

Measures of the binary star Σ 2367

with the 36 inch Equatorial.

The close pair of this triple system has been a difficult object since the first observations by *Struve*. The maximum distance is probably not much greater than 0".4, and for the last twenty years it has been gradually diminishing. It is now a pretty good test for the 36 inch telescope of this observatory. I have the following measures this year:

1891.326	107°1	0".07 \pm
389	109.3	0.09
578	104.6	0.09
1891.43	107.0	0.09

The distance in the first observation was estimated. There is no doubt about the proper quadrant being given for the smaller component. The stars are sufficiently unequal to make this certain, even with the present small distance.

As but few measures have been made of the close pair, it may be convenient hereafter to give these observations in chronological order. The following is a complete list of the measures, omitting only negative results where the pair was noted as single, etc.

Mt. Hamilton, 1891 Sept. 15.

1833.88	68°3	0".4	Σ	3n
1843.77	70.4	0.3	<i>Ma</i>	1n
1846.95	77.8	0.53	<i>O\S</i>	3n
1862.73	66.3	0.55	<i>Ma</i>	3n
1874.72	67.8	0.37	<i>N</i>	2n
1875.65	242.3	0.32	<i>Sp</i>	4n
1883.62	250.4	0.30	<i>Sp</i>	3n
1883.94	62.1	0.22	<i>En</i>	6n
1891.43	107.0	0.09	β	3n

It appears from these measures that the motion is very slow, and that until recently the change has been principally in distance. There seems to be no doubt of the smaller star having been on the following side during the entire time covered by the observations, and, therefore, the period must be a long one. It may be some years before it is measurable again, as the distance will probably still further diminish.

There is a third star about 14" distant, in the direction of 194°, but there has been no sensible change in its position since the measures of *Struve* in 1832.

S. W. Burnham.

The discovery of the duplicity of the principal star of Σ 3018.

In the course of making a series of measures of γ 2 Pegasi (β 720) with the 36 inch refractor, I happened to look at a star in the immediate vicinity, which proved to be Σ 3018, and saw that the larger component of this wide pair was a close double. It is easy enough with the large telescope, but still close enough to have escaped detection by those who have previously measured the wide pair, without any change in the distance.

With the 36 inch I have made the following measures of A and B:

1891.673	72°1	0".24	7.5	7.5
692	75.6	0.26	7.3	7.3
709	74.2	0.23	7.5	7.5
1891.69	74.0	0.24	7.4	7.4

With the same instrument I have obtained the following measures for the wide stars (Σ 3018):

1891.673	203°7	19".00	—	9.5
692	203.7	18.90	—	8.7
709	203.0	18.86	—	8.8

The following are all the measures of these stars:

1830.52	204°0	18".92	7.2	9.5	Σ	3n
1843.74	203.4	19.41	—	—	<i>Ma</i>	1n
1864.45	204.0	18.98	7.2	9.0	<i>A</i>	3n
1870.07	203.8	18.83	7.9	9.8	<i>Du</i>	4n
1879.57	202.9	19.19	7.0	9.5	<i>Cin</i> ₃	1n
1891.69	203.5	18.92	—	9.0	β	3n

Evidently there has been no change in the relative positions of these stars during the sixty years covered by the measures. It is equally certain that the new pair will ultimately prove to be a binary system.

S. W. Burnham.

Lick Observatory, 1891 Oct. 10.

Beobachtungen auf der Wiener Sternwarte.

Von Dr. F. Palisa.

1891	M. Z. Wien	$\Delta\alpha$	$\Delta\delta$	Vgl.	α app.	$\log p.\Delta$	δ app.	$\log p.\Delta$	Red. ad l. app.	*
(226) Weringia.										
Aug. 12	12 ^h 5 ^m 2 ^s	— 6 ^m 49 ^s 68	+ 4' 13".9	4 P	22 ^h 41 ^m 50 ^s 35	9.104 _n	— 15° 30' 56".7	0.894	+ 2 ^s 39 + 13".3	1
(256) Walpurga.										
März 9	11 17 4	+ 1 50.69	— 4 37.9	5 P	11 13 1.90	8.900 _n	— 0 33 18.4	0.821	+ 0.88 — 4.9	2
10	11 12 28	+ 1 8.77	+ 4 18.1	5 P	11 12 19.99	8.900 _n	— 0 24 22.4	0.821	+ 0.89 — 4.9	2