without sensible loss of accuracy. Also, since $p'$, $q'$ vary slowly, it would suffice to give them once for each day instead of for every star.

They might thus be given in a few lines at the bottom of each page, which would leave space for two other columns, which are given in the *American Ephemeris,* and which might well be given in ours, viz., the Greenwich hour-angle of the star at the time of conjunction in R.A., and the star's declination to the nearest tenth of a degree. If these were given, we should have all necessary data on the same page of the *Almanac,* and further could estimate with much greater facility whether an occultation was likely to be visible at a given station.

I feel convinced that if Prof. Hough's suggested omissions were carried out, the only result would be still greater slackness in these observations on the part of private observers than is now the case.                    A. C. D. C.

---

### Meteors in February from Auriga.

On the evening of February 18, at $9^h$ $46^m$, I saw a meteor brighter than 1st mag. burst out very suddenly a few degrees E. of γ Andromedæ. Its apparent path was from 35° +44° to 19° +42°, but I did not see the early part satisfactorily. The duration of its flight was about 2 sec., and its direction from the stars ζ–η Aurigæ.

One of the best meteoric showers visible in February has a radiant near this point, 5° S.S.W. of α Aurigæ, and I have called attention to it on several occasions (*Monthly Notices,* lxi. p. 420, &c.). It often furnishes bright meteors in the evenings of the month named, and the display seems to have been first recognized and its radiant found by Greg and Herschel and Schiaparelli and Zezioli. The duration of its activity is rather doubtful, but it is certainly continued between February 7 and 23, and there is evidence of its sustenance in the months of March and April. I have never obtained many observations in February, but have recorded seven of these Aurigids with a radiant at 75° +41°. The mean of several other determinations by various observers in February and March is at 75° +43½°. This particular stream deserves more attention, and it would be interesting to learn the date of its maximum, which I believe occurs near the middle of the month. The position of its radiant will also repay further investigation, for it appears to coincide with that of a series of showers visible in the summer and autumnal months (August to December inclusive) from a centre at 74° +41½°. These Aurigids begin to display a well-pronounced activity in the mornings of the second week in August, when they are contemporary with the Perseids, but they are more numerous in September, especially on

about 1st–6th, 14th–16th, and 21st–22nd.  In August and September they are often brilliant and exhibit features similar to the swift, streaking Perseids.  In later months, when the observer may be watching the Orionids (October), Leonids (November), or Geminids (December), his attention will again be pretty certainly drawn to the Aurigids ; their visible aspect will, however, have somewhat changed, though the point of radiation will remain the same at $\zeta$–$\eta$ Aurigæ.

W. F. DENNING.

Bishopston, Bristol,
1903, Feb. 20.

# CORRESPONDENCE.

*To the Editors of ' The Observatory.'*

### Flamsteed's Well.

GENTLEMEN,—

Perhaps you will allow me to add a very slight additional comment to your editorial note on Mr. Lynn's letter.

The impression has somehow or other obtained some currency that Flamsteed used his well to obtain naked-eye observations of $\gamma$ Draconis during the daytime.  As I mentioned in my last book, ' Astronomy without a Telescope,' p. 239, I am convinced that his object was entirely different, and that he wished to secure accurate measures of the distance of this star from the zenith.  It is well known that he was very anxious to measure stellar parallax, or, as he prefers to call it, "the annual parallax of the Earth," in order to complete the proof of the Copernican theory of the motion of the Earth.  For this he observed Polaris and Sirius with his mural quadrant, and believed that he had solved the problem, until Cassini pointed out that the displacements which Flamsteed believed to be parallactic occurred at the wrong times of the year.  They were, of course, really due to aberration.

But in the course of this enquiry the suitability of $\gamma$ Draconis for an observation of the kind did not escape him, and it seemed to him that he might obtain far more accurate measures of it than of any other star.  Most of his observations of stellar position were made with his mural quadrant of seven feet radius.  But at that time telescopes of enormous focal length were used in order to get rid of the effects of chromatic aberration.  Such a telescope Flamsteed actually had, of 60 feet length, and mounted on a mast 80 feet high, which stood in the centre of what is now the lawn of the Astronomer Royal's Terrace Garden.  But such telescopes were never used for accurate observations of star-places ; they were too ricketty and unwieldy.

One star, however, could be easily observed with such a telescope — $\gamma$ Draconis.  The object-glass could be placed in a horizontal position in the roof of a high building, and the observer