ASTRONOMISCHE NACHRICHTEN.

N^o 2438.

Schreiben von Dr. D. Gill, Director der Königl. Sternwarte am Cap der Guten Hoffnung,
an den Herausgeber.

It is proposed to carry out a series of observations of the Minor Planets Victoria and Sappho for determining the Solar Parallax by Galle's method in the months of July, August, September and October of the present year.

The necessary extra-meridian observations will be made at Dunsink, Strassburg, Berlin, Bothkamp, Leipzig, Kiel*), Upsala, Moscou and Clinton U. S. in the Northern Hemisphere, and at Melbourne, Rio de Janeiro, Cape of Good Hope (2 telescopes) and Natal in the Southern Hemisphere.

From the clearer skies of the Southern Hemisphere it is believed that a fully corresponding number of observations will be secured there, notwithstanding that the number of cooperating observatories is smaller than in the Northern Hemisphere. It is therefore hoped that other Northern observatories beyond the above-named (whose cooperation is already promised) will also take part in the work.

The necessary programme for the extra meridian observations has been already circulated. The only alterations which have resulted from the criticism of Astronomers are the following:

1. The use of clock work is to be optional, and the observer, if he prefers it, may employ the older method of observing differences of Declination, in which the telescope remains at rest whilst the planet and stars of comparison transit the field.
2. When from errors in the places of the comparison stars, or from errors in the tables of the planets, any distance between the planet and star of comparison is found to exceed six minutes of arc, that distance is not to be measured, but the whole of the observers attention should be given to measuring the distance from the other comparison star, and to measures of the scale value stars.

The more immediate object of this notice is to request the cooperation of powerful meridian instruments in determining the tabular errors of the motions of the planets.

Good meridian observations of the RA. and Decl. of Victoria and Sappho at all observatories provided with sufficiently powerful Meridian-Instruments, are required on every available opportunity between the under mentioned dates:

*) Ich habe eine Mitwirkung der Kieler Sternwarte noch nicht zugesagt, hoffe aber, dass eine solche doch Statt finden wird. Es müssen in der nächsten Zeit noch einige Aenderungen an der Aufstellung des Refractors vorgenommen werden, die indessen hoffentlich rechtzeitig beendet sein werden. K^r.

Victoria 1882 July 15 to Sept. 26
Sappho Sept. 1 to Oct. 22.

Together with each observation of a planet, three of the following comparison stars should be observed, and to make all the series of observations strictly intercomparable, it is desirable that all the comparison stars mentioned below should be observed at least four times each in both RA. and Decl.

Comparison Stars for Victoria.

	S t a r	Mag.	RA. 1855.0	Decl. 1855.0
<i>a</i>	W ₁ 21 ^h 11 75	7.3	21 ^h 50 ^m 13 ^s	+ 3° 28' 8"
<i>b</i>	1302	8.0	21 56 17	+ 3 41.6
<i>c</i>	22 ^h 102	9.1	22 5 55	+ 7 3.2
<i>d</i>	212	9.2	11 3	+ 7 37.6
<i>e</i>	313	8.7	16 19	+ 8 33.8
<i>f</i>	498	7.7	23 56	+ 8 34.5
<i>g</i>	631	9.1	30 7	+ 8 3.3
<i>h</i>	719	9.2	22 34 11	+ 7 26.7

Correction to 1882.0 + 1^m 21^s & + 8'.0

Comparison Stars for Sappho.

<i>α</i>	W ₁ 23 ^h 981	8.8	23 48 10	+ 7 34.6
<i>β</i>	DM. + 7° 5100	9.2	23 53 34	+ 7 35.0
<i>γ</i>	W ₁ 23 ^h 1203	9.0	23 58 36	+ 9 3.3
<i>δ</i>	DM. + 12° 8	8.5	0 3 13	+ 12 24.9
<i>ε</i>	W ₁ 0 ^h 128	8.3	0 8 5	+ 12 37.2
<i>ζ</i>	254	9.3	0 14 55	+ 14 35.8
<i>η</i>	384	9.0	0 23 28	+ 15 23.4

Correction to 1882.0 + 1^m 26^s & + 9'.3.

Meridian observations of the following stars are also requested.

Stars for investigating the distortion of the field.

	Mag.	RA. 1882.0	Decl. 1882.0
<i>a</i>	7.8	17 ^h 39 ^m 46 ^s	+ 5° 46' 0"
<i>b</i>	7.8	40 10	+ 5 44.6
<i>c</i>	7.7	40 23	+ 5 42.4
<i>d</i>	7.1	40 54	+ 5 49.3
<i>e</i>	8.4	41 15	+ 5 44.2

Scale value stars.

For Victoria.

1882.0	7.8	22 ^h 24 ^m 33 ^s	+10° 4'4"
	7.8	25 53	+10 9.5

For Sappho.

1882.0	8.5	0 10 35	+11 17.0
	8.5	11 34	+11 23.2.

It is earnestly hoped that all observatories possessed of sufficiently powerful Meridian-Instruments will cooperate in this work.

Royal Observatory Cape of Good Hope
1882 May 25.

David Gill.

Observations of Variable Stars in 1881.

By *Edwin F. Sawyer.*

The following observations of variable stars were made during the year 1881, at Cambridgeport, Mass. U. S. A. The observations were made by Argelander's method of step estimations, and his comparison stars were used although their light values were in the majority of cases independently determined from my observations, and the corresponding light of the variables deduced from these. I have thought it best as in former communications of this kind to give (in the case of variables of short period) their light values for each evening rather than attempt to deduce their times of max. and min. A low power opera-glass was used throughout the series. An * is used to denote moonlight.

1. R Coronae Borealis.

This star was under observation from June 17 to Nov. 29, but no appreciable change of light could be detected, it remaining about 3 steps fainter than π Cor. Bor.

2. R Scuti.

Observations of this star from June 15 to Nov. 28 indicate the following:

Maxima Aug. 6 and Oct. 23, Minima July 7 and Sept. 24. The following are the light values for each evening given in my scale:

	Light	Light
June 15	15.9	14 15.4
16	16.4	15 15.4
17	15.9	17 15.4
18	15.9	18 16.4 :
19	15.9	19 16.9 :
21	15.4	21 17.4
22	14.9 :	23 18.0
23	15.9 :	24 18.0
24	15.4	27 18.0 :
25	14.9	Aug. 1 18.0
26	15.4	2 18.0
July 1	14.3	3 18.0 *
2	12.3	11 18.0 *
3	11.3 :*	13 18.0 *
4	11.8 *	21 16.7
5	10.3 *	22 16.7
6	9.8 *	23 15.7 :
9	12.2 *	25 15.9
13	14.9 *	28 15.9 :

	Light		Light
Aug. 29	15.7 *	Oct. 10	16.6 :*
30	15.7 :*	11	16.4
31	15.7 :*	14	17.2
Sept. 7	15.4 *	15	17.2 :
8	15.4 *	16	17.2
13	15.8 :*	19	17.2 :
17	14.3	20	17.2
18	13.8	21	16.0
19	12.8	26	16.0
20	13.0	Nov. 11	15.8
21	12.6	14	15.8
25	12.6	15	15.8
26	12.3	16	15.8
30	12.6	20	15.4
Oct. 3	13.8 *	22	15.4
5	15.4 *	26	14.9 *
6	15.4 *	28	14.9 *

Light Scale.

<i>f</i> Scuti	= 26.9
<i>k</i> »	= 23.7
<i>h</i> »	= 20.0
<i>g</i> »	= 18.0
<i>c</i> »	= 13.8
<i>m</i> »	= 11.8.

3. γ Herculis.

Observed from June 15 to Nov. 29. Maxima are indicated as occurring about July 25 and Nov. 12, and a minimum about Sept. 23.

4 and 5, β Pegasi and α Cassiopeia.

The former star was observed from Sept. 18 to Dec. 2, and the latter from Sept. 18 to Dec. 12, but not the slightest change of light could be detected in either star.

6. χ Cygni.

A very good series of observations of this interesting variable was obtained from June 15 to Sept. 18 and indicates a maximum as having occurred about July 14. The following are the light values for each evening expressed in Argelander's scale: