

## COMMISSION 8: POSITIONAL ASTRONOMY (ASTRONOMIE DE POSITION)

**Report of Meetings, 19 and 26 August 1970**

ACTING PRESIDENT: W. Dieckvoss.

SECRETARIES: G. van Herk and R. H. Tucker.

President Nemiro, who is absent, proposes G. van Herk for Vice-President. Symms proposes R. H. Tucker for the same position. Tucker refuses to accept a nomination. The meeting accepts G. van Herk unanimously.

The Commission then nominated the members of the Organizing Committee.

The Sub-committee on photographic catalogues up to the 9th magnitude is reported to die out.

The following resolutions are unanimously adopted:

1. Commission 8 reaffirms its recommendation that meridian circle observers should include time and latitude stars in their observing programmes (A. A. Nemiro).

2. Commission 8 recommends that as many observatories as possible which possess suitable meridian instruments should organize absolute observations of bright and faint stars (A. A. Nemiro).

3. Commission 8 considers as very important the inclusion in the fundamental catalogues of a number of faint stars up to the 9th magnitude (especially the FKSZ stars) (A. A. Nemiro).

4. Commission 8 approves the initiative of the Nikolaiev observatory in respect of the meridian observations of zodiacal stars, and recommends that the observation of these stars be organized at other observatories on the basis of international co-operation (A. A. Nemiro).

5. La Commission 8 souligne le grand intérêt qu'il y aurait à préparer et effectuer des observations spatiales en astrométrie pour obtenir rapidement dans le domaine qui l'intéresse des progrès très importants difficiles, ou impossible, à obtenir autrement (P. Lacroute).

6. Commission 8 encourages the developments of new instrumentation and techniques which endeavor to improve the fundamental inertial reference system (B. L. Klock).

7. Considering the necessity and the actuality of the problem of refraction for the further advance of astrometry, Commission 8 proposes a symposium before the next General Assembly of the IAU, be dealing with the astronomical refraction (G. Teleki).

With respect to the name of the Commission, no change is considered at this moment in view of the oncoming merging of Commissions 23 and 24 (A. Reiz).

The following papers were presented at the meeting:

B. L. Klock: The Automatic Transit Circle of the U.S. Naval Observatory.

P. Lacroute: Intérêt de mesures spatiales en astrométrie.

E. Høg: A Theory of a Photoelectric Multislit Micrometer.

J. E. B. von der Heide: Mounting Errors of a Photoelectric Micrometer.

G. Teleki: Need for an International Agreement on Astronomical Refraction.

H. J. Fogh Olsen: Results obtained with the Copenhagen Transit Circle at Brorfelde.

D. Saletić, S. Sadzakov: Quelques résultats du travail sur le catalogue des étoiles de latitude.

D. Saletić, S. Sadzakov: Une méthode différentielle pour la détermination des erreurs du cercle.

C. Anguita, G. Carrasco, P. Loyola, D. D. Polojentsev, K. N. Tavastsherna, M. S. Zverev: The SPF1 Catalogue of Right Ascensions.

J. Petit, E. Portugal, R. Tapia, D. Polojentsev, G. Silva, G. Timashkova, T. Polojentseva, R. Taibo, D. Viveros: The Pulkovo Large Transit Instrument in Chile.

B. Guinot: A Full-Aperture Astrolabe.

J. E. B. von der Heide: SRS-Program. Preliminary Results of the Observations made at Perth Observatory, Bickley, Western Australia by the Hamburg Observatory Expedition.

K. N. Tavastsherna: The Catalogues of Declinations Compiled at the Pulkovo Observatory on the Base of Observations Made at the Melbourne Observatory.

D. A. Pierce: Star Catalogue Corrections Determined from Photographic Observations of Selected Minor Planets (Summary and Results).

I. Pakvor: The Meridian Marks of the Large Transit Instrument in Belgrade.

F. Noël: Corrections for Some FK4 Stars Deduced from Astrolabe Observations at Santiago, Chile.

J. L. Schombert: Status of the SRS Program, 1 June 1970.

Observatory	Zone	Commitment	Date started	Completed		Final results expected
				Obs'n	Redn's	
Abbadia	+5° to -15°	1560 × 4	62.3	100%	100%	1968.8
Bordeaux	+5 to -15	1560 × 4	62.5	100	100	1970.5
Bucharest	+5 to -10	1176 × 4	62.6	100	50	-
Nicolaiev	0 to -20	5984 × 2	64.3	100	95	1971.0
San Fernando	-10 to -30	3709 × 4	63.3	93	88	1972.0
Tokyo	-10 to -30	3560 × 4	63.3	100	95	1971.0
USNO 6-in	+5 to -30	8706 × 2	66.5	85	70	1972.0
Bergedorf (Bickley)	+5 to -90	20495 × 4	68.4	69	95	-
	-30 to -40			95	95	-
Cape	-40 to -50	10082 × 4	61.3	100	100	1966
	-50 to -90			8	0	-
San Juan	-40 to -90	7190 × 2	69.5	40	60	-
Santiago } Pulkovo }	-47 to -90	11496 × 4	63.1	95	35	-
	-47 to -90			100	60	-
USNO 7-in (El Leoncito)	+5 to -20	7683 × 2				
	-20 to -75	12121 × 4	68.7	51	57	1974.0
	-75 to -75SP	1382 × 4				

#### Summary:

1. As of 1 June 1970, 72% of the observational work of the SRS-Program was completed.

2. It is expected that the final results from all observatories should be on hand about 1975.5.

The commission expressed its thanks to Mr. F. P. Scott for his valuable work on the SRS-Program.

Mme E. Marcus: A Catalogue of Faint Stars in the FK4-System.

H. Yasuda: A Proposal for the Meridian Observations of PZT Stars.

R. d'E. Atkinson: On the Advantages of a Mirror Transit Circle.

Mlle S. Débarbat: Weights of Observations Made with Astrolabes in France.

W. Fricke and A. A. Nemiro were appointed delegates to represent Commission 8 on the working group dealing with Precessional Constants now being set up by Commission 4.

Names of new members should be proposed to any member of the Organizing Committee.

Besides the many papers relating to progress made in meridian circle or astrolabe work, W. Gliese pointed out that the FK4-system of the southern hemisphere at least in right ascension happens to be very poor because it is based mainly on the work of one observatory only, the Cape Observatory.

He asked which programmes are under way for the determination of absolute right ascensions in the southern hemisphere, or which have been finished already since the compilation of the FK4. Special attention should be paid to the determination of absolute azimuths which are really independent of the system of any basic catalogue! The answer to the question is that there is only one programme, fulfilling Gliese's requirements, going on in the southern hemisphere, namely that with the Large Transit Instrument of Pulkovo, now at Cerro Calan.

Other series of observations are only quasi-absolute; there remains always some doubt as to the validity of the system.

E. Høg wanted to stress the importance of the inclusion of observations of the four bright minor planets in meridian circle programmes performed at southern observatories. (Incidentally, the U.S. Naval Observatory includes these observations in its work in South America.) The experience of the USNO has been that it is impossible to obtain enough observations in both quadratures of each planet. This problem could be solved by combining observations from the northern and the southern hemisphere since a quadrature during the northern summer could be more easily observed from a station in the south.