



BAV Circular

Heft 2 - 2024

Ephemeriden

Unterlagen für die Planung der Veränderlichenbeobachtungen, Informationen zu allen BAV-Programmen und Empfehlungen zur Beobachtung

Julianisches Datum 2024

	Jan	Feb	Mrz	Apl	Mai	Jun	Jul	Aug	Spt	Okt	Nov	Dez
2460 000 +	0310	0341	0370	0401	0431	0462	0492	0523	0554	0584	0615	0645

jeweils für den Nullten des Monats um 12 Uhr Weltzeit

Umwandlung von Julianischen Tagesbruchteilen in MEZ

JD	.00d	.10d	.20d	.30d	.40d	.50d	.60d	.70d	.80d	.90d
.00d	13 00	15 24	17 48	20 12	22 36	01 00	03 24	05 48	08 12	10 36
.01	13 14	15 38	18 02	20 26	22 50	01 14	03 38	06 02	08 26	10 50
.02	13 29	15 53	18 17	20 41	23 05	01 29	03 53	06 17	08 41	11 05
.03	13 43	16 07	18 31	20 55	23 19	01 43	04 07	06 31	08 55	11 19
.04	13 58	16 22	18 46	21 10	23 34	01 58	04 22	06 46	09 10	11 34
.05	14 12	16 36	19 00	21 24	23 48	02 12	04 36	07 00	09 24	11 48
.06	14 26	16 50	19 14	21 38	00 02	02 26	04 50	07 14	09 38	12 02
.07	14 41	17 05	19 29	21 53	00 17	02 41	05 05	07 29	09 53	12 17
.08	14 55	17 19	19 43	22 07	00 31	02 55	05 19	07 43	10 07	12 31
.09	15 10	17 34	19 58	22 22	00 46	03 10	05 34	07 58	10 22	12 46

Alle Vorhersagen (Ephemeriden) in Heft 2 sind in MEZ angegeben.

Während der Sommerzeit muss daher bei den Ephemeriden eine Stunde hinzugerechnet werden, um zur dazugehörigen Uhrzeit zu gelangen.

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	Bedeckungsveränderliche "Standardprogramm 2010"	S10
	Bedeckungsveränderliche "Langperiodische 2010"	L10
	Bedeckungsveränderliche "Erwünschte Beobachtungen"	
	Selten beobachtete Sterne	E10S
	Die Elemente sind unbekannt oder fraglich	E10U
	Der Stern hat eine exzentrische Bahn mit Apsidendrehung	E10X
	Das (B-R)-Diagramm zeigt sehr viel Dynamik	E10D
	RR-Lyrae-Sterne Standardprogramm	RR
	RR-Lyrae-Sterne Programm 1990	90
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Veränderungen gegenüber dem Vorjahr

Aktuelle Daten für E0 und P wurden teilweise von Paschke, Anton und Maintz, Gisela übernommen

Erläuterung der Ephemeriden-Tabelle

Ephemeriden für Bedeckungsveränderliche und RR-Lyrae-Sterne (ab Seite 4)

Die Tabelle ist nach Monaten gegliedert. In den Zeilen sind jeweils die Veränderlichen, in den Spalten die Tage des Monats dargestellt. Für Bedeckungsveränderliche werden die Zeitpunkte der Minima und für RR-Lyrae-Sterne die Zeitpunkte der Maxima angegeben.

Nach dem Sternnamen wird der Kürzel für das BAV-Beobachtungsprogramm angegeben. Es folgt die Spalte "P" mit einer Beobachtungspriorität. Vorhersagen werden angegeben, wenn die Minima bzw. Maxima nach Sonnenuntergang bzw. vor Sonnenaufgang eintreten und der Veränderliche dann eine Höhe von mindestens 20 Grad über dem Horizont hat. Die Vorhersagen wurden für einen mittleren Ort in Deutschland (10 Grad östliche Länge, 50 Grad nördliche Breite) berechnet .

In den letzten Zeilen jeder Seite wird für jeden Tag das Julianische Datum angegeben.

Priorität

- 1 = Der Stern wurde noch nie innerhalb der BAV beobachtet
- 2 = Der Stern wurde seit über 2000 Tagen (rund 6 Jahre) nicht mehr innerhalb der BAV beobachtet
- 3 = Der Stern wurde seit über 1000 Tagen (rund 3 Jahre) nicht mehr innerhalb der BAV beobachtet

Tagesbruchteile

In der Spalte des Tages sind Julianische Tagesbruchteile (TB) eingetragen, die zum Teil (bei einem Tagesbruchteil größer 46) für den folgenden bürgerlichen Tag gelten. Damit aber alle Erscheinungen einer Nacht in einer Spalte stehen, wird so getan, als ob um Mitternacht kein bürgerlicher Datumswechsel stattfindet. Eine Tabelle zur Umrechnung der Tagesbruchteile in MEZ befindet sich auf der Titelseite.

Impressum

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Erläuterung der Ephemeriden-Tabelle

zu Ephemeriden für Bedeckungsveränderliche und RR-Lyrae-Sterne (ab Seite 4)

Zusätzliche Kennzeichen

- +** Sind aufgrund der Kürze der Periode mehrere Erscheinungen pro Nacht sichtbar, wurde hinter die Vorhersage ein " + " gesetzt.
- s** Ein Nebenminimum wird durch "s" hinter dem Tagesbruchteil markiert.
- \ /** Bei Bedeckungsveränderlichen vom Typ Algol, bei denen die Bedeckung länger als 36 Stunden dauert, werden neben dem Zeitpunkt des Minimums weitere Angaben gemacht:
Der Beginn des Abstiegs wird zeitlich angegeben, gekennzeichnet durch ein "\" hinter dem Tagesbruchteil. Während des weiteren Abstiegs wird das Zeichen "/" weiterhin angegeben.
Beim Anstieg wird entsprechend mit dem Kennzeichen "/" verfahren.
- \ /** Bei Beta-Lyrae-Sternen mit einer Periode länger als 16 Tage, wird nach der Hälfte des Abstiegs zusätzlich während des gesamten weiteren Abstiegs das Zeichen "/" angegeben.
Beim Anstieg wird entsprechend mit dem Kennzeichen "/" verfahren.

Beispiel an Hand eines Ausschnitts aus der Tabelle vom Januar

2010 Jan		1	2	3	4	5	15	16	17	18	19
Ari	X RR		30		25		32		27		23
Ari	RS L10				20						
Ari	AL E10				34						
Aur	TZ 90	20+	38+	55	34+	51	30+	48	26+	44	22+
Aur	CQ L10				6						00s
Aur	IY E10			50					47		
Boo	TW 90	57	63	70	76		57+	47	53	60	45+
Boo	AC E10	65	53+	59+	64s	52+	75	45+	51+	57+	
Cam	SS E10	28		70s			23+			16s	38+
Cnc	RZ L10				72\	\ 34	97/				

Beispiele

Lösungen

Spalte	Angabe	Datum	MEZ	Bemerkungen
4	20	4.1.	17:48	Minimum von RS Ari
17	26+	17.1.	19:14	Maximum von TZ Aur, weitere sind in der Nacht sichtbar (+)
3	50	3.1.	01:00	Minimum von IY Aur in der Nacht vom 3. / 4.1.
4	64s	4.1.	04:22	Nebenminimum (s) von AC Boo in der Nacht vom 4. / 5.1.
15	72\	15.1.	06:17	Die Bedeckung dauert 77,9 Stunden (D = 77,9h). Der Abstieg beginnt am 15.1. um 6:17, am 16.1. dauert der Abstieg an, das Minimum ist am 17.1. um 21:10, der Anstieg endet am 18.1. um 10:50.
16	\			
17	34	17.1.	21:10	
18	97/	18.1.	10:50	

Ephemeriden für Mirasterne (auf den letzten beiden Seiten)

Kopfzeilen Unter der Abkürzung des Monatsnamens geben die Zahlen " 123 " die Dekaden des Monats an.

M Ein Maximum wird vorhergesagt

m Ein Minimum wird vorhergesagt

2024 Jan	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
And SW RR			40	28			38	26			36	24			34	22			32	20			30		40	28			38	26				
And SY L10	1			83s	88	92s																												
And TW S10	3																								24			30s		36				
And XX 90	3	22		38			28		44			34		50	23		39			29		45		34			24		40					
And CD L10	2																																	
And OV 90	3	28	22				46	40	34	28	22				46	40	34	28	22					40	34	28	22				40			
Aqr SW RR	3	23						20																										
Aqr SX 90	2							22																										
Aqr CD E10S	2			47						31																								
Aqr HH 90	3														20																			
Aqr LL L10	2														78											86s								
Aql V0889 L10	3						96s											8s											20s					
Aql V1353 E10S	3																		78						73s									
Aql V1426 E10S	2							9+	26+	44	3+	20+	38+	55s	14+	31+	49	8+	25+	43s	1+	19+	37+	54	13+	30+	48s	7+	24+	42	59s	18+		
Aql V1430 E10S	2																														74s			
Ari X RR	3		30		25		21			46		42	37		32		28		23					44		39	35		30					
Ari RS L10	2				84										65								45											
Ari AL E10S	3										31														30									
Aur TZ 90		52	30+	47	26+	43	22+	39	57	35+	52	31+	48	27+	44	23+	40	58	36	53	32+	49	28+	45	23+	41	58	37	54	33	50	28+		
Aur CQ L10	2						12s					43											5					36s						
Aur IY E10S	3		39								56				35													53		32				
Aur V0432 E10S	3	26		34			42			50		58			66	20s						29s		37s			45s		53s					
Aur epsil																																		
Aur zeta																																		
Boo RS RR	3	76		65	78	53	66		55	68		57	70		59	72		61	74	49	63		76	51	64		53		66	55	68	57		
Boo TW 90	3	52	58	65	71	78				50	57	63	70	76				49	55	62	68		75		47		54	60	67	73				
Boo UU 90		62				73	65	56		76		67	59					70	61	53				73	64	55		75	67	58	49			
Boo UY 90	2		62		57					78		73		68		64				59		54				75			70		65		61	
Boo AC E10D		62+	50+	56+	61+	50+	55+	61+	49+	55+	61+	49+	54+	60+	48+	54+	60+	48+	54+	59+	47+	53+	59+	47+	53+	58+	47+	52+	58+	46+	52+	58+		
Boo CM 90	2		65		69					74	57	79		61				66		70			53	75	58			62		67				
Boo CQ 90		71		68	65		78	63	75	60	73	57	70		67			65	77	62	75	59		72	57	69	54	67		64	77	61	74	59
Cam SS E10S	2			33s		74				15s	57				98s		39			80s		21		62s		4		45s		86				
Cam SV S10	3	46+	35+	24+	43+	32+	21+	40+	28+	47+	36+	25+	44+	33+	22+	40+	29+	48+	37+	26+	44+	33+	22+	41+	30+	48s	37+	26+	45+	34+	23+	41+		
Cam AK E10S	3					20s	32	43s	54	66s	77				23		23	34s	45	57s	68				25s	36	47s	59	70s					
Cam AN L10	3					20s	32	43s	54	66s	77				23		23	34s	45	57s	68				25s	36	47s	59	70s					
Cam AT E10S	3	33	72	42s		52	21s	61s	31	70	40s		49		59s	29	68	38s	78s	47			57s	27	66	36s	76s	45		55s	25	64	34s	
Cnc S L10							88																											
Cnc RU L10	2											17												34									51	
Cnc RW 90	2		38	47	57	66	75		40	49	58	68	77	32	41	51	60	70		34	43		53	62	72	26	36	45	55	64	74	28	38	
JD 603 ..		11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		31	32	33	34	35	36	37	38	39	40	41	

2024 Jan	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Cnc RZ	L10	2									51\	\	13	75/								33\	95s	/	57/										
Cnc TT	90	3	51	64		46	59	71		40	53	66		35	47	60			42	55	67		36	49	62		31	43	56			38			
Cnc TU	E10S	3			50						6					62						18					75								
Cnc TW	L10	2																																	
Cnc UU	L10	2																																	
Cnc ZZ	L10	2																																	
Cnc AQ	90	3	48	57	67	77	41	51	61	70		35	45	54	64	74			38	48	58	67		32	42	51	61	71		35	45	55	64		
CVn W	90	2	76		52	63	73		49	59		70		45	56		66	77			52		63	73		49	59	70		46		56	64		
CVn Z	90	2	46	76	42	73	69		65	61			57	54			50		46	77	42		73	38	69	65	61		58			54			
CVn RS	S10	2			49s						69					49											68s					48s			
CVn RZ	90	2	52	65	79	49	62	76			60	73		57	70				54	67			51	65			48	62	75	46		59			
CMa R	S10	2		50s			48				45s				43				40s				38				49s					47			
CMi AM	E10S	2																33	35	37	38	40	42	44	46	48	50	52	54	56	58	60	60		
Cas RX	L10	2																									\	\			10				
Cas RZ	S10		54	73			32	51	71				30	49	69				27	47	66				25	44	64			22	42				
Cas SX	L10	2											20\	\	3	86/																			
Cas TV	S10	3					53		34					78			59		40		21							46		28					
Cas TW	S10	3		39		25	68		53				39		25	67					53		39			24	67		53						
Cas TX	E10S	3		60		53		46				38		31	77s		54s	60/				24	70s		63s		55s		48s		41s				
Cas AQ	L10	2							63\	68	74/					49\	54s	60/					35\	40	46/			21\	26s	32/					
Cas BM	L10	2																																	
Cas DN	E10S	3	79s			26	41s	57	72s				35s	50	66s						28s		43	59s	74			21s	37	52s	68				
Cas GG	E10S	3			47				23										50								26								
Cas GU	E10U	3																											36						
Cas IL	E10S	2					45						35														71					61			
Cas IT	E10X	3					45	48s				38s	35		28s							26				71						61			
Cas OX	E10X	3				62+				60+						58+						55+											51+		
Cas PV	E10X	3		30s		62+		55s		30s	60+				55s	58+	30s						55s		30s	53+							51+		
Cas V0368	E10S	3		72						40s		63																	21s	43				66s	
Cas V0375	E10D	3		62s	36	57s	30	78	51s	25	72	46s	20	67	41s		62	36s		57	30s		78s	51	25s	72s	46	67s	41	62s			35		
Cas V0381	E10X	3		62+	36	57s	30	78+	51s	25	72	46s	20	67	41+		62	36s		57	30s		78+	51	25s	72s	46	67s	41+	62s			35		
Cas V0459	L10	3		20	44s			43				89s		42															39+						
Cep RZ	90		22+	45+	38+	30+	23+	46+	39+	31+	24+	48+	40+	33+	25+	49	41+	34+	27+	50	43+	35+	28+	21+	44+	37+	29+	22+	45+	38+	31+	23+	47+		
Cep VW	S10		19+	30+	28+	25+	23+	20+	31+	29+	26+	23+	21+	32+	30+	27+	24+	22+	33+	31+	28+	25+	23+	20+	32+	29+	26+	24+	21+	32+	30+	27+	25+		
Cep XX	S10	3				30		63							31	64							66					33		67					
Cep XY	E10S	3		56			33								66				43		21					76		53					30		
Cep ZZ	S10	3		45		59	73								30				44		58			73								29			
Cep AI	E10S	2		71s										27		39s								73											
Cep CW	E10X	3		33+				79+			52+				25+								43+						62+						
JD	603	..	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41		

2024 Jan			P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Cep	EI	L10	3					61					83s				5				27s				49				71s				93	
Cep	EX	L10	3										23									46												
Cep	NN	E10S	3					20	23s	25	28s	31	34s	37	40s	43	46s	49	52s	55	57s	60	63s	66	69s	72	75s							
Cet	RR	RR	3	33				20	31					28	39				26	37				24	34			22	32					
Cet	RV	90	3	24			36		23			35		22		34		21		32					31					30				
Cet	TU	E10S	2	48					88					27			66				5				44				83					
Cet	TV	L10	2										4+								14+								25+					
Cet	XY	E10S									33						28s							23		40s								
Com	S	90	3	75	51	69			62	79		55		72	48	66		59	76		52		70	46	63		56	74		50	67			
Com	ST	90	2		69				68		68				67		66		66				65		65		64	44	64					
CrB	U	S10	2					75						66							56													
CrB	RV	90	3	73	72	71	71	70	70	69	69	68	68	67	67	66	66	65	65	64	64	63	63	62	62	61	61	60	60	59	59	58	58	57
Crt	W	90	2					61	67					62	68						62				56	62								
Cyg	Y	S10	3					61	67					62	68						62				56	62								
Cyg	UY	RR	2	22					27					19				24								21+								
Cyg	XZ	RR	3				39	33+	26+	19+	59			32	26+	66	59				32	26+	66	59			32	26+	66	59	52			
Cyg	BO	E10S	2	26s							28s			79s			31s							33s	21						24			
Cyg	BR	E10S	3	30	30s	29			29s	29				29s	29	29s		29	29s			29				62	61s		61					
Cyg	DM	RR	3		20	30			24					28				22					25	77					23		75			
Cyg	V0367	L10	2								\	\		86	/	/				\	\				15s	/	/		\	\	45			
Cyg	V0463	E10S	3				74							21									74s											
Cyg	V0477	E10X					74		78s					21									74s	21s										
Cyg	V0541	L10	3	4+														38+					71	62s		33	23s		74	64s				
Cyg	V0548	E10S		76s	66				37s	27				79s	69			30	20s															
Cyg	V0788	L10	2																															
Cyg	V0891	E10S	3						19									72																
Cyg	V0909	E10S	3		78s	19								20s							21													
Cyg	V1061	E10S	3	35						39		73						77																
Del	DX	90	3					21																										
Dra	RW	RR	3	28+	61	49	26+		59	48	25+	58	47	24+	57	45	78	22+	55	44	77	21+	54	42	75	64	53	41	74	63	51	40		
Dra	SU	RR		59	25	57	23	55	21	53	19	51		50	48	46	78	44	76	42	74	40	72	38	70	36	69	35	67	33	65	31		
Dra	SW	RR		43	57	71	28	41	55	69	26	40	54	68	25	39	53	67	24	38	52	66	23	37	50	64	21	35	49	63	77	34	48	62
Dra	TZ	E10D			72s		76		19+	79s	22+			25+		71s	58s	75	61				78s	21+	67			71s	57s		74			
Dra	VZ	90		30+	26+	23+	19+	47	44+	72	68	65	61	25+	22+	50	46+	43+	71	67	64	60	24+	20+	49	45+	41+	38+	66	62	59	23+	51	48
Dra	WW	S10							62					25							51													
Dra	XZ	RR		51	46	41	37	32	27+	23+	65	61	56	51	47	42	37	33	28+	23+	66	61	57	52	47	43	38	33	28+	24+	67	62	57	53
Dra	AI	S10		20	60	79			19	59	79						58	78					58	78				57	77					
Dra	BF	L10		20	60	79+			19	59	79						58+	78					58+	78				57	77					
Dra	BK	90	3	47	65	24	43	61	20+	39	57	75	35	53	71	31	49	67	27	45	64	23	41	60	78	37	56	74	33	52	70	29	48	66
JD	603	..		11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41

2024 Jan	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Dra BU E10S										77s	73	69s	64	60s	56	52s	47	43s	39													
Dra DD 90		40+	38+	36+	34+	32+	30+	28+	26+	24+	22+	20+	51	49	47	45+	43+	41+	39+	37+	35+	33+	31+	29+	27+	25+	23+	21+	52	50	48	46
Eri RV 90 2		43			28					28					28											27						
Gem RR 90 2		30+	49	28+	48	27+	46	26+	45	24+	44	23+	42	22+	41	20+	40	59	38	57	37	56	35	55	34	53	33	52	31	51	30	49
Gem RY L10 2					79					44s					9				74s					39					4s			
Gem SZ 90 3		52	52	52	53	53	53	53	54	54	54	54	54	55	55	55	55	56	56	56	56	56	57	57	57	57	58	58	58	58	59	59
Gem WW E10S 3		23	47		33s	56s	42	66	28s	52s		37	61	23s	47s		32	56	42s					37s	61s	23	46		32s	56s		
Gem YY S10 2		47s	29+	51	32+	54s	36s	58	39	61s	43s	24+	46	28+	50s	31+	54	35	57s	39s	20+	42	24+	46s	27+	49	31	53s	34s	56	38	60s
Her TX S10																									56	59s	62	65s	68	71s	74	77s
Her UX E10D 3							75s					72										69s							66			
Her VX RR 3		78	69				78	70				79	70				71	62				72	63				73	64				
Her VZ 90 2		75	19+		71			79	67			75	63				72	60		68			76	64			73	61				
Her AK S10		70s	75		70		75s		70s	76			71	76s			66	71s	77	66s		72	77s		67	72s		67s	73			
Her AR 90		56			79		73	67	61	55			78	72	66		60	54	48			77	71	65	59	53	47		76	70		
Her AW L10 2					22							2										82										
Her DI L10					22		34s						2				89s						82				44s					
Her GU E10U 2			74s										60				77s										62					
Her LV L10 2			74s										60				77s										62					
Her MM E10S 2												78							76s				74				72s					
Hya SZ 90 2			52	59	67					50		58	65				49	56	64					47	54		62			38	45	
Hya WZ 90 2		64					55	63					54	62					42+			53	61					53	60			
Hya AI L10 2		84+								13+																	71+					
Hya ET 90 3		66					46	52	57			63					43	48				54	60					40	45			
Lac RW L10 3		66					46	52	57+			63					43	48				54+	60					40	45			70s
Lac SW S10		22+	19+	31	27	23+	20+	32s	28s	24+	20+	33	29	25	21+	34s	30s	26s	22+	35	31	27	23	35s	32s	28s	24s	36	33	29	25	21
Lac UW E10S		93					22					51					80						9					38				
Lac CO E10X					24+		78+	32+				40+		49+								20+	74+		28+			37+				45+
Lac V0345 E10X					44+							93+													42+		91+					
Lac V0364 E10X 3					44+					36s		93+													42+		91+					
Leo RR RR 3		50	40	76	66	57	47	38	73	64	54	45	35	71	62	52	43	33+	69	59	50	40	76	66	57	47	38	74	64	55	45	35
Leo SS RR 2		68	56				69	57				70	58				71	59	47			72	60	48			73	61	49			74
Leo ST RR 3		79	75	71	66	62	57	53	49				74	70	66		61	57	52	48	44			78	74	69	65	61	56	52	47	43
Leo AG E10S 2				70s	39			79	48s				57									66s	36		75			44s				
Leo AM S10		56+	48+	58+	49+	59+	50+	60+	51+	61+	53+	44+	54+	45+	55+	46+	56+	48+	57+	49+	58+	50+	41+	51+	43+	52+	44+	53+	45+	55+	46+	38+
Lyn TY E10S 2					71							37					70								36				70			
Lyr RR RR		22+			19+				72				69	26			66	23					76				73			69		
Lyr RZ 90 3									68			20+	73	75	77													62				65
Lyr UZ S10 3			28s	23								79	74s	68									20s					76s	71			65s
Lyr CN 90 3				71			77					70	76						70	75					69		75					
JD 603 ..		11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41

2024 Jan		P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Lyr	EZ	RR	2				70	22+									68	20+	78							66	71	76								
Lyr	IO	90	2	19+						69					73				77			66			70			74						63		
Lyr	beta				45						92s								39					86s									33			
Mon	UX	E10S	2	65			60s			55			51s		46				41s			36			32s		27			22s						
Mon	VV	E10S	2		82			84s		87				90s		92			95s				97		00s			2					5s			
Mon	AQ	E10S	2	56s				37					47					56			38s				47s											
Mon	AR	L10	1																4\	74\								65\	50s	35\						
Mon	AT	E10S	2	55	58		61																													
Mon	AV	E10S	2		52			99s				47			94s				41			89s			36			83s						31		
Mon	EZ	E10U	2	36+	49s	43+	37+	50s	44	38+	51s	45	39+	33+	46	40+	34+	47	41s	35+	48	42s	36+	30+	43s	37+	31+	44s	38	32+	44s	39	33+	45s		
Mon	IL	E10S	2	31				34				36					39		42				44				47						50			
Mon	V0448	E10S	2		32	44	55			35s	47s	59s		38	50				30s	42s	54s		33	45	57		25s	37s	48s				28			
Mon	V0530	E10U	2	36+	41	46	51	56	35+	40s	45s	50s	29+	34+	39	45	50	28+	34+	39s	44s	49s	28+	33+	38	43	48	27+	32+	37s	42s	47s	26+	31		
Mon	V0634	E10U	2			38		50		61													30	41	53											
Oph	U	ST	2	76s				79s																72			76									
Oph	ST	90	2							76									77					73												
Ori	Z	E10S	2	76				96						17					37					57				78								
Ori	BM	E10S	2	3				50							97							44					91									
Ori	CP	E10S	2	25				57						89							21			53				85								
Ori	DN	L10	2					11														8														
Ori	FO	L10	2										31																					11		
Ori	FT	E10X	3					33s		48s			31	63s													23s		38s					11		
Ori	GG	E10X	3					33		48		32s	63														23		38					21s		
Ori	V0536	E10S	2		38			55														20		36												
Ori	V1016	L10	3																																	
Ori	V1031	E10S	2		37				48s								29s						40													
Peg	U	S10	3	23s	35s	29	22s	35s	29	22s	35s	28	22s	35s	28	22s	34s	28	22s	34s	28	22s	34s	28	21s	34s	28	21s	34s	27	21s	27			21s	
Peg	VV	RR	2							31	29			26	24	22	20																			
Peg	VW	L10	2							31	29			26	24	22	20																			
Peg	AV	RR	2	21				28		24	19						26		21						24											
Peg	AW	L10	2	64				95s							26					57s				89				20s								
Peg	BH	90	3				34	26							31			24						29		21										
Peg	BK	E10S	3							29												27													25	
Peg	CG	90	2	33	26	19				27	20								27	21					21									22		
Peg	DF	L10	3					5																												
Peg	DH	RR	3			20	23	25	27										21	23	26								22							
Peg	GH	E10S	2			21																						22								
Per	RW	L10	3		92														12															32		
Per	RY	E10S	2			39s							25s										55					41								
JD	603	..		11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41		

2024 Feb	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31						
And SW RR			36	24			34	22			32				30			28				26																
And SY L10	1							74\	78	83\																												
And TW S10	3																																28s					
And XX 90	3	30					35			25		41			30						36				26				31									
And CD L10	2																																					
And OV 90	3	34	28	22					40	34	28							34	28						34		28											
Aqr CD E10S	2																																					
Aqr LL L10	2																																					
Aql V0889	L10	3									32s																							44s				
Aql V1353	E10S	3				76					71s					66								74									69s					
Aql V1426	E10S	2	35+	53s	12+	29+	47	5+	23+	40+	58s	17+	34+	52	11+	28+	46s	4+	22+	39+	57	16+	33+	51s	9+	27+	44	3+	21+	38+	56s							
Aql V1430	E10S	2						73s								72s																		71s				
Ari X RR	3		25								37		32		28			23										35					30	26				
Ari RS L10	2		25								6								86														66					
Ari AL E10S	3									29																	28											
Aur TZ 90		46	24+	42	59	38	55	33	51	29+	47	25+	43	60	38	56	34	52	30	48	26+	43	61	39	57	35	53	31	48	27								
Aur CQ L10	2	68					99s						30						61s					92									23s					
Aur IY E10S	3										49				29																		26					
Aur V0432	E10S	3		61s				24			32				40			48			56												27s					
Aur epsil																																						
Aur zeta																																						
Boo RS RR	3	70	46	59	72	47	61	74	49	63		51	64		53	66	42	55	68	44	57	70	45	59	72	47	61		49	62								
Boo TW 90	3		46	52	58	65	71				44	50	57	63	70				42	49	55	62	68				41	47	54	60								
Boo UU 90		69	61	52			72	63	55	46		74	66	57	49				68	60	51	43	71	62	54	45							65	56				
Boo UY 90	2	56		51					72		67				62		58					53		48		43	74	69		64			59	55				
Boo AC E10D		46+	51+	40+	45+	51+	39+	45+	51+	39+	44+	50+	38+	44+	50+	38+	44+	49+	37+	43+	49+	37+	43+	49+	37+	42+	48+	36+	42+	48+								
Boo CM 90	2	49	71		54	76		58			63		46	67		50		72		55				59		42	64		47	68		51						
Boo CQ 90		71	56	69	53	66	51	63	76	61	73	58	71	55	68	53		65	50	63	47	60	73	57	70	55	67		52	65	49	62						
Cam SS E10S	2	27s		68			9s		50	92s					33	74s					15	56s			97		39s						80					
Cam SV S10	3	30+	49	38+	27+	46+	35+	24+	42+	31+	50s	39+	28+	46s	35+	24+	43+	32+	50	39+	28+	47	36+	25+	43+	32+	51s	40+	29+	48s								
Cam AK E10S	3				27	38s	49	61s	72							29s	40	51s	63	74s														31	42s	53	65s	
Cam AN L10	3				27	38s	49	61s	72							29s	40	51s	63	74s														31	42s	53	65s	
Cam AT E10S	3	74s	43		53s	23	62	32s	71s	41		51s		60	30s	69s	39		49s		58		28s	67s	37		47s						56	26s	65s			
Cnc S L10					34										82																			31				
Cnc RU L10	2										69																								86			
Cnc RW 90	2	47	57	66		30	40	49	59	68	23	32	42	51	61	70	25	34	44	53	62			27	36	46	55	64		29	38							
Cnc RZ L10	2	15\	77	/	39\							97\	\	59s	/	22\									79\	\	41	/	4\									
Cnc TT 90	3	50	63		32	45	58		27	39	52											28	41	54										35	48	30	42	55
Cnc TU E10S	3	31					87								43							99													55			11
JD 603 ..		42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72						

2024 Feb			P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Cnc TW	L10	2																																33\		
Cnc UU	L10	2																																		
Cnc ZZ	L10	2									49\	51	54\																							
Cnc AQ	90	3		29	39	48	58	68		32	42	52	61		26	36	45	55	65		29	39	49	58		33	42	52	62							
CVn W	90	2	66			42	52	63	73		39	49	59	70		46	56	66			42	53	63	73		39	49	60	70							
CVn Z	90	2		50	46			42	73	39	69	35	66	31	62	58		54		50	46		43	73	39	70	35	66	31							
CVn RS	S10	2			68					47					67s									47s					66							
CVn RZ	90	2	72		43	56	70		40	53	67		51	64			48	61		45	58	72		42	56	69		39	53							
CMa R	S10	2			44s				42					40s			37			35s				32					30s							
Cas RX	L10	2		/									\	\	26s				/	/									\							
Cas RZ	S10	61						40	59					37	57				35	54	74			32	52	71										
Cas SX	L10	2																		76\	\	59	/	42\												
Cas TV	S10	3			71	53			34								40					65		46		28										
Cas TW	S10	3	39			24	67			53			38			24	67				53			38		67		52								
Cas TX	E10S	3		33s		26s	72			65			58			51				43			36		29		68s									
Cas AQ	L10	2		71	13	18\			93\	99s	/	4\			79\	85	90\			65\	71s	76\			51\	57	62\									
Cas BM	L10	2																																		
Cas DN	E10S	3				30	46s	61					23	39s	54	70s				32s	48	63s				25s	41	56s	72							
Cas GG	E10S	3			54				30															33												
Cas GU	E10U	3								73																		29								
Cas IL	E10S	2						51							42								32													
Cas IT	E10X	3			76s			51							42						35s	32		24s												
Cas OX	E10X	3				49+					47+				45+						43+			41+					38+							
Cas PV	E10X	3				49+		30s			47+				31s	45+					43+	31s			41+	56s		31s	38+							
Cas V0368	E10S	3						34			56s							24		46s							37s	59								
Cas V0375	E10D	3		56s	30		51s	25	72	46s	67	40s	61	35s	56	30s	51	24s	72s	45		66s	40			61s	35									
Cas V0381	E10X	3		56s	30	37s	51s	25	72	46s	67	40+	61	35s	56	30s	34s	51	24s	72s	45		66s	40+		61s	35									
Cas V0459	L10	3										27s			35			73s				34			19s		32									
Cep RZ	90		39+	32+	24+	48	41+	33+	26+	49	42+	34+	27+	51	43+	36+	28+	52	44+	37+	30+	53	46	38+	31+	54	47	40+	32+	25+	48					
Cep VW	S10		22+	33+	31+	28+	26+	23+	34+	32+	29+	27+	24+	35+	33+	30+	28+	25+	36+	34+	31+	29+	26+	37+	35+	32+	29+	27+	38+	36+	33+					
Cep XX	S10	3		34		68					36		69							37		71			38		72									
Cep XY	E10S	3								63			40									73		50		27										
Cep ZZ	S10	3	43		58		72								29			43		57		71							28							
Cep AI	E10S	2	29s		40				63		74s												30				64s									
Cep CW	E10X	3									54+				27+						73+		46+						64+							
Cep EI	L10	3				15s				37					59s			81					3s			25					47s					
Cep EX	L10	3	89														32												76							
Cep NN	E10S	3											25	27s	30	33s	36	39s	42	45s	48	51s	54	57s	60	62s	65	68s	71							
Cet RR	RR	3	30					28						25							23															
JD	603	..		42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72		

2024 Feb	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31																									
Cet RV	90	3	28				27					26					25																																								
Cet TU	E10S	2	22				61					0					40					79					18					57																									
Cet TV	L10	2					35+										45+										56+																														
Cet XY	E10S		35									31s					26																																								
Com S	90	3	43 60				53 71					47 64					40 57 75					51 68					44 61					37 55 72					48 65					41															
Com ST	90	2	43	63	43 63		42 62					42					62 41 61					41 61					40 60					40 60					39					59					39 58										
CrB U	S10	2															73					63										54																									
CrB RV	90	3	57	56	56	55	55	54	54	53	53	52	52	51	51	50	50	49	49	48	48																																				
Crt W	90	2	63				57										52 58					52 58					52 58										53																				
Cyg Y	S10	3	63				57										52 58					52 58					52 58										53																				
Cyg UY	RR	2	74														71										68										73																				
Cyg XZ	RR	3	32 25+ 65 59				52					25+					65 59 52					25+ 65 59 52										25+ 65					58 52 45																				
Cyg BO	E10S	2	75				26										29					68s										70s																									
Cyg BR	E10S		61s	61			61s			61			61s			61			60s			60			60s			60			60s			60			60s																				
Cyg DM	RR	3					73										70										74					68					72																				
Cyg V0367	L10	2	/				\ \ 75s / /					/ /					\ \ 5 / /					\ \					\ \ 35s / /																														
Cyg V0463	E10S	3					68s 74										68s										62s					68																									
Cyg V0477	E10X						68s 74										68s										72s					62s					68																				
Cyg V0541	L10	3	71+														5+																																								
Cyg V0548	E10S		25s				67s 57					28s										70s 60 50s															72s 62 53s																				
Cyg V0788	L10	2					68										92\ 87 83/																				64																				
Cyg V0891	E10S	3																				67s					68										67																				
Cyg V0909	E10S	3										66										28					63																														
Cyg V1061	E10S	3										24																														67															
Del DX	90	3															75																				73																				
Dra RW	RR	3	73	61	50	38	71	60	48	37	70	58	47	36	69	57	46	34	67	56	44	33	66	54	43	32	64	53	42	30	63																										
Dra SU	RR		63	29	61	27	59	25	57	23	55		54	52	50			48	46				44	42	40			73	39	71	37																										
Dra SW	RR		76	33	47	61	75	32	46	60	73	30	44	58	72	29	43	57	71	28	42	56	70	27	41	55	69	25	39	53	67																										
Dra TZ	E10D		60				63s					66 53					70s					56s					73 59					62s 49s					65					52					69s 55s					72 58					
Dra VZ	90		44+	40+	37+	65	61	58	54	50	46	43+	39+	35+	64	60	56	53	49	45	42+	38+	34+	30+	59	55	51	48	44	40+	37+																										
Dra WW	S10		40									66					29															55																									
Dra XZ	RR		48	43	39	34	29	24+	67	63	58	53	49	44	39	34	30	25+	68	63	59	54	49	45	40	35	30	26+	69	64	59																										
Dra AI	S10		57 76				56 76										55 75										55										54																				
Dra BF	L10		54s	57	76					56 76					75s					55 75					35s					55										54					56s												
Dra BK	90	3	25	44	62	40				58					36 54 73					32 50 69 28 46					65 24 42 61					38 57					34 53					71 30 49 67																	
Dra BU	E10S		74s	70	66s	61	57s	53	49s	44	40s	36	31s															71s 67					63s 58 54s 50																								
Dra DD	90		44+	42+	40+	38+	36+	34+	32+	30+	28+	26+	24+	55	53	51	49	47	45	43	41+	39+	37+	35+	33+	31+	29+	27+	25+	56	54																										
Eri SV	90	2	27									26										26										26					25																				
Gem RR	90	2	29	48	27+	46	26+	45	25+	44	23+	42	62	41	60	40	59	38	57	37	56	36	55	34	53	33	52	31	51	30	49																										
JD 603	..		42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72																								

2024 Feb	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Gem RY L10	2	69					34s				99					64s					29				94s						59	
Gem SZ 90	3	59	59	59	60	60	60	60	61	61	61	61	61	62	62	62																
Gem WW E10S	3		41		27s	51s			37		22s	46s				41s			27	51		36s			46		31s			41		
Gem YY S10	2	41s	23+	45	26+	48s	30s	52	33	56s	37s	59	41	63s	44s	26s	48	29	51s	33s	55	36	58s	40s	62	43	25	47s	28s	51		
Her TW RR	2				58		58		58		58			57		57			57		57				56		56		56		56	
Her TX S10																									46	49s	52	55s	58	61s		
Her UX E10D	3				63s				72s						69								66s								63	
Her VX RR	3	74	65				75	66	57				67	58					68	59				69	60	51		70	61	52		
Her VZ 90	2	57			65	53			73	61			70	58		66		54		74	62	50		70	59			67	55			
Her AK S10		68	73s		63	68s	74		63s	69	74s	58s	64	69s	74	59	64s	70		59s	65		70s		60	65s	70	55	60s	65	71s	
Her AR 90		58	52	46			75	69	63	57	51	45			74	68	62	56	50	44				73	67	61	55	49	43	37		
Her AW L10	2										42																				3	
Her DI L10							99s			42								54s	23										3	9s		
Her GU E10U	2									65											51s		68									
Her LV L10	2								71s	65											51s		68									
Her MM E10S	2				68s				66					64s			62					60s			58					56s		
Hya SZ 90	2	53	60				36	44	51	59				35	42	50						33	41	48					32	39	46	
Hya WZ 90	2			44	52	59					43	51	58						42	50	57				41	49						
Hya AI L10	2			00+										29+																87+		
Hya ET 90	3	51	57						36	42				48	53						33		39	45	50							
Lac RW L10	3	51	57					36	42			7s	48	53							33	39+	45	50								
Lac SW S10		33s	30s	26s	22s		31	27	23	31s		28s	24s		29		25+				29s	26+			27	71s			28s	72		
Lac UW E10S			67					96						25							54				83					12		
Lac CO E10X									71+			25+		33+							42+				59+			67+				
Lac V0345 E10X				40+								90+										39+							88+			
Lac V0364 E10X	3			40+								90+										39+							88+			
Leo RR RR	3	71	62	52	43	33	69	59	50	40	31	66	57	47	38	28	64	55	45	36	26+		62	52	43	33	69	59	50	40	31	
Leo SS RR	2		62	50				63	51				64	52			40	65	53				41	66	54			42	67	55		
Leo ST RR	3			73	69		64	60	56	51	47	42	38		73		68	64	59	55	51		46	42	37		72	68	63	59		
Leo AG E10S	2	53					62s		32					41s							50				58s	28						
Leo AM S10		47+	39+	49+	40+	50+	41+	51+	42+	52+	44+	35+	45+	36+	46+	37+	47+	39+	48+	40+	49+		41+	32+	42+	34+	43+	35+	44+	36+	46+	
Lyn TY E10S	2							36				69										35			69							
Lyr RR RR				66				63	76			60	73						70			67			63				60	73		
Lyr RZ 90	3	67	69	71	74	76																58	61	63	65	67	70	72				
Lyr UZ S10	3																73	67s	62													
Lyr CN 90	3	68		74			62		68	73			61	67					73		61			66	72			60	66			
Lyr EZ RR	2				64	69	74							62	67		72							55	60	65		70				
Lyr IO 90	2				66				70			59	74		63							67		56	71			60				
Lyr beta					80s								27								75s					22						
JD 603 ..		42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72

2024 Feb	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
Mon UX	E10S 2	17			12s		8				3s	98				93s			89			84s		79			74s									
Mon VV	E10S 2			7			10s			12		15s			17				20s			22		25s			27									
Mon AQ	E10S 2			38								29s							38s			47s					29									
Mon AR	L10 1									25\	95/								86\	71s	55/										46\					
Mon AT	E10S 2																				25	28		31		33	36			39						
Mon AV	E10S 2				78s			26			73s				20				68s			15		62s				10								
Mon EZ	E10U 2	39	33+	28+	40	34s	28+	41	35s	29+	42	36s	30+	24+	37s	31+	25+	38s	32	26+	39s	33	27+	40s	34	28+	41s	35	29s	42s						
Mon IL	E10S 2			52				55				57			60					63			65				68									
Mon V0448	E10S 2	40	52			31s	43s			23	35	46			26s	38s	50s			29	41				33s	45s				36						
Mon V0530	E10U 2	36	42	47	25+	31s	36s	41s	46s	25+	30	35	40	45	24+	29s	34s	39s	44s	50s	28	33	39	44	49	28s	33s	38s	43s	48s						
Mon V0634	E10U 2									32		44																			35					
Oph U	ST 2							66s					69s						72s											63						
Oph ST	90 2	73					69			74					69						65			70						66						
Ori Z	E10S 2			98					18					38					59					79						99						
Ori BM	E10S 2			38					85						32							79								26						
Ori CP	E10S 2			17					49					81						13				46						78						
Ori DN	L10 2		4												1												98									
Ori FO	L10 2																			91																
Ori FT	E10X 3	53s																	29s	91		44s														
Ori GG	E10X 3	53																	29		44															
Ori V0536	E10S 2											34																								
Ori V1016	L10 3											30																								
Ori V1031	E10S 2	32s					43						24							35s																
Peg U	S10 3		27			27			27			27		26					26				26													
Peg VV	RR 2		24	22																																
Peg VW	L10 2		24	22																																
Peg AV	RR		22																				74													
Peg AW	L10 2			51					82s					13						44s				75												
Peg BH	90 3	26									23																									
Peg BK	E10S 3											23																								
Peg CG	90 2						76	23																							72					
Peg DF	L10 3			45																																
Per RW	L10 3												52													72										
Per RY	E10S 2					28																	44s									30s				
Per AG	E10X 3					28																	44s									30s				
Per AR	90 3	58	43	28	55	41	26	53	38	24	51	36	49	34			47	32		45	30		43	28	56	41	26	53	39							
Per AY	L10 2										60												37													
Per IQ	E10X 3			40+						37+									34+						32+											
Per KN	E10U 3	30+	39	25+	34s	42	29+	37s	24+	32	40s	27+	35	43s	30s	38	25+	33s	42	28+	37s	45	32	40s	26+	35	43s	30s	38	25+						
JD 603	..	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72				

2024 Feb		P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Per	LX	L10	2	45				47s				49				51s		53				55s				56									
Per	beta		35							52s			38s			25s						42			29										
Psc	RY	90	3	39		34		30			25		37			32		28		23			35		30		25								
Psc	RY	90	3				22									23																			
Psc	SS	90	3	31		32		34			35	22	37	23			25		26		27		29		30		32		33						
Sge	SY	E10S											70																						
Ser	VY	RR	2	59		73			59		73				58		73			58		73			58		72			58		72			
Ser	AN	90		71	75							58		63	67	72								55	59	63	68	72							
Ser	BH	90	3	64	51		69	56		73	60			64	51		68	55			72	59			63	50	68	55		72	59	46			
Ser	EG	L10	2	96			44s		93			42s					90			39s			88			36s		85		34s		82		31s	
Ser	LX	K10	3	55+	66	61	56+	67	62	57+	52+	63	58+	53+	64	59+	54+	65	60	55+	50+	61	56+	51+	62	57+	52+	47+	58	53+	48+	59			
Sex	T	90	3	55	53	50	48	45	43	40	37	35	65	62	59	57	54	52	49	46	44	41	39	36	34	31	61	58	56	53	50	48			
Tau	RW	S10	2	42											50		26												34						
Tau	CD	S10	2			34					49s						36s															39			
Tau	EN	E10S	3	50s		36		22s	46s		32	56		42s		27	51		37s			47		33s		43		28s	52s		38				
Tri	X	S10	3																							37	34	31	28	25					
Tri	RU	E10S	2				30s														37s				27										
Tri	UX	90	2				39		32	25					39	32	26					39	33	26					33	26					
UMa	W	S10		36+	36+	36+	36+	36+	37+	37+	37+	37+	37+	37+	37+	37+	37+	37+	37+	38+	38+	38+	38+	38+	38+	38+	38+	38+	38+	39+	39+				
UMa	RV	RR	3	38	32	72	66	59	53	46	40	34	27+	68	61	55	48	42	36	29	70	63	57	51	44	38	31	25+	65	59	53	46			
UMa	RW	E10S	3			32s											31											64				30s			
UMa	TU	RR		48	59	71		38	49	61	72		40	51	63	74	30	42	53	65		32	44	55	67		34	45	57	69		36			
UMa	TX	S10	3																				29			35		41			48				
UMi	W	S10				57		27			67		37					47					58		28		68		38						
Vir	ST	90	2		73	55		61		66		72	54		59		65		70	52		58		63		68	51	56		61					
Vir	AG	E10D	2	55	52s	48	45s	41+	70	66s	62	59s	55	52s	48	44s	41+	37+	66s	62	58s	55	51s	48	44s	40+	37+	65s	62	58s	55	51s			
Vir	AH	S10	2	51+	53+	55+	57s	58	60s	42+	44+	46+	47+	49+	51+	53+	55+	57s	38+	40+	42+	44+	46+	48+	50+	51+	53s	35+	37+	39+	41+	42+			
Vir	AT	90	2		55	60	65	70		75				49	54	59	64	69																	
Vir	AV	90	2	65		62		59		56		53		50		47	44					73		70		67		64		61		58			
Vir	CG	E10S	3				70	64	57					72s	65s	59s						73	67	60	54				68s	62s	55s	49s			
Vul	Z	S10	2																																69
Vul	RR	E10S	3																							70									
Vul	BN	90	2	73			71			68																72		69			66				
Vul	EV	E10S	3									70																	64						
JD	603	..		42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	

2024 Mrz			P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Ser	VY	RR	2	58	72				58					58			47	52	56	61	65	69			57			44	48	53	57	61	66	
Ser	AN	90			51	55	60		64	69							62	49	67	54	40	58	45			62	49		66	53	40	57	44	
Ser	BH	90	3	63	50	67			54	71	58	45					62	49	67	54	40	58	45			62	49		66	53	40	57	44	
Ser	EG	L10	2	80			28s		77			26s		75			23s		72		21s				69		18s		67			15s		
Ser	LX	K10	3	54+ 49+ 60	55+ 50+				45+ 56+ 51+ 46+ 57					52+ 47+ 42+ 53+ 48+					43+ 54+ 49+ 44+ 55						50+ 45+ 40+ 51+ 46+				41+ 52+ 47+ 42+ 37+			48+		
Sex	T	90	3	45	43	40	37	35	32	30	27	57	54	52	49	47	44	41	39	36	34	31				53	51	48	45	43	40	38	35	
Tau	RW	S10	2							41																								
Tau	CD	S10	2				26					41s								28s									30					
Tau	EN	E10S	3		48s		34				44s	29			39s					35s					45	30s			40				36	
Tri	RU	E10S	2							35																	32s							
Tri	UX	90	2				33		27						27																			
UMa	W	S10		39+ 39+ 39+ 39+ 39+					39+ 39+ 39+ 39+ 40+					40+ 40+ 40+ 40+ 40+					40+ 40+ 40+ 40+ 40+						41+ 41+ 41+ 41+ 41+				41+ 41+ 41+ 41+ 41+				41+	
UMa	RW	RR	3	40	34	27	68	61	55	48	42	36	29	70	63	57	50	44	38	31		65	59	53	46	40	33	67	61	55	48	42		
UMa	RW	E10S	3				63s			29							62				29s						61s							
UMa	TU	RR		47	59	70	26	38	49	61		28	40	51	63		30	42	53	65		32	43	55	66		34	45	57	68	36	47		
UMa	TX	S10	3	54			60			67																								
UMi	W	S10			49					59	29				69	39						50					60		30					
Vir	ST	90	2	67	49	72	54		60	65	47	71		53	58	64			46	69	51		57		62	44	67	50	55	60	42	66		
Vir	AG	E10D	2	47	44s	40+	37+	33+	62	58s	54	51s	47	44s	40	36+	33+	29+	58s	54	50s	47	43s	40	36s	32+	29+	57s	54	50s	47	43s		
Vir	AH	S10	2	44+	46+	48+	50+	52+	33+	35+	37+	39+	41+	43+	45+	46+	48+	30+	32+	34+	35+	37+	39+	41+	43+	45+	47+	49	30+	32+	34+	36+	38+	
Vir	AT	90	2		47	52	57	62	67					40	46	51	56	61	66					39	45	50	55	60				38		
Vir	AV	90	2	55		52	49			47	44			41	38	69			66	63		60			57	54		52	49		46			
Vir	CG	E10S	3				70	63	57	50				71s	65s	58s	52s	45s				66	60	53	47			67s	61s	55s	48s	42s		
Vul	Z	S10	2		60																					69		60						
Vul	BN	90	2		63				60										70		67				64		61		58			55		
Vul	DR	E10X	3	63+							63+										63+								64+					
Vul	EV	E10S	3																										68					
JD	603	..		71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99		
JD	604	..																													0	1		
2024 Apl			P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
And	SY	L10	1																		55\	60	65\											
And	CD	L10	2				21\			\	28s	/	34\																					
And	OV	90	3																63								63							
Aqr	SW	RR	3												65						62													
Aqr	SX	90	2												65																			
Aqr	CD	E10S	2				39					23				7						90					74				58			
Aqr	LL	L10	2																															
JD	604	..		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

2024 Apl	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Aql AA RR 3					66					64																64					62		
Aql V0341 90 3					67										65									58						63			
Aql V0889 L10 3					67+										65								58						63	16s			
Aql V1353 E10S 3	64s						59					55s					50		62s				57							52s			
Aql V1426 E10S 2	29+	46s	5+	22+	40+		58	16+	34+	51s	10+	28+	45	4+	21+	39+	56s	15+	33+	50	9+	26+	44s	3+	20+	38+	55	14+	32+	49s	8+		
Aql V1430 E10S 2		65s					58			64s				57			63s					56			62s			55			61s		
Ari RS L10 2		88																															
Aur TZ 90	38		34	52			48		44		39		35		49		44		40			36					45		41		37		
Aur CQ L10 2					41						72s						3					34s					66						
Aur IY E10S 3							36																										
Aur V0432 E10S 3								33s		41s																				36			
Aur epsil																																	
Aur zeta																																	
Boo RS RR 3	32	45	58	34	47		60	36	49	62	38	51	64	40	53		41	55		43	56		45	58	34	47	60	36	49	62	38		
Boo TW 90 3	54	60	67				33	39	46	52	59	65			38		44	51	57	63				36	42	49	55	62					
Boo UY 90	55	46	38	66			58	49	40	32		60	52	43	34		63	54	46	37			57	48	40		60	51	42				
Boo UY 90 2	44		39	35			65		60	55			51	46			41		36			62		57	52		48		43				
Boo AC E10D	37+	43+	31+	37+	43+		48+	37+	42+	48+	36+	42+	48+	36+	41+	47+	35+	41+	47+	35+	41+	46+	34+	40+	46+	34+	40+	45+	51s	39+	45+		
Boo CM 90 2		40	62	45			66		49	32		54		36	58		41		63	45			50		55		37	59	42				
Boo CQ 90	47	60	44	57	42		54	39	52	36+	49	34+	46	59	44	56	41	54	38	51	36+	48	61	46	58	43	56	40	53	38	50		
Cam SS E10S 2	56		97s				38		79s			20		62s			3		44s	85			26s		67			8s		50			
Cam SV S10 3	50s	39	58	47s	36+		54	43s	32+	51	40s	58s	47	36s	55s	44	33+	51s	40	59	48s	37	56	44s	63s	52	41s	60s	49	38s	56s		
Cam AK E10S 3				39	50s		62							41s	52		64s								43	55s							
Cam AN L10 3				39	50s		62							41s	52		64s								43	55s							
Cam AT E10S 3		46		55s			64	34s		44		53s		62			42		51s		60			40	49s		58			37			
Cnc S L10	24										73											21									70		
Cnc RU L10 2	55											72											90										
Cnc RW 90 2			31	40	50					33	42	51		34		44	53					36	46				38	48					
Cnc RZ L10 2							8\	70	/	32\							90\	\	52s	/	15\						72\	\	34	97\			
Cnc TT 90 3		36	48						43			37					44				39								40				
Cnc TU E10S 3		48						5						61						17					73						29		
Cnc TW L10 2																																	
Cnc UU L10 2				64											/	/																	
Cnc ZZ L10 2	73\																																
Cnc AQ 90 3	53				37		47					40	50				34	44					37	47				41					
CVn W 90 2		36	46	56	67		32	42	53	63			39	49	60			36	46	56				43	53	63		39	50				
CVn Z 90 2	36	66	32	63			59		55	51		47		43		40		36				63		59	55		51		48				
CVn RS S10 2				65s					44s						64						44												
CVn RZ 90 2		44	57				41	55		38		52	65	35	49		62		33	46	60			43	57		41	54					
JD 604 ..		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	

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Cas	RX	L10	2			76		/	/									\	\			92s	/	/											
Cas	RZ	S10	38	57					35	55					33	52												48							
Cas	SX	L10	2																																
Cas	TV	S10	3			53	34						59											46											
Cas	TW	S10	38				66			52			37							52			37						51						
Cas	TX	E10S	3	34						65s			58s			51s				43s			36s												
Cas	AQ	L10	73	78/				54\	59s	65/			40\	45	51/					26\	31s	37/			12\	17	23/			98\					
Cas	BM	L10	2																																
Cas	DN	E10S	3			38	54s						32	47s	63							41s	56				34s	49							
Cas	GU	E10U	3	32									60																						
Cas	IL	E10S	2							65													45									36			
Cas	IT	E10X	3							65													45			59s					36				
Cas	OX	E10X	3																									64+							
Cas	PV	E10X	3	32s						57s	32s					57s							58s					64+		58s					
Cas	V0368	E10S	3							43s	66									34s	56								46						
Cas	V0375	E10D	3	50s		45s		66	39s	60	34s		55		50					45			39	60s	34		55s		50s						
Cas	V0381	E10X	3	50s		45s		66	39s	60	34s		55		50					45			39	60s	34		55s		50s						
Cas	V0459	L10	3				48s								94s									39s							85s				
Cep	RZ	90	59	51	44	36+	60	52	45	38	61	54	46	39	62	55	48	40	33+	56	49	42	34	58	50	43	35	59	52	44	37	60			
Cep	VW	S10	34+	31+	42+	40+	37+	35+	32+	43+	41+	38+	35+	33+	44+	42+	39+	36+	34+	45+	43+	40+	37+	35+	46+	44+	41+	38+	36+	47+	44+	42+			
Cep	XX	S10	3				45						46									48										49			
Cep	XY	E10S	3	34										44										54											
Cep	ZZ	S10	3	41		55												40		54															
Cep	AI	E10S	2		56		67s															46		57s											
Cep	CW	E10X	3	39+								58+											50+												
Cep	EI	L10	3			23s			45				67s			89							11s			33			55s						
Cep	EX	L10	3								6													50											
Cep	NN	E10S	3	67s																						34	37s	40	43s	46	49s				
Cet	TU	E10S	2																																
Cet	TV	L10	2																																
Com	S	90	3	67		43	61	37	54			47	65		41	58		34	51			44	62		38	55		48			42				
Com	ST	90	2	33	53		32	52		32	51		51			50				50			49			49		48			48				
CrB	U	S10	2			51										41																			
CrB	RV	90	3	60	59	59	58	58	57	57	56	56	55	55	54	54	53	53	52	52	51	51	50	50	49	48	48	47	47	46	46	45	45		
Crt	W	90	2	37		43					37	43																					39		
Cyg	Y	S10	3	37		43					37	43					38																39		
Cyg	UY	RR	2		61			54	66				59					63				56				60						53			
Cyg	XZ	RR	3	58	51	45	38			65	58	51	44	38				51	44	38				64	58	51	44	38			58	51			
Cyg	BO	E10S	2	58s							61s						63s	51								53							56		
JD	604	..	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32		

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Cyg	BR	E10S	58s	58			57s		57		57s		57		57s		57		57s		57		57s		56		56s		56		56s				
Cyg	DM	RR	3	63			57				61			55	65				58		52		62		56				50		60				
Cyg	V0367	L10	2		\	\	55s	/	/				\	\	84	/	/				\	\		14s	/	/									
Cyg	V0463	E10S	3	62s															50	56s	62														
Cyg	V0477	E10X		62s		62s						66s							50	56s	62									44s					
Cyg	V0541	L10	3			7+															40+														
Cyg	V0548	E10S					63s	53	44s						56			46s	37					59	49s		39								
Cyg	V0788	L10	2	68/																															
Cyg	V0891	E10S	3					66		57			48																63		53				
Cyg	V0909	E10S	3		56s					57								58s						60									61s		
Cyg	V1061	E10S	3					56							60																				
Del	DX	90	3	65								63																			59	53			
Dra	RW	RR	3	52	41		62	51	39	61	49	38		59	48	37			58	47	35	57		45	34	55	44				54	43			
Dra	SU	RR			39	37		35	33	65			63	62	60				58		56			54	52	50			48		47				
Dra	SW	RR		57		42	56			41	55			40	54				39	53		37		51		36	50	64		35	49	63			
Dra	TZ	E10D		66s	52s	39s		55	42		59s	45s		62	48	35	65s		51s	38s	55	41		58s	44s	61	47			50s	37s				
Dra	VZ	90		47	43	39	36	32+	60	57	53	49	46	42	38	34	63	59	55	52	48	44	41	37	62	58	54	51	47	43	40	36			
Dra	WW	S10				59														48															
Dra	XZ	RR		52	47	42	38	33			62	57		52	48	43	38	34				62	58	53	48	44	39	34			63	58			
Dra	Al	S10		31	51					50							49					49							48						
Dra	BF	L10		31	51					50							49+					49				62s		48							
Dra	BK	90	3	65		42	61		38	57		34	53			49			45	63		41	59		37	55				51		47			
Dra	BU	E10S										65s	61	57s	52	48s	44		40s	35															
Dra	DD	90		56	54	52	50	48	46	44	42	40	38	36	34	65	63	61	59	57	55	53	51	49	47	45	43	41	39	37	35				
Gem	RR	90	2		47		45		44	43		41		40		39			37		36		34												
Gem	RY	L10	2		14s			79					44s					9				74s				39							4s		
Gem	WW	E10S	3			31				40s						35s										35									
Gem	YY	S10	2		48s		33			37s		41		44s		48			33s		36		40s		43							36s			
Her	TW	RR	2		52		52		52	52		52		51		51			51	51		51		50		50		50		50		50			
Her	TX	S10	54	57s	60	63s	66																											37	
Her	UX	E10D	3		48s			58s			45				55			65				52s			62s			49		59					
Her	VX	RR	3		67	58	49	40			59	50	41		60	51		42			61	52	43		62	53	44	35	62	54					
Her	VZ	90	2	45	66	54	42		62	50	38		58	46		54		43		63	51	39		59	47	35	55	43	63	52					
Her	AK	S10		53	59s	64	48	54s	59	43+	49s	54	60s	44+	49	55s	60	44+	50s	55	61s	45s	50	56s	40+	45	51s	56	40+	46s	51	56s	41+		
Her	AR	90			62	56	50	44	38	32			61	55	49	43	37					60	54	48	42	36									
Her	AW	L10	2		23								3									83										63			
Her	DI	L10			23							29s	3									83	84s								63				
Her	GU	E10U	2										45		63s											48									
Her	LV	L10	2					65s				45			63s										45s	48									
JD	604	..	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32		

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Hya SZ	90	2		31	38							37						35							34										
Hya WZ	90	2					35	43					34	42								41													
Hya AI	L10	2		3+							32+							61+									90+								
Hya ET	90	3							32		38														34										
Lac RW	L10	3		92s					32		38			29s											34		66s								
Lac SW	S10		63s			64	60				65s	61s				62	58					63s	59s			64	60	56		61s	57s	53s			
Lac UW	E10S						15						44					73						3					32						
Lac CO	E10X														48+				56+																
Lac V0345	E10X												83+															82+							
Lac V0364	E10X	3				34+							83+															82+			63s				
Leo RR	RR	3	43	33		60	50	41			57	48	38			55	45	36			53	43	34			50	41				48	38			
Leo SS	RR	2	50		38			51		39			52		40			53			41				42					43					
Leo ST	RR	3	61	57	52	48	44	39	35						56	52	47	43	39	34						56	51			47	42	38			
Leo AG	E10S	2									38						47s												35						
Leo AM	S10		46	38+	48s	39+	49	40s	32+	41	33+	43s	34+	44	35+	45s	36+	46	38s	47s	39	49	40s	50s	41	51	42s	34+	44	35s	45s	36			
Lyn TY	E10S	2											33																						
Lyr RR	RR		47	61			44	57							51	64			48	61					44	58			41	54		38			
Lyr RZ	90	3	48	50	53	55	57	59	62	64	66													42	44	47	49	51	53	56	58	60	62		
Lyr UZ	S10	3									63s		57	52s	47															60	54s	49			
Lyr CN	90	3		57	63			51		56			62	44	50			56	61	44							49	55	61	43	49	54			
Lyr EZ	RR	2		47	52	57	62							45	50	55		60	65						43	48	53	58	63						
Lyr IO	90	2		53				57			46		61		50	65			54					42	58		46	62		50					
Lyr beta				5							52s							99							46s				93						
Mon UX	E10S	2			17s			12			7s			3		98s			93								88s								
Mon VV	E10S	2		58			60s			63				65s		68																			
Mon AR	L10	1	28	97/				31s			78		88\	73	58/																				
Mon AV	E10S	2		83														73						20s											
Mon EZ	E10U	2		33		34				35																									
Mon IL	E10S	2		92					94				97														2		5						
Mon V0448	E10S	2		35s														34																	
Mon V0530	E10U	2		33	38			32s	37s						36				35s						35										
Oph U	ST	2				53																		46s			62	49s							
Oph ST	90	2	63	53				58				64	54					49			64	55				60	50			55	45				
Ori Z	E10S	2				42					62													3											
Ori BM	E10S	2																																	
Ori CP	E10S	2	70					2						34					66							98									
Ori DN	L10	2						88																											
Ori FO	L10	2																																	
Ori FT	E10X	3	39s																																
JD 604	..		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32		

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Ori	GG	E10X	3	39																																																											
Ori	V1016	L10	3																																																												
Peg	VV	RR	2						66 64																																																						
Peg	VW	L10	2						66 64																																																						
Peg	AV	RR							63					61					64 59																																												
Peg	AW	L10	2	93s					24			56s			87			18s			49																																										
Peg	CG	90	2						62					63					63 57					64 58																																							
Peg	DF	L10	3	24															94																																												
Peg	DH	RR	3																					63																																							
Peg	GH	E10S	2											62s																																																	
Per	RW	L10	3	32															52																																												
Per	RY	E10S	2																34s																																												
Per	AG	E10X	3																34s																																												
Per	AR	90	3	43		41			39			37			35																																																
Per	AY	L10	2						48										26																																												
Per	IQ	E10X	3	42+					40+										37+					34+																																							
Per	KN	E10U	3	31		34			37			32s			35s			33																																													
Per	LX	L10	2	74s					76					77s					79					81s					83					85s																													
Per	beta																							33s																																							
Sge	SY	E10S							56s					63s															56																																		
Ser	VY	RR	2	57		43			57			43			57			42			57			42			56			42																																	
Ser	AN	90		40					44 49 53 58 62								36 41 45 50 54					58 63								37 42 46																																	
Ser	BH	90	3	61 48 35 66 52		39 57 44			61 48 35 65 52			59 7s			56 5s			53			2s			51			38 56 43																																				
Ser	EG	L10	2	64		13s			61			10s			59			7s			56			5s			53			2s			51			99s																											
Ser	LX	K10	3	43+		39+		49+		44+		40+		50+		46+		41+		36+		47+		42+		37+		48+		43+		38+		49+		44+		39+		34+		45+		40+		35+		46+		41+		36+		47+		42+		37+		48		43+	
Sex	T	90	3						49 47 44 41 39					36 34										45					43 40 38 35																																		
Tau	RW	S10	2	33																																																											
Tau	CD	S10	2											32s																																																	
Tau	EN	E10S	3						31					41s					37s																																												
UMa	W	S10		42+		42+		42+		42+		42+		42+		42+		42+		42+		42+		42+		42+		42+		42+		42+		42+		42+		42+		42+		42+		42+		42+		42+		42+													
UMa	RV	RR	3	63 57 50		44 38			65			59 52 46 40 33			60s			61 55 48			42 35			63			57 50 44 38																																				
UMa	RW	E10S	3	61															60s					61 55 48					42 35					63					57 50 44 38																								
UMa	TU	RR		38 49 61					39 51 63						41 53 64						43 55			34 45 57						36 47 59																																	
UMa	TX	S10	3											36					43					49					55					62																													
UMi	W	S10		41					51					61										42					52					62																													
Vir	ST	90	2	48		53 59			41 64 46 52			57 39 62 45			50 55 38			61 43 48			54 36 59 41																																										
Vir	AG	E10D	2	32+		61 57s 53 50s		46 43s 39 35s 32			60 57s 53 50s 46			42s 39 35s			56s 53 49s 46 42s			38 35s 56s																																											
Vir	AH	S10	2	41+		43+		45 47s 49		51s 32+ 34+ 36+ 38+			40+ 42+ 44s 45 47s			49 51s 33+ 35+ 36+			38+ 40s 42 44s 46			48s 50 51s 53 35+																																									
Vir	AT	90	2	44 49 54 59					32 37			42 48 53 58						36			41 47 52			35																																							
JD	604	..		2 3 4 5 6		7 8 9 10 11			12 13 14 15 16			17 18 19 20 21			22 23 24 25 26			27 28 29 30 31			32																																										

2024 Apl			P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Vir	AV	90	2	43		40		37		34	65		62		60		57			54		51		48		45		42		39		36			
Vir	CG	E10S	3			62	56	50	43				64s	57s	51s	45s	38s			65	59	52	46		40				60s	54s	47s	41s	35s		
Vul	Z	S10	2			51																											52		
Vul	BN	90	2			52							65			62			60			57				54		51			48				
Vul	DR	E10X	3						64+									64+																	
Vul	EV	E10S	3															61																	
JD	604	..		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
2024 Mai			P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
And	SW	RR																		61				60				58				56			
And	SY	L10	1																						46\	51	56/								
And	TW	S10	3												56																				
And	XX	90	3																						60								55		
And	CD	L10	2								65\	\		72	/	79/																			
And	OV	90	3		63	57								57								57								57	51				
Aqr	SW	RR	3					62						59					56				57								58				
Aqr	SX	90	2				61							57								61							57						
Aqr	CD	E10S	2				42					26				9						93									61				
Aqr	LL	L10	2													85										93s									
Aql	AA	RR	3			60				58				56			54					52	61			59					57				
Aql	V0341	90	3			57				61					55							59				53					58				
Aql	V0889	L10	3			57				61	28s				55							59	41s			53					58	53s			
Aql	V1353	E10S	3			48		60s					55				50s						45			58s	41s		53						
Aql	V1426	E10S	2	25+	43	2+	19+	37+	54s	13+	30+	48	7+	24+	42s	59s	18+	36+	53	12+	29+	47s	6+	23+	41+	58	17+	34+	52s	11+	28+	46	4+	22+	
Aql	V1430	E10S	2			54				60s	47s			53		59s	46s					52			58s	45s		51			57s	44s			
Ari	RS	L10	2																																
Aur	TZ	90								42		38										39													
Aur	CQ	L10	2	97s						28																									
Aur	epsil																																		
Aur	zeta																																		
Boo	RS	RR	3	51		39	53		41	54		43	56		45	58		47	60		49		37	51		39	53		41	54		43	56		
Boo	TW	90	3		41	47	54	60					39	46	52	59						38	44	51	57						43	49	55		
Boo	UU	90			62	54	45	36			56	48	39			59	50	42				61	53	44				55	47	38		58	49	41	
Boo	UY	90	2	38					59	54		49		45	40									56		51		47		42					
Boo	AC	E10D	5	51	39+	45+	50s	38+	44+	50	38+	44+	50s	38+	43+	49	37+	43+	49s	37+	43+	48	54	42+	48s	54s	42+	47	53	41+	47s	53s	41+	47	
Boo	CM	90	2			46					55			38	60		43					47				56		39						48	
Boo	CQ	90		35+	48	60	45	58	42	55	40	52	37	50	62	47	60	44	57	42	54	39	52		49		46	59	44	56	41	54	38	51	
JD	604	..		32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	

2024 Mai	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Cam SS	E10S	2	91s			32	73s				14	55s	97				38s	79				20s	61			2s	43				85s			
Cam SV	S10	3	45	53s	42	60	49s	38	57	46s		53	42s	61s	50	39s	57s	46	54s	43		51s	39	58	47s	55	44s	51		40s				
Cam AK	E10S	3			45s	57							36s	47	59s							38	49s	61										
Cam AN	L10	3			45s	57							36s	47	59s							38	49s	61										
Cam AT	E10S	3	47s	56						45s		54					43s	52				41s	50			59s			39s					
Cnc S	L10								18								67																	
Cnc RU	L10	2	7									24										42												
Cnc RW	90	2		40	50					42					44												39							
Cnc RZ	L10	2					54\	\	17s	79/									36\	99	/	61/							19\	81s				
Cnc TT	90	3		35								36																						
Cnc TU	E10S	3				85						41					98																	
Cnc TW	L10	2							9\			15	21/																					
Cnc UU	L10	2																																
Cnc ZZ	L10	2																																
Cnc AQ	90	3		44						38					41												38							
CVn W	90	2	60			36	46	56			43	53			39		50	60				46	57				43	53			39			
CVn Z	90	2	44		40	36					59	55	52				48	44	40								60	56			52			
CVn RS	S10	2		43s									43														42s							
CVn RZ	90	2	38	51			48	62		46	59	59	43	56					40	53		37	51				48				45			
Cas RX	L10	2		\	\		8		/	/									\	\		25s	/	/										
Cas RZ	S10		45					43	62					41	60						38	58					55							
Cas SX	L10	2		89\	\	72	/	55/																										
Cas TV	S10	3	53									59	40									46											53	
Cas TW	S10	3	37					51				37							51			37						51						
Cas TX	E10S	3	60		53		46			38														56s			48s		41s					
Cas AQ	L10	2	3s	9/		84\	89	95/				70\	75s	81/			56\	62	67/				42\	48s	53/			28\	34	39/				
Cas BM	L10	2																																
Cas DN	E10S	3			43	58s						36	52s						45s	60							38s	54						
Cas GG	E10S	3						50														54												
Cas GU	E10U	3											53																					
Cas IL	E10S	2															61						52								42			
Cas IT	E10X	3															61						52								42			
Cas OX	E10X	3	62+				60+					58+					55+					53+					51+					49+		
Cas PV	E10X	3	62+			58s	60+					58+	58s				55+	58s				53+					51+					49+		
Cas V0368	E10S	3					37	59s										50s									40s							
Cas V0375	E10D	3	44s			39s	60			55			49				44		39			60s		54s			49s			44s				
Cas V0381	E10X	3	44s			39s	60			55			49				44		39			60s		54s			49s		60s	44s				
Cas V0459	L10	3								31s									77s								23s		60					
Cep RZ	90		53	45	38	62	54	47	39	55	48	41	57	49	42		58	51	43			59	52	45	37	61	53	46	38	54	47			
JD 604	..		32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	

2024	Mai	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Cep	VW	S10	39+	37+	48+	45+	43+	40+	38+	49s	46+	44+	41+	39+	36+	47+	45+	42+	40+	37+	48	46+	43+	41+	38+	49	47+	44+	41+	39+	50	48s	45+	
Cep	XX	S10	3		50							51						52							54								55	
Cep	XY	E10S	3					41											51														38	
Cep	ZZ	S10	3	39		53												38		52														
Cep	AI	E10S	2					36		47s		58														37s		48		60s				
Cep	CW	E10X	3	41+							60+											52+											43+	
Cep	EI	L10	3		77			98s					20			42s					64			86s				8						
Cep	EX	L10	3				93														37													
Cep	NN	E10S	3	52	55s	58	61s																											
Cet	TU	E10S	2																															
Cet	TV	L10	2																															
Com	S	90	3	59		35	52		46			39	56			49			43				53			47		40					51	
Com	ST	90	2		47		47			46			46			45			44			44			43			43		42				
CrB	U	S10	2				58														39													
CrB	RV	90	3	44	44	43	43	42	42	41	41	40	40	39	39	38	38	37	37															
Cyg	UY	RR	2			57				50	62			55					47	59				52				44	56				49	
Cyg	XZ	RR	3	44	38			57	51	44	37			57	51	44	37	37				57	51	44	37			57	50	44				
Cyg	BO	E10S	2						58	46s					61	49s								51s						54s	41			
Cyg	BR	E10S	3	56		56s	56		56s	56			55s	55	55s			55		55s			55		55s	55		54s	54				54s	
Cyg	DM	RR	3		54			48	58				52	62	46			56		49			59	43	53			47	57	41				
Cyg	V0367	L10	2	44	/	/							74s	/	/								4	/	/								34s	
Cyg	V0463	E10S	3			44	50s	56	62s														38	44s	50	56s	61							
Cyg	V0477	E10X	3			44	50s	56+	62s					52s								56s	38	44s	50	56s	61	60s						
Cyg	V0541	L10	3			74+															8+													
Cyg	V0548	E10S	3	61	52s	42								54s	44								57s	47	37s								59s	
Cyg	V0788	L10	2															61\	57	53/														
Cyg	V0891	E10S	3	44															44s				50		40									
Cyg	V0909	E10S	3		42s							43													46									47s
Cyg	V1061	E10S	3							41							45							49								53		
Del	DX	90	3					62	57	51						60		55	49						58	53	47							
Dra	RW	RR	3	53	41			51	40	61	50		38	60	49	37		59	47				57	46	56		44		54	43				
Dra	SU	RR	3	45		43	41		39		37											60		58	56		54		52		51			
Dra	SW	RR	3		48	62			46	60			45	59		44		58			43	57			41	55		40	54				39	
Dra	TZ	E10D	3	54	40	57s		43s	60	46				50s	36s	53		39	56s	42s			59	45	49s			52	38			55s		
Dra	VZ	90	3	61	57	53	49	46	42	38			59	56	52	48	45	41	37			58	54	51	47	43	40			57	53		50	
Dra	WW	S10	3	36							62															51								
Dra	XZ	RR	3	54	49	44	40				59		54	50	45	40						60	55	50	46	41				60			56	
Dra	AI	S10	3		48				47																			45						
Dra	BF	L10	3		48				47					44s	47													45						
JD	604	..	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	

2024 Mai	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
Dra BK	90	3	43	62	39	58	54					50	46				42	60			38	56			52			48				45				
Dra BU	E10S			62s	58	54s	49	45s	41	37s		42	40	38			61	59	57			55	53	51	49	47	59s	55	51s	46	42s	38				
Dra DD	90	62	60	58	56	54	52	50	48	46	44	42																45	43	41	39					
Equ S	S10	3																									58									
Gem RR	90	2										40	39	37																						
Gem RY	L10	2			69						35s																									
Gem YY	S10	2	39	43s								38s											38													
Her TW	RR	2	49	49			49	49		49		48	48				48	48	48			47	47				47	47	47							
Her TX	S10		40s	43	46s	49	52s	55	58s	61																										
Her UX	E10D	3			46s							43	53				40s				50s		59s	37				47					56			
Her VX	RR	3	45	36	63	54	46	37		55		46	37		56		47	38		57		48	39		58		49	40		59		50				
Her VZ	90	2	40	60	48	36		56	44			52	40	61	49		37	57	45			53	41	61		50	38		58	46						
Her AK	S10		46	52s	36+	41+	47s	52	36+	42s	47	52s	37+	42	48s	53	37+	43s	48	53s	38+	43	48s	54	38+	43s	49	54s	39+	44	49s	55	39+	43		
Her AR	90		35		58		52	46	40				57	51	45		39					56	50	44	38					55	49					
Her AW	L10	2					43										23								3											
Her DI	L10		39s					43				94s					23					49s		3												
Her GU	E10U	2					51										37s	54														40s				
Her LV	L10	2					51						52s				37s	54														40s				
Hya AI	L10	2																																		
Lac RW	L10	3			3s																					77s										
Lac SW	S10		62	58	54		59s	55s	51s	60		56	52	61s	57s		53s	49s	58	54		50		59s	55s	51s	47s	60	56	52	48	44+				
Lac UW	E10S			61				90					19					48					77						6							
Lac CO	E10X		44+			53+		61+										41+				49+		58+												
Lac V0345	E10X					31+						80+							29+								78+									
Lac V0364	E10X	3				31+						80+							29+								78+									
Leo RR	RR	3			45	36				43					41				38				46					43								
Leo SS	RR	2		44					45					46																						
Leo ST	RR	3					50	46	42	37								50	45	41	37								45	40						
Leo AG	E10S	2	43s																																	
Leo AM	S10		46	37s	47s	39	48	40s	49s	41	42s	43	45s				46	37s	47s	38		40s	41	42s			43									
Lyr RR	RR		51			48	61			45	58		41	55				38	51				48				45	58			42		55			
Lyr RZ	90	3										36	38	40	43	45		47	49	52	54	56	58	61												
Lyr UZ	S10	3	43s	38														56s	51	45s	40															
Lyr CN	90	3		60	42	48		54		59	42		47	53			59	41	47			52		58	40		46		52		57			40		
Lyr EZ	RR	2			41	46	51	56	61				39	44	49		54	59						37	42	47	52	57								
Lyr IO	90	2		39	54		43	58		47		62		51			39	55				43	59			47			51							
Lyr beta							40s						87						35s							82										
Mon UX	E10S	2																																		
Mon VV	E10S	2																																		
JD 604	..		32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62			

2024	Mai	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Mon	AR	L10	1																																
Mon	AV	E10S	2																																
Mon	IL	E10S	2																																
Oph	U	ST	2	53s				56s					59s	43				46					49					53							
Oph	ST	90	2		61	51			56	46			61	51	41			57	47				52	42			57	47	38				53		
Ori	Z	E10S	2																																
Ori	BM	E10S	2																																
Ori	CP	E10S	2																																
Ori	DN	L10	2																																
Ori	FO	L10	2																																
Ori	V1016	L10	3																									58		58					
Peg	U	S10	3																																
Peg	VV	RR	2	62	59	57																	60	57	55			53	50						
Peg	VW	L10	2	62	59	57																	60	57	55			53	50						
Peg	AV	RR	2	62	57						60		55	50						58			53	48			60	55	51						
Peg	AW	L10	2		80s					11				42s					73					5s									36		
Peg	BH	90	3								61								59										56						
Peg	BK	E10S	3																							54									
Peg	CG	90	2				58	52					59	52					60	53						60	54	47							
Peg	DF	L10	3	64														34																	
Peg	DH	RR	3				59	62										58	60									55	57	59					
Peg	GH	E10S	2				63s							58										52s											
Per	RW	L10	3	71																															
Per	AR	90	3	37			35																												
Per	AY	L10	2	3										81													59								
Per	LX	L10	2										93s					95							98					0s					
Psc	SS	90	3																															60	
Sge	SY	E10S	3											49s										57s										41	
Ser	VY	RR	2	56			42	56		42			56		42			56		42			56		41		56		41					56	
Ser	AN	90	3	50	55	59						38	42	47	51	56	60							39	43	47	52	56							
Ser	BH	90	3	60	47		51	38		55	42		59	46		50							59	46		50			54	41				58	
Ser	EG	L10	2	48		97s		46		94s			43		92s			40		89s			38		86s		35		84s					32	
Ser	LX	K10	3	38+	49	44+	39+	45+	40+	51	46+	41+	36+	47	42+	37+	48	43+	38+	49	44+	39+	50	45+	40+	51	46	41+	52	47	42+	53		48	
Sex	T	90	3				42	39			36																								
UMa	W	S10	3	44+	44+	44+	45+	45+	45+	45+	45+	45+	45+	45+	45+	45+	46	46	46	46	46	46	46	46	46	46	46	46	47	47	47	47	47		47
UMa	RV	RR	3		59	52	46	40			61		55	48	42								57	50	44		37		59	52	46	40			
UMa	RW	E10S	3							58s																								57s	
UMa	TU	RR	3		37	49			39	51				41	53				43	55						45			47						
UMi	W	S10	3				43					53														44			54						
JD	604	..	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62		

2024 Mai		P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Vir	ST	90	2	47	52	58		40	45	51			56	38	44			49	54	37		42	47			53		40		46				
Vir	AG	E10D	2	53	49s	45	42s	38		52		49s	45	41s	38			48s	45	41s	38							48s	45	41s				
Vir	AH	S10	2	37+	39	40s	42	44s	46	48s	50	52s	54		37s	39	41s	43	45s	46	48s	50			37s	39	41s	43	45s	47	49s			
Vir	AT	90	2	40	46	51							39	45	50								38	44										
Vir	AV	90	2				59		56	53			50	47	44			41	38															
Vir	CG	E10S	3	62	55	49	42		36		57s		50s	44s	37s			58	52	45	39			60s	53s	47s	40s							
Vul	Z	S10	2				43															61				52								
Vul	RR	E10S	3							46					51				56					61										
Vul	BN	90	2	45			61		58			55		52				49		46			43			40	59		56					
Vul	DR	E10X	3																	41+							41+							
Vul	EV	E10S	3	54															47															
JD	604	..		32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
2024 Jun			P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
And	SW	RR		54										59				57				55			53			37l	42	47l				
And	SY	L10	1														48s		54		60s													
And	TW	S10	3											56								51				57								
And	XX	90	3																															
And	CD	L10	2											9l	\	16s		/	23l															
And	OV	90	3			57	51						57	51	45					57		51	45					57	51	45				
Aqr	SW	RR	3		55						53			58	50					55	47			60		52	44							
Aqr	SX	90	2	54							50	57						47	54					50	57									
Aqr	CD	E10S	2	44					28					12				96					80				63							
Aqr	HH	90	3															58			60													
Aqr	LL	L10	2		2										11s									20										
Aql	AA	RR	3	55							51	59			49	57			46	55			44	53		42	51	60		49				
Aql	V0341	90	3								56			45				50			54			43	59		48							
Aql	V0889	L10	3								56	65s		45				50			54		77s	43	59		48							
Aql	V1353	E10S	3	48s	60			43		55s			38s	51					46s	58			41	53s								48		
Aql	V1426	E10S	2	40+	57s	16+	33+	51	10+	27+	45s	3+	21+	38+	56	15+	32+	50s	8+	26+	43	2+	20+	37+	55s	14+	31+	49	7+	25+	42s	1+	19+	
Aql	V1430	E10S	2	50				56s	43s		49			55s	42s		48			54s	41s			60	47		53s	40s		59	46			
Ari	RS	L10	2											30									10							91				
Aur	CQ	L10	2																															
Aur	epsil																																	
Aur	zeta																																	
Boo	RS	RR	3	45	58			47	60		49		51	39	52		41	54		43	56			45	58		47		49		50			
Boo	TW	90	3					41	47	54	60			39	46	52	59				38			44	51	57				43	49			
JD	604	..		63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93

2024 Jun	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Boo UU	90				52	43				55	46				57	49	40			60	51	43				54	45				57		
Boo UY	90	2				53		48		44		39										50		45		41							
Boo AC	E10D	52	40+	46s	52s	40+	46	52	40+	45s	51s	39+	45	51	39+	45s	50s	38+	44	50	38+	44s	49s	38+	43	49	55	43+	49s	54s	42+		
Boo CM	90			53			57		40			44			49							53				41				50			
Boo CQ	90		48		46	58	43	56	40	53	38	50		48		45						42	55	40	52		50		47	44	42	39	
Cam SS	E10S	2			26	67s			8		49s		90			32s		73			14s		55		96s			37		78s			
Cam SV	S10	3	59s	48		55s	44		52s	41	59	48s			56	45s	52	41s	60s	49	38s	57s	46		53s	42	50s	39	57	46s			
Cam AK	E10S	3		40s	51								42	54s										44s	56								
Cam AN	L10	3		40s	51								42	54s										44s	56								
Cam AT	E10S	3	48		57s				46		55s					44		53s						42		51s				40			
Cnc S	L10																																
Cnc RU	L10	2																															
Cnc RW	90	2	40																														
Cnc RZ	L10	2		43/																													
Cnc TU	E10S	3																															
Cnc TW	L10	2																															
Cnc UU	L10	2																															
Cnc ZZ	L10	2																															
CVn W	90	2	50	60			46	57				43	53				39	50	60					46	57			43	53				
CVn Z	90	2		48		44	41									56		52		48			45		41								
CVn RS	S10	2						42												41s													
CVn RZ	90	2	58		42	56		41	39	53				50			47					44			42				39	52			
Cas RX	L10	2		\	\			41		/	/									\	\			58s		/	/						
Cas RZ	S10			53					51						48												43						
Cas SX	L10	2								46\	\	29	/	12/																			
Cas TV	S10	3								59		40																			53		
Cas TW	S10	3						51										51											50				
Cas TX	E10S	3										58			51																	60s	
Cas AQ	L10	2			14\	20s	25/				0\	6	11/		86\		92s	97/				72\	78	83/				59\	64s	69/			
Cas BM	L10	2						\																									
Cas DN	E10S	3		47							40	56s															42s	58					
Cas GG	E10S	3					57																										
Cas GU	E10U	3											46			55																	
Cas IL	E10S	2																							58							49	
Cas IT	E10X	3			56s				45s																58							49	
Cas OX	E10X	3				47+					45+					43+										38+							
Cas PV	E10X	3		59s		47+				59s	45+					43+	59s							59s		38+					59s		
Cas V0368	E10S	3					53									43												56s					
Cas V0375	E10D	3		38s		59		54			49			44			38		59s				54s		49s			43s			38s		
JD 604	..		63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93

2024 Jun	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Cas V0381 E10X 3			38s	59	59s		54				49		57s	44			38		59s	55s		54s			49s	54s	43s			38s			
Cas V0459 L10 3				68s		59							57+							55	60s					54				6s			
Cep RZ 90		40	56	48	41		57	50	42			58	51	44	60		52	45			54	46	39	55	47		40	56	49	41			
Cep VV S10		42+	40+	51	49s	46+	43+	41+	38+	50s	47	44+	42+	39+	50s	48	45+	43+	40+	38+	49	46+	44+	41+	38+	50	47s	45+	42+	39+	51		
Cep XX S10 3							56							57								59							60				
Cep XY E10S 3	38												48											58									
Cep ZZ S10 3			52															51															
Cep AI E10S 2													39		50s																		
Cep CW E10X 3																					54+										45+		
Cep EI L10 3	30s					52					74s					96					18s		40				62s				84		
Cep EX L10 3	80															23													67				
Cep NN E10S 3	39	42s	45	48s	51		54s	57	60s																								
Cet TU E10S 2																																	
Cet TV L10 2																																	
Com S 90 3				44							48			41								45			38						42		
Com ST 90 2	42			41			41			40				40			39			39			38		38								
CrB U S10 2												55								46													
CrB RV 90 3				60	60		59	59	58	58	57	57	56	56	55	55	54	54	53	53	52	52	51	51	50	50	49	49	48	48	47		
Cyg UY RR 2				41	54					46	58			38	51							43	55			48	60		40	52			
Cyg XZ RR 3				57	50	44					57	50	44					57	50	43				57	50	43							
Cyg BO E10S 2						56s	44						59s	46														51	39s				
Cyg BR E10S		54		54s			54	54s	54				54s	53			53s	53		53s		53		53s		53		53s	53				
Cyg DM RR 3	51		45				55	39	49			59	43	53					46		56	40	50		60	44		54	38	48			
Cyg V0367 L10 2	/						\	\	64	/	/						\	\	94s	/	/			\	\			24	/	/			
Cyg V0463 E10S 3									38s	44	50s	56															38	44s	50	55s			
Cyg V0477 E10X								38s	44	50s	56			38s										42s			38	44s	50	55+			
Cyg V0541 L10 3				42+																													
Cyg V0548 E10S	50	40s									52	43s																	58	48s	38		
Cyg V0788 L10 2																																	
Cyg V0891 E10S 3									56		46																				52		
Cyg V0909 E10S 3							49																		51						53s		
Cyg V1061 E10S 3							57																										
Del DX 90 3		56	51	45							60	54	49	43								58	52	47	41				56	50	45		
Dra RW RR 3		53	42				52	40		50	39	39	60	49	38				59	48				58	46		56	45		55	44		
Dra SU RR	49		47	45			43	41																		60	58	56	55				
Dra SW RR	53		38	52					50				49											47		46	59			44	58		
Dra TZ E10D	41s	58	45					48s		51			54s	40s			57	44		60s	47s			50		53s	40s		56	43			
Dra VZ 90	46	42	38				59	56	52	48	45	41			58		55	51	47	43	40				57	53		50	46	42	39		
Dra WW S10							40																									55	
JD 604 ..		63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	

2024 Jun			P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Dra	XZ	RR		51	46	42							56	52	47	42							57	52	47	43	38					58		
Dra	AI	S10		45						44						44							43				42							
Dra	BF	L10		45						44	46s					44							43				42							
Dra	BK	90 3				41	59			55			51			47			43				39 58			54		50			46			
Dra	BU	E10S																		56s	52	48s		43	39s									
Dra	DD	90				60	58		56	54	52	50	48	46	44	42	40	39						59	57	55	53	51	49	47	46	44	42	
Equ	S	S10 3																										50						
Gem	RY	L10 2																																
Her	TW	RR 2	46		46		46			46	46			45	45		45			45		45		44		44		44		44		44		
Her	TX	S10				39	42s		45	48s	51	54s	57	60s																				
Her	UX	E10D 3				44s				53s				41		50				60	38s			47s		57s			44					
Her	VX	RR 3	41		60	51			42				52	43			53	44					54	45			54	46			55			
Her	VZ	90 2		54	42				50	38	59	47				55	43			51	39		59			56	44				40			
Her	AK	S10	44s	50	55s	39s	45		50s	56	40	45s	51	56s	40s	46	51s	56	41	46s	52	57s	41s	47	52s	57	42	47s	52	58s	42s	47	53s	
Her	AR	90				60			54	48	42					59	53	47	41					58	52	46	40				57	51		
Her	AW	L10 2		83										64									44								24			
Her	DI	L10		83+										64	59s								44		14s						24			
Her	GU	E10U 2		57											43s	60										46s								
Her	LV	L10 2		57	59s										43s	60						39s				46s								
Hya	AI	L10 2																																
Lac	RW	L10 3				14s										50s										87s								
Lac	SW	S10	57s	53s	49s	45s	58		54	50	46	42+	55s	51s	47s	43+	56	52	48	44+	40+	53s	49s	45s	41+	54	50	46	42+	39+	51s	47s	43+	
Lac	UW	E10S			35					64						93							22			51					80			
Lac	CO	E10X								46+			54+													42+			50+		59+			
Lac	V0345	E10X			27+								77+								26+					75+								
Lac	V0364	E10X 3			27+								77+							26+						75+		45s						
Leo	RR	RR 3		41						39																								
Leo	SS	RR 2				38					39																							
Leo	ST	RR 3											40											39										
Leo	AM	S10			38	39s				40										38														
Lyr	RR	RR			38	52				49					45	59			42	55			39	52			49				46	59		
Lyr	RZ	90 3			39	41			43	45	48	50	52	54	57	59													39	41	44	46		
Lyr	UZ	S10 3			58s	53	48s	42															55	50s	44	39s								
Lyr	CN	90 3		45	51				57	39	45			50		56	38		44	50		55		38		43	49		55	60	43			
Lyr	EZ	RR 2			40	45	50		55	60						38	43	48	53	58						41	46	51	56					
Lyr	IO	90 2	40	55			44		59		48					52			40	56			44	60		48				52				
Lyr	beta			29s						76						23s							70						17s					
Mon	UX	E10S 2																																
Mon	VV	E10S 2																																
JD	604	..	63	64	65	66	67		68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93

2024 Jun	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31						
Mon AR	L10	1																																				
Mon AV	E10S	2																																				
Mon IL	E10S	2																																				
Oph U	ST	2	56	40s			59	43s				46s					49s						52s				56s	39										
Oph ST	90	2	43		58	48	38			53	44		59	49	39		54	44					60	50	40		55	45										
Ori Z	E10S	2																																				
Ori BM	E10S	2																																				
Ori CP	E10S	2																																				
Ori DN	L10	2																																				
Ori FO	L10	2																																				
Ori V1016	L10	3																																				
Peg U	S10	3	58		57		57			57			57				57		56				56	50s		56	50s	56	50s	56	50s							
Peg VV	RR	2										60	57	55			53	50	48	46	43																	
Peg VV	L10	2						50s				60	57	55			53	50	48	46	43								58s									
Peg AV	RR	46		58			53		49	44			56	51			46		42	59			54		49		44	39	57									
Peg AW	L10	2			67s				98							29s									91s													
Peg BH	90	3					53						59	51									56		48						48							
Peg BK	E10S	3				52											50														48							
Peg CG	90	2	55	48						55	49	42					56	49	43					57	50	44							57					
Peg DF	L10	3	4													73																		43				
Peg DH	RR	3				51	53	55	58	60							50	52	54	56	59						46	48	51	53	55							
Peg GH	E10S	2				58																		47							59							
Per RW	L10	3																						51														
Per RY	E10S	2																																				
Per AG	E10X	3																																				
Per AR	90	3																																				
Per AY	L10	2					36																													92		
Per IQ	E10X	3																																	60+			
Per KN	E10U	3																										60s		55								
Per LX	L10	2	2				4s			6																	12s				14				16s			
Per beta																																			58			
Psc RU	90	3	58									56																						57	52			
Psc RY	90	3																																				
Psc SS	90	3																																		53		
Sge SY	E10S							49																												50s		
Ser VY	RR	2		41		55			41	55			41																							41		
Ser AN	90			39	44	48	53	57									45	49	53	58															41	45	50	54
Ser BH	90	3	45		49			54	41		58	45		49																						53	40	
Ser EG	L10	2		81s		30		78s		27			76s		24			73s		22				70s		19		68s		16								
JD	604	..	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92				93		

2024 Jun			P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Ser LX	K10	3	43+	38+	49	44+	39+	50	45	40+	51	46	41+	52	47	42+	53	48	43+	38+	49	44	39+	50	45	40+	51	46	41+	52	47	42			
Tri RU	E10S	2			59																		56s												
Tri UX	90	2	58							59						59								60	53					60	53				
UMa W	S10	2	47	47	47	47	47	48	48	48	48	48	48	48	48	48	48	48	49	49	49	49	49	49	49	49	49	49	49	50	50	50			
UMa RV	RR	3		54	48	42						57	50	44					59	52	46	39				54	48		42						
UMa RW	E10S	3										56												55s											
UMa TU	RR		49				39					41					43						45												
UMa TX	S10	3		44			50																												
UMi W	S10									45					56											46						57			
Vir ST	90	2		51			39		44	50					42			48					41	46					39			45			
Vir AG	E10D	2							44	41s									40s									40s							
Vir AH	S10	2			38s	40	41s	43	45s						38s	40		42s	44						38s		40								
Vir AT	90	2	42										41																						
Vir AV	90	2	52		49	46			43	40																					42				
Vir CG	E10S	3	55	48	42					50s	43s							51	45	38					46s	40s									
Vul Z	S10	2	43							47			44		41	60			39	57			54	53	51			44			46				
Vul BN	90	2		53			50			41+						42+									42+										
Vul DR	E10X	3																																	
Vul EV	E10S	3		58			41													52															
JD 604	..		63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93		
2024 Jul		P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
And SW	RR				49			59	47			57	46		55	44				53	42			51	40	61	49		59	47					
And SY	L10	1																40		46s	52			58s									28\		
And TW	S10	3																53			42	59		48				54							
And XX	90	3			52					58		47																							
And CD	L10	2																	54\	\	60	/	67/												
And OV	90	3						57	51	45	39				57	51	45	39					57	51	45	39					57	51			
Aqr SW	RR	3	57	49				54	46				60	51	43					57	49	40		62	54	46	37		59	51	43				
Aqr SX	90	2	47	54					43	50	57				39			47	54	61				43	50	57			39	47					
Aqr CD	E10S	2	47					31					15		98											66			50						
Aqr HH	90	3	51			53				55				57					59			47		49				51							
Aqr LL	L10	2			29s										38										47s										
Aql AA	RR	3	57		47	55			45	53			43	51	60			41	49	58		39	47	56		37	45	54	62	43	52	60			
Aql V0341	90	3	52		41	57			46				51		40			55		44	60			49			38	54		43	58				
Aql V0889	L10	3	52	89s	41	57			46				51	1s	40			55		44	60			49	13s		38	54		43	58				
Aql V1353	E10S	3			43s			56			39		51s						46	58s			41s	53			36	49s			61				
JD 604	..		93	94	95	96	97	98	99																										
JD 605	..								0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			

2024 Jul			P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Aql	V1426	E10S	2	36+	54	12+	30+	47s	6+	24+	41	59s	18+	35+	53s	11+	29+	46	5+	23+	40+	58s	16+	34+	51	10+	28+	45s	4+	21+	39+	57	15+	33+
Aql	V1430	E10S	2	52s	39s		58		45			51s	38s		57	44			50s	37s		56	43		61s	49s	36s		55	42			48s	35s
Ari	X	RR	3																61															
Ari	RS	L10	2								71								51										32					
Aur	CQ	L10	2																								95s							26
Aur	epsil																																	
Aur	zeta																																	
Boo	RS	RR	3		39	52		41	54		43			45		47				48		37	50		39		41			43				45
Boo	TW	90	3	55						41	47	54					39		46	52					38	44	51							36
Boo	UU	90	4	48	39			59	51	42				53	45				56	47	39				50	41				53	44			
Boo	UY	90	2							42		38													40									
Boo	AC	E10D	4	48	54	42+	48s	53s	42+	47	53	41+	47s	53s	41+	46	52	40+	46s	52s	40+	46	51	39+	45s	51s	39+	45	51	39+	44s	50s	38+	44
Boo	CM	90	2						42			46								38			42											39
Boo	CQ	90	4	52		49		46		44		41		38		48			46		43		40		38					45		42		40
Cam	SS	E10S	2		20		61s			2		43s		84		25s			67		8s			49		90s			31		72s			13
Cam	SV	S10	3	54	43s		50	39s	58s	47		54s	43		51s	40	59	47s		55	44s		52	41s	59s	48	37s	56s	45		52s	41	60	49s
Cam	AK	E10S	3		46	58s								37	48s	60								39s	51	62s								41
Cam	AN	L10	3		46	58s								37	48s	60								39s	51	62s								41
Cam	AT	E10S	3	49s		59			38		47s	57					45s		54						43s		52		62s		41s			50
Cnc	S	L10																																
Cnc	RU	L10	2																															
Cnc	RZ	L10	2																															
Cnc	TU	E10S	3																															
Cnc	TW	L10	2																															
Cnc	UU	L10	2																															
Cnc	ZZ	L10	2								46				43	53				40	50				36	47					43			
CVn	W	90	2	40	50					49	45	41		37									40	50			45		41		38			
CVn	Z	90	2				53																											
CVn	RS	S10	2	40											40s												39							
CVn	RZ	90	2			50					47			44					41				38											
Cas	RX	L10	2				\	\			74			/	/									\	\		90s		/	/				
Cas	RZ	S10		41							39	58				56								54					51					
Cas	SX	L10	2																3\	85	/	68/												
Cas	TV	S10	3								59	40																		53				
Cas	TW	S10	3						50										50										50				36	
Cas	TX	E10S	3		53s			46s			38s														56		48			41				
Cas	AQ	L10	2		45\	50	55/				31\	36s	41/			17\			22	28/				3\	8s	14/		89\	94	00/				
Cas	BM	L10	2	20																								/	/					
Cas	DN	E10S	3		51							44	60s							38	53s						47s	62						
JD	604	..		93	94	95	96	97	98	99																								
JD	605	..								0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	

2024 Jul	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Cas GG E10S 3											40														44										
Cas GU E10U 3													39				49		58																
Cas IL E10S 2								39																									55		
Cas IT E10X 3								39					52s				42s																55		
Cas PV E10X 3								60s						60s									60s					60s							
Cas V0368 E10S 3						47s										37s										50									
Cas V0375 E10D 3		59				54			48			43				38	59s							48s		43s			38s		59				
Cas V0381 E10X 3		59	52s			54			48		51s	43				38	59s	49s					48s		47s	43s			38s		59		46s		
Cas V0459 L10 3			52						52s		51						98s								47+								46		
Cep RZ 90		57	50	43			59	51	44		60	53	45	38	61	54	47	39		55	48	40		56	49	42		58	50	43	36		59		
Cep VW S10	48s	46+	43+	40+	38+		49s	47+	44+	41+	39+	50s	47+	45+	42+	40+	37+	48	46+	43+	41+	38+	49	47+	44+	42+	39+	36+	48+	45+	43+	40+			
Cep XY E10S 3								45											55																
Cep ZZ S10 3		50																50																	
Cep AI E10S 2		40s			51																		41		53s										
Cep CW E10X 3												37+																					47+		
Cep EI L10 3						6s					28					50s						72					94s					16	38s		
Cep EX L10 3													10																		54				
Cep NN E10S 3							39	41s	44	47s	50	53s	56	59s																					
Cet RR RR 3					59						57																						59		
Cet TU E10S 2																											48			67			26		
Cet TV L10 2																																	31+		
Com S 90 3																																			
CrB U S10 2																																	43		
CrB RV 90 3	47	46	46	45	45		44	44	43	43	42	42	41	41	40	40	39	39	38	38	37	37	36	36											
Cyg UY RR 2		45	57									42	54				47	59								44	56				36	48	61		
Cyg XZ RR 3	57	50	43						57	50	43	37				56	50	43									56	50	43	36			56	50	43
Cyg BO E10S 2				54	42s																					61	49s	37							
Cyg BR E10S		52s		52			52s		52		52s		52		52s		52		51s		51		51s		51				51		51s				
Cyg DM RR 3		58	42		52				46	56	40	50	50	60			44	53	37				47		57	41		51		61	45		55		
Cyg V0367 L10 2				\	\		53s	/	/				\	\	83		/	/					\	\	13s	/	/								
Cyg V0463 E10S 3																38s	44																		
Cyg V0477 E10X							50s									54s	38s	44				50s	55	61s		58s			62s						
Cyg V0541 L10 3				9+																															
Cyg V0548 E10S							60	50s	41																			53s	43						
Cyg V0788 L10 2				46i	42		38/																												
Cyg V0891 E10S 3		43																																	
Cyg V0909 E10S 3						54																													
Cyg V1061 E10S 3			38								42																							54	
Del DX 90 3	39						59	54	48	43	37					57	51	46	41								60	55	49	44	39				
JD 604 ..	93	94	95	96	97		98	99																											
JD 605 ..									0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		23		

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Dra RW RR 3				54	42		52	41				51	39	61	50		38	60	48	37		58	47				57	45		55	44			
Dra SU RR			53	51			49	47		45			43	41			40	38					37	51			62	60			59			
Dra SW RR			43	57			42	56				41	55	39			53		38	52							36	50						
Dra TZ E10D			59s	46s			49			52s	39s		55	42		58s	45s	61	48			51s	38s		54		41	57s	44s			60		
Dra VZ 90			60	56	52	49	45	41				58	55	51	47	44	40		61	57		54	50	46	42	39		60	56	52	49			
Dra WW S10															44																			
Dra XZ RR		53	48	43	39						58	53	49	44	39						59	54	49	45	40					59		55		
Dra AI S10		42						41						41	60					40	60				39		59					39		
Dra BF L10		42						41+						41	60					40	60				39		59					39		
Dra BK 90 3			42	60	38		56			52				48		44			40	59			55			51			47			43		
Dra BU E10S											58	53s	49	45s	40																		63	
Dra DD 90		40	38					60	58	56	54	53	51	49	47	45	43	41	39	37			61	60	58		56	54	52	50	48		46	
Equ S S10 3																					55							42						
Gem RY L10 2																																		
Her TW RR 2	43		43		43			43		43		42		42		42		42		61		41	61	41	61	41	61	41	61	41	60		40	
Her TX S10								38s	41	44s		47	50s	53	56s	59																		
Her UX E10D 3	54					41s		51s				61s	38		48				58				45s		55s				42					
Her VX RR 3	46				56		47	38		57		48	39				49	40				50	41				51	42					52	
Her VZ 90 2	60	48			57		45			53	41		61	49	37		57	45			54	42		62	50	38		58	46				54	
Her AK S10	58	43	48s	53	38+		43s	48	54s	38+	43	49s	54	39	44s	49	55s	39s	44	50s	55	39	45s	50	56s	40s	45	51s		40	46s	51		
Her AR 90	45	39					56	50	44	38				61	55		49	43	37				60	54	48	42	36				59		53	
Her AW L10 2								4									84											64						
Her DI L10				69s				4						24s			84							79s	64									
Her GU E10U 2								48s														51s												
Her LV L10 2								48s		46s												51s												53s
Hya AI L10 2																																		
Lac RW L10 3						24s									61s																			
Lac SW S10	39+	52	48	44+	40+		53s	49s	45s	41+	37+	50	46	42+	38+	51s	47s	43+	39+	51	48	44+	40+	36+	49s	45+	41+	37+	49	46+	42+		38+	
Lac UW E10S						9					38					67						96						25					54	
Lac CO E10X												38+		47+					55+														43+	
Lac V0345 E10X			24+								73+															72+								
Lac V0364 E10X 3			24+								73+																72+							
Lyr RR RR			42	56				39	52				49				46	59			43	56			39	53			36	50				
Lyr RZ 90 3	48	50	53	55	57		59													38	40	42	44	47	49	51	53	56	58	60	62			
Lyr UZ S10 3								57	52s	46	41s														59	54s	49	43s	38					
Lyr CN 90 3		48		54			60	42		48		54		59	41		47		53		59	41		47		52		58	40		46			
Lyr EZ RR 2				39	44		49	54	59					37	42		47	52	57						40		45	50	55	60				
Lyr IO 90 2	41	56			45		60			49				37	53		41	57				45	61		49			38	53				42	
Lyr beta			65								12s						59							6s						53				
JD 604 ..	93	94	95	96	97		98	99																										
JD 605 ..								0	1	2		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		23	

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Mon UX E10S 2																																		
Mon VV E10S 2																																		
Mon AR L10 1																																		
Mon AV E10S 2																																		
Mon IL E10S 2																																		
Oph U ST 2				43				46					49					52						39s					43s					
Oph ST 90 2			50	40			56	46				51	41				46			52			42			47		37			43			
Ori Z E10S 2																																		
Ori BM E10S 2																																		
Ori CP E10S 2																																		
Ori DN L10 2																																		
Ori FO L10 2																																		
Ori V1016 L10 3																																		
Peg U S10 3	56	49s		56	49s		55	49s	55		49s	61s	55	49s	61s	55	49s	61s	55	48s		61s	55	48s	42+	54	48s	42+	54	48s	42+	54		
Peg VV RR 2			60	57		55	53	50	48	46		43	41	39										62	60		57	55	53	50	48	46		
Peg VV L10 2			60	57		55	53	50	48	46		43	41	39										62	60		57	55	53	50	48	46		
Peg AV RR 90 2	52		47	42		59		54	50			45		40	57		52		48			43	60	38	55		50		45	41	58			
Peg AW L10 2	22					54s						85					16s						47				78s							
Peg BH 90 3	53		46					58	51			43					56		48			40		61		53		45		38				
Peg BK E10S 3								46									44																42	
Peg CG 90 2	51	44	38				58	52	45	38			59	52			46	39					59	53	46	40		60	54	47	40			
Peg DF L10 3															13																		83	
Peg DH RR 3	57	59				43	45	47	49	52		54	56	58	60			41	44	46	48		50	52	55	57	59	61	38	40	42	44	47	
Peg GH E10S 2			42s				53s					37					48						59		43s							54s		
Per RW L10 3						71														91														
Per RY E10S 2														57s										43s										
Per AG E10X 3														57s										43s										
Per AR 90 3							60		58				56				54			52				50		48		61		58				
Per AY L10 2												69												47										
Per IQ E10X 3						57+							55+								52+						50+							
Per KN E10U 3	58		53s				56s		51	60s		55		50s	58		53s	61		56s			51	59s		54		49s	58	53s		61		
Per LX L10 2			18					19s					21				23s								27s				29					
Per beta																													56s					
Psc RU 90 3			59			55		50					57	53			48			60			55		50		46			58				
Psc RY 90 3	55								55		61									56								51	56	62				
Psc SS 90 3	55		56			58		59	61				49	50			51		53			54		56		57		59	45	60	46		62	
Sge SY E10S							58s										42							50						58				
Ser VY RR 2			40					40					40						40						40				40					
Ser AN 90									42	46	51									38			42	47										
JD 604 ..	93	94	95	96	97	98	99																											
JD 605 ..							0	1	2		3	4	5	6	7		8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	

2024 Jul			P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Ser	BH	90	3	44			48		52	39				43			47		38					43			47		38					42
Ser	EG	L10	2	65s			14		63s			11		60s			9		57s			6		55s			3		52s			1		48
Ser	LX	K10	3	53	48	43	39+	49	44	40	50	45	41	51	47	42	37+	48	43	38	49	44	39	50	45	40	51	46	41	36	47	42	37	48
Tri	X	S10	3	58	55	52																		61					51s					
Tri	RU	E10S	2						54															61					51s					
Tri	UX	90	2						60	54					61	54	47					61		54	48				61	55	48			36s
UMa	W	S10	2	50																									36s	36s	36s	36s		36s
UMa	RV	RR	3	56	50	44				59	52	46		39					54	48	41				56	50	44		37					52
UMa	TU	RR					39					41																						
UMa	TX	S10	3																39															
UMi	W	S10												47					58							38					49			
Vir	ST	90	2				38			43							41							40										
Vir	AH	S10	2						39s																									
Vir	AV	90	2		39																								36					
Vir	CG	E10S	3	48	41							43s							44	38						39s								41
Vul	Z	S10	2																			53				44								
Vul	BN	90	2		43				40	59		56			53				50			47			44		41		60	38	57			35
Vul	DR	E10X	3		42+									43+										43+								43+		
Vul	EV	E10S	3						45													56				38								
JD	604	..		93	94	95	96	97	98	99																								
JD	605	..								0	1	2	3	4	5	6	7		8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
2024 Aug		P	1	2	3	4	5		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
And	SW	RR		57	45				55	43		64	53	41		62	51	39		60	49	37		59	47	35	57		45	33	66	55	43	31
And	SY	L10	1	33	38/																	38	44s		51		57s		63					
And	TW	S10	3																			38	44s		51		57s		63					
And	XX	90	3	43		60			49			38		55			44		61	33		50			39		56		45		62	34		
And	CD	L10	2																			98\		\		4s	/	11/						
And	OV	90	3	45	39				63	57	51	45	39			63	57		51	45	39	33		63	57	51	45	39	33		63	57		
Aqr	SW	RR	3	35			56	48	40			61	53	45	37			58	50	42	34			56	47	39		53	44	36				
Aqr	SX	90	2	54	61				36	43	50	57	64				39	47	54	61				36	43	50	57			32	39	47	54	
Aqr	CD	E10S	2				34					17				1					85				69				52					
Aqr	HH	90	3	53				55			42	57			44	59			47	61			49			51		38	53				40	
Aqr	LL	L10	2		56										65s											74								
Aql	AA	RR	3	41	50	58			39	48	56	37		46	54		35	44	52			33	42	50		40	48		38	46				36
Aql	V0341	90	3		47				36	52		41		56		45						34	50	39	55		44		33	48				
Aql	V0889	L10	3		47		25s		36	52		41		56		45			37s	34	50			39	55		44		49s	33	48			
Aql	V1353	E10S	3		44		56s				39s	51				34	46s		59				42		54s		37s		49		32			
JD	605	..		24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54

2024 Aug	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Aql V1426 E10S 2		50s	9+	27+	44	3+	20+	38+	55s	14+	32+	49	8+	25+	43s	2+	19+	37+	54	13+	31+	48s	7+	24+	42	1+	18+	36+	53s	12+	29+	47		
Aql V1430 E10S 2			54	41			47s			53	40			46s			52	39			45s		51	38			44s			49	37			
Ari X RR 3	58		54											61			56		51												53	54		
Ari RS L10 2				12								92										73												
Ari AL E10S 3																														65				
Aur TZ 90									64		60						65		60			56					65		61		57			
Aur CQ L10 2						57s					88						19s					50					81s							
Aur IY E10S 3																														62				
Aur V0432 E10S 3											60s															55								
Aur epsilon																																		
Aur zeta																																		
Boo RS RR 3			46		35				37			39			41				43				33			35			37				39	
Boo TW 90 3	43	49								35	41	48					33	39	46							38	44							
Boo UU 90		47	38					49	41										46	37					40					42	34			
Boo UY 90 2							37															34												
Boo AC E10D	50	38+	44s	49s	37		43	49	37s	43s	48s	37	42	48	36s	42s	48s	36	41	47	35s	41s	47s	35	41	46	34s	40s	46s	34	40	46		
Boo CM 90 2												35			40											36								
Boo CQ 90		37								42		39		36										38		35		33						
Cam SS E10S 2		55s		96				37s		78				19s		60			2s		43		84s		25		66s			7		48s		
Cam SV S10 3	38	56	45s		53		42s	60s	49	38s	57s	46	35s	54s	43	61	50s	39	58	47s	36+	54	43s	32+	51	40s	58s	47	36+	55s	44	33+		
Cam AK E10S 3		53s									43s	55									34s	45	57s						36	47s	59			
Cam AN L10 3	53s										43s	55									34s	45	57s						36	47s	59			
Cam AT E10S 3		60s			39s		48		58s			37s		46			56s		65	35s		44		54s	63	33s		42		52s				
Cnc S L10																															0			
Cnc RU L10 2																																		
Cnc RZ L10 2																										76\ \	38s	/	0/					
Cnc TU E10S 3																																		
Cnc TW L10 2																																		
Cnc UU L10 2															\ \													66s						
Cnc ZZ L10 2																																	25\	
CVn W 90 2			40						36						43											36					33			
CVn Z 90 2													42		38			34																
CVn RS S10 2							39s												38															
CVn RZ 90 2		43					41			38					35																			
Cas RX L10 2								\ \				7		/	/										\ \			23s	/	/				
Cas RZ S10		49							46						44	64						61						39	59					
Cas SX L10 2																							59\	\	42	/	25/							
Cas TV S10 3							59		40									46										53		34				
Cas TW S10 3							50		35					64			50			35					64		49			35				
JD 605 ..		24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54		

2024 Aug	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Cas TX	E10S	3									58s					51s	43s				36s											60		
Cas AQ	L10	2	75\	80s	86\			61\	66	72\				47\	52s	58\					33\	38	44\				19\	25s	30\				5\	
Cas BM	L10	2																																
Cas DN	E10S	3	40s	55							49	64s					42	58s								35	51s	66						44s
Cas GG	E10S	3									47																51							
Cas GU	E10U	3															42				51					61								
Cas IL	E10S	2						46								36																	62	
Cas IT	E10X	3						46								36					59s					49s				39s			62	
Cas OX	E10X	3																								64+					62+			60+
Cas PV	E10X	3				60s		35s				61s	36s								61s	36s	64+				61s		62+	36s			60+	
Cas V0368	E10S	3		40		63s										53s									43s	66								
Cas V0375	E10D	3		53		48			43	64s	37	58s					53s				48s				42s	63	37s		58	32s	53			
Cas V0381	E10X	3		53		48			44s	43	64s	37	58s	42s				53s				48s				41s	42s	63	37s	65s	58	32+	53	
Cas V0459	L10	3	89s						44		35s					42					81s				41				65	27s	39			
Cep RZ	90		52	44	37	60	53	46	38	62	54	47	39	63	56	48	41	33+	57	49	42	35	58	51	43	36	59	52	45	37	61	53	46	
Cep VW	S10		37+	35+	46+	44+	41+	38+	36+	47+	44+	42+	39+	37+	34+	45+	43+	40+	38+	35+	46+	44+	41+	39+	36+	33+	45+	42+	40+	37+	34+	32+	43+	
Cep XX	S10	3														34									36						37			
Cep XY	E10S	3	42													52										62				39				
Cep ZZ	S10	3	49		63											34					48					62					33			47
Cep AI	E10S	2									43s	54																		33s	44	55s		
Cep CW	E10X	3									39+										58+										50+			
Cep EI	L10	3		60					82s							4					26s					48				70s		92		
Cep EX	L10	3							97																41									
Cep NN	E10S	3									35s	38	41s	43	46s	49	52s	55	58s	61	64s													
Cet RR	RR	3				56					54					52	62										50	60				47	58	66
Cet RV	90	3																							65				63					
Cet TU	E10S	2		65						4					43					83					22			61		0				
Cet TV	L10	2						42+								52+																		
Cet XY	E10S															61s										57					52s			
Cyg UY	RR	2		41	53						46	58					38	50	62							35	47	59		40	52	64	32	44
Cyg XZ	RR	3	36			63	56	49	43	36						63	56	49					63			56	49	42	36					
Cyg BO	E10S	2		52s	40						54s	42					57s	45							59s	47	35s				62s		50	
Cyg BR	E10S		51		51s	50			50s	50		50s	50	50s				50				50s				50	49s	49		49s	49		49s	
Cyg DM	RR	3	39		49	59	43		53	37	63	47	57	41				51	34	60	44				54	38	64	48	32	58	42	52	36	62
Cyg V0367	L10	2	\	\	43	/	/				\		\	73s	/	/					\	\				3	/	/		\	\			33s
Cyg V0463	E10S	3	38	44s	49	55s	61																		38s	43	49s	55	61s					
Cyg V0477	E10X		38	44s	49	55s	61			36s					40s								38s	43	49s	55+	61s			48s				
Cyg V0541	L10	3				77+																												
Cyg V0548	E10S					58s	49	39s							61s	51	41s									63s	54	44s	34				66s	
JD 605	..		24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	

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Cyg V0788	L10	2																				31\	27	22\									
Cyg V0891	E10S	3					63		54			45		35														60	50				
Cyg V0909	E10S	3		59		40				61s			41s				62		43								44s						
Cyg V1061	E10S	3					58							62											36								
Del DX	90	3	58	53	47	42	36				62	56	51	45	40	34			60	54	49	43	38	32			58	52	47	41		36	
Dra RW	RR	3			54	43		53	41	63		51	40	61	50		39	60	49	37		59	47	36			57	46	34	56		45	
Dra SU	RR			57	55			53	51	49			47	45			44	42	40			38	36	36			34	66	32	64		63	
Dra SW	RR		48	62		47		61		46	60			45	59			43	57			42	56		41		55		40	54			
Dra TZ	E10D		47	63s	50s	37s		53	40	56s		43s	59	46			63s	49s	36s		52	39	55s	42s			58	45	32	62s	48s	35s	
Dra VZ	90		45	41	38	62		59	55	51	47	44	40	36	61	57	54	50	46	43	39	35	32+	60	56	53	49	45	41	38	34	62	
Dra WW	S10						59																										
Dra XZ	RR		50	45	41	36				60	55	51	46	41	37			65	61	56		51	47	42	37	33		66	61	57		52	
Dra AI	S10		59					38	58				38	58				37	57									36	56			56	
Dra BF	L10		59			52s		38	58				38	58				37	57			33s					36	56				56	
Dra BK	90	3	61		39	57		35	53		49			46	64		42	60		38	56		34	52			48	66	44	63			
Dra BU	E10S		59s	55	50s	46	42s	37																	56s	52	47s	43	39s	34			
Dra DD	90		44	42	40	38	36		63	61	59		57	55	53	51	49	47	45	43	41	39	37	35	33+	64	62	60	58	56	54	52	50
Equ S	S10	3											61															35					
Eri SV	90	2																				58						58					
Gem RR	90	2																										65	64				
Gem RY	L10	2																	65s						30			95s					
Gem WW	E10S	3															61s								65			60					
Gem YY	S10	2																							61s		65						
Her TW	RR	2	60	40	60	40	60	40	60	40	59	39		39		39		39	39		38		38				38	38		38		37	
Her TX	S10										34s	37	40s	43	46s	48	51s	54	57s														
Her UX	E10D	3	52				39s		49s				36		46					33s			43s						40				
Her VX	RR	3	43				44	35				45	36				46	37				46	38					38					
Her VZ	90	2	43		51	39		59	47	35		55	43		52		40			48	36			44	32		52	40			49	37	
Her AK	S10		35	41s	46	51s	36s	41	47s	52	36	42s	47		37s	42	47s		37	43s	48		38s	43		33s	38	43s	33	38s	44		
Her AR	90		47	41	35			58	52	46	40	34					51	45	39	33					50	44	38	32					
Her AW	L10	2			44								24									4									84		
Her DI	L10				44	34s							24		89s							4			44s					84			
Her GU	E10U	2	37		54s										40													43					
Her LV	L10	2	37		54s										40						33s							43					
Hya AI	L10	2																															
Lac RW	L10	3				35s										72s												9s					
Lac SW	S10		50s	47+	43+	39+	35+	48	44+	40+	36+	48+	45+	41+	37+	49	46+	42+	38+	34+	46+	43+			39+	35+	47+	44+	40+			33+	
Lac UW	E10S					83								12				41							70						99		
Lac CO	E10X			52+				60+											40+		48+							65+					
JD 605	..		24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54

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Lac	V0345	E10X		21+						70+										19+						69+										
Lac	V0364	E10X	3	21+						70+			56s							19+						69+										
Lyn	TY	E10S	2										62																							
Lyr	RR	RR		46	60				43	56			40	53			36	50	63			33	47	60			43	57			40	53			37	
Lyr	RZ	90	3									34	36	38	40	43	45	47	49	52	54	56	58												32	
Lyr	UZ	S10	3										62	56s	51	45s	40	34s														58s	53	47s	42	
Lyr	CN	90	3	52		57	40	63	45		51		57	39		45	50		33	56	38		44		50	32	55	38		43		49	31	55		
Lyr	EZ	RR	2				38	43	48	53	58	63					36	41	46	51	56	61					34	39	44	49	54	59				
Lyr	IO	90	2	57			46	61			50			38	54		42		58			46			35	50		39	54				43			
Lyr	beta						0s							47						95s							42						89s			
Mon	UX	E10S	2																																	
Mon	VV	E10S	2																																	
Mon	AR	L10	1																																	
Mon	AV	E10S	2																																	
Mon	IL	E10S	2																																	
Mon	V0448	E10S	2																																	
Oph	U	ST	2			46s										36						39					42								67	
Oph	ST	90	2			48	38				43					39			44	34					39				35					40		
Ori	Z	E10S	2								30					50					70				91							11				
Ori	BM	E10S	2																				97						44							
Ori	CP	E10S	2	7					39					71						3					35					67						
Ori	DN	L10	2												54														51							
Ori	FO	L10	2																							91										
Ori	FT	E10X	3																															61s		
Ori	GG	E10X	3																															61		
Ori	V0536	E10S	2																															63		
Ori	V1016	L10	3																														60			
Peg	U	S10	3	48s	41+	54	48s	41+	54	47s	41+	53	47s	41+	53	47s	41+	53	47s	41+	53	47+	40+		34+	46+	40+	34+	46+	40+	34+	46+	40+	34+	46+	
Peg	VV	RR	2	44	41	39	37									64	62	60	58	55	53	51	48		46	44	41	39	37	34	32					
Peg	VV	L10	2	44	41	39	37									64	62	60	58	55	53	51	48		46	44	41	39	37	34	32					
Peg	AV	RR	3	36	53	48			43	60	38	56	34	51	46	63	41		58	36	53	49			44	61	39	56	34	51	47	64			42	
Peg	AW	L10	2		9					40s						71						3s					34						65s			
Peg	BH	90	3		58	51			43		35	63		56		48	40		33	61	53				45		38	66		58		50		43		
Peg	BK	E10S	3									40										63s			38								61s			
Peg	CG	90	2			61	54		48	41	35			62	55	48	42	35			62	56	49		43	36		63	56	50	43	37				
Peg	DF	L10	3													53																	23			
Peg	DH	RR	3	49	51	53	56	58	60	37+	39+	41	43	45	48	50	52	54	56	33+	35+	37+	40+		42	44	46	49	51	53	55	32+	34+	36+	38	
Peg	GH	E10S	2			37					49					60					43s					54s				38	66s					
Per	RW	L10	3		11												31														50					
JD	605	..		24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54		

2024 Aug			P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Per	RY	E10S	2						59								46																		62s	
Per	AG	E10X	3						59								46								47s	49s		52s		55s				62+		
Per	AR	90	3		56			54			52			50	63	48			61	46		58	44		56	41		54	39	52		65	50			
Per	AY	L10	2				25												2										80							
Per	IQ	E10X	3		47+								45+							42+					65+	39+					62+		37+			
Per	KN	E10U	3	47	56s		51	59s	46s	54	62s	49s	57	44	52s	60	47	55s	42+	50	59s	45s	54	40+	49s	57	44+	52s	39+	47	55s	42+	50	37+		
Per	LX	L10	2	31s			33					35s								39s				40				42s			44					
Per	beta										59			46								63s		49s						66				53		
Psc	RU	90	3		48		43	61		56		51		46	63	41	58		54	49		44	61	39	56		52		47	64	42	59	37			
Psc	RY	90	3				51		57	63							46	52	58	64				46	52	58	64							41	47	
Psc	SS	90	3	48	63	49		51		52		54		55	42	57	43	58	44	60	46	61	47	62	49	64	50	37+	52	38	53	39	55	41		
Sge	SY	E10S		35s							43s						51s								59s		36							43		
Ser	VY	RR	2							39																										
Ser	AN	90		39	43										35	40	44									32	36	40								
Ser	BH	90	3		46						37		42							37			41					32								
Ser	EG	L10	2	49s	98				47s		95			44s		93			41s		90			39s		87		36s		85				34s		
Ser	LX	K10	3	43	38		44	39		45	40	35	46	41	36		42	37		43	38	33			39	34		40	35			41	36	31	37	
Tau	RW	S10	2																					54												
Tau	CD	S10	2																				58													
Tau	EN	E10S	3						60s													61					56				66s					
Tri	X	S10	3				61	59		56	53	50	47	44	41																					
Tri	RU	E10S	2	41								58s					49					39s		66s					56							
Tri	UX	90	2			62	55	49		42			62		56	49	42							63	56	49	43	36		63	56	50	43	37		63
UMa	W	S10		36s	36s	36s	36s	36s	36s	37s	37s	37s	37s	37s	37s	37s	37s	37s	37s	37s									55		55	55	55	55		55
UMa	RV	RR	3	46	39						48	41	35					50		43	37						46	39	33						41	
UMi	W	S10			59								39					50					60							41						
Vir	CG	E10S	3								36s						37									32s										
Vul	Z	S10	2											62						53				44					35							
Vul	RR	E10S	3								37						42					47					52				57					
Vul	BN	90	2	54			51			48		45				42	61		39	58		36	55		33	52					49		46			
Vul	DR	E10X	3								44+											44+							45+							
Vul	EV	E10S	3						49														60			42										
JD	605	..		24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54		
2024 Spt			P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
And	SW	RR		64	53	41	30	62	51	39		60	49	37	58	47	35		68	56	45	33	66	54	43	31	64	52	41	29	62	50	39			
And	SY	L10	1				19\	24	28/																											
JD	605	..		55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85		

2024 Spt	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
And TW S10	3																	30s			36	43s		49	55s		61		67s					
And XX 90	3	51			40		57			46		63	35		52		69	41		58	30	47		64	36		53		70	42				
And CD L10	2																					42\	\			49	/	55\						
And OV 90	3	51	45	39	33		63	57	51	45		39	33		69	63	57	51	45	39	33	27	69	63	57	51	45	39	33	27	69			
Aqr SW RR	3		50	42	33		55	47	39	31				52	44	36	28			49	41	33			46	38		30						
Aqr SX 90	2					36	43	50	57			32	39	47	54					29	36	43	50				32	39	47					
Aqr CD E10S	2		36					20				4					88					71				55								
Aqr HH 90	3	55			42	57			44			32	46		34		49			36	51			38	53		40			27				
Aqr LL L10	2		83s											92									1s											
Aql AA RR	3	44	53	33	42		51		31	40	49			29	38	46			36	44		34	42			32	40		30	38				
Aql V0341 90	3	37	53			42			31	47				36			40			29	45			34			38			27				
Aql V0889 L10	3	37	53			42			61s	31	47			36			40		73s	29	45			34			38		85s	27				
Aql V1353 E10S	3	44s					39		52s			35s		47			30		42s					37				32s		45				
Aql V1426 E10S	2	6+	23+	41+	58s	17+	35+	52	11+	28+	46s	5+	22+	40+	57	16+	33+	51s	10+	27+	45	3+	21+	39+	56s	15+	32+	50	9+	26+	44s			
Aql V1430 E10S	2		43s	30s			48	36			42s	29s		47	35				41s	28s		34			40s	27s		33						
Ari X RR	3		49							65		61		56		51			47		42		68		63		58		54		49			
Ari RS L10	2								33										14					94										
Ari AL E10S	3													64					39									63						
Aur TZ 90		53			66		62		58		54		50	67		63			59		55	51	68	46	64		60		56		51			
Aur CQ L10	2	13					44s					75							6s			37					68s							
Aur IY E10S	3											59															55							
Aur V0432 E10S	3											50s		58s					66s									45						
Aur epsil																																		
Aur zeta																																		
Boo R5 RR	3								31			33			35								27		29			31						
Boo TW 90	3		36	43							35	41							33								31							
Boo UU 90					36					39	30					33					36	27					30							
Boo AC E10D		34s	39s	45s	33	39	45	33s	39s	44s	32	38	44	32s	38s	43s	32	37		31s	37s		31	36		30s	36s		30	36				
Boo CM 90	2					32													29															
Boo CQ 90					35		32												31		29										28			
Cam SS E10S	2		90			31s		72			13s		54		95s				36		78s		19		60s		1		42s					
Cam SV S10	3	51s	40	59	48s	37+	55	44s	33+	52	41s	30+	49	38+	56s	45	34+	53s	42	31+	49s	38+	27+	46s	35+	53	42s	31+	50	39+	28+			
Cam AK E10S	3								38s	50	61s								29s	40	52s	63						31	42s	54	65s			
Cam AN L10	3								38s	50	61s								29s	40	52s	63						31	42s	54	65s			
Cam AT E10S	3	61	31s	40			49s	59	68s			38		47s	57				66s	36	45s		55		64s	34		43s		53				
Cnc S L10									48											96									45					
Cnc RU L10	2	14										32										49												
Cnc RW 90	2										64								66				68					60	69					
Cnc RZ L10	2			58\	\		20	83\							40\	\	2s	65\									22\	85	/	47\				
JD 605 ..		55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85		

2024 Spt	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Cnc TT 90 3																	70				65												66	
Cnc TU E10S 3						21					77						33						89					45					61\ 67 73/	
Cnc TW L10 2																																		
Cnc UU L10 2									/																									
Cnc ZZ L10 2		27	29/																															
Cnc AQ 90 3																										70							64	
CVn W 90 2										36					33																			
CVn Z 90 2				34		30																		31		27								
CVn RZ 90 2				34						32				29																				
CMa R S10 2																																	72s	
CMi AM E10S 2					68																													
Cas RX L10 2									\		\		40			/	/									\							56s	
Cas RZ S10	37	56						35	54				32	52								30	49	69			27			47	66			
Cas SX L10 2																																	16\ 98 / 81/	
Cas TV S10 3				59			40						65	46			28							71	53			34						
Cas TW S10 3		64			49			35				63		49			35						63		49						35			
Cas TX E10S 3	53			46				39			31						63s						56s				48s			41s			34s	
Cas AQ L10 2	11	16/			91\		97s / 2/					77\ 83 88/					63\ 69s 74/									49\ 55 60/					35\ 41s			
Cas BM L10 2																																		
Cas DN E10S 3	60							37s	53	68s				31s	46		62s								39	55s	71					33	48s	
Cas GG E10S 3								54					30													58				33				
Cas GU E10U 3																	35		45						54			63						
Cas IL E10S 2								52						42											33									
Cas IT E10X 3								52						42											66s			56s					46s	
Cas OX E10X 3					57+						55+					53+												49+					47+	
Cas PV E10X 3	61s	36s			57+			61s		55+						53+		37s		51+					62s	37s	49+				62s	47+		
Cas V0368 E10S 3	34s	56										47		69s											37		60s						27	
Cas V0375 E10D 3		47	68s	42			63s	37		58s	32		53s				47s	68	42s					63	37s	58	31s			52	26s		47	
Cas V0381 E10X 3		47+	68+	42			63s	37	61s	58s	32+		53s				47+	68+	42s					63	37s	58s	58	31+		52	26s		47+	
Cas V0459 L10 3		63	38+						61		36		18s				60	34						64s	58	33						56+		
Cep RZ 90	39	31+	55	47	40		32+	56	48	41	34+		57	50	42	35+	28+	51	44	36+	29+	52			45	38+	30+	54	46	39+	31+	55	48	40+
Cep VW S10	41+	38+	35+	33+	30+		41+	39+	36+	34+	31+		29+	40+	37+	35+	32+	29+	41+	38+	36+	33+		30+	28+	39+	37+	34+		31+	29+	26+	38+	35+
Cep XX S10 3				38																														
Cep XY E10S 3								49																										69
Cep ZZ S10 3		61											32		47			61															32	46
Cep AI E10S 2	67													34			46s	57		68s														
Cep CW E10X 3							68+			41+								60+														52+		
Cep EI L10 3			14s				36			58s					79											23					45s			
Cep EX L10 3				84														28																71
JD 605 ..		55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84		85	

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Cep NN E10S	3											31	34s	37	40s		43	46s	48	51s	54	57s	60	63s	66	69s							
Cet RR RR	3			43	53	64				40	51	62					70			47	57	68		44	55		65			42	53		
Cet RV 90	3	62					61					60					58					57					56						
Cet TU E10S	2				39				78				17				56					95					35				74		
Cet TV L10	2		73+									83+									93+											4+	
Cet XY E10S				47			64s						59									54s							50				
CrB U S10	2		41							31																							
CrB RV 90	3									44	43	43	42	42	41	41	40	40	39	39		38	38	37	37	36	36	35	35	34	34		
Cyg UY RR	2	57			37	49	61			42	54			34	46	58			39	51			31	43	56			36	48				
Cyg XZ RR	3	62	56	49	42	36			62	56	49	42	36	29	69	62	56	49	42	35	29	69	62	55	49	42	35	29		62	55		
Cyg BO E10S	2	37s					64s	52	40s				67s	54	42s		30					57	45s	33					59	47s	35		
Cyg BR E10S			49		49s		49		48s	48			48s		48		48s		48		48s		48		48s		47		47s	47			
Cyg DM RR	3	46		56	40	66	50	34	60	44		54	38	64	48	32	58	41		51	35	61	45	29	55	39		49	33	59	43		
Cyg V0367 L10	2		/						\	\	63	/	/				\	\	93s	/	/						\	\	22	/	/		
Cyg V0463 E10S	3					32s	38	43s	49	55s														32	37s	43	49s						
Cyg V0477 E10X						32+	38	43s	49	55s			56s										32	37+	43		49s						
Cyg V0541 L10	3				44+													78+															
Cyg V0548 E10S		56	47s	37							59	49s	40	30s						62	52s	42	32s					64	54s	45			
Cyg V0788 L10	2																																
Cyg V0891 E10S	3	41		32																	47		37		28								
Cyg V0909 E10S	3		45						47s								48		29				49s				30s					51	
Cyg V1061 E10S	3	40						44							48								52							56			
Del DX 90	3					56	50	45	39	34				54	48		43	37	32					52	46	41	35	30					
Dra RW RR	3	33		55	43	32			53	42	30	52	40	29	50		39	28			49	38		48	36			46	35				
Dra SU RR			61		59		57		55		53	51		49			48		46		44		42		40		38	70	36	68	34		
Dra SW RR			39	53	66		37	51	65	36		50	64	35	49		63		34	48	62		32	46	60		31	45	59	30			
Dra VZ E10D			51	38	54s		41s		58	44	31		47s	34s	50		37		53s	40s		57	43	30	46s		33s		49	36			
Dra VZ 90		59	55	51	48	44	40	37	33	61	58	54	50	46	43	39	35	32	28	56	53	49	45	42	38	34	30	27	55	51	48		
Dra WW S10					36								62														51						
Dra XZ RR		47	43	38	33			67	62	57	53	48	43	39	34	29		67	63	58	53	49	44	39	34	30		68	63	59	54		
Dra AI S10						35	55					35	55				34	54						33	53						33		
Dra BF L10			54s			35	55					35	55				34	54+						33	53						33+		
Dra BK 90	3	40	59		36	55		32	51			47	65		43	61		39	57		35	53		31	49	68	27	45	64		41		
Dra BU E10S																		49	44s	40	36s	31	27s										
Dra DD 90		48	46	44	42	40	38	36	34+	32+	30+	61	59	57	55	53	51	49	47	45	43	41	39	37+	35+	33+	31+	29+	27+	58	56		
Equ S S10	3												53								40							27					
Eri SV 90	2	57					57					57					57					56					56						
Gem RR 90	2	62		61	60			58		57		56		54	53								68		67			65		64		63	
Gem RY L10	2		60					25s				90					55s					20				85s						50	
JD 605 ..		55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	

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Gem SV E10S	1							51				52					53				53			54				54							
Gem SZ 90	3											60	60	60	60		60	61	61	61	61		62	62	62	62	62	63	63	63	63	64			
Gem WW E10S	3			56			65s					60s					55s		65			50s		60			69s		55						
Gem YY S10	2		57s		61		64s		68				56		60s		63		67s			71	52		56s		59		63s		66				
Her TW RR	2	37		37		37		37		36		36		36		36		36		35			35		35		35		35		34				
Her TX S10												29s	32	35s	38		41s	44	47s	50															
Her UX E10D	3					37s			46s				34		43						31s			40s				28		37					
Her VX RR	3	39					40	31					32					33						34				35		26					
Her VZ 90	2			45	33			41			50	38			46	34						42	30			38		35		43	31				
Her AK S10		34s	39	44s		34	39s			34s	40		29s	35	40s		30	35s	41		30s		36			31	36s			26	31s	37			
Her AR 90		49	43	37	31				48	42		36	30					47	41	35	29						40	34	28						
Her AW L10	2							64									44									24									
Her DI L10					99s			64							54s		44									24		9s							
Her GU E10U	2																				31s														
Her LV L10	2						40s															31s													
Hya AI L10	2												82+											11+											
Hya ET 90	3																									70									
Lac RW L10	3					46s										83s											70		20s						
Lac SW S10		45+	42+	38+	34+	30+	42+	39+	35+	31+	43+	40+	36+	32+	44+	40+	37+	33+	29+	41+	38+		34+	30+	42+	39+	35+	31+	27+	39+	36+	32+			
Lac UW E10S		28					57					86					15							44				73							
Lac CO E10X				36+			45+		53+			62+		70+								33+			41+		50+		58+						
Lac V0345 E10X		18+							67+								16+								65+										
Lac V0364 E10X	3	18+							67+								16+								65+										
Leo RR RR	3																						70					68							
Leo AG E10S	2																												70s						
Leo AM S10																														72s					
Lyn TY E10S	2						61													61															
Lyr RR RR		50	63		34	47	60		30	44	57			40	54			37	50				34	47		31	44			27	41				
Lyr RZ 90	3	34	36	39	41	43	45	48	50	52	54												28	30	32	35	37	39	41	44	46	48			
Lyr UZ S10	3	37s	31													55	50s	44	39s	33	28s														
Lyr CN 90	3	37		43		48	31	54	36		42		48	30	36			41		47	29			35		41	46	29		34					
Lyr EZ RR	2			32	37	42	47	52					30	35	40		45	50						28	33	38	43	48							
Lyr IO 90	2		31	47			35	51			39				43			32	47				36			40			28	44					
Lyr beta							36						83s							30						78s									
Mon UX E10S	2											54			50s			45				40s			35			31s					26		
Mon VV E10S	2				86s			89		91s			94				96s		99					1s			4			6s					
Mon AQ E10S	2															66s														66					
Mon AR L10	1							35	19	4								95	80s	65								55	40	25					
Mon AV E10S	2						15s		62				10s				57								52		99s				47				
JD 605 ..		55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85			

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Mon EZ E10U 2															66s		67s				68s			69s	63		70s	64		70s	64			
Mon IL E10S 2												97			99							2			5				7					
Mon V0448 E10S 2													65s				68						60s			63								
Mon V0530 E10U 2						67s					66				66s						60	65	70		59s	64s	69s		58	63				
Mon V0634 E10U 2																								65										
Oph U ST 2					33s						36s														29						33			
Oph ST 90 2						35					31				36										27			32						
Ori Z E10S 2				31						52				72						92					13					33				
Ori BM E10S 2				91						38					85									32				79						
Ori CP E10S 2				99						31				64						96					28					60				
Ori DN L10 2											47														44									
Ori EW E10X 2															70+										64+					57+				
Ori FO L10 2													71																					
Ori FT E10X 3													71												67s									
Ori GG E10X 3													68s												67									
Ori V0536 E10S 2																	61																	
Ori V1016 L10 3																																		
Ori V1031 E10S 2																									61									
Peg U S10 3		40+	33+	46+	39+	33+	46+	39+	33+	45+	39+	33+	45+	39+	33+	45+	39+	32+	45+	39+	32+	45+	38+	32+	45+	38+	32+	26+	38+	32+	44+			
Peg VV RR 2		67	65	62	60		58	55	53	51	48	46	44	41	39	37	34	32	30									60	58	55	53	51		
Peg VW L10 2		67	65	62	60		58	55	53	51	48	46	44	41	39	37	34	32	30									60	58	55	53	51		
Peg AV RR 59		37	54	32	49		44	62	40	57		35	52	30	47		42	59	38	55	33		50	28	45	40	57	35	52	31	48			
Peg AW L10 2		96								27s					58										89s		21						52s	
Peg BH 90 3		35	63		56		48		40			32	61		53		45		37		30		58		50	43		35		27	55			
Peg BK E10S 3	36										59s				34										57s		32							
Peg CG 90 2	64	57	51	44	37		31	64	58	51		45	38	32			59	52	45	39	32				59	53	46	40	33	26				
Peg DF L10 3															93													63						
Peg DH RR 3	41	43	45	47	49		52	54	30+	33+	35+	37	39	41	44	46	48	50	53	29+	31+		34	36	38	40	42	45	47	49	26+	28+		
Peg GH E10S 2				32s	60					44s					55s											50			33s					
Per RW L10 3											70															90								
Per RY E10S 2										48s					34s											64								
Per AG E10X 3		61s	64s				67s	48s							34s											64								
Per AR 90 3		63	48		61		46		59	44		56	42	69	54	39	67	52	37	65	50		35	63	48	33	61	46	31	59	44	29+		
Per AY L10 2										58																35								
Per IQ E10X 3					60+				34+						57+	32+										55+								
Per KN E10U 3	45+	53	40+	48s	35+		43+	52s	38+	46+	55s	41+	50	36+	45+	53	40+	48+	35+	43+	51s		38+	46+	33+	41+	49+	36+	44+	31+	39+	48+		
Per LX L10 2		46s					48				50s				52										54s		56		58s				60	
Per beta			40								57s				43s											60		34					64s	
Psc RU 90 3	54		49	67	45		62	40	57	35	52	69	47	64	43	60	38	55	33	50	28+		45	62	40	58	36	53	31+	48	26+	43		
JD 605 ..		55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74		75	76	77	78	79	80	81	82	83	84	85	

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Psc	RY	90	3	53	59	65				41	47	53	59	65				36	42	48	54	60				37	43	49	54	60				
Psc	SS	90	3	56	42	58	44	59	45	60	47	33+	48	35+	50	36+	51	37+	53	39+	54	40+	55	42+	57	43	30+	45	31+	46	32+	48	34+	
Sge	SY	E10S								51									36s						44s									
Ser	AN	90				32	37									29			33									29						
Ser	BH	90	3		32				36					31										31								26		
Ser	EG	L10	2		82		31s		80		28s		77		26s			74		23s			72		20s		69				18s			
Ser	LX	K10	3	32		38	33		34		35		30	36	31			32		33		28		29			30	26			32			
Tau	RW	S10	2	62											46												54							
Tau	CD	S10	2	60s									62							49					65s									
Tau	EN	E10S	3	62s					57s		67		53s		63			49s		58			68s		54		64s				50			
Tri	X	S10	3				67		65	62	59	56	53	50	47	45	42	39	36	33														
Tri	RU	E10S	2	46s					36		63						53s			44			70		34s		61s							
Tri	UX	90	2	57	50	44	37		64	57	51	44	37	31		64	58	51	44	38	31		65	58	51	45	38	31	72	65	58	52		
UMa	W	S10		55	56	56	56	56	56	56	56	56	56	56	56	57	57	57	57	57	57	57	57	57	57	58	58	58	58	58	58	58		
UMa	RV	RR	3	35					43	37	31				39			33		67					35	28	69					37		
UMa	TU	RR																					69				71							
UMa	TX	S10	3															65																
UMi	W	S10		51					61		31			42					52					62		33						43		
Vul	Z	S10	2										54					45						36				27						
Vul	RR	E10S	3	62																														
Vul	BN	90	2	43		40			38		35		53	32	50			29	48		45			42			39				36			
Vul	DR	E10X	3		45+									45+										46+										
Vul	EV	E10S	3						53		35													46			29							
JD	605	..		55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85
2024 Okt		P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
And	SW	RR		27+	60	48	37	25+	58	46	35	68	56	45	33	66	54	43	31	64	52	41	29	62	50	39	27	60	48	37	25	58	46	35
And	SY	L10	1							10	14	19																						
And	TW	S10	3																				29s		35		41s	47		53s			59	
And	XX	90	3		59	31	48		65	37	54		26	71	43	60		32		49	66		38		55	27	72	44		61	33		50	
And	CD	L10	2																													86\	93s	
And	OV	90	3	63	57	51	45	39	33	27	69	63	57	51	45	39	33	27	69	63	57	51	45	39	33	27	22+	63	57	51	45	39	33	27
Aqr	SW	RR	3	43	35	27			40	32				46	37	29							43	35	26		40	32	24				37	29
Aqr	SX	90	2			29	36		43				25	32	39	46					29	36	43					25	32	39				
Aqr	CD	E10S	2	39					23				6			90					74					58						42		
Aqr	HH	90	3	42			29	44		31	46			33	48			36			23	38				25	40		27	42				29
Aqr	LL	L10	2		9									18s												27								
JD	605	..		85	86	87	88	89	90	91	92	93	94	95	96	97	98	99																
JD	606	..																	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

2024 Okt			P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Aql	AA	RR	3			28	36		26	34				24	32	41			30	39			28	37			26	35			24	33		
Aql	V0341	90	3	43		32				37				26	41		30				35				24	40			29				33	
Aql	V0889	L10	3	43		32				37	97s			26	41		30				35				24+	40			29				33	
Aql	V1353	E10S	3		27		40s					35					30s					25			37s					33				
Aql	V1426	E10S	2	2+	20+	37+	55	14+	31+	49s	7+	25+	43	1+	19+	36+	54s	13+	30+	48	6+	24+	41s	59s	18+	35+	53	11+	29+	46s	5+	23+	40+	58
Aql	V1430	E10S	2	39s	26s			32		38s	25s			31			37s		24s			30			36s	23s			29			34s	22s	
Ari	X	RR	3		44		40	70	65	61				56	51	47				42		37	68	33	63	58			54		49		44	
Ari	RS	L10	2			74									54										35									15
Ari	AL	E10S	3		38										62					37										61				
Aur	TZ	90		69	47	65	43	61	56		52	70		48	66	44	61		57	75	53	71	49	66	45	62	41	58	76	54	71	50	67	46
Aur	CQ	L10	2		99					30s					62						93s					24						55s		
Aur	IY	E10S	3						73			52												69		49								
Aur	V0432	E10S	3	53			61		69							40s				48s				56s		64s				73s				
Aur	epsilon																																	
Aur	zeta																																	
Boo	RS	RR	3								25			27												72			23	74			76	
Boo	TW	90	3			30								28								73	27							72	25			
Boo	UU	90		32					26					29							23				26					28+				
Boo	AC	E10D		29s	35s		29	35	29s	34s		28		34		28s	33s	74s	27	33	74	27s	33s	74s	27	32+	73	26s	32+	73s	26	31+	72	25s
Boo	CM	90	2																											75				
Cam	SS	E10S	2	83		25s			66		7s			48	89s				30	71s				13	54s	95				36s	77			
Cam	SV	S10	3	46	35+	54s	43+	32+	50s	39+	28+	47s	36+	25+	44+	33+	51	40+	29+	48	37+	26+	44+	33+	52s	41+	30+	48s	37+	26+	45+	34+	23+	41+
Cam	AK	E10S	3						33s	44	56s	67							24s	35	46s	58	69s						26	37s	49	60s	71	
Cam	AN	L10	3						33s	44	56s	67							24s	35	46s	58	69s						26	37s	49	60s	71	
Cam	AT	E10S	3	62s	32	71	41s		51		60s	30	69	39s	49		58s		28	67	37s		47		56s	26	65	35s	75s	44		54s	24	63
Cnc	S	L10							93											42									90					
Cnc	RU	L10	2	66										84										1										
Cnc	RW	90	2		62	71					64	73			56	66			75			58		68			51		60	70				53
Cnc	RZ	L10	2						4\	67s	/	29\								87\	\	49	/	11\						69\	\	31s	93\	
Cnc	TT	90	3		61	73				68				62					57	69				64			58		71		53	65		
Cnc	TU	E10S	3		1					57					14							70					26							82
Cnc	TW	L10	2																															
Cnc	UU	L10	2	\	\										0											/	/							
Cnc	ZZ	L10	2																					44\	46	48\								
Cnc	AQ	90	3						67					61	70					64	74				58	67				61	71			
CVn	W	90	2				30					26											75				71					68		23
CVn	Z	90	2			73			69		66													74		70	66		62		58			75s
CVn	RS	S10	2																		75													
CVn	RZ	90	2						25												74					71			68					
JD	605	..		85	86	87	88	89	90	91	92	93	94	95	96	97	98	99																
JD	606	..																	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

2024 Okt	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
CMa R	S10	2	70			67s												74				71s					69				66s					
CMi AM	E10S	2																			55	57	59	61	63	64	66	68	70	72	74	76				
Cas RX	L10	2	/															/	/													89s				
Cas RZ	S10		45	64					42	62												37	57				35	55	74							
Cas SX	L10	2																																		
Cas TV	S10	3		59		40						65	46				28					71	53		34											
Cas TW	S10	3	63			49			34			63		49				34				63			48			34								
Cas TX	E10S	3	26s	73			65			58		51		43				36				29	75s		22	68s		61s				53s				
Cas AQ	L10	2	46/			22/	27	32/				8/	13s	18/			94/	99	/	4/			80/	85s	91/		66/	71	77/							
Cas BM	L10	2																																		
Cas DN	E10S	3	64				26	42s	57	73s				35s	50		66s					28s	44	59s	75				37	53s	68					
Cas GG	E10S	3							61				37															40								
Cas GU	E10U	3															29			38				47		57			66							
Cas IL	E10S	2	68							59				49								39								30						
Cas IT	E10X	3	68	35s			25s		59					49								39								30+						
Cas OX	E10X	3				45+					42+					40+						38+			36+						34+					
Cas PV	E10X	3	37s			45+	62s		37s		42+			62s		40+							37s		36+		63s		38s	34+						
Cas V0368	E10S	3	50s		72							40s		63								31s		53		76s							43			
Cas V0375	E10D	3	68s	42		63s	36		57s	31		52s	26	73	47s		68	41s		62	36s		57	31s	52		25s	73s	46		68s	41				
Cas V0381	E10X	3	68+	42	63s	36	55s	57s	31+			52s	26	73	47+		68+	41s		62	36s		52s	57	31+	52		25s	73s	46+	68+	41				
Cas V0459	L10	3	31				55	56s	29					53			28	2s					52	26	48s			50	25							
Cep RZ	90		33+	56	49	41+	34+		27+	50	43	35+	28+		51	44	37+	29+	53		45	38+	31+	23+	47	39+	32+	24+	48	41+	33+	26+	49	42+	34+	27+
Cep VW	S10		32+	30+	27+	25+	36+		33+	31+	28+	26+	37+		34+	32+	29+	26+	24+		35+	33+	30+	27+	25+	36+	34+	31+	28+	26+	23+	35+	32+	29+	27+	24+
Cep XX	S10	3	43							44																									48	
Cep XY	E10S	3	46											56		33												43								
Cep ZZ	S10	3	60									31	45					59		73									30	44						
Cep AI	E10S	2		36s		47		58s		70													37		48s		60									
Cep CW	E10X	3					70+			43+								62+		35+									54+					27+		
Cep EI	L10	3	67			89s					11			33s							55					77s		99						21s		
Cep EX	L10	3												14														58								
Cep NN	E10S	3													24		27s	30	33s	36	39s		42	45s	48	50s	53	56s	59	62s	65	68s	71			
Cet RR	RR	3	63		40	50	61			37	48	59		35	46		56			33	43		54			31	41	52			28	39		50		
Cet RV	90	3	55				53					52					51						50		37		48		35					47		
Cet TU	E10S	2			13					52			91						30				69					8						48		
Cet TV	L10	2								14+										24+								35+								
Cet XY	E10S		67s		45s				62			40					57s		35s					52										47s		
Com S	90	3							73										70						74											
Com ST	90	2																									75				67					
CrB U	S10	2																29														75				
JD 605	..		85	86	87	88	89	90	91	92	93	94	95	96	97	98	99																			
JD 606	..																	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15			

2024 Okt	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
CrB RV 90 3		33	33	32	32	31	31	30	30	29	29	28	28	27	27	26	26	25	25	24	24	23	23		22											
Cyg UY RR 2		28	40	53			33	45		25		38	50		30		42		23	35	47		27	39						32	44					
Cyg XZ RR 3		49	42	35	29		62	55	49	42	35	29	62	55	48	42	42	35	28			55	48	42	35	28	22		55	48	42		35			
Cyg BO E10S 2					62		50s	38	25s				52s	40	28s						55s	43	30s				46s	46s	46	45s						
Cyg BR E10S			47s	47			47s	47	47s			47	46s				46	46s	46			46s	46	46		46s	46	46	45s							
Cyg DM RR 3		27	53	37	47		31	57	41	25	51	35	45	29	55		39	23	48	32		42	26	52	36		46	30	40	24		50				
Cyg V0367 L10 2					\		\	52s	/	/				\	\		82	/	/				\	\			12s	/	/							
Cyg V0463 E10S 3										26		32s	37	43s	49														26s	31	37s		43			
Cyg V0477 E10X		34s						38s	26			32s	37	43s	49	42s						46s						26s	31	37s		43				
Cyg V0541 L10 3				12+															46+																	
Cyg V0548 E10S		35s						57s	47	38s		28					60s	50	40s	30							53	43s	33	23s						
Cyg V0788 L10 2								16\	12	7\																										
Cyg V0891 E10S 3												43	34	24																						
Cyg V0909 E10S 3			31							33s							34								35s										37	
Cyg V1061 E10S 3				25			60					29	64					33							37											
Del DX 90 3			50	44	39	33	28					48	42	37	31	26				46		40	35	29	24							38		33		
Dra RW RR 3		45	34		44		32	54	42	31		52	41	29+			51	40	28+	50		38	27+	48	37		25+	47	35	24+						
Dra SU RR		67	33	65	31	63	29	61	27	59	25	57	55	53			52	50				48	46	44	44		76	42	74	40	72			38		
Dra SW RR		44	58	72	29	43	57	71	27	41	55	69	26	40	54	68		25	39	53	67	24	38	52	66	23	37	50	64	35	49			63		
Dra TZ E10D		52s	39s	26s	42		29	45s	32s			48	35	38s			25s	41	28			44s	31s	47	34			37s	24s					40		
Dra VZ 90		44	40+	37+	33	29	26	54	50	47	43	39+	36+	32	28	24		49	45	42+	38+	34+	31+	27	23		48	44+	41+	37+	33+		29+			
Dra WW S10										40											66			29												
Dra XZ RR		49	44	40	35	30	26+	69	64	59	55	50	45	40	36	31		26+	69	65	60	55	50	46	41	36	32	27+	22+	65	61	56		51		
Dra AI S10										32								31					31												70	
Dra BF L10										32								39s	31				31					60s	30					70		
Dra BK 90 3		60		37	56		33	52	70	29	48	66	25	44	62		40	58		36	54	73	32	50	69	28	46	65	24	43	61					
Dra BU E10S					71	67s						41s	37	33s	28	24s												73s	68	64s	60					
Dra DD 90		54	52	50	48	46	44	42	40+	38+	36+	34+	32+	30+	28+	26+		24+	55	53	51	49	47	45	43	41+	39+	37+	35+	33+	31+	29+		27+		
Equ S S10 3															46							33														
Eri SV 90 2		56					55					55					55					55					54		40					54		
Gem RR 90 2			61	60			59	57	56			54	74	53	72		52	71	50	70	49	68	48	67	46	65	45	64	44	63	42			61		
Gem RY L10 2					15s				80						45s					11			76s					41								
Gem SV E10S 1			55				56			56					57					58			58				59							59		
Gem SZ 90 3		64	64	64	65	65	65	65	66	66	66	66	66	67	67	67		67	67	68	68	68	68	69	69	69	69	69	70	70	70	70		71		
Gem WW E10S 3			64s	50			60s	45	69			55s		64			50s	74s	59			45s	69s	54			40s	64s	50					73		
Gem YY S10 2			70s	51s	73	55	58s	62				66s	47s	69	51	73s	54s	58	61s			65	46	68s	50s		72	53	76s	57s				61		
Her TW RR 2		34		34	34		34	33				33	33	33				33	32			32	32	32			32	32	31					31		
Her TX S10															25s		28	31s	34	37s	40															
Her UX E10D 3			25s				34s						31								28s						25									
JD 605 ..		85	86	87	88	89	90	91	92	93	94	95	96	97	98	99																				
JD 606 ..																	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14			15		

2024 Okt	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					
Her VX RR 3			27					28					29					30												22							
Her VZ 90 2			39	27			36					32		40	28			36	24			33					29			25							
Her AK S10	26s	32	37s	27			32s			27s	33			28	33s		23	28s			23s	29			24	29s			24s	29							
Her AR 90			39	33			27						38	32	26						37	31	25+					36	30	24+							
Her AW L10 2			5										85										65								45						
Her DI L10			5				64s						85					19s				65						74s			45						
Her GU E10U 2			34s																									23									
Her LV L10 2			34s										27s															23									
Her MM E10S 2																													35								
Hya SZ 90 2							72						71								69							68	75								
Hya WZ 90 2																														76							
Hya AI L10 2	40+									69+								98+										27+									
Hya ET 90 3							67	73										64	69			75							61		66						
Lac RW L10 3							67+	73										93s	64	69		75						30s	61		66						
Lac SW S10	28+	40+	37+	33+	29+		25+	37+	34+	30+	26+		38+	35+	31+	27+	39+		35+	32+	28+	24+	36+		33+	29+	25+	37+	33+	30+	26+	22+	34+	31+	27+		
Lac UW E10S			2										31					60				89					18				47						
Lac CO E10X			66+										29+		37+			46+				54+			63+		71+		25+		34+		42+				
Lac V0345 E10X	14+																					13+				62+								11+			
Lac V0364 E10X 3	14+																					13+				62+						42s		11+			
Leo RR RR 3	65				73		63				70	61				68	58				75	65					73	63			70	61					
Leo SS RR 2																													69								
Leo ST RR 3												72																									
Leo AG E10S 2														67s								75												63s			
Leo AM S10											69s		70		71s		73		74s		75	66s		68		69s		70		71s	63		72				
Lyn TY E10S 2		60														60													59								
Lyr RR RR 54				37	51				34	48			31	44				28	41			24		38			34	48			31	45					
Lyr RZ 90 3														24	26	29	31		33	35	38	40	42														
Lyr UZ S10 3				52s	46	41s		35	30s	25																	43s	38	32s	27							
Lyr CN 90 3	40		46	28			34		39		45	27		33		39					27		32			38		26		32		37					
Lyr EZ RR 2			26	31	36		41	46						24	29	34		39	44								27	32	37	42							
Lyr IO 90 2		32					36			25	40			29	44			33					37			25	41					29					
Lyr beta		25								72s						19							66s								13						
Mon UX E10S 2			21s				16			12s			7		2s			97				92s				88		83s			78						
Mon VV E10S 2	9				11s				14			16s		19				21s				24				27s		29			32s						
Mon AQ E10S 2																66s						75s				57			66								
Mon AR L10 1										16\	85\											76\	61\		46\						37\		22s				
Mon AT E10S 2												61		64		67			70			73															
Mon AV E10S 2				94s				41			89s				36				83s					31			78s				25			73s			
Mon EZ E10U 2		71s	65	59s	72s		66	60s	73s	67	61s	74s	68	62s	56	69	63s	57	70	64s	58		71	65s	59	72	66s	60	54+	67s	61	55+	68s				
JD 605 ..	85	86	87	88	89		90	91	92	93	94	95	96	97	98	99																					
JD 606 ..																		0	1	2	3	4				5	6	7	8	9		10	11	12	13	14	15

2024 Okt		P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Mon	IL	E10S	2	10				13				15				18			21				23				26			28				
Mon	V0448	E10S	2	66s			58	70			61s	73s			53	65			56s	68s			59	71			51s	63s	74s					
Mon	V0530	E10U	2	68		58s	63s	68s	73s		57	62	67	72	56s	61s		66s	71s		55	60	65	71	55s	60s	65s	70s	75s	54	59	64		
Mon	V0634	E10U	2										67																					
Oph	U	ST	2															26s																
Oph	ST	90	2	28									28					24									24							
Ori	Z	E10S	2		53					74					94										34					55				
Ori	BM	E10S	2				26						73						20					67								14		
Ori	CP	E10S	2			92						24															20					52		
Ori	DN	L10	2			40													37													34		
Ori	EW	E10X	2					51+																										
Ori	FO	L10	2	51																														
Ori	FT	E10X	3	51								57s				72s															47s			
Ori	GG	E10X	3		58s							57				72										47s					47			
Ori	V0536	E10S	2				59																					73						
Ori	V1016	L10	3																														3	
Ori	V1031	E10S	2						64																									
Peg	U	S10	3	38+	32+	25+	38+	31+	25+	38+	31+	25+	37+	31+	25+	37+	31+	25+	37+	31+	24+	37+	31+	24+	37+	30+	24+	36+	30+	24+	36+			
Peg	VV	RR	2	48	46	44	41	39	37	34	32	30	27	25																				
Peg	VW	L10	2	48	46	44	41	39	37	34	32	30	27	25																				
Peg	AV	RR	2	26	43		38	55	33	50	28	46	24	41		36	53	31	48	26	43		39											
Peg	AW	L10	2				83						14s																					
Peg	BH	90	3		48		40		32		25	53		45		37	30		50															
Peg	BK	E10S	3	55s			30									53s		28																
Peg	CG	90	2	53	47	40	34	27			54	48	41	34	28		55		48	42	35	28												
Peg	DF	L10	3											32																				
Peg	DH	RR	3	30	32	34	37	39	41	43	45	48	24+	27+	29	31	33	35	38	40	42	44	46	23+	25	27	30	32	34	36	38	41	43	
Peg	GH	E10S	2		44s				28					39					50															
Per	RW	L10	3					10																										
Per	RY	E10S	2	50																														
Per	AG	E10X	3	50								37																						
Per	AR	90	3	57	42	69	54	40	67	52	37	65	50	35	63	48	33	61	46	31+	59	44	29+	57	42	27+	55	40	25+	52	38	23+	50	
Per	AY	L10	2		13											91																		
Per	IQ	E10X	3			50+						73+	47+				70+																	
Per	KN	E10U	3	34+	43+	29+	38+	46+	32+	41+	27+	36+	44+	31+	39+	26+	34+	42+	29+	37+	24+	32+	40+	27+	35+	44+	30+	39+	25+	34+	42+	29+	37+	
Per	LX	L10	2			62s				63						65s			67															
Per	beta				50s					37s			67			54			41			28	71s			58s		44s			31s	74		
Psc	RU	90	3	60	38	55	33+	51	29+	46	63	41	58	36	53	31	48	27+	44	61	39	56	34	51	29	46	24+	42	59	37	54	32	49	
Psc	RY	90	3			31	37	43	49	55						32	38	44	50	56														
JD	605	..		85	86	87	88	89	90	91	92	93	94	95	96	97	98	99																
JD	606	..																	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

2024 Okt		P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Psc	SS	90	3	49	35+	50	37+	52	38+	53	40+	26+	41+	28+	43	29+	44	30+	46	32+	47	33+	48	35+	50	36+	23+	38+	24+	39	25+	41	27+	42	
Sge	SY	E10S		29								37							44							29s									
Ser	AN	90									26																								
Ser	BH	90	3										26											25											
Ser	EG	L10	2	66				15s	64				12s	61				10s	58				7s	56		5s	53					2s			
Ser	LX	K10	3	27			28		29					25			26		27					23		24									
Sex	T	90	3		72	69										73	71	68	66										75	72	70	67	64	62	
Tau	RW	S10	2						61				38							69				46											
Tau	CD	S10	2		52s				67							54							69s	41				56s							
Tau	EN	E10S	3	59s	45	69			55s			65		51s	74s	60			46s	70s	56				42s	66s	51		75	37s	61s	47	71		
Tri	X	S10	3						73	71	68	65		62	59	56	54	51	48	45	42	39	36	34	31	28	25	22							
Tri	RU	E10S	2	51					41s			68s		31			58						48s				39		65			29s			
Tri	UX	90	2	45	38	32	25+	65	59	52	45	39	32	26+	66	59	52	46	39	33	26+	66	59	53	46	40	33	26	66	60	53	47	40	33	
UMa	W	S10		58	58	58	58	59	59	59	59	59	42+	42+	43+	43+	43+	43+	43+	43+	43+	43+	43+	43+	43+	44+	44+	44+	44+	44+	44+	44+	44+	44+	
UMa	RV	RR	3	31	71	65					33	26+	67	60			35	28+	69	62							30	24+	64	58				26+	
UMa	TU	RR												65				67						69		59	71					61	73		
UMa	TX	S10	3																													54			
UMi	W	S10					53					64		34			74	44						54		25		65		35					
Vir	AG	E10D	2											72s										72s	68						75	72s	68		
Vir	AH	S10	2																71s	73	75s								70	71s	73	75s			
Vul	Z	S10	2													45						36					27								
Vul	BN	90	2	33			30			27	46			24	43		40				37			34		31			28			25			
Vul	DR	E10X	3	46+									46+									47+					22+								
Vul	EV	E10S	3										40															33							
JD	605	..		85	86	87	88	89	90	91	92	93	94	95	96	97	98	99																	
JD	606	..																	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
2024 Nov		P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
And	SW	RR		23	56	44	33	21	54	42	31		52	40	29		50	38	27		48	36	25	58	46	34	23	56	44	32	21	54	42		
And	SY	L10	1													0\	5	10\																	
And	TW	S10	3																						21		27s	33	39s		45				
And	XX	90	3	22	67	39		56	28		45		62	34		51	23	40		57	29		46		63	35	52	24		41					
And	CD	L10	2	99\																															
And	OV	90	3	21	63	57	51	45	39	33	27	21	63	57	51	45	39	33	27	21	63	57	51	45	39	33	27	21	63	57	51	45	39		
Aqr	SW	RR	3	21				34	26					31	23									28	20										
Aqr	SX	90	2		21	29	36					25		32	39								21	29	36			25	32						
Aqr	CD	E10S	2							9						93											60				44				
Aqr	HH	90	3			31				33				21	35			23	38				25				27			29					
JD	606	..		16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	

2024 Nov	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Aqr LL L10 2			36s										45										54s										
Aql AA RR 3	22	31					29				27			25				22	31				20	29			27						
Aql V0341 90 3		22					27				31			20				25				30		19				23					
Aql V0889 L10 3		22+					27				31			20+				25				30		19+				23					
Aql V1353 E10S 3	28s						23		35s					30				26s					21									28	
Aql V1426 E10S 2	17+	34+	52s	10+	28+		45	4+	22+	39+	57s	15+	33+	50	9+	27+	44s	3+	21+	38+	56	14+	32+	49s	8+	26+	43	2+	19+	37+	54s		
Aql V1430 E10S 2		28					21s		27					20s									25									24	
Ari X RR 3	40		35	65	31		61		56		51			47		42			33	63	28			58	24	54		49		44		40	
Ari RS L10 2									95									76									56						
Ari AL E10S 3	36												60					35														59	
Aur TZ 90	63	41	59	37+	55		72	51	68	46	64	42	60	38+	56	34+	51	69	47	65	43	61	39+	56	35+	52	31+	48	66	44	61		
Aur CQ L10 2			86							17s					48												11					42s	
Aur IY E10S 3				66				45											63				42										
Aur V0432 E10S 3	35			43				51			59			68				76		30s			38s		46s			54s				63s	
Aur epsil																																	
Aur zeta																																	
Boo RS RR 3								69			70			72			74			76			65	78		67		69			70		
Boo TW 90 3				70	23+								69	22+							67		20+					65	19+	78			
Boo UU 90			77	22						25+				73											78	70			72		64		
Boo UY 90 2										75													76		72	67							
Boo AC E10D	66s	72s	25	66	72		24+	65s	71s	24+	65	71	24+	65s	70s	23+	64	70	23+	64s	69s	22+	63	69	22+	63s	69s	21+	62	68	21+		
Boo CM 90 2											71			76									67		72			76					
Boo CQ 90							77		74									76		74			71					78	76	73			
Cam SS E10S 2		18s		60				1s		42		83s		24			65s					6	48s		89			30s		71			
Cam SV S10 3	30+	49	38+	27+	46+		34+	23+	42+	31+	20+	39+	28+	46+	35+	24+	43+	32+	21+	39+	28+	47+	36+	25+	43+	32+	21+	40+	29+	47+	36+		
Cam AK E10S 3						28s	39	51s	62	73s				30			41s	53	64s	75					21	32s	43	55s	66	77s			
Cam AN L10 3						28s	39	51s	62	73s				30			41s	53	64s	75					21	32s	43	55s	66	77s			
Cam AT E10S 3	33s	73s	42			52s	22	61	31s	71s	40			50s	20	59	29s	69s	38	78	48s			57	27s	66s	36	76	46s	55	25s	64s	
Cnc S L10						39									87																		
Cnc RU L10 2	18												36										53										
Cnc RW 90 2	62	72					55	64	73			47	56	66	75			49	58	68	77					51	60	70	79	43	53	62	
Cnc RZ L10 2									51\	\	13	75/										33\	95s	/	58/							15\	
Cnc TT 90 3				60	72			54	67			49	61	74				56	68			50			63	75	45	57	70		52	64	
Cnc TU E10S 3						38					94							50															
Cnc TW L10 2																																	
Cnc UU L10 2																																	
Cnc ZZ L10 2																																	
Cnc AQ 90 3		55	64	74					58	68	78			52	62	71											75		49	59	68	78	52
CVn W 90 2						75					71					68	78					64	75			61	71					58	
JD 606 ..		16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	

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CVn Z	90	2					74		70			66	62	59			55					78	74			70	66	63							
CVn RS	S10	2										74											73s												
CVn RZ	90	2				76					73						68					65	78		62		75		59	73					
CMa R	S10	2			64							59													66s			63							
Cas RX	L10	2		/									\	\			5		/	/								\							
Cas RZ	S10	33	52	72			30	50	69				28	47	67						26	45			23		43	62							
Cas SX	L10	2		72\	\	55	/	38/																											
Cas TV	S10	3	59	40		21					65		46		28						71		53	34							59				
Cas TW	S10	3	63		48			34	77	20		62			48						34	77		62		48			34	76	19				
Cas TX	E10S	3		46s			39s			31s	78		24s	70			63				56			48		41			34						
Cas AQ	L10	2		52\	57s	63/				38\	43	49/			24\		29s	35/					10\	15	21/		96\	\	1s	7/					
Cas BM	L10	2																																	
Cas DN	E10S	3				30	46s	61	77s				24	39s	55	70s					32s		48	64s	79			26s	41	57s	72				
Cas GG	E10S	3						68				44				20							71				47				23				
Cas GU	E10U	3	75														22				31			41			50			59					
Cas IL	E10S	2	75						65							56							46								36				
Cas IT	E10X	3	75	53s			42s		65	32s						22s	56						46								36				
Cas OX	E10X	3				32+				30+						28+					77+		25+		74+		23+		72+		21+				
Cas PV	E10X	3			63s	32+	38s				30+	63s		38s	28+			77+	63s	25+			74+		23+		72+		21+						
Cas V0368	E10S	3		66s						34		56s						24		47s			69							37s					
Cas V0375	E10D	3	62s	36		57s	31	52s	25	73		46s	20	67	41s		62	36s	57	30s		78s	51	25s	72s	46	20s	67s	41		62s				
Cas V0381	E10X	3	62s	36	48s	57s	31+	52s	25	73		46+	20	67+	41s		62	36s	45s	57	30+		78s	51	25s	72s	46+	20s	67s	41		62s			
Cas V0459	L10	3		93s	48		23					47+		21							45	85s	20			44			31s						
Cep RZ	90		50	43+	36+	28+	21+	44+	37+	30+	22+	46+	38+	31+	23+	47+	40+	32+	25+	48	41+	33+			26+	19+	42+	35+	27+		20+	43+	36+	29+	21+
Cep VW	S10		22+	33+	30+	28+	25+	23+	34+	31+	29+	26+	23+	21+	32+	30+	27+	24+	22+	33+	31+	28+			25+	23+	20+	32+	29+	26+	24+	21+	19+	30+	
Cep XX	S10	3					49							50								51				19		53							
Cep XY	E10S	3			76					30								63				40							73						
Cep ZZ	S10	3	58		73								29		44		58		72									29		43					
Cep AI	E10S	2						27		39s			50		61s													29s		40					
Cep CW	E10X	3				72+				45+							64+				37+							56+		29+					
Cep EI	L10	3			43					65s				87				9s					31			53s				75					
Cep EX	L10	3									1														45										
Cep NN	E10S	3	74s	77															20s	23	26s		29	32s	35	38s	41	44s	47	50s	52	55s			
Cet RR	RR	3		26	37	47			24	34	45	56			43		53				30	40	51			28	38	49		25	36				
Cet RV	90	3		34		46		33			44		31			43		30				42			29		41		28		39				
Cet TU	E10S	2			87					26				65					4					43				82							
Cet TV	L10	2				45+										55+									66+										
Cet XY	E10S			65			43			60s				38s				55			33					50s			28s						
Com S	90	3			71			64				75			68			62					72		65			59		76					
JD 606	..		16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46		

2024 Nov	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Com ST	90 2	74			74			73			73			72			72		71			71			70			69							
CrB U	S10 2																											71							
CrB RV	90 3												78	78	77	77		76	76	75	75	74		74	73	73	72	72		71	71	70			
Crt W	90 2																											75							
Cyg Y	S10 3																											75							
Cyg UY	RR 2		24	37				29	41			22	34	46			26	38					31	43		23		35				28			
Cyg XZ	RR 3	28	22		55	48	41	35	28+	21		55	48	41	35	28+	21				48	41		35	28+	21		48	41	34	28+	21			
Cyg BO	E10S 2				48	35s	23					50	38s	26											40s	28				43s	31				
Cyg BR	E10S 3	45		45s	45			45s	45			45s	45	45s			44		44s			44		44	44s	44				77s	77				
Cyg DM	RR 3	34	44	28			38	22	48	32		42	26	36	20		46	29	39	23			33		43	27		37	21	31					
Cyg V0367	L10 2				42	/	/							72s	/	/								2	/	/									
Cyg V0463	E10S 3													20s	26		31s	37																	
Cyg V0477	E10X 3									24s				20s	26		31s	37+							32s										
Cyg V0541	L10 3			79+																13+															
Cyg V0548	E10S 3					55	45s	36	26s			77		48s			38	29s							51s	41	31s	21							
Cyg V0788	L10 2																								1\	92/									
Cyg V0891	E10S 3	40	30		21													20						36	26										
Cyg V0909	E10S 3							38s																		21s									
Cyg V1061	E10S 3	41						45							49									53						22					
Del DX	90 3	27	22						36	31	25	20					34	29	23									32	27	21					
Dra RW	RR 3	45	34	23+	44		33+	21+	43	31+	20+	41	30+	63			40	29+	61			39	27+	60	37		26+	59	36	25+					
Dra SU	RR 3	71	37	69	35	67	33	65	31	63	29	61	27	59	25	57	23	56	22	54	20		52		50	48		46	78	44	76				
Dra SW	RR 3	77	34	48	62	76	33	47	61	75	32	46	59	73	30	44	58	72	29	43	57		71	28	42	56	70	27	41	55	68	25			
Dra TZ	E10D 3			43s	30s			33		36s		23s		39	26			29s							35+	22s		38	25	28+					
Dra VZ	90 3	26	22		43+		39+	36+	32+	28+	25	21	78	42+	38+		34+	31+	27+	23+	20			76	41+	37+	33+	30+	26+	22+		79			
Dra WW	S10 3		55														44								70								33		
Dra XZ	RR 3	46	42	37	32	28+	23+	66	61	56	52	47	42	38	33	28+	24+	66	62	57	52		48	43	38	34	29+	24+	19+	62	58	53			
Dra Al	S10 3				29		69			29				68					68						28	67				27				67	
Dra BF	L10 3				29		69			29				68	42s				68						28	67+				27				67+	
Dra BK	90 3	39	57	75	35	53	71	31	49	67	27	45	64	23	41	60		78	37	56	74	33		52	70	29	48	66		25	44	62	21	40	
Dra BU	E10S 3			38s	34	30s	25	21s									78s	74	70s	65	61s							31	27s	22					
Dra DD	90 3	25+	23+	21+	52	50	48	46	44+	42+	40+	38+	36+	34+	32+	30+		28+	26+	24+	23+	21+		51	49	47	45+	43+	41+	39+	37+	35+	33+		
Equ S	S10 3																											25							
Eri SV	90 2			39	54			39	53				39	53					39	53						38	52			38					
Gem RR	90 2	41	60	39	59		57	76	56	75	55	74	53	72	52	71		50	70	49	68	48		67	46	66	45	64		44	63	42	61	41	
Gem RY	L10 2		6s				71					36s					1									31							96s		
Gem SV	E10S 1			60				61				61			62											62				64					
Gem SZ	90 3	71	71	71	72	72	72	72	72	73	73	73	73	74	74	74		74	74	75	75	75		75	76	76	76	76	76	77	77	77	77		
Gem WW	E10S 3		59s	45	68			54s	40	64			49s	73s	35	59		44s	68s						78	39s	63s	49	73	35s	58s		44		
JD 606	..	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35		36	37	38	39	40	41	42	43	44	45	46		

2024 Nov	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31								
Gem YY	S10	2	42	64s	46s	68	49	71s	53s	75	56	78s	60s	41s	63	45	67s	48s	71	52	74s	56s	37+	59	41	63s	44s	66	48	70s	51s	33+								
Her TW	RR	2		31		31		31		30		30		30		30		30		29		29		29		29		29		28		28								
Her TX	S10																			21s	24	27s	30	33s																
Her UX	E10D	3				22s																						23												
Her VX	RR	3				23				24																						19								
Her VZ	90	2		33	22			30				26										31+				27		79	23			75	20							
Her AK	S10	2	25				25s				25			20	26s			21s										22s												
Her AR	90							29+	23+																								79	26+						
Her AW	L10	2								25								5															85							
Her DI	L10									29s	25							5+															85							
Her GU	E10U	2									26																													
Her LV	L10	2									26																													
Her MM	E10S	2	33s				31				29s					27																		19						
Hya SZ	90	2			66	73					64		72									25s				23							21s							
Hya WZ	90	2				75							66																											
Hya AI	L10	2			56+								85+																					43+						
Hya ET	90	3	72							57	63				69	74																								
Lac RW	L10	3	72					67s		57	63				69	74						4s												41s						
Lac SW	S10		23+	35+	31+	28+	24+	36+	32+	29+	25+	21+	33+	30+	26+	22+	34+	30+	27+	23+	35+	31+																		
Lac UW	E10S				76						5					34																			21					
Lac CO	E10X			51+		59+				68+	22+				30+							39+		47+				56+		64+				27+						
Lac V0345	E10X									60+						10+																			8+					
Lac V0364	E10X	3								60+						10+										48s	59+							8+						
Leo RR	RR	3		77	68	58				75	66	56			73	63	54					70	61	51										75	66	56	47			
Leo SS	RR	2	71					72						73								74					75		63					76	64					
Leo ST	RR	3	75	70	66									74	70	65	61																		60					
Leo AG	E10S	2				72																59s													77s					
Leo AM	S10		64s	74s	65	75	66s	76s	67	77	69s	60+	70	61s	71s	62	72	64s	73s	65	75	66s	57+	67	59+	68s	60+	70	61+	71s	62	72								
Lyn TY	E10S	2																																						
Lyr RR	RR		28	41				25	38		21	35																							22+	35				
Lyr RZ	90	3			22	25	27	29	31	34	36	38																								23	25	27	30	32
Lyr UZ	S10	3									40	34s	29	23s																							36s	31	26s	20
Lyr CN	90	3	25		31		37			25		30										36			24													23		
Lyr EZ	RR	2			25	30	35	40																																
Lyr IO	90	2	33			22	37			26												30																30		19
Lyr beta					60s							8																										49s		
Mon UX	E10S	2	73s			69				64s		59				54s						49		45s													30			
Mon VV	E10S	2	34			37s				39		42s			44							47s		49														57s		
Mon AQ	E10S	2	75				57s					66s																									48s			
JD 606	..		16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46							

2024 Nov	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31						
Mon AR L10 1	6/									97\	82	67/									58\	42s	27/															
Mon AV E10S 2				20				68s				15		62s				10				57s		4				52s										
Mon EZ E10U 2	62	56+	69s	63	57+		51+	64	58+	52+	65	59s	53+	66	60s	54+	48+	61s	55+	49+	62s	56	50+	62s	56	51+	45+	57	51+	46+	58							
Mon IL E10S 2			31					34				36			39					42			44					47										
Mon V0448 E10S 2		54	66					57s	69s			49	61	73			52s	64s			44	55	67		47s	59s	71s				50							
Mon V0530 E10U 2	69	48+	53s	58s	63s		68s	47+	52	57	62	68	46+	52+	57s	62s	67s	46+	51+	56	61	66	45+	50s	55s	60s	65s	44+	49	54	60							
Mon V0634 E10U 2	70																50	61			73																	
Oph U ST 2							23																															
Oph ST 90 2										21																												
Ori Z E10S 2			75						95					16											56							77						
Ori BM E10S 2							61						9								56						3											
Ori CP E10S 2					84							16					48					80						12										
Ori DN L10 2													30														27											
Ori FO L10 2									12																		92											
Ori FT E10X 3	62s		77s						12									37s			52s				67s		92											
Ori GG E10X 3	62		77+															37			52			67	63s													
Ori V0536 E10S 2												55		71														36										
Ori V1016 L10 3																																						
Ori V1031 E10S 2							59s												51					62s									43s					
Peg U S10 3	30+	24+	36+	30+	23+		36+	30+	23+	36+	29+	23+	35	29+	23+	35	29+	23+	35	29+	23+	35	29+	22+	35	28+	22+	35	28+	22+	34							
Peg VV RR 2	25	23	21										46	44	42		39	37	35	32	30		28	25	23	21												
Peg VW L10 2	25	23	21										46	44	42		39	37	35	32	30		28	25	23	21												
Peg AV RR 49	27	44	22	39			34		30	47		25	42	20	37		32		27	45	23	40	35		30		25	42	21	38								
Peg AW L10 2					70							1s					32						63s				94											
Peg BH 90 3	24		45				37		29			22		42			35		27				40		32		24											
Peg BK E10S 3		49s					24							47s			22							45s			20											
Peg CG 90 2	36	30	23				44	37	31	24				44	38		31	25					39	32	25	19			39	33								
Peg DF L10 3									72															42														
Peg DH RR 3	22	24	26	28	31		33	35	37	39	42	44	20	23	25	27	29	31	34	36	38	40	19	21	24		26	28	30	32	35							
Peg GH E10S 2		39						23s						34s								29					40						23s					
Per RW L10 3		50													70													90										
Per RY E10S 2	39s							25s				68							55					41														
Per AG E10X 3	39s	47s	50s				53s	25+	59s		68	61s	64s		67s	55+	73s							41														
Per AR 90 3	21+	48	33+	61	46		31+	59	44	29+	57	42	27+	55	40	25+	53	38	23+	50	35+	21+	48	33+	61	46	31+	59	44	29+	57							
Per AY L10 2							46												24																			
Per IQ E10X 3				62+			37+					60+	34+								57+		32+				55+	29+										
Per KN E10U 3	32+	40+	27+	35+	22+		30+	38+	25+	33+	20+	28+	37+	23+	31+	40+	26+	35+	21+	30+	38+	25+	33+	20+	28+	36+	23+	31+	39+	26+	34+							
Per LX L10 2	75		77s					79						81s					83					86		88s												
Per beta		61		48				35				21	65s		51s					38s		25s	68		55		42											
JD 606 ..		16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46						

2024 Nov			P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Psc	RU	90	3	44	22+	39	57	35	52	30	47	25	42	20+	37	54	33	50	28	45	23	40	57	35	52	30	48	26	43	21	38	55	33			
Psc	RY	90	3	45	51				22	28	33	39	45				22		28	34	40	46				23	29	35	41							
Psc	SS	90	3	28+	43	30+	45	31+	46	33+	48	34	21+	36	22+	37	23+	39	25+	40	26+	41	28+	43	29+	44	31	46	32	47	34	20+	35			
Sge	SY	E10S	2	37s																30																
Ser	VY	RR	2																																79	
Ser	AN	90																																		77
Ser	BH	90	3					76									76								71			75								
Ser	EG	L10	2	51		99s			48		97s			45		94s			43		91s			40		89s		37		86s						
Ser	LX	K10	3			22					76			77							75			76			77	72		78	73		79			
Sex	T	90	3						76	74	71	68		66	63	61	58					77	75	72	70	67	64	62	59	57	54					
Tau	RW	S10	2	53			30							61			38									69		45			22					
Tau	CD	S10	2		43s				59					74s		46					61s			33				48s								
Tau	EN	E10S	3		57s		43	67	52s	76s	38	62		48s	72s	34	58			44s	68s		53	77	39s	63s		49	73	35s	59s		45			
Tri	X	S10	3											65	62	60			57	54	51	48	45	43	40	37	34	31	28	25	23	20				
Tri	RU	E10S	2		56s				46					36s		63s						53						43s							34	
Tri	UX	90	2	27	67	60	54	47	40	34	27	21+	61	54	47	41	34	28	21	61	54	48	41	35	28	21	61	55	48	42	35	28	22			
UMa	W	S10		44+	44+	45+	45+	45+	45+	45+	45+	45+	45+	45+	45+	46+	46+		46+	46+	46+	46+	46+	46+	46+	46+	46+	46+	46+	46+	46+	46+	46+	46+	46+	46+
UMa	RV	RR	3	67	60	54			28+	22+	62	56				77	24+		64	58	52					73	20+	60	54	47			75	22+		
UMa	RW	E10S	3											45													45s								77s	
UMa	TU	RR				63	75				65	77				55	67									59	71				61	73				
UMa	TX	S10	3		60			66			73																									
UMi	W	S10		75		45					56	26				66	36				76	46						57		27				67		
Vir	ST	90	2											78							77							75								
Vir	AG	E10D	2						75	71s	68	64s						78s	75	71s	68	64s	60				78s	74	71s	67	64s	60				
Vir	AH	S10	2	77					66	68s	70	72s	74	75s	77				63	64s	66	68s	70	72s	74	76s	78	61s	63	65s	67	69s	70			
Vir	AT	90	2																		72	78								71	77					
Vir	AV	90	2								78			75		72			69																	
Vir	CG	E10S	3																		77							79s								
Vul	Z	S10	2														37						28					19								
Vul	RR	E10S	3		23				28					33							38															
Vul	BN	90	2		22				38		35			32		29					27				24		21									
Vul	DR	E10X	3				22+										23+									23+										
Vul	EV	E10S	3														26																		19	
JD	606	..		16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46		

2024 Dez	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
And SW RR		30	19	52	40	29		50	38	27		48	36	25		46	34	23	44	32		21	42	30	19		40	28				38		
And SY L10	1																91	96	/	/														
And TW S10	3	51s																					19			25s	31		37s					
And XX 90	3	58	30		47	19		36		53	25		42		59	31		48	20		37		54	26		43		32	49		21			
And CD L10	2	30\	\	37	/	44/																												
And OV 90	3	33	27	21		57	51	45	39	33	27	21		51	45	39	33	39	33	27	21		51	45	39	33	27	21		51		45		
Aqr SW RR	3				28	19					25						22						19				24							
Aqr SX 90	2		21	29							25						21	29							25									
Aqr CD E10S	2			28					12				96				79						63				47							
Aqr HH 90	3	31				33			20				22				25				27				29									
Aqr LL L10	2		63										72s										81											
Aql AA RR	3	25				23				21			19														21				19			
Aql V0341	90	3		28							22										20													
Aql V0889	L10	3		28							57s						70s				20						82s							
Aql V1353	E10S	3									23s				19								21s											
Aql V1426	E10S	2	13+	31+	48	7+	24+	42s	1+	18+	36+	53	12+	30+	47s	6+	23+	41+	58	17+	35+	52s	11+	28+	46									
Aql V1430	E10S	2									23																							
Ari X RR	3	35		31		26	56	21	51		47		42		38		33		28		24		54	19	49		45		40		35		31	
Ari RS L10	2					36										17								97									77	
Ari AL E10S	3	34															33																32	
Aur TZ 90		40+	57	36+	53	32+	49	27+	45	62	41	58	37+	54	32+	50	28+	46	24+	42	59	37+	55	33+	51	29+	47	25+	42	21+	38+		56	
Aur CQ L10	2					73						4s					35						66s				97							
Aur IY E10S	3		59			39							77				56			35							73				53			
Aur V0432	E10S	3		71s		25			33			41		49			57				66		20s		28s			36s					44s	
Aur epsil																																		
Aur zeta																																		
Boo RS RR	3			72		61	74		63	76		65	78		67			68		57	70		59	72		61	74		63	76		65		
Boo TW 90	3						64	70	77					56	62	69	75						54	61	67	74				53	59		66	
Boo UU 90					75	67				78	69	61				72	63				74		66			77	68	60					71	
Boo UY 90	2				78		73		69	64										75			70		66	61								
Boo AC E10D		62s	68s	21+	62+	67	20+	61+	67s	20+	61+	67	19+	60+	66s	54+	60+	66	54+	60+	65s	53+	59+	65	53+	59+	64s	53+	58+	64	52+		58+	
Boo CM 90	2		64			68				73			77				65			69			74		78		61					65		
Boo CQ 90			70		67			78		75		72		69	67			64	77	74			71		69	66	79	63	76	61		73		
Cam SS E10S	2	12s	53		95s				36		77s			18	59s			0		41s			83		24s		65				6s			
Cam SV S10	3	25+	44+	33+	22+	41+	29+	48+	37+	26+	45+	34+	23+	41+	30+	19+	38+	27+	45+	34+	23+	42+	31+	20+	38+	27+	46+	35+	24+	42+	31+	20+		
Cam AK E10S	3				23s	34	45s	57	68s	79						25	36s	48	59s	70					27s	38	50s	61	72s					
Cam AN L10	3				23s	34	45s	57	68s	79						25	36s	48	59s	70					27s	38	50s	61	72s					
Cam AT E10S	3	34	74	44s		53	23s	62s	32	72	42s		51	21s	60s	30	70	40s	79s	49	19s		58s	28	68	37s	77s	47	56s	26	66		35s	
Cnc S L10				84												33											81							
JD 606 ..		46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76		

2024 Dez	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Cnc RU	L10	2	70									87											5												
Cnc RW	90	2	72		45	55	64	74			47	57	66	76		40	49	59	68	77			42	51	61	70	79	34	44	53	62	72			
Cnc RZ	L10	2	78	/	40/						97\	\	60s	/	22/								80\	\	42	/	4/								
Cnc TT	90	3	77		46	59	71				53	66	79				42	55	67				49	62	74	44	56	69	38	51		63			
Cnc TU	E10S	3		19						75				31						87					43								0		
Cnc TW	L10	2							37\	43	49/																								
Cnc UU	L10	2	34s										/	/																					
Cnc ZZ	L10	2										63\	65	67/																					
Cnc AQ	90	3	62	72		46				56	65	75					43	53	62	72			46	56	66	75		40	50	59	69				
CVn W	90	2	68	78						65	75						58	68	78				54	65	75		51	61	72						
CVn Z	90	2		59		55			51	47	78	74		71	67			63	59				55		52	48	78	44	75	71					
CVn RS	S10	2							73			53							72s					52s									72		
CVn RZ	90	2			70					67			64	78			61	75		59			72		56	69			53	66					
CMa R	S10	2		61s					58		56s				53				51s				49				46s						44		
CMi AM	E10S	2							43	45	47	49	51				53	55	57	59	60			62	64	66	68	70							
Cas RX	L10	2		22s	/	/					38	57	77							38		/	/												
Cas RZ	S10	2	21	40	60	79									36	55	75			33		53	72				31	50	70						
Cas SX	L10	2									29\	\		12	94/																				
Cas TV	S10	3		40	21						65			46	28								53		34			78	59				40		
Cas TW	S10	3	62		48				33	76	19			62		48		33	76	19		62		47				33	76	19			62		
Cas TX	E10S	3	26	73s	19	65s			58s			51s		44s			36s		29s		75	22s	68				61					53			
Cas AQ	L10	2		82\	87	93/			68\	74s	79/			54\	60		65/			40\		46s	51/			26\	32	37/							
Cas BM	L10	2																																	
Cas DN	E10S	3			19s	35		50s	66				28	43s	59	74s				21	37s	52	68s					30s	45	61s	77				
Cas GG	E10S	3										51				27											54						30		
Cas GU	E10U	3		69																		25		34			43						53		
Cas IL	E10S	2						27		72							62						52											43	
Cas IT	E10X	3						27	60s	72		49s			39s				29s				52											43	
Cas OX	E10X	3	70+		19+			68+				66+					64+					62+					59+							57+	
Cas PV	E10X	3	70+	39s	19+			68+		64s	39s	66+			64s		64+	39s				62+		39s			59+							57+	
Cas V0368	E10S	3	60						27s	50			73s							40			63s					31					53s		
Cas V0375	E10D	3	35	56s	30	77		51s	25	72	46s	19	67	40s	61	35s		56	30s	77s	51	25s	72s	46	19s	67s	40	61s	35				56s		
Cas V0381	E10X	3	35	42s	56s	30	77	51s	25	72	46+	19	67	40s	61	35s	39s	56	30s	77s	51	25s	72s	46+	19s	67s	40	61s	35	35s				56s	
Cas V0459	L10	3		42				77s		40						22s	39						37+										35		
Cep RZ	90		45+	37+	30+	23+	46+	39+	31+	24+	47+	40+	33+	25+	49+	41+	34+	26+	19+	43+	35+	28+	20+	44+	36+	29+	22+	45+	38+	30+	23+	46+	39+		
Cep VW	S10		27+	25+	22+	20+	31+	28+	26+	23+	20+	32+	29+	27+	24+	21+	19+	30+	28+	25+	22+	20+	31+	29+	26+	23+	21+	32+	29+	27+	24+	22+	19+		
Cep XX	S10	3		20		54					21	55					22		56				24		57								25		
Cep XY	E10S	3		50		28							60		37									70			47					25			
Cep ZZ	S10	3		57		71							28		42		56		70								27		41					56	
JD	606	..	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75		76	

2024 Dez	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Cep AI E10S 2	51s															19s	30		41s		53				75									
Cep CW E10X 3						74+						20+					66+			39+							58+				31+			
Cep EI L10 3				97s					19				41s				63								7						29s			
Cep EX L10 3							88																											
Cep NN E10S 3	58	61s	64	67s	70		73s	76	79s															20s	22	25s	28	31s	34	37s	40	43s		
Cet RR RR 3	47				23	34	44			21	31	42				29	40				27	37			25	35				22		33		
Cet RV 90 3		26				38		25			37		24			36		23			34				21			20			32			
Cet TU E10S 2	21				60					0					39					78					17			56						
Cet TV L10 2		76+										86+																			7+			
Cet XY E10S 3	45			23						40s						36								31s		48			26					
Com S 90 3	69				63			56	73			67			60	77		53	70			64				57	74		50	68		61		
Com ST 90 2	69				68			68			67			67			66				66			65		65			64			64		
CrB U S10 2																																		
Crt W 90 2				75						70	76					70										71		65		71				
Cyg Y S10 3				75						70	76					70										71		65		71				
Cyg UY RR 2	40				20	33					25	37				30				22	34				27			19	31					
Cyg XZ RR 3				48	41	34	28+	21+					41	34	28+	21+				41	34	28+	21+			41	34	27+	21+	61				
Cyg BO E10S 2				45s	33	21s							36	23s							38	26s					41	28s						
Cyg BR E10S 3		77s		77			77s	77		76s			76		76s		76	76s		76		76s		76		76s	76	76s	75		75s			
Cyg CI K10 1		40\	\				25	/	10\																									
Cyg DM RR 3		41	25		35		19	29		39		23	33				27		36	20				30		24	34			28				
Cyg V0367 L10 2		32s	/	/						\	\		62	/	/				\	\	91s		/	/				\	\		21			
Cyg V0463 E10S 3		20	25s	31																				19s	25						78s			
Cyg V0477 E10X 3	36s	20	25s	31																					19s	25					78s			
Cyg V0541 L10 3				47+																														
Cyg V0548 E10S 3	73s		44	34s			24				75s					36s	27										39s	29	20s		71			
Cyg V0788 L10 2																																		
Cyg V0891 E10S 3																23																		
Cyg V0909 E10S 3	23									24s																	27s							
Cyg V1061 E10S 3				26								30																38		73				
Del DX 90 3					30		25	19								28	23										26	21						
Dra RW RR 3	57		35+	23+	56			33+	22+	55		32+	20+	53		30+	19+	52		29+	62	51			28+	61	49		26+	59	48		25+	
Dra SU RR 3	42	75	41	73	39		71	37	69	35	67		33	65	31	63	29	61	27	60	26	58	24	56	22	54	20	52		50		48		
Dra SW RR 3	39	53	67	24	38		52	66	23	37	51		65	22+	36	50	64	21+	34	48	62	19+	33	47	61	75	32	46	60	74	31	45	59	
Dra TZ E10D 3				31+							24																	23+						
Dra VZ 90 3	75	72	36+	32+	28+		25+	21+		78	74		70	35+	31+	27+	24+	20+	48	77	73	69	33+	30+	26+	22+	19+	47+	75	72	68	64	29+	
Dra WW S10 3										59						22											48							
Dra XZ RR 3	48	44	39	34	30+		25+	20+	63	58	54		49	44	40	35	30+	25+	21+	64	59	54		50	45	40	35	31+	26+	21+	64	60	55	50
Dra AI S10 3				26			66				26		66					25								25		64			24		64	
JD 606 ..		46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76		

2024 Dez	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Dra BF L10					26		66				26	44s	66				25	65				25+	64				24+	64						
Dra BK 90 3	58	77	36	54	73		32	50	69	28	46	65	24	42	61	20+	38	57	75	34	53	71	30	49	67	26	45	63	23	41	59	19+		
Dra BU E10S										75s	71	67s	62	58s	54	50s	45																77	
Dra DD 90	31+	30+	28+	26+	24+		22+	20+	50	48	46+	44+	42+	40+	38+	37+	35+	33+	31+	29+	27+	25+	23+	21+	19+	49	47	45+	44+	42+	40+	38+		
Eri SV 90 2				38						37							37						37											
Gem RR 90 2	60	40+	59	38+	57		37+	56	35+	55	34+	53	33+	52	31+	51	30+	49	29+	48	27+	47	26+	45	64	44	63	42	62	41	60	40		
Gem RY L10 2				61						26s												21					86s							
Gem SV E10S 1	64				65					65					66				67			67			68					69				
Gem SZ 90 3	78	78	78	78	79		79	79	79	79													32	32	33	33		33	33	34	34	34	34	
Gem WW E10S 3	68	30s	54s	39			63	49s	72s	34		58	44s	68s	29		53	39s	63s	25		48	34s	58s			43	67	29s	53s		39		
Gem YY S10 2	55	36+	58s	40s	62		43	66s	47s	69	51	32+	54s	36+	58	39	61s	43s	65	46	28+	50s	31+	53	35+	57s	38s	61	42	64s	46s	27+		
Her TW RR 2		28																																
Her TX S10			68s	71	74s		77															19	22s											
Her UX E10D 3				20s																			79s						76					
Her VX RR 3			74						75						76				77					78	69				79	70				
Her VZ 90 2		72					24			76	20			73				69		77		21		73				70				78		
Her AK S10									76				77s				77			77s				72s	78			73	78s				73s	
Her AR 90	20+	61						78	25+	19+	60				77		71	65	59					76	70	64	58						75	
Her AW L10 2				65										45									25										5	
Her DI L10				65					94s					45						49s			25								4s	5		
Her GU E10U 2																						69												
Her LV L10 2											22s												69											
Hya SZ 90 2	60	67	74						58	65	73						64	71					55	62	70				53	61		68		
Hya WZ 90 2	64	71	79						63	70							62	69					61	68					60	67				
Hya AI L10 2							72+									1+									30+								59+	
Hya ET 90 3		57	62				68						54	59				65						50			56	62						
Lac RW L10 3		57	62				68	78s					54	59				65	15s				50				56	62+						
Lac SW S10	22+	34+	30+	26+	23+		19+	31+	27+	24+	20+	32+	28+	24+	21+	33	29+	25+	22+	34s	30+	26+	22+	19+	31	27+	23+	20+	32s	28+	24+	20+		
Lac UW E10S				51							80											9					67						96	
Lac CO E10X			35+				44+			52+											23+	77+		32+			40+		49+					
Lac V0345 E10X								57+							6+								55+									5+		
Lac V0364 E10X 3								57+							6+								55+						24s			5+		
Leo RR RR 3	73	63	54				70	61	51		78	68	59	49		75	66	56	47		73	63	54	44		71	61	52	42	78	68	59		
Leo SS RR 2	77	65					79	68	66					67					68		56			69				70		58				
Leo ST RR 3		77	73	69			64	60	55						77	72	68	64	59	55					40+		76	72	67	63	58	54	50	
Leo AG E10S 2				55s						64						73s							52s					60					69s	
Leo AM S10	63s	55+	65	56+	66s		57+	67	58+	68s	60+	69	61+	52+	62	53+	63s	55+	64	56+	66s	57+	48+	58+	50+	59+	51+	61+	52+	62	53+	63s		
Lyn TY E10S 2								58															57						23					
Lyr RR RR	19	32					29			25					22+	35				19+	32			72	29			26					22+	
JD 606 ..		46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76		

2024 Dez	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
Lyr RZ	90	3															19	21	23+	26+	79													
Lyr UZ	S10	3														33	28s	22						79	73s							73		
Lyr CN	90	3	29				22		28						22	37					21				79	20								
Lyr EZ	RR	2			19	24	29									22+	27								20+	25+								
Lyr IO	90	2			23				27							20+					24					74					20+			
Lyr beta						96										43s				90					38s							85		
Mon UX	E10S	2	26s		21		16s		11					7s			2		97s				92		87s		83				78s			
Mon VV	E10S	2	59		62s		64		67s					69			72s			74				77s		79		82s				85		
Mon AQ	E10S	2			57s				66s					48						57							48s					57s		
Mon AR	L10	1	18\	88/								79\	63s	48/										39\	24	9/								
Mon AT	E10S	2							46			48		51		54				57		60				63								
Mon AV	E10S	2	99		47s				94					41s		89									83		31s			78				
Mon EZ	E10U	2	52s	46+	59	53s	47+		60	54s	48+	42+	55s	49+	43+	56s	50	44+		57s	51	45+	39+	52	46+	40+	53	47s	41+		43+			
Mon IL	E10S	2	49		52				55					57						60						63			65			68		
Mon V0448	E10S	2	62		42s	54s	65s		45	57		69		36s	48s	60s				40	52	64				43s	55s		35	46	58			
Mon V0530	E10U	2	65	43+	49s	54s	59s	64s	43+	48	53	58	37+	42+	47s	52s	57s	36+	41+	46	51	57	35+	40+	46s	51s	56s	35+	40+	45	50	55	34+	
Mon V0634	E10U	2				53	64																	44	55									
Oph ST	90	2																							79									
Ori Z	E10S	2				97						17															58		78			99		
Ori BM	E10S	2		50					97							44											91			38				
Ori CP	E10S	2		44				76																		73				5				
Ori DN	L10	2							24																	20								
Ori FO	L10	2																																
Ori FT	E10X	3								43s																				33s			48s	
Ori GG	E10X	3							43						58	53s	73												33			48		
Ori V0536	E10S	2	53																	34		51												
Ori V1016	L10	3																																
Ori V1031	E10S	2				54																								37				
Peg U	S10	3	28+	22+	34	28+	22+	34	28+	21+	34	28+	21+	34	27s	21+	34	27s	21+	33	27s	21+	33	27s	21+	33	27s	20+	33	27s	20+	33	26s	
Peg VV	RR	2								39	37	35	32	30	28	25	23	21																32
Peg VV	L10	2								39	37	35	32	30	28	25	23	21																32
Peg AV	RR			33		28		23	40		36		31		26		21			33		29			24		19		31		26		22	
Peg AW	L10	2		25s					56																	50s			81					
Peg BH	90	3		37		29		22					34		27		19								24			37		29		21		
Peg BK	E10S	3					43s													41s										39s				
Peg CG	90	2	26	20			40	33	27	20					34	28	21							35	28	22				29	22			
Peg DF	L10	3								12																82								
Peg DH	RR	3	37			20	22	24	27	29	31	33	35				19	21	23	25	28		30	32					20	22	24		26	
Peg GH	E10S	2				35s									29											24s								
JD 606	..		46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	

2024 Dez	P	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Per RW L10 3													10													30							
Per RY E10S 2			27			71s							57s						43s							30s							
Per AG E10X 3			27			71s							57s						43s						19s	22s	30s	25s	27s		30s		
Per AR 90 3	42	27+	55	40	25+		53	38	23+	50	36	21+	48	33	19+	46	31+	59	44	29+	57	42	27+	55	40	25+	53	38	23+	51	36	21+	
Per AY L10 2													79												57								
Per IQ E10X 3	78+	52+	26+				75+	50+				24+	73+				47+	21+				70+	44+			19+		67+			42+		
Per KN E10U 3	21+	29+	38+	24+	33+		19+	28+	36+	23+	31+	39+	26+	34+	21+	29+	37+	24+	32+	19+	27+	36+	22+	30+	39+	25+	34+	20+	29+	37+	24+	32+	
Per LX L10 2			90				92s					94				96s			98					00s				2					
Per beta	29					59s			45s			32s			19s	62			49			36		22				52s				39s	
Psc RU 90 3	50	28	45	23	41		19	36	53	31	48	26	43	21	38		34	51	29	46	24	41	19	36	32	49	27	44	22	39			
Psc RY 90 3			23	29	35	41						24	30	36								24	30	36					19	25	31		
Psc SS 90 3	21+	36	23+	38	24+		39	26+	41	27	42	29	44	30	45	32	47	33	19+	34	21+	36	22	37	24	39	25	40	27	42	28	43	
Sge SY E10S			22s							30s																		23					
Ser VY RR 2	79						79					79					79					79					79					78	
Ser AN 90					73	77											69	74	78									70	74	79			
Ser BH 90 3		71			75			79				70		74					78	65			70		74			78	65				
Ser EG L10 2	35	83s																															
Ser LX K10 3	74		75	70			76	71		77	72	78	73	68			79	74	69		75	70	65	76	71	66	77	72	67	78	73	68	
Sex T 90 3	79	76	74	71	68	66	63	61	58	55	53	50		78	75		72	70	67	65	62	59	57	54	52	49	46	76	74	71	69	66	
Tau RW S10 2						53			30													60				37							
Tau CD S10 2	63	35s					50						65s	37								52s		24				39s					
Tau EN E10S 3	69	31s	54s	40			64	26s	50s	74s	36	60	46s	70s	32		55	41s	65s	27		51	37s	61s	23	47		32s	56s			42	
Tri X S10 3																						54	51	49	46	43	40	37	34	32	29	26	
Tri RU E10S 2		60	24s				51s						41						31s				58s	21			48					38s	
Tri UX 90 2	55	49	42	35			29	22		56	49	42	36	29	22		56	49	43	36	30	23			50	43	37	30	23			50	
UMa W S10	30+	31+	31+	31+	31+	31+	31+	31+	31+	31+	31+	31+	31+	32+	32+	32+	32+	32+	32+	32+	32+	32+	32+	32+	33+	33+	33+	33+	33+	33+	33+	33+	
UMa RV RR 3	62	56	49				77	71	64	58	52	45	79	73	66		60	54	47			75	69	62	56	49	43		77	71	64	58	
UMa RW E10S 3			44													77											76s						
UMa TU RR	52	63	75				53	65	76			55	67	78			46	57	69			48	59	71			49	61	73			51	
UMa TX S10 3												42		48					55			61		67			74						
UMi W S10		37			77		48					58	28				68	38				79	49			19		59				29	
Vir ST 90 2		73	79					72				77					70	75					68	74			79			67			
Vir AG E10D 2			78s	74	71s	67	63s	60	56s			77s	74	70s	67		63s	59	56s	52		77s	74	70s	66	63s	59	56s	52	77s		73	
Vir AH S10 2	72s	74	76s	58+	59	61s	63	65s	67	69s	71	73s	74	56+	58+		60	62s	64	65s	67	69s	71	53+	54+	56+	58+	60	62s	64	66s	68	
Vir AT 90 2							70	76									64	69	75								63	68	73	79			
Vir AV 90 2		77	74				71	68			65	62												79			76	73	70				
Vir CG E10S 3		74							75s								76	70						78s	71s							79	
Vul Z S10 2																							19										
Vul BN 90 2			31				28		25				22				19																
JD 606 ..		46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	

BAV-Materialien für Beobachter veränderlicher Sterne

BAV Einführung in die Beobachtung Veränderlicher Sterne

Die vierte, ergänzte und erweiterte Auflage des bewährten Buches liegt seit Oktober 2009 vor. W. Braune, B. Hassforth und W. Quester beschreiben die Beobachtungsvorbereitung, die Beobachtung und die Auswertung der Ergebnisse. CCD-Technik und visuelle Beobachtung sind ausführlich erläutert. Prof. Dr. E. Geyer gibt eine Übersicht der astrophysikalischen

Die 4. Auflage enthält wesentliche Erweiterungen weiterer Autoren zum Thema Auswertung. 318 Seiten, 118 Abbildungen, 10 Tabellen, Format 16 x 22,5 cm, glanzfolienl **22.00 €**

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BAV Mitteilungen	Die Beobachtungsergebnisse der BAV seit 1950, mehr als 210 Publikationen.
BAV Rundbrief	Das Mitteilungsblatt für unsere BAV-Mitglieder erscheint 4xjährlich seit 1952.
BAV Circular	Daten und Jahresvorhersagen zu den Veränderlichen der BAV-Programme.
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BAV Journal	Das neue E-Journal der BAV

Unsere Mitglieder erhalten die BAV Mitteilungen, den BAV Rundbrief und das BAV Circular regelmäßig. Alle BAV-Veröffentlichungen sind auf der BAV-Website verfügbar.

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