

Commission 19. (VARIATION DES LATITUDES.)

Professor Kimura was in the chair and presented his report, as printed in the draft reports (p. 120), together with the two following appendices:

(a) *Most Recent Report from Professor Nefedjew, Director of the International Latitude Observatory at Kitab in Central Asia.*

The Namasgoch Garden, which was formerly chosen as a site of the latitude observatory, has been found unsuitable in view of the following two disadvantages: (1) the shallowness of the underground water which brings great inconvenience and harm for erecting the pillar of the instrument, (2) the place which lies too far to the south in its latitude from the mean of those of the other three stations existing now.

Thus another place with its latitude very near to the mean value  $+ 39^{\circ} 8' 8''$  was newly chosen and was decided on as the definite one. In this place the condition of the underground water is also very favourable, it running at the depth of about 8 metres which does not give any harm to the construction of the foundation. There is still another inconvenience in connection with the comfort of living of the observers: this may, however, be improved without much difficulty in the latter place.

With regard to the topographic condition of the new position, the Director says that it is nearly the same as that of the former one. To the south there are abundant plantations of trees on the vast plain extending to 15 kilometres, after which the Gissare mountain chain continues. To the north also the plain lies and is crossed by the river Kashka-Daria, extending to 10 kilometres which continues to the Zeravshan mountain chain 1500 metres high.

Finally he adds that the large zenith telescope of Bamberg will arrive in Kitab within the month of July, and the construction of the observation-house will be finished on September 1.

(b) *Reply from Dr Dodwell, Director of the Adelaide Observatory, Australia.*

About the close of the General Meeting of the I.A.U. at Leiden, I received the following kind reply from Dr Dodwell to my letter asking for the southern co-operation in the latitude work:

I must apologize for the delay in replying to your kind letter asking for observations of the Variation of Latitude. I have been away much in the country for magnetic observations and the determination of latitude and longitude at field stations. I am much attracted by the subject of Latitude Variation, and should like to co-operate with La Plata, as you suggest, but I am sorry that the prospects are not very good at present owing to financial conditions.

Is it possible that the Latitude Commission could offer any support in the way of instruments, or in any other way? In that case I might be able to approach the Government with better hope of success; though I am not certain of this, at least not immediately. Secondly, could you kindly inform me of the exact details of full co-operation with La Plata? Namely, what instruments are most desirable; their approximate cost; what stars are to be observed; and the method of observing; and any other points that might be useful to know.

In conclusion, I will endeavour to co-operate with you as far as is possible, when an opportunity is afforded of taking up this work here.

With my very kind regards and cordial good wishes,

I am, dear Sir,

Yours sincerely,

(signed) G. F. DODWELL.

By this letter it is known that the financial conditions at this observatory are not favourable for the new work on the variation of latitude. But I know that I can count upon being able to lend the observatory a large zenith telescope. Therefore I wrote again to the Director that he need not trouble himself about the instrument, but begging him to make every effort in his power with regard to the cost of the new observation-house and an annual salary of an observer from his Government.

The President made the following special reference to the new important latitude stations in the world.

(a) The establishment of a new additional international station at Kitab near Samarkand in Uzbekistan on the same parallel  $+39^{\circ} 8'$  had been decided upon. The work would begin in the latter part of the year.

(b) The establishment of a new latitude station at the Lembang Observatory in Java had been decided upon. This station had a particular importance as lying near the equator.

(c) A new enterprise with regard to the International Co-operation of Latitude-Work in the Southern Hemisphere, which had been proposed by the preceding General Meetings of the International Geodetic and Geophysical Union at Madrid and Prague, might be realized within a few years. The stations were the two observatories of La Plata and Adelaide, lying so favourably situated that they are on the same parallel of latitude and on the same meridian but differing by twelve hours.

Professor Schlesinger referred to Lawson's results as to the secular motion of the north pole and Dr Dneprovsky gave the following values of  $\Delta\phi = \phi - \phi_0$  derived from the observations with the Zenith Telescope at Pulkovo (Mrs S. V. Romansky).

Fraction of year	Year						
	1919	1920	1921	1922	1923	1924	1925
0	—	—	—	—	—	—	—
.1	—	-.18	-.17	-.08	.00	+.18	+.11
.2	—	-.15	-.18	-.10	-.07	+.10	+.07
.3	—	-.09	-.13	-.11	-.12	-.01	-.04
.4	—	-.01	-.05	-.09	-.14	-.09	—
.5	-.04	+.04	+.04	-.06	-.13	-.08	—
.6	-.08	+.07	+.11	+.03	-.06	.00	—
.7	-.11	+.08	+.18	+.11	+.04	+.09	—
.8	-.14	+.07	+.18	+.17	+.14	+.13	—
.9	-.16	+.03	+.10	+.19	+.22	+.15	—
.9	-.17	-.06	-.02	+.22	+.12	+.14	—

The above values were the abstract from the introduction to the fundamental catalogue of declinations of 1334 stars for 1925.0 (N. Dneprovsky, *Publications de l'observ. centrale à Poulkovo*, vol. xxxv).

A discussion took place on the motion introduced by the American section, and it was hoped that an expression by the I.A.U. officially would convince the various governments of the desirability of financing such new latitude stations.

In the discussion Mr Merfield mentioned a possible latitude observing station at Canberra, Australia, but stated that no definite steps had been taken. Perhaps the Adelaide Observatory might co-operate.

Professor Dawson inquired about the instrument that used to be at Bayswater; according to Professor Schlesinger this had been borrowed from Germany and had probably been returned. Professor Dawson added that La Plata would probably undertake observations with the instrument from Oncativo.

Dr Jones agreed that it was largely a matter of personnel, and he hoped that Professor Schlesinger's automatic arrangement would help. Professor Schlesinger explained his instrument and the trials made with it by Dr Oort in 1923, but nothing definite had yet been reached. His instrument was in reality an improvement on those of Kapteyn and Ross, but had the great advantage of being automatic.

The resolution, printed in italics at the bottom of p. 128, was then unanimously accepted.

Professor Müller, speaking also for Professor Gautier of Geneva, reported on the work at Potsdam, and referred to the heavy loss suffered by the death of Dr Wanach. The work was now being carried on by Dr Mahnkopf.

The following resolution was adopted: "The Commission asks that a subvention of £100 be made annually, until the next meeting of the I.A.U." Professor Schlesinger and Sir Frank Dyson proposed a resolution commending the President's work. This was carried by acclamation and the Commission adjourned.

#### *Commission 20. (PETITES PLANÈTES, ETC.)*

In the absence of Professor A. O. Leuschner, the Chair was occupied by Professor G. Van Biesbroeck, with Dr Innes acting as Secretary.

The Commission met on three occasions. A letter from Professor Leuschner was discussed by the Chairman and he proposed that a message to Professor Leuschner, signed by all present, should be prepared and despatched. This was agreed to unanimously.

Code for telegrams announcing discoveries of Comets, etc.: this was discussed and referred to Commission 6.

Dr Comrie spoke on the arrangements made by the *Nautical Almanac* for the introduction of the 1950.0 equinox and of the intention, if possible, to issue in one volume the rectangular coordinates of Jupiter and Saturn at 40-day intervals and some other planets at 10-day intervals for the period 1920–1939, all referred to the equinox of 1950.0.

Dr Kopff added that the *Berliner Jahrbuch* will add a table as from 1932 or 1933 showing the reduction from the mean equinox of 1925 to that of 1950.

M. Andoyer remarked that 1950 is far distant and that it is difficult to define its mean equinox. He preferred the 10-year intervals already used by the C.T. 1920–30–40, etc.

It was asked if planetary elements would be referred to 1950 and Dr Kopff replied in the affirmative.

Dr Crommelin considered that in the case of comets the equinox of the year of observation should be used as they were more ephemeral than minor planets. Dr Comrie stated that this would be provided for as both will be given in the *N.A.*—the equinox of 1950 and the reduction to the beginning of year.