

versity, St. Andrews (August 16). A lecturer in zoology at Armstrong College, Newcastle-upon-Tyne—The Registrar (August 28). A principal of the University College of North Wales, Bangor—The Registrar (October 1). A chief science mistress at the County School for Girls, Beckenham; or a temporary post until Christmas and a permanent post in September or January—The Head Mistress (marked 'Science Post'). Directors of propaganda for calcium cyanamide in India and in Ceylon respectively—The Director of Propaganda for Calcium Cyanamide, Adelaide House, King William Street, E.C.4. An assistant entomologist under the Empire Cotton

Growing Corporation for work on cotton pests in the Union of South Africa—The Secretary, Empire Cotton Growing Corporation, 2 Wood Street, Westminster, S.W.1. An assistant master at Soham Grammar School to take charge of practical instruction in Nature study, horticulture, and the elements of agricultural science—The Secretary for Education, County Hall, Cambridge.

ERRATUM.—In the issue of July 10, p. 64, col. 1, line 21 of paragraph on "Silver Iodide in Gelatin Iodo-bromide Emulsions": for "440 mm." read "440  $\mu$ ."

Our Astronomical Column.

FINLAY'S COMET.—Mr. S. Hasunuma, of Tokyo, who has calculated the perturbations of Finlay's comet (*Astr. Nach.* 5453), finds that they delay the perihelion passage until August 7, which is some six weeks later than the approximate value assumed in the B.A.A. Handbook. The effect is to bring the comet into a more favourable position for observation, so that its detection this summer is now quite probable. The following ephemeris for 0<sup>h</sup> is based on perihelion August 3<sup>o</sup>.

	R.A.	N. Decl.
July 18.	3 <sup>h</sup> 37 <sup>m</sup>	13° 48'
„ 26.	3 40.9	16 38
Aug. 3.	4 16.9	18 56

A change of +4 days in perihelion date diminishes the R.A. by about 10<sup>m</sup> and the Decl. by about 90'. The comet must be looked for low in the east just before dawn.

THE COMING PERSEIDS.—The earlier meteors of this famous shower have been perceptible since the opening of July, and it is very interesting to trace the development of the display and the motion of its radiant from night to night through the constellations of Andromeda and Perseus.

This year should provide a shower of more than usually prominent character, for the moon will be new on August 8 and practically invisible at the period of the maximum.

The radiant moves E.S.E. in a line corresponding to 39° north of the ecliptic, and its positions on four dates in July, August, and September are as follow :

	Star near
July 15 . . . 15° + 47°	Psi Andromedæ.
August 1 . . . 31° + 52°	10° N. Gamma Andromedæ.
August 15 . . . 49° + 57½°	8½° N. Alpha Persei.
September 1 . . . 69° + 61½°	2° W. Beta Camelopardalis.

New observations should be applied to test the accuracy of these approximate positions. The Perseids usually leave streaks, and these are occasionally very enduring in the case of the brighter meteors, so that their directions of flight may be recorded with considerable fidelity.

Some hundreds of the Perseids have had their real paths computed, and there seems little necessity for further data of this sort except on nights near the commencement or end of the display, when double observations will give good and certain radiants. It will be interesting, however, to learn more of the minor contemporary showers. Observers, in comparing one year's results with others, should make such allowances as appear to be required respecting the weather, moonlight, etc. The hours of observation are also important as greatly affecting the

altitude of the radiant and the number of meteors distributed.

THE SIMEIS OBSERVATORY REFLECTING TELESCOPE.—The report of the Pulkovo Observatory for 1925 has been published. The most important work done during this year is considered to be the erecting of the 40 inch (1 metre) reflecting telescope at the Simeis Observatory in the Crimea, which is affiliated to the Pulkovo Observatory. The reflector was made at the works of Sir Howard Grubb and Sons, Ltd., and a brief description of it is to be found in NATURE of April 12, 1924 (vol. 113, p. 550).

In the report some interesting details are given relating to the erection of the instrument. The masonry was started on June 6, 1925, and at the beginning of November the mechanical parts of the revolving dome were so far ready that the erection of the reflector could be proceeded with. Finally the large mirror was inserted in its case with great precautions, and was fixed to the tube.

By the end of the year the reflector was mounted, with the exception of the clock-work. Movement of the instrument by hand is easy, although the total weight is 6½ tons. The mechanical parts of the instrument work perfectly, the construction being the highest type of technical achievement.

The programme of research being dependent on the quality of the mirror, a preliminary laboratory test was made during the summer months by Hartmann's method at the centre of curvature of the mirror. The conditions during the test were purposely chosen far from favourable and approximated closely to the average conditions in the dome. Quite apart from the mounting, it is very important to have a thorough knowledge of the shape of the mirror. A series of independent photographs were taken on different days and were examined, in order to get an idea of the mirror's shape. The following details are noteworthy. The results of measurements of different photographs taken on the same day give very nearly the same results. The zonal aberration is exceedingly small, of the same order as the errors of measurement. The average departure in different zones is about 0.03 mm. The accuracy of the configuration of the mirror (departure from a paraboloid) is of the order of 1/10 of a wave-length. According to Hartmann's classification, the mirror may be considered as "hervorragend gut" (exceedingly good). The results of the analysis leave no doubt that the mirror has a perfect shape, and in comparison with data published for other big mirrors it certainly ranks among the best.

Research with such an excellent instrument on both the mechanical and the optical sides is expected to give good results in the various interesting problems for which the instrument is intended to be used.