

Auszug aus einem Schreiben des Herrn *Hind* an die Redaction.

Here one observation of Dr. *Westphal's* comet by instrumental Comparisons with B.A.C. 1235 which, I believe, will prove pretty exact.

1852	Greenw. m. T.	AR. ☾	δ. ☾
Sept. 30	$8^h 19^m 25^s$	$3^h 29^m 29^s 96$	$+84^{\circ} 42' 28'' 1$

There was no catalogued star near enough for the wire-micrometer. On October 5 the comet exhibited a tail about 40' long.

I have one observation of *Massalia*; the planet was rather brighter than *Bessel's* stars of the ninth magnitude.

1852	Greenw. m. T.	AR.	Decl.
Octbr. 2	$11^h 21^m 3^s$	$0^h 0^m 15^s 64$	$+0^{\circ} 31' 5'' 1$

At $11^h 14^m 28^s$ the planet followed a star of 8.9th or 9th mag. $9^{\circ} 12'$ and was south of it $38'' 4$; this observation, when reduced, will be much better than the above, at present I have not got its position.

Last night (October 11) I noticed a very small nebulous-looking object in AR. $4^h 11^m 50^s$ $\delta. +19^{\circ} 8'$ for 1825, the epoch of our Ecliptical charts: it was south-preceding a star of 10th mag. which, to my surprise, has escaped insertion on the map for 4^h R. A. recently published — possibly it may be variable. The sky at the time was remarkably clear but the object appeared very faint: it preceded the star $1^s 2$ and was $0' 7$ south of it. I suppose it will prove a new nebula, none of our Catalogues having anything in the above position. Its diameter did not exceed $30''$.

Let me request your attention to one of my variable stars AR. $7^h 40^m 17^s 51$ N.P.D. $65^{\circ} 53' 45'' 7$ for 1850,0, which has become visible this year sooner than I expected, its neighbour AR. $7^h 34^m 2^s 41$ N.P.D. $66^{\circ} 12' 11'' 6$ being still of the 13th magnitude. On September 20 the former star was a 9.10th and very slightly, if at all, yellow. It was less than the star following but brighter than one to the North forming nearly an equilateral triangle. On October 11th it had increased a little in brilliancy and was much yellower. As this star approaches its maximum it assumes a deep orange or red colour. Its neighbour will probably come out suddenly and I am anxious to get continuous observations to decide something about the law of variation in both instances.

On October 11th. *Westphal's* Comet presented a rather curious appearance. The nebulosity was extended in the usual direction of the tail and a small glimmering point was visible in the more condensed part situated near the boundary of the nebulosity toward the sun. From this point a ray of light shot out into the cometic matter forming the short tail: at moments this was very distinct and reminded me of some of the drawings of *Halley's* Comet with its luminous sector.

We looked well this morning for *Biela's* Comet under the most admirable sky I remember to have witnessed in October, but the twilight was too strong to allow of our discovering the Comet.

Mr. *Bishop's* Observatory, London,
1852 October 12.

J. R. Hind.

Note sur la figure de la terre et la loi de la pesanteur à sa surface, d'après l'hypothèse d'Huygens, publiée en 1690.

1) Quoique cette hypothèse soit démentie par l'ensemble des faits observés, il est curieux de l'exhumer, et de la présenter développée avec le langage de l'analyse moderne, afin de pouvoir juger si *Huygens*, dans l'appendice à sa dissertation sur la cause de la gravité, a réellement été capable de démontrer que son hypothèse conduit aux deux résultats que *Laplace* lui attribue dans sa notice historique, exposée vers le commencement du XI^{ème} livre de sa *Mécanique Céleste*. Comme je pense que, *Huygens* n'était pas en possession de principes suffisants pour comprendre dans son analyse la double hypothèse de la force constante et celle de la force

variable, j'ai voulu mettre en évidence par quelle espèce d'heureuse divination, il a pu, à travers des calculs bornés, en conclure le véritable rapport entre la pesanteur au pôle et la pesanteur à l'équateur, dans le cas, où, sans admettre l'attraction de molécule à molécule, on suppose, que chaque molécule d'une masse fluide homogène, tournant sur un axe, tend vers le centre de gravité de cette masse, en raison inverse du carré de sa distance à ce point. On verra que cela tient à une extension hasardée que *Huygens* donnait au résultat obtenu pour le cas de la force constante.

2) Soit $Mf(r)$ la loi de l'attraction à la distance r du