

MAS Eclipsing Binary Ephemeris for May 2016

all times in U.T.

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	RT	TW	UU	WZ	XZ	AB	AB	AD	AD	BD	BX	DS	QX	QX	RY	CX	CZ	XZ	KO	KP	OO	OO	V342
	AND	AND	AND	AND	AND	AND	AND	AND	AND	AND	AND	AND	AND	AND	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	11.1	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
MIN	10.2	11.0	14.1	12.6	13.0	10.2	10.2	11.6	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
DUR	3	11	8	4	3	3	3	4	4	3	4	4	3	3	5	3	3	7	5	4	3	3	7
TOT		2																					3
								(S)	(S)					(S)									(S)
0- 1	6.5					6.5	10.5		8.5	10.0	11.0					9.0					10.0		
1- 2						6.5	10.5		8.0	8.5	1.5				8.0						10.0		
2- 3	3.5					6.5	10.5		8.0	6.5		8.5					10.5			4.5	10.5	4.5	
3- 4	10.0					6.5	10.5		7.5	5.0		8.5	8.5		7.0						11.0	4.5	
4- 5			9.0			6.0	10.0		7.0	3.0		9.0		9.5					8.5		11.0	5.0	9.0
5- 6	7.0					6.0	10.0		7.0			9.0	10.0			9.0						5.5	
6- 7						6.0	10.0		6.5	10.5		9.5		11.0								5.5	
7- 8	4.5					6.0	10.0		6.0	9.0		9.5						5.5				6.0	
8- 9	10.5					6.0	10.0		6.0	7.0	9.5	10.0										6.5	
9-10	1.5					5.5	9.5		5.5	5.0		10.0										6.5	
10-11	8.0						9.5		5.0	3.5		10.5	9.0			9.5						7.0	
11-12			8.0				9.5		5.0		10.5	10.5		9.5								7.5	4.0
12-13	5.0						9.5		4.5	11.0		11.0	10.5					7.0		7.0		7.5	
13-14			10.5				9.5			9.0		11.0		11.0								8.0	
14-15	2.5			8.5			9.0			7.5								10.5				8.5	
15-16	8.5						9.0			5.5					9.5	9.5						8.5	
16-17							9.0			4.0												9.0	
17-18	6.0			1.5			9.0					9.0										9.5	
18-19			10.0				9.0							9.5								9.5	
19-20	3.0						8.5			9.5	9.0		10.5									10.0	
20-21	9.5		9.5				8.5			8.0				11.0		9.5						4.0	10.5
21-22							8.5			6.0							10.0					4.5	10.5
22-23	6.5						8.5			4.5	10.0									9.5	5.0	11.0	
23-24							8.0							8.5								5.0	
24-25	4.0						8.0						9.0						9.5			5.5	
25-26	10.0						8.0			10.0				10.0		9.5						6.0	
26-27			11.0				8.0			8.5			10.5									6.0	
27-28	7.5			8.0			8.0			6.5							11.0	6.5	6.5			6.5	
28-29							7.5	11.0		4.5												7.0	
29-30	4.5		10.0	10.5			7.5	10.5		3.0								10.0				7.0	
30-31	11.0	8.5					7.5	10.5			8.5			8.5		9.5			3.0			7.5	

	TU	TU	TY	TY	TZ	TZ	UW	VW	VW	ZZ	AD	AD	BW	BW	Y	SV	AL	CD	CD	R	RT	SX	UU
	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	CAM	CAM	CAM	CAM	CAM	CMA	CMA	CMA	CMA
MAX	11.7	11.7	11.8	11.8	10.6	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	6.2	11.4	10.3	10.0
MIN	12.7	12.7	12.3	12.3	11.1	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	6.8	12.9	11.4	12.5
DUR	3	3	3	3	3	3	3	3	3	5	4	4	5	5	6	3	5	5	5	4	5	4	5
TOT		(S)		(S)		(S)		(S)			(S)		(S)				(S)						
0- 1	4.5	8.5	8.5	5.0	2.0	5.5		2.5	6.5	4.0						7.0		7.5					
1- 2	4.0	8.0	7.5	4.0	6.5	3.0		3.0	7.5									2.0	11.0			2.0	
2- 3	3.5	7.5	6.5	2.5	3.5	7.5		4.0	8.0				3.0			1.5	6.0		5.5				
3- 4	3.0	6.5	5.0	1.5	8.5	4.5		4.5	8.5							6.0		9.0					
4- 5	2.0	6.0	4.0	8.0	5.5	2.0		5.0	9.5			2.5		6.0	10.5		3.0			1.5			
5- 6	1.5	5.5	3.0	6.5	3.0	6.5	1.5	6.0	1.5	3.5			11.0					6.5					
6- 7	8.5	4.5	1.5	5.5	7.5	4.0	1.5	6.5	2.5							5.5	6.0	10.0			3.0		
7- 8	8.0	4.0	8.0	4.5	5.0	1.5	1.5	7.0	3.0			10.5				9.5		4.5					
8- 9	7.5	3.5	7.0	3.0	2.5	6.0	2.0	7.5	3.5										8.0				
9-10	6.5	2.5	6.0	2.0	7.0	3.5	2.0	8.5	4.5							4.5			2.5				
10-11	6.0	2.0	4.5	8.5	4.5	8.0	2.0	9.0	5.0	3.5						9.0	5.5	6.0					
11-12	5.5	1.5	3.5	7.5	1.5	5.5	2.0	1.5	5.5										9.5				
12-13	4.5	8.5	2.5	6.0	6.0	2.5	2.5	2.0	6.0				3.0			3.5			3.5				
13-14	4.0	8.0	9.0	5.0	3.5	7.0	2.5	3.0	7.0							8.0		7.5					
14-15	3.5	7.5	7.5	4.0	8.0	4.5	2.5	3.5	7.5			1.5	2.5		4.0		5.0	1.5	11.0			2.0	
15-16	2.5	6.5	6.5	2.5	5.5	2.0	2.5	4.0	8.0	3.0	2.5			11.0		3.0			5.0				
16-17	2.0	6.0	5.5	1.5	3.0	6.5	2.5	4.5	9.0			3.0				7.0		8.5					
17-18	1.5	5.5	4.0	8.0	7.5	4.0	3.0	5.5	9.5		4.0		10.5					3.0		2.5			
18-19	8.5	4.5	3.0	7.0	5.0	8.5	3.0	6.0	2.0			4.5				2.0	4.5		6.5				
19-20	8.0	4.0	2.0	5.5	2.0	6.0	3.0	6.5	2.5		5.5					6.5		10.0			3.0		
20-21	7.0	3.5	8.0	4.5	7.0	3.0	3.0	7.5	3.0	3.0		6.5				11.0		4.5					
21-22	6.5	2.5	7.0	3.5	4.0	7.5	3.5	8.0	4.0		7.0								8.0				
22-23	6.0	2.0	6.0	2.0	1.5	5.0	3.5	8.5	4.5			8.0		3.0		5.5	4.5		2.0				
23-24	5.5	1.5	4.5	8.5	6.0	2.5	3.5	9.0	5.0		9.0					10.0		5.5					
24-25	4.5	8.5	3.5	7.5	3.5	7.0	3.5	1.5	6.0			9.5	2.5		2.0				9.0				
25-26	4.0	8.0	2.5	6.0	8.0	4.5	3.5	2.5	6.5	3.0	10.5			11.0		5.0			3.5				
26-27	3.5	7.0	9.0	5.0	5.5	2.0	4.0	3.0	7.0							9.0	4.0	7.0		1.5			
27-28	2.5	6.5	7.5	4.0	3.0	6.5	4.0	3.5	7.5			10.5			9.5			1.5	10.5			1.5	
28-29	2.0	6.0	6.5	2.5	7.5	4.0	4.0	4.0	8.5							4.0			5.0				
29-30	9.0	5.5	5.5	1.5	4.5	8.5	4.0	5.0	9.0							8.5		8.5					
30-31	8.5	4.5	4.0	8.0	2.0	5.5	4.5	5.5	1.5	2.5							3.5	2.5					

	OX	PV	V364	V364	V375	V380	U	SU	WW	WZ	WZ	XX	ZZ	DK	DL	DV	EG	EK	GK	TX	RW	RW	RZ
	CAS	CAS	CAS	CAS	CAS	CAS	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CEP	CET	COM	COM	COM
MAX	10.1	10.0	11.2	11.2	10.1	10.4	6.7	8.8	11.1	11.7	11.7	8.5	9.3	12.2	12.4	11.6	9.6	8.2	6.9	10.9	11.0	11.0	10.0
MIN	10.9	10.6	11.7	11.7	10.9	11.1	9.8	9.8	11.9	11.3	11.1	9.6	10.0	14.2	13.2	12.4	10.6	9.5	7.4	11.5	11.6	11.6	10.7
DUR	5	3	4	4	5	5	4	4	4	3	3	4	5	4	5	4	3	6	4	4	3	3	3
TOT							2													1			
	(S)			(S)							(S)												(S)
0- 1		6.5									9.0	4.0		4.0			11.0		5.0		2.5	5.0	2.0
1- 2				10.5	9.5		3.5				5.0	10.0		4.0				9.5	3.5		7.0	4.0	2.5
2- 3											11.0	6.0		3.5		3.0	2.0		2.0		5.5	2.5	3.0
3- 4						8.5					7.0	2.0	7.0	3.0		6.5	4.0				4.5	1.5	3.0
4- 5	9.0				8.0			11.0			3.0	8.0		3.0	3.5	10.5	6.5				3.0	6.0	3.5
5- 6			7.0					8.5			9.0	4.0		2.5			8.5		11.0		2.0	5.0	4.0
6- 7				1.5		1.5	3.0	6.0			5.0	10.0		2.0			10.5				6.5	3.5	4.5
7- 8		6.5			7.0	10.0		3.5			11.0	6.0		2.0	9.5						5.0	2.5	4.5
8- 9			9.0								7.0	2.0		1.5			2.0				4.0	7.0	5.0
9-10	8.5										3.0	8.0					2.0	4.0			3.0	5.5	5.5
10-11					5.5	3.0					9.0	4.0	7.5				6.0	6.0	6.0		1.5	4.5	6.0
11-12			11.0				2.5		4.5	5.5	10.5					10.0	8.5		10.5		6.0	3.0	6.0
12-13				5.5							6.5		4.5		7.0		10.5		9.0		5.0	2.0	6.5
13-14					4.0			11.0			7.5	2.5							7.5		3.5	6.5	7.0
14-15	8.0	6.5				5.0		8.5			3.5	8.5	8.0				1.5		6.0		2.5	5.0	7.5
15-16				7.5				6.5			9.5	4.5					4.0		4.5		7.0	4.0	7.5
16-17			2.0		3.0		2.5	4.0			5.5	10.5					1.5	6.0	3.0		5.5	3.0	8.0
17-18								1.5			1.5	6.5	7.5		4.5	5.5	8.0		1.5		4.5	1.5	8.5
18-19				9.5		6.5					7.5	2.5				9.0	10.0				3.0	6.0	9.0
19-20	7.5				1.5						3.5	8.5						2.5			2.0	5.0	9.0
20-21									9.5	9.5	4.5				11.0		1.5				6.5	3.5	1.5
21-22		6.5					2.0				5.5	10.5					3.5				5.5	2.5	2.0
22-23			6.0			8.5					1.5	7.0			2.0		5.5				4.0	7.0	2.0
23-24								9.0			8.0	3.0					8.0				3.0	5.5	2.5
24-25	7.0							6.5			4.0	9.0	8.0			4.5	10.0				1.5	4.5	3.0
25-26			8.5			1.5		4.5			10.0	5.0			8.0	8.5				11.0	6.0	3.0	3.5
26-27					10.5	10.0	1.5	2.0			6.0	11.0							10.0		5.0	2.0	3.5
27-28											2.0	7.0	4.5				3.5		8.5		3.5	6.5	4.0
28-29		6.5	10.5								8.0	3.0					5.5		7.0		2.5	5.5	4.5
29-30	6.5				9.0	3.0					4.0	9.0	7.5				7.5		5.5		7.0	4.0	5.0
30-31											10.0	5.0			5.5		9.5		4.0		5.5	3.0	5.0

	RZ	SS	SS	CC	CC	U	RW	TW	W	W	RV	RV	V	SW	WW	ZZ	AE	BR	CG	DK	KR	KV	V346	
	COM	COM	COM	COM	COM	CRB	CRB	CRB	CRV	CRV	CRV	CRV	CRT	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	
MAX	10.0	10.9	10.9	11.0	11.0	7.6	10.1	10.5	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	
MIN	10.7	11.5	11.5	11.9	11.9	8.8	10.6	11.3	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	
DUR	3	4	4	2	2	5	4	4	4	4	4	4	4	5	5	4	4	4	3	4	4	4	5	5
TOT														2										
	(S)		(S)		(S)					(S)		(S)												
0- 1	6.0	10.5	5.5	1.5	4.0			4.0	2.0	7.0			6.5			6.0			10.0	7.5			6.0	
1- 2	6.5	6.0		4.0	6.5		6.5	8.0	6.0	1.5	4.5										6.0			
2- 3	7.0	2.0	7.0	6.5	4.0	4.5				5.5		7.0				3.5		2.0	7.5	5.0				
3- 4	7.5	7.5	2.5	3.5	6.5		11.0	2.5	4.5				1.5			9.5		10.0			8.0			
4- 5	7.5	3.5	8.5	6.0	3.5		4.0	7.0		4.0	4.0									5.0		4.0		
5- 6	8.0	9.5	4.5	3.5	6.0				3.5	8.0		6.5	4.0			6.5			11.0				9.0	
6- 7	8.5	5.0	10.0	6.0	3.0		8.5		7.0	2.5								2.0		10.5				
7- 8	8.5		6.0	3.0	5.5		2.0	5.5	2.0	6.5	4.0		7.0	5.5		4.0		10.0	8.5	9.0				
8- 9	9.0	6.5	1.5	5.5	3.0			10.0	6.0			6.5			2.5	10.0				7.5	9.5	5.0		
9-10	9.5	2.5	7.5	2.5	5.5	2.5	6.5			5.0										6.0	6.0	6.0		
10-11	1.5	8.0	3.0	5.0	2.5			4.0	4.5		3.5		2.0			7.5		2.0		5.0				
11-12	2.0	4.0	9.0	2.5	5.0		10.5	8.5		3.5		6.0			10.5			10.0					5.5	
12-13	2.5	9.5	4.5	5.0	2.0		4.0		3.0	7.5			4.5							9.5				
13-14	3.0	5.5	10.5	2.0	4.5			3.0	7.0	2.0	3.5					11.0	10.5							
14-15	3.0		6.5	4.5	2.0		8.5	7.0	1.5	6.0		6.0	7.5			2.0	9.5	1.5	7.0	10.5	7.5			
15-16	3.5	7.0	2.0	1.5	4.5		1.5		5.5							8.0	9.0	9.5		9.0	4.0			
16-17	4.0	3.0	8.0	4.0	1.5			1.5		4.5	3.0			9.0			8.0		4.5	7.5				
17-18	4.5	8.5	3.5	6.5	4.0		6.0	6.0	4.0			5.5	2.5			5.5	7.5		11.0	6.5				
18-19	4.5	4.5	9.5	4.0	6.5			10.0	8.0	3.5							6.5	1.5		5.0				
19-20	5.0	10.0	5.0	6.5	3.5	11.0	10.5		2.5	7.0	2.5		5.0			2.5	6.0	9.5	8.5		9.5		11.0	
20-21	5.5	6.0		3.5	6.0		4.0	4.5	6.5	2.0		5.5				9.0	5.5				5.5			
21-22	6.0	1.5	6.5	6.0	3.5			9.0	6.0						9.0		4.5		6.0					
22-23	6.0	7.5	2.5	3.0	6.0		8.0		5.0		2.5					6.0		1.5		10.5		9.5	5.0	
23-24	6.5	3.5	8.0	5.5	3.0		1.5	3.0		4.5		5.0					9.5		9.5	9.0				
24-25	7.0	9.0	4.0	3.0	5.5			7.5	3.5		8.5		3.0			3.5			9.5	7.5	11.0			
25-26	7.5	5.0	10.0	5.5	2.5		6.0		7.5	3.0	2.0					9.5				6.5	7.5	6.0		
26-27	7.5	10.5	5.5	2.5	5.0	8.5		2.0	2.0	7.0		4.5	5.5					1.5	7.0	5.0	3.5			
27-28	8.0	6.5	1.5	5.0	2.5		10.0	6.0	6.0	1.5	8.0					7.0		9.5						
28-29	8.5	2.0	7.0	2.0	5.0		3.5	10.5		5.5	2.0									4.5				
29-30	9.0	8.0	3.0	4.5	2.0				5.0			4.5				4.0			10.5					
30-31	9.0	3.5	8.5	2.0	4.5		8.0	5.0		4.0	7.5			2.0		10.0		1.5		10.5	9.0		10.5	

	V387	V388	V401	V456	V466	V466	V477	V548	V704	1034	W	TT	TY	YY	FZ	Z	RZ	TW	UZ	UZ	AI	BH	S
	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	CYG	DEL	DEL	DEL	DEL	DEL	DRA	DRA	DRA	DRA	DRA	DRA	DRA	EQU
MAX	11.5	9.7	10.8	10.8	10.8	10.8	8.3	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
MIN	12.3	10.3	11.6	11.9	11.6	11.6	9.2	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
DUR	3	3	4	3	4	4	4	5	4	4	7	5	4	4	3	4	3	5	5	5	4	5	5
TOT											2							1					
					(S)															(S)			
0- 1	10.5															8.0	9.0			9.5	2.5		
1- 2			4.0			10.5	6.0											9.5			7.0	5.5	
2- 3	8.5		8.0		3.0				5.5						7.0								
3- 4		11.0		9.0					9.0					6.5			3.0						9.5
4- 5	6.5	7.5		6.0		5.5		6.5					9.5		10.0	5.5	5.0						
5- 6		4.5	6.0	3.5							11.0				10.5				7.0				
6- 7	4.5		10.0		7.5			2.0	5.5					10.5			10.0					2.5	
7- 8									9.0					5.5		3.0						7.0	
8- 9			3.5			9.5	7.0					8.0					2.0						
9-10	9.5		7.5												8.5		4.5						
10-11		8.0							5.5				8.5	9.5			7.0			4.5		7.5	6.5
11-12	7.5	4.5		9.5		4.5			9.0					4.5		5.0	9.0						
12-13			5.5	6.5																	2.0	3.0	
13-14	6.0		9.5	4.0	6.5			7.5							6.5					10.5	7.0		
14-15									5.5					9.0			3.5						
15-16	4.0		3.5			8.5	8.0	2.5	9.0							6.5	6.0	10.5	2.0				
16-17	10.5	8.5	7.5								7.0		7.0		9.5		8.0						
17-18		5.0			10.5												10.5						
18-19	9.0					3.0			5.0	11.0				8.0				6.0	8.0		2.0		
19-20			5.5	10.0					8.5	10.5						8.0	2.5				7.0	9.5	
20-21	7.0		9.5	7.0	5.5				10.0						7.5		5.0						
21-22				4.5					9.5								7.0					5.0	
22-23	5.0	8.5	3.5			7.5	9.0	8.0	5.0	9.0			6.0	7.0		1.5	9.5						
23-24		5.5	7.5						8.5	8.0			11.0		10.5	10.0				5.5			
24-25					9.5			3.5		7.5					5.5							2.0	
25-26	10.0									7.0												6.5	
26-27			5.5						5.0	6.5				6.5		3.0	6.0						
27-28	8.0		9.0	10.5	4.5				8.5	6.0					8.5		8.5						11.0
28-29		9.0		7.5						5.5	10.0						11.0		3.0				
29-30	6.0	5.5	3.0	5.0		6.5	10.0			5.0			9.5	10.5									
30-31			7.0						5.0	4.5				5.5		5.0	2.5				2.0	7.0	

	RW	SX	TX	WW	AF	AL	RX	SZ	TT	TU	UX	CC	CT	DI	HS	HS	LT	V728	WY	WY	AV	DF	DF
	GEM	GEM	GEM	GEM	GEM	GEM	HER	HER	HER	HER	HER	HER	HER	HER	HER	HER	HER	HER	HYA	HYA	HYA	HYA	HYA
MAX	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	8.4	8.5	8.5	10.7	10.9	10.3	10.3	10.2	11.0	11.0
MIN	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	9.1	9.0	9.0	11.1	11.5	11.1	11.1	10.6	11.5	11.5
DUR	5	5	6	4	4	4	5	4	4	5	5	4	4	6	4	4	4	3	3	3	4	4	4
TOT	1									1													
														(S)		(S)				(S)			(S)
0- 1								2.0	3.0			7.5			10.5			2.0	2.0		3.0		3.0
1- 2											2.0		3.0			7.0	3.0			3.5			3.0
2- 3							10.5										5.0	10.5			4.5		2.5
3- 4				1.5				8.5									7.5	9.5					2.5
4- 5					4.0		5.0	4.5		2.5	4.5						9.5	8.0			5.5		2.0
5- 6															8.5			6.5	2.0			6.0	2.0
6- 7		3.5								9.0						5.0		5.0		4.0		6.0	2.0
7- 8								11.0	10.0		6.5	6.0						4.0				5.5	1.5
8- 9								6.5	8.0				6.5					2.5				5.5	1.5
9-10					3.5			2.0	6.0														5.0
10-11									4.0		9.0		1.5		6.5			11.0	2.5				5.0
11-12							8.0		1.5							2.5		9.5		4.0	1.5	5.0	
12-13								8.5				10.5						8.0					4.5
13-14			1.5				2.5	4.5		4.0							1.5	7.0			3.0	4.5	
14-15					3.0							4.5				9.5	3.5	5.5					4.0
15-16										10.5			10.0		4.5		5.5	4.0	2.5		4.0	4.0	
16-17	2.0							11.0									7.5	2.5		4.5		4.0	
17-18		2.0				4.5		6.5	11.0				5.0				9.5				5.0	3.5	
18-19							10.5	2.0	9.0		3.0				11.0								3.5
19-20				4.0	2.0				6.5			9.0		4.0		7.0		10.0			6.5	3.5	
20-21							5.5		4.5									8.5	3.0				3.0
21-22		4.0						8.5	2.5		5.0	3.0						7.0		5.0			3.0
22-23								4.5		6.0								5.5					2.5
23-24															9.0			4.5					2.5
24-25				2.5	1.5	3.5					7.5		8.5			5.0		3.0		1.5			2.5
25-26								11.0										1.5	3.5				2.0
26-27								6.5				7.5	3.5							5.0	2.5	2.0	6.0
27-28			1.5				8.0	2.0			10.0							3.5	10.0				1.5
28-29									9.5						6.5			5.5	9.0		3.5	1.5	5.5
29-30				1.5			3.0		7.5							3.0		7.5	7.5		2.0		5.5
30-31								8.5	5.5									9.5	6.0	3.5		5.0	5.0

	DI	DK	SW	SW	VX	AR	AW	CM	CO	CO	DG	GX	Y	UU	UV	VZ	WZ	XY	XZ	AM	SS	DELT	RY	
	HYA	HYA	LAC	LAC	LAC	LAC	LAC	LAC	LAC	LAC	LAC	LAC	LEO	LEO	LEO	LEO	LEO	LEO	LEO	LEO	LIB	LIB	LYN	
MAX	11.0	10.5	9.2	9.2	10.9	7.3	10.6	8.5	10.5	10.5	10.8	10.1	9.5	11.4	9.5	10.6	11.3	9.5	10.6	9.2	10.4	4.8	11.9	
MIN	12.0	11.0	10.0	10.0	12.3	8.2	11.3	9.5	11.0	11.0	12.0	10.4	12.7	12.7	10.2	11.7	12.0	9.9	11.2	9.8	11.3	5.9	13.3	
DUR	4	4	3	3	4	6	5	4	5	5	4	6	5	4	3	4	5	2	3	3	6	7	4	
TOT						2																		
				(S)						(S)														
0- 1		4.5	7.0	11.0	10.5		10.5								4.0			1.5		6.0				
1- 2	2.0		6.5	10.0		6.5				5.0			1.5					5.0						
2- 3			5.5	9.5													3.5			2.0	3.0			
3- 4				8.5		6.0									4.0	5.5		4.5		4.5			7.5	
4- 5	4.0			7.5				8.5		7.0				3.0			4.5			6.5		2.5		
5- 6			10.5	6.5		5.5			2.0									4.0						
6- 7			9.5	5.5			4.0						3.0		4.0			7.5		2.5	10.5	10.5	4.5	
7- 8			8.5			5.0	7.0			9.0	4.5							4.0	7.5	5.0				
8- 9			7.5				10.5		4.0									7.0	7.0	7.0				
9-10	2.0	1.5	7.0	10.5		4.5		4.0			9.0	3.5		4.0	4.0			3.5	6.0		7.5			
10-11		2.5	6.0	9.5														7.0	5.5	3.0				
11-12		3.5		9.0		4.5				6.5			4.5				5.5	3.5	5.0	5.5		2.0		
12-13	3.5	4.5		8.0	6.0			9.0							4.0			6.5	4.5	8.0	4.5			
13-14			11.0	7.0	8.0	4.0												3.0	4.0			10.0	8.5	
14-15			10.0	6.0	9.5		4.0			8.5				5.0		3.0		6.5	3.5	3.5				
15-16			9.0			3.5	7.0			2.5					4.0	5.5		3.0	2.5	6.0	1.5			
16-17			8.0				10.5						5.5					6.0	2.0				5.5	
17-18	1.5		7.0	11.0				4.5	10.5									2.5	1.5	2.0				
18-19			6.5	10.0						4.5	5.0				4.0		6.0	6.0		4.5		1.5		
19-20			5.5	9.0										6.0				2.5		6.5	9.0		2.5	
20-21	3.5			8.5				9.5			10.0							5.5				9.5		
21-22		1.5		7.5						6.5			7.0		4.0		2.0	2.0		2.5				
22-23		2.5	10.5	6.5			4.0											5.5		5.0	6.0			
23-24	5.0	4.0	9.5	5.5			7.0											2.0		7.0				
24-25		5.0	8.5				10.5			8.5				7.0	4.0			5.0						
25-26	1.5		7.5					5.0	3.5								7.0	1.5		3.0	3.0			
26-27			6.5	10.5	5.5											3.0		5.0		5.5			6.5	
27-28			6.0	9.5	7.0					10.5					4.0	5.0				7.5	8.0		9.0	
28-29	3.0			9.0	9.0			10.0	5.5			5.0					3.0	4.5	7.0					
29-30				8.0	10.5						6.0									6.0	3.5	10.5		3.5
30-31			11.0	7.0			4.0								4.0			4.5	5.5	6.0				

	UZ	EW	FL	RU	RU	RW	AT	BB	BO	EP	U	SX	V501	V508	V839	1010	EF	EF	ER	ER	ET	FH	FR
	LYR	LYR	LYR	MON	MON	MON	MON	MON	MON	MON	OPH	OPH	OPH	OPH	OPH	OPH	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	5.8	10.5	10.9	10.1	8.8	6.2	12.6	12.6	9.5	9.5	11.2	10.5	11.0
MIN	11.0	13.6	9.5	11.3	11.3	11.9	11.4	11.3	12.1	11.1	6.5	11.2	11.8	10.7	9.4	7.0	14.1	12.8	10.2	10.2	12.4	11.5	11.9
DUR	5	5	4	5	5	5	5	4	5	5	5	5	4	3	3	4	6	6	3	3	5	5	4
TOT						1																	
				(S)													(S)		(S)				
0- 1										2.0	6.0		5.0	8.5	11.0	6.5							
1- 2								2.0					4.0	9.5	6.5					1.5			
2- 3		10.5											3.5	10.5		6.0							
3- 4													2.5	3.0	7.5			2.0					2.5
4- 5		9.5			3.0									3.5	3.5	6.0							
5- 6											6.5			4.5	9.0						1.5		
6- 7		8.0	3.5				1.5							5.5	4.5	5.5							
7- 8														6.0	10.0		3.0						
8- 9		7.0	7.5				2.5			3.0				7.0	5.5	5.0							
9-10	9.5													8.0	11.0								
10-11		6.0		1.5			3.0				7.5	2.0		8.5	6.5	4.5							
11-12	7.0													9.5									
12-13		4.5					3.5	2.0					3.5	10.5	7.5	4.5							
13-14	4.0													3.0	3.5								
14-15		3.5												5.0	3.5	9.0	4.0						
15-16											8.0			4.5	4.5								
16-17		2.0				2.5								6.5	5.5	10.0	3.5						
17-18														6.0	5.5								
18-19													8.0	7.0	11.0	3.0							2.5
19-20			5.0						4.0					8.0	6.5	11.0							
20-21											9.0	9.5		8.5		3.0	2.0						
21-22			9.5											9.5	7.5	10.5						2.5	
22-23												11.0		10.0	3.5								
23-24								2.0					10.5	3.0	8.5	10.0							
24-25													9.5	3.5	4.5			3.0					
25-26											9.5		9.0	4.5	10.0	9.5							
26-27	10.0												8.0	5.5	5.5								1.5
27-28													7.5	6.0	11.0	9.5							
28-29	7.5								1.5				6.5	7.0	6.5								
29-30													6.0	7.5		9.0							
30-31	4.5		2.5								10.5		5.0	8.5	7.5				1.5				

	FT	FZ	FZ	GU	GU	U	U	TY	UX	AQ	AQ	AQ	BB	BB	BG	BX	DI	GP	Z	RT	RV	ST	XZ
	ORI	ORI	ORI	ORI	ORI	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PEG	PER	PER	PER	PER	PER
MAX	9.1	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	9.9	10.6	10.3	9.7	10.6
MIN	9.7	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	12.0	12.7	13.2	12.7
DUR	4	3	3	4	4	3	3	6	5	12	12	12	3	3	4	3	2	4	6	4	8	5	4
TOT										5	5	5							2			1	
			(S)		(S)		(S)			(2)		(3)		(S)									
0- 1		1.5			3.0		11.0							9.5		10.0							
1- 2			1.5		1.5	9.5							7.0			6.0	10.0						
2- 3		1.5											9.0			9.0				9.0			
3- 4			1.5				10.5						11.0	6.5		5.5							
4- 5		1.5		3.0		9.0				7.0			8.5			8.0				1.5			1.5
5- 6			1.5	1.5									6.5	11.0		11.0							
6- 7		1.5					10.5						8.5			7.5	9.5						
7- 8	3.0		1.5			9.0							10.5			10.5							
8- 9		1.5			3.0									8.0		6.5							
9-10			1.5		1.5		10.5							10.0		9.5				4.0			
10-11		1.5				9.0							8.0			5.5							
11-12			1.5										10.0			8.5	9.5						
12-13		1.5		3.0			10.5							7.5	10.0								3.0
13-14			1.5	1.5		9.0			8.0					9.5		7.5				10.0			
14-15		1.5											7.5		9.0	10.5							10.5
15-16			1.5				10.5			7.0	9.5		9.5			6.5				2.5			
16-17		1.5			3.0	9.0			10.0					7.0	8.0	9.5	9.0						
17-18			1.5		2.0									9.0		6.0			2.0			10.0	
18-19		1.5					10.5							7.0	11.0	8.5							
19-20			1.5			9.0								9.0						8.5	11.0		
20-21		1.5		3.0									11.0	6.5		8.0						1.5	4.5
21-22			1.5	2.0			10.5							8.5		11.0	8.5			1.5			
22-23		1.5				9.0								10.5		7.0							
23-24			1.5										8.0			10.0							
24-25		1.5			3.0		10.5						10.5			6.0				11.0			
25-26			1.5		2.0	9.0								8.0		9.0							
26-27		1.5						9.5		7.0	9.0			10.0		5.0	8.0			3.5			
27-28			1.5				10.5							7.5		8.0		10.5					2.5
28-29		1.5		3.0		9.0								9.5		11.0		10.0					
29-30			1.5	2.0											7.5	7.0		9.5	7.5				10.0
30-31		1.5					10.5		8.0						9.5	10.0		9.0		9.5			

	IQ	IQ	IT	IU	KW	V432	BETA	RV	UZ	UZ	AV	U	V505	1968	RS	AO	CC	CC	Y	RZ	WY	AQ	CT
	PER	PER	PER	PER	PER	PER	PER	PSC	PUP	PUP	PUP	SGE	SGR	SGR	SER	SER	SER	SER	SEX	TAU	TAU	TAU	TAU
MAX	7.7	7.7	9.9	10.5	10.5	11.0	2.2	11.3	9.7	9.7	10.2	6.4	6.4	12.3	10.8	10.6	11.1	11.1	9.8	10.5	11.5	12.0	10.2
MIN	8.3	7.9	10.5	11.6	11.5	11.7	3.5	12.0	10.6	10.3	10.8	9.1	7.6	13.3	11.5	12.1	11.7	11.7	10.2	11.2	11.7	12.9	11.5
DUR	5	5	4	5	4	3	8	3	4	4	3	6	5	4	4	4	4	4	3	3	4	5	5
TOT												2											
		(S)								(S)								(S)					
0- 1			9.5			9.0							6.0				9.0	3.0	3.0		3.0		
1- 2		9.5											10.5	6.0	4.0	10.0	10.0	3.5		1.5			2.5
2- 3												10.0		9.0	8.5	7.0	10.5	4.5	5.5				
3- 4		3.0		11.0		1.5		9.0			3.0					4.0		5.5	1.5				2.5
4- 5	2.0																	6.0					
5- 6					11.0									4.5	8.5			7.0	4.0				2.5
6- 7					9.0									7.5			1.5	7.5					
7- 8					7.5								8.5	10.5			2.0	8.5	6.5		1.5		2.5
8- 9			1.5		6.0	10.5		9.0			3.5				8.0	10.5	3.0	9.0	2.5				
9-10				11.0	4.5							4.0					8.0	3.5	10.0		3.5		2.5
10-11		2.5			2.5									6.0		5.0	4.5	10.5	5.0				
11-12						2.5	9.5							9.0	8.0	2.0	5.5						2.5
12-13																	6.0						
13-14						10.0		8.5			3.5			6.5			7.0		3.5			3.0	2.5
14-15								11.0	4.0				11.0	4.5	7.5		7.5						
15-16				10.5										8.0			8.5	2.0	6.0				2.5
16-17						2.5					3.5			11.0			8.5	9.0	3.0	2.0		1.5	
17-18		2.0													7.5	5.5	10.0	3.5					2.5
18-19						9.5			3.0		3.5					3.0	10.5	4.5	4.5		3.5		
19-20					10.0			11.0				7.5		6.5				5.0					2.5
20-21					8.5					3.0			8.5	9.5	7.0			6.0	6.5				
21-22				10.5	7.0	2.0												7.0	3.0				2.5
22-23					5.0				2.5									7.5					
23-24			9.5		3.5	9.0					4.0			5.0	7.0	9.5	2.0	8.5	5.5	2.5			2.5
24-25					2.0			10.5		2.5				8.0		6.5	3.0	9.0	1.5			1.5	
25-26														11.0		3.5	3.5	10.0			1.5		2.5
26-27						1.5			2.0					6.5	6.5		4.5	10.5	4.0				
27-28				10.5							1.5		11.0				5.0				3.5		2.5
28-29										1.5	4.0			6.5			6.0		6.0	2.0			
29-30						3.0		10.0				11.0		9.5	6.5		6.5		2.5				2.5
30-31																10.5	7.5					3.5	

	EQ	EQ	HU	V	X	RS	RV	W	W	TX	TY	TY	UX	UX	VV	XZ	ZZ	AF	W	RU	VV	AG	AH
	TAU	TAU	TAU	TRI	TRI	TRI	TRI	UMA	UMA	UMA	UMA	UMA	UMA	UMA	UMA	UMA	UMA	UMA	UMI	UMI	VIR	VIR	VIR
MAX	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	10.8	8.6	10.7	11.7	8.8	9.7
MIN	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	11.6	9.7	11.4	13.5	9.4	10.2
DUR	3	3	6	4	4	4	4	3	3	6	3	3	1	1	3	3	4	8	7	4	4	4	4
TOT																							
		(S)							(S)			(S)											
0- 1					10.5			4.5	8.5		6.0	2.0	2.5	7.5	3.5						5.0	6.0	5.0
1- 2				10.0	10.0			4.5	8.5		7.5	3.5	7.0	2.5							2.5		
2- 3								4.5	8.5	4.5	9.0	5.0	2.0	6.5	5.0		3.5	3.5	10.5	1.5		4.0	6.0
3- 4								4.5	8.5		2.0	6.5	6.5	1.5		3.5				2.5	8.0		1.5
4- 5							9.0	4.5	8.5		3.5	8.0	10.5	6.0	6.5	9.0	10.5		3.5	4.0	5.5	2.5	6.5
5- 6								4.5	8.5	6.0	5.0	9.5	5.5	10.0						5.0	3.0	9.0	2.5
6- 7	1.5							4.5	8.5		6.5	2.5	10.0	5.0	8.0					6.0			7.5
7- 8							9.5	4.5	8.5		8.0	4.0	4.5	9.5				9.5		7.5	8.5	7.5	3.0
8- 9				10.5				4.5	8.5	7.5	9.5	5.5	9.0	4.5	9.5					8.5	6.0		8.5
9-10								4.5	8.5		3.0	7.0	4.0	8.5	2.0	6.0			6.0	10.0	3.5	6.0	4.0
10-11							9.5	4.5	8.5		4.5	8.5	8.0	3.5	11.0					11.0			9.5
11-12				8.5				4.5	8.5	9.0	6.0	1.5	3.0	8.0	3.5		8.0				9.0	4.0	5.0
12-13								4.5	8.5		7.5	3.0	7.5	2.5							6.5		
13-14		1.5					10.0	4.5	8.5		9.0	4.5	2.5	7.0	5.0					2.0	3.5	2.5	6.0
14-15								4.5	8.5	10.5	2.0	6.0	6.5	2.0		3.5			8.5	3.0		9.0	1.5
15-16				11.0				4.5	8.5		3.5	7.5	1.5	6.0	6.5	9.0				4.5	9.5		7.0
16-17							10.5	5.0	9.0		5.0	9.0	6.0	10.5						5.5	6.5	7.5	2.5
17-18								5.0	9.0		6.5	2.0	10.0	5.5	8.0					6.5	4.0		7.5
18-19				9.0		9.5		5.0	9.0		8.0	3.5	5.0	9.5			6.0			8.0	1.5	5.5	3.5
19-20							10.5	5.0	9.0		9.5	5.5	9.5	4.5	9.5				11.0	9.0	9.5		8.5
20-21	1.5							5.0	9.0		2.5	7.0	4.0	9.0	2.0	6.0				10.5	7.0	4.0	4.0
21-22								5.0	9.0		4.0	8.5	8.5	4.0	11.0				3.5		4.5		9.5
22-23							11.0	5.0	9.0		5.5	10.0	3.5	8.0	3.5						2.0	2.0	5.0
23-24								5.0	9.0		7.0	3.0	7.5	3.0				4.0			10.0	9.0	
24-25								5.0	9.0		8.5	4.5	2.5	7.5	5.0					2.5	7.5		6.0
25-26				10.0				5.0	9.0		1.5	6.0	7.0	2.0		3.5	3.5			3.5	5.0	7.5	1.5
26-27								5.0	9.0		3.0	7.5	2.0	6.5	6.5	9.0			6.0	5.0	2.0		7.0
27-28		1.5	2.0					5.0	9.0		4.5	9.0	6.0	1.5			10.5			6.0	10.5	5.5	2.5
28-29								5.0	9.0		6.5	2.0	10.5	5.5	8.0			10.5		7.5	8.0		8.0
29-30								5.0	9.0		8.0	3.5	5.5	10.0						8.5	5.0	4.0	3.5
30-31								5.0	9.0		9.5	5.0	9.5	5.0	9.5					9.5	2.5		8.5

	AH	AK	AW	AW	AX	AZ	AZ	BH	MS	MS	NY	Z	AW	AX	AY	BE	BO	BS	BT	BU	CD	
	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VIR	VUL	VUL	VUL	VUL	VUL	VUL	VUL	VUL	VUL	VUL	VUL
MAX	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	9.9	10.4	11.0	11.8	10.6	11.5	
MIN	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	11.4	13.3	11.5	12.5	11.4	12.6	
DUR	4	4	3	3	4	3	3	4	3	3	1	6	5	5	4	5	4	3	3	3	4	
TOT																						
	(S)		(S)		(S)		(S)		(S)													
0- 1			1.5	6.0		6.5	2.5		3.5	7.5	3.5				5.5	9.5		6.0		10.0	9.0	
1- 2	5.5	4.5	3.0	7.5	5.5	8.0	3.5		2.0	6.0	3.5						5.5	5.0				
2- 3		9.0	4.5	9.0		9.0	5.0		8.0	4.5	1.5							4.0	7.0		10.0	
3- 4	6.5		6.0	2.0	8.0	2.0	6.0	7.0	6.5	3.0	2.0		8.5				4.0		10.5	6.5		
4- 5	2.0		7.5	3.5		3.0	7.0	2.5	5.0	9.0	2.0		4.0							10.0		
5- 6	7.0		9.0	4.5		4.0	8.5		3.5	7.5	2.5			4.0							4.0	
6- 7	3.0		2.0	6.0	3.5	5.5	9.5		2.0	6.0	2.5							10.5				
7- 8	8.0	3.5	3.5	7.5		6.5	2.5	9.0	8.0	4.5	3.0		9.5	4.5				9.5		6.0	5.0	
8- 9	3.5	8.5	5.0	9.0	6.0	7.5	3.5	4.5	6.5	3.0	3.0		5.0			4.0		8.5		9.5		
9-10	9.0		6.5	2.0		9.0	4.5		5.0	9.0	3.0			5.0					7.0		6.5	
10-11	4.5		8.0	3.5	8.5	1.5	6.0		3.5	7.5	3.5	11.0							6.0	6.5		
11-12			9.5	5.0	1.5	3.0	7.0		2.0	6.0	3.5		10.0	6.0		6.5		5.0	10.0	5.5	7.5	
12-13	5.5		2.5	6.5		4.0	8.0	6.5	8.0	4.5	1.5		5.5		7.0				3.5		9.0	
13-14		3.0	4.0	8.0	4.0	5.0	9.5	2.0	6.5	3.0	2.0			6.5							8.5	
14-15	6.5	7.5	5.5	9.5		6.5	2.0		5.0	9.0	2.0					9.0						
15-16	2.0		7.0	2.5	6.5	7.5	3.5		3.5	7.5	2.5	9.0	11.0	7.0							5.5	10.0
16-17	7.5		8.5	4.0		8.5	4.5	8.5	2.0	6.0	2.5		6.5					10.5		8.5		
17-18	3.0		10.0	5.5	9.0	1.5	5.5	4.0	8.0	4.5	3.0			7.5				9.5				
18-19	8.0		3.0	7.0	2.0	2.5	7.0		6.5	3.0	3.0							8.0	6.5			
19-20	3.5	2.0	4.5	8.5		4.0	8.0		5.0	8.5	3.5			8.0				7.0	10.0	5.0		
20-21	9.0	7.0	6.0	1.5	4.5	5.0	9.0	10.5	3.5	7.0	3.5	6.5	7.0					6.0		8.0	5.0	
21-22	4.5		7.5	3.0		6.0	2.0	6.0	2.0	5.5	3.5			9.0				5.0				
22-23			9.0	4.5	7.0	7.5	3.0	1.5	8.0	4.0	1.5								3.5		6.0	
23-24	5.5		2.0	6.0		8.5	4.5		6.5	2.5	2.0			9.5							4.5	
24-25			3.5	7.5	10.0	10.0	5.5		5.0	8.5	2.0		8.0		8.5					8.0	7.5	
25-26	6.5		5.0	9.0	2.5	2.5	6.5	8.0	3.5	7.0	2.5	4.5		10.0		5.5				11.0		
26-27	2.0	6.0	6.0	2.0		3.5	8.0	3.5	2.0	5.5	2.5							10.5	6.0		8.5	
27-28	7.5		7.5	3.5	5.5	5.0	9.0		8.0	4.0	3.0			10.5				9.5	9.5	4.0		
28-29	3.0		9.0	5.0		6.0	2.0		6.5	2.5	3.0		8.5			8.0	11.0	8.0		7.5	9.5	
29-30	8.5		2.0	6.5	8.0	7.0	3.0	10.0	5.0	8.5	3.5		4.0	11.0	4.5				7.0		10.5	
30-31	4.0		3.5	8.0		8.5	4.0	5.5	3.5	7.0	3.5						10.0	6.0			11.0	