

Hardwick Parsonage,
Nov. 20. 1865.

My dear young friend,

I have long - very long - owed you a letter - so long that you would have been more than justified in throwing me overboard, but for the apologies which I know my dear wife has repeatedly made for me. Indeed I have been much over-pressed - especially in connection with this unexpected Cheltenham engagement. I thought such a thing might possibly be looked for towards spring - but at this time it came upon me as a surprise - I did not like to decline it but it has proved a great enjoyment. So that I have had no time to look, as yet, at the book you so kindly sent me - tho' I am none the less obliged by the sender's very kind remembrance. In addition to all this, we have of late had a great & most distressing anxiety, which Mr. Webb mentioned to you. You will I know be pained to learn that it had a fatal termination on Friday last, when it pleased our Heavenly Father to take to Himself - one whom we mourn, & long & well mourn, with a depth that would not be understood by any who did not know what she was, & what she was to us. I cannot tell you how we have been cut up. I feel quite blighted. We might have lost many members of our families with much less reluctance. I fear I have been

very-unwilling to submit - very disbelieving to the Supreme Will - very backward to believe in that wonderful Goodness which changes us. I feel now how vain much has been my attempt, at consoling other people. -

But I must not make your affectionate heart uneasy by these details - I must thank you very much indeed for your kindness in referring to Prof: Challis about the libration question - I had hardly had leisure or heart to look into it - but my impression is that it is very satisfactory solution - that part of your letter, I cannot at this moment lay my hand upon, but it is quite safe, & will furnish me with matter of thought some day. - I am very much pleased at your standing with the Professor & your introduction to the Observatory. The telescope is sufficiently known as out of first-rate definition - but still its great light-gathering power must make it a magnificent thing in its way. With respect to Prof: Challis's enquiry about diffraction-rings, they are very conspicuous in reflectors - I think I may say, as far as my experience goes (for I do not know much of very large reflectors) they are both more numerous, & brighter, than in the achromatic. Since the central disc is smaller & sharper: so that one might fancy that in the achromatic some part of the light which forms rings in the reflector

was ~~of~~ detained, as it were, in the edges of the spurious
disc, so as to give it magnitude & richness of definition.
I have never seen a front-view reflector, so I cannot
form an idea how far the rings are increased by the
presence of the small mirrors, but I think there is rea-
son to believe that such must be the case, as Prof.
Airy (I believe) says that in achromets the rings
are rendered more bright & luminous, & the discs
smaller, by stopping out the centre of the object-glass.

— Mr. Witt is going on admirably with his
specula. — Those of $6\frac{1}{2}$ inches & $5\frac{1}{2}$ ft. focus have
I hear most marvellous definition. He has just
sold a splendid thing of $10\frac{1}{2}$ inches, the performance
of which greatly delighted me, when I was fortunate en-
ough to have a fine hour one evening in Hereford.
With a power of 370, I saw μ^2 Bootis cleanly divi-
ded, with a black interval of about half either's disc.
Will the Northumberland Telescope do this? If so,
it has been greatly belied. Witt could do the same
with $9\frac{1}{4}$ inches. — One of the $10\frac{1}{2}$ (or $10\frac{1}{4}$) has been just
ordered for an Englishman living near Nice. Think of
old Hereford being preferred to Paris or Munich! —
Mr. Witt lent me one of the Herschel-Browning speculo-
scopes — quite a new thing to me — which delighted me ex-

tremely. But this sad occurrence has brought a heavy
cloud over all these things. and what are they after all!
Behold - the Judge standeth before the door! and how
uneasy am I, to give in my account of my steward-
ship! It is every awful thought. What if I were
summoned away in the midst of all my scientific
trifling! -

My thoughts have often been with you on subjects
as to which ~~you~~ ^{we} had much interesting talk, but you
have since said nothing. I hope I may infer that
my dear young friend is more "stablished, strengthened,
settled." The time is short - & instead of listening to
specious but empty objections to the Gospel, we had all
need to imbibe more of its spirit: "If any man will do His
will, he shall know of the doctrine, whether it be of God."

We have been so very glad to hear of your dear Mo-
ther's restoration ~~to health~~ ^{to health}. I trust she may yet be
spared for many, ~~many~~ ^{many} years of increasing usefulness
& happiness. My father sends his kind regards, & my
wife will speak for herself, so with all possible good
wishes & many thanks I remain,

My dear young friend
Yours very affectionately
J. W. Webb.