

Philostratus & Kalmuczy's
595.

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Albany by Melissa Silliman
July 14th 1831.

Sir,

I have only this moment received your obliging letter of the 10th October accompanying the Account of your very interesting Journey to Mont Elbruz which I shall be happy to insert in my Journal, in two or three successive numbers. It will also give me great pleasure to send to your friend M. Saxe of Hamburg an Auto graph letter of Mr. Walter Silliman and of some other distinguished Sillimans.

The paper on the Mean Temperature of the Earth to which you allude I mean to reprint in the next No. of my Journal. It was written eleven years ago and establishes beyond a doubt the existence of two Poles of maximum cold in the Northern Hemisphere, &c. As these Poles appeared to differ in temperature I gave a separate formula for each, the accuracy of which has been confirmed by

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by many subsequent observations. These since,
however, constructed the following general formula
on the supposition that the two poles are of equal
temperature, and in the same latitude and oppo-
site meridians.

$$T = (t - \tau) (\sin.^\circ \delta. \sin.^\circ \delta') + \tau$$

in which τ = Mean Temperature in Fahren.

t = Maximum Equatorial Temperature, about 82° Fahren.

τ = Maximum Temperature at each pole of
maximum Cold, = about from 0° to $-3\frac{1}{2}^\circ$ Fahren.

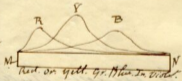
δ, δ' = Distances of the place from the two
cold Poles

The Exponent n is not far from $5/3$. - The Transit
Circle Pole is not far from Long. 100° W. for Green-
wich & is N. Lat. 73° , and the Siberian one is
East Long. 110° and N. Lat. 73° .

I have given an envelope formula for repre-
senting the magnetic Intensity. Both the formu-
lae give a series of returning curves of the
nature of Lemniscates, similar to those obtain-
ed by projecting Haughton's & Sabine's observations.

Along with this I have sent a Paper on Elastic Attraction which you will oblige me by presenting to the Imperial Academy of Sciences to show I have sent various others without knowing if they have ever been received.

I beg also that you will notify to that learned body that I have succeeded in effecting a New Analysis of White Light by the action of absorbing media. I have shown that the Solar Spectrum formed by a prism consists of three Spectra of equal length viz Red, Yellow and Blue having different points of maximum illumination. The annexed Figure shows this, where MN is the spectrum, and R, Y and B the Curves whose ordinates represent the intensities of each colour.



It would be very agreeable to me to receive from you occasionally an account of your own Researches, or of any discussion made in Russia after communicating them to the Royal Society of

of Editor, I would make them known by
 publication in my Journal. Any thing
 sent to me addressed to the Care of Mr.
 Cadell Strand London would reach me in
 safety. - I have had the pleasure of pro-
 posing you as an Honorary member of
 the Society of Arts for Scotland, and I
 hope in a week or two to send you notice
 of your election.

I have the Honor to be, with great regard,

Yr

Your Most Obedt. S.

Faithful Servt.

J. Becket

To Professor Kueffer
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P.S. I am very anxious to receive accounts of the
 Discoveries in Nat. Hist. & Physical Geography made
 by the Water-works. They are now explaining the
 Russian Empire.