

blink comparator and other methods. The preliminary results of the investigation are published in Vol. I of the *Publications of Eclipse Expeditions* (in Russian).

The results may be summarized as follows: It was established with certainty that a number of formations in the outer corona shifted in various directions during the time covered by the observations; the apparent velocities did not exceed 2 or  $2\frac{1}{2}$  km./sec. A discussion of the shifts showed that they can be generally accounted for on the assumption that the corona follows the solar rotation with the daily angular velocity  $14^\circ$ .

Many conspicuous changes were found to have occurred in the inner corona during the two hours of observations. Motions of the coronal clouds with velocities from 5 to 20 km./sec. and in outstanding cases to 40 km./sec. were established. Strong qualitative changes in the coronal arches and loops were detected, sometimes completely altering the appearance of a coronal formation.

An examination of the plates of the inner corona showed that the structure of the corona is intimately connected with that of the chromosphere. In several cases formation of coronal clouds from condensations and details in prominences (these clouds had the greatest velocities) and ejection with coronal velocities from salient points of the chromosphere were directly observed.

#### COMMISSION 14 (STANDARD WAVE-LENGTHS)

PRESIDENT: Dr W. F. MEGGERS.

SECRETARY: Prof. G. R. HARRISON.

Dr Meggers expressed regret that so many members of the Commission had been unable to attend the meeting, most because of ill-health.

The tragic death of Dr C. V. Jackson was a great blow to the work of the Commission, but the President felt that the measurements on the lines of the noble gases and of the iron arc made by Dr Jackson would stand as an enduring monument.

The recommendations listed on p. 101 of the Draft Report were brought up for detailed consideration, the following visitors taking part in the discussion: Messrs Carroll, Dingle, Edlén, Green, Merrill and Swings, and Mrs Moore Sitterly.

At the suggestion of Prof. Harrison the wording of recommendation 1 was changed to read as follows: "It is recommended that the specification for producing the primary standard of wave-length, adopted in 1935 by the International Committee on Weights and Measures, be adopted by the International Astronomical Union in lieu of the specification set up by the Union in 1925." The recommendation was adopted as amended.

Recommendation 2 was adopted in the form given on p. 101 of the Draft Report.

Recommendation 3 was adopted in the form given on p. 101 of the Draft Report.

Recommendation 4 was discussed at length. Prof. Harrison believed that some modification in the definition of the symbol A. was desirable. Prof. Dingle pointed out that the term "Ångström unit" was not technically correct, the name of the unit being the angstrom. Accordingly the definition of A. on p. 100 of the Draft Report was amended to read as follows: A. = angstrom, the international wave-length unit. It was emphasized that the word angstrom, while derived from the name Ångström, was not in fact that name, the Å and ö having been modified.

Dr Merrill expressed the opinion that the use of *r* and *R* for indicating lines with

narrow and wide reversal respectively was not desirable for astronomical spectra, in which both absorption and emission lines might often be found together, or even the same line appear in both absorption and emission. Prof. Harrison felt that this would not cause confusion, since  $r$  and  $R$  were to be taken as indicating absorption in an emission line, or emission in an absorption line. Specific statement would in any case be needed to indicate whether the main portion of the line appeared in absorption or in emission. The recommendation was adopted as given in the Draft Report on p. 101, with the single change mentioned above regarding the symbol A.

## COMMISSION 15 (PHYSICAL STUDY OF THE COMETS)

PRESIDENT: Dr F. BALDET.

SECRETARY: Miss HELEN W. DODSON.

En ouvrant la séance le Président rappelle que la Commission 15, créée en 1935, se réunit pour la première fois. Il rend hommage à la mémoire du Comte A. de la Baume Pluvinel, Président du Comité National Français d'Astronomie, récemment décédé, qui devait participer aux travaux de la Commission. Cet astronome avait beaucoup étudié les spectres des comètes et c'est à lui qu'on doit, en particulier, la première application réussie (1902) du prisme-objectif à leur étude.

Le Président fournit quelques explications sur le rapport préliminaire qui donne un résumé des travaux effectués sur la physique des comètes depuis trois ans. Il s'est proposé de montrer où en étaient les questions qui vont faire l'objet des discussions de la Commission afin de pouvoir mieux orienter une collaboration internationale. Le rapport est adopté sans modifications.

Il dépose sur le bureau les exemplaires dactylographiés, traduits du russe en français, de six mémoires du Prof. Orlov sur la théorie des comètes. Ces traductions sont à la disposition des membres qui désireraient en prendre connaissance.

Les trois suggestions publiées aux "Draft Reports" (p. 113) sont mises en discussion. En ce qui concerne la première, M. Dufay rappelle que des échanges de photographies de la comète Finsler (1937*f*) ont déjà eu lieu à la demande du regretté Ellsworth de l'Observatoire de Lyon, qui désirait entreprendre une étude des mouvements des nébulosités observées dans la queue de cette comète. Le Président a envoyé à l'Observatoire de Zurich une série des photographies de cette même comète prises à l'Observatoire de Meudon.

Les deux autres suggestions sont soumises à discussion et des échanges de vue sur la photométrie des comètes par images extra-focales ont lieu.

M. Vandekerkhove attire l'attention sur les avantages que présente la chambre de Schmidt à grande ouverture relative dans l'étude photographique des comètes et l'intérêt qu'il y aurait à en répandre l'usage.

Le Président lit une note communiquée par M. Delporte sur les travaux concernant les observations de comètes et la théorie de leur origine effectués à l'Observatoire d'Uccle.

La Commission adopte les quatre résolutions suivantes:

(1) La Commission recommande de publier une liste des photographies des comètes et de leurs spectres classées par ordre chronologique. La publication de cette liste sera faite trimestriellement, et à titre d'essai, aux Annales de l'Observatoire de Meudon par les soins du Président.