

MAS Eclipsing Binary Ephemeris for December 2024

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	EK	EK	XZ	OO	OO	V342	V343
	AND	AND	AND	AND	AND	AND	AND	AND	AND	AND	AND	AND	AND	AQR	AQR	AQR	AQR	AQR	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	10.8	10.8	9.3	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	11.3	11.3	11.2	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	3	3	7	3	3	7	4
TOT		2																				3	
							(S)						(S)					(S)			(S)		
0- 1	2.5			6.5	3.5		3.5		3.0	9.5		7.0	2.5	1.0	3.5			5.0					
1- 2			7.5				3.0		1.0			3.0	8.0				3.0						
2- 3				8.5		7.0	3.0			5.5		8.5	4.0	0.0				1.0					
3- 4	6.0			1.0		7.0	3.0					4.5	9.5										
4- 5			7.0		5.0	7.0	3.0		7.0	1.0	0.0	0.5	5.0		1.0		4.5						
5- 6	3.5			3.5		7.0	3.0		5.0	6.5	0.5	6.0	1.0		3.5	3.0		2.5		0.0		1.5	
6- 7						6.5	2.5	8.5	3.5		0.5	1.5	6.5				0.5			0.5			
7- 8	0.5	0.5	6.5	5.5		6.5	2.5	8.0	1.5	2.5	1.0	7.5	2.5							0.5			
8- 9	7.0				7.0	6.5	2.5	7.5		7.5	1.0	3.0	8.0					4.0	1.5	1.0			
9-10				7.5		6.5	2.5	7.5			1.5	9.0	4.0		1.0		2.0			1.5			
10-11	4.0		6.0	0.0		6.5	2.5	7.0	7.5	3.5	1.5	4.5	9.5		3.5			0.0		1.5			
11-12		3.5				6.0	2.0	6.5	5.5	9.0	2.0	0.5	5.5			4.0				2.0			
12-13	1.5			2.0	8.5	6.0	2.0	6.5	4.0		2.0	6.0	1.0			0.5	3.5						0.5
13-14	7.5		5.0			6.0	2.0	6.0	2.0	5.0	2.5	2.0	7.0					1.5					
14-15				4.5		6.0	2.0	6.0	0.0	10.0	2.5	7.5	2.5		1.0								
15-16	5.0	6.5			1.5	5.5	2.0	5.5		1.0	3.0	3.5	8.5		4.0								
16-17			4.5	6.5	10.0	5.5	1.5	5.0	8.0	6.0	3.0	9.0	4.0					3.0					
17-18	2.0					5.5	1.5	5.0	6.0		3.5	5.0	10.0				1.0						
18-19	8.5			8.5		5.5	1.5	4.5	4.0	2.0	4.0	0.5	5.5			1.5							
19-20			4.0	1.0	3.5	5.5	1.5	4.0	2.5	7.5	4.0	6.5	1.5		1.0			4.5					
20-21	5.5					5.0	1.0	4.0	0.5		4.5	2.0	7.0		4.0		3.0						
21-22				3.5		5.0	1.0	3.5		3.0	4.5	7.5	3.0					1.0					
22-23	3.0		3.0			5.0	1.0	3.0	8.0	8.5	5.0	3.5	8.5									0.5	
23-24				5.5	5.0	5.0	1.0	3.0	6.5		5.0	9.0	4.5				4.5		1.0				2.0
24-25	0.0					5.0	1.0	2.5	4.5	4.5	5.5	5.0	0.0		1.5	2.5		2.5			0.0		
25-26	6.5		2.5	7.5		4.5	0.5	2.0	3.0	9.5	5.5	1.0	5.5		4.0		0.5				0.5		
26-27				0.0		4.5	0.5	2.0	1.0	0.5	6.0	6.5	1.5								1.0		
27-28	3.5				7.0	4.5	0.5	1.5		5.5	6.0	2.0	7.0					4.0			1.0		
28-29			2.0	2.0		4.5	0.5	1.0			6.5	8.0	3.0				2.0				1.5		
29-30	1.0					4.5	0.5	1.0	7.0	1.5	6.5	3.5	8.5		1.5			0.0			2.0		
30-31	7.0			4.5		4.0	0.0	0.5	5.0	7.0	7.0	9.5	4.5		4.0	3.5					2.0		

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	V346	RX	SS	SS	RY	SX	TT	WW	WW	AP	AP	AR	AR	CL	EM	EP	HP	HP	IM	V459	V459	SS	SS	
	AQL	ARI	ARI	ARI	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	AUR	BOO	BOO
MAX	9.0	9.4	10.1	10.1	11.7	8.2	8.7	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	
MIN	10.4	9.9	11.1	11.1	14.0	9.0	9.7	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	
DUR	4	4	3	3	6	4	5	5	5	4	4	5	5	4	4	3	3	3	4	4	4	18	18	
TOT																						6	6	
				(S)				(S)		(S)		(S)					(S)			(S)	(2)	(3)		
0- 1		6.0	8.0	3.0	11.0		9.5			12.0	5.5			8.5	8.5	7.0			0.0	5.0				
1- 2		7.0	3.5	8.5		2.5				2.0	8.5	5.0				11.5	9.0		6.0	6.5				
2- 3		7.5	8.5	4.0		7.5		0.5		5.0	12.0				4.0	1.5		2.0	12.0	8.0				
3- 4		8.5	4.0	9.0	4.5	12.5	1.5		7.0	8.5	1.5		6.5			6.0		12.5		9.5				
4- 5		9.0		4.5			9.5			12.0	5.0			2.0		10.0	5.5			11.0				
5- 6			5.0							1.5	8.5	8.0		8.0		0.5				12.5				
6- 7			0.5	5.0						5.0	11.5					4.5		8.5	5.5		1.0			
7- 8			5.5	0.5		3.5	1.5	2.0		8.0	1.5		9.5			9.0	1.5		11.5		2.5			
8- 9	0.5		1.0	6.0		8.5	9.5		8.0	11.5	4.5						12.0				4.0			
9-10			6.5	1.5						1.0	8.0	11.0		1.5	11.0	3.5		5.0		5.5		11.0		
10-11			2.0	6.5						4.5	11.5			7.5		8.0					7.0			
11-12			7.0	2.0	8.5		1.0			8.0			13.0		6.5	12.5	8.0		5.5		9.0			
12-13			2.5	7.5			9.0	3.0		11.0	4.5					2.5		1.0	11.5		10.5			
13-14			7.5	3.0		5.0			9.5		7.5				2.5	7.0		11.5			12.0			
14-15			3.0	8.0	2.0	10.0				4.0	11.0			1.0		11.5	4.5			0.5				
15-16			8.5	3.5			1.0			7.5				7.0		1.5					2.0			
16-17			4.0	9.0			9.0			11.0	4.0			13.0		6.0		7.5	5.0	3.5				
17-18			9.0	4.5				4.0			7.5					10.0	0.5		11.0	5.0				
18-19			4.5			1.0			10.5	4.0	10.5					0.5	11.0				6.5			
19-20	2.0		0.0	5.0	13.0	6.0	1.0			7.0				0.5		5.0		4.0		8.0				
20-21			5.5	0.5		11.0	9.0			10.5	3.5			6.5	9.5	9.0				9.5				
21-22			1.0	5.5							7.0			12.0			7.0		5.0	11.0				
22-23			6.0	1.0	6.0			5.5		3.5	10.5				5.0	3.5		0.0	11.0	12.5				
23-24			1.5	6.5			1.0		11.5	7.0						8.0		10.5			1.5			
24-25			7.0	2.0		2.0	9.0			10.0	3.5				0.5	12.5	3.5				3.0	10.0		
25-26			2.5	7.0		7.0					6.5			6.0		2.5					4.5			
26-27			7.5	2.5		12.5				3.0	10.0	0.0		11.5		7.0		6.5	4.5		6.0			
27-28		0.5	3.0	8.0			1.0	6.5		6.5						11.5			10.5		7.5			
28-29		1.5	8.0	3.5			9.0		13.0	10.0	3.0		2.0			1.5	10.0				9.0			
29-30	1.0	2.0	3.5	8.5							6.5				12.0	6.0		3.0			10.5			
30-31		3.0	9.0	4.0	10.5	3.5				3.0	9.5	3.5		5.5		10.5					12.0			

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	ZZ	AD	AD	44	Y	SV	AL	AN	CD	CD	R	RT	SX	TU	TZ	TZ	UU	XZ	YY	AC	AK	AM	AM
	BOO	BOO	BOO	BOO	CAM	CAM	CAM	CAM	CAM	CAM	CMA	CMA	CMA	CMA	CMA	CMA	CMA	CMI	CMI	CMI	CMI	CMI	CMI
MAX	6.8	9.8	9.8	4.7	10.6	8.6	10.5	9.7	11.6	11.6	6.2	11.4	10.3	9.7	9.8	9.8	10.0	9.7	8.5	11.0	10.1	10.0	10.0
MIN	7.6	10.4	10.2	4.8	12.4	9.4	11.3	10.5	11.8	11.8	6.8	12.9	11.4	10.7	10.5	10.5	12.5	10.2	9.1	11.5	11.5	10.7	10.4
DUR	5	4	4	3	6	3	5	8	5	5	4	5	4	4	4	4	5	3	4	3	4	5	6
TOT	(S)		(S)	(S)						(S)						(S)							(S)
0- 1						11.0			12.0	2.5	10.0	6.0		6.5	4.0			3.5	5.5	5.5			8.0
1- 2	11.5					1.0	3.5		6.0					9.5				7.5	8.0		5.5		8.5
2- 3				1.5	5.5	11.0			0.5	9.5							4.5	11.0	10.0		8.5		9.0
3- 4					10.0					4.0			8.0						12.5		12.0		9.5
4- 5					0.0				7.5			3.5					8.5	5.0					10.0
5- 6				9.0	4.5	3.0	10.5	2.0	11.0		10.5							8.5		10.0	4.5		10.5
6- 7	11.5				9.0	11.0				5.5								12.5		7.0	8.0		11.0
7- 8									9.0		5.5									4.0	11.0		11.5
8- 9					4.0				3.0	12.5	9.0		5.0	4.0				6.0					12.0
9-10					8.5	2.5				6.5	12.0	7.5		7.0				10.0			3.5		12.0
10-11					13.0	10.5			10.0	1.0				10.0							7.0		12.5
11-12	11.0				3.0				4.5				11.0					3.5	4.5	12.0	10.0		
12-13					7.5					8.0								7.0	6.5	8.5			
13-14					12.0	2.0			11.5	2.5		4.5						11.0	9.0	5.5			
14-15			9.0		2.0	10.0			6.0										11.0		6.0		
15-16		9.5		7.0	6.5				0.5	9.5	4.5				11.0		4.5	4.5			9.0		
16-17	11.0		10.5		11.0				13.0	4.0	8.0		7.5					8.5			12.0		
17-18		11.5			1.5	2.0			7.5		11.0			4.5		10.0	8.5	12.5					3.5
18-19			12.0		6.0	9.5			1.5	11.0		9.0		7.5						10.5	5.0	4.0	
19-20					10.5					5.0				10.5	6.5			6.0		7.0	8.0	4.5	
20-21					0.5				8.5									9.5		4.0	11.5	5.0	
21-22	11.0				5.0	1.5			3.0	12.0			4.5			5.5							5.5
22-23					9.5	9.5				6.5		6.0						3.5			4.0	6.0	
23-24								10.0	1.0									7.0	5.0		7.0	6.5	
24-25					4.0				4.5		6.5		10.5					11.0	7.5	12.0	10.5	7.0	
25-26				0.0	5.0	8.5	1.0		8.0	10.0									9.5	9.0		7.5	
26-27	10.5						9.0	10.5	11.5	2.0		3.0		5.0				4.5	12.0	5.5	3.0	8.0	
27-28					3.5				5.5		10.0			8.0				8.5			6.5	8.5	
28-29				12.0	8.0				0.0	9.0							4.5	12.0			9.5	9.0	
29-30					12.5	0.5			12.5	3.5			7.5								12.5	9.0	
30-31					2.5	8.5			7.0								8.5	6.0				9.5	

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	RW	TY	RZ	TV	TW	ZZ	AB	CW	CW	DZ	IR	IS	IT	MM	OR	OX	OX	PV	PV	V364	V364	V375	V380
	CAP	CAP	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS	CAS
MAX	9.8	10.5	6.4	7.3	8.3	10.7	10.2	11.8	11.8	11.6	10.8	11.6	11.0	11.3	11.4	10.1	10.1	10.0	10.0	11.2	11.2	10.1	10.4
MIN	10.8	11.6	7.8	8.4	8.9	11.1	12.2	12.5	12.5	12.3	12.1	12.6	11.8	11.9	12.4	10.9	10.9	10.6	10.6	11.7	11.7	10.9	11.1
DUR	5	4	4	4	5	4	4	3	3	4	4	5	5	5	4	5	5	3	3	4	4	5	5
TOT																							
									(S)								(S)		(S)		(S)		
0- 1				5.0		8.5		1.5	5.0			1.5		8.5					6.0	4.0			
1- 2		0.5			3.0		3.5	0.5	4.0		2.5					6.5		2.5					6.5
2- 3				0.5			12.0	7.0	3.0	8.0					0.5	11.0		0.0				8.0	
3- 4			2.0					6.0	2.0	3.0	3.5		5.0		6.5					6.0			
4- 5			6.5			2.0		5.0	1.0						12.0						0.5		
5- 6			11.5		10.0	8.0	6.0	4.0	0.0		4.5											7.0	8.5
6- 7								3.0	6.5	6.5				3.5		6.0		8.5		8.0			
7- 8				11.0				2.0	5.5	1.0	5.5	10.0	2.5	7.0			10.5		6.0		2.5		
8- 9					6.5			0.5	4.5						6.0			2.5				5.5	1.5
9-10			1.5	6.5		1.5	8.0	7.5	3.5	9.5	6.5	6.5			12.0				0.0				10.0
10-11			6.0			7.5		6.5	2.5	4.5											5.0		
11-12			11.0	2.0	3.0			5.0	1.5		7.5	2.5				5.5						4.5	
12-13							2.0	4.0	0.5								10.0						3.5
13-14							10.5	3.0	7.0	8.0	8.5			2.0	5.5			8.5		7.0			12.0
14-15					1.0			2.0	6.0	2.5	1.0			6.0	11.5			6.0	1.5		3.0		
15-16	0.5		1.0		10.0	6.5		1.0	5.0					10.0				2.5					
16-17			5.5			12.5	4.0	0.0	4.0		2.0					5.0			0.0		9.0		5.0
17-18			10.5					6.5	3.0	6.0							9.5			3.5		2.0	
18-19				8.0	6.5			5.5	2.0	1.0	3.0				5.0								
19-20						0.5		4.5	0.5						11.0								
20-21				3.5		6.0	6.5	3.5	7.5	9.5	4.0	7.5		1.0				8.5		5.5		0.5	6.5
21-22			0.5		3.0	12.0		2.5	6.5	4.0				5.0		4.5		6.5		0.0	12.0		
22-23			5.0					1.5	5.0		5.0	3.5		8.5			9.0	2.5					
23-24			9.5				0.5	0.5	4.0						4.5				0.5	7.5			
24-25							9.0	7.0	3.0	7.5	6.0				10.5						2.0	10.5	8.5
25-26					10.0	5.5		6.0	2.0	2.5													
26-27						11.5		5.0	1.0		7.0					4.0				9.5			
27-28				9.5			2.5	4.0	0.0								8.5	8.5			4.0	9.5	1.5
28-29			4.5		6.5		11.5	3.0	6.5	5.5	8.0			3.5	4.0				6.5				10.0
29-30			9.0	5.0				2.0	5.5	0.5	0.5			7.5	10.0			2.5					
30-31						5.0		0.5	4.5										0.5		6.0	8.0	

	U	SU	WW	WZ	WZ	XX	ZZ	CW	CW	DK	DL	DV	EG	EK	GK	TT	TW	TW	TX	RZ	RZ	SS	SS
	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CET	CET	CET	CET	COM	COM	COM	COM
MAX	6.7	8.8	11.1	11.7	11.7	8.5	9.3	7.6	7.6	12.2	12.4	11.6	9.6	8.2	6.9	10.8	10.4	10.4	10.9	10.0	10.0	10.9	10.9
MIN	9.8	9.8	11.9	11.3	11.1	9.6	10.0	8.0	8.0	14.2	13.2	12.4	10.6	9.5	7.4	11.3	11.2	11.2	11.5	10.7	10.7	11.5	11.5
DUR	4	4	4	3	3	4	5	5	5	4	5	4	3	6	4	3	3	3	4	3	3	4	4
TOT	2																		1				
					(S)				(S)								(S)			(S)		(S)	
0- 1				8.0	3.0					8.0	7.5		9.0	6.5	9.5	4.5	1.5	5.0	6.0				10.0
1- 2	11.0			4.0	9.0		1.5		3.5	7.5		3.0	11.0		8.0	3.5	0.0	4.0					
2- 3				10.0	5.0			12.5		7.5		7.0	0.0		6.5	3.0		2.5					
3- 4				6.0	1.0		5.0			7.0		10.5	2.5		5.0	2.5	5.5	1.5	5.0				
4- 5				2.0	7.0	0.5				6.5			4.5		3.5	1.5	4.0	0.5				8.0	
5- 6		8.0		8.0	3.0		8.5	6.0		6.5	5.0		6.5		2.0	1.0	3.0						8.5
6- 7	11.0	5.5		4.0	9.0	9.0				6.0			9.0		0.5	0.5	2.0	5.5	4.0			9.5	
7- 8		3.0		0.0	5.0		12.0			5.5			11.0				0.5	4.5		7.0			
8- 9		0.5	8.5	6.0	1.0					5.5		2.5						3.0		7.5			
9-10				2.5	7.5			8.0		5.0		6.0	2.0	3.0			6.0	2.0	3.5	8.0			
10-11				8.5	3.5					4.5	2.0	10.0	4.0				4.5	1.0					7.5
11-12	10.5			4.5	9.5	1.0				4.0			6.5				3.5					8.5	
12-13				0.5	5.5				1.5	4.0			8.5				2.5	6.0	2.5				9.0
13-14				6.5	1.5	9.0		10.5		3.5	8.5		10.5		12.0		1.0	5.0				10.0	
14-15				2.5	7.5					3.0			13.0		10.5	6.5		3.5	7.5				
15-16		5.5		8.5	3.5					3.0		1.5	2.0		9.0	6.0	6.5	2.5	1.5				
16-17	10.0	3.5		4.5	9.5		1.5	3.5		2.5		5.5	4.0		7.5	5.0	5.0	1.5					
17-18		1.0		0.5	5.5				12.5	2.0		9.5	6.0		6.0	4.5	4.0	0.0	7.0				8.0
18-19				6.5	1.5	1.5	5.0			2.0	6.0		8.5		4.5	4.0	3.0		0.5	7.5		9.0	
19-20				2.5	7.5					1.5			10.5		3.0	3.0	1.5	5.5		7.5			9.5
20-21				9.0	4.0	9.5	8.5		6.0	1.0			12.5		1.5	2.5	0.5	4.0	6.0	8.0			
21-22	10.0			5.0	10.0					1.0			1.5				2.0	3.0					
22-23			4.0	1.0	6.0		11.5			0.5		1.0	4.0	10.0		1.0	5.5	2.0					
23-24				7.0	2.0					0.0	3.0	5.0	6.0			0.5	4.5	0.5	5.0			7.5	
24-25		6.0		3.0	8.0			8.0				8.5	8.0				3.5						8.5
25-26		3.5		9.0	4.0	1.5						12.5	10.0				2.0	6.0				9.0	
26-27	9.5	1.5		5.0	0.0								12.5				1.0	4.5	4.0				
27-28				1.0	6.0	9.5		1.5					1.5					3.5					
28-29				7.0	2.0			10.5			0.5		3.5		11.5		6.0	2.5					
29-30				3.0	8.0							0.0	5.5		10.0		5.0	1.0	3.5		7.5		
30-31				9.0	4.0							4.0	8.0		8.5		3.5				7.5	8.0	



	V466	V548	V704	1034	W	TT	TY	YY	FZ	Z	RZ	TW	UZ	UZ	AI	BH	S	TZ	YY	YY	RW	SX	TX
	CYG	CYG	CYG	CYG	DEL	DEL	DEL	DEL	DEL	DRA	DRA	DRA	DRA	DRA	DRA	DRA	EQU	ERI	ERI	ERI	GEM	GEM	GEM
MAX	10.8	8.9	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	9.8	8.4	8.4	9.6	10.8	10.0
MIN	11.6	9.7	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	12.6	9.1	9.1	11.6	11.7	11.9
DUR	4	5	4	4	7	5	4	4	3	4	3	5	5	5	4	5	5	4	3	3	5	5	6
TOT					2							1						1			1		
	(S)													(S)						(S)			
0- 1										0.5	12.0		3.5						6.5	2.5		6.5	
1- 2			3.0			2.0				9.0	1.5				10.0			5.0	5.5	1.5			
2- 3	0.5	3.5									4.0								4.5	1.0			
3- 4									1.5			8.5	9.5						4.0	7.5	11.5		
4- 5										2.0									3.0	7.0		9.0	
5- 6			3.0							10.5	11.0			1.0	0.5				2.0	6.0			
6- 7											0.5	4.0						10.0	1.0	5.0	8.0		
7- 8						1.0	3.0				3.0				10.0					4.0		2.5	11.0
8- 9										4.0				7.0			1.0		7.0	3.5		11.5	
9-10			2.5	1.0						12.5						1.0		0.5	6.5	2.5	5.0		
10-11			6.0						2.5		10.0								5.5	1.5			6.5
11-12		4.0						2.0			12.5				0.0				4.5	1.0		5.0	
12-13										5.5	2.0								4.0	7.5	1.5		
13-14			2.5								4.5		4.5		9.5				3.0	7.0			
14-15			6.0						0.5							12.0		5.5	2.0	6.0			
15-16							1.5				9.0								1.5	5.0		7.5	
16-17										7.5	11.5		10.5						0.5	4.5			
17-18			2.5								1.0	9.5							7.5	3.5			
18-19			6.0								3.5			2.0		3.0			6.5	2.5		1.0	
19-20						0.5		0.5		0.5					9.5				5.5	1.5		10.0	
20-21	3.0	5.0						3.5		9.0		5.0							4.5	1.0			
21-22			2.5						1.5		10.5			8.0					4.0				11.0
22-23		0.0	6.0															1.0	3.0	7.0		3.5	
23-24										2.0	2.0	0.0							2.0	6.0	12.5	12.5	
24-25										10.5	4.5								1.5	5.0			6.5
25-26			2.0												9.5				0.5	4.5			
26-27			5.5			2.5					9.5		5.5						7.5	3.5	9.5	6.0	
27-28	2.0									4.0	12.0					5.0		6.5	6.5	2.5			
28-29									3.0	12.5	1.0								5.5	2.0			
29-30		5.5	2.0								3.5		12.0			1.0			5.0	1.0	6.5		
30-31			5.5	3.5				3.0											4.0			8.5	

all times in U.T.

	WW	AF	AL	SZ	TT	TU	CC	CT	DI	HS	HS	LT	V728	68	WY	WY	AV	DF	DF	DI	DK	V470	V470
	GEM	GEM	GEM	HER	HER	HER	HER	HER	HER	HER	HER	HER	HER	HER	HYA	HYA	HYA	HYA	HYA	HYA	HYA	HYA	HYA
MAX	9.8	10.2	9.3	10.2	9.7	10.6	9.5	9.9	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
MIN	10.5	11.3	10.0	12.0	10.4	13.4	12.8	11.2	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
DUR	4	4	4	4	4	5	4	4	6	4	4	4	3	5	3	3	4	4	4	4	4	3	3
TOT						1																	
									(S)		(S)					(S)			(S)				(S)
0- 1															4.5		6.5	7.0			10.0	9.0	4.5
1- 2	5.0			11.5									1.5			6.5		7.0		8.0	11.0	4.0	8.5
2- 3	10.5												0.0		8.0		7.5	6.5			12.0	8.5	
3- 4			9.5		12.0											10.0		6.5					8.0
4- 5		7.0													12.0		9.0	6.0		10.0		8.0	
5- 6		13.0								0.5					5.0			6.0					7.5
6- 7	4.0		4.0						0.5							6.5	10.0	6.0		6.0		7.5	
7- 8	9.5														8.5			5.5		11.5			7.0
8- 9				1.0										11.5		10.5	11.5	5.5					7.0
9-10		6.5													12.0			5.5		8.0	6.5		6.5
10-11		12.0	8.0	11.5									0.5	13.0	5.0		12.5	5.0			8.0	6.5	
11-12	2.5															7.0		5.0			9.0		6.0
12-13	8.5														9.0			4.5		9.5	10.0	5.5	
13-14			3.0		12.5											10.5	6.0	4.5			11.0		5.5
14-15		5.5	12.5				12.0				2.0				12.5			4.5		6.0	12.0	5.0	
15-16		11.5													5.5		7.5			11.5			5.0
16-17	1.5															7.5			8.0			4.5	9.5
17-18	7.0		7.0	1.0											9.0		8.5		7.5	7.5		9.0	4.5
18-19	13.0												0.5			11.0			7.5			4.0	9.0
19-20		5.0		11.5									10.5		12.5	4.0	9.5		7.5			8.5	
20-21		11.0	2.0												6.0				7.0	9.5			8.0
21-22			11.5													7.5	11.0		7.0		7.0	8.0	
22-23	6.0														9.5				6.5	5.5	8.0		7.5
23-24	11.5									1.0						11.0	12.0		6.5	11.5	9.0	7.5	
24-25		4.5	6.0												13.0	4.5			6.5		10.0		7.0
25-26		10.5					13.0								6.0				6.0	7.5	11.0	7.0	
26-27				0.5									1.0			8.0	5.5		6.0		12.0		6.5
27-28	5.0												11.0		9.5				5.5			6.5	
28-29	10.5		10.5	11.5												11.5	7.0		5.5	9.5			6.0
29-30		4.0														4.5			5.5			6.0	
30-31		9.5				12.5							12.0			6.5	8.0		5.0	5.5			5.5



	SW	SW	VX	AW	CM	CO	CO	DG	GX	MZ	MZ	Y	UU	UV	VZ	WZ	XY	XZ	AM	T	Z	RR	RY	
	LAC	LAC	LAC	LAC	LAC	LAC	LAC	LAC	LAC	LAC	LAC	LEO	LEO	LEO	LEO	LEO	LEO	LEO	LEO	LMI	LEP	LEP	LYN	
MAX	9.2	9.2	10.9	10.6	8.5	10.5	10.5	10.8	10.1	11.2	11.2	9.5	11.4	9.5	10.6	11.3	9.5	10.6	9.2	10.2	11.0	10.2	11.9	
MIN	10.0	10.0	12.3	11.3	9.5	11.0	11.0	12.0	10.4	12.1	12.1	12.7	12.7	10.2	11.7	12.0	9.9	11.2	9.8	12.6	12.5	10.9	13.3	
DUR	3	3	4	5	4	5	5	4	6	4	4	5	4	3	4	5	2	3	3	6	4	4	4	
TOT																								
		(S)					(S)			(S)														
0- 1	7.0	3.0															6.5					5.5		
1- 2	6.0	2.0				7.5						4.0		10.0		9.0			8.0			3.5	7.5	
2- 3	5.0	1.0					1.5	5.0		6.0							6.5							
3- 4	4.0	0.5	1.0																					
4- 5	3.5		2.5										6.5	10.0		4.5	6.0		6.5				4.5	
5- 6	2.5	6.0	4.5	0.5			3.5												8.5	4.0				
6- 7	1.5	5.5	6.5	4.0					7.0			5.5			4.5		5.5							
7- 8	0.5	4.5		7.5	3.0									10.0	6.5									
8- 9		3.5						5.5							9.0	10.0	5.5	10.5	7.0	4.5			12.0	
9-10	6.5	2.5				0.5							7.5		11.0							10.0	9.0	
10-11	5.5	1.5								2.5				10.0			5.0	9.5				10.0	7.0	
11-12	4.5	1.0					7.5	1.0				7.0				5.5		9.0		5.0	10.0	5.0	8.5	
12-13	3.5					2.5											5.0	8.5	7.5			9.5	3.0	
13-14	3.0	6.5		0.5				5.5		6.0				10.0				7.5				9.5		
14-15	2.0	5.5		4.0									8.5					7.0		5.5	9.5		5.5	
15-16	1.0	5.0		7.5	3.5	4.5										11.0		6.5				9.5		
16-17	0.0	4.0										8.5		10.0				6.0	8.0			9.0		
17-18	7.0	3.0	0.0															5.5		6.0	9.0		2.5	
18-19	6.0	2.0	2.0			6.5				1.0					4.5	6.5		5.0				9.0	13.0	
19-20	5.0	1.0	4.0				0.5						9.5	10.0	6.5				6.0			8.5		
20-21	4.0	0.5	5.5												8.5				8.5	6.5	8.5	9.0		
21-22	3.0			0.5		9.0				4.5		9.5			10.5							8.5	7.0	9.5
22-23	2.5	6.0		4.0			2.5	1.5						10.0	13.0	12.0						8.0	5.0	
23-24	1.5	5.0		7.5	4.0														7.0	7.0	8.0	3.0		
24-25	0.5	4.5						6.5					10.0									8.0	6.5	
25-26		3.5						4.5	8.5					10.0			7.5	6.5				8.0		
26-27	6.5	2.5									11.0									7.5	7.5			
27-28	5.5	1.5															6.5	11.0	7.5		7.5		3.5	
28-29	4.5	0.5					7.0							10.0				10.5			7.5			
29-30	3.5			0.5		2.0				1.0		11.0					6.0	10.0		7.5	7.0			
30-31	2.5	6.5		4.0														9.5			7.0			

	UZ	EW	FL	RU	RU	RW	AT	BB	BO	EP	V501	V508	V839	EF	EF	EQ	ER	ER	ET	FH	FL	FR	FT
	LYR	LYR	LYR	MON	MON	MON	MON	MON	MON	MON	OPH	OPH	OPH	ORI	ORI	ORI	ORI	ORI	ORI	ORI	ORI	ORI	ORI
MAX	9.8	11.2	8.7	10.6	10.6	9.1	10.6	10.6	10.8	10.5	10.9	10.1	8.8	12.6	12.6	10.3	9.5	9.5	11.2	10.5	10.5	11.0	9.1
MIN	11.0	13.6	9.5	11.3	11.3	11.9	11.4	11.3	12.1	11.1	11.8	10.7	9.4	14.1	12.8	13.3	10.2	10.2	12.4	11.5	13.2	11.9	9.7
DUR	5	5	4	5	5	5	5	4	5	5	4	3	3	6	6	4	3	3	5	5	3	4	4
TOT						1			1														
					(S)										(S)			(S)					
0- 1		1.5	3.5			8.5		7.5									4.0	9.0					
1- 2																6.0		5.5	10.5			11.0	
2- 3		0.0				6.5		12.0							8.5		6.5	1.5	9.5	1.5	8.0	8.5	
3- 4				12.0				6.0			0.0			3.5			3.0	8.0	8.0			5.5	
4- 5			12.0			4.0				3.5							9.5	4.5	7.0	5.5		2.5	
5- 6								10.5	5.0	7.0							6.0		6.0		10.5		
6- 7						2.0		4.0		10.5			0.5	9.5			2.0	7.5	4.5	9.0			
7- 8									10.0						5.0		8.5	3.5	3.5				
8- 9					5.0			9.0								5.5	5.0	10.0	2.5				
9-10	2.0																	6.5	1.0			10.0	
10-11										1.0					10.5		8.0	2.5			2.0	7.0	
11-12			1.0					7.5			0.0			6.0			4.0	9.0				4.5	
12-13										4.5					1.5			5.5				1.5	2.5
13-14								12.0		8.0		0.0					7.0	2.0			4.5		
14-15				6.0				5.5		11.5				12.0			3.5	8.5					
15-16					9.0								0.5		7.0	5.5	9.5	4.5					6.0
16-17								10.5	8.0					2.5			6.0				7.0	11.5	
17-18						12.5		4.0									2.5	7.5		3.0		8.5	
18-19																	9.0	4.0				6.0	9.5
19-20						10.0		8.5						8.5			5.0			6.5	9.5	3.0	
20-21										5.0					4.0		1.5	6.5					
21-22				10.0		8.0				8.5							8.0	3.0	10.0	10.5			
22-23								7.0		12.0						5.0	4.5	9.5	8.5				
23-24						5.5	4.0								9.5			5.5	7.5				
24-25			2.5					12.0					0.5	5.0			7.0	2.0	6.5		1.0	10.0	
25-26						3.5	4.5	5.5	5.5								3.5	8.5	5.0			7.5	
26-27	2.5				3.0												10.0	5.0	4.0			4.5	
27-28							5.5	10.0	11.0					10.5		10.5	6.5		2.5		3.5	2.0	
28-29	0.0							3.5		6.0					6.0		2.5	7.5	1.5				
29-30							6.0			9.5				1.5		4.5	9.0	4.0					
30-31								8.5									5.5			1.0	6.0		

	FZ	FZ	GU	GU	U	U	TY	UX	AQ	AQ	AQ	BB	BB	BG	BX	DI	GP	KW	KW	Z	RT	RV	ST
	ORI	ORI	ORI	ORI	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PER	PER	PER	PER
MAX	10.7	10.7	12.6	12.6	9.7	9.7	10.5	10.7	10.3	10.3	10.3	10.6	10.6	10.5	10.9	9.6	10.2	12.1	12.1	9.9	10.6	10.3	9.7
MIN	11.3	11.3	13.5	13.5	10.5	10.5	12.6	12.0	13.0	13.0	13.0	11.2	11.2	11.8	11.5	10.8	11.0	12.4	12.4	12.4	12.0	12.7	13.2
DUR	3	3	4	4	3	3	6	5	12	12	12	3	3	4	3	2	4	3	3	6	4	8	5
TOT									4	4	4			1						2			1
		(S)		(S)		(S)			(2)		(3)		(S)						(S)				
0- 1	9.0	4.5		6.0	0.5	5.0						5.0	1.0		1.0								
1- 2	4.5	9.0	10.5	4.5	3.5		1.0						3.0		4.0	0.0			4.0	10.0			3.5
2- 3	9.0	4.5	9.0	3.5	6.5	2.0		2.5				0.5	5.0		0.0						9.0		
3- 4	4.5	9.0	7.5	2.0	0.5	5.0			0.0	2.0	4.0	2.5			3.0	3.5		5.0			5.5		
4- 5	9.0	4.5	6.0		3.5		3.0					4.5	0.0					0.5			2.0		
5- 6	4.5	9.0	4.5	10.5	6.5	2.0		4.5					2.0		2.0								
6- 7	9.0	4.5	3.5	9.0	0.5	5.0							4.5	4.5					1.5				11.0
7- 8	4.5	9.0	2.0	7.5	3.5		5.5					2.0			1.5						11.5		
8- 9	9.0	4.5		6.0	6.5	2.0						4.0		3.5	4.5	3.0		2.5			8.0		
9-10	4.5	9.0	10.5	5.0	0.5	5.0							1.5		0.5						4.5	11.5	2.5
10-11	9.0	4.5	9.0	3.5	3.5								3.5	2.5	3.5	6.0			3.5		0.5		
11-12	4.5	9.0	7.5	2.0	6.5	2.0						1.5										11.0	
12-13	9.0	4.5	6.0		0.5	5.0						3.5		1.0	2.5			4.5					
13-14	4.5	9.0	5.0	10.5	3.5								1.0			2.5					10.0	10.5	
14-15	9.0	4.5	3.5	9.0	6.5	2.0			2.5				3.0	0.0	1.5						6.5		9.5
15-16	4.5	9.0	2.0	7.5	0.5	5.0						1.0			4.5	5.5			1.0		3.0	9.5	
16-17	9.0	4.5		6.0	3.5			0.0				3.0			0.5								
17-18	4.5	9.0	10.5	5.0	6.5	2.0						5.0	0.5		3.5			2.0				9.0	1.0
18-19	9.0	4.5	9.0	3.5	0.5	5.0							2.5			2.0							
19-20	4.5	9.0	7.5	2.0	3.5			2.5				0.5	4.5		2.5		6.5		3.0		9.0	8.5	
20-21	9.0	4.5	6.0		6.5	2.0						2.5				5.5	6.0				5.5		
21-22	4.5	9.0	5.0	10.5	0.5	5.0						4.5			2.0		5.0	4.0			1.5	8.0	
22-23	9.0	4.5	3.5	9.0	3.5			4.5					2.0		5.0		4.5						8.0
23-24	4.5	9.0	2.0	7.5	6.5	2.0							4.0		1.0	1.5	4.0		5.0			7.0	
24-25	9.0	4.5		6.0	0.5	5.0						1.5			4.0		3.5		0.5		11.0		
25-26	4.5	9.0	10.5	5.0	3.5							4.0			0.0	5.0	3.0				7.5	6.5	
26-27	9.0	4.5	9.0	3.5	6.5	2.0							1.5		3.0		2.5	1.5			4.0		
27-28	4.5	9.0	7.5	2.0	0.5	5.0							3.5				1.5				0.5	6.0	
28-29	9.0	4.5	6.5		3.5							1.0			2.0	1.0	1.0		2.5				
29-30	4.5	9.0	5.0	10.5	6.0	1.5						3.0			5.0		0.5					5.5	
30-31	9.0	4.5	3.5	9.0	0.0	4.5							1.0		1.0	4.5		3.5			10.0		7.0

	XZ	IQ	IQ	IT	IU	KW	V432	BETA	AE	AE	Y	RV	UZ	UZ	AV	U	V505	AO	CC	CC	Y	RW	RZ
	PER	PER	PER	PER	PER	PER	PER	PER	PHE	PHE	PSC	PSC	PUP	PUP	PUP	SGE	SGR	SER	SER	SER	SEX	TAU	TAU
MAX	10.6	7.7	7.7	9.9	10.5	10.5	11.0	2.2	7.5	7.5	9.0	11.3	9.7	9.7	10.2	6.4	6.4	10.6	11.1	11.1	9.8	8.0	10.5
MIN	12.7	8.3	7.9	10.5	11.6	11.5	11.7	3.5	8.2	8.2	12.0	12.0	10.6	10.3	10.8	9.1	7.6	12.1	11.7	11.7	10.2	12.5	11.2
DUR	4	5	5	4	5	4	3	8	2	2	7	3	4	4	3	6	5	4	4	4	3	4	3
TOT																2						1	
			(S)							(S)				(S)						(S)			
0- 1	12.0		7.5			8.5	5.5		3.0		1.5	4.5	8.0		7.5								3.0
1- 2		6.5				7.0	9.0		5.0	0.5		7.0		12.5								3.5	9.0
2- 3			1.0	9.5	10.5	5.0	3.5			2.5				7.5							7.0		5.0
3- 4		0.0			7.0	3.5	7.0		0.5	5.0			12.0		8.5			10.5					0.5
4- 5					4.0	2.0	1.5		2.5		1.5	7.5			5.5			11.5			9.5		6.5
5- 6	3.0		13.0	11.0	0.5	0.0	5.0		4.5	0.5	4.0		12.0					12.0					2.5
6- 7	6.5	12.0							8.5		2.5		6.5	7.0	9.5								8.5
7- 8	10.0		6.5				3.0		0.0	4.5			11.5		6.5	1.0					8.0		4.5
8- 9		5.5			10.5		6.5		2.0				6.5										0.5
9-10			0.5		7.0		1.0	9.5	4.5			1.0		11.5								11.0	6.5
10-11				1.5	3.5		4.5			2.0		4.0		6.5	7.5						6.5		2.5
11-12					0.5		8.0			4.0		6.5	11.0						10.5				8.0
12-13	0.5		12.0			11.0	2.5	6.0	2.0				6.0						11.0		8.5	5.5	4.0
13-14	4.5	11.0		3.0		9.5	6.0		4.0				10.5	9.0			11.5		12.0				0.0
14-15	8.0		6.0		10.5	7.5	0.5			1.5		1.0		5.5	5.5								6.0
15-16	11.5	5.0			7.0	6.0	4.0	3.0		4.0	3.0	3.5	10.5								7.0		2.0
16-17				4.5	3.5	4.5	8.0		1.5			6.0	5.5		10.0								8.0
17-18					0.5	2.5	2.0		3.5			8.5		10.0	6.5						9.5		4.0
18-19						1.0	6.0			1.5				5.0							6.0		10.0
19-20			11.5	6.0			0.0			3.5		0.5	9.5						10.5				6.0
20-21	2.0	10.5			10.5		4.0		1.0			3.0	5.0		8.0			12.5	11.0		8.0		1.5
21-22	5.5		5.5		7.0		7.5		3.5			5.5		9.5					12.0				7.5
22-23	9.5	4.5		8.0	3.5		1.5			1.0		8.5		4.5									3.5
23-24					0.5		5.5			3.0			9.0		9.0						6.5	7.5	9.5
24-25							9.0		1.0	5.0		0.0	4.0		6.0								5.5
25-26				9.5			3.5		3.0			3.0		9.0							9.0		1.5
26-27			11.0		10.5	10.0	7.0		5.0	0.5		5.5			10.0		0.0					1.5	7.5
27-28		10.0			7.0	8.5	1.5			3.0		8.0	8.5		7.0					10.5			3.5
28-29	3.5		5.0	11.0	3.5	7.0	5.0		0.5	5.0										11.0	7.5		9.5
29-30	7.0	4.0			0.5	5.5	8.5	11.0	2.5					8.0						12.0			5.0
30-31	11.0					3.5	3.0		4.5	0.5	4.5	2.5	13.0		8.0						10.0		1.0

	TY	WY	AC	AM	AQ	CT	EQ	EQ	HU	V	X	RS	RV	W	W	TX	TY	TY	UX	UX	VV	XZ	ZZ
	TAU	TAU	TAU	TAU	TAU	TAU	TAU	TAU	TAU	TRI	TRI	TRI	TRI	UMA	UMA	UMA	UMA	UMA	UMA	UMA	UMA	UMA	UMA
MAX	11.5	11.5	10.5	10.4	12.0	10.2	10.3	10.3	6.0	10.9	8.9	10.3	11.4	9.1	9.1	6.8	11.7	11.7	12.7	12.7	10.1	10.1	9.8
MIN	12.0	11.7	12.3	12.3	12.9	11.5	11.0	11.0	6.8	11.9	12.0	11.0	12.5	9.9	9.9	8.9	12.4	12.4	13.8	13.8	11.0	11.7	11.2
DUR	2	4	6	5	5	5	3	3	6	4	4	4	4	3	3	6	3	3	1	1	3	3	4
TOT																							
								(S)						(S)				(S)					
0- 1		6.0				12.5	5.0	1.0	5.0	8.5				7.5	3.5		7.5						1.0
1- 2	0.5					4.5	5.5	1.5						8.5	7.5	3.5		4.5			8.0	3.0	
2- 3	2.5	8.0				12.5	6.0	2.0	6.5	3.0				2.5	7.5	3.5		6.0				8.5	8.0
3- 4	4.0	0.5			4.5	4.5	6.5	2.5		7.0				7.5	3.5			7.5	9.0		9.5		
4- 5	6.0	10.0			9.5	12.5	7.0	3.0	8.0					8.5	7.5	3.5		5.0			8.5	2.0	
5- 6	8.0	2.5				4.5	7.5	3.5		1.0	9.0			2.5	8.0	4.0		6.5		8.5	11.0		
6- 7	10.0	12.0				12.5	0.0	4.0	9.0	5.0	8.5			8.0	4.0			8.0	3.5		8.0	3.5	
7- 8		4.5				4.5	0.5	5.0			7.5	7.0	9.0	8.0	4.0			5.0	7.5		12.5	6.0	
8- 9					1.0	12.5	1.5	5.5	10.5		7.0		3.0	8.0	4.0			6.5		7.0	5.0	11.0	
9-10		6.5			6.0	4.5	2.0	6.0		3.5	6.5	5.0		8.0	4.0	4.0	4.0	8.5	6.5				5.5
10-11			0.5		11.5	12.5	2.5	6.5		7.5	5.5		9.5	8.0	4.0		5.5			6.5	6.5		
11-12		8.0				4.5	3.0	7.0			5.0	2.5	3.5	8.0	4.0		7.0		6.0				13.0
12-13		1.0	1.5			12.5	3.5	7.5		1.5	4.0			8.0	4.0	5.5		4.5			8.0	3.0	
13-14		10.0				4.5	4.0	0.0		5.5	3.5	0.5	9.5	8.0	4.0			6.0				8.5	
14-15		2.5	2.5		3.0	12.5	4.5	0.5			3.0		4.0	8.0	4.0			7.5			9.5		
15-16	0.5	12.0			8.0	4.5	5.5	1.0			2.0			8.0	4.0	7.0	4.5			9.0	2.0		
16-17	2.5	4.5	3.5			12.5	6.0	2.0		4.0	1.5		10.0	8.0	4.0		6.0		8.5		11.0		3.0
17-18	4.5					4.5	6.5	2.5		8.0	1.0		4.0		4.0		7.5			8.5	3.5		
18-19	6.0	6.5	4.5			12.5	7.0	3.0			0.0				4.0	8.5		5.0	8.0		12.5	6.0	10.5
19-20	8.0			0.5		4.5	7.5	3.5		2.0					4.0			6.5		7.5	5.0	11.0	
20-21	10.0	8.5	5.5		5.0	12.5	0.0	4.0		6.0			4.5		4.0		4.0	8.0	7.0				
21-22		1.0		1.5	10.0	4.5	0.5	4.5							4.0	10.0	5.5			6.5	6.5		
22-23		10.5	6.5			12.5	1.0	5.5		0.5					4.0		7.0		6.5				
23-24		3.0		2.5		4.5	1.5	6.0		4.5			5.0		4.0		8.5	4.0		6.0	8.0	3.0	0.5
24-25		12.0	7.5			12.5	2.5	6.5		8.5					4.0	11.5		5.5				8.5	
25-26		5.0		4.0	1.5	4.5	3.0	7.0							4.0			7.0			9.5		8.0
26-27			8.5		7.0	12.5	3.5	7.5		2.5			5.0		4.0		4.5			9.5	2.0		
27-28		6.5		5.0	12.0	4.5	4.0	8.0		7.0					4.0		6.0		9.0		11.0		
28-29			9.5			12.5	4.5	0.5				7.0			4.5		7.5			8.5	3.5		
29-30	0.5	8.5		6.0		4.5	5.0	1.0	0.0	1.0			5.5		4.5			5.0	8.0		12.5	6.0	
30-31	2.5	1.0				12.5	6.0	1.5		5.0		5.0			4.5			6.5		8.0	5.0	11.0	

MAS Eclipsing Binary Ephemeris for December 2024

all times in U.T.

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	AF	W	RU	VV	AG	AH	AH	AK	AX	BH	Z	AW	AY	BE	BO	BS	BT	BU	CD	V495	V495	
	UMA	UMI	UMI	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VUL	VUL	VUL	VUL	VUL	VUL	VUL	VUL	VUL	VUL	VUL	VUL
MAX	10.8	8.6	10.7	11.7	8.8	9.7	9.7	10.0	10.0	9.9	7.4	10.8	11.0	9.9	10.4	11.0	11.8	10.6	11.5	9.6	9.6	
MIN	11.6	9.7	11.4	13.5	9.4	10.2	10.2	11.5	10.8	11.3	9.2	11.9	12.9	11.4	13.3	11.5	12.5	11.4	12.6	10.0	10.0	
DUR	8	7	4	4	4	4	4	4	4	4	6	5	4	5	4	3	3	3	4	4	4	
TOT																						
							(S)														(S)	
0- 1			9.5		8.5		7.5								1.0		0.5	3.5	0.5			
1- 2			10.5	10.5		8.0									2.0							
2- 3			12.0				8.5			10.5	1.0	0.0								1.5		
3- 4		8.0	0.5			9.0			10.0													
4- 5			1.5				9.5											3.0	3.0			
5- 6		0.5	3.0		12.0			12.5	13.0				3.0									
6- 7			4.0							12.5		1.0										
7- 8			5.0		10.0											2.0						
8- 9		10.5	6.5													1.0	0.5	2.5				
9-10			7.5		8.5																	
10-11	5.5	3.0	9.0			7.5			11.0			1.5										
11-12			10.0					8.0	11.5		10.0										1.5	
12-13			11.0				8.0											2.0				
13-14		13.0	12.5					8.5												0.5		
14-15			1.0		12.0	9.0						2.5										
15-16	12.0	5.5	2.0					9.5		9.0	12.0			1.0						1.5	2.0	
16-17			3.5		10.0												0.0	1.5				
17-18			4.5					11.0	11.5							2.0	3.5		3.0			
18-19			6.0		8.5							3.5		3.5		1.0						
19-20			7.0																			
20-21		8.0	8.0																		1.5	
21-22			9.5			7.5																
22-23		1.0	10.5					8.0		9.5			0.5									
23-24			12.0		12.0	8.5																
24-25			0.5					9.0		12.0	11.5										1.0	
25-26		10.5	1.5		10.0	9.0											3.5					
26-27	0.5		2.5					9.5													0.0	
27-28		3.5	4.0		8.5							0.0				2.0						
28-29			5.0													0.5		0.5	1.5			
29-30			6.5						10.0		1.0			0.5				4.0			1.0	
30-31			7.5	10.5															2.5			