It is well known that *C* and *F* of the solar spectrum coincide with lines of hydrogen. On the evening of the 17 inst., I observed the lines of hydrogen heated by the induction spark, in the instrument simultaneously with the bright lines of this remarkable star. The brightest line coincided with the centre of the undefined hydrogen line in the green. On account of the faintness of the stellar spectrum the coincidence of the red band could not be determined with certainty, but it appeared to agree in position in the spectrum with the red line of hydrogen. If hydrogen be really the gas from which the lines of this star emanate, the conditions under which it has become luminous are probably different from those of terrestrial flames. The line in the star is brilliant and well defined at the edges, but the green line of hydrogen is usually more expanded and less luminous than the strong red line, which characterizes the spectrum of this gas.*) The faint line seen by glimpses in the more refrangible part of the spectrum of the star, may correspond with the blue line of hydrogen.

The observation that the bright lines of this star are more brilliant than the corresponding parts of the continuous spectrum over which they fall, appears to indicate that the gas from which the light represented by the bright lines emanates is at a much higher temperature than the photosphere of the star.

*) See *Plücker and Hittorf*, Spectra of Ignited Gases and Vapours, Phil. Trans. 1865, page 21.

In connection with the phenomena of this star several of our former observations on the spectra of stars appear to possess new interest.

The spectra of α Orionis and β Pegasi are of the same order of general grouping of the absorption lines as the spectrum of this star. In these stars the dark lines indicating the presence of hydrogen are wanting. We have recently found that the more remarkable of the variable stars which have an orange or ruddy tint possess similar spectra.

This also worthy of note that the whole class of white and bluish white stars, are characterized by spectra in which the dark lines due to absorption by hydrogen are very strong, while the absorption lines due to the other elements are unusually faint. The speculation presents itself whether we may not regard hydrogen as intimately connected with the more important differences of stellar constitution.

On the 16th the new star was brighter than ϵ Coronae Borealis, but on the 17th, it was not so bright as ϵ Coronae Borealis. The astronomer Royal informs me that a meridian observation of this star made at Greenwich on the 17th inst., leads to the conclusion that it may possibly be Argelander *N* 2765, Zone $+26^\circ$ „Bonner Sternverzeichniss“, 9,5 mag., which has burst forth into temporary splendour.

Observatory, Upper Tulse Hill, near London, 1866 May 19.

William Huggins.

NB. Die hiezu gehörige Zeichnung wird nachgeliefert. *P.*

Beobachtung der Leto. Schreiben des Herrn Stud. *Theodor Wolff* an den Herausgeber.

Die Leto, welche in diesem Monat in Opposition kommt, habe ich gestern Abend aufgefunden und beehre ich mich Ihnen die eine von zwei Beobachtungen, welche ich erhalten habe, zu übersenden. Es ist der Ort der Leto:

$11^h 15^m 57^s$ mittl. Zeit Bonn. AR = $16^h 23^m 6^s 17$, Decl. = $-25^\circ 49' 30'' 5$,

und der scheinbare Ort des Vergleichsterns: Oeltzen 15701/2. 8^m. AR = $16^h 23^m 45^s 89$, Decl. = $-25^\circ 42' 55'' 9$.

Eine genaue Vergleichung mit der Ephemeride im Berliner Jahrbuch habe ich noch nicht anstellen können; es scheint mir aber zweifellos, dass der beobachtete Planet die Leto sei.

Bonn, 1866 Mai 19.

Theodor Wolff.

Schreiben des Herrn Professors *E. Quetelet* an den Herausgeber.

Un article de journal intitulé „une nouvelle étoile“ annonçait qu'un M. *Courbebaisse*, Ingénieur de ponts et chaussées, à Rochefort, avait observé le 13 dans la couronne une étoile nouvelle. On donnait une position approchée de cet astre qui le 13 devait avoir égalé l'éclat de Gemma, tandis que le 11 le même amateur n'avait rien vu dans cette position. Hier Samedi j'ai vu effectivement une étoile assez

brillante que j'ai estimé de grandeur $5\frac{1}{2}$.) L'ascension droite réduite au 1^{er} Janvier 1866 était $15^h 53^m 54^s 58$, et la déclinaison approchée $+26^\circ 19'$. Cette position répond à l'étoile n° 2765 de la Zone $+26^\circ$ p. 113 du Catalogue d'Argelander publié en 1861, dont l'éclat est marqué $9\frac{1}{2}$. Cette étoile est donc très-probablement une variable.

Bruxelles, 1866 Mai 20.

E. Quetelet.

*) Am 23^{sten} d. M. war der Stern nur noch schwach 7^{ter} Grösse. — *P.*