

ASTRONOMISCHE NACHRICHTEN.

№ 1350.

Ephemeris of the Variable Stars for 1862,
by *Norman Robert Pogson*, Director of the Madras Observatory.

Star	Probable Mag.	Mean Place in 1860		Times of Maxima.	Authority.
		α	δ		
<i>T</i> Piscium	9,5	0 ^h 24 ^m 46 ^s	+13° 46'	April 24, Sept. 14.	<i>Schönfeld</i>
α Cassiopeae	2,0	0 32 35	+55 46	March 20, June 7, Aug. 25, Nov. 12.	<i>Argelander</i>
<i>R</i> Arietis	8,0	2 8 10	+24 24	Jan. 15, July 17.	<i>Baxendell</i>
α Ceti	2,0	2 12 17	— 3 37	July 3.	<i>Argelander</i>
<i>R</i> Tauri	8,0	4 20 38	+ 9 51	May 7.	<i>Winnecke</i>
<i>S</i> Tauri	10,0	4 21 32	+ 9 38	March 11.	<i>Winnecke</i>
<i>R</i> Orionis	9,0	4 51 22	+ 7 55	June 19.	<i>Winnecke</i>
α Orionis	1,0	5 47 36	+ 7 23	Jan. 9, July 24.	
<i>R</i> Geminorum	7,3	6 58 56	+22 55	January 25.	<i>Pogson</i>
<i>R</i> Canis min.	8,0	7 1 0	+10 14	April. Uncertain.	
<i>S</i> Canis min.	7,5	7 25 7	+ 8 37	July 3.	<i>Winnecke</i>
<i>S</i> Geminorum	9,2	7 34 38	+23 47	August 14.	<i>Pogson</i>
<i>T</i> Geminorum	8,9	7 40 54	+24 5	May 13.	<i>Pogson</i>
<i>U</i> Geminorum	9,0	7 46 48	+22 22	Jan. 21, April 28, Aug. 2, Nov. 7.	<i>Pogson</i>
<i>R</i> Cancri	6,0	8 8 51	+12 9	January 17.	<i>Baxendell</i>
<i>U</i> Cancri	9,0	8 27 45	+19 23	July 5.	<i>Winnecke</i>
<i>S</i> Hydrae	8,5	8 46 16	+ 3 36	January 22, October 5.	<i>Winnecke</i>
<i>T</i> Cancri	12,0	8 48 40	+20 23	At minimum December 26.	<i>Winnecke</i>
<i>T</i> Hydrae	6,5	8 48 51	— 8 37	February 22, December 11.	<i>Winnecke</i>
<i>R</i> Leonis	5,0	9 40 2	+12 5	October 13. Minimum (10,0) May 29.	<i>Pogson</i>
<i>R</i> Ursae maj.	7,0	10 34 41	+69 31	April 29. Minimum (13,0) Nov. 4.	<i>Pogson</i>
<i>T</i> Leonis	9,0	11 3 36	+ 6 13	February 9, August 28.	<i>Winnecke</i>
<i>R</i> Comae	8,0	11 57 4	+19 34	October 1.	<i>Winnecke</i>
<i>R</i> Virginis	6,5	12 31 24	+ 7 46	January 1, May 27, October 19.	<i>Argelander</i>
<i>S</i> Ursae maj.	7,5	12 37 48	+61 52	April 10, Nov. 22. Minimum (12,0) Aug. 15.	<i>Pogson</i>
<i>U</i> Virginis	7,5	12 44 0	+ 6 19	July 28.	<i>Winnecke</i>
<i>V</i> Virginis	7,0	13 20 36	— 2 28	March, November.	<i>Pogson</i>
<i>R</i> Hydrae	4,0	13 22 4	—22 33	Not until February 1863.	<i>Baxendell</i>
<i>S</i> Virginis	6,0	13 25 42	— 6 28	May 21. Minimum (11,0) Nov. 17.	<i>Pogson</i>
<i>R</i> Bootis	8,0	14 31 1	+27 21	February 16, September 29.	<i>Winnecke</i>
<i>S</i> Serpentis	8,0	15 15 7	+14 49	March 5.	<i>Argelander</i>
<i>R</i> Coronae	6,2	15 42 49	+28 35	November: very irregular.	<i>Baxendell</i>
<i>R</i> Serpentis	6,5	15 44 15	+15 34	August 29.	<i>Argelander</i>
<i>R</i> Librae	8,5	15 45 40	—15 49	April. Uncertain.	<i>Pogson</i>
<i>R</i> Herculis	8,5	15 59 56	+18 45	October 24.	<i>Baxendell</i>
<i>R</i> Scorpii	9,0	16 9 19	—22 35	April. Very uncertain.	<i>Pogson</i>
<i>S</i> Scorpii	9,5	16 9 20	—22 33	April. Uncertain.	<i>Pogson</i>

Star	Probable Mag	Mean Place in 1860		Times of Maxima.	Authority.
		α	δ		
<i>S</i> Ophiuchi	9,3	16 ^h 26 ^m 12 ^s	—16° 52'	August 5.	<i>Pogson</i>
<i>S</i> Herculis	7,5	16 45 32	+15 11	September 15.	<i>Baxendell</i>
<i>R</i> Ophiuchi	7,6	16 59 44	—15 54	June 25.	<i>Pogson</i>
α Herculis	3,0	17 8 16	+14 33	March 11, May 16, July 21, Sept. 26, Dec. 1.	<i>Argelander</i>
<i>T</i> Herculis	7,9	18 3 48	+31 0	March 16, August 23.	<i>Krüger</i>
<i>T</i> Serpentis	10,5	18 21 59	+ 6 13	Beginning of April.	<i>Baxendell</i>
<i>R</i> Scuti	5,0	18 40 1	— 5 50	Jan. 8, March 21, May 31, Aug. 11, Oct. 26.	<i>Argelander</i>
13 Lyrae	4,3	18 51 4	+43 46	Jan. 31, March 18, May 3, June 18, Aug. 3, Sept. 18, }	<i>Baxendell</i>
<i>R</i> Aquilae	6,5	18 59 38	+ 8 1	May: uncertain. [Nov. 3, Dec. 19.]	<i>Argelander</i>
<i>R</i> Sagittarii	8,2	19 8 28	—19 33	May 19: irregular.	<i>Pogson</i>
<i>S</i> Sagittarii	10,0	19 11 14	—19 16	December.	<i>Pogson</i>
<i>R</i> Cygni	8,0	19 33 4	+49 53	Nov. 14. Minimum (14,3) June 12.	<i>Pogson</i>
χ Cygni	5,0	19 45 11	+32 33	June 10.	<i>Argelander</i>
<i>R</i> Capricorni	9,5	20 3 28	—14 41	September 25.	<i>Winnecke</i>
<i>R</i> Sagittae	10,2	20 7 40	+16 18	Minima; Febr. 24, May 4, July 16, Spt. 25, Dec. 5.	<i>Baxendell</i>
<i>S</i> Delphini	8,2	20 36 38	+16 35	May 4.	<i>Baxendell</i>
<i>U</i> Capricorni	10,5	20 40 22	—15 18	April: irregular.	<i>Pogson</i>
<i>R</i> Vulpeculae	8,0	20 58 10	+23 16	March 8, July 16, Nov. 23.	<i>Winnecke</i>
<i>T</i> Capricorni	9,0	21 14 13	—15 45	July 26.	<i>Schönfeld</i>
β Pegasi	2,0	22 57 0	+27 19	March 10, Apr. 22, June 5, July 18, Aug. 30, Oct. 13, }	<i>Auwers</i>
<i>R</i> Pegasi	8,5	22 59 37	+ 9 46	April 28. [Nov. 25.]	<i>Argelander</i>
<i>R</i> Aquarii	7,0	23 37 15	—16 3	June 28.	<i>Argelander</i>
<i>R</i> Cassiopeae	6,0	23 51 18	+50 37	Nov. 15. Minimum (13,5) May 30.	<i>Pogson</i>

Visible Minima of the Short Period Variable Stars
in G.M.T. and for the Earth's Mean Distance from each Star.

A l g o l.				
Minimum 4,0.		Usual Magnitude 2,3.		
Whole variation completed in seven hours.				
Jan.	5	17 ^h 5 ^m	Sept. 9	7 ^h 8 ^m
	8	13 54	23	15 12
	11	10 43	26	12 1
	14	7 32	29	8 50
	31	12 25	Oct. 2	5 39
Febr.	3	9 13	13	16 54
	6	6 3	16	13 43
	23	10 56	19	10 32
	26	7 45	22	7 21
March		9 27	Nov. 2	18 36
April	10	7 58	5	15 25
May	17	14 33	8	12 14
June	9	13 4	11	9 3
	29	14 46	14	5 51
July	2	11 35	25	17 7
	22	13 17	28	13 56
	25	10 6	Dec. 1	10 45
Aug.	11	14 59	4	7 34
	14	11 48	7	4 22
	17	8 37	18	15 38
	31	16 41	21	12 27
Sept.	3	13 30	24	9 16
	6	10 19	27	6 4

λ Tauri.			
Minimum 4,5.	Maximum 4,0.	Variation rapid.	
March 4	11 ^h 1 ^m	Oct. 31	14 ^h 5 ^m
8	9 54	Nov. 4	12 58
12	8 46	8	11 50
16	7 38	12	10 42
Aug. 4	14 57	16	9 34
8	13 49	20	8 26
12	12 41	24	7 19
Oct. 27	15 13	28	6 11

ζ Geminorum.			
Minimum 4,5.	Maximum 3,8.	Increasing 5 ^d 6 ^h .	
Jan. 10	7 ^h 48 ^m	Aug. 11	15 ^h 36 ^m
20	11 36	Oct. 11	14 24
30	15 24	21	18 12
March 12	6 36	Dec. 1	9 24
22	10 24	11	13 12
May 22	9 12	21	17 0

β Lyrae.			
Principal Minimum 4,3.			
First Maximum (3,4).	3 ^d 2 ^h after Minimum.		
Second Minimum (3,8).	6 9	z	z
Second Maximum (3,4).	9 10	z	z

Febr. 12	18 ^h 52 ^m	July 30	13 ^h 40 ^m
25	16 38	Aug. 12	11 25
March 10	14 23	25	9 10
13	12 8	Sept. 7	6 56

η Aquilae.

Minimum 4,4. Maximum 3,6. Increasing 2^d 9^h.

Febr. 17	18 ^h 4 ^m	July 25	13 ^h 14 ^m
March 25	15 15	Aug. 30	12 24
May 30	12 25	Oct. 5	9 34
June 12	13 49	Nov. 10	6 45
July 18	11 0	Dec. 16	3 55

δ Cephei.

Minimum 4,8. Maximum 3,7. Increasing 1^d 14^h.

Jan. 3	10 ^h 35 ^m	April 15	9 ^h 41 ^m
8	19 23	May 1	12 4
14	4 11	17	14 27
19	12 58	28	8 2
30	6 34	June 13	10 25
Febr. 4	15 21	29	12 48
15	8 57	July 15	15 11
20	17 44	26	8 47
March 3	11 20	Aug. 11	11 10
19	13 43	27	13 33
30	7 18	Sept. 7	7 8
April 4	16 6	12	15 56

Madras Observatory 1861 Dec. 31.

Sept. 23	9 ^h 31 ^m	Nov. 10	16 ^h 40 ^m
Oct. 9	11 54	21	10 15
20	5 29	Dec. 7	12 38
25	14 17	18	6 14
Nov. 5	7 52	23	15 1

The preceding ephemeris rests chiefly upon the same elements of variation as have been employed for the last two years. I trust, before the next is due, to have deduced new numbers for many of the Variable Stars; although, in several instances, I have good reason to think that the corrections to present epochs and periods will be but small. Mr. *Baxendell*, with his habitual friendly cooperation, has favored me with the maxima and minima of all the stars bearing his initial, including λ Tauri. For the other short period Variables I have adhered to the numbers furnished by Prof. *Argelander*, in Vol XVII., page 149, of the Monthly Notices of the Royal Astronomical Society. The table for δ Cancri is intentionally omitted, as from the learned Professor's constant guardianship of that highly interesting object it is most probable that an ephemeris of its changes is already in print, from later corrected elements than are here available. The *Astronomische Nachrichten* arrives so tardily that at present I am only in receipt of *N*° 1328, which was due two months back.

N. R. Pogson.

Observations and Elements of Asia and notice respecting another Minor Planet probably Hestia,

by *Norman Robert Pogson*, Director of the Madras Observatory.

Owing to the breaking up of the fine weather in the month of May, and other unavoidable causes, only the two following observations of the planet Asia could be obtained, in

addition to those published in *Astr. Nachr.* *N*° 1314. They were, like the rest, made by the *Boguslawski* method, with a straight bar and two determining stars.

	Madras M. T.	Mag.	App. α	App. δ	Log. of Par. $\times \Delta$	Compar.	
					α	δ	
1861 May 11	13 ^h 16 ^m 47 ^s	10,6	15 ^h 34 ^m 17 ^s 61	—13° 32' 3" 8	9,177	0,576	14
12	10 15 45	11,0	15 33 30,18	—13 25 58,1	9,444 _n	0,553	18

The assumed places of the two stars employed being:

	Mag.	Mean α 1861,0	Mean δ 1861,0
Weisse XV. 587	8	15 ^h 31 ^m 43 ^s 44	—13° 26' 53" 0
Taylor 8200 = Piazzini XV. 139 = Weisse XV. 597 } = Lalande 28502 and 28504	8	15 32 4,77	—13 35 56,6

From the observations of April 17, May 1 and 12 the following orbital elements were deduced, closely accordant with those of Mr. *Tietjen*, in *A. N.* 1319, and representing

the middle place, exactly in longitude, and within 0^u4 in latitude.