

KG

11366
136

Correspondence.

1692phae.proj.11385
15011366.136



KG 11366.136



Partial Copy.

Gibbeller, 22nd March 1892.

Dear Sir,

With reference to H. C. S. circular No. 2, kindly sent to me, I should be very much obliged if you will send me your magnitudes of comparison stars for the following variables, which I have long wanted to get, in order to secure uniformity in results. *R Andromedae*, *S Ceti*, *R Arietis*, *ε Ceti*, *R Ceti*, *U Ceti*, *R Chrysiæ*, *U Orionis*, *T Hydrae*, *R Ursae Majoris*, *R Virginis*, *R Hydrae*, *X Cygni*, *T Aquarii*, *R Pegasi* + *R Cassiopeiae*.

9th May 21. Sent Col. Markwick to day 3 copies of ^{retype} sheets 1. 2. 3. 4. (magn. of Circumpolar Variables, - also Dir. Nos. for Comparison Stars) - Sent the same number of copies also to J. R. Parkhurst, H. W. Parkhurst and Cuthbert E. Peck.

9th May 23. Sent Col. Markwick faint charts ^{+ mags.} of *R Androm.*, *S Ceti*, *R Arietis*, *ε Ceti*, *R Chrysiæ*, *U Orionis*, *T Hydrae*, *R Hydrae*, *X Cygni*, *T Aquarii*, and *R Pegasi*, (also sent faint chart for *R Virginis*, although the phot. scale mags. are not ready and were not sent.)

(Copy.)

Williams Bay, Wis.,
April 14, 1898.

Dear Professor Bailey,

I am very much obliged to you for your kind letter about the variable stars in the globular clusters. Time has permitted me to take up only one of these clusters, M. 5. It is exceedingly interesting, and when your letter was handed to me I was at work trying to get at the periods of several of these stars.

Visually I have undertaken about five of the stars, three of which I have very carefully followed. I have already observed the cluster on 24 nights since Dec. 20. The most interesting of the stars is the one marked **1** on your photograph kindly sent me by Professor Pickering. This star's normal condition is faint - but under good conditions always visible in the 40 in. It suddenly begins to rise and in less than 2 hours has attained its maximum, the range running through two or three magnitudes at least. It does not remain bright long, and rapidly sinks to its normal condition. I have plenty of material for its period having observed quite a number of maxima I am at work now trying to get at the exact period.

42 is an extraordinary star. It remains bright (the brightest star near) for a long period, then it fades out a couple of magnitudes, and remains faint a considerable time, possibly several days. Another star (either 84 or 86) exactly like it and attaining almost its light at maximum is in P.A. 64° dist. $159''.8$ from 42. Their normal condition seems to be bright. You may be interested in my measures

of these two stars.

1897. Dec. 27.	P.A. 64.20	dist. 189.51	referred to #2
1898. Feb. 26.	.. 64.26	.. 189.52	
Mar. 2.	.. 64.42	.. 189.71	
" 6.	.. 64.40	.. 189.78	

I am measuring up the stars in the cluster with the micrometer, and already have some 36 stars measured.

I think these discoveries are very extraordinary, and when I get through with M. 5, I shall have a lot of work out of it, in the way of measures, etc. I shall be glad to give full credit to these important discoveries. Besides these stars I have mentioned, there are a lot of others that I have readily seen were variable, some marked as variable on the photograph and some unmarked.

I send my rough chart showing the stars I have measured. - For these measures I have selected 5 centers or points of reference.

Very respectfully

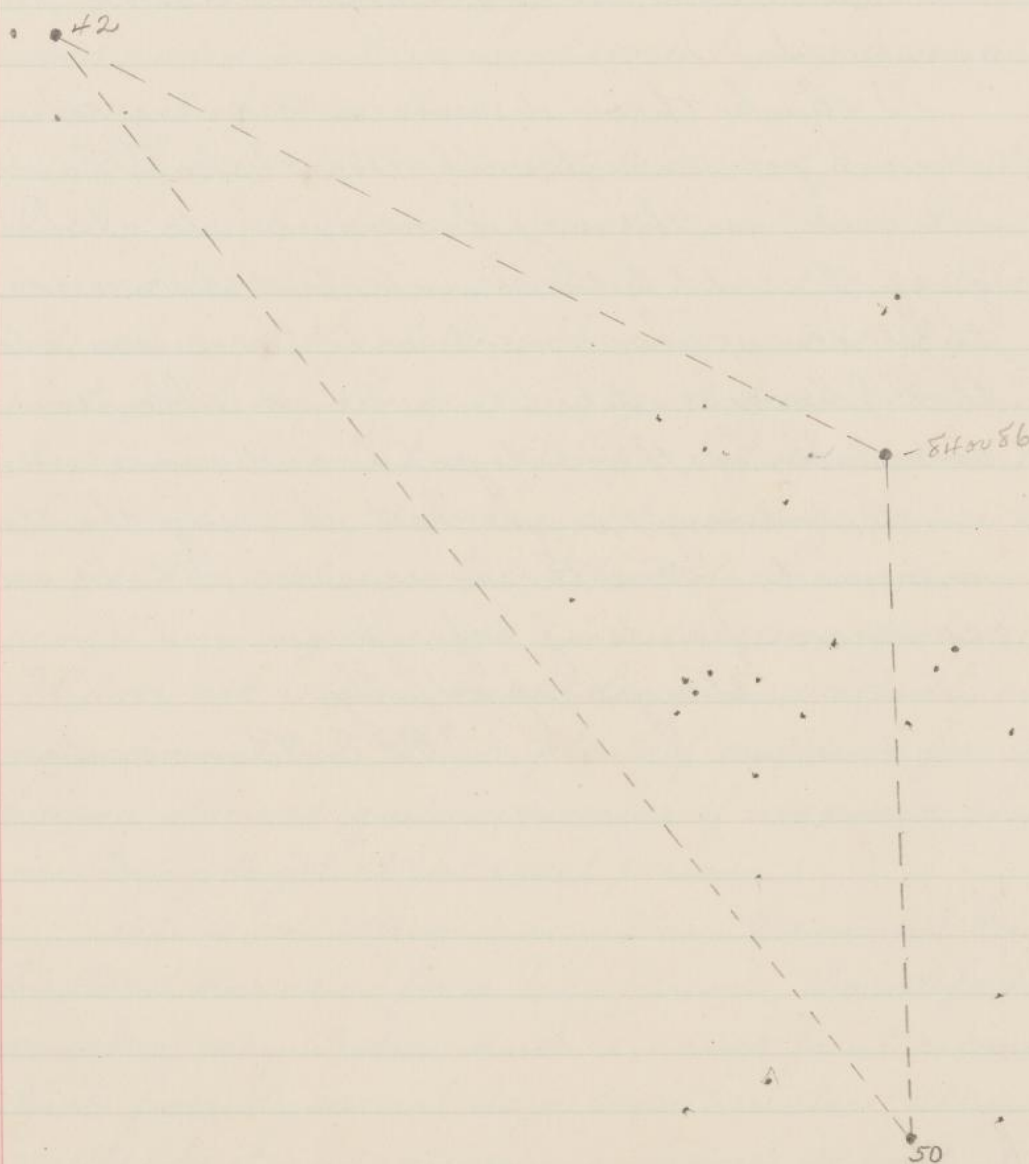
E. E. Barnard.

Rough Chart of some of the stars in
M. 5 from micrometer measures
with 40" of Yerkes Observatory

E. E. B.

The numbers refer to H. C. O. Photo.

S
N



Williams Bay, Wis.,
April 14, 1898.

My dear Professor Bailey,

In speaking of the variables in M. 5, I mentioned H. C. O. no 1. I believe I stated that it required something less than 2 hrs. to rise and the same to fall. The entire rise and fall seems to be well within 2 hours. That is, when it begins to brighten it rapidly ascends to its maximum and then down again within 2 hours or certainly not much exceeding two hours.

When I get time to go over carefully all my obs. I can get the period and entire light change easily from them.

Very respectfully

E. E. Barnard.

Copy.

Maryo Ill. Apr. 23. 1892.
 Prof. E. C. Pickering
 Dear Sir.

I enclose herewith charts showing the comparison stars for nine of my variables, for two of which I note in your circular No. 27, that you have already measured the magnitudes. The others are coming into position for evening observation, and I would be very glad to know the magnitudes of such as you find it convenient to measure. In addition to these I have observed.

♂ Persei.
 R Ursae majoris.
 ♂ " "
 ♀ " "
 ♂ Bootis
 R Camelopardalis.
 ♂ Cygni.
 R Cassiopeiae.

using the comparison stars and notation which you give in "Variable Stars of Long Period"

Very respectfully.
 (Signed) J. A. Parkhurst.

92. May 25. Sent J. A. Parkhurst phot. ^{scale} negs. of all the comp. stars (bot. & faint) ^{for} ♂ Androm. and R. Comae, - also faint charts for comp. stars for these variables.

Pickering Regime

+14 580 3 57 43.3 +14 6.1 8.1 a.

Orig.
R.H. } 1900.
Sec.
Sm. Co.

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System