	3	2	3	2	2	2	3	2	2	3	2	1	2	3	2	3	
0- 1		7.5	9.5	11.0	8.5			10.5		6.0			7.0	7.0	5.0	4.0	9.0	4.0					3.5	
1- 2				9.0			5.5				10.5				5.5	5.0	7.5	5.5	8.5				5.0	
2- 3	8.5		6.0	7.0			10.5					11.0	4.0	4.0	6.0	6.0	6.0	7.0	6.5	7.5	7.0			
3- 4	5.5	5.0		5.5	5.0	6.0		5.5		10.0	9.5	9.0	7.5	9.5	7.0	7.0	4.5	8.5	4.5				2.0	
4- 5			2.0	3.5	8.5	8.5	6.5		11.0						7.5	8.0	3.0	10.5	2.0	6.0	3.5	3.0	2.0	
5- 6	11.0	9.0	8.0					7.5	10.0	7.5			4.5	6.5	8.0		9.0						5.5	
6- 7	8.0			10.5					9.5				7.5		8.5		7.5		9.0	5.0	7.0			
7- 8	5.0		4.0	8.5	5.0		7.5	9.5	8.5				2.0	3.5	9.5		6.0	2.0	7.0				2.0	
8- 9		6.0	10.0	6.5	8.0	5.5			7.5		2.0	9.5	5.0	9.0			4.5	3.5	5.0	4.0	4.0			
9-10	10.5			4.5		8.0			6.5				8.0				3.0	5.5	3.0				5.5	
10-11	7.5	10.0	6.0	2.5		10.5	8.5		6.0	9.0	10.5		2.5	6.0		2.0	9.0	7.0		3.0	7.0	3.5		
11-12	4.5	3.5			5.0								5.5			3.5	7.5	8.5	9.5				2.5	
12-13			2.5	9.5	8.0		4.5	6.0		7.0	9.5		8.5	3.0		4.5	6.0	10.0	7.5				4.0	
13-14	10.0	7.5	8.5	8.0		4.5	9.5					9.5	3.0	8.5		5.5	4.5		5.5				5.5	
14-15	7.0			6.0		7.0		8.0					6.0			6.5	3.0		3.5					7.5
15-16	4.5		4.5	4.0	4.5	9.5	5.5			11.0			9.0	5.5	2.5	7.5	9.0	2.0					2.5	
16-17		5.0	10.5		8.0		11.0	10.0					3.0		3.0	8.5	7.5	3.5	10.5				4.0	4.0
17-18	9.5			11.0						8.5	2.5		6.5	2.5	3.5		6.0	5.0	8.0	6.5	6.0			
18-19	6.5	9.0	6.5	9.0		4.0	6.5		10.5			10.0	9.5	8.0	4.0		4.5	6.5	6.0				7.5	
19-20	4.0			7.0	4.5	6.5		4.5	9.5	6.0	10.5	8.0	3.5		5.0		3.0	8.0	4.0	5.5	2.5			
20-21			3.0	5.0	8.0	9.0			8.5				7.0	5.0	5.5		9.0	9.5	2.0				4.5	
21-22	9.0	6.5	9.0	3.0			7.5	6.5	8.0		9.5				6.0		7.5			4.5	6.0	2.0		
22-23	6.0								7.0	10.0			4.0	2.0	7.0	3.0	6.0		9.0				7.5	
23-24		10.5	5.0	10.5	4.5			8.5	6.0			10.5	7.5	7.5	7.5	4.0	4.5		7.0	3.5	3.0			
24-25		4.0	11.0	8.5	8.0	5.5	9.0		5.0	8.0		8.5			8.0	5.0	3.0	3.0	4.5				4.5	
25-26	8.5			6.5		8.0		10.5					4.5	4.5	9.0	6.0	9.0	4.5	2.5	2.0	6.0			
26-27	5.5	8.0	7.0	4.5		10.5	4.5				2.5		7.5	10.5	9.5	7.0	7.5	6.0					7.5	
27-28				2.5	4.5		10.0						2.0			8.0	6.0	7.5	9.5			3.0	2.5	
28-29	10.5		3.5		8.0			5.0			11.0	11.0	5.0	7.0			4.5	9.0	7.5				4.5	
29-30	8.0	5.0	9.0	9.5		4.5	5.5			9.5		9.0	8.0				3.0		5.5				6.0	
30-31	5.0			7.5		7.0	11.0	7.0			10.0		2.5	4.0			9.0		3.5	7.0	8.0			

MAS RR Lyrae Ephemeris for July 2015

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Page 2

	VZ	SS	RV	RZ	VW	YZ	AN	RR	RU	RV	RX	RZ	UU	XX	XZ	DM	RW	XZ	RX	SV	RX	SS	RR
	CNC	CVN	CAP	CAP	CAP	CAP	CAP	CET	CET	CET	CET	CET	CET	CYG	CYG	CYG	DRA	DRA	ERI	ERI	FOR	FOR	GEM
MAX	7.2	11.2	10.2	12.5	12.6	11.0	12.0	9.3	10.8	10.3	11.0	11.2	11.5	11.4	9.1	11.2	11.0	9.6	9.2	9.6	11.1	9.4	10.7
MIN	7.9	12.5	11.6	13.5	13.5	11.6	13.0	10.3	12.1	11.2	11.7	12.4	12.4	12.5	10.5	12.7	12.0	10.3	10.1	10.2	12.5	10.6	11.9
RISE	1	2	2	3	2	3	5	2	3	3	3	2	3	1	3	2	2	3	3	5	2	2	2
0- 1		3.5	8.0	3.5	7.0	9.5	5.5	11.0			10.5	8.0		2.5		11.0	2.0	6.5				9.5	2.0
1- 2		2.5	5.5	8.5	6.0	5.5						8.5	10.0	7.5	10.5	7.0	10.0	5.5					9.5
2- 3			3.0	3.5	4.5	7.5	8.5		7.5					3.0	9.0	3.0	7.0	4.0					9.0
3- 4				8.5	3.0	3.0				9.0	7.5	9.5		8.0	7.0	9.5	4.5	3.0	10.5				9.0
4- 5			9.0	3.5	9.5	5.5		8.0			11.0	10.0	10.5	3.5	5.5	5.5	2.0	2.0		10.5		9.0	11.0
5- 6			6.5	8.5	8.0	7.5	5.0	10.5				10.5		8.5	4.0		9.5						8.5
6- 7		8.5	4.0	4.0	6.5	3.5			10.0			11.0	6.5	4.0	2.5	8.0	7.0	11.0					10.5
7- 8		7.5		8.5	5.0	5.5	8.5				8.0			9.0		4.0	4.0	10.0					
8- 9		6.5	9.5	4.0	4.0	8.0				8.5				4.5	10.5	10.5		9.0					
9-10		5.5	7.0	9.0	10.0	3.5		7.5	8.5				7.0	9.5	9.0	6.5	9.5	7.5		10.5			
10-11		4.5	4.5	4.0	8.5	6.0	5.0	10.0						5.0	7.0	2.5	6.5	6.5					
11-12		3.5		9.0	7.0	8.0					8.5			10.5	5.5	9.0	4.0	5.5					
12-13		2.5	10.5	4.0	6.0	4.0	8.0						7.5	5.5	4.0	5.0		4.5					
13-14			8.0	9.0	4.5	6.0			11.0	8.5				11.0	2.5		9.0	3.0				11.0	
14-15			5.5	4.0	3.0	8.5		7.0						6.0		7.5	6.5	2.0		10.5			
15-16			2.5	9.0	9.5	4.0	4.5	9.5			8.5		8.5		10.5	3.5	3.5						
16-17			11.0	4.5	8.0	6.0			9.0					7.0	9.0	9.5						11.0	
17-18		8.5	8.5	9.0	6.5	8.5	8.0							2.0	7.0	6.0	8.5	10.0					
18-19		7.5	6.0	4.5	5.0	4.0				8.0			9.0	7.5	5.5	2.0	6.0	9.0					
19-20		6.5	3.5	9.5	4.0	6.5			7.5		9.0			3.0	4.0	8.5	3.0	8.0		10.5	10.5		
20-21	2.0	5.5		4.5	10.0	8.5	4.5	9.0						8.0	2.5	4.5	11.0	6.5					
21-22		4.5	9.0	9.5	8.5	4.5				11.0			10.0	3.5		10.5	8.5	5.5					
22-23		3.5	6.5	4.5	7.0	6.5	8.0							8.5	10.5	7.0	5.5	4.5				10.0	
23-24		2.5	4.0	9.5	6.0	9.0			10.0	8.0	9.5			4.0	8.5	3.0	3.0	3.5					
24-25				5.0	4.5	4.5							10.5	9.0	7.0	9.0	10.5	2.0		10.5			
25-26	2.0		10.0	9.5	3.0	7.0	4.5	8.5			8.5			4.5	5.5	5.5	8.0					10.0	
26-27			7.5	5.0	9.0	9.0		11.0	8.5	10.5	6.5	9.0	6.5	9.5	4.0		5.5						
27-28			5.0	10.0	8.0	5.0	7.5				10.0	9.5		5.0	2.5	7.5	2.5	10.5					
28-29		9.0		5.0	6.5	7.0						10.0		10.0		4.0	10.5	9.0					
29-30		8.0	10.5	10.0	5.0	9.5	11.0		6.5			10.5	7.0	5.5	10.5	10.0	7.5	8.0		10.0			2.0
30-31		7.0	8.0	5.0	4.0	5.0	4.0	7.5	11.0		6.5	11.0		10.5	8.5	6.5	5.0	7.0	11.0				

	TW	VX	VZ	AR	DL	DY	DY	DY	LS	UU	RR	SS	ST	TV	WW	AA	SZ	SZ	SZ	RR	RZ	ST	AV	
	HER	HER	HER	HER	HER	HER	HER	HER	HER	HYA	LEO	LEO	LEO	LEO	LEO	LEO	LYN	LYN	LYN	LYR	LYR	OPH	PEG	
MAX	10.5	9.9	10.7	10.6	11.0	10.2	10.2	10.2	10.8	10.7	10.0	10.5	10.8	11.5	11.0	11.3	9.1	9.1	9.1	7.1	10.0	11.3	9.9	
MIN	11.8	10.4	12.0	11.6	12.4	10.6	10.6	10.6	11.1	12.3	11.7	12.0	12.3	12.6	12.0	12.4	9.6	9.6	9.6	8.1	12.0	12.7	10.9	
RISE	2	2	2	2	1	1	1	1	2	2	2	2	2	2	3	2	1	1	1	2	2	3	2	
0- 1	5.5	8.5	6.5	10.5		5.0	9.0		4.0						2.5			3.0	4.5	4.0	3.0	10.0		
1- 2	10.5	6.5	4.0	9.0	3.5	2.5	6.0	10.0	2.0	2.5		4.0						2.0		7.5	4.5		5.0	
2- 3	5.5	4.5		7.5	8.0		3.5	7.0	5.5		3.5					2.5	10.0	4.0		11.0	5.5	9.0	9.0	
3- 4	10.5	2.0	8.5	6.0		8.0		4.5	4.0				2.0	2.5		3.5					6.0	6.5	3.5	
4- 5	5.5		6.0	4.5	2.5	5.5	9.0	2.0	2.0										2.5	3.5	6.5	4.5	8.0	
5- 6	10.0	9.0	3.0	3.0	7.0	3.0	6.5		5.5				4.0	2.5		2.5		10.5		7.0	7.0	2.0	2.5	
6- 7	5.5	6.5	10.5	2.0			4.0	7.5	4.0			4.0	3.0					3.5		10.0	7.5		6.5	
7- 8	10.0	4.5	8.0			8.5		5.0	2.0		3.0		2.0	3.0			3.0				8.0	8.0	11.0	
8- 9	5.5	2.5	5.0	10.0	6.0	6.0	9.5	2.5	5.5							2.5			2.0	3.0	8.5	5.5	5.5	
9-10	10.0		2.0	9.0	10.5	3.0	7.0		4.0					3.5				10.0	4.0	6.0	9.0	3.0	9.5	
10-11	5.5	9.0	10.0	7.5			4.0	8.0	2.0									3.0		9.5	9.5		4.5	
11-12	10.0	7.0	7.0	6.0	5.0	9.0		5.0	6.0			4.5				2.0	2.0				10.0	9.5	8.5	
12-13	5.5	4.5	4.0	4.5	9.5	6.0	9.5	2.5	4.0	2.5	2.0						4.5		10.0	2.0	10.5	7.0	3.0	
13-14	10.0	2.5		3.0		3.5	7.0		2.0										3.5	5.5		4.5	7.5	
14-15	5.0		9.0		4.0		4.5	8.0	6.0							2.0		2.5		8.5		2.0	2.0	
15-16	10.0	9.0	6.0		8.5	9.0	2.0	5.5	4.0								10.5						6.0	
16-17	5.0	7.0	3.0	10.0		6.5		3.0	2.0		4.0		4.0				3.5					8.0	10.5	
17-18	10.0	5.0	11.0	8.5	3.0	4.0	7.5		6.0				3.0			2.0			3.0	4.5		6.0	5.0	
18-19	5.0	3.0	8.0	7.0	7.5		5.0	8.5	4.0				2.0					2.0		7.5		3.5	9.0	
19-20	10.0		5.0	5.5		9.5	2.5	6.0	2.0							10.0	4.0			11.0	2.0		4.0	
20-21	5.0	9.5	2.0	4.0	2.0	7.0		3.0	6.0								3.0					2.5	9.5	8.0
21-22	10.0	7.5	10.0	3.0	6.5	4.0	8.0		4.0		3.5								2.5	3.5	3.0	7.0	2.5	
22-23	5.0	5.0	7.0		11.0		5.0	8.5	2.0									10.0		7.0	4.0	4.5	7.0	
23-24	10.0	3.0	4.0			9.5	2.5	6.0	6.0	2.5		2.0						3.5		10.0	4.5	2.5	11.0	
24-25	5.0			9.5	5.5	7.0		3.5	4.0								2.5				5.0		5.5	
25-26	10.0	9.5	9.0	8.5	10.0	4.5	8.0		2.0										2.0	3.0	5.5	8.5	10.0	
26-27	5.0	7.5	6.0	7.0		2.0	5.5	9.0	6.0		3.0		5.0						4.0	6.0	6.0	6.0	4.5	
27-28	9.5	5.5	3.5	5.5	4.5		3.0	6.5	4.0				4.0					3.0		9.5	6.5	3.5	8.5	
28-29	5.0	3.0	11.0	4.0	9.0	7.5		4.0	2.0		2.0	3.0				2.0					7.0		3.5	
29-30	9.5		8.0	2.5		5.0	8.5		6.0				2.0			4.0		10.0	2.0	7.5	9.5	7.5		
30-31	5.0	10.0	5.5		3.5	2.0	6.0	9.5	4.0									3.5	5.5	8.0	7.0	2.0		

	BH	RU	DF	RV	TU
	PEG	SCL	SER	UMA	UMA
MAX	10.0	9.3	11.4	10.1	9.2
MIN	10.8	10.8	13.0	11.2	10.2
RISE	3	2	2	3	3

0- 1				10.5	
1- 2	9.5		7.5	9.0	3.0
2- 3			4.5	7.5	6.0
3- 4	7.5			6.0	
4- 5				4.5	
5- 6	6.0		6.0	3.0	
6- 7			3.0		3.5
7- 8	4.0				
8- 9	10.5		7.5	9.5	
9-10			4.5	8.0	
10-11	9.0		1.5	6.5	
11-12				5.0	4.0
12-13	7.0		6.5	3.5	
13-14			3.5	2.0	
14-15	5.0				
15-16			8.0	10.0	
16-17	3.5	11.0	5.0	8.5	4.5
17-18	10.0	10.5	2.0	7.0	
18-19		10.0		5.5	
19-20	8.0	10.0	6.5	4.0	
20-21		9.5	3.5	2.5	2.0
21-22	6.5	9.5			5.0
22-23		9.0	8.0	10.5	
23-24	4.5	8.5	5.0	9.0	
24-25		8.5	2.0	7.5	
25-26		8.0		6.0	2.5
26-27	9.5	7.5	6.5	4.5	5.5
27-28		7.5	3.5	3.0	
28-29	7.5	7.0			
29-30		6.5	8.0		
30-31	5.5	6.5	5.0	9.5	3.0