

Saturday 2^d Nov.

Gentlemen!

at VIII b', 197

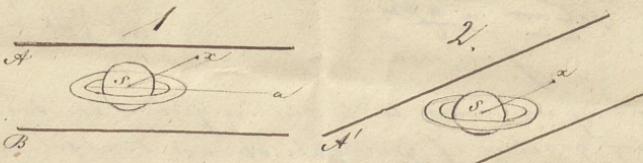
I yesterday received with the liveliest satisfaction the two remaining quarters of your elaborate and beautiful map of the moon's surface together with the Treatise accompanying them as also your maps of the surface of Mars. Pray accept my best thanks for this esteemed and valuable present, and at the same time my hearty congratulations on the confection of a work of such very great labour and difficulty as well as importance! The want of such maps has long been felt and regretted.

Had the Missionaries to whom they were intrusted arrived two months later, we should have quitted the Cape. I expect to arrive in England some time in May and it is not impossible that during the Summer I may have the pleasure to thank you in person for this mark of your attention, as I propose visiting Hanover soon after my arrival in England, and if time will permit should be very desirous to come as far as Berlin - if it were only for the sake of saying my respects to yourselves and your admirable Encke?

When last I wrote to you on the receipt of your former maps, I spoke with hesitation above the 6th (2^d) satellite of Saturn. Since that time (in May last) I have had the satisfaction of observing it several times in a most unequivocal manner, and tracing it through several revolutions in its orbit. But the 7th (1^d) I left all my research. The great Refractor preparing for the Petersburg Observatory will however, I hope, show it. I have also procured a fine Series of micro-metrical measures of all the other satellites in every situation with respect to the primary - the closest and smallest of them being easily observed at its superior and inferior conjunctions. The measures are referred at once to the rings major axis by a peculiar mode of observation which gives such very good and according results that I only regret not having tried

them upon it before. It is as follows:

1st week	X	1st week	X
2nd week	1st and 2nd	2nd week	1st and 2nd
3rd week	2nd and 3rd	3rd week	2nd and 3rd
4th week	3rd and 4th	4th week	3rd and 4th
5th week	4th and 5th	5th week	4th and 5th
6th week	5th and 6th	6th week	5th and 6th
7th week	6th and 7th	7th week	6th and 7th
8th week	7th and 8th	8th week	7th and 8th
9th week	8th and 9th	9th week	8th and 9th
10th week	9th and 10th	10th week	9th and 10th
11th week	10th and 11th	11th week	10th and 11th
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14th week	13th and 14th	14th week	13th and 14th
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16th week	15th and 16th	16th week	15th and 16th
17th week	16th and 17th	17th week	16th and 17th
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31st week	30th and 31st	31st week	30th and 31st
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35th week	34th and 35th	35th week	34th and 35th
36th week	35th and 36th	36th week	35th and 36th
37th week	36th and 37th	37th week	36th and 37th
38th week	37th and 38th	38th week	37th and 38th
39th week	38th and 39th	39th week	38th and 39th
40th week	39th and 40th	40th week	39th and 40th
41st week	40th and 41st	41st week	40th and 41st
42nd week	41st and 42nd	42nd week	41st and 42nd
43rd week	42nd and 43rd	43rd week	42nd and 43rd
44th week	43rd and 44th	44th week	43rd and 44th
45th week	44th and 45th	45th week	44th and 45th
46th week	45th and 46th	46th week	45th and 46th
47th week	46th and 47th	47th week	46th and 47th
48th week	47th and 48th	48th week	47th and 48th
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A and *B* are two very thick parallel wires, distant enough to take in easily between them the planet and Ring. I mean, re the apparent elongation or the angle α (α of a Satellite) from the line of *A* and *B* or the angle α (α), the planet in first place between the wires so as in (fig 1) to stand symmetrically of which the eye will judge with extreme precision - the graduated division being read off. They are next placed as in fig 2. and it is surprising how very correctly with a little practice this may be done so that the line α shall be parallel to the direction of the wires. This being done alterately 3, 5 or 7 times (so as to leave off with the position No 1) - all change of situation with respect to the horizon &c. is eliminated.

The last astronomical novelty of the Southern Hemisphere is one of very great interest. The Star γ Argus (marked in Bode's Map as γ Probus Caroli) has always hitherto been regarded as a Star of the second magnitude or at most as (2.1). During the former years I have had six as it were continually under my eye, by reason of the great nebula which surrounds it, and of which I have been taking most careful drawings - I have always considered it as (2.1) and never had reason to suppose it variable. In Nov. 1837 I saw it as usual. Judge of my surprise to find on the 16.17. December that it had suddenly become a Star of the first mag., indeed and almost equal to Rigel. - It continued to increase. Rigel is now not to be compared to it, it exceeds Arcturus, and is very nearly equal to α Centauri, being at the moment when I write, the fourth Star in the heavens in order of brightness! I remain, gentlemen, Your obliged and faithful Servt.

J. F. W. H. Herzel.

P.S. You will oblige me by communicating the above mentioned fact respecting γ Argus to Prof. Schumacher, as perhaps he may think it worth noticing in the Astron. Nachrichten.

P.S. The total eclipse of the moon last year was finely seen here! The whole disk was well seen with the naked eye, intensely red like a glowing coal - all the spots well seen in the scope - many occultations took place of very minute stars and a faint nebula was traced up almost to the very edge of the disc. It would have been interesting indeed to have seen a nebula occulted.

Done written & signed
George Griffith Esq. L.L.B.
Gwth & John Foster Son & Co