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KG
11366
v.673

Ephemeriday of Variable
Stars

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4 Delphini.

Observe this variable for vertical parts of curve (for correction to period) from

$-4^h\ 6^m$ to $-1^h\ 24^m$ before minimum, = and

$+1^h\ 24^m$ to $+4\ 6$ after " "

Corrections to U Sagittae Ephemeris

		h m
Hartwig's Ephemeris	=	$-4\ 3^m$ $-2:29$
Ables "	=	$-2\ 2^m$.
Schwabe "	=	$+5\ 3^m$ $+1:45$

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Comp.

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Algol Type Variables.

Designation	R.A. 1855	Dec.	Period.	Amt. and Duration.
U Cephei	$0^h\ 49^m\ 38^s$	$+81°\ 5.5$	$2^d\ 11^h\ 47^m\ 30^s$	7.2 to 9.4	$10^h\ 0^m$
β Persei	2 58 45	+40 23.6	2 20 48 52	2.2 - 3.7	10 0
λ Tauri	3 52 39	+12 4.6	3 22 50 53	3.4 - 4.2	10 0
R Can. Maj.	7 12 55	-16 7.6	1 2 43 12	5.9 - 6.7	5 0
S Cancri.	8 35 39	+19 33.2	9 11 37 45	8.2 - 9.8	21 30
S Antliae	9 25 27	-27 59.4	0 7 46 48	6.7 - 7.3	abt. 3½ hrs.
δ Librae	14 53 14	-7 56.4	2 7 51 20	4.9 - 6.1	12 0
U Coronae	15 12 17	+32 10.8	3 10 51 15	7.6 - 8.8	9 42
U Ophiuchi	17 9 11	+1 22.6	0 20 7 42	6.0 - 6.7	4 30
Z Herculis	17 51 34	+15 8.9	3 23 48 30	6.9 - 8.0	6.6 hrs.
"	"	"	"	6.9 - 7.4	4.0
H Delphini	20 31	+17.8			12 & 0.
Y Cygni.	20 46 16	+34 7.0	1 11 58 31	7.1 - 7.9	8 0

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Months of May and June.

1895. R Canis Majoris. Eastern Time.

May	7.	4^h	58^m	to	9^h	58^m
	8.	8	14	"	13	14
	15.	3	48	"	8	48
	16.	7	04	"	12	04
	24.	5	55	"	10	55
	25.	9	11	"	14	11
June	1.	4^h	45^m	to	9^h	45^m
	2.	8	00	"	13	00
	9.	3	35	"	8	35
	10.	6	51	"	11	51
	18.	5	42	"	10	42
	19.	8	57	"	13	57
	26.	4	32	"	9	32
	27.	7	48	"	12	48

S Cancri.

								Times of Minima.		
May	1.	4^h	21^m	to May	2.	1^h	51^m	May. 1.	15^h	6^m
	10.	15	59	"	11.	13	29	11.	2	44
	20.	3	36	"	21.	1	06	20.	14	21
	29.	15	14	"	30.	12	44	30.	1	59
June	8.	2	52	to June	9.	0	22	June 8.	13	37
	17.	14	30	"	18.	12	00	18.	1	15
	27.	2	07	"	27.	23	37	27.	12	52

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Months of May and June.

1898. U Cephei. Eastern Time.

May. 1.	5^h	42^m	to	15^h	42^m
6.	5	21	"	15	21
11.	5	00	"	15	00
16.	4	39	"	14	39
21.	4	18	"	14	18
26.	3	57	"	13	57
31.	3	36	"	13	36
June. 5.	3	17	to	13	17
10.	2	56	"	12	56
15.	2	35	"	12	35
20.	2	14	"	12	14
25.	1	53	"	11	53
30.	1	32	"	11	32

X Delphini.

May 9.	14^h	26^m	to	$+2^h$	46^m
14.	10	07	"	22	07
19.	5	27	"	17	27
24.	0	48	"	12	48
June. 2	15	30	to	+3	30
7	10	51	"	22	51
12	6	11	"	18	11
17	1	32	"	13	32
22	-3	07	"	8	53

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Months of May and June.

1895. U Coronae Eastern Time.

May	7.	5^h	14^m	to	15^h	14^m
	14.	2	56	"	12	56
	17.	13	47	"	23	47
	21.	0	38	"	10	38
	24.	11	29	"	21	29
	28.	−1	40	"	8	20
	31.	9	11	"	19	11
June.	7.	6	53	to	16	53
	14.	4	35	"	14	35
	21.	2	17	"	12	17
	24.	13	08	"	23	08
	28.	−00	01	"	9	59

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Months of May and June.

1895. Z Herculis. Eastern Time.

Secondary Minima.

		h	m
May	3.	18	06.8
	5.	18	1.6
	7.	17	56.3
	9.	17	51.1
	11.	17	45.8
	13.	17	40.6
	15.	17	35.3
	17.	17	30.1
	19.	17	24.8
	21.	17	19.6
	23.	17	14.3
	25.	17	9.1
	27.	17	03.8
	29.	16	58.6
	31.	16	53.3

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Months of July, August, and September.

1898. U Cephei. Eastern Time.

July	5.	1h	12m	to	11h	12m
	10.	0	51	"	10	51
	15.	0	30	"	10	30
	20.	0	09	"	10.	09
	25.	-0	12	"	9	48
	30.	-0	32	"	9	28

August	16.	10h	15m	to	20h	15m
	21.	9	55	"	19	55
	26.	9	35	"	19	35
	31.	9	14	"	19	14

September	5.	8h	53m	to	18h	53m
	10.	8	32	"	18	32
	15.	8	11	"	18	11
	20.	7	51	"	17	51
	25.	7	30	"	17	30
	30.	7	09	"	17	09

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Months of July, August, and September.

1895. R Delphini. Eastern Time.

July	1.	11h	34m	to	23h	34m
	6.	6	55	"	18	55
	11.	2	16	"	14	16
	16.	− 2	23	"	9	37
	25.	12	18	"	+ 0	18
	30.	7	59	"	19	59
August	4.	2h	59m	to	14h	59m
	9.	− 1	40	"	10	20
	23.	8	22	"	20	22
	28.	3	43	"	15	43
September.	2.	− 0h	56m	to	11h	04m.
	16.	9	06	"	21	06
	21.	4	27	"	16	27
	26.	− 0	12	"	11	48

S Cancri.

Sept	1.	11h	32m	to Sept.	2.	9h	02
	10.	23	09	"	11.	20	39
	20.	10	47	"	21.	8	17
	29.	22	25	"	30.	19	55

Eastern Times of Minima.

Sept.	1.	22h	17m
	11.	9	54
	20.	21	32
	30.	9	10

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1902phae.proj.1677.

Months of July, August, and September.

1898. β Persei. Eastern Time.

July	2.	9^h	04^m	to	19^h	04^m
	5.	5	52	"	15	52
	8.	2	41	"	12	41
	11.	-0	30	"	9	30
	19.	13	57	"	23	57
	22.	9	46	"	19	46
	25.	7	35	"	17	35
	28.	4	25	"	14	25
	31.	1	12	"	11	12

August	11.	12^h	28^m	to	22^m	28^m
	14.	9	17	"	19	17
	17.	6	06	"	16	06
	20.	2	55	"	12	55
	25.	-0	16	"	9	44

September	3.	10^h	59^m	to	20^h	59^m
	6.	7	48	"	17	48
	12.	1	26	"	11	26
	23.	12	42	"	22	42
	26.	9	31	"	19	31
	29.	6	20	"	16	20

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Months of July, August, and September.

1895. U Coronae. Eastern Time.

July 1.	10^h	50^m	to	20^h	50^m
8.	8	32	"	18	32
15.	6	14	"	16	14
22.	3	56	"	13	56
29.	1	37	"	11	37
August 5.	0^h	41^m	to	9^h	19
15.	7	53	"	17	53
22	5	35	"	15	35
29.	3	17	"	13	17
September 5.	0^h	59^m	to	10^h	59^m
15.	9	32	"	19	32
22.	7	14	"	17	14
29.	4	56	"	14	56

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Month of July.

1895. Y Cygni. Eastern Time.

Primary Minima.

July	1.	6^h	03^m
	4.	5	58
	7.	5	53
	10.	5	48
	13.	5	43
	16.	5	38
	19.	5	33
	22.	5	28
	25.	5	23
	28.	5	17
	31.	5	12

Secondary Minima.

July	2.	9^h	28^m
	5.	9	23
	8.	9	17
	11.	9	12
	14.	9	06
	17.	9	01
	20.	8	55
	23.	8	50
	27	8	45
	30	8	39

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Month of July.

1895. δ Librae. Eastern Time

July	2.	10^h	24	to	22^h	24^m
	7.	2	06	.	14	06
	9.	9	58	.	21	58
	14.	1	40	.	13	40
	16.	9	32	.	21	32
	21.	1	15	.	13	15
	23.	9	06	.	21	06
	28.	0	49	.	12	49
	30.	8	40	.	20	40

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1899. January.

R Canis Majoris.

1899. Minima	G.M.T.	Epoch.	Minima	G.M.T.	Epoch.
Jan. 21d	12h 22m	3802.	Feb. 22d	7h 44.0m	3830
" 22	15 38.3	3803.	" 23	10 59.7	3831
" 23	18 54.0	3804.	" 24	14 15.5	3832
" 24	22 9.8	3805.	" 25	17 31.3	3833
X " 26	1 25.6	3806.	" 26	20 46.0	3834
" 27	4 41.3	3807.	" 28	0 2 8	3835
" 28	7 57.1	3808.	March.		
" 29	11 12.9	3809.			
" 30	14 28.6	3810.			
" 31	17 44.4	3811.	X		
Feb. 1	21 0.2	3812.			
" 3	0 15.9	3813			
" 4	3 31.7	3814.			
" 5	6 47.5	3815.			
" 6	9 3.2	3816.			
" 7	13 19.0	3817			
" 8	16 34.8	3818			
" 9	19 50.5	3819			
" 10	23 6.3	3820			
" 12	2 22.1	3821			
" 13	5 37.8	3822			
" 14	8 53.6	3823			
" 15	12 9.4	3824			
" 16	15 25.1	3825			
" 17	18 40.9	3826			
" 18	21 56.7	3827			
" 20	1 12.4	3828			
" 21	4 28.2	3829			

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January.

1899. N Cancri.

Minima	G.M.T.	Epoch.
Jan. 3	10	27
" 12	22	5
" 22	9	43
" 31	21	21
Feb. 10	8	58
" 19	20	36
March 1	8	14
" 10	19	52
" 20	7	29
" 29	19	7
April 8	6	45
" 17	18	23
" 27	6	0
May 6	17	38
" 16	5	16
" 25	16	54
June 4	4	31
" 13	16	9
" 23	3	47
Sept. 7	0	49
" 16	12	27
" 26	0	4
Oct. 5	11	42
" 14	23	20
" 24	10	58

Minima	G.M.T.	Epoch.
Nov. 2	22	36
" 12	10	13
" 21	21	51
Dec. 1	9	29
" 10	21	7
" 20	8	44
" 29	20	22

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1899 March.

R. Canis Majoris. Eastern Time

Minima	Egst. time		Epoch
Mar. 2	1h	37.m3	3837
Mar. 3	4	50.1	3838
Mar. 4	8	5.9	3839
" 5	11	21.6	3840
" 6	14	37.4	3841
" 7	17	53.2	3842
" 8	21	8.9	3843
" 10	0	24.7	3844
" 11	3	40.5	3845
" 12	6	56.2	3846
" 13	10	12.0	3847
" 14	13	27.8	3848
" 15	16	43.5	3849
" 16	19	59.3	3850
" 17	23	15.1	3851
" 19	2	30.8	3852
" 20	5	46.6	3853
" 21	9	2.4	3854
" 22	12	19.1	3855
" 23	15	33.9	3856
" 24	18	49.7	3857
" 25	22	5.4	3858
" 27	1	21.2	3859
" 28	4	37.0	3860
" 29	7	52.7	3861
" 30	11	8.5	3862
" 31	14	24.3	3863

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1900. January & February

R. Canis Majoris. Eastern Time.

Minimum	d	East time h	m	
January	25	11	47	
	26	15	2	
	27	18	18	
	28	21	34	
	30	0	50	From 3:10 to 6:50
	31	4	6	" 6:26 to 10:6
February	1	7	21	" 9:41 " 13.21
	2	10	37	
	3	13	53	
	4	17	9	
	5	20	24	
	6	23	40	
	8	02	56	From 5:16 to 8:56
	9	06	12	" 8:32 " 12:12
	10	9	27	
	11	12	43	
	12	15	59	
	13	19	15	
	14	22	30	
	16	1	46	From 4:06 to 7:46
	17	5	2	" 7:22 to 11.02
	18	8	8	" 10:38 to 14:18
	19	11	34	
	20	14	49	
	21	18	5	
	22	21	21	
	24	0	37	From 2:57 to 6:37

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February & March

1900

R Canis Majoris. Ephemeris Cont.

Minimum	East. Time.		
	d	h	m
Feb. 25		3	52 From 6:12 to 9:52
26		7	8 " 9:28 " 13.08
27		10	24
28		13	40

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Algol Variables.

Variable	Notation	RA. 1900 h m s	Dec. 1900 ° ′	Magnitude Range	Duration of variation h
U Cephei		0 53 23	+81 20.2	7.1 – 9.2	10.0
	14.1902	2 33 41	+41 46.0	9.4 – 12	
β Persei	Algol	3 1 40	+40 34.2	2.3 – 3.5	10.0
λ Tauri		3 55 8	+12 12.5	3.4 – 4.2	10.0
R Canis. Maj.		7 14 56	-16 12.4	5.9 – 6.7	5.0
S Cancri		7 38 14	+19 23.6	8.2 – 9.8	21.5
R R Puppis		7 43 31	-41 7.8	10.0 – 11.0	
V Puppis		7 55 22	-48 58.4	4.1 – 4.8	
S Velorum		9 29 27	-44 45.9	7.8 – 9.3	
R R Velorum		10 17 48	-41 50.1	10.0 – 10.9	
δ Librae		14 55 38	-8 7.3	5.0 – 6.2	12.0
U Coronae		15 14 7	+32 0.8	7.5 – 8.9	9.7
R Arae		16 31 26	-56 47.6	6.9 – 8.0	
U Ophiuchi		17 11 27	+1 19.3	6.0 – 6.7	4.5
Z Herculis		17 53 36	+15 8.8	7.1 – 8.0	6.6
R S Sagittarii		18 10 59	-34 8.5	6.4 – 7.5	
R V Lyrae	13.1902	19 12 30	+32 14.6	11.0 – 12.8	
U Sagittae	93.1901	19 14 25	+19 25.8	6.5 – 9	
S Y Cygni	Ceraski II	19 42 44	+32 27.4	10 – <12	
S W Cygni	Ceraski I	20 3 50	+46 0.5	9 – 11.7	
U W Cygni	14.1901	20 19 36	+42 55.0	10 – 12	
W Delphini		20 33 7	+17 55.9	9.5 – <12	12.0
Y Cygni		20 48 4	+34 17.0	7.1 – 7.9	
	20.1902	21 2 20	+45 22.6	12.4 – 13.7	
U Z Cygni	+43.4101	21 55 14	+43 52.1	8.9 – 11.6	
RX Herculis	18.2612	18 26.0	+12 32	7.0 – 7.5	
	55.1903	20 11 21	+34 11.8	9.8 – 11.8	
	4.1903	11 39	+72	9.9 – 12.4	
	21.1903	7 28	+76	9.5 – 11.5	

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γ Cygni.

min. comp. from Hartwig's sphere.

Eastern Mean Time.

Ep.	3266	=	May	3	10 54.9
	3267		"	4	22 52.3
	68		"	6	10 49.7
	69		"	7	22 46.8
	3270		"	9	10 44.7
	71		"	10	22 41.5
	72		"	12	10 39.6
	74		"	15	10 34.5
	76		"	18	10 29.3
	78		"	21	10 24.1
	80		"	24	10 19.0
	82		"	27	10 13.9
	84		"	30	10 8.8
	86		June	2	10 3.6
	88			5	9 58.4
	90			8	9 53.4
	92			11	9 48.3
	94			14	9 43.2
	96			17	9 38.0
	98			20	9 32.8
3	300			23	9 27.7
	02			26	9 22.6
	04			29	9 17.5
	06		July	2	9 12.3
	08			5	9 07.1
	10			8	9 02.1

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Ephemeris of Error.

for Jan. 10 to Mar 8, 1901.

1901	Position 1900		Position 1855			1901	Position 1900		Position 1855		
	h m	° ′	h m	° ′			h m	° ′	h m	° ′	
Jan. 10	2 28.9	+34 4	2 26.2	+33 52		Feb. 8	4 09.8	+22 5	4 07.1	+21 58	Mar.
11	" 32.0	+33 38	" 29.3	+33 26		9	" 13.5	+21 41	" 10.8	+21 34	
12	" 35.0	+33 12	" 32.3	+33 00		10	" 17.2	+21 18	" 14.5	+21 11	
13	" 38.2	+32 47	" 35.5	+32 35		11	" 21.0	+20 55	" 18.3	+20 49	
14	" 41.3	+32 21	" 38.6	+32 10		12	" 24.7	+20 32	" 22.1	+20 26	
15	" 44.6	+31 56	" 41.9	+31 45		13	" 28.5	+20 9	" 25.7	+20 3	
16	" 47.8	+31 30	" 45.1	+31 19		14	" 32.2	+19 46	" 29.6	+19 40	
17	" 51.1	+31 05	" 48.4	+30 54		15	" 36.0	+19 23	" 33.4	+19 18	
18	" 54.4	+30 40	" 51.7	+30 29		16	" 39.7	+19 1	" 37.1	+18 56	
19	" 57.8	+30 14	" 55.1	+30 3		17	" 43.4	+18 38	" 40.8	+18 33	
20	3 01.2	+29 49	" 58.5	+29 38		18	" 47.2	+18 16	" 44.6	+18 11	
21	" 04.6	+29 24	3 01.9	+29 14		19	" 50.9	+17 54	" 48.3	+17 50	
22	" 08.0	+28 59	" 05.3	+28 49		20	" 54.7	+17 32	" 52.1	+17 28	
23	" 11.5	+28 34	" 08.8	+28 24		21	" 58.4	+17 10	" 55.8	+17 6	
24	" 15.0	+28 9	" 12.3	+27 59		22	5 02.2	+16 48	" 59.6	+16 44	
25	" 18.6	+27 44	" 15.9	+27 34		23	" 05.9	+16 27	5 03.3	+16 23	
26	" 22.1	+27 19	" 19.4	+27 9		24	" 09.6	+16 6	" 07.0	+16 3	
27	" 25.7	+26 55	" 23.0	+26 46		25	" 13.3	+15 45	" 10.7	+15 42	
28	" 29.3	+26 30	" 26.6	+26 21		26	" 17.0	+15 24	" 14.4	+15 21	
29	" 32.9	+26 5	" 30.2	+25 56		27	" 20.8	+15 3	" 18.2	+15 0	
30	" 36.6	+25 41	" 33.9	+25 32		28	" 24.4	+14 42	" 21.8	+14 40	
31	" 40.2	+25 17	" 37.5	+25 8		Mar. 1	" 28.1	+14 22	" 25.5	+14 20	
Feb. 1	" 43.9	+24 52	" 41.2	+24 44		2	" 31.8	+14 1	" 29.2	+13 59	
2	" 47.6	+24 28	" 44.9	+24 20		3	" 35.5	+13 41	" 33.0	+13 39	Apr.
3	" 51.2	+24 4	" 48.5	+23 56		4	" 39.2	+13 21	" 36.7	+13 20	
4	" 54.9	+23 40	" 52.2	+23 32		5	" 42.8	+13 2	" 40.3	+13 1	
5	" 58.6	+23 16	" 55.9	+23 8		6	" 46.5	+12 42	" 44.0	+12 41	
6	4 02.4	+22 52	3 59.7	+22 45		7	" 50.1	+12 22	" 47.6	+12 21	
7	4 06.1	+22 28	4 03.4	+22 21		8	5 53.7	+12 3	5 51.2	+12 3	

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Ephemeris of Eros. Continued.

	1900				1900							
Mar 9	5	57.4	+11	44	5	54.9	+11	44				
10	6	1.0	+11	25	"	58.5	+11	25				
11	"	4.5	+11	7	6	2.0	+11	7				
12	"	8.1	+10	48	"	5.6	+10	49				
13	"	11.6	+10	30	"	9.1	+10	31				
14	"	15.2	+10	12	"	12.7	+10	13				
15	"	18.7	+9	54	"	16.2	+9	55				
16	"	22.2	+9	37	"	19.7	+9	38				
17	"	25.7	+9	20	"	23.2	+9	22				
18	6	29 18.	+9	1 40.	6	26 53	+9	34	6	26 50.	+9	
19		32 49.	+	44 18.		30 24	+	48 12		30 21.	+	
20		36 19.	+	27 6.		33 54	+	31 0.		33 51.	+	
21		39 50.	+	10 48.		37 25	+	13 58.		37 22.		
22		43 19		53 11.		40 54	+	57 57.		40 51.		
23		46 48		36 20.		44 23	+	40 22		44 20.		
24		50 16.		19 53.		47 51	+	23 47.		47 48.		
25		53 44.		3 26.		51 19	+	7 20.		51 16.		
26	6	57 11.	6	47 9.		54 46	+	51 3.		54 43.		
27	7	0 38.	6	31 1.		58 13	+	34 55.		58 10.		
28		4 3.	6	15 1.	7	1 38	+	18 55.	7	1 35.		
29		7 29.		59 10.		5 4	+	3 54.		5 1		
30		10 53.		43 26.		8 28	+	47 20.		8 25		
31		14 17.		27 51.		11 52	+	31 45.		11 49.		
Apr. 1.		17 40.		12 24	7	15 15	+	16 18.		15 12.		

see next page

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Ephemeris of Eros. Cont.

Miss A. Winlock's eph.

For 1900.

		m	°	′
Apr. 6	7	32.1	+4	3′
7		35.5	+3	48′
8		38.8	+3	33′
9		42.1	+3	20′
10		45.4	+3	6′
11		48.7	+2	52′
12		52.0	+2	38′
13		55.3	+2	24′
14		58.6	+2	11′
15	8	1.8	+1	57′
16		5.0	+1	43′
17		8.2	+1	29′
18		11.4	+1	15′
19		14.6	+1	2′
20		17.8	+0	50′
21		21.0	+0	37′
22		24.2	+0	24′
23		27.4	+0	10′
24		30.6	−0	3′
25		33.8	−0	16′
26		36.9	−0	28′
27		40.1	−0	40′
28		43.2	−0	53′
29	8	46.3	−1	5

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Ephemeris & Eros. E. Millosevich
ast nach
no. 3678 p. 27.

1901

	α Vera.	α Dec.	R.A.	Dec.
	h m s	° ′ ″		
april 1	7 17 50.43	+3 10 16.3		
2	21 13.00	4 54 58.0		
3	24 34.93	4 39 47.3		
4	27 56.22	4 24 44.1		
5	31 16.90	4 9 48.3		
6	34 36.94	3 54 59.9		
7	37 56.97	3 40 18.8		
8	41 15.16	3 25 44.9	7 38 50.90	+3 32 32.9
9	44 33.36	3 11 17.9	42 9.10	+3 18 05.9
10	47 50.96	2 56 57.8	45 26.70	+3 3 45.8
11	51 7.96	2 42 44.4	48 43.70	+2 49 32.4
12	54 24.37	2 28 37.6	52 0.09	+2 35 25.6
13	7 57 40.21	2 14 37.2	55 17.24	+2 22 32.2
14	8 0 55.47	2 0 42.9	58 32.50	+2 9 37.9
15	4 10.19	1 46 54.5	8 1 47.22	+1 57 49.5
16	7 24.41	1 33 11.6	5 1.44	+1 41 06.6
17	10 38.09	+1 19 34.1	8 15.12	+1 27 29.1
18	13 51.25	1 6 1.9	11 29.42	+1 14 50.9
19	17 3.90	0 52 34.7	14 42.06	+1 01 23.7
20	20 16.04	0 39 12.3	17 54.20	+0 48 01.3
21	23 27.65	0 25 54.7	21 5.81	+0 34 43.7
22	26 38.75	+0 12 41.6	24 16.91	+0 21 30.6
23	29 49.31	−0 0 26.9	27 28.41	+0 9 13.5
24	32 59.34	0 13 31.0	30 38.44	−0 3 50.6
25	36 8.84	0 26 30.9	33 47.94	−0 16 50.5
26	39 17.82	0 39 26.7	36 56.92	−0 29 46.3
27	42 26.26	0 52 18.5	40 5.36	−0 42 38.1
28	45 34.16	1 5 6.4	43 13.91	−0 54 48.1
29	48 41.52	1 17 50.5	46 21.27	−1 7 32.2

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Comp Stars for Nova Persei from Hagen Chart No 1.

Hag. no.	Bay	Fl.	Constellation	B.D.		Rev. M.P.	
1	β	11	Cassiopeia	+58°	3'	2.42	
2	α	18		+55	139	2.47	Var.
3	η	24		+57	150	3.64	
4	γ	27		+59	144	2.25	
5	θ	33		+54	236	4.52	
6	δ	37		+59	248	2.80	
7	ε	45		+62	320	3.44	
8	φ	42	Andromeda	+46	275	4.28	
9	β	43		+43	198	2.37	
10	ν	50		+40	332	4.18	
11	γ	57		+41	395	2.20	
12	υ		Perseus	+47	467	3.77	
13	φ			+49	444	4.19	
14	θ	13		+48	746	4.22	
15	η	15		+55	714	3.93	
16		16		+37	646	4.27	
17	τ	18		+52	641	4.06	
18	π	22		+39	681	4.62	
19	γ	23		+52	654	3.08	
20	ρ	25		+38	630	3.68	Var
21	β	26		+40	673	2.31	Var
22	ζ			+49	857	4.17	
23	κ	27		+44	631	4.00	
24	ω	28		+39	724	4.82	
25		30		+43	674	5.38	
26		29		+49	899	5.30	
27		31		+49	902	5.08	
28	I	32		+42	750	4.98	

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Hog No	Bay	Fl.	Constellation	BD.	Rev. H. P.	
29	α	33	Perseus	+49° 917	1.90	
30				+48 913	5.91	
31				+48 920	4.94	= BAC. 1059
32		34		+49 945	4.67	
33				+46 760	6.20	H 80
34				+46 762	7.00	
35	σ	35		+47 843	4.55	
36				+40 772	6.57	
37		36		+45 778	5.35	Heis 83
38				+44 734	6.33	R 998
39	ψ	37		+47 857	4.26	
40				+42 795	6.30	
41	δ	39		+47 876	3.10	
42				+45 804	6.09	
43	ο	38		+31 642	3.94	
44	γ	41		+42 815	3.93	
45				+45 811	5.64	
46				+43 818	5.86	
47				+44 801	5.79	
48				+30 572	6.22	
49				+48 1015	5.92	
50	ζ	44		+31 666	2.91	
51				+47 912	5.34	
52	I			+30 591	6.16	Van.
53	ε	45		+39 895	2.96	
54	ξ	46		+35 775	4.05	
55	λ	47		+49 1101	4.33	
56	c	48		+47 939	4.03	
57						

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Hag no	Bay	Fl.	Constellation	BD.		Rev. H. P.
58	α	2	Trianguluum	+28°	312"	3.58"
59	β	4		+34	381"	3.08"
60	δ	8		+33	395"	5.07"
61	γ	9		+33	397	4.07
62	γ	5	Aries	+18	243"	4.04"
63	β	6		+20	306"	2.72"
64	α	13		+22	306"	2.23"
65		41		+26	471"	3.68"
66	ε	48		+20	484"	4.64"
67	δ	57		+19	477"	4.53"
68		17	Taurus	+23	507"	3.81"
69	9	19		+24	547"	4.37"
70		20		+23	516"	4.02
71		23		+23	522"	4.25"
72	η	25		+23	541"	2.96"
73		27		+23	557"	3.80"

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Comp. stars used for Nova Persei.

Not.	Desig.	DM No.	Magns. used.	
a	Ider.	+42°750	4.98	Phot.
b	30 "	+43 674	5.38	"
c	H 45	+45 811	5.64	"
d	H 46	+43 818	5.86	"
e	H 42	+45 802	6.09	"
f	H 33	+46 760	6.20	"
g	H 2	+44 734	6.33	"
h	H 1	+43 730	6.92	"
k	H 5	+43 732	7.25	"
l	H 6	+43 720	7.48	Visual
m	H 7	+43 766	8.07	"
n	H 11		8.62	"
o	H 20		9.10	"

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Ephemeris of Variables
Eastern Mean Time
Continued from P. 199.

1900

Oct. 23 Dm 42° 3338 (12:48) U Cephei. (S.T. 22:14)
~~β Persei. (13:44)~~

24 γ Cygni. (5:07) 45° 3062 (6:45)

25 U Oph. (11:27) β Herculis (2:41)

26 Dm 42° 3338 (8:50) β Persei. (10:33) U Oph. (7:34)

27 Dm 42° 3338 (12:01) γ Cygni (5:07)
U Oph. (2:42)

28 U Cephei. (S.T. 22:14)

29 β Persei. (7:22) β Herculis (2:31)

30 Dm 42° 3338 (8:02) γ Cygni (5:47) U Oph (2:13)
W Delphini (9:55)

31 Dm 42° 3338 (10:30 / 11:00) U Oph. (8:22)

Nov. 1 β Persei. (~~4:11~~ 5:18)

2 U Cephei. (S.T.) 22:14) 45° 3062 (10:15) γ Cygni. (5:42)
β Herculis 2:17

3 42° 3338 (~~7:06~~ 6:36)

4 W Delphini (5:17) 42° 3338 (~~10:28~~ 9:58) β Persei. (2:06)

5 γ Cygni. (5:37)

6 β Herculis. (2:6)

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November 1900

7 42°3338 (~~6:58~~ 5:58) Ucethei (at 1:40 S.t.)

8 γ Cygni (6:32) 42°3338 (~~9:42~~ 9:12) U Oph. (6:39)

9 U Oph. (2:47)

10 ζ Hercules (1:56) U Oph. (8:55)

11 42°3062 (13:46) γ Cygni (5:27) 42°3338 (~~5:42~~ 5:12)
U Oph. (5:03)

12 42°3338 (~~8:35~~ 8:25) Ucethei (1:40 S.t.) U Oph. (1:11)

13 42°3338 (~~12:07~~ 11:37) U Oph. 17:25

14 γ Cygni (5:22) ζ Hercules (1:40) U Oph. (13:33)

15 β Persei. (~~12:15~~ 13:22) U Oph. (9:41)

16 42°3338 (~~8:08~~ 7:38) U Oph. (5:49)

17 γ Cygni (5:17) 42°3338 (~~11:20~~ 10:30) Ucethei. (1:40 S.t.)
U Oph. (1:57) + (22:05)

18 β Persei (~~9:04~~ 10:11) U Oph. 18:13 ζ Her. (1:36

19 U Oph. (4:21)

20 γ Cygni. (5:12) 42°3338 (~~7:22~~ 6:52) U Oph. (6:29)

21 42°3338 (~~11:33~~ 10:03) β Persei. (~~5:33~~ 7:00) U Oph (6:39)

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November & December 1900.

Nov. 22 U Cephei. (1:40 S.T.) U Ophi (2:45) & (22:53)
Z Herculis (1:26)

23 Z Cygni (5:07) W Delphini (10:41) U Ophi (19:01)

24 42° 3338 (6:34) β Persei. (~~2:42~~ 3:49) U Ophi 15.09

25 45° 3062 (7:01) 42° 3338 (9:17)

26 γ Cygni (5:02) Z Herculis. 1:16

27 U Cephei (1:40 S.T.)

28 W Delphini (16:02) 42° 3338 (5:48)

29 Z Cygni. (~~4:56~~) 42° 3338 (~~9:02~~ 8:32)

30 42° 3338 (~~12:13~~ 11:43) Z Herculis (1:04)

Dec. 1

2 Z Cygni. (4:51) U Cephei (1:40 S.T.)

3 42° 3338 (~~8:44~~ 7:44)

4 45° 3062 (10:31) 42° 3338 (~~11:06~~ 10:56) Z Herculis (0:54)

5 Z Cygni. (4:46)

6

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December 1900.

Dec 7 U Cephei (1:40 S.T.)

8 γ Cygni (4:41) β Persei (~~10:46~~ 11:53) χ Her (0:44)

9

10

11 γ Cygni (4:36) β Persei (~~9:35~~ 8:42) 42° 3338 (6:10)

12 U Cephei (1:40 S.T.) 42° 3338 (9:23) χ Her. (0:34)

13

14 γ Cygni (4:31) β Persei (~~4:24~~ 5:31)

15

16 42° 3338 (8:37) χ Her. (0:24)

17 γ Cygni (4:26) W Delphini (11:24) β Persei (2:20)
U Cephei (1:40 S.T.)

18

19

20 γ Cygni (4:21) 42° 3338 (7:49) χ Her (6:14)

21 42° 3338 (11:12)

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December 1900

Dec 22 W Delphini (6:44) κ Cephei (5T. 1:40)

23 γ Cygni · (4:16)

24 42° 3338 (7:03) ζ Her (0:04)

25 42° 3338 (10:15)

26 γ Cygni. (4:10)

27 45° 3062 (7:16) κ Cephei. (5T. 1:40)

28 β Persei. (~~12:29~~ 13:36) 42° 3338 (6:15)

29 γ Cygni. (4:04) 42° 3338 (9:28)

30

31. β Persei. (~~9:18~~ 10:25 ~~7 K 1~~)

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Ephemerides of Variables.
Eastern Mean Time.
January 1901.

Jan 1 U Cephei (8:7) (1:40) 42° 3338 (5:29)

2 42° 3338 (8:42)

3 β Persei (7:14)

4

5 +45° 3062 P.S (10:46) ✓

6 42° 3338 (7:55) β Persei (4:03)

7 42° 3338 (11:08)

8

9 β Persei (0:52)

10 +45° 3062 (6:31) 42° 3338 (8:04)

11 β Persei (21:40)

12

13

14 42° 3338 (7:17) β Persei (18:29)

15 26 Delphini (P.S 7:29)?

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1902phae.proj.1677.

Eastern Mean Time.

January 1901

Jan 16

17 β Persei. (5:17)

18 42° 3338 (6:30)

19 +45° 3062 (F.S. 4:02)

20 W Delphini (F.S. 2:49) β Persei (12:06)

21

22 42° 3338 (5:44)

23 β Persei (8:54)

24

25

26 β Persei (5:43)

27 42° 3338 (8:15)

28 +45° 3062 (7:32)

29 β Persei (2:31)

30

31 β Persei (23:20) +42° 3338 (7:27)

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1902phae.proj.1677.

Eastern Mean Time

February 1901

Feb. 1

2

3 β Persei (20:08)

4 χ P +42° 3338 (6:40)

5

6 +45° 3062 (11:02) β Persei (16:57)

7

8

9 β Persei (13:45)

10

11

12 β Persei (10:34)

13

14

15 β Persei (7:22)

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1902phae.proj.1677.

Eastern Mean Time.

February 1901

Feb. 16

17

18 β Persei (4:10)

19

20 +45° 3062 (4:16)

21 β Persei (0:09)

22

23 β Persei (21:48)

24

25

26 β Persei (18:36)

27

28

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1902phae.proj.1677.

Eastern Mean Time
March 1901.

1 +45°3062 (7:46) B Persei 5 5:32

2

3

4 U Cephei S.T. 10:00± for Descend Side
B Persei 12:21

5

6

7 B Persei. 9:09

8

9 U Cephei S.T. 10:00 ±T. Desc. Side.

10 B Persei. 5:59

11

12

13 B Persei. 2:47

14 U Cephei. S.T. 10:00 Desc. Side

15 B Persei. 23:37

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1902phae.proj.1677.

East. Mean. Time
March 1901.

16

17

18 β Persei. (19:19)

19 α Cephei 10.00 S.T.

20

21 β Persei. (16:07)

22

23

24 α Cephei 10:00 S.T. β Persei (12:57)

25

26

27 β Persei (9:46)

28

29 α Cephei 10:00 S.T.

30 β Persei. (6:34)

31

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East. Mean. Time.
April 1901.

1
2 β Persei. (3: 2.3)
3 α Cephei 10.0 S.T.
4
5 β Persei (0: 12)
6
7 β Persei (21: 01)
8 α cephei (10.00 S.T.)
9
10 β Persei (17: 50)
11
12
13 β Persei (14: 40) α cephei (S.T. 10.00)
14
15
16 β Persei (11: 28)
17
18 α Cephei 10.00 S.T.
19 β Persei (8: 16)
20
21
22 β Persei (5: 05
23 α Cephei (10: 00 S.T.)
24
25 β Persei (1: 55
26
27 β Persei (22: 43)
28 α Cephei (10: 00 S.T.)
29
30 β Persei (19: 31)

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1902phae.proj.1677.

East Mean Time
May 1901.

May 1

3 β Persei (16:22) U Cephei (10:00 S.T. & 13:30 S.T.)
4 δ Librae (8:29) +45° 3062 (8:17) +32° 19h 41m (6:36)

6 β Persei (13:10) δ Librae (16:21)

8 U Cephei (10h & 13h5 S.T.)
9 β Persei (9:58)
10 +32° 19:41 (6:45)
11 δ Librae (8:4)
12 β Persei (6:48)
13 U Cephei (10h & 13h5 S.T.) δ Librae (15:53) +45° 3062 (11:47)

15 β Persei (3:37) W Delphini (13:37)
16 +32° 19h 41m (6:54)

18 β Persei (0:25) U Cephei (10h & 13h5 S.T.) δ Librae (7:38)

20 δ Librae (15:30) W Delphini (8:58)

22 W Delphini (15:17) +32° 19h 41m (7:03)
23 U Cephei (10h & 13.5 S.T.)

25 δ Librae (7:12) W Delphini (4:19)

27 δ Librae (5:3) W Delphini (5:2)
28 U Cephei (10h & 13.5 S.T.) +32° 19h 41m (7:42)

31 U Ophiuchi (12:58) Saurgas Var (9:54)

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1902phae.proj.1677.

East Mean Time

June 1902

1 δ Librae (6:45) U Ophiuchi (9:07) Sawyers (18:14)
2 U Cephei (13:6 ST) Sawyers (15:34)
3 δ Librae (14:37) +32° 19h 41m (7:20) Sawyers (12:54)
4 Sawyers (10:16)
5 +45° 3062 (8:32) U Ophiuchi (13:45) Sawyers (7:38)
6 U Ophiuchi (9:53) Sawyers (x:59)
7 U Cephei (13:6) ST. Sawyers (2:19) & (23:39)
8 δ Librae (6:20) Sawyers (21:02)
9 +32° 19:41 (7:29) Sawyers (18:22)
10 δ Librae (14:11) Sawyers (15:43)
11 U Ophiuchi (10:39) Sawyers (13:05)
12 U Cephei (13:6 ST) U Oph. (6:47) Sawyers (10:24)
13 W Delphini (9:44) Sawyers (7:46)
14 +45° 3062 (12:2) Sawyers (5:06)
15 δ Librae (5:54) +32° 19:41 (7:38) Sawyers (2:28) & (23:49)
16 U Oph (11:26) Sawyers (21:19)
17 δ Librae (23:45) U Cephei (13:06 ST) U Oph. (7:33) Sawyers (18:31)
18 Sawyers (15:52)
19 Sawyers (13:13)
20 Sawyers (10:35)
21 +32° 19:41 (7:47) U Oph (12:12) Sawyers (7:45)
22 δ Librae (5:28) U Cephei (13:06 ST) U Oph. (8:17) Sawyers (5:17)
23 Sawyers (2:37) (23:57)
24 δ Librae (18:19) Sawyers (21:17)
25 Sawyers (18:37)
26 U Oph. (12:58) Sawyers (15:57)
27 U Cephei (13:06 ST) +32° 19:41 (7:56) U Oph. (9:06) Sawyers (13:17)
28 +45° 3062 (5:17) U Oph (5:13) Sawyers (10:37)
29 δ Librae (5:2) Sawyers (7:57)
30 Sawyers (5:47)

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1902phae.proj.1677.

July 1901

July 1 δ Librae (12:54)
2 U Cephei (13:06) (8T.))
3 +32° 19:41 (8:4) δ Serpentis.
4
5 δ Serpentis.
6 δ Librae (4:37)
7 W Delphini (10:30) +45° 3062 (8:47)
8 δ Librae (12:28)
9 +32 19:41 (8:13)
10
11
12 W Delphini (5:51) δ Serpentis
13 δ Librae (4:10)
14 δ Serpentis.
15 δ Librae (12:2) +32° 19:41 (8:22)
16 +45° 3062 (12:17)
17
18
19
20 δ Librae (3:45)
21 +32° 19:41 (8:31) δ Serpentis
22 δ Librae (11:36)
23 δ Serpentis
24
25
26
27 δ Librae (3:19) +32° 19:41 (13:40)
28
29 δ Librae (11:11)
30 +45° 3062 (5:32) δ Serpentis.
31 W Delphini (11:16)

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1902phae.proj.1677.

Sept. 1901.
Eastern mean Time.

Sept. 1

2

3 W Delphini min. 2:45

4

5 +42° 3338 (9:25)

6 +42° 2338 (12:41)

7 +32° 19h 41m min. 9:41 U Cephei 21:36 S.T.

8 Sawyers Var. (12:04)

9 45° 3062 min (9:18) Sawyers Var (9:24) 42.3338 (8:42)

10 Sawyers Var (6:45) 42.3338 (11:55)

11 d Serpentis

12 U Cephei 21:36 S.T.

13 +32° 19h 41m min (9:50) R d Serpentis

14 42.3338 (11:07)

15 B Persei (10:41)

16 Sawyers Var. (12:13)

17 W Delphini min (12:48) U Cephei 21:36 S.T. Sawyers Var. (9:33)

18 B Persei (9:30) 45° 3062 min (12:48) Sawyers Var. (6:54) 42.3338 (10:22)

19 +32° 19:41 min (9:59)

20 d Serpentis

21

22 W Delphini min (8:10) d Serpentis U Cephei 21:36 S.T.

23

24 Sawyers 12:22

25 +32° 19:41 min 10:8 Sawyers 9:42

26 Sawyers 7:03

27 W Delphini min (3:31) U Cephei 21:36 S.T.

28

29 d Serpentis

30

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October 1901.

E. M. T.

Oct 1 d Serpentis.
2 U Cephei (21.00 S.T. + 0.30 S.T.) B Per (15.34) 45°.306 z (6.03) λ Tauri (3.56)
3
4 3338 (6.15)
5 B Persei (12.23) 3338 (9.27)
6 λ Tauri (2.49)
7 U Cephei (21.00 − 0.30 S.T.) 19h 41m +32° 21′ (10.25).
8 d Serpentis B Persei (9.12) 3338 (5.28)
9 3338 (8.42)
10 3338 (11.54)
11 B Persei (6.01) w Delphini (13.35) 45°.306 z (9.33)
12 U Cephei (21.00 − 0.30 S.T.)
13 19.41 +32 21 (10.34) 3338 (7.54)
14 B Persei (2.50) 3338 (11.06)
15
16 w Delphini (8.56)
17 U Cephei (21.00 − 0.30 S.T.) d Serpentis
18
19 19.41 +32.21 (10.43)
20 45°.306 z (13.3)
21 w Delphini (~~11.37~~ 1.34)
22 U Cephei (21.00 − 0.30 S.T.)
23
24
25 B Persei (14.6) 19.41 +32.21 (10.52) 38.1901 Cyg. (12.10)
26 ~~d~~ d Serpentis ~~w Delphini~~
27 U Cephei (21.00 − 0.30 S.T.)
28 B Persei (10.55)
29
30
31 B Persei (7.44) 19.41 +3221 (11.00)

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1902phae.proj.1677.

Nov. 1901.

56)

Nov 1 78.1901 Cygni (9:47) U Cephei 0:30 S.T.
2
3 β Persei (4:33) (40° 3062) (6:48)
4 W Delphini (11:36) d Serpentis
5
6 β Persei (1:22) U Cephei 0:30 S.T.
7 3338 ~~(6:57)~~
8 78.1901 Cygni (7:25) 3338 ~~(0:09)~~ (0:39)
9 W Delphini (6:57)
10
11 U Cephei (S.T. ~~0:30~~ 0:22) d Serpentis
12 40° 3062 (9:48) 3338 ~~(6:10)~~ (9:40)
13 ~~d Serpentis~~ 3338 ~~(9:23)~~ (9:53)
14 β Persei (15:48) λ Tauri (15:31)
15 78.1901 Cygni (6:03)
16 U Cephei ~~(0:30~~ (0:22 S.T.)
17 β Persei (12:37) 3338 ~~(8:55)~~ (8:05)
18 78.1901 Cygni ~~(16:33)~~ (15:53) λ Tauri (14:23) 3338 ~~(11:48)~~ (11:18)
19
20 β Persei (9:26) d Serpentis
21 U Cephei ~~(0:30~~ (0:22 S.T.) 40° 3062 (13:18) 3338 ~~(7:49)~~ (7:19)
22 78.1901 Cygni (2:41) λ Tauri (13:15) ~~d Serpentis~~ ~~3338 (10:43)~~
23 β Persei (6:15)
24 9:41 +32:2 (11:36) 3338 (6:33)
25 78.1901 Cygni (13:31) ~~3338 (7:03)~~ (6:33) 3338 (9:45)
26 β Persei (3:04) λ Tauri (12:07) U Cephei ~~(0:30~~ (0:22 S.T.) ~~3338 (10:15)~~
27
28 W Delphini (12:20) 3338 (5:36)
29 78.1901 Cygni (0:20) ~~β Persei~~ 3338 (8:58) d Serpentis
30 λ Tauri (10:59) 40° 3062 (16:48) 3338 ~~(6:28)~~ (9:58) (19:41) (11:45)

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Dec. 1901

Dec. 1 U Cephei. (0:22 8:30 S.T.)
2 78. 1901 (11:08)
3 W Delphini (7:42) 3338 (8:11)
4 λ Tauri (9:52)
5 K5° 3062 (6:33)
6 U Cephei. (0:22 8:30 S.T.) 19:41 (11:53)
7 β Persei (14:20) 3338 (7:25)
8 λ Tauri (8:44) 3338 (10:36)
9 78. 1901 (8:46)
10 β Persei (11:09)
11 U Cephei. 0:22 8:30 S.T. 3338 (6:3[illegible])
12 λ Tauri (7:36) 19:41 (12:02) 3338 (9:51)
13 β Persei (7:58)
14 K5° 3062 (10:3)
15
16 β Persei (4:47) λ Tauri (6:28) 78. 1901 (6:24) U Cephei (0:22) S.T. 3338 (9:03)
17
18 19:41 (12:11)
19 β Persei (1:35)
20 λ Tauri (5:20) 3338 (8:16)
21 U Cephei (0:22 S.T.)
22 W Delphini (3:05)
23 K5° 3062 (13:34) 78. 1901 (4:03)
24 λ Tauri (4:13) 19:41 (12:20) 3338 (7:31)
25 3338 (10:43)
26 78. 1901 (14:51)
27 W Delphini (8:25)
28 λ Tauri (3:05) 3338 (6:44)
29 3338 (9:56)
30 β Persei (12:51) 19:41 (12:28)
31

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Jan. 1902

Jan 1 W Delphini (3:45)
2 β Persei (9:42) 3338 (9:11) 78. 1901 (12:30)
3
4
5 β Persei (6:38) 19:41 (12:37)
6 45° 3062 (6:48) 3338 (8:23)
7
8 β Persei (3:20)
9 78. 1901 (10:07)
10 3338 (7:36
11 β Persei (0:09) 19:41 (12:46) 3338 (10:49)
12
13
14 3338 (6:50)
15 45° 3062 (10:38) W Delphini (13:48) 3338 (16:02)
16 β Persei (12:47) 78. 1901 (7:46)
17 19:41 (12:55)
18
19 3338 (9:15) β Persei (9:35)
20 W Delphini (9:08)
21
22 β Persei (6:24) U Cephei S. T. (8:05)
23 (19:41) (13:04) 3338 (8:28) 78. 1901 (5:24)
24 45° 3062 (13:48)
25 W Delphini (4:30) β Persei (3:13)
26
27 3338 (7:41) U Cephei. (8:48)
28
29 (19:41) (13:12) 45° 3062 (3:32)
30 78. 1901 (3:01)
31 3338 (6:54)

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Feb. 1902.

Feb. 1 U Cephei (P: 48)
2 78. 1901 (13:51)
3 ~~β Persei (22:09)~~
4
5
6 U Cephei (P: 48) ~~β Persei 19:27~~
7 48° 306 2 (7:03)
8
9 ~~β Persei. (16:16)~~
10 93 1901 Sag.
11 U Cephei (P: 48)
12 ~~β Persei (13:06)~~
13
14 ~~β Persei 4:56~~ 93.1901 β Persei 9:53
15 ~~β Persei, β Persei. (9:04)~~
16 45° 306 2 (10:33) U Cephei (P: 48)
17 ~~β Persei. 1:44~~ β Persei (6:42)
18 ~~β Persei (6:44)~~
19
20 93 1901 β Persei (3:31)
21 U Cephei (P: 48) ~~β Persei 3:31~~
22
23
24
25
26 U Cephei (P: 48)
27
28

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Eastern Mean Time.

March. 1902.

Mar. 1

2 93.1901 (18:45)

3 β Persei. (15:46) U Cephei. (8:48)

4

5

6 β Persei (12:35) 9 3:1901 (2:55)

7

8 U Cephei. (8:48)

9 93.1901 (3:05) β Persei (9:24)

10

11

12 β Persei (6:13) 93.1901 (22:15)
U Cephei (8:48)

13

14

15 β Persei. (3:02)

16 93.1901 (7:35)

17

18 U Cephei. (8:48)

19 93.1901 (6:35)

20

21

22

23 U Cephei (8:48) 93.1901 (2:37 ~~4:45~~)

24

25

26 β Persei (14:18) 9 3.1901 (11:47 ~~10:05~~)

27

28 U Cephei. (8:48) 8 (12:18)

29 93.1901 (~~20:05~~ 20:57) β Persei. (11:07)

30

31

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April 1902.

April

1 β Persei (7:55)
2 93.1901 (~~8:16~~ 6:08) U Cephei (8:48) H (2:18)
3
4 β Persei (4:44)
5 93.1901 (~~11:26~~ 10:58)
6
7 β Persei (1:33) U Cephei (8:48) H (2:18)
8
9 93.1901 (9:28)
10
11
12 93.1901 (~~8:46~~ 9:38) U Cephei (8:48) H (2:18)
13
14
15 β Persei (16:08) 93.1901 (~~17:06~~ 18:48)
16
17 U Cephei (2:18)
18 β Persei (12:49) δ Librae (0:56)
19 93.1901 (~~3:06~~ 3:58)
20
21 β Persei (9:38)
22 93.1901 (~~12:16~~ 13:08) U Cephei (2:18) or 9:30 G.M.T. γ Cyg. (11:2)
23
24 β Persei (6:27)
25 93.1901 (~~21:26~~ 22:18) δ Librae (0:30) γ Cygni (0:57)
26 7A.1901 (9:27)
27 β Persei (3:16) U Cephei (2:18) = 9:10 for Beginning β Lyrae min (23:42)
28 γ Cygni (0:52)
29 93.1901 (~~6:36~~ 7:28)
30 U Ophiuchi (8:18) ~~A R Lyrae (0:30?)~~
~~31~~

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E. M. T. used.

May 1902.

May 1 U Oph. (4:27) γ Cygni (10:47) W Delph (7:26)
2. U Cephei 8:50 E.M.T. for Beginning δ Librae (10:4) W Sag. (15:03)
3 76.1901 (7:05) Nova
4 U Oph (12:54) γ Cygni (10:42) Nova Persei. ~~10:00~~
5 U Oph. (9:05)
6 U Oph. (5:13) U Sag. (9:13) 76.1901 (17:54)
7 U Cephei 8:20 Begin. γ Cyg. (10:37)
8
9 δ Librae (9:39) U Oph (8:44) U Sag. (9:23) β Lyrae min (4:42)
10 U Oph. (7:52) γ Cyg. (10:32) 76.1901 (4:42) RR Lyr. (11:30)?
11 U Oph. (5:59) S W Cygni (7:50)
12 U Cephei (8:00) Begin. U Sag. (18:33)
13 γ Cyg. (10:27) 76.1901 (15:32)
14 U Oph. (14:30)
15 U Oph. (10:38) W Delph. (17:28)
16 δ Librae (9:13) U Oph. (6:46) γ Cygni. (10:22) U Sag. (8:43)
17 U Cephei (7:40) Begin
18
19 U Oph. (5:16) γ Cygni. (10:17) U Sag (12:53)
20 U Oph. (11:24) 76.1901 (13:09) W Delph. (2:49)
21 U Oph. (7:32)
22 U Cephei (7:20) Begin U Oph. (3:39) γ Cyg. (10:12) U Sag. (22:03)
23 δ Librae (8:47) S W Cygni. 11:20 β Lyrae min. (9:40)
24
25 U Oph. (12:10) γ Cygni (10:07) W Delph. (8:09)
26 U Oph. (8:18) U Sag. (8:13)
27 U Cephei (7:00) Begin. U Oph. (4:26) 76.1901 (10:48)
28 γ Cygni (10:02)
29 U Sag. (16:23)
30 δ Librae (8:20) U Oph. (12:56) 43.4101
31 U Oph (9:44) γ Cygni (10:57)

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June 1902

June 1 S W Cygni (4:50)
2 U Sagittae (1:33)
3 78.1901 (8:25) Y Cygni 9:52 U Cephei (9:56)
4 U Oph. (13:44)
5 3 Lyrae Min (7:40) U Oph (9:52) U Sag (9:40)
6 S Librae (7:55) Y Cyg. (9:47) ~~S W. Cygni 1:3~~
7
8 S Librae (5:47) U Cephei (9:36)
9 Y Cyg. (9:42) U Oph (14:32)
10 78.1901 (6:04) U Oph (10:40)
11 U Oph (6:48)
12 Y Cyg. (9:37)
13 W Delp (13:31) U Cephei (9:16) S Librae (7:30)
14 U Oph. (5:20)
15 Y Cyg. (9:32) S W. Cygni (2:05) U Oph (11:28) ~~U Sag (10:01)~~
16 U Oph (7:36)
17 78.1901 (3:42)
18 3 Lyrae Min (15:38) Y Cyg (9:27) W Delp (6:54) ~~U Oph (6:56)~~ ~~U Oph~~
19
20 78.1901 (14:31) U Oph (12:16) S Librae (7:04)
21 Y Cygni (9:13) U Oph. (8:24)
22 S Librae (14:55) U Sag. (7:10)
23 ~~U Cephei (8:06)~~
24 S. W. Cygni (11:35) Y Cygni (9:08)
25 U Sag. (16:18) U Oph (13:04)
26 U Oph (9:12)
27 78.1901 (12:09) S Librae (6:37) Y Cygni (9:03)
28 ~~U Cephei (8:16)~~
29 S Librae (4:28)
30 U Oph (13:52) Y Cygni (8:58) R R Lyrae (6:50)
~~30 U Sag (7:00)~~

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1902phae.proj.1677..

July 1902.

July 1 β Lyrae Min (13:38) ~~Z Sagittae~~ U Oph (9:52)
2 ~~U Sagittae~~ U Sagittae (10:32) U Oph (6:00)
3 ~~γ Cygni~~ (8:58) S.W. Cygni (5:05)
4 7h 1901 (9:48) R R Lyrae (10:00)
5
6 S Librae (14:02) γ Cygni (8:48) U Oph (10:38)
7 W Delphini (14:06) U Oph (6:46)
8 R R Lyrae (8:10)
9 U Sagittae (4:46) γ Cygni (8:43)
10
11 U Oph (11:24) 7h 1901 (7:25) S Librae (5:45) U Oph (2:32)
12 U Sagittae (13:54) γ Cygni (8:38) W Del (9:45)
13 S Librae (13:37)
14 β Lyrae Min (11:36)
15 γ Cygni (8:33)
16 U Oph (12:10) R R Lyrae (7:30)
17 S.W. Cygni (8:20) U Oph (8:18)
18 γ Cygni (8:28) 7h 1901 (9:05) S Librae (5:20)
19 U Sagittae (8:08)
20 S Librae (13:11)
21 γ Cygni (8:18) U Oph (12:56)
22 U Sag. (17:15) U Oph (9:04)
23
24 γ Cygni (8:13)
25 S Librae (14:54)
26 S.W. Cygni (11:50)
27 β Lyrae (9:36) S Librae (12:48) γ Cygni (8:08) U Oph (9:50)
28 U Cephei (11:17) U Oph (5:08) 7h 1901 (13:30)
29 U Sagittae (11:30)
30 γ Cygni (8:03)
31

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August 1902

Aug.

2 U Cephei (10:57)

7 U Cephei (10:37)

9 β Lyrae Min (9:34)

12 U Cephei (10:17)

17 U Cephei (9:57)

22 β Lyrae Min (5:34) U Cephei (9:37)

27 U Cephei (9:17)

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1902phae.proj.1677..

September 1902.

Sept. 1 U Cephei (8:57) U Sagittae (9:06)
2 U Oph (7:33)
3 β Persei (8:59) W Delphini (6:20)
4 ~~β Lyrae min 3:32~~ Y Cygni (6:58)
5 δ Librae (7:19)
6 ~~β Lyrae min 3:32~~ U Cephei (8:37) β Persei (6:48)
7 Y Cygni 6:53 U Oph (8:21)
8
9
10 Y Cygni (6:48) S.W. Cygni (5:20)
11 U Cephei (8:17) U Sagittae (12:36)
12 δ Librae (1:53) U Oph (9:09)
13 Y Cygni (6:43) U Oph. (5:17)
14 δ Librae (9:45)
15
16 U Cephei (7:47) Y Cygni 6:38 U Cephei (11:27)
17 U Oph. (9:57)
18 U Sagittae (5:10) U Oph. (6:05)
19 Y Cygni (6:29) S.W. Cygni (8:51)
20
21 U Cephei (7:27) (11:07)
22 Y Cygni (6:26) W Delphinii (11:45) U Oph. (10:45)
23 U Oph. (6:53)
24
25 Y Cygni (6:19)
26 U Cephei (7:07) (10:47)
27 W Delphini (7:06)
28 Y Cygni (6:14) S.W. Cygni (12:21) U Sagittae (8:40) U Oph 6:41
29
30

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October 1902

Oct. 1 U Cephei (6:47) δ (10:17) Y Cygni (6:09)

2

3

4 Y Cygni (6:04)

5 U Sagittae (3:01)

6 U Cephei (9:57)

7 β Persei (13:47) Y Cygni (5:58)

8 U Sag. (13:57)

9

10 β Persei (0:36) Y Cygni (5:53)

11 U Cephei (8:22) Fol.

12 S.W. Cygni (5:36)

13 β Persei (7:25) Y Cygni (5:48)

14

15 U Sag. (6:31)

16 U Cephei (9:02) Y Cygni (5:41) W Delphini (12:41)

17

18 ~~U Sag.~~

19 Y Cygni (5:34)

20 λ Tauri (14:20) Fol.

21 U Cephei (9:42) W Delphini (8:02) S.W. Cygni (9:06)

22 Y Cygni (5:29)

23 Ceraski (7:06)

24 λ Tauri (13:12) Ceraski (0:36)

25 Y Cygni (5:24) U Sag. (10:01)

26 U Cephei (8:22) Fol.

27 Ceraski (5:51)

28 λ Tauri (12:05) Y Cygni (5:19) Ceraski (4:31)

29 14.1902 (6:40)

30 β Persei (12:14) S.W. Cygni (12:36)

31 U Cephei (8:02) Fol. Y Cygni (5:14) Ceraski (3:36)

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November 1902

14.1902 (8:02)

Nov. 1 λ Tauri (10:57) U Sag. (4:21) Ceraski (5:36)
2 β Persei (9:07) Ceraski (4:06) +43°4101 (14:36)
3 γ Cygni (5:08)
4 14.1902 (2:23)
5 β Persei (5:56) λ Tauri (9:49) Ceraski (2:20) U Cephei (7:42) Fol.
6 γ Cygni (6:02)
7 14.1902 (10:44) β Lyrae (14:06)
8
9 λ Tauri (8:41) γ Cygni (4:56)
10 U Cephei (7:22) Fol. 14.1902 (2:07)
11 U Sagittae (7:22) Ceraski (9:06)
12 γ Cygni (4:50) Ceraski (7:36)
13 λ Tauri (9:33) S.W. Cygni (5:51) 14.1902 (13:28)
14 W Delphini (8:48) Ceraski (5:51)
15 U Cephei (7:02) Fol. γ Cygni (4:44)
16 14.1902 (14:50)
17 λ Tauri (6:26)
18 γ Cygni (4:39) U Sag. (1:38)
19 W Delphini (4:10) 14.1902 (16:10)
20 U Cephei (6:42) Fol. Ceraski (2:36) β Lyrae (2:06)
21 λ Tauri (5:18) γ Cygni (4:33) U Sag. (10:46) Ceraski (1:06)
22 β Persei (10:50) S.W. Cygni (9:21)
23 Ceraski (9:21)
24 γ Cygni (4:27)
25 β Persei (7:39) λ Tauri (4:10) U Cephei (6:22 Fol)
26
27 γ Cygni (6:21)
28 β Persei (4:28) U Sag. (5:02)
29 λ Tauri (3:02)
30 γ Cygni (4:15) U Cephei (6:02) Fol.

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December 1902

Dec
1 U Sagittae (14h 10m C.T.)
2
3 β Lyrae 10:05
4
5 U Cephei (5:42) fol. side.
6
7
8 U Sag. (8:27)
9
10 U Cephei (5:22) fol side.
11
12
13
14 14.1902 (3:03)
15 U Sag. (2:44) U Cephei (5:02) fol. side.
16 β Lyrae (8:04)
17 14.1902 (4:25)
18 U Sag. (11:51) β Persei (6:11)
19 ~~3338~~ RR Lyrae (6:03) RR Lyrae (9:05) 18.1901 (11:48) U Coronae (4:02)
20 U Cephei (4:40) fol side. 14.1902 (min. 5:46) Ceraski (9:51)
21 β Persei (3:00)
22 Ceraski (2:51) W Delf (2:04)
23 14.1902 (7:07) Ceraski (11:21) U Coronae (18:58)
24 S.W. Cygni (9:36) U Coronae (6:58)
25 U Sag. (6:08) Ceraski (9:36).
26 14.1902 (8:30)
27 Ceraski (2:36) ~~W Delf (2:25)~~ U Coronae (5:49) (7:49) 76 1901 (9:25)
28 Ceraski (1:06)
29 β Lyrae 6:03 | 14.1902 (9:52) Ceraski (23:20)
30 U Coronae (16:40)
31 Ceraski (6:31) U Cor[illegible] (4:40) W Delfa (2:46)

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January 1903.

Jan.

1 14.1902 (11:12) ~~W Delf 2:46~~ W Delf (0:06) U cephei begin (11:41) U Sag (0:28) B Persei (14:15)
2 ~~W Delf (0:01)~~
3 78.1901 (7:04)
4 14.1902 (12:34) U Sag. (9:38) B Persei (11:04) W Delph. 22:07
5 ~~W Delf (22:47)~~
6 U cephei (11:21) W Delf. (5:25)
7 14.1902 (13:53) ~~W Delf (5:28)~~ B Per. (7:53)
8
9 W Delf. (17:28)
10 14.1902 (15:17) ~~W Delf 17:28~~ 78.1901 (4:42) B Per. (4:42)
11 U Sag. (3:58) B Lyrae (4:02) U cephei (11:00)
12
13 B Persei (1:31)
14 W Delf (12:49)
15 ~~W Delphini (12:49)~~
16 U cephei (10:40) S.W. Cyg. (6:21)
17 78.1901 (2:22)
18
19 W Delf. (4:10)
20 ~~W Delphini (6:10)~~ 78.1901 (13:08)
21 U Sag. (7:28) U cephei (10:50)
22
23
24 B Lyrae (2:01) B Persei (12:47) W Delf. (3:31)
25 ~~W Delf (3:31)~~ W Delf. (10:52) S.W. Cyg. (9:51)
26 ~~W Delf (10:52)~~ U cephei (10:30)
27 78.1901 (10:47) B Persei (9:36)
28 U Sag. (1:48) W Delf. (22:51) (20.1902)
29 ~~W Delf (22:51)~~
30 B Persei (6:25) ~~W Delf (6:13)~~
31 ~~W Delf (6:13)~~ U cephei (10:10) (9:40) U Sag (10:51) (20.1902)

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Feb. 1903
Eastern Mean Time.

Feb.

1
2 β Persei (3:14)
3 γ Ap. 1901 (8:25) 43.4101
4 14.1902 (2:09) ~~43.4101~~ (2:27)
5 ν Cephei (9:50)
6
7 14.1902 (3:30) ν Sag. (5:07)
8
9 ν Cep[illegible] (9:40)
10 14.1902 (4:51) γ Ap. 1901 (6:04) ν Cephei (9:30)
11
12
13 14.1902 (5:14)
14 ν Cep[illegible] (8:40)
15 ν Cephei (9:10)
16 14.1902 (7:34) β Persei (11:19)
17 γ Ap. 1901 (3:42)
18
19 14.1902 (8:56) β Persei (8:8) [illegible]
20 ν Cephei 8:50
21
22 14.1902 (10:17) β Persei (4:57)
23
24 γ Ap. 1901 (1:19) [illegible]
25 ~~ν Cephei prob. sidt. begins at 10:38~~ 14.1902 (11:40) ν Cephei 7:30 β Persei (6:46)
26
27
28 14.1902 (13:01)

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March 1903

Eastern Mean Time

Mar. 1 ~~H. 1902 (3:19)~~

2 U Cephei prin side at (8:10)

3 H. 1902 (14:50)

4

5

6

7 U Cephei (7:50)

8 β Persei (13:1)

9

10

11 β Persei (9:50)

12 U Cephei (7:30)

13

14 β Persei (6:39)

15

16

17 U Cephei (7:10 & 10:40) β Persei (3:28)

18 H. 1903 (2:50)

19 H. 1903 (14:24)

20 H. 1903 (20:00)

21

22 U Cephei (6:50 : 10:20) H. 1903 (4:33

23 H. 1903 (13:08)

24 H. 1903 (prin 21:08) (sec 5:25)

25 H. 1903 (sec 14:09)

26 H. 1903 (6:17)

27 U Cephei (6:30) : (10:09) H. 1903 (14:52)

28 H. 1903 (sec 7:04) prin 23:16

29 H. 1903 sec (5:44)

30 H. 1903 (8:02)

31 β Persei (11:33) H. 1902 (sec 7:18) H. 1903 (prin 16:36)

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April 1903

1 U Cephei (9:40) H.1903 Sec (8:53)
2 H.1903 Prim (4:10)
3 β Persei (8:22) H.1902 (4:26) H.1903 (9:46) Prim
4 H.1903 (8:20) Prim
5 H.1903 Sec (10:38)
6 β Persei (5:11) H.1902 (5:47) U Cephei (9:20) H.1903 Prim (2:55)
7 H.1903 (11:30) Prim.
8 H.1903 (20:04) Prim
9 H.1902 (7:09) H.1903 (12:21) Sec.
10 H.1903 Prim (4:39)
11 U Cephei (9:00) H.1903 (13:23)
12 H.1902 (8:30) H.1903 (21:48) H.1903 (5:31) Sec.
13
14 H.1903 (6:23)
15 H.1902 (9:52)
16 U Cephei (8:40) H.1903 Sec. (7:12)
17
18 H.1902 (11:13) H.1903 Prim Min (8:06)
19
20 H.1903 Sec. (8:58)
21 H.1902 (12:35) U Cephei (8:20)
22 H.1903 Prim (9:50)
23
24 H.1902 (13:56) H.1903 Sec. (10:43)
25
26 U Cephei (8:00) H.1903 Prim (11:35)
27 H.1902 (15:18) Z Her (10:44) Prim. Min.
28 —
29 Z Her. Sec. (10:40)
30 H.1902 (16:39) δ Libræ (11:08)

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May 1903

δ W Cygni (10:37)

May 1 H. 1903 Sec. (5:36) U Cephei (7:40) Z Her (10:34) Prim.
2 RV Lyrae (9:37)
3 H. 1903 Prim. (6:28) U Oph. (12:57) Z Her. Sec. (10:30)
4 U Oph (9:05)
5 H. 1903 Sec. (7:20) Z Her. Prim (10:24)
6 U Cephei (7:20) W Delphini (9:39) Prim.
7 H. 1903 Prim. (8:12) δ Librae (11:12) Z Her Sec (10:20) U W. Cyg. (3:2)
8 H 34101
9 H. 1903 Sec. (9:02) U Oph. (9:51) H 34101 (8:04) Z Her Prim (10:14) U Sag (11:52)
10 δ W Cygni (14:07) H 34101
11 Z Her. Sec (10:10) H. 1903 Prim. (9:55)
12
13 Z Her. (10:04) Prim. H. 1903 Sec (10:48)
14 δ Librae (9:46) U Oph. (10:37) U W. Cyg. (10:41)
15 Z Her (10:00) H. 1903 Prim (11:40)
16
17 Z Her (9:54) Prim.
18
19 U Oph (11:23) Z Her (9:50)
20 U Oph. (7:31) RV Lyrae (9:29)
21 δ Librae (10:20) Z Her (9:44) Prim. U W. Cyg. (8:19)
22 H. 1903 Prim (6:33)
23 Z Her. Sec. (9:40)
24 U Oph (12:10) δ W Cygni (7:22) H. 1903 Sec (7:25)
25 U Oph (8:17) Z Her (9:34) Prim.
26 U Sag (9:33) H. 1903 Prim (8:16)
27 Z Her (9:30) Sec.
28 δ Librae (9:55) H. 1903 (9:22) Sec
29 U Oph. (12:56) Z Her. (9:24) Prim.
30 U Oph. (9:04) W Delp. (10:25) Prim. H. 1903 Prim (10:01)
31 U Oph (5:11) Z Her (9:20) Sec.

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June 1903

June 1 H. 1903 Sec (10:53)
2 Y Cygni (7:38) ζ Her. Prim (9:10) δ W Cygni (10:52) UZ Cyg (11:10)
3 H. 1903 Prim (11:45)
4 δ Librae (9:30) ζ Her Sec. (9:05)
5 Y Cygni (7:33) U Sag (12:58)
6 ζ Her Prim (9:00)
7 R V Lyrae (9:21)
8 Y Cygni (7:29) ζ Her Sec (8:55) UZ Cygni
9 UZ Cygni (15:24)
10 ζ Her Prim (8:50) UZ Cygni / H. 1903 (6:37)
11 δ Librae (9:3) Y Cygni (7:24) U W Cygni (12:03) UZ Cyg (10:15)
12 ζ Her. Sec. (8:45) H. 1903 (10:30) Sec.
13
14 Y Cygni (7:19) ζ Her. Prim (8:48) H. 1903 (8:22)
15 V Lyrae (7:52)
16 ζ Her Sec (8:35) H. 1903 Sec (9:14)
17 Y Cygni (7:15) V Lyrae (8:08)
18 δ Librae (8:37) ζ Her. Prim (8:30) H. 1903 (10:06)
19 V Lyrae (8:24)
20 Y Cygni (7:10) ζ Her Sec. (8:20) H. 1903 (Sec) 10:57) UZ Cyg (9:19)
21 U W Cygni (9:42) V Lyrae (8:48)
22 ζ Her. Prim (8:20) U Sag (10:40) H. 1903 (11:50)
23 Y Cygni (7:05) V Lyrae (8:56)
24 ζ Her Sec. (8:13)
25 δ Librae 8:11 δ W. Cygni (7:38) R V Lyrae (9:13) V Lyrae (9:12)
26 Y Cygni (7:00) ζ Her. Prim (8:10)
27 V Lyrae (9:28)
28 ζ Her. Sec. (8:09) U W Cygni (7:20)
29 Y Cygni (6:53) V Lyrae (9:44)
30 ζ Her. Prim (8:00)

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July 1903.

July 1

2 g Her Sec. (2:00) U Sagittae (Y cygni (6:48) H. 1903 (11:55) Prim.)

3

4 g Her. Prim (7:45) SW. Cygni Prim (11:08) / H. 1903 Sec. (12:47)

5 UW. Cygni (4:58) Y Cygni (6:43) U Oph. (0:39)

6 g Her. Sec. (7:50) / H. 1903 (13:39) Prim / U Oph (6:47)

7 U Cephei Front (11:34)

8 g Her. Prim. (7:45) Y Cygni (6:38)

9 U Sagittae (8:21) / H. 1903 (6:48) Prim. / U Z Cygni

10 g Her Sec (7:40) U Z Cygni (22:42) Prim / U Oph 11:27 /

11 U Z Cygni / Y Cygni (6:33) / U Oph (7:35) /

12 g Her. Prim (7:35) U Cephei (Front 11:14)

13 R.V. Lyrae (9:04) / H. 1903 (8:32) Prim /

14 g Her Sec (7:30) Y Cygni Uncert (6:28)

15 H. 1903 Sec. (9:24) / U Oph. (2:15) /

16 g Her. Prim (7:25) U Oph (8:23) /

17 W Delf. Min (7:58) / U Cephei Front (Y cygni (6:23) (10:54) / H. 1903 (10:16) Prim /

18 g Her Sec. (7:20)

19 U Sag. (11:46) H. 1903 (Sec. 11:09)

20 g Her. Prim (7:15) R.V. Lyrae (13:49) / Y Cygni (6:18)

21 H. 1903 (12:01) Prim / U Oph (9:11) /

22 g Her. Sec. (7:10) W Delf. Min (10:19) UW Cygni (11:4) (U Cephei Front (0:34))

23 Y Cygni (6:13)

24 g Her. Prim. (7:05)

25 H. 1903 (3:45)

26 g Her Sec. (7:05) U Sag. (5:3) Y Cygni (6:08) U Oph (9:59)

27 SW. Cygni (7:53) U Cephei Front (10:14) U Oph (6:07)

28 g Her Prim (6:55) / H. 1903 (6:54) Prim /

29 UW Cygni (8:43) Y Cygni (6:03)

30 g Her. Sec. (6:50) H. 1903 Sec. (7:45)

31 R.V. Lyrae (8:56) U Oph (0:47)

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Sept. 1903.

Sept. 1 U Sagittae (10:34)|
2 H. 1903 Drac. (10:28) Prin|
3
4
5 RV Lyrae (8:40)|U W Cygni (7:44)|U Cephei (7:30) & (11:00)
6 SW. Cygni (11:38)|H. 1903 (12:11) Prin|
7
8 W Delph. (11:51)
9 H. 1903 (5:19) Prin|
10 U Cyg Cygni |U Cephei (7:10) & (10:40)|H. 1903 (13:55) Prin|
11 U Sagittae (13:59)|U Cyg Cygni 13:17
12 RV Lyrae (13:25)|U Cyg Cygni.
13 W Delph. (7:12) |H. 1903 (7:03)|
14
15 H. 1902 (5:51)|U Cephei (6:50): (10:20)|
16 β Persei (15:42)
17 H. 1903 (8:48) Prin|
18 U Sagittae (8:16)|H. 1902 (7:13) &|
19 β Persei (12:31)
20 U Cephei Fol. (10:00)
21 H. 1902 (8:35) |H. 1903 (Prin 10:32)|
22 β Persei (9:20)|U W Cygni (13:50)|
23 RV Lyrae (8:32)
24 H. 1902 (9:57)
25 U Cephei Fol (9:40) |H. 1903 Prin (12:15)|
26
27 H. 1902 (11:19)|
28 U Sagittae (11:41)
29 SW Cygni (8:23)|U W Cygni (11:28)
30 RV Lyrae (3:17)|H. 1902 (12:36) |U Cephei (9:05 20) Fol. side|.

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October 1903.

Oct.

1

2 H. 1903 Prin (9:40)

3 λ Tauri (10:54) H. 1902 (13:58) H. 1903 Drac. Prin (15:45)

4 H. 1903 Sec. (8:00)

5 U Cephei Fol. (8:45) U Sag. (5:57)

6 U W Cyg. (9:07) H. 1902 (15:19) H. 1903 Prin (8:54)

7 λ Tauri (9:46)

8 S W Cygni (11:03) U Sag. (15:06) H. 1903 Sec. (9:45)

9 β Persei. (14:13)

10 U Cephei Fol. (8:25) H. 1903 Prin (10:37)

11 λ Tauri (8:39) RV Lyrae (8:24)

12 β Persei (11:02) U Cygni (21:35) H. 1903 Sec. (11:30)

13 U W Cygni (6:45) U Cygni

14 U Cygni H. 1903 Drac. Prin (12:20)

15 U Cephei Fol. (8:05) β Persei (7:51) U Sagittae (9:22) λ Tauri (7:31)

16 H. 1903 Sec. (13:15)

17

18 RV Lyrae (13:09)

19 λ Tauri (6:23)

20 U Cephei Fol. (7:45)

21 H. 1903 Prin (7:14)

22 S W Cygni (5:08)

23 λ Tauri (5:~~23~~ 15) H. 1903 Sec. (8:10)

24

25 U Cephei Fol. (7:25) U Sag. (12:47) H. 1903 Prin (8:58)

26 W Delp. (13:23)

27 H. 1903 Sec. (9:55)

28 β Lyrae Sec (22:00)

29 RV Lyrae (8:16) H. 1903 Prin (10:42) β Per. (15:59)

30 U Cephei Fol. (7:05) U W Cyg. (12:51)

31 W Del. (8:44) S W Cygni (8:39) H. 1903 Sec. (11:40)

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Ephemeris 43.4101

Run of clock 2410015.d05 + 31.d304 E.

Ep.		G. M. T. Minima		East mean time
				d h m
184	5.774.986	Jan 24	1902	1902 Jan 24 18:40
185	5806.290	Feb 25		Feb 25 1:58
186	5837.594	Mar 28		Mar 28 9:16
187	5868.898	Apr 28		Apr 28 16:33
188	5900.202	May 30		May 29 23:51
189	5931.506	June 30		June 30 7:08
190	5962.810	July 31		July 31 14:26
191	5994.114	Sept 1		Aug 31 21:44
192	6025.418	Oct 2		Oct 2 5:02
193	6056.722	Nov 2		Nov 2 12:20
Ep. 194	2416088.026	Dec 4		Dec 3 19:37
195	6119.330	Jan 4	1903	1903 Jan 4 2:55
196	6150.634	Feb 4		Feb 4 10:13
197	6181.938	Mar 7		Mar 7 17:31
198	6213.242	Apr 8		Apr 8 0:48
199	6244.546	May 9		May 9 8:06
200	6275.850	June 9		June 9 15:24
201	6307.154	July 11		July 10 22:42
202	6338.458	Aug 11		Aug 11 6:00
203	6369.762	Sept 11		Sept 11 13:18
204	6401.066	Oct 13		Oct 12 20:35
205	6432.370	Nov 13		Nov 13 3:53
206	6463.674	Dec 14		Dec 14 11:10

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1902phae.proj.1677.

November 1903.

Nov. 1 β Persei (12:45) U Sag. (7:04)

2

3

4 β Persei (9:34) U Cephei Fol. (6:45) β Lyrae Prim. min. (9:00)

5 RV Lyrae (13:1)

6 U W Cygni (10:29)

7 β Persei (6:23)

8

9 S W Cygni (12:09) 14.1902 (6:20) U Cephei (6:25) Fol.

10 β Lyrae Sec (20:00)

11 U Sag (10:29)

12 U Z Cygni 14.1902 (7:42)

13 U W Cygni (8:08) U Z Cygni (3:53)

14 U Z Cygni U Cephei (6:05) Fol.

15 14.1902 (7:30)

16 RV Lyrae (8:8)

17 β Lyrae (7:00) Prim. min.

18 14.1902 (10:25)

19 W Delf. (14:09) U Cephei (5:45) Fol.

20 U W Cygni (5:46)

21 β Persei (14:28) U Sag (3:54) 14.1902 (11:46)

22

23 S W Cygni (5:24) RV Lyrae (12:53) β Lyrae Sec (18:00)

24 β Persei (11:17) W Delf (9:31) 14.1902 (13:08) RR Lyr. (7:18)

25

26

27 β Persei (8:06) 14.1902 (14:29)

28 U Sag. (8:10) RR Lyrae (6:46)

29 RR Lyrae (10:12)

30 U W Cygni (14:16) 14.1902 (15:51) β Lyrae Prim. min (5:00)

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1902phae.proj.1677.

December 1903.

December 1
2 SW Cygni (8:54) H.1903 (9:11)
3
4 RV Lyrae (8:00)
5
6 β Lyrae Sec. (16:00) H.1903 (10:55)
7 UW Cygni (11:52) RR Lyrae (8:24)
8 U Sag. (11:35)
9
10 H.1903 (12:40)
11 RV Lyrae (12:45) RR Lyrae (7:38)
12
13 U ζ Cyg. β Lyrae Prim (3:00) H.1903 (5:48)
14 β Persei (2:59) UW Cyg. (9:31) UZ Cyg (11:11)
15 U Sag (5:52) ZG Cygni RR Lyrae (6:52)
16
17 β Per. (9:48) H.1903 (7:31)
18 W Delph. (10:16)
19 β Lyrae Sec. (14:00) RR Lyrae (6:06)
20 β Per (6:37) RR Lyrae (9:17)
21 χ Tauri (12:18) UW Cygni (7:09) H.1903 (9:16)
22 RV Lyrae (7:52)
23 W Delph (5:38) RR Lyrae (5:20)
24 RR Lyrae (8:31)
25 χ Tauri (11:10) SW Cygni (5:39) U Sag. (9:17) H.1903 (11:00)
26 β Lyrae Prim (1:00)
27
28 UW Cygni (5:47) RR Lyrae (7:44)
29 χ Tauri (10:02) RV Lyrae (12:37) H.1903 (12:40)
30
31 U Oph. (11:25) Low Side H.1902 (5:22)

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1902phae.proj.1677.

January 1904.

Jan. 1. H.1903 (5:53) β Lyrae Sec. (12:00)
2 R R Lyrae (6:57)
3 S W Cygni (8:09 min)
4
5 H.1903 (7:38) U Cephei Prec (11:05)
6 R R Lyrae (6:10)
7 β Lyrae Prim (23:00)
8
9 H.1903 (9:23)
10 U Cephei Prec (10:45)
11 R R Lyrae (8:36)
12 S W Cygni (11:39) Min.
13 H.1903 (11:08) U Z Cygni.
14 β Lyrae Sec. (10:00) U Z Cygni (18:28)
15 R R Lyrae (7:50) U Cephei Prec (10:25) U Z Cygni.
16
17 H.1903 (12:53)
18
19
20 β Lyrae Prim (21:00) U Cephei (10:05) Prec.
21 H.1903 (14:38)
22
23
24
25 U Cephei Prec (9:45)
26 S W Cygni (5:54) Min.
27 β Lyrae Sec (8:00)
28 H.1903 (9:33)
29 β Persei (10:03)
30 U Cephei (9:25) Prec
31

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February 1904.

February 1 (z Drac) H. 1903 (11:18) β Persei (6:52)
2
3
4 U Cephei (9:05) Rec. SW Cygni (9:24) β Persei (8:41)
5 (H. 1903 z Drac) (3:08)
6 ~~H. 1903~~
7
8 H. 1903 (6:13) z Drac
9 U Cephei (8:45) Rec.
10
11
12 H. 1903 (7:58)
13
14 U Cephei (8:25) Rec. UZ Cygni.
15 UZ Cygni (01:46)
16 H. 1903 (9:43) UZ Cygni.
17
18 SW Cygni (3:39) β Persei (11:46)
19 U Cephei (8:05) Rec.
20 H. 1903 (12:28)
21 β Persei (8:35)
22
23
24 U Cephei (7:45) Rec. β Persei (5:23)
25
26
27 β Persei (2:12) H. 1903 (7:23)
28
29 U Cephei. (7:25) Rec.

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1902phae.proj.1677.

March 1904

Mar. 1

2 Z Draconis (8:02)

3 RV Lyrae (7:19)

4

5 U Cephei (7:00) prec. (10:30 fol.)

6 Z Draconis (9:47)

7 γ Camelop. (11:54)

8

9

10 U Cephei (6:40 prec.) (10:10 fol.) RV Lyrae (12:04) Z Drac. (11:32)

11

12 β Persei (10:17)

13 λ Tauri (12:35)

14

15 U Cephei (9:50 fol.) β Persei (7:06) U Sag. (2:35)

16

17 λ Tauri (11:27) γ Camelop (9:54)

18

19

20 U Cephei (9:30 fol.) RV Lyrae (7:11)

21 λ Tauri (10:19) Z Draconis (8:12)

22

23

24

25 U Cephei (9:10 fol.) λ Tauri (9:11) U Sag. (6:00) Z Draconis (9:57)

26

27 γ Camelop (7:55)

28 RV Lyrae (1:56)

29 λ Tauri (8:03) Z Draconis (11:42)

30 U Cephei (8:50 fol.)

31

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1902phae.proj.1677.

May 1904

Eastern Mean Time.

May 1

2

3 U Cygni (Secondary) RV Lyrae (11:40) +7.3404

4 Y Cygni Prim (12:21)

5

6

7 Y Cygni (12:15) Prim SY Cyg. (9:28) U W Cyg (7:57)

8 U Sagittae (14:48)

9 Y Cancelof (7:16)

10 Y Cygni (12:9) Prim | SW Cygni (10:10) +7.3404

11

12 Y Cancelof (14:36)

13 Y Cygni 12:03 Prim SY Cygni (9:36)

14 RV Lyrae (6:47)

15 U Sagittae (9:05)

16 Y Cygni (11:5) Prim)

17 U Cygni Prim, +7.3404

18 U Cygni Prim. (23:39) SY Cygni (9:45) SW Cyg (13:40)

19 U Cygni Prim. * Y Cancelof (6:16) Y Cygni (11:51 Prim)

20

21 RV Lyrae (11:32)

22 Y Cancelof (2:36) Y Cygni (11:45) Prim.

23

24 U W Cygni (14:03) +7.3404

25 Y Cygni (11.39) Prim) SY Cygni (9:54) U Sag. (12:30)

26 [illegible]

27 [illegible]

28 Y Cygni (11:33 Prim)

29

30 [illegible]

31 Y Cygni (11:27 Prim) SY Cygni (9:03) +7.3404

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1902phae.proj.1677.

June 1904.

June 1

2

3 Y Cygni 11:21 Prim.

4 U Sagittae (15:55)

5

6 Y Cygni 11:15 Prim. S Y Cyg Min (10:12)

7 U W Cygni (9:19)

8 ~~U Sge R Cph~~ (11:00) Min. R V Lyrae (11:24)

9 Y Cygni 11:09 Prim.

10

11 S W Cygni (10:25 Min) U Sagittae (10:11) Y Camel. (8:37)

12 Y Cygni 11:08 Prim. S Y Cyg. Min (10:21)

13

14

15 Y Cygni 10:54 Prim.

16

17

18 Y Cygni 10:51 Prim. S Y. Cygni. Min. (10:30) U Y Cygni.

19 R V Lyrae (6:31) U Y Cygni (6:57)

20 U Cephei Rec (11:17) ~~Prim~~ S W Cygni (3:55 Min.) U Y Cygni.

21 Y Cygni 10:45 Prim. Y Camel (6:32)

22

23

24 Y Cygni 10:39 Prim. S Y Cygni Min (10:39)

25 U Cephei Rec (10:5)

26 R V Lyrae (11:16)

27 Y Cygni 10:33 Prim.

28 U Sagittae (7:53) V W Cygni (9:32)

29

30 U Cephei Rec. (10:37) Y Cygni 10:27 Prim. S Y Cyg Min (10:47)

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1902phae.proj.1677.

1904 July 1904

July 1
2 W Delph. Min. (11:47) Z Drac. Min (12:04)
3 Y Cygni (10:22)
4 SW Cygni (7:10) U Z Cygni / Y Camel (11:58)
5 U Cephei (10:17) U Z Cygni. Sec. Min. 0:05
6 Y Cygni. (10:20) U Z Cygni. Z Drac. Min (14:48)
7
8 U Sagittae (11:18) U W Cygni (10:42)
9 Y Cygni. 10:19 Z Drac (6:57)
10 U Cephei (9:57)
11
12 Y Cygni (10:14)
13 SW Cygni (10:40)
14 Y Camelop (9:58) VW Cygni (6:18)
15 U Cephei (9:37) Y Cygni (10:09) ~~U Sagittae~~ / U W Cyg. (8:21)
16
17 Z Drac (10:25)
18 Y Cygni (10:04) U Sagittae (14:43)
19 U Z Cygni
20 U Cephei (9:17) U Z Cygni (4:14) Min Prin.
21 Y Cygni (10:00) U Z Cygni
22 SW Cygni (14:10)
23
24 Y Cygni (9:55) Y Camelop (7:58)
25 U Cephei (8:57) U Sagittae (8:59) Z Drac (13:54)
26 W Delph (12:33)
27 Y Cygni (9:50)
28 Z Drac (7:03)
29
30 U Cephei (8:37) / Y Cygni (9:45)
31

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1902phae.proj.1677..

August 1904

Aug
1
2
3
4 U Cephei (8:12)
5 UZ Cygni Secondary (5:50)
6
7
8
9 U Cephei (7:52)
10
11
12
13
14
15
16
17
18
19 W Delphi (0:12) UZ Cygni
20 UZ Cygni Primmin (21:32)
21 UZ Cygni
22
23
24 W Delphi (8:40)

see page 106

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1902phae.proj.1677.

Ephemeris of Encke

June, 1901

(Berlin mean Time)

Date	R.A. (h m s)	Decl. (° ′ ″)	Log Δ	Log r
June 1.5	10 27 12.3	-7 52 13	9.964247	0.139784
2.5	30 4.0	8 3 37	9.967995	0.140809
3.5	32 55.3	8 14 59	9.971733	0.141831
4.5	35 46.1	8 26 20	9.975463	0.142849
5.5	38 36.6	8 37 39	9.979183	0.143866
6.5	41 26.7	8 48 56	9.982895	0.144880
7.5	44 16.4	9 0 12	9.986597	0.145891
8.5	47 5.7	9 11 26	9.990291	0.146901
9.5	49 54.7	9 22 38	9.993975	0.147906
10.5	52 43.3	9 33 49	9.997649	0.148909
11.5	55 31.5	9 44 58	0.001313	0.149908
12.5	10 58 19.4	9 56 6	0.004968	0.150903
13.5	11 1 7.0	10 7 12	0.008612	0.151897
14.5	3 54.3	10 18 17	0.012246	0.152888
15.5	6 41.3	10 29 21	0.015870	0.153875
16.5	9 28.0	10 40 23	0.019482	0.154858
17.5	12 14.4	10 51 23	0.023084	0.155838
18.5	15 0.4	11 2 22	0.026674	0.156815
19.5	17 46.1	11 13 19	0.030252	0.157788
20.5	20 31.5	11 24 15	0.033817	0.158756
21.5	24 16.7	11 35 9	0.037371	0.159720
22.5	26 1.5	11 46 2	0.040913	0.160681
23.5	28 46.0	11 56 53	0.044442	0.161638
24.5	31 30.3	12 7 42	0.047958	0.162591
25.5	34 14.2	12 18 29	0.051462	0.163540
26.5	36 57.9	12 29 15	0.054953	0.164485
27.5	11 39 41.3	-12 39 58	0.058430	0.165426

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Date	R.A. h m s	Decl	Log Δ	Log r
June 28.5	11 42 24.4	+12 50 40	0.061896	0.166362
29.5	45 7.2	13 1 20	0.063547	0.167294
30.5	47 49.7	-13 11 58	0.068786	0.168221

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Ephemeris of β Persei. 1902. d

Per = 2.867300

G.M.T.	
5	795.6205
	98.4874
5801.	3551
	04.2224
	07.0897
	09.9570
	12.8243
	15.6916
	18.5589
	21.4262
	24.2935
	27.1608
	30.0281
	32.8954
	35.7627
	38.6300
	41.4973
	44.3646
	47.2319
	50.0992
	52.9665
	55.8338
	58.7011
	61.5684
	64.4357

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September 1904.
Eastern Mean Time.

Sept. 1

2

3 ζ Her Prin (13:07)

4

5 ζ Her Sec (13:02) U ζ Cygni (13:14)

6 SW Cygni (9:41) RV Lyrae (10:44)

7 ζ Her Prin (12:57) U Sag. (12:47)

8 U Cephei Hel. (9:20)

9 ζ Her. Sec. (12:52)

10

11 ζ Her. Prin (12:47)

12 VW Cygni (6:59)

13 U Cephei Hel (9:00) ζ Her Sec (12:42)

14 ~~ζ Her. Sec. (12:42)~~

15 ζ Her. Prin (12:37) SW Cygni (11:11) U W Cygni (11:07) γ Camel. (5:20)

16

17 ζ Her. Sec (12:32) W Delphi. Prin (9:26) U Sag. (11:12) RV Lyrae (5:51)

18 U Cephei Hel. (8:40) γ Camel. (12:40)

19 ζ Her. Prin (12:27)

20 β Persei (12:57) U ζ Cygni

21 ζ Her Sec (12:22) U ζ Cygni (4:50)

22 U W Cygni (8:45) U ζ Cygni. ζ Persei (3:39)

23 β Persei (9:46) U Cephei (8:20) ζ Her Prin. (12:17)

24 U Sag (5:29) RV Lyrae (10:36)

25 ζ Her. Sec (12:12) ζ Per (5:01)

26

27 ζ Her. Prin (12:07)

28 U Cephei (8:00) Hel. γ Camel. (10:40) ζ Per. (6:23)

29 ζ Her Sec. (12:02) U W Cygni (6:28)

30

~~31 ζ Her. Prin.~~

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1902phae.proj.1677.

Oct. 1902
E. M. Time.

Oct. 1. β Persei (7:45)
2
3 U Cephei (7:40 fol)
4
5 RV Lyrae Min (5:43)
6 U β Cygni Sec. Min (20:29)
7 U β Cygni ~~Sec. Min~~
8 U Cephei (7:20 fol) SW Cygni Min (7:56) γ Cassiopeiae (8:41)
9
10
11 W Delphini (10:11 Min)
12 RV Lyrae (10:28 Min)
13 U Cephei (7:00 fol) ~~10:30~~
14 U Sagittae Min (12:18)
15
16 W Delphini (5:32) Min. UW Cygni (12:29 Min)
17 SW Cygni (11:26 Min)
18 U Cephei (6:40 fol) γ Cassiopeiae Min (6:41)
19
20
21 U Sagittae (6:35 Min) U β Cygni
22 U β Cygni Min (12:08)
23 RV Lyrae Min (5:35) UW Cyg. Min (10:08) U β Cygni
24 VW Cygni Min (10:54)
25
26
27
28
29
30
31 U Sagittae (10:00) Min RV Lyrae Min (10:20) UW Cyg. Min (7:46)

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1902phae.proj.1677.

November 1902.

Nov. 1
2
3
4
5
6 Y Cygni Min (6:38)
7
8
9 Y Cygni Min (6:33)
10
11 β Persei (3:39 Min)
12 Y Cygni Min (6:28)
13
14
15 Y Cygni Min (6:23)
16
17 U Sag. Min (7:47) RV Lyrae Min (10:12)
18 Y Cygni Min (6:18) SW Cygni Min (11:41)
19
20 Y Camelop Min (8:02)
21 Y Cygni Min (6:13) UZ Cygni
22 UZ Cygni Min (19:25)
23 UW Cygni Min (11:31) UZ Cygni
24 Y Cygni Min (6:08)
25 β Persei Min (11:44)
26
27 Y Cygni Min (6:03) U Sag. Min (11:06)
28 β Persei Min (8:33) W Del. Min (11:44) RV Lyrae Min (5:19)
29
30 Y Cygni Min (5:58) UW Cygni Min (9:09) Y Camelop Min (6:02)

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1902phae.proj.1677.

December 1904.

Dec. 1 β Per. Min (5:22) Z Persei Min (10:51)
2 SW Cygni Min (4:56)
3 W Delph (7:5 Min) SU Cygni Min (14:36) γ Camel. Min (13:23)
4 U Ceph. Rec. (12:50) Z Draco Min (10:40) U Sagittae Min (5:23) Z Per Min (12:13)
5 RV Lyrae Min (10:04) VW Cyg. 14:49 Min.
6
7 UW Cyg. Min. (6:47)
8 Z Draco. Min (7:46)
9 U Cephei Rec (11:50) SY Cyg. Min (14:44)
10 γ Camel Min (4:03)
11 SW Cygni (6:26)
12 Z Draco Min 9:31
13 γ Camel of Min (4:23)
14 U Ceph. Rec (12:10) U Sag. Min (8:48) UW Cyg. Min 4:26
15 SY Cyg. Min (14:52)
16 RV Lyrae Min (5:11)
17
18 β Per. Min (10:45) 15
19 U Cephei Rec (11:50) Z Draco (4:26)
20 SW Cygni Min (11:56)
21 β Per. Min (7:4) SY Cygni Min (15:00)
22 VW Cygni Min (11:35)
23 RV Lyrae (9:56) UZ Cyg. γ Camel. Min (9:23) Z Draco Min (6:11)
24 U Cephei Rec. (10:50) UW Cygni Min (12:54) UZ Cygni (2:43) Min
25 UZ Cyg.
26
27 W Delph. (7:51 Min) SY Cygni Min. (5:11) Z Draco. Min (7:56)
28
29 U Ceph Rec. (9:50) (10:35)
30
31 U Sagittae Min (6:29) Z Draco Min (9:41)

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1902phae.proj.1677

January 1905
E. M. T. Minima.

1905
Jan 1
2 RV Lyrae (7:3) γ Camel (7:24)
3 U Cephei prec. (10:15) Z Draco (2:40)
4 SW Cygni. (5:12) Z Draco (11:21)
5 γ Camel. (14:44)
6
7 UW Cygni (8:11) Z Draco (4:35)
8 U Cephei (9:55 prec) Z Draco (13:11) VW Cygni (8:21)
9
10 Z Persei (4:34)
11 Z Draco. (6:22)
12 γ Camel obs. (5:25) Z Draco (14:57)
13 U Cephei (9:35 prec) SW Cygni (8:43) Z Per. (5:55)
14 UW Cygni (5:50)
15 RV Lyrae (2:38) γ Camel (12:46) Z Draco. (8:28)
16 Z Persei (7:23)
17
18 U Cephei (9:15 prec.) RV Lyrae (5:03) Z Draco (1:19)
19 Z Persei (8:40) γ Camel (3:19) Z Draco (9:55)
20 W Delph. (8:34) Z Draco (18:30)
21 RV Lyrae (7:26) UW Cygni (3:29)
22 SW Cygni (12:13) Z Persei (10:02) γ Camel (10:44) Z Draco (3:16)
23 U Cephei (8:55 prec) Z Draco (11:43)
24 RV Lyrae (9:50)
25 W Delph (3:55) Z Persei (11:24) γ Camel (18:00) VW Cygni (5:08)
26 Z Draco (4:53)
27 RV Lyrae (12:16) Z Draco. (15:52)
28 U Cephei (8:35 prec) Z Persei (12:46)
29 γ Camel (1:21)
30 RV Lyrae (14:38) Z Draco. (6:39)
31 Z Persei (4:08) Z Draco (17:44)

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1902phae.proj.1677.

β Lyrae

East Mean Time.

Corr. Time Min.	d	h	m
1902 Apl.	27	23	42
May	10	21	42
"	23	19	40
June	5	17	40
"	18	15	38
July	1	13	38
"	14	11	36
"	17	9	36
Aug	9	7	34
"	22	5	34
Sept	4	3	32

Corr. Time 1st Max.	d	h	m
May	1	7	37
"	14	5	37
"	27	3	35
June	9	1	35
"	21	23	33
July	4	21	33
"	17	19	31
"	30	17	31
Aug	12	15	29
"	25	13	29
Sept	7	11	27

Corr. Time 2nd Max.	d	h	m
May	7	22	44
"	20	20	44
June	2	18	42
"	15	16	42
"	28	14	40
July	11	12	40
"	24	10	38
Aug	6	8	38
"	19	6	36
Sept	1	4	36
"	14	2	34

Note:- Added $3^d.33 = 3^d\ 7^h\ 55^m$ to Corr. min for 1st summit

" $9.96 = 9\ 23\ 02$ " " " " 2nd "

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β Lyrae Ephemeris from 15, p. 5-3 Corrected by $+0.^{d}640$ for Prim. Min.

	G.M.T. Minima	G.M.T. 1st Max.	G.M.T. 2nd Max.
Ep. 1338	2410886.196	5871.526	5878.156
1339	5881.112	5884.442	5891.072
1340	5894.028	5897.358	5903.988
	5906.944	5960.274	5916.904
	5919.860	5923.190	5929.820
	5932.776	5936.106	5942.736
	5945.692	5949.022	5955.652
	5958.608	5961.938	5968.568
	5971.524	5974.854	5981.484
	5984.440	5987.770	5995.400
	5997.356	6000.686	6007.316

see note on preceding page.

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Comparison Stars. Photometric.

(See note bottom of p. 134)

7 Cygni	+33° 4029	A.r	20h 41m 16.0s	+33°	30.2	(1 Aug r)	
N Can. Ven.	+37 2340	A.r	13 6 17.9	+37	r6.0	"	
− Virginis.	−1 2746	A.0	13 r 44.7	−1	47.4	"	
ι Librae	−19 4orr	6.r	1r r 3.3	−19	r.9	"	
V Aquilae	−r 4A4A	7.0	1A rr 33.r	−r	4r.A	"	
V Vir. Vuj.	+r1 14A6	9.3	9 0 24.7	+r1	37.6	"	
7 Lyrae	+36 3170	A.3	1A 27 2r.r	+36	33.A	"	
ε Aurigae	+44 1077	7.r	4 r1 1.1	+44	10.7	"	
μ Capri	+rA 2314	(6.7)	21 3A 26.0	+rA	36.r	"	
U Z Cygni.	+43 410r	(A.6) (9.44)	21 r4 12.7	+43	30.0	"	
12201	+1 2691	(9.0)	12 16 r2.0	+1	31.6	"	
− Camelop.	+67 3r3	(7.0)	4 3A 46.	+67	r7.6	"	
+7° 3404	+7 3399	9.0 (h)	17 26 29.6	+7	246 (9.26)	"	
RX Cygni	+47 3037	6.4	20 6 12.2	+47	4A.3	"	
~~+47° 3031~~	~~+47 3037~~	~~6.4~~					
r Sertι	−A 4732	A.2	1A 43 20.1	−A	r.9	"	
− Serpentis	−1r 4927	r.7	1A 11 44.1	−1r	r3.4	"	
δ = ε 1902 Bor.	+1r 4420	A.r	21 20 30.3	+1r	41.9	"	
"	+1A 4772	A.7	21 16 A.2	+1A	2A.7	"	
"	+2r 447r	A.r	21 3 3A.4	+2r	46	"	
"	+29 42r3	6.7	20 r2 11.2	+29	r0.2	"	
"	+34 41A4	7.r	20 46 16.2	+34	6.9	"	
"	+r3 2297	A.r	19 40 46.r	+r3	39.A	"	
"	+rA 1AA0	7.A	19 9 r.2	+rA	17.2	"	
"	+66 A25	7.r	13 r2 2r.	+66	4.7	"	
"	+64 9r1	7.0	13 24 r9.	+64	r6.4	"	
"	+r9 14r2	9.r	12 30 17.6	+r9	12.4	"	
"	+3A 2197	A.4	10 49 1A.A	+3A	2r.2	"	

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Comparison Stars. Photometric.

ρ Cassiop.	+56° 311 (7.5)	23	44	16.3	+56	37.9	(1A55
+51° 762	+50° 401 (8.7)	3	31	0.4	+50	44.2	"
+7° 1772	+6° 1714 (8.0)	7	25	52.2	+6	57.4	"
200036	+36 3A44 (8.1)	19	54	46.7	+36	46.6	"
+2A 707	+2A 704 (7.4)	4	41	44.3	+2A	50.0	"
R Camelop.	Star m. (+51°37 50)	23	51	33.4	+51	1.2	"
88 Cygni	" e (+43°4030)	21	3A	40.7	+43	8.6	"
μ Cephei	+54 2314 (6.7)	21	3A	26.0	+58	36.5	"
Half Star	+37 3A75 (9.1)	20	13	4.0	+37	0.4	"
U Cygni	+42 4169 (8.7)	21	33	10.6	+42	47.1	"
Star near Half Star	+37 3A75 (9.1)	20	13	4.0	+37	0.4	"
R Virginis.							
4. 1903 Draco	+572 5455 (8.4)	11	37	39.	+72	53.1	"
*d Herculis	+29 3194 (7.5) (7.36)	18	5	49.4	+29	52.4	"
R Coronae.	Star f						
04 22 39	+39° 1011 (8.5)	4	20	50.5	+39	30.2	"
+27 2413	+27 2411 (9.0)	14	37	1.1	+27	22.0	"
D.V. +30° 1014	+30 1004 (9.2)	5	37	16.5	+30	31.1	"
" +26° 1167	+26 1125 (8.7)	6	2	44.5	+26	0.4	"
" +26 2563	+26 2559 (8.0)	14	16	0.3	+26	11.3	"
U Camelop.							
X Virginis	+9° 2575 (9.4)	11	55	31.4	+9	34.4	"
20. 1902							
u Herculis	+33° 2A71 (7.8)	17	13	26.8	+33	0.9	"
Star prec. +17° 1533	+17 1533 (9.0)	7	8	36.5	+17	34.7	"
+21° 1146	+21° 1143 (7.8)	6	2	35.9	+21	35.5	"

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Comparison Stars. Photometric.

+18° 2346	+18° 2349 (9.5)	10	12	24.1	+18	36.4 (18.5)
+3° 1950	+3° 1960 (8.0)	8	13	48	+3	6.7 "
~~+7° 3404~~	~~+7° 3399 (9.0)~~	~~17h~~	~~26m~~	~~29.6~~	~~+7°~~	~~24.6~~ "
R Cassiop.	+51° 3750 (8.5)	23	51	33.4	+51	1.2 "
ε a 1904	+47° 2379 (9.0)	16	42	53.3	+47	3.1 "
"	+47 2368 (9.4)	16	37	27.4	+47	51.0 "
"	+48 2425 (8.4)	6	36	50.8	+48	15.9 "
"	+54 1723 (9.3)	15	53	5.8	+54	0.7 "
"	+54 1775 (9.4)	15	45	47.0	+54	27.8 "
R T Virginis.						
R Sagittarii	-6 4664 (8.8)	17	43	10.7	-6	51.2 "

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Comparison Stars. Photometric.

(1875)

Iris.	+18° 1576 (8.9)	7h 11m 55.4s	+18° 46.8	
"	+18 1573 8.3	7 8 50.3	+18 36.8	
"	+18 1532 8.1	7 6 23.7	+18 44.4	
"	+18 1496 9.4	6 59 56.1	+18 30.3	
"	+18 1495 9.2	6 59 49.5	+18 13.4	
"	+18 1419 9.1	6 48 52.4	+18 17.5	
"	+18 1391 9.4	6 45 26.9	+18 8.5	
"	+17 1404 9.0	6 40 37.0	+17 34.7	
"	+17 1368 9.4	6 35 24.2	+17 59.6	
"	+17 1451 9.5	6 48 52.6	+17 29.1	
"	+17 1541 9.4	7 10 49.5	+17 9.4	
"	+17 1584 9.5	7 20 43.6	+17 20.9	
"	+16 1495 8.7	7 22 45.0	+16 55.0	
"	+17 1598 9.0	7 24 38.8	+17 21.3	
"	+15 1781 9.4	8 4 30.4	+15 19.6	
"	+15 1795 9.5	8 10 57.5	+15 33.7	

Vesta Prec. +17° 681 (9.4) by 11.0 + 2.7 south. =

= = 3 57 41.8 +17 39.8

" +20° 402 (8.5) 4 34 31.5 +20 21.6

Aquitania +4° 3281 (9.5) 16 46 34.5 +4 57.9

Pallas +17° 2945 (9.0) 15 53 13.1 +17 45.9

Hidalgo +22° 1932 (9.3) 8 21 20.0 +22 23.9

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Comparison Stars. Photometric.

(1 Aug)

Flora	+1A° 2349 (9.5)	10h	12m	24s.1	+1A° 36'.4
"	+1A° 2346 (9.5)	10	11	10.2	+1A 52.6
Chaldea	L. S. prec. +3° 2193 (7.2) by	12h	2m	and is	10'.7 south
	of it =	9	13	25.3	+3 23.3
"	+3° 2190 (9.5)	9	12	30.0	+3 52.4
Torricelia	+6° 1662 (9.5)	7	1A	52.0	+6 12.3
	+6 1656 (9.5)	7	17	12.4	+6 1.7
Cæs.	-22° 4173 (7.A)	16	22	57.7	-22 29.1

(Sep. Note. All the comp. stars in 16h to 19h incl. are on pp. 130-134 incl. given to Prof. P. for obs. July ~~13~~ 30, 1904.)

The stars checked in red on pp. 130, 131, 132, 133, 134 have been turned over to Prof. P. for observation.

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90 1901 Sagittal

Ephemeris compt. from elements in telegram of Feb. 2, 1902.

Ep. 0 = 5784.89 + 3.38 E. G.M.T.

Ep. 0	241 5784.89	Feb. 3	Ep. 30	241.5886.29
1	5788.27	7		5889.67
2	5791.65	10		5893.05
3	5795.03	14		5896.43
4	5798.41	17		5899.81
5	5801.79	20		5903.19
6	5805.17	24		0606.57
7	5808.55	27		09.95
8	5811.93	Mar 2		13.33
9	5815.31	6		16.71
10	5818.69	9	Ep. 40	20.09
11	5822.07	13		23.47
12	5825.45	16		26.85
13	5828.83	19		30.23
14	5832.21	23		33.61
15	5835.59	26		36.99
16	5838.97	29	46	40.37
17	5842.35	Apl. 2	Ep. 65	6004.59
			72	6028.25
18	5845.73	5	" 73	6031.63
19	5849.11	9	" 74	35.01
20	5852.49	12	Ep 75	38.39
21	5855.87	15	" 76	41.77
22	5859.25	19	" 77	45.15
23	5862.63	22	78	48.53
24	5866.01	26	79	51.91
25	5869.39	29	80	55.29
26	5872.77	May 2		
27	5876.15	6		
28	5879.53	9		
29	5882.91	12		

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Full brightness observations

East. Mean. Time.

1902

2d Corona.

Min. d h m	2,3 Phase d h m s	2,8 phase d h m
May 28 8 58	May 30 16 10	May 31 4 10
May 31 19 49	June 3 3 01	June 3 15 01
June 4 6 40	" 6 13 52	" 7 1 52
" 7 17 31	" 10 0 43	" 10 12 43
" 11 4 22	" 13 11 34	" 13 23 34
" 14 15 13	" 16 22 25	" 17 10 25
" 18 2 4	" 20 9 16	" 20 21 16
" 21 12 55	" 23 20 07	" 24 8 07
" 24 23 46	" 27 6 58	" 27 18 58
" 28 10 37	" 30 17 49	July 1 5 49
July 1 21 28	July 4 4 40	" 4 16 40
" 5 8 19	" 7 15 31	" 8 3 31
" 12 6 1	" 14 13 13	" 15 1 13
" 15 16 52	" 18 0 04	" 18 12 4
" 19 3 43	" 21 10 55	" 21 22 55
" 22 14 34	" 24 21 46	" 25 9 46
" 26 1 25	" 28 8 37	" 28 20 37
" 29 12 16	" 29 19 28	" 30 7 28
Sept 2 0 46	Sept 4 7 58	Sept 4 19 58
" 5 11 37	" 7 18 49	" 8 6 49
" 8 22 28	" 11 5 40	" 11 17 40
" 12 9 19	" 14 16 31	" 15 4 31
" 15 20 10	" 18 3 22	" 18 15 22
" 19 7 1	" 21 14 13	" 22 2 13
" 22 17 52	" 25 1 04	" 25 13 4
" 26 4 43	" 28 11 55	" 28 23 55
" 29 15 34	Oct 1 22 46	Oct 2 10 46

see page 163

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East Near Trios

SV. 20. Cygni.

1902

Min.	d	h	m	d 1.0 phase	d	h	m	d 2.7 phase	d	h	m	phase. 36	d	h	m
May	28	1	5		May	29	1	5	May	30	18	5	May	31	15	35
June	1	14	50		June	2	14	50	June	4	7	50	June	5	5	20
"	6	4	35		"	7	4	35	"	8	21	35	"	9	19	05
"	10	17	20		"	11	17	20	"	13	11	20	"	14	8	50
"	15	8	5		"	16	8	5	"	18	1	5	"	18	22	35
"	19	21	50		"	20	21	50	"	22	14	50	"	23	12	20
"	24	11	35		"	25	11	35	"	27	4	35	"	28	2	05
"	29	1	20		"	30	1	20	July	1	17	20	July	2	15	50
July	3	15	5		July	4	15	5	"	6	8	5	"	7	5	35
	8	4	50		"	9	4	50	"	10	21	50	"	11	19	20
	12	18	35		"	13	18	35	"	15	11	35	"	16	9	05
	17	8	20		"	14	8	20	"	20	1	20	"	20	22	50
	21	22	5		"	22	22	5	"	24	15	5	"	25	13	35
	26	11	50		"	27	11	50	"	29	6	50	"	30	3	20
	31	1	35	Aug	~~Sept~~	1	1	35	Aug	2	18	35	Aug	3	17	05
Sept	1	1	50	Sept	2	1	50	Sept	3	18	50	Sept	4	17	20	
"	5	10	35	"	6	15	35	"	8	8	35	"	9	7	05	
"	10	5	20	"	11	5	20	"	12	22	20	"	13	20	50	
"	14	19	05	"	15	19	05	"	17	12	05	"	18	10	35	
"	19	8	51	"	20	8	51	"	22	1	51	"	23	0	21	
"	23	22	36	"	24	22	36	"	26	15	36	"	27	14	06	
"	28	12	21	"	29	12	21	Oct.	1	5	21	Oct	2	3	51	
Oct.	12	5	36	"	13	5	36	"	14	22	36	Oct.	15	21	06	
"	16	19	21	"	17	19	21	"	18	12	21	"	19	10	51	
"	21	9	6	"	22	9	6	"	23	2	6	"	24	0	36	
"	25	22	51	"	26	22	51	"	27	15	51	"	28	14	31	
"	30	12	36	"	31	12	36	Nov	1	5	36	Nov.	2	4	06	
Nov.	4	2	21	Nov	5	2	21	Nov	5	19	21	"	6	17	51	

see page 164

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1902

East mean Time

26 Delphini

		d	h	m		d	h	m		d	h	m
		3.5	phase			4.1	phase					
May	30	3	30	June	2	15	30	June	4	5	53
June	3	22	50	"	7	10	50	"	8	1	45
"	8	18	11	"	12	6	11	"	12	20	36
"	13	13	31	"	17	1	31	"	17	15	56
"	18	8	54	"	21	20	54	"	22	11	19
"	23	4	15	"	26	16	15	"	27	6	40
"	27	23	35	July	1	11	35	July	2	2	00
July	2	18	55	"	6	6	55	"	7	21	20
"	7	14	06	"	11	2	06	"	11	16	31
"	12	9	26	"	15	21	26	"	16	11	51
"	17	4	46	"	20	16	46	"	21	7	11
"	22	0	06	"	25	12	06	"	26	2	31
"	26	19	26	"	30	7	26	"	30	21	51
"	31	14	46	Aug	4	2	46	Aug.	4	17	11
Sept	3	6	24	Sept	6	18	24	Sept	7	8	49
"	8	1	35	"	11	13	35	"	12	4	00
"	12	21	57	"	16	9	57	"	17	00	22
"	17	16	18	"	21	4	18	"	21	18	43
"	22	11	39	"	25	23	39	"	25	16	04
"	27	7	00	"	30	19	00	Oct	1	9	25
Oct	11	17	10	Oct.	15	5	10	Oct.	15	19	35
"	16	12	32	"	20	0	32	"	20	14	57
"	21	7	54	"	24	19	54	"	25	10	5
"	26	3	14	"	29	15	14	"	30	5	39
"	30	22	35	Nov.	3	10	35	Nov.	4	1	00
Nov.	5	17	55	"	9	5	55	"	9	20	20
"	10	13	18	"	14	1	18	"	14	15	43
"	15	8	38	"	18	20	38	"	19	11	03
"	20	3	58	"	23	15	58	"	24	6	23
"	24	23	19	"	28	11	19	"	29	1	44
"	29	18	40	Dec	3	6	40	Dec	3	21	05

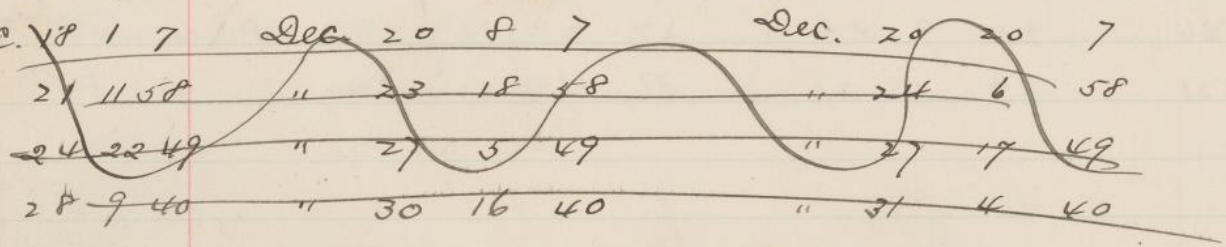
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U Coronae Cont.

E. M. T.

Minima.	d 2.3		d 2.8	
Oct. 13 10 58	Oct. 15	17 58	Oct. 16	5 58
16 21 49	19	4 49	19	16 49
20 8 40	22	15 40	23	3 40
23 19 31	26	2 31	26	14 31
27 6 22	29	13 22	30	1 22
30 17 13	Nov. 2	0 13	Nov. 2	12 13
Dec. 18 1 7	Dec. 20	8 7	Dec. 20	20 7
21 11 58	" 23	18 58	" 24	6 58
24 22 49	" 27	5 49	" 27	17 49
28 9 40	" 30	16 40	" 31	4 40



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S. W. Cygni.

d E. M. T.

Minimum	d 1.0	d 2.7	d 3.6
Nov. 8 16 6	Nov. 9 16 6	Nov. 11 9 6	Nov. 12 7 36
13 5 51	14 5 51	" 15 22 51	16 21 51
17 19 36	18 19 36	" 20 12 36	20 11 06
22 9 21	23 9 21	" 25 2 21	25 0 51
26 23 6	27 23 6	" 28 16 6	29 14 36
Dec. 19 19.51	Dec. 20 19 51	Dec 22 12 51	Dec 23 11 21
24 9.36	25 9 36	27 2 36	28 1 06
28 23.21	29 23 21	31 16 21	Jan 1 14 51

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20 Delphini.

Min.	d 3.5 phase		
~~Dec. 30 04~~	~~Dec. 22 12 04~~		
~~23 19 25~~	~~27 7 25~~		
~~28 14 46~~	~~Jan. 1 2 46~~		
Jan 1 10 07	4	22	07
6 5 28	9	17	28
11 0 49	14	12	49
15 20 10	19	8	10
20 15 31	24	3	31
25 10 52	28	22	52
30 6 13			

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Variables having a variation of 0.5 mags. or more per hour.

Designation	R.A.	Dec.	Variation in hour. Prec.	Foll.	Limits of Var. Prec. side.		Limits of Var. Foll. side.	
γ Delphini.	20h 31m	+17.8	0.80	0.82	-4h 6m	-1h 24m	+1h 24m	+4h 6m
U Cephei.	0 50	+81.1	1.18	1.28	-2 15	-1 15	+1 15	+2 15
~~-1 41~~					~~-0 58~~		~~+2 4~~	~~+2 51~~
Craseki I.	20 2	+55.9	0.92	1.00	-3 40	-1 48	+1 41	+3 24
" II.	19 43	+32.5						
+42° 3338	19 21	+42.5	0.55	..	-1 0	..	..	..
76. 1901. (Krill.)	20 18	+42.5	1.03	1.03				
93. 1901 (Schwab)	19 14	+19.4	1.20	1.25				
73. 1901 (Scuti)	18 49	-12.7	0.48	0.48				
δ Cancri	8 32	+19.4	0.48	0.43				
4. 1903	11 37	+73.1	2.00+					
δ Librae	14 53	-7.9	0.30	0.30				
3. 1903	9 34	+56.6	0.63	0.63				

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No. Nights.		Total range of Variation	Period.	Magnitude.	
Pree. Side	Fol. Side			Max.	Min.
2	~~2~~ 3	2.70	4.0061	9.37	12.07
3	5	2.34	2.4928		
2	2	2.61	4.5729[4]		
			6.0065		
~~2~~ 3	..	0.03	0.5668		
		2.61	3.4507		

Av. Dev. Corr. to Period.

U Cephei 1.4 ms

SS Cygni 1.4

SS Delphini 3.4

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Ephemeris of Variables.

99. Apr.	20	U Cephei
	21	
	22	
	23	
	24	
	25	U Cephei.
	26	
	27	S Cancri.
	28	
	29	
	30	U Cephei.
May	1	S Librae. U Coronae.
	2	
	3	S Librae
	4	
	5	U Cephei
	6	S Cancri.
	7	β Lyrae.
	8	S Librae. U Coronae.
	9	
	10	U Cephei. S Librae.
	11	
	12	
	13	
	14	
	15	U Cephei. S Librae. U Coronae.
	16	S Cancri.
	17	S Librae
	18	

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Ephemeris of Variables.

May 19
20 β Lyrae.
21
22 U Coronae.
23
24 δ Librae.
25 S Cancri. U Cephei. U Coronae.
26
27
28
29 δ Librae.
30 U Cephei.
31 δ Librae.
June 1 U Coronae.
2 β Lyrae.
3
4 U Cephei.
5 δ Librae.
6
7 δ Librae.
8 U Coronae.
9 U Cephei.
10
11
12 δ Librae.
13 S Cancri.
14 U Cephei. δ Librae.
15 U Coronae. β Lyrae.
16

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'99. June 17. Nunn. Groeskii Var.

18.

19. δ Librae

20.

21.

22. κ Delphini.

23

24

25

26

27

28

29

30

July 1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12. δ Librae.

13.

14.

15.

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99. July 16 W Delphini. U Coronae.
17
18
19 δ Librae. V
20
21 W Delphini. V
22
23 U Coronae. V
24
25
26 δ Librae. V
27
28
29
30
31.

99. Sept. 1.
2.
3
4
5
6 δ Librae, U Coronae.
7
8 δ Librae?
9 U Coronae.
10
11
12 Cerasoki.
13 δ Librae.

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Ephemeris of Variables.

(Eastern Time.)

99 Sept. 19. U Cephei. ($11^h\ 32^m$)

20

21 Eraskis. ($10^h\ 27^m$)

22

23 U Coronae ($10^h\ 22^m$)

24 U Cephei ($11^h\ 11^m$)

25

26 W Delphini. ($12^h\ 11^m$) B. Lyrae ($11^h\ 31^m$)

27

28

29 U Cephei. ($10^h\ 51^m$)

30 U Coronae ($8^h\ 5^m$)

Oct. 1 W Delphini ($7^h\ 32^m$)

2

3

4 U Cephei. ($10^h\ 30^m$)

5 Eraskis. ($3^h\ 43^m$)

6 W Delphini. ($2^h\ 54^m$)

7 U Coronae ($5^h\ 47^m$)

8

9 U Cephei. ($10^h\ 9^m$) B. Lyrae. ($9^h\ 30^m$)

10

11

12

13 W Delphini ($6^h\ 39^m$)

14 U Cephei. ($9^h\ 48^m$) Eraskis. ($7^h\ 13^m$) U Coronae ($3^h\ 29^m$)

15

16

17

18

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Ephemeris of Variables cont.

Eastern Time.

'99. Oct. 19 U Cephei ($9^h\ 27^m$)
20 W Delphini ($12^h\ 55^m$)
21 U Coronae ($1^h\ 11^m$)
22 BLyrae ($7^h\ 29^m$) DM. 3338 ($5^h\ 57^m$)
23 Ceraskis ($10^h\ 43^m$) DM. 3338 ($9^h\ 07^m$)
24 U Coronae ($12^h\ 2^m$) U Cephei. ($9^h\ 7^m$) DM. 3338. ($12^h\ 18^m$)
25 W Delphini. ($8^h\ 16^m$)
26 DM. 3338. ($5^h\ 03^m$)
27 DM. 3338 ($8^h\ 12^m$)
28 Ceraskis ($0^h\ 24^m$) DM. 3338 ($11^h\ 22^m$)
29 U Cephei. ($8^h\ 46^m$)
30 W Delphini. ($3^h\ 36^m$)
31 U Coronae. ($9^h\ 44^m$) DM. 3338. ($7^h\ 17^m$)
Nov. 1 Ceraskis. ($14^h\ 13^m$) DM. 3338 (10 27)
2
3 U Cephei. ($8^h\ 25^m$)
4 BLyrae ($5^h\ 28^m$) DM. 3338 ($6^h\ 23^m$)
5 DM. 3338. ($9^h\ 33^m$)
6 Ceraskis. ($3^h\ 57^m$)
7 U Coronae ($7^h\ 26^m$)
8 U Cephei. ($8^h\ 4^m$) DM. 3338. (5:28)
9 DM. 3338 (8:38) ζ Tauri (9:41)
10 Ceraskis Var. ($17^h\ 42^m$)
11
12 DM 3338 (4:33)
13 U. Cephei. ($7^h\ 43^m$) W Delphini ($13^h\ 39^m$) ζ Tauri (9:34) DM 3338 (7:43)
14 U Coronae ($5^h\ 8^m$) DM 3338 (10.54)
15 Ceraskis ($7^h\ 27^m$)
16
17 BLyrae ($3^h\ 27^m$) ζ Tauri (9:34)

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1902phae.proj.1677.

Ephemeris of Var.
continued.

Eastern Time.

99. 11. 18.
19
20
21 U Coronae. ($12^h\ 50^m$) x Tauri. (6:18)
22
23 W Delphini (4:20) U Cephei (7:12)
24 Cerasky's Var. ($10^h\ 17^m$)
25 x Tauri (6:10) DM. 3338 (6:11 ~~8:45~~)
26
27
28 U Coronae. ($0^h\ 32^m$) U Cephei (6:41)
29 x Tauri. (4:02) Cerasky's Var. ($0^h\ 43^m$) 3338 (7:26)
30 BL Lyrae (1:26) DM 3338 (10:37)
12 1
2
3 x Tauri. (2:55) Cerasky's Var ($14^h\ 20^m$) U Cephei (6:20) DM 3338 (6:37)
4 DM 3338 (9:48)
5
6
7 DM 3338 (5:48)
8 Cerasky's Var. ($4^h\ 13^m$) U Cephei. (5:59) DM 3338 (9:02)
9
10
11
12 W Delphini. (9:45) BL Lyrae (23:25)
13 U Cephei. (6:39) ~~BL Lyrae (11:20)~~ DM 3338 ($9^h\ 05^m$)
14
15
16 DM 3338 (5:06)
17 Cerasky's Var ($7^h\ 43^m$) W Delphini (~~6:10~~ 6:55) DM 3338 ($8^h\ 19^m$)

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Ephemeris
& Variables

Eastern Time

99. 12 18 U Cephei. (4:51 -8:21)
19
20 DM 3338. (4h 22m)
21 DM 3338 (7h 35m)
22 ~~W Delphini. (o~~ W Delphini. (between 1:49 & 4:3 following side.) (DM 3338 10:48)
23 U Cephei. (4;31 -8;01)
24 DM 3338 (3:37)

1900 Jan. 3. λ Tauri. (17:51)

Jan. 4

7 1900. 1. 5 W Delphini (between 6:22 & 9:04 front side.) (between 11:52 & 14:34 bb.)
6 DM 3338 (6:12) (Corr = 7.23)
6
7 U Cephei (— S.T. 2:21) λ Tauri. (16:42)
8
9 Erasbis Var. Min = 4.29 (between 6:10 and 7:53 following side) DM 3338 (526)
10 W Delphini (between 1:42 & 4:24 front side) (between 7:12 & 9:54 following side)
11 λ Tauri (15:33)
12 U Cephei (— S.T. 2:21)
13 ~~DM +3338 (7:55)~~
14 DM +3338 (7:55)
15 W Delphini (between 2:34 to 5:16 following side) λ Tauri. (14:24)
16
17 U Cephei (— S.T. 2:21)

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Ephemeris
& Variables

Eastern Time

99. 12 18 W Cephei. (4:51 -8:21)
19
20 DM 3338. ($4^h 22^m$)
21 DM 3338 ($7^h 35^m$) (DM 3338 10.48)
22 ~~W Delphini. (0~~ W Delphini. between 1:49 & 4:3 following side.)
23 W Cephei. (4;31 -8;01)
24 DM 3338 (3:37)
25 β Lyrae (21:24) DM 3338 ($6^h 50^m$)
26 Cerasbis Var (Front side. 7.33 to 9.25) DM 42°3338 ($10^h 03^m$) Cer Var min at (1:13)
27
28 W Cephei. (— -7:41)
29 DM 3338 (6:05)
30 DM 3338 (9:18)
31 Cerasbis Var. (between 2:39 and 4:12 following side.)
2 Cephei (— -7 sid time = 2.2) = Cas. Time - 7.17
1900. 1. 5 W Delphini (between 6:22 & 9:04 front side.) (between 11:52 & 14:34 fol.)
6 DM 3338 (6:12) (Cor = 7.25)
6
7 W Cephei (— S.T. 2:21) λ Tauri. (16:42)
8
9 Cerasbis Var. min = 4.29 (between 6:10 and 7:53 following side) DM 3338 (5.26)
10 W Delphini (between 1:42 & 4:24 front side) (between 7:12 & 9:54 follow. side)
11 λ Tauri (15:33)
12 W Cephei (— S.T. 2.21)
13 ~~DM +3338 (7.56)~~
14 DM +3338 (7:53)
15 W Delphini (between 2:34 to 5:16 following side) λ Tauri. (14:24)
16
17 W Cephei (— S.T. 2:21)

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Ephemeris of Variables

East mean Time.

1900. 1. 18 Dm 3338 (7:10) Ceraskis Var. min at (7:58) (between 4:18 & 6:10 front side); 9:39 & 11:22 fob side.

19 χ Tauri. (13:15)

20

21

22 Ucephei (— S.T. 2:21) Dm 3338 (6:25)

23 χ Tauri. (12:13)

24

25 R Canis Majoris (min at 11:47)

26 Dm 3338 (3:41)

27 Ceraskis Var (min = 11:28) (between 7:48 & 9:40 front side.) U Cephei (— S.T. 2:29)

28

29 W Delphini (between 7:04 to 9:46 front side)

30 Dm 3338 (14:56)

31 Dm 3338 (8:19) χ Tauri. (9:58)

2 1

2

3

4 χ Tauri. (8:50)

5

6

7

8 χ Tauri. (7:42)

9

10 ~~Ceraskis Var (9:18 min) (between 6:03 & 7:55 preceding side.)~~

11

12 χ Tauri (6:34)

13

14

15

16 χ Tauri (5:26)

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Ephemeris of Variables.

East mean Time.

2 18

18

19 Craskis Var. (8:14) (between 4:34 & 6:26 front side)

20 λ Tauri. (4:19)

21

22

23

24 λ Tauri. (3:11)

25

26

27

28 λ Tauri. (2:3) U Cephei. (12:16 minus)

3 1

2 δ Librae (2:54)

3

4 λ Tauri. (0:55-) δ Librae (10:45-)

5 U Cephei. (11:55-)

6

7

8

9

10 U Cephei. (11:34)

11 δ Librae (10:19)

12

13

14

15 U Cephei. (11:12)

16

17

18

19

Cont. on P. 192.

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Dates of observations of special objects.

	Sapetus.	Nova Aurigae.	Nova Sagitt.	Nr. P. 1441.	χ Cygni.	ζ Virginis.	Sawyer's Var.
99 January.							—
"							—
February.		4. 9.		27.			—
"							—
March.		16.	12.	24.			—
"							—
April.		5.	9. 18.				—
"							—
May.	N. 17. 30.	—		—		9. 10. 26.	—
"		—		—			—
June.	1. 6. 13. 16.	—					
"	19.	—					

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(A. J. Vol, 20, p. 47.)

A. N. 149. p. 271.

Müller + K, Var. +30° 91.

Nova Cygni Variable.

R S Sagittarii.

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cont. from P. 189.

Ephemeris of Variables.

East Mean Time.

1900 3 20 U Cephei. (10:52 = Min)
21
22
23
24
25 δ Librae (9:27) U Cephei (10:31 = Min)
26 β Lyrae Cor Min = ($19^h\ 17^m$)
27 ~~β Lyrae Cor Min = ($8^h\ 17^m$ = M.T.) η~~ g. Herculis Prin Min ($11^h\ 52^m$)
28
29 g Herculis (Sec. Min at $11^h\ 0^m$ - 2^m)
30 U Cephei. (10:10½ = Min)
31 g Herculis. (Prin. Min. at $11^h\ 42^m$)
4 1 δ Librae (9:01)
2 g Herculis (Sec. Min at $11^h 42^m$)
3
4 U Cephei. (Min = $9^h\ 49^m$) g. Her (Prin Min) = $11^h\ 31^m$
5
6 g. Herculis (Sec Min = $11^h\ 31^m$)
7
8 δ Librae (8:05) β Lyrae Cor. Min = ($17^h\ 16^m$) g. Her Prin Min = $11^h\ 20^m$
9 U Cephei. (min = ($9^h\ 28^m$)
10 g Herculis (Sec. Min = $11^h\ 20^m$)
11
12 g Herculis. (Prin Min = $11^h\ 10^m$)
13
14 U Cephei. (min = $9^h\ 7^m$) g. Herculis (Sec Min = $11^h\ 10^m$)
15 δ Librae (8:09)
16 g Herculis (Prin Min = $11^h\ 00^m$)
17
18 g Herculis (Sec. Min = $11^h\ 00^m$) DM 3338 (Mag. 8 $^h\ 32^m$)

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East. Mean. Time.

4 19 U Cephei. (Min = $8^h 47^m$) DM 3338 (max $11^h 45^m$)
20 ζ. Herculis (Prin Min = $10^h 49^m$)
21 β Lyrae. Cor. Min = ($10^h 13^m$)
22 δ Libral (Min at $7^h 43^m$) DM 3338 ($7^h 46^m$) S Cancri (10:5-5)
23 DM 3338 ($10^h 58^m$) ζ. Herculis (Sec Min = $10^h 49^m$)
24 U Cephei. (Min = $8^h 26^m$) ζ Herculis (Prin Min = $10^h 38^m$)
25
26 ~~Sec~~. ζ Herculis (Sec. Min = $10^h 38^m$) DM 3338 ($6^h 58^m$)
27 ~~ζ Herculis (Prin Min at $11^h 52^m$)~~ DM 3338 ($10^h 13^m$)
28 ~~ζ Herculis (Prin Min = $10^h 28^m$)~~
29 ~~ζ Herculis (Sec. Min at $11^h 02^m$)~~
U Cephei. (Min = $8^h 0^m$) δ Libral (Min = $7^h 17^m$)
30 ζ. Herculis (Sec. Min = $10^h 28^m$)
5 1
2 ζ. Herculis (Prin Min = $10^h 18^m$)
3 Cerakis. 45°3062 (Min at $12^h 14^m$)
4 ζ Herculis (Sec Min = $10^h 18^m$) DM 42° 3338
β Lyrae Cor. Min = ($13^h 14^m$) U Cephei (Min = $7^h 44^m$)
5 DM 42° 3338
6 δ Libral (Min = $6^h 07^m$) DM 42° 3338 = 11:37
ζ Herculis (Prin Min ($16^h 7^m$)
7
8 ζ. Herculis (Sec Min = $19^h 7^m$) (45°3062 at $6^h 59^m$)
9 U Cephei (Eq = 10:44 Sid. Time 14:14) DM 42° 3338 (7:49) γ Aquil (10:45)
10 ζ Herculis (Prin Min = $9^h 57^m$) W Delphini (9:28) (42° 3338 28) (11:04)
11 S Cancri (10:10)
12 ζ Herculis (Sec. Min = $9^h 57^m$) γ Aquil (10:40) U Ophiuchi (9:56)
13 δ Libral (Min = 6, 26 Sid. Time) U Ophiuchi (6:32)
14 U Cephei (Equal = 14:14) DM 3338 (10:18) ζ Herculis Prin Min = ($9^h 47^m$)
15 γ Aquil (10:34)
16 ζ Herculis (Sec. Min = $9^h 57^m$)
17 β Lyrae Cor. Min # = ($11^h 13^m$) 45°3062 ($5^h 29^m$) DM 3338 (19:30) U Oph (10:47)
18 ζ Herculis (Prin Min = $9^h 36^m$) γ Aquil (10:29) U Oph (16:50)

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East mean Time.

May.

19 U Cephei (Equably = 14:14 S.T.)
20 ζ Herculis (9:36 Sec. Min)
21 γ Cygni (10:24)
22 ζ Herculis (Prin. Min. 9:26) U Ophiuchi (11:28) Dm 3338 (8:44)
23 U Ophiuchi (7:36) Dm 3338 (11:57)
24 U Cephei (Equal. = 14:14 St.) γ Cygni (10:19) ζ Her Sec Min = 9:26)
25
26 45° 3062. (8h 59m β Herculis. Prin Min. 9:16) Dm 3338 (7:58)
27 γ Cygni (10:14) U Ophiuchi (12:14) Dm 3338 (11:09)
28 ζ Her (Sec Min = 9:16) U Ophiuchi (8:22)
29 U cephei (equal = 14:14 S.T.)
30 γ Cygni (10:9) ζ Herculis Prin Min (9:06) B Lyrae 9:12 Dm 3338 (7:10)
31 Dm 3338 (10:23)

June 1 ζ Her (Sec. Min = 9:06) U Ophiuchi (13:02)
2 γ Cygni (10:04) U Ophiuchi (9:09) U Oph (5:17)
3 W Delphini (10 12) U Cephei (Equal = 14:14 S.T.) ζ Her. Prin Min = (8:54)
4 45° 3062 (12h 29m) Dm 3338 (9:36)
5 γ Cygni (9:58) ζ Her (Sec Min = 8:54) Dm 3338 (12:49)
6
7 ζ Herculis Prin Min = (8:44) U Ophiuchi (9:56) U Oph (6:03)
8 W Delphini (5h 33m) U Cephei (Equal = 14:14 S.T.) γ Cygni (9:53)
9 ζ Her Sec Min = 8:44) Dm 42° 3338 (12:03)
10
11 γ Cygni (9:48) β Herculis (Prin Min 8:34)
12 U Oph (10:42) B Lyrae 7:11 Dm 42° 3338 Dm 42° 3338 (11:15)
13 U Cephei (Equal = 14:14 S.T.) ζ Her (Sec Min = 8:34) U Oph (6:49)
14 γ Cygni (9:43)
15 ζ Herculis Prin Min (8:24)
16
17 γ Cygni (9:38) ζ Herculis (Sec Min = 8:24) Dm 42° 3338 (10:29) U Oph (11:28)

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June 18

18 45°3062 (5ʰ 44ᵐ) U Cephei (Equal = 14:14 S.T.) U Oph. (7:36)
19 ζ Herculis (Prim min. 7:11)
20 γ Cygni (9:33)
21 ζ Herculis (Sec. min. = 8:14) DM 42°3338 (9:42)
22 U Ophiuchi (12:14)
23 U Cephei (Equal 14:14 S.T.) γ Cygni (9:28) U Oph. (8:22) ζ Herculis Prim min = (8:04)
24
25 ζ Her (Sec. min = 8:04) DM 42°3338 (A:38) β Lyrae 5:10
26 γ Cygni (9:23)
27 45°3062 (9ʰ 15ᵐ) W Delphini (10:56ᵐ) U Oph (13:30)ʰ ζ Her. Prim min (7:54)
28 U Cephei Equal = 14:14 S.T.) U Ophiuchi (9:08)
29 γ Cygni (9:18) ζ Her (Sec. min. = 7:54) DM 42°3338 (A:09)
30 DM 42°3338 (11:20)

July 1 ζ Herculis Prim min (= 7:41)
2 W Delphini (6:17) γ Cygni (9:12) U Ophiuchi (18:48)
3 ζ Herculis (Sec min = 7:41) U Oph. (9:55)
4 DM 3338 (10:35) U Oph (6:09)
5 γ Cygni (9:07) ζ Herculis Prim min = 7:31)
6 45°3062 (12ʰ 45ᵐ)
7 ζ Her (Sec. min = 7:31)
8 γ Cygni (9:02) β Lyrae (+12°3557) min at 12:05 (8:09) DM 3338 (9:47) U Oph (10:42)
9 ζ Herculis (Prim min = 7:21) U Oph. (6:49) +12°3557 at 9:25)
10 12°3557 at (6:45)
11 45°3062 (2ʰ 30ᵐ) ζ Her (Sec. min. = 7:01) γ Cygni (8:58)
12 DM 42°3338 (9:02)
13 ζ Herculis (7:11 Prim min.) DM +42°3338 (12:14) U Oph (1:28)
14 U Oph. (7:36) γ Cygni (8:52)
15 ζ Hercules (Sec. min = 7:11)
16 DM 3338 (8:15) +12°3557 (12:12) +12°3557 at 9:35
17 ζ Hercules (7:11 Prim min.) DM 3338 (4:26) γ Cygni (8:44)

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East. Mean Time.

1900.

July 18 U Ophiuchi (12:14) +12° 3557 (at 6:54)

19 ζ Her. (Sec. Min = 7:00) U Oph. (8:22)

20 45° 3062 (6:00) DM 42° 3338 (7:28) U Oph. 4:30 ν Cygni (8:42) DM 42° 3338 (10:40)

21 W Delphini (11:40) ζ Herculis (Prin. Min = 6:50) β Lyrae (01:8)

22

23 ζ Her. (Sec. Min = 6:50) U Oph. (13:00) γ Cygni (8:37)

24 U Oph. (9:08)

25 W Delphini (7:00) ζ Herculis (Prin. Min = 6:40) DM 3838 (9:53) U. Oph. (5:16) (+12° 3557 at 9:43)

26 γ Cygni (8:32) +12° 3557 (7:05)

27 ζ Her. (Sec. Min = 6:40)

28 U Oph. (13:47)

29 45° 3062 (9:30) ζ Herculis (Prin. Min = 6:30) DM 3338 (9:07) U Oph. (9:54) γ Cygni (8:27)

30 U Oph. (6:02)

31 ζ Her. (Sec. Min = 6:30)

Sept. 1 DM 42° 3338 (9:18)

2 DM 42° 3338 (12:31) DM +12° 3557 (13:07)

3 U Ophiuchi (min at 11:28) γ Cygni. (7:24) ζ Her. Prin. Min (4:34) DM +12° 3557 (10:28)

4 U Ophiuchi (min at 7:36) DM +12° 3557 (7:49)

5 U Oph. (3:43) ζ Her. Sec. Min (4:54) DM 42° 3338 (8:32) DM +12° 3557 (5:11)

6 γ Cygni (7:19) DM 42° 3338 (11:44)

7 ζ Herculis. Prin. (4:44)

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East. Mean. Time.

Sept 8 UCeph. (12:14) +45°3062 (13:13-).

9 UCeph. (8:22) γ Cygni. (7:14) ζ Her. Sec (4:44)
Dm+42°3338 (7:45-)

10 UCeph. (4:30) Dm+42°3338 (10:58) Dm+12°3557 (13:16)

11 ζ Herculis. Prim. (4:34) Dm+12°3557 (10:30)

12 γ Cygni. (7:09) W Delphini. Prim (8:28) Dm+12°3557 (7:58)

13 UCeph. (13:00) ζ Herculis Sec. (4:34) +45°3062 (3:08)
Dm+12°3557 (5:18)

14 UCeph. (9:08) Dm+42°3338 (10:10)

15 UCeph. (5:16) γ Cygni. (7:04) ζ Herculis Prim (4:24)

16 [illegible]

17 ζ Herculis Sec (4:24) W Delphini Prim (3:48)

18 γ Cygni. (7:00) Dm+42°3338 (14:24) Dm+12°3557 (13:22)
UCephei. S.T. Rec Side. 22:14 Equal to comp Star.)

19 UCeph. (9:54) ζ Herculis (Prim (4:14) Dm+12°3557 (10:46
β Persei Prim. (3:57)

20 UCeph. (6:02) Dm+12°3557 (8:06)

21 UCeph. (2:10) γ Cygni. (6:55) ζ Herculis. Sec (4:14)
Dm+12°3557 (5:28)

22 45°3062 (6:30) Dm+42°3338 (13:38)

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Observe H. P. 10 K on three nights with two comps. stars, and then observe the natural between the stars also. That is. triangulate on 3 nights.

Sept 23 ζ Herculis Prim (4:04) U Cephei (S.T. 22:14)

24 U Oph. (10:41) γ Cygni (6:50)

25 U Oph. (6:48) ζ Herculis Sec (4:04)

26 U Oph. (2:56) Dm 42° 3338 (7:56)
Dm +12° 3557 (13:35)

27 γ Cygni (6:45) ζ Herculis Prim (3:54)
Dm 42° 3338 (11:04) Dm +12° 3557 (10:55)

28 Dm +12° 3557 (10:16) U Cephei (S.T. 22:14)

29 U Oph. (11:27) ζ Herculis Sec (3:54)
Dm +12° 3557 (5:37)

30 U Oph. (7:35) γ Cygni (6:38)

Oct. 1 45° 3062 (10:0) Dm 42° 3338 (10:16) U Oph. (3:43)
β Herculis (3:41) Prim. Min.

2 Dm 42° 3338 (13:29)

3 U Cephei (S.T. 22:14) β Persei (Min. 12:01) γ Cygni (6:33)

4 U Oph. (12:14)

5 Dm 42° 3338 (9:30) U Oph (8:22) ζ Her. (3:31)

6 W Delphini Min (9:13) Dm 42° 3338 (12:43)
β Persei (8:50) U Oph. (4:30) γ Cygni (6:28)

7

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Oct. 8 U Cephei (S.T. 22:14)

9 Dm 42° 3338 (8:44) β Persei (0:39) γ Cygni (6:23)
ζ Herculis (3:21)

10 Dm 42° 3338 (11:55) U Oph. (9:08) 45° 3062 (8:30)

11 W Delphini Min (4:33) U Oph. (5:16)

12 β Persei (2:28) γ Cygni (6:18)

13 Dm 42° 3338 (7:56) U Cephei (S.T. 22:14)
ζ Herculis (3:11)

14 Dm 42° 3338 (11:09)

15 U Oph (9:54) γ Cygni (6:13)

16 U Oph (6:02)

17 Dm 42° 3338 (7:10) ζ Herculis (3:01)

18 Dm 42° 3338 (10:22) U Cephei (S.T. 22:14)
γ Cygni (6:08) ~~ζ Herculis (3:01)~~

19

20 U Oph. (10:40)

21 γ Cygni (6:03) ζ Herculis (2:51) U Oph. (6:48)

22 Dm 42° 3338 (9:38) ~~U Oph. (7:06)~~

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Ephemeris of Eros.

Date. 1899.		R. A. h	m	s	Dec. °	′	″	Log r	Log Δ	Diff.
March	1.5	1	37	20.19	+17	27	55.1	0.09012	0.2170	12.5
	3.5	1	43	32.53	17	34	20.7			
	5.5	1	50	29.31	18	20	18.0	0.08646	0.2179	
	7.5	1	57	10.51	18	45	43.7			
	9.5	2	3	56.13	19	10	34.7	0.08283	0.2188	12.5
	11.5	2	10	46.14	19	34	48.1			
	13.5	2	17	40.52	19	58	21.0	0.07933	0.2195	
	15.5	2	24	39.24	20	21	10.3			
	17.5	2	31	42.26	20	43	13.1	0.07603	0.2202	12.4
	19.5	2	38	49.53	21	4	26.4			
	21.5	2	46	0.98	21	24	47.4	0.07289	0.2208	
	23.5	2	53	16.54	21	44	13.1			
	25.5	3	0	36.14	22	2	40.5	0.06994	0.2213	12.4
	27.5	3	7	59.68	22	20	6.8			
	29.5	3	15	27.06	22	36	29.4	0.06720	0.2218	
	31.5	3	22	58.19	22	51	45.5			
April	2.5	3	30	32.95	23	5	52.4	0.06468	0.2223	12.4
	4.5	3	38	11.21	23	18	47.5			
	6.5	3	45	52.50	23	30	28.4	0.06241	0.2229	
	8.5	3	53	37.57	23	40	52.8			
	10.5	4	1	25.32	23	49	58.5	0.06039	0.2234	12.4
	12.5	4	9	15.81	23	57	43.3			
	14.5	4	17	8.80	24	4	5.2	0.05846	0.2240	
	16.5	4	25	4.04	24	9	2.4			
	18.5	4	33	1.26	24	12	33.3	0.05671	0.2247	12.3
	20.5	4	41	0.22	24	14	36.4			
	22.5	4	49	0.64	24	15	10.5	0.05507	0.2254	

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Ephemeris of Eros.

Date.	R. A.			Dec.			Log r	Log Δ	mag.
april	24.5	4h	57m 2.27	27°	14′	14″6			
	26.5	5	5 4.52	24	11	47.9	0.0vv13	0.2262	12.3
	28.5	5	13 5.06	24	7	49.9			
	30.5	5	21 11.70	24	2	20.3	0.0v4v2	0.2272	
may	2.5	5	29 15.51	23	55	15.9			
	4.5	5	37 19.25	23	46	45.5	0.0v433	0.2251	12.3
	6.5	5	45 22.65	23	36	41.3			
	8.5	5	53 25.43	23	25	5.5	0.0v440	0.2293	
	10.5	6	1 27.33	23	12	0.1			
	12.5	6	9 28.05	22	57	25.3	0.0v477	0.2306	12.4
	14.5	6	17 27.41	22	41	22.3			
	16.5	6	25 25.10	22	23	52.6	0.0vv446	0.2320	
	18.5	6	33 20.90	22	4	57.7			
	20.5	6	41 14.61	21	44	39.4	0.0v646	0.2336	12.4
	22.5	6	49 6.02	21	22	59.7			
	24.5	6	56 54.97	21	0	06	0.0v776	0.2354	
	26.5	7	4 41.28	20	35	44.4			
	28.5	7	12 24.53	20	10	13.4	0.0v934	0.2374	12.4
	30.5	7	20 5.51	19	43	29.5			
June	1.5	7	27 43.24	19	15	36.0	0.06120	0.2395	
	3.5	7	35 17.97	18	46	34.3			
	5.5	7	42 49.66	18	16	27.0	0.06333	0.2419	12.5

Correction to Ephemeris on Apr. 11. was − 6 secs. in R.A. and + 0.″9 in Dec.

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Ephemeris of Fredina (3 KV). From supplement to A. N. 3706.

		R.A.	1901.	Dec.	log r	log Δ
1901.	May	17.	12 1 36.	-3° 12'.K	0.37AA	0.21V1
		17.	1 V3.	3 3.9		
		19.	2 17.	2 V6.2		
		21.	2 K7.	2 K9.K		
		23.	3 22.	2 K3.V	0.3796	0.2373
		25.	K K.	2 3A.K		
		27	K V1	2 3K.1		
		29	V KK	2 30.7		
		31	6 K2	2 2A.0	0.3A0V	0.2600
June		2	7 KV	2 26.1		
		4	A V3	2 2V.0		
		6	10 7	2 2K.6		
		A	11 2V	2 2K.9	0.3A13	0.2A26
		10	12 KA	2 2V.9		
		12	1K 1V	2 27.V		
		1K	1V K6	2 29.A		
		16	17 22	2 32.A	0.3A21	0.30KA
		1A	19 2	2 36.K		
		20	20 K6	2 K0.6		
		22	22 3K	-2 KV.3		

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o Ceti
Capellæ
R Delphini.
U Cephei.
Cerasticis Var.
Nova Aurigæ.
U Camelop.
T Persei.
R Leo Min.

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Comp. Stars for Nova Persei.

H.P. No.	Desig.	Rev. H.P. mag.	H.P. No.	Desig	Rev. H.P. mag.
324	γ Androm.	2.20 ✓	537	– Per. (BQC. 1035)	5.30 ✓
496	β Persei Var.	2.31 ✓	...	PIII 28	6.17 ✓
541	α "	1.90 ✓	600	ο Persei	3.94 ✓
591	δ "	3.10 ✓	735	α Persei	4.89 ✓
649	ε "	2.96 ✓		11 Persei.	5.66 ✓
747	α Tauri.	1.06 ✓		γ Gem.	1.93 ✓
~~862~~	~~ι Aurigae~~	~~2.90~~			
932	α "	0.21 ✓			
936	β Orionis	0.34 ✓			
1091	α "	0.92 ✓			
1423	α Geminorum	1.58 ✓			
1459	β "	1.21 ✓			
142	γ Cassiopeiae	2.25			
213	α Ursae Minoris.	2.12 ✓			
483	γ Persei.	3.08 ✓			
638	ζ "	2.91 ✓			
443	η "	3.93 ✓			
833	α Arietis	2.23 ✓			
1100	β Aurigae	2.07			
1442	α Can. Min.	0.48 ✓			
3147	α Lyrae	0.14 ✓			
1926	α Urs. Maj.	1.95 ✓			
979	γ Orionis	1.70. ✓			
2077	δ Urs. Maj.	3.44 ✓			
1104	θ Aurigae	2.71 ✓			
862	ι "	2.90 ✓			
323	ε Trianguli	5.44 ✓			
707	ζ Persei	4.89 ✓			
896	η Aurigae	3.28			

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Nova Persei. disc. by Anderson 1901. 2. 21.

Comp. Star = 3 hr. + 43° 732 (7.5)

Date.	Diff. Mag.	C. S.	Magn. Nova.	
				6.90
1901. 2. 22.	-6.AA	7.25	0.37	6.86
" " 24.	-6.66		0.59	6.66
" " 25	-6.18		1.07	6.18
" " 26	-5.76		1.49	
" " 27	-5.32		1.93	
" " 28.	-5.Kh		1.43	
" 3 1.	-4.91		2.3K	

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Comp. Stars used in Equatorial Work.

Current number.	Name of Var.	Comp. Star.	
1	Nova Sagittarii.	S.D. -13° 200 (9.0)	
2	R Sagittarii.	C.D.M. II (Vol. 17) -34° 12677 (8.7)	
3	Nova Cassiopeiae Var.	D.M. +47° 3067 (9.1)	
4	S Librae	S.D. -7° 3943 (7.0)	
5	R Virginis.	" -2° 3644 (8.0)	
6	β Lyrae.	D.M. +33° 3224 (8.5)	
7	R Lyrae	" +28° 3467 (9.1)	9.09
8	S Lyrae.	" +43° 4030 (8.6)	8.93
9	Y Aquilae	" +10° 3744 (8.5)	
10	S Cygni	" +33° 4062 (9.0)	
11	o Ceti	S.D. -3° 355 (9.0)	9.19
12	Nova Aurigae	Comp. Star 8 = 11.0	
13	M.P. 4461	D.M. +62° 594 (9.2)	9.18
14	U Vulpeculae	D.M. +20° 4204 (9.2)	9.5-4
15	S Antliae	C.D.M. -28° 7347 (8.7)	
16	T Andromedae	{D.M. +26° 40 7 also star a " +26° 37 a8 +D.M. +26° 42 a1}	
17	U Pegasi	D.M. +15° 4916 (8.8)	8.90
18	U Cephei	" +81° 27 (8.6) + D.M. +81° 2.6 (9.5)	
19	S Camelopardi	D.M. +19° 2088 (9.0)	
20	Z Herculis	" +15° 3316 (9.3)	
21	U Ophiuchi	" +1° 3411 (6.8)	
22	β Persei	α Persei = D.M. +39° 724 (5.2)	
23	~~S Librae~~	~~S.D. -7° 3943 (7.0)~~	
24	R Virginis	" -2° 3644 (8.0)	
25	U Coronae	D.M. +32° 2570 (9.3)	
26	X Cygni.	" +32° 3589 (8.0)	
27	R Canis Majoris	S.D. -15° 1774 (9.1)	
28			

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Comp. Stars used in Equatorial Work.

Current Number	Name of Object	Comp. Star.			Obs. Mag.	
1	Sapelus.	-21°	4457	9.7	10.51	For 1899 obs.
	"	"	4537	9.5	10.56	
	"	"	4547	9.2	9.79	
	"	"	4552	9.3	10.51	
		"	4554	8.7	8.79	
	"	"	4560	9.4	10.05	
	"	"	4567	9.3	9.74	
	"	"	4577	8.7	9.29	
	"	"	4594	8.2	8.19	
	"	"	4605	9.0	9.86	
	"	"	4641	9.0	9.83	
	"	"	4648	9.1	9.65	
	"	"	5391	8.7		
	"	"	5560	8.5		
	"	-19°	4381	8.4	9.18 (No. on 1 day only)	For 1898 obs.
	"	"	4397	8.8		
	"	"	4374	9.8		
	"	"	4399	9.4		
	"	"	4368	8.5	8.68 " " " " "	
	"	"	4365	7.0	8.81 " " " " "	
	"	"	4362	8.6		

χ Cancri. +18° 2082 8.5

χ Persei. +30° 0846 8.9

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Comp. Stars used in Equatorial Work.

(See also p. 130. ff.)

Current Numbers.	Name of Var.			
	T Monocerotis.	Dm.	+7° 1267 (A.6)	
	Charlois Asteroid	"	+14° 7357 (A.7)	
	" "	"	+14° 7330 (9.3)	
	U Ophiuchi	"	+1° 3409 (9.0)	
	+42° 3338	"	+42° 3342 (9.2)	
	X Herculis	"	+47° 2292 (A.1)	
	T Tauri	"	+12° 0357 (A.3)	
	61 Cygni 1900.	"	+61° 0000 (9.0)	
	Nova Aquilae	"	-0° 3709 (9.5)	
	R Lyrae	"	+43° 3017 (7.1)	
	+12° 3577	"	+12° 3566 (9.3)	
	Lalande 21185	Nd.	-22° 4722 (9.2)	
	" "	"	-22° 4702 (9.1)	
	" "	"	-22° 4600 (A.2)	
	" "	"	-22° 4688 (A.7)	
	" "	"	-22° 4613 (9.1)	
	" "	"	-22° 4619 (A.3)	
	" "	"	-22° 4597 (A.0)	
	" "	"	-22° 4581 (A.7)	
	" "	"	-22° 4500 (9.0)	
	" "	"	-22° 4511 (9.1)	
	" "	"	-22° 4480 (9.0)	
	" "	"		
	β Persei	Dm.	+40° 6646 (6.5)	Phot. Value 6.1m
	ζ Bootis	"	+20° 2962 (A.4)	
	δ Monocerotis	"	+9° 1340 (A.1)	
	U Geminorum	"	+22° 1402 (A.2)	Phot. Value A.42 (Vol. 24)
	T Persei	"	+57° 0543 (9.0)	
	W Delphini	"	+17° 4368 (9.1)	

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Comp. Stars used in Equatorial Strip.

Current Number	Names of Var.				Date of Observation
	Stand. fol. y Peg.	Dm.	+14° 1v	(9.2)	
	N Ursae Min.	"	+79° 467	(9.4)	
✓	Eros	N.D	-6° v626	(9.2) ✓	'98,9,5-86
✓	"	"	-6° v60A	(A.v) ✓	98,9.9
✓	"	"	-6° vvAA	(A.3) ✓	98,9-13+14
✓	"	"	-4° v410	(A.v) ✓	98,11,11
✓	"	"	-6° vv79	(A.A) ✓	98.9.12
✓	"	Dm.	+7° v070	(A.) ✓	99.1.18
✓	"	"	+7° v07A	(A.A) ✓	99.1.19.
✓	"	"	+20° K36	(A.A) ✓	99.3.17.
✓	"	"	+21° 21v	(9.v) ✓	'00 7.27
✓	"	"	+3K° Kv2	(9.K) ✓	'00.9.3+4
✓	"	"	+K2° 637	(9.0) ✓	'00.9.24
✓	"	"	+42° 627	(9.2) ✓	'00.9.26
✓	"	"	+45° 662	(A.3) ✓	'00 10. 4.
✓	"	"	+46° 638	(A.7) ✓	'00. 10.5.
✓	"	"	+46° 649	(9.4) ✓	'00. 10.5.
✓	"	"	+48° 707	(A.2) ✓	'00. 10 11.
✓	"	"	+49° 755	(A.7) ✓	'00. 10.15.
✓	"	"	+50° 613	(A.K)	'00.10.19.
✓	"	"	+50° 602	(9.0) ✓	'00.10.20
✓	"	"	+52° 595	(9.0) ✓	'00.10.24
✓	"	"	+52° 596	(9.3) ✓	00.10.24.
✓	"	"	+53° K93	(A.4) ✓	'00. 11. 2.
✓	"	"	+53° K92	(9.5)	'00. 11. 2.
"	"	"	+v3° 430	(A.A) ✓	'00. 11. 6.
"	"	"	+v4 4v2	A.v ✓	'00. 11. 10.
"	"	"	+v3 420	A.v	'00. 11. 1K+v
"	"	"	+54 438	(9.0) ✓	00. 11.12

24)

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~~Comp. Stars used in Equatorial Work.~~

Comp. Stars for Eros.

Eros. C. N. Eros. Comparison Stars (Photometric)

Also stars prec. Dm +34° 446 (9.1) by 54 secs. 12.5 South of it.
magn of this star 10.5 to 11.0 (1855)
Position of this star 2h 20m 53s +34° 41.1 1900.9.4.

Also 10 magn. stars following Dm +42° 638 (8.0) 16 secs; 6.5 N. of it.
Position of this star 2h 41m 26s +42° 28.1 1900.9.26.

also star fol. Dm +45° 663 (9.4) 2m 14s; 1.0 South of it.
Position of this star 2h 42m 42s +45° 44.3 1900.10.4

also 10.8 magn. star prec. Dm +48° 756 (8.6) 34 secs: 1.5 north of it.
Pos. of this star 2h 36m 38s +48° 30.3 1900.10.11.

also 11th magn. star fol. Dm +49° 755 (8.7) 2.0 secs: 7.5 north of it.
Pos. of this star 2h 34m 49s +49° 43.1 1900.10.15.

also 11th magn star fol. Dm +50° 613 (8.4) 25 secs., 8.2 South of it,
Pos. of this star 2h 33m 43s +50° 46.9. 1900.10.19.

Dm.	+52°	424	(8.7)	1900. 11. 21.
C. N. fol. Dm.	+52°	400	(9.0) 14.7 secs., 14' north.	" " 23.
Dm.	+51°	334	8.8	" " 28.
"	+48	463	8.3	" 12 7.
"	+47	448	8.0	" " 8.
"	+46	387	8.9	" " 11.
"	+45	405	9.0	" " 14.
"	+44	347	8.5	" " 17.
"	+43	357	8.8	" " 20.
"	+42	379	9.3	" " 22.
"	+40	409	8.4	" " 26.
"	+39	452	9.4	" " 28.
"	+38	401	8.5	" " 29.
"	+37	490	8.8	1901 1 1.

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Comp. Stars used in Equatorial Work.

Comp. Stars for Eros.

Eros. C. S.	Dm.	+37°	5705	9.0	1901. 1. 2.
		+36	5571	8.6	1. 4.
		+35	4450	8.6	1. 7.
		+30	4361	9.4	1. 16.
		+30	4378	9.1	1. 18.
		+29	5319	8.6	1. 19.
		+27	5245	8.9	1. 29.
		+25	5257	9.1	2. 1.
		+25	5249	9.2	2. 2.
		+23	6321	8.8	2. 6.
		+22	6575	8.3	2. 9.
		+21	6310	8.8	2. 8.
		+20	7360	8.8	2. 11.
		+17	8320	8.9	2. 19.
		+15	9157	8.8	2. 27.
		+12	9257	8.5	3. 6.
		+11°	1071	9.5	3. 12.
		+8	1539	9.1	3. 19
		+2	1851	9.7	4. 12
		−2	2823	9.1	5. 6
		−2	2840	8.8	5. 7
		−4	2932	9.2	5. 17
		−9	3157	8.9	6. 8

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Comp. Stars used in Equatorial Work.

Iapetus	1902	−14°	4118 (9.0)	~~−17° 4413 (9.2)~~
"		−14	4095 (8.7)	
"		−14	4085 (8.4)	
"		−13	4022 (8.9)	
"		−13	4003 (9.0)	
"		−13	3994 (7.5)	
"		−12	4141 (8.0)	
"		−13	2986 (6.0)	
"		−17	4413 (9.2)	
"		−16	4138 (9.2)	
"		−17	4395 (9.2)	
"		−16	4138 (9.2)	
"		−16	4129 (9.0)	
"		−16	4122 (9.0)	
"		−16	4120 (8.0)	
"		−16	4116 (8.8)	
"		−17	4388 (7.2)	
"		−16	4144 (9.0)	

μ Cephei. +57° 2316 (6.7)
S Cam. Var. +37° 2380 (8.5)

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U Cephei.

Descending.	Ascending.
1900. 3. 20 (1)	1900. 1. 2. (3)
4 4 (V)	V 29. (V)
4 14 (V)	6 18. (3)
4 19 (4)	11 7
V 4 (3)	
9 8 (4)	11 7 (3)
9 13 (7)	11 12 (V)
9 18 (6)	12 7 (V)
10 23 (V)	12 12 (4)
11 2 (V)	12 22 (V)

Y Delphini.

1900. 11. 23. (V)	1900. 10. 11 (4)
12. 17. (V)	11. 28 (1)

+42° 3334

1900. V. 10 (V)
V 31 (3)
6 4 (3)
6 13 (V)
9 27 (6)
10 22 (6)
1901. 1. 2 (3)

Cracoviæ Var.

Descending.	Ascending.
1900. Jan. V. (4)	1900. Dec. 27. (4)
	1901. Jan. 19. (4)
1901. July 16 (V)	" June V. (V)

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1902phae.proj.1677.

Photometric.

S 7 Cygni. Overlapping means and right hand pages finished

U Vulpec. " " " " " " " "

S S Cygni. Left hand pages of photometric and visual finished.

o Ceti Overlapping magnitudes finished.

" " Visual Obs. (left hand pages) transfer up.

U Ophei. Left hand pages up.

Y Sagittæ.

S Cygni. Overlapping means on right hand pages finished.

U Ophiuchi. " " " " " " " " and

checked a second time by Mr. Campbell.

β Persei.

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1902Planet. proj. 1677.

Eros.

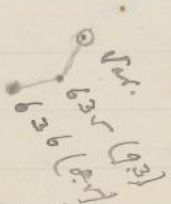
Stars to be observed with Phot. T. near the intersection of the branches of loops.

						(A-V)			
2 Mc.	+	3V°	490	2	21	V8.4"	+3V	2A.0"	7.V"
	+	3V	492	2	22	10.3"	+3V	4.6"	9.0"
	+	3V	493	2	22	16.6"	+3V	0.9"	9.3"
	+	3V	494	2	22	21.4"	+3V	6.6"	A.A"
		Faint intermediate star.							
	+	3K	4V1	2	23	6.9"	+3K	V4.V"	A.A"
	+	3V	490	2	23	2V.6"	+3V	V.0"	A.0"
	+	3V	V01	2	2K	21.6"	+3V	2.1"	A.9"

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Var. Star to be obs. near +42° 63ν (9.3) and 636 (9.5)



Angle at 63ν = 120°

Var. to be obs. about min. by Argelander's method when P. cannot observe it with 12 inch.

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U Cephei.

Time when var. ~~is equal to comp. star~~ is equal to comp. star = $10^h\ 44^m$ S. T.

$10^h\ 44^m + 1^h\ 47^m + 1^d\ 2^h\ 48^m =$

time of secondary min. of U Cephei in sidereal time.

U Cephei. Rate of variation.

Prec. side.		Fol. side.	
$-8^h\ 48^m = +0.8$		$2^h\ 47^m$	$+0.8$
$\frac{-1\ 41}{81}$	$= \frac{-0.8}{1.0 \text{ mag.}}$	$\frac{2\ 81}{47}$	$\frac{-0.8}{1.0}$

∴ Rate of variation per hour on

Prec. side	Fol. side
1.1 mag. per hour.	1.2 mag. per hour.

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2 2 3

U Cephei.

Time when the var. is equal to comp. star.

	E.T.	E.T.
99. Dec. 4.	⩗ 33	9 3
" 13	⩗ 13	4 43
" 14.	43 ⩗1	4 21
" 23.	43 31	4 01
" 25.	16 46	—
" 24.	—	7 41
Dec. 30	16 0	—

U Cephei (99. 12. 29.)

From obs. of last night, the Sidereal Time when U Cephei is equal to comp. star, is

For frac. side = 22h 51m

" foll. " = 2h 21m

10 ⩗1

14 21

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Comp. Stars for Vesta.

1901. 2. 21. Dhu. +24° 1999 (A.O)

" 2. 24 { " +24° 1999 (A.O)
" +25° 1997 (A.O)

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