

OBSERVATIONS OF COMET 1887*e* (*Barnard, May 12*)

MADE AT THE HARVARD COLLEGE OBSERVATORY

By O. C. WENDELL, ASSISTANT.

(Communicated by Prof. EDWARD C. PICKERING, Director.)

1887 Greenwich M.T.			*	No. Comp.	$\Delta\alpha$	$\Delta\delta$	$\alpha$	$\delta$	log $p\Delta$	
					$\alpha$	$\delta$	s apparent		for $\alpha$	for $\delta$
June	7	14 <sup>h</sup> 29 <sup>m</sup> 42 <sup>s</sup>	1	5	-1 <sup>m</sup> 9.15	- 4 49.8	16 <sup>h</sup> 0 <sup>m</sup> 13.09	-12 31 12.7	n9.131	0.854
	8	14 14 42	2	5	+0 50.99	- 7 24.4	16 2 23.47	-11 44 13.5	n9.202	0.848
	13	16 41 58	3	5	+1 48.22	+11 21.1	16 13 41.93	- 7 48 48.8	n9.136	0.828
	14	14 41 53	4	5	-1 11.72	-11 41.5	16 15 45.32	- 7 8 9.2	n8.944	0.825
	15	14 27 31	5	5	+1 31.93	+11 1.8	16 17 59.52	- 6 24 42.0	n9.036	0.821
	25	15 28 32	6	5	+2 54.90	- 5 19.7	16 40 39.59	+ 0 3 26.3	+8.622	0.772

Mean Places for 1887.0 of Comparison-Stars.

*	$\alpha$	Red. to app. place	$\delta$	Red. to app. place	Authority
1	16 <sup>h</sup> 1 <sup>m</sup> 20.15	+2.09	-12 26 27.2	+4.3	Ll. 29331
2	16 1 30.40	+2.08	-11 36 53.2	+4.1	Weisse 15 <sup>h</sup> .1138
3	16 11 51.67	+2.04	- 8 0 12.7	+2.8	Weisse 16 <sup>h</sup> .184
4	16 16 55.00	+2.04	- 6 56 30.7	+3.0	Ll. 29798
5	16 16 25.54	+2.05	- 6 35 47.1	+3.3	Weisse 16 <sup>h</sup> .272
6	16 37 42.62	+2.07	+ 0 8 40.1	+5.9	BB. VI. +0°.3571

On June 13, and subsequently, an incipient tail was noticed, about 2' long.

ON A NEW VARIABLE OF THE ALGOL-TYPE

7<sup>h</sup> 13<sup>m</sup> 49<sup>s</sup>, -16° 9'.7 (1875.0)

By EDWIN F. SAWYER.

I beg to announce that I have discovered the star 155 (U.A.) *Canis Majoris* to be a variable of the *Algol*-type.

On the evening of March 26, while observing sequences in the constellation *Canis Major*, in connection with my revision of the southern star magnitudes, the unusual faintness of this star attracted my notice by the marked alteration in the aspect of the rather conspicuous group in the opera-glass, formed by this star with nos. 144, 156, 165 and 169 (U.A.) *Canis Majoris*. Only two evenings previous it had appeared of the usual brightness. Careful comparison with the neighboring stars showed that no. 155 was about 6<sup>m</sup>.8. My two previous observations of the star had made it 6<sup>m</sup>.3 and 6<sup>m</sup>.4, while in the *Uranometria Argentina* it is 6<sup>m</sup>.2. The evening being remarkably clear, there could be no mistake in the observation.

The next opportunity of observing the star occurred on March 29, when it was found at its normal brightness. Other observations at normal brightness followed until April 11 (an interval of sixteen days), when the star was again ob-

served near minimum, and the interesting character of the variations established. Two other observations, at intervals of eight days, were secured when the star was near minimum, including a good observation of the increase of light on April 19 and an apparent decrease on the following evening, when, however, the star was low. It will thus be seen that the period is some aliquot part of eight days, and if the last observation is to be depended upon it is 1<sup>d</sup> 3<sup>h</sup>±. The star was not again observed in faint light, the observations terminating on May 1, owing to its near approach to the sunset horizon. It is uncertain, as yet, whether the star has been actually observed at minimum; the observed fluctuation in light has however amounted to about half a magnitude.

As the star will not be visible here for several months, I have thought it best to publish the meager facts so far obtained, so that observers more favorably located may have an opportunity of obtaining earlier observations from which to determine the elements. The comparison-stars, together with my provisional light-scale used, are as follows:

		Eq. 1875.0		Magnitude		Light
		$\alpha$	$\delta$	U.A.	Sawyer	
$a = 156$	(U.A.) <i>Canis Majoris</i>	7 <sup>h</sup> 15 <sup>m</sup> 15 <sup>s</sup>	-14 7.7	6.2	6.25	16.1
$b = 169$	" " "	7 19 24	-13 30.4	6.4	6.45	14.0
$c = 152$	" " "	7 13 33	-19 3.1	6.6	6.65	10.0
$d = 168$	" " "	7 19 20	-18 46.1	6.8	6.70	9.7
$e = 153$	" " "	7 13 43	-17 17.8	7.0	6.95	5.0

The following table gives the light of the variable at each observation. The letter *n* signifies that the star was observed at its normal or maximum brightness, which is about 14.5 or 14.8 of the light-scale.

OBSERVATIONS.					
Cambridge M.T.		Light	Cambridge M.T.		Light
1887 Mar. 24	7.45	<i>n</i> :	1887 Apr. 10	7.45	<i>n</i> :
26	10.00	9.3	10	9.30	<i>n</i> :
29	8.15	14.3*	11	8.15	10.0::
30	7.45	14.1*	11	9.00	<i>n</i> ::
Apr. 6	7.45	14.8*	12	7.35	<i>n</i> :
7	7.45	14.8*	14	7.45	<i>n</i>
9	7.45	<i>n</i> *	17	7.45	<i>n</i>

Cambridgeport, 1887 July 4.

Cambridge M.T.		Light	Cambridge M.T.		Light
1887 Apr. 19	7.40	10.5:	1887 Apr. 21	8.15	<i>n</i>
19	7.55	10.5	22	8.15	<i>n</i>
19	8.10	11.5	22	9.00	<i>n</i> :
19	8.35	13.2	24	8.00	<i>n</i>
19	9.15	14.5:	24	8.45	<i>n</i> :
19	9.45	14.8:	27	7.45	<i>n</i>
20	8.00	14.4	27	8.45	<i>n</i> *
20	9.15	11.8:	May 1	7.55	<i>n</i> *

It is rather a curious fact that the star is only contained in the *Uranometria Argentina*, although of the magnitude 6.2. As it is the first certainly variable star discovered in *Canis Major* it will probably be known as *R Canis Majoris*.

### THE NOMENCLATURE OF DOUBLE STARS.

I frequently have requests for observations of double stars, which I should be glad to make, especially in the case of rapid motion, if the writers would take the pains to give the position of the star. Instead of doing this, they usually make an obscure reference by means of symbols, or the initial letters of astronomers, which require considerable ingenuity and labor to understand. The symbols  $\Sigma$  and  $O\Sigma$ , used to designate the STRUVES are well known, and the fun-

damental work done by them in this branch of astronomy deserves commemoration. But the increase of symbols has already become inconvenient, and must lead to confusion. It would be better, I think, even at the risk of dampening the ardor of discoverers, to omit the introduction of new symbols until the astronomer has found a pretty large number of new double stars.

A. HALL.

Naval Observatory, 1887 July 18.

### CORRIGENDA.

- No. 158, p. 107. Equation (33), the signs of the 5th and 6th terms should be inverted.
- p. 108. Equation (34), the signs of the 1st, 3d, 6th, 7th and 10th terms should be inverted.

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