

Answer. No. The photograph is a microphotograph, taken with a 6 mm. objective on Kodak Super XX film and subsequently enlarged.

Nous plaçons ici une communication de M. Whipple, se rapportant au sujet traité par M. Linfoot, quoique cet exposé ait été fait, pour des raisons matérielles, au début de l'après-midi.

2. EXPERIENCES WITH THE BAKER SUPER-SCHMIDT METEOR CAMERAS

By FRED L. WHIPPLE, *Harvard College Observatory*

The Super-Schmidt Meteor Camera was designed by James G. Baker and manufactured by the Perkin-Elmer Corporation for the Bureau of Ordnance of the United States Navy, to be used by the Harvard Observatory. The camera, of fine optical components including a spherical mirror, has an aperture of 12.3 inches, a focal length of 8.0 inches and covers a field of 55° with a spherical focal surface of 7.3 inches diameter. The optical focal ratio is nominally $f/0.65$ and effectively $f/0.85$.

The first complete telescope was installed in New Mexico during the summer of 1951. Since March 1952 two of them have been operating at two stations for the simultaneous photography of meteors.

Rotating shutters break the exposure for meteors 60 times per second and admit 25 % of the light for stationary objects in the sky. Special equipment has been designed at the Harvard Observatory for moulding flat photographic film to a radius of curvature of 8.0 inches by means of heat. The moulding technique is completely successful and requires 2 minutes per film. The optical system of the camera is opened for loading the film. The operation requires about 3 minutes. The film is held on a spherical surface by vacuum to a precision of about 0.0005 inch. With Eastman X-Ray film and with the rotating shutter, the maximum exposure on the sky is 12 minutes; the operating cycle is 15 minutes.

The Super-Schmidt cameras give the optical performance of high quality wide-angle lens systems with about 80 % of the light contained in a 25-micron disk near the optical axis and in about a 50-micron disk near the edge of the field. Lack of achromatism is small in the wave-length range 3800–4500 Å., but becomes quite appreciable in the red end of the spectrum.

Some 200 meteors have been doubly photographed in the interval March through July 1952 with a rate of about one meteor per 30 minutes of exposure time. This effective rate for meteor photography is from 50 to 100 times greater than with any previous lens systems used for the purpose.

3. SUR LES PHENOMENES THERMIQUES NUISIBLES DANS LES TELESCOPES A REFLEXION

Par A. COUDER, *Paris, France*

Les phénomènes dont je vais parler sont de deux ordres différents. J'examinerai en premier lieu les effets qui résultent des différences de température qui existent dans l'air, à l'intérieur d'un instrument et dans son voisinage immédiat, sur le trajet du faisceau lumineux: c'est là ce qu'on pourrait appeler la micrométéorologie de l'observation télescopique. Comme résultat de cette étude je décrirai brièvement les dispositions qui ont été introduites dans l'installation du télescope de 193 cm. actuellement en cours de réalisation à l'Observatoire de Haute-Provence, comme une tentative pour améliorer ces conditions micrométéorologiques.

Dans une seconde partie je considérerai les déformations thermiques des miroirs eux-mêmes. Sans revenir bien longuement sur la description de ces déformations, connues