

	SW	XX	AT	SW	TZ	YZ	AA	BO	BR	DN	TZ	BH	RS	ST	SW	SZ	TV	TW	UU	UY	UY	KV	SS
	AND	AND	AND	AQR	AQR	AQR	AQR	AQR	AQR	AQR	AUR	AUR	BOO	BOO	BOO	BOO	BOO	BOO	BOO	BOO	CAM	CNC	CVN
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	11.9	11.2
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	13.0	12.5
RISE	2	3	3	1	3	2	2	3	2	3	2	2	2	3	2	2	3	2	1	2	3	2	2
0- 1		5.0	5.0	5.5				10.0	6.5	6.5	9.5	8.5	2.5		3.0			2.5			1.5		
1- 2	8.5		10.5	3.5	4.5		6.5		5.5				6.0	4.5	3.5		6.0	4.0			3.0		
2- 3	5.5	9.0	1.5	1.5	8.0	4.0			5.0						4.5		4.5	5.5	5.0		4.5		
3- 4	3.0		7.0	10.5	11.5	6.5		4.5	4.0	10.5			3.0	1.5	5.0		3.0		3.0		6.5		5.5
4- 5				8.5		9.0	7.5						6.5	7.5	5.5	1.5	1.5				1.5		4.5
5- 6	8.0	6.0	3.5	6.5	4.5	11.5		6.5		8.0		9.0			6.5	2.5					3.0		3.5
6- 7	5.0		9.0	5.0	8.0		3.5						3.5	4.0		3.5	6.0				5.0		2.5
7- 8		10.0		3.0	11.5	3.0	8.5	8.5		6.0						4.5	4.5		6.0				1.5
8- 9	10.0	3.5	5.5			5.5			11.0							6.0	3.0	2.0	3.5		1.5		
9-10	7.5		11.0	10.0	4.5	8.0	4.5	10.5	10.5				4.0	7.0			1.5	3.5	1.5	3.5	3.5		
10-11	4.5	7.5	2.0	8.0	8.0	10.5	9.5		9.5	10.0		9.5						5.5			5.0		
11-12			7.5	6.0	11.0				8.5		8.5	7.0	1.5	3.5			6.0	7.0		2.5			
12-13	9.5			4.0			5.5	5.0	7.5	7.5			4.5				4.5		6.5		2.0	11.0	
13-14	7.0	5.0	4.0	2.0	4.5	4.5	10.5		7.0								3.0		4.5		3.5	11.0	
14-15	4.0		9.5		8.0	7.0		7.0	6.0	5.0			2.0	6.5			1.5		2.5		5.0	11.0	5.5
15-16		9.0		9.0	11.0	9.5	6.5		5.0	11.5		9.5	5.0								11.0	4.5	
16-17	9.5		6.0	7.5				9.0	4.0			7.5		3.0		2.0	6.0	2.0			2.0	11.5	3.5
17-18	6.5		11.5	5.5	4.5					9.0			2.0		2.0	3.0	4.5	3.5	7.0		3.5	11.5	2.5
18-19	3.5	6.5	2.5	3.5	7.5	4.0	7.5	11.0					5.5		2.5	4.0	3.0	5.0	5.0		5.0	11.5	1.5
19-20			8.0	1.5	11.0	6.5		4.0		7.0				6.0	3.0	5.5	1.5	6.5	3.0				
20-21	9.0	10.5		10.5		9.0	3.5				9.0	10.0	2.5		3.5						2.0		
21-22	6.0	4.0	4.5	8.5	4.5	11.5	8.5	6.0	11.5			8.0	6.0	2.5	4.5		6.0				3.5		
22-23	3.0		10.0	6.5	7.5				10.5	11.0					5.0		4.5			4.0	5.5		
23-24		8.0		4.5	11.0	3.0	4.5	7.5	9.5				3.0		5.5		3.0		5.5				
24-25	8.5		6.5	2.5		5.5	9.5		9.0	8.5			6.5	5.5	6.5		1.5	1.5	3.5	3.0	2.0		
25-26	5.5				4.0	8.0		9.5	8.0		10.5							3.0	1.5		4.0		5.5
26-27	3.0	5.0	3.0	10.0	7.5	10.5	5.5		7.0	6.0		8.5	3.5	2.0			6.0	4.5		1.5	5.5		4.5
27-28	10.5		8.5	8.0	11.0		11.0		6.0							1.5	4.5	6.0					3.5
28-29	8.0	9.5		6.0				4.5	5.5							2.5	3.0		6.0		2.5		2.5
29-30	5.0		5.0	4.0	4.0	5.0	6.5		4.5	10.0	9.0		4.0	5.0		3.5	1.5		4.0		4.0		1.5
30-31			10.5	2.0	7.5	7.5		6.5								5.0			2.0		5.5		

	RV	RZ	VW	YZ	AN	RR	RU	RV	RX	RZ	TY	UU	S	XX	XZ	DM	RW	XZ	RX	SV	BB	RX	SS
	CAP	CAP	CAP	CAP	CAP	CET	CET	CET	CET	CET	CET	CET	COM	CYG	CYG	CYG	DRA	DRA	ERI	ERI	ERI	FOR	FOR
MAX	10.2	12.5	12.6	11.0	12.0	9.3	10.8	10.3	11.0	11.2	11.4	11.5	10.9	11.4	9.1	11.2	11.0	9.6	9.2	9.6	10.9	11.1	9.4
MIN	11.6	13.5	13.5	11.6	13.0	10.3	12.1	11.2	11.7	12.4	11.9	12.4	12.1	12.5	10.5	12.7	12.0	10.3	10.1	10.2	11.9	12.5	10.6
RISE	2	3	2	3	5	2	3	3	3	2	3	3	3	1	3	2	2	3	3	5	2	2	2
0- 1	5.0	3.0	6.0	4.5	6.0		8.5	8.0		10.0		9.5		7.0	2.5	5.0	8.0	1.5					
1- 2	2.5	8.0	4.5			7.0				10.5				2.5			5.5						
2- 3		3.0	3.5	2.5		10.0			7.0	11.0		5.0	2.0	7.5	10.5	7.5	2.5	11.0		8.5			
3- 4	8.5	8.0	2.0	4.5	2.5		7.0	10.5	10.5	11.5		10.0		3.0	9.0	3.5	10.5	9.5					
4- 5	6.0	3.5					11.0							8.0	7.5	9.5	8.0	8.5					
5- 6	3.5	8.0	6.5	2.5	6.0			7.5			7.5	5.5		3.5	6.0	6.0	5.0	7.5					
6- 7		3.5	5.5	5.0		6.5			7.5		7.0	11.0		8.5	4.5	2.0	2.5	6.5	10.5			11.5	
7- 8	9.0	8.0	4.0			9.0	9.5		11.0					4.0	2.5	8.0	10.0	5.0		8.5			11.5
8- 9	6.5	3.5	2.5	3.0	2.5			10.5				6.5		9.0		4.5	7.5	4.0		11.5			11.5
9-10	4.0	8.5		5.0								11.5	3.0	4.5	10.5		4.5	3.0				11.0	11.0
10-11		3.5	7.5		6.0		7.5	7.0	7.5					9.5	9.0	6.5	2.0	2.0					11.0
11-12	10.0	8.5	6.0	3.0		6.0			11.5			7.0		5.0	7.5	3.0	10.0						10.5
12-13	7.5	3.5	4.5	5.5		8.5									6.0	9.0	7.0	11.0		8.0	11.5	11.0	10.5
13-14	5.0	8.5	3.0		2.5	11.0	6.0	10.0						5.5	4.5	5.5	4.5	10.0					10.5
14-15	2.0	4.0	2.0	3.5			10.0		8.0			8.0			2.5	1.5	1.5	8.5					10.0
15-16		8.5		5.5	5.5			7.0						6.0		7.5	9.5	7.5				10.5	10.0
16-17	8.0	4.0	6.5			5.5					7.5		4.0	1.5	10.5	4.0	7.0	6.5	10.5		11.0		9.5
17-18	5.5	9.0	5.5	3.5		8.0	8.5				7.0	8.5		7.0	9.0	10.0	4.0	5.5		8.0			9.5
18-19	3.0	4.0	4.0	5.5	2.0	10.5		9.5	8.5	7.0				2.0	7.5	6.0	1.5	4.0				10.0	9.0
19-20		9.0	2.5							7.5			2.0	7.5	6.0	2.5	9.0	3.0		11.5			9.0
20-21	8.5	4.0		3.5	5.5		7.0	6.5		8.0		9.5		2.5	4.0	8.5	6.5	2.0			11.0		8.5
21-22	6.0	9.0	7.5	6.0			11.0		5.5	8.5				8.0	2.5	4.5	3.5					10.0	8.5
22-23	3.5	4.5	6.0			7.5			9.0	9.0		5.0		3.5				11.0		8.0			8.5
23-24		9.0	4.5	4.0		10.0		9.5		9.5		10.0		8.5	10.5	7.0	9.0	10.0	11.5				8.0
24-25	9.5	4.5	3.0	6.0			9.5			10.0				4.0	9.0	3.0	6.0	9.0		11.5	10.5	9.5	8.0
25-26	7.0	9.5	2.0		5.0				5.5	10.5		5.5		9.0	7.5	9.5	3.5	8.0					7.5
26-27	4.5	4.5		4.0					9.5	11.0		11.0	3.0	4.5	6.0	5.5		6.5	10.0				
27-28	2.0	9.5	6.5	6.5	8.5	7.0	7.5			11.5				9.5	4.0	2.0	8.5	5.5		8.0		9.5	
28-29		4.5	5.5	2.0		9.5		9.0			7.0	6.5		5.0	2.5	8.0	6.0	4.5			10.5		
29-30	7.5	9.5	4.0	4.0					6.0			11.5	1.5			4.0	3.0	3.0		11.5			
30-31	5.0	5.0	2.5	6.5	5.0		6.0		9.5					5.5	10.5			2.0				9.0	

	RR	GQ	TW	VX	VZ	AR	DL	DY	DY	DY	LS	RR	SS	ST	VY	U	RR	RZ	ST	AV	BH	RU	DF
	GEM	GEM	HER	HER	HER	HER	HER	HER	HER	HER	HER	LEO	LEO	LEO	LMI	LEP	LYR	LYR	OPH	PEG	PEG	SCL	SER
MAX	10.7	13.6	10.5	9.9	10.7	10.6	11.0	10.2	10.2	10.2	10.8	10.0	10.5	10.8	13.6	9.8	7.1	10.0	11.3	9.9	10.0	9.3	11.4
MIN	11.9	14.6	11.8	10.4	12.0	11.6	12.4	10.6	10.6	10.6	11.1	11.7	12.0	12.3	14.6	11.1	8.1	12.0	12.7	10.9	10.8	10.8	13.0
RISE	2	2	2	2	2	2	1	1	1	1	2	2	2	2	2	2	2	2	3	2	3	2	2
0- 1			9.0		3.0		2.0		2.0	5.5	4.5						6.5	5.0	6.5	2.5	7.5		4.5
1- 2			4.0	7.5		8.5	6.5	6.5		3.0	2.5						9.5	5.5	4.0	6.5			1.5
2- 3			9.0	5.0	7.5	7.0		3.5					1.5					6.0	2.0	1.5	5.5		
3- 4			4.0	3.0	5.0	5.5			4.5		4.5						2.5	6.5		5.5			
4- 5			9.0		2.0	4.5	5.5		2.0	5.5	2.5						5.5	7.0			3.5		3.0
5- 6			4.0			3.0		6.5		3.0							9.0	7.5	5.5	4.5	10.5		
6- 7			9.0		7.0	1.5		4.0			4.5							8.0	3.0	8.5	1.5		
7- 8	9.5		4.0	5.5	4.0		4.5	1.5	5.0		2.5					11.0	1.5	8.5		3.0	8.5		5.0
8- 9			9.0	3.0					2.5	6.0					11.0		5.0	9.0		7.5			2.0
9-10			4.0		9.0	8.5		7.0		3.5	4.5						8.0	10.0	6.5	2.0	6.5		
10-11			8.5		6.0	7.0	3.5	4.5			2.5						11.5	10.5	4.5	6.0			
11-12		11.5	4.0		3.0	5.5	7.5	2.0	5.5										2.0		5.0		3.5
12-13			8.5	5.5		4.0			3.0	6.5	4.5						4.0			5.0	11.5		
13-14			4.0	3.5	8.0	2.5	2.5			3.5	2.5						7.5			9.0	3.0	11.5	
14-15			8.5	1.5	5.0		6.5	4.5								10.5	10.5		5.5	4.0	9.5	11.0	5.0
15-16		11.5	4.0		2.0			2.0	5.5		4.5								3.0	8.0		10.5	2.0
16-17			8.5				1.5		3.0	6.5	2.5						3.5	1.5		2.5	8.0	10.5	
17-18			4.0	6.0	7.0	8.0	5.5			4.0							6.5	2.0		6.5		10.0	
18-19			8.5	3.5	4.0	6.5		5.0		1.5	4.5			2.0	11.0		10.0	2.5	7.0	1.5	6.0	10.0	3.5
19-20		11.0	3.5	1.5	1.5	5.0		2.5	6.0		2.5							3.0	4.5	5.5		9.5	
20-21			8.5		9.0	4.0	4.5		3.5	7.0							2.5	3.5	2.0		4.0	9.0	
21-22			3.5		6.0	2.5				4.5	4.5					10.0	6.0	4.0		4.5	11.0	9.0	5.0
22-23			8.5	6.0	3.5			5.5		1.5	2.5						9.0	4.5		8.5	2.5	8.5	2.0
23-24		11.0	3.5	4.0			3.5	2.5	6.5									5.0	6.0	3.5	9.0	8.0	
24-25			8.5	1.5	8.0				3.5		4.5						2.0	5.5	3.5	7.5		8.0	
25-26			3.5		5.5	8.0				4.5	2.5						5.0	6.0		2.0	7.0	7.5	3.5
26-27			8.5		2.5	6.5	2.5	5.5		2.0							8.0	6.5		6.0		7.0	
27-28		11.0	3.5	6.0		5.0	7.0	3.0	6.5		4.5	1.5					11.5	7.0	7.0		5.5	7.0	
28-29			8.5	4.0	7.0	3.5			4.0		2.5							7.5	4.5	5.0		6.5	5.0
29-30			3.5	2.0	4.5	2.0	1.5		1.5	5.0				2.0			4.0	8.5	2.5	9.0	3.5	6.5	2.0
30-31			8.0		1.5		6.0	6.0		2.5	4.5						7.5	9.0		4.0	10.5	6.0	

all times in U.T.

	RV	TU
	UMA	UMA
MAX	10.1	9.2
MIN	11.2	10.2
RISE	3	3
0- 1	4.5	
1- 2	3.0	
2- 3	1.5	
3- 4		
4- 5		2.0
5- 6		
6- 7	6.5	
7- 8	5.0	
8- 9	3.5	
9-10	2.0	2.5
10-11		
11-12		
12-13		
13-14	7.0	
14-15	5.5	3.0
15-16	4.0	
16-17	2.5	
17-18		
18-19		
19-20		
20-21		
21-22	6.0	
22-23	4.5	
23-24	3.0	
24-25	1.5	
25-26		
26-27		
27-28		
28-29	6.5	1.5
29-30	5.0	
30-31	3.5	