

Jan. 21. 1824. — London

Dear Sir/ On the 3^d inst I received your letter of the 17. Nov. (23) and almost immediately after two more, dated the 25 Nov: and the 23^d Dec: (23) the former enclosing your interesting communication "Ueber die Rectification des Aequatorials" and the latter an outline of the proposed plan for an observation at Vienna. I send you by the same post by which you will receive this my ideas on the latter subject in a form which I hope will meet your purpose, & I have communicated the letter enclosed to F. Bailey from whom you will hear soon on the same subject. I shall now proceed to answer seriatim the many highly interesting points contained in your valuable letters.

The money for Molyneux's Clock has not yet reached him, neither does Hammersley, or Couette know anything about it. I mention this because as you say it has long since been paid over to Friep, it will be right to examine into the cause of the delay. I am glad to hear so good an account of its going. I have ordered one exactly similar, by your directions for Col: Fallon. Molyneux has one already finished and quite ready to go by the next ship which sails for Hamburg. However, as I feared lest I might not exactly understand that part of your letter in which you speak of an adjustment for putting it up without the assistance of a Clockmaker, I have directed him to write to you first. His address is M^r. Molyneux Chronometer Maker N^o 44. Devonshire Street, Queen Square London I have directed him to address the clock to M. Schumacher Palmaille & Co, for Col. Fallon and I have written to M^r. S. to tell him that he may expect it & lose no time in forwarding it to your orders.

If Col. Fallon intends to determine the length of the Pendulum by Capt. Kater's method, & by observations of coincidences, I will mention a circumstance which Captain Sabine, who is just returned from making similar observations at Spitzbergen assured me is a great improvement on his former system. It is to observe not merely the moment of the first disappearance of one disc behind the other, but also that of its first reappearance on the other side, and take the mean for the moment of the coincidence. If this precaution be omitted grave errors may arise from a variation in the intensity of the light which falls on the white disc.

I will take care that your paper on the Equatorial shall be properly laid before the Ast. Socy. and in the volume of their Transactions now in the press you will see that your other interesting communications have been received with the approbation they so justly merit

Mr. Leubach's Propositions respecting right-angled triangles are very neat. Some of the properties you have enumerated (for instance the situation of the Centers of the circles in right lines) were known to me before. If I can possibly find time I shall supply the demonstrations & communicate them to some of our Scientific Journals &c. But as I am very much occupied at present, I will not promise

Permit me now to acknowledge the receipt of several interesting communications. Your Analytical Geometry, like your Astronomy appears to me a most useful compendium, and one which has the peculiar advantage that any formula or theorem which is wanted can be immediately found. The Errata & Addenda to the Astronomy I also received, but have had no opportunity of using. I suggested the translation of that work to a friend of mine, very competent to the task, and had hopes it would have been accomplished, but business of a very different nature interfered, I have therefore been obliged to content myself with making honourable mention of it, in an Essay on Physical Astronomy I have lately published in the Encyclopædia Metropolitana, & expressing a hope that some one will be found to undertake it. I shall send you this Essay as soon as possible — probably in Col. Fallon's Clock Case.

I believe I must have long since acknowledged the arrival of the 2^d Vol. of the "Annalen der Sternkunde in Wien" of which 4 Copies reached me Nov. 1. 1822. & of which I dispatched one to Greenwich one to Dublin, one to Cambridge and the other to the Ast. Society, and for each of which the best thanks are due from their respective quarters.

The III^d Vol of the "Annalen der Wiener Sternkunde" which you speak of in your letter of the 17th Nov. as "längst abgeschickt" has not yet reached me. I long to see it and the IVth which you say is in the Press.

Your empirical formulae of Refraction are very curious. I have taken the liberty to translate & read to the Astronomical Society the part of your letter of the 3^d Jan. 1823 which contains them, as well as your account of Fraunhofer's new Circular Micrometer (of which M. Schumacher has circulated a printed notice) You have by this time I dare say seen Mr. Ivory's memoir on Refraction, a work every way worthy the reputation of its Author. At all events I will endeavour to procure & send you a copy.

Your method of determining the Latitude without any knowledge of the time seems extremely practicable, even at Sea, and may easily be extended to other stars at a distance from the Pole, and that often with great advantage, in cases where the trouble of computation bears no proportion to the value of the result. It strikes me I have met with a method not very dissimilar, at least depending on the same principle (for land observations) in some periodical work, but on looking for it I have not been able again to find it.

In the event of your wishing to make any communications in future to the Astronomical Society, have the goodness to address them, generally, "for the Astronomical Society of London. Care of the Foreign Secretary 55. Lincoln's Inn ~~Street~~ Square London".

As I am soon going abroad, and shall probably be long absent from England, so that I am compelled to devolve the correspondence of the Society on another. I am not without hopes that our Friend Mr. Bailey, will undertake the office, but at all events, I hope that individually our correspondence will continue, as I assure you it has been productive of much gratification to me, and all letters addressed to me (in my private capacity) will be duly taken care of

and (if considered safe) forwarded. I fear I shall not be able
to visit Vienna, though the prospect of making your
acquaintance in person would alone be a powerful
inducement to me. Yours very truly. J. F. W. Herschel

on 9. March

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 $\mu = 907$
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An dem Herrn Herrn Professor Littrow
Direktor der k. k. Sternwarte
zu Wien
Wien
Germany

Erhöht. Conc. Bül.
Jan. 21. 1747



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Professor Pfaff of Erfurt is translating my Father's astronomi-
cal works into German & they will speedily be published in
4 Volumes, arranged methodically. The 1st Vol is finished & soon
to press, it is printed by M. Arnold. Dresden