

31. Fedorov, E. P., Glagoleva, I. I. 1962, *Dopovidy AN U.S.S.R.*, 4, 473.
 32a. Yatskiv, Ya. S. 1969, *Voprosy Astrometrii*, 84, Kiev.
 32b. Sakharov, V. I., Vasilyev, O. B. 1971, Extra collection of papers contr. to the *IAU Symp.*, 48, 113.
 33. Mikhailov, A. A. 1971, *Astr. Zu.*, 48, No. 6.
 34. Nesterov, V. V., Rykhlova, L. V. 1970, *ibid.*, No. 2.
 35. Mikhailov, A. A. 1970, *ibid.*, No. 3.
 36. Pavlov, N. N. 1970, *ibid.*, No. 4.
 37a. Fedorov, E. P. *et al.* 1972, *IAU Symp.*, 48, 78.
 37b. Fedorov, E. P. *et al.* 1972, *Dvyzhenie polusov Zemly s 1890.0 po 1969.0*, Kiev.
 38. Pariisky, N. N. *et al.* 1972, *IAU Symp.*, 48, 240.

REPORT OF THE INTERNATIONAL POLAR MOTION SERVICE

1. General

More than 50 stations and observatories all over the globe have cooperated in the work of the International Polar Motion Service during this period consecutive with the earlier years. They observed latitude, time and latitude, or time only, with various kinds of instruments such as the zenith telescope, the photographic zenith tube, the astrolabe and the transit instrument.

The Central Bureau of the IPMS collected the data every week or every month and calculated the coordinates of the pole every month from the data obtained at the 5 ILS stations. The preliminary results were summarized every month in the Monthly Notes of the IPMS as a rapid service and the detailed definitive values of the results were published every year in the Annual Report of the IPMS, the last volume of which was the one for 1970 issued in 1972.

The coordinates of the pole have been calculated so far only from the results of latitude observations made at the 5 ILS stations. Studies have been made on how best to combine all the observational data of time and latitude in order to derive the most probable pole coordinates: many problems still remain, such as errors in star positions, station coordinates, the definition of mean latitudes, and the appreciable discrepancies between pole coordinates derived independently from the time and latitude data.

2. Results of the ILS during 1949.0 to 1962.0

The ILS results for the period from 1949.0 to 1962.0 derived by Prof. G. Cecchini have already been compiled ready for publication in a complete form similar to earlier volumes. Prof. A. Marussi, president of the Italian Geodetic Commission, is considering photographing each page of Prof. Cecchini's manuscript; a final decision will be made soon. It is not certain, however, that the Italian Geodetic Commission will meet all the publication charges.

3. Cooperative observation of time and latitude with the PZT

(a) Northern parallel of latitude of 39°8'.

It was recommended by the IAU at its General Assembly in Prague 1967 that each of the 5 ILS stations on the parallel of 39°8' north should be equipped with PZT's to observe time and latitude in parallel with the observation of latitude by the visual instruments.

Mizusawa has already been equipped with a PZT and a second PZT was completed on the same parallel in May 1972.

Kitab is going to be equipped with a PZT which will be moved from Pulkovo Observatory. Necessary modifications on the mechanical parts are being made in Pulkovo Observatory.

The Italian Geodetic Commission has decided to install a new PZT on 39°8' north, but not in Carloforte. The proposed site is very near to Cagliari, Sardinia.

The National Ocean Survey, National Oceanic and Atmospheric Administration of the United States proposes to install two PZT's, one at Gaithersburg and the other at Ukiah, but it is understood that there may be some delay owing to difficulties of financing.

(b) Installation of a PZT chain in the southern hemisphere, say -34° , was also recommended at the same time. This proposal was discussed again at the IAU Colloquium No. 1 in La Plata, 1968, which strongly supported this programme especially with the collaboration of Australia, South Africa, Chile and Argentine. Regrettably, there was no progress other than the installation of a PZT at Punta Indio, Argentine in 1968.

It is recommended that this proposal be discussed in Sydney and a further resolution endorsed by Commission 19, otherwise the future of this programme seems to be very hopeless. It appears probable that it would not be likely to attract sufficient support especially in Australia and South Africa in spite of the efforts made by the astronomers concerned. No information was available from Chile and Argentine by this date.

4. Cooperation of the Chinese Observatories

It is very desirable to have the cooperation of Tientsin and Shanghai Observatories for the work of the IPMS. The former has been equipped with a ZTL-180 and the latter with an astrolabe and a transit instrument, but no cooperation has so far been given by them, presumably because they were not members of the IAU. The problem should be discussed at the coming General Assembly and even earlier if possible.

5. Advantage of the new techniques

Many observatories are interested in the use of the new techniques such as laser, VLBI and Doppler observation of satellites. Results by these new techniques should be included in the study of polar motion and its relevant problems.

6. Other matters

(a) The visual zenith telescope of Belgrade was covered with aluminium foil to protect the telescope against the unfavourable effect of the surrounding air temperature. Thermal effects seem to be substantially diminished. This is especially evident in the reading of Talcott's levels.

(b) The Director of the IPMS visited or was invited to the following observatories: Carloforte in 1970 after the General Assembly in Brighton; Moscow State Astronomical Observatory of Shternberg, Pulkovo Observatory, Kiev Observatory, Astronomical Institute of Tashkent and Kitab latitude station in 1971; Carloforte (including Cagliari), Belgrade Observatory, Jósefostaw and Borowiec in 1972. The purpose was to see the observatories and/or discuss with them the studies on observation, method of reduction, polar motion and so on.

S. YUMI
Director, IPMS

REPORT OF THE BUREAU INTERNATIONAL DE L'HEURE

Since the XIVth General Assembly, regular publication has continued of the coordinates of the pole, and of UT1-UTC, obtained by a synthesis of all the available data. In 1971, the data of 81 instruments were used (52 series of latitudes, 61 series of UT). Since 1967, the evolution in the number of instruments is shown in Table 1.

Table 1.

Year	astrolabe	PZT	Number of instruments				Total
			circum-zenithal	zenith telescope	visual transit inst.	photoelect. transit inst.	
1967	18	9	2	18	22	10	79
1971	21	12	2	20	15	11	81