19. COMMISSION DE LA VARIATION DES LATITUDES

PRÉSIDENT: M. KIMURA, *Director of the International Latitude Observatory, Mizusawa, Japan.*

MEMBRES: MM. G. Bemporad, Beneš, Bianchi, Cecchini, Dyson, Gautier, Hasimoto, Janne, Jones, Littell, Mimoso Guerra, Morize, Nijland, Ross, Schlesinger.

PROVISIONAL RESULTS OF THE OBSERVATIONS OF THE LATITUDE-VARIATION DURING THE PAST FOUR YEARS

1. *International Latitude Service.*

The values given below are slightly different from those published in every annual report of the international latitude work, with the exception of those for the last year. They were calculated from the observed results in three stations, only those of Ukiah being subtracted by the correction for the inequality of the screw for the reason stated in the annual report of the year 1927.

Fraction of year	Year 1924 X	1924 Y	1925 X	1925 Y	1926 X	1926 Y	1927 X	1927 Y
·0	+″·02	−″·09	+″·02	−″·06	−″·02	−″·09	−″·01	″·00
·1	− ·07	− ·10	− ·03	− ·11	− ·07	− ·11	− ·01	− ·01
·2	− ·11	− ·02	− ·08	− ·09	− ·10	− ·07	− ·02	− ·03
·3	− ·13	+ ·04	− ·07	− ·03	− ·11	·00	− ·02	− ·01
·4	− ·10	+ ·08	− ·05	+ ·01	− ·09	+ ·05	+ ·01	+ ·03
·5	− ·05	+ ·11	− ·02	+ ·03	− ·05	+ ·07	+ ·03	+ ·03
·6	+ ·02	+ ·12	+ ·02	+ ·01	·00	+ ·08	+ ·05	+ ·02
·7	+ ·08	+ ·10	+ ·05	− ·01	+ ·02	+ ·06	+ ·04	− ·02
·8	+ ·08	+ ·05	+ ·05	− ·04	+ ·03	+ ·03	+ ·01	− ·04
·9	+ ·06	− ·01	+ ·03	− ·06	·00	+ ·01	(− ·01)	(− ·06)

2. *Royal Observatory, Greenwich.* (Kindly communicated by the Astronomer Royal.)

The following values are not the direct ones communicated by the Astronomer Royal, but have been deduced graphically from the smoothed curves by using the communicated data.

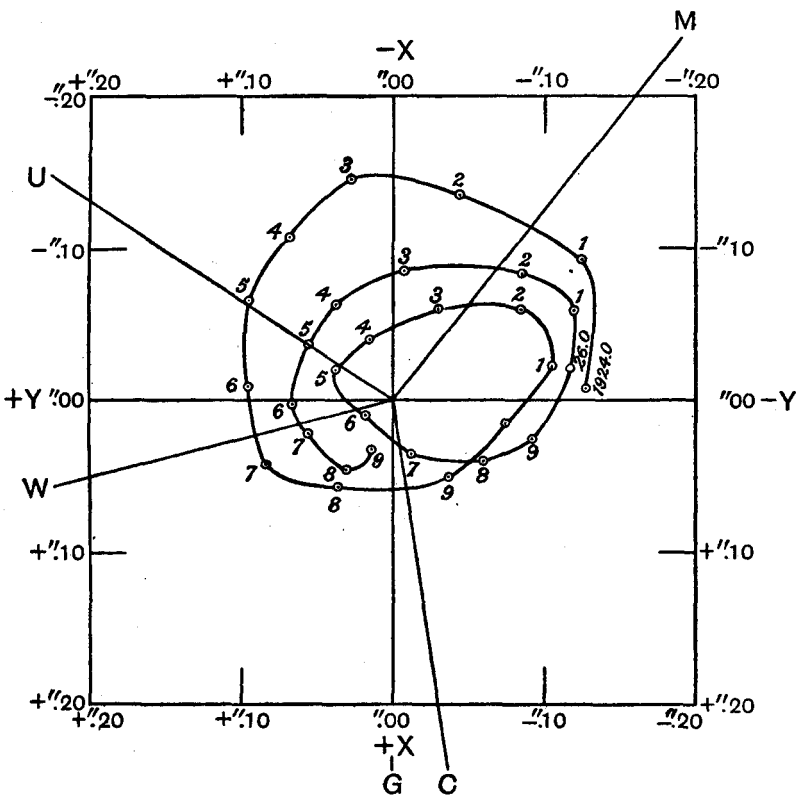
Fraction of year	Year 1924	1925	1926
·0	−″·04	+″·02	−″·02
·1	− ·12	·00	− ·03
·2	− ·16	− ·03	− ·03
·3	− ·17	− ·03	− ·03
·4	− ·13	− ·02	− ·02
·5	− ·10	− ·01	·00
·6	− ·06	·00	+ ·02
·7	− ·02	·00	+ ·04
·8	+ ·02	+ ·01	+ ·05
·9	+ ·03	·00	+ ·07

3. *Naval Observatory, Washington.* (From *A. J.* 852–853, 875, for the year 1926, kindly communicated by the Director of U.S. Naval Observatory.)

Fraction of year	Year 1924	1925	1926
·0	−″·16	−″·08	−″·14
·1	− ·17	− ·10	− ·14
·2	− ·10	− ·09	− ·12
·3	− ·03	− ·05	− ·04
·4	− ·01	− ·03	− ·03
·5	− ·01	− ·03	− ·04
·6	·00	− ·03	− ·01
·7	+ ·04	− ·04	+ ·02
·8	+ ·02	− ·08	+ ·03
·9	− ·06	− ·12	+ ·02

4. *New Values of* X *and* Y *for the Period* 1924.0–1927.0 *deduced by combining the Results of Greenwich and Washington with those of the International Service.*

This is the continuation of the values given in the preceding report of the I.A.U. The data used are those in the above three tables, among which the results of the two observatories were corrected by the respective Z in the following



Path of the Polar Motion, 1924.0–26.9.

table. The Z for each observatory was deduced by subtracting the pure annual polar motion from the total annual variation found from the mean of the observations for the last 8 years, this period being a complete cycle in the present variation of latitude. And for that annual polar motion, the same values as in the previous report were adopted, as they would be the most probable values being free from all other variations. Thus we have obtained the following values of Z_g and Z_w.

Fraction of year	1919·0–1927·0 Z_g	Z_w
·0	+″·006	+″·010
·1	+ ·013	·000
·2	+ ·004	+ ·001
·3	− ·012	− ·007
·4	− ·026	− ·037
·5	− ·009	− ·071
·6	+ ·015	− ·063
·7	+ ·017	− ·030
·8	·000	− ·010
·9	− ·012	+ ·001

The following new values of the polar motion were calculated by the method of least squares, using all the data corrected by the above-mentioned quantities, with the weights 1·84 and 1·11 for the international values of X and Y respectively, and 1 for the values determined at the two observatories.

Fraction of year	Year 1924 X	1924 Y	1925 X	1925 Y	1926 X	1926 Y
·0	−″·01	−″·13	+″·01	−″·08	−″·02	−″·12
·1	− ·09	− ·12	− ·02	− ·11	− ·06	− ·12
·2	− ·13	− ·05	− ·06	− ·09	− ·08	− ·09
·3	− ·15	+ ·03	− ·06	− ·03	− ·09	− ·01
·4	− ·11	+ ·07	− ·04	+ ·01	− ·06	+ ·04
·5	− ·07	+ ·09	− ·02	+ ·04	− ·03	+ ·06
·6	− ·01	+ ·09	+ ·01	+ ·02	·00	+ ·07
·7	+ ·04	+ ·08	+ ·04	− ·01	+ ·02	+ ·05
·8	+ ·06	+ ·04	+ ·04	− ·06	+ ·04	+ ·03
·9	+ ·05	− ·04	+ ·03	− ·09	+ ·03	+ ·01

5. *Compilation of* $\Delta\delta_e' - \Delta\delta_m'$ *for the International Latitude Service during the Period* 1922.8–1928.0.

Among the following values of $\Delta\delta_e' - \Delta\delta_m'$ those for the period 1924·0–1927·0 differ a little from those given in the annual reports, this being due to the elimination of the screw error for Ukiah from these values.

As we see in the following table, there is a systematic annual variation which may affect the Z phenomenon if we calculate these variations according to the old method. The comparison between these values and those for the two periods 1900·0–1906·0 and 1906·0–1912·0 and the analytical discussion were given in the National Report from Japan submitted to the General Meeting of the Geodetic and Geophysical Union in Prague in 1927.

Unit = ″·001

Group	Year 1922	1923	1924	1925	1926	1927	Mean
IV	—	+ 4	+ 22	− 27	+ 22	− 63	− 8
V	—	+ 38	− 69	+ 18	− 7	− 63	− 17
VI	—	+ 4	− 41	− 45	− 18	− 28	− 26
VII	—	− 31	− 50	− 11	− 77	− 45	− 43
VIII	—	− 33	− 28	− 27	− 7	(− 109)	− 24
IX	—	− 11	− 29	− 29	− 18	—	− 22
X	—	− 43	+ 14	+ 45	− 16	− 2	0
XI	—	− 14	− 3	− 8	+ 44	+ 5	+ 5
XII	—	+ 14	− 1	− 42	− 35	+ 15	− 10
I	+ 10	+ 4	− 3	+ 28	− 11	+ 8	+ 6
II	0	+ 28	− 15	+ 8	− 7	+ 24	+ 6
III	− 24	+ 34	− 8	− 38	− 43	—	− 16

6. There are two other observatories—*namely, those at Pulkowa and at Rio de Janeiro*—in which observations of the variation of latitude are being carried out at the present time, but I have not received reports of recent observations from either of them.

Recently, I received an interesting paper* which was kindly sent by Dr Max Wolf, Director of the Königstuhl Observatory. This paper contains the results of experimental observations, during the period 1925·3–1926·5, made by Mr Schlier, using the broken-type transit of Bamberg with the aperture of 66 mm. *The aim of this attempt was to compare two methods, viz. the Talcott and the Prime Vertical, using one and the same instrument,* alternately in time but under similar external conditions. All stars used for both methods were taken from the P.G.C. of Boss. After having investigated the several systematic errors in his result, the author gave the following conclusions:

(1) This series of observations confirms the existence of a systematic error $\Delta\delta_a$ in Boss's system of declination.

(2) The systematic difference between both methods, Talcott and Prime Vertical, is very small if they are treated as a whole.

(3) The mean latitude found after the correction of all systematic errors coincides exactly with the previously determined values.

(4) As the result of comparison of both methods, the Talcott method is superior to the other for determining the exact value of the latitude, but, for the purpose of the variation of latitude, the Prime Vertical method would be the better one, provided the surrounding conditions are very favourable.

Reports

(*a*) *Additional International Latitude Station in Central Asia, at Kitab, near Samarkand*

In June, 1927, I received, first of all, a gratifying report from Prof. Subbotin, Director of Tashkent Observatory, that the establishment of a new international latitude station in Uzbekistan, at Kitab, near Samarkand, under the Uzbekistan-Soviet Government, had been decided on, and that Prof. Nefedjew of Perm University would be appointed the Director of the new station. This station is a substitute for the old Tchardjui station, the new one lying east of the old,

* "Veröffentlichungen der Badischen Landes-Sternwarte zu Heidelberg."

and the longitude difference being only 3°. Prof. Subbotin's next letter, in September, informed me that Prof. Nefedjew was then in Kitab selecting a suitable site for the observation building and also arranging all other details. Last February, Prof. Nefedjew wrote to me from Kitab that a young astronomer, Mr Agafonow, has been appointed an assistant observer, and that they are now commencing to select the suitable sites for the observation building, the office building and residences for the observers and the employees. Further, he informed me that the Government of Uzbekistan has approved of the expenditure of a sum for buying a 110 mm. zenith-telescope, of Bamberg, in Berlin, and the cost of construction of all buildings. As regards future working plans, he also told me that latitude-variation work, meteorological and seismological observations will be carried on, and further that eventually he hoped to co-operate in longitude co-operation. The determination of the longitude-difference between this station and Tashkent will be carried out during the construction of the observation building, i.e. almost immediately.

An important matter about which he wanted to consult me is the question of the observation building. He says that there is a large and beautiful garden near the city of Kitab called Namasgoch, and that this place is the most suitable site for the observation building in all respects with the exception of remoteness from either of the other three stations. It is to the south of them, the latitude being 39° 7′ 40″. He asks if such a large difference is any objection from scientific consideration. To this I have replied that all star-pairs contained in the present international programme may be observed without any difficulty from a place of such low latitude till the year 1935 or later, so that the site will do for the present case if he cannot find any better one. It is, however, to be hoped that for permanent purposes a place, the latitude of which is very near the mean of the other three stations, namely 39° 8′ 8″, will be available later on*.

According to his report on the topographical conditions, the garden in question is covered with trees and supplied with good wells. It is surrounded by a vast plain crossed by the river Kashka-Daria, to the north and to the south there are mountains 1000 metres high at a distance of 15–20 kilometres, and to the east also mountain ranges at a distance of about 30 kilometres, the country being only open on the western side.

As to the meteorological conditions, nothing is known owing to the lack of previous observational records. But the climate seems to be milder than that of Samarkand.

(*b*) *The problem of the international co-operation in the southern hemisphere*

First, at the general meeting of the Geodetic and Geophysical Union, held in Madrid in 1924, Prof. Alliaume of Liège proposed the establishment of three stations on the same parallel in the southern hemisphere, but an amendment was brought forward by Prof. Carnera to reduce this number to two, namely La Plata and Adelaide, these observatories being so favourably situated that their latitude-difference is only 1′ and the longitudes differ by only 1 hour less than 12 hours. This latter amendment was supported by a majority of the members present. At the last general meeting of the same union held in Prague in 1927, a delegate of the Argentine Government announced that it was intended to carry out observations of the latitude-variation in La Plata, but no information was given regarding co-operation in this work by Australia.

* See Appendix (*a*) to this report, p. 242.

Meanwhile, I received a kind letter from Dr Hartmann, Director of the La Plata Observatory, telling me that up to the present time three observers were engaged in the work of the "Zonenkatalog," but that owing to the near completion of this work, one before long will be sufficient for this purpose, so that the other two observers may be employed exclusively in the new work of latitude-variation whenever the necessity occurs. Besides this, he informed me that his observatory has a zenith-telescope of a large size. Finally, he asked me about the observing plan and the star programme for working in co-operation with Adelaide. But as I had received no definite report regarding this co-operation from anywhere, I delayed the arranging of star-pairs till I had received the letter from Dr Hartmann. But we are now working to prepare this. On the other hand, I wrote to the Director of the Adelaide Observatory asking about the progress of arrangements for co-operation on his side*.

(*c*) *Establishment of a latitude station at Lembang, Java*

In the short report of Prof. Nijland containing the minutes of the proceedings of the session of the Latitude-Variation Committee held in Prague on the occasion of the General Assembly of the Geodetic and Geophysical Union, it was found that Dr Voûte, Director of the Lembang Observatory, is much interested in the work of latitude-variation. As we are hoping earnestly for the establishment of a latitude station on or near the equator, I wrote to him immediately, urging the carrying out of this work. Fortunately, he at once inclined to my suggestion and proposed in his first letter to undertake this work in financial co-operation with the Mizusawa Observatory. But in his second letter he informed me that after consultation with the councillors of his observatory, it has been decided that all work and all expenses will be undertaken by them, with the exception of the reduction of the observations which it is desirable to authorize the Mizusawa Observatory to carry out. At the same time, he requested me to write to the Governor of the Dutch East Indies about the importance of the international latitude work and the special importance of observations of this kind at Lembang, to which I agreed and about which I wrote immediately to the Governor.

The instrument to be used in this observatory is a broken-type transit of Bamberg having an aperture of 90 mm. It is expected that observations will be commenced within the course of the present year.

(*d*) *Resolutions No.* 5 *and* 6 *passed at the General Meeting at Cambridge*

In accordance with *resolution No.* 5, the General Secretary of the I.A.U. had requested that those stars used by the International Latitude Service and also in the observations at Rio, should be added to the programmes of the observatories at Greenwich, Washington and Algiers for the northern stars and to those of the observatories at the Cape and Cordoba for the southern stars. To this request, he had received two kind replies from Greenwich and Washington, copies of which were kindly sent to me by him. According to these replies, at Greenwich 152 latitude stars were already included in the observing list, and the remaining 40 stars were added to it, while as to Washington it was regretted that the request could not be complied with as they have urgent work to carry out which will engage their whole attention for the next two years. Recently, I have received gratifying information about this matter from Dr G. Bemporad, as seen in his letter in a later page. Thus we can obtain before long, by his

* See Appendix (*b*) to this report, p. 242.

favour, a special catalogue for 192 stars used in the International Latitude Service.

In accordance with *resolution No.* 6, I circulated to the Directors of the Observatories of the world a letter dated May 1, 1926, urging them to undertake the observation of the variation of latitude for the advancement of this work. To this circular I received kind replies from eleven Directors, most of them being those of the observatories lying in the southern hemisphere. It is, however, regrettable to report here that almost all of them informed me that such work could not be carried out immediately owing to unavoidable hindrances.

(*e*) *Report of the Proceedings of the Session of the Latitude-Variation Committee held in Prague*, 1927

This report in abstract form was kindly sent me by Prof. Nijland, the secretary at that session. The following are the principal subjects mentioned in his report:

(1) Discussions with regard to the problem of facilitating the establishment of the two international stations, namely La Plata and Adelaide, in the southern hemisphere. (See preceding item (*b*).)

(2) The reductions of the observations of the International Latitude Service during the period 1912·0–1922·7 (containing those of the Tchardjui station till the year 1919) have been carried out in Potsdam under the superintendence of Prof. Wanach, with the help of a kind donation of 150 dollars from the Lick Observatory and the subsidy of £100 from the I.A.U. The computations had already been made and the *Resultate des Internationalen Breitendienstes*, Bd. VI, is now going to press. Further, it was decided by the Executive Committee of the Geodetic Section that an amount of 18,000 paper francs should be paid for the cost of the publication of Bd. VI.

(3) Father Lejay of Zô-Sè suggested that in all stations within the longitude net regular observations of the latitude-variation should be made, in order to have two coordinates at the same time. But none of the members present seems to have supported this proposal.

Proposal regarding the International Latitude Work by Prof. IVANOFF, *Director of the Pulkowo Observatory*

About the end of the year 1925 the following proposal was sent by the director of the Pulkowo Observatory.

The Pulkowo Observatory is paying much attention to the International Latitude Service. According to the information at the disposal of the Observatory the work of the late stations of the International Latitude Service at Cincinnati and Gaithersburg is stopped.

Among the stations which are not working is also the Tschardjui Station in Turkestan. Nowadays Turkestan is a separate republic and the Pulkowo Observatory has no possibility of influencing the restoration of the station in question. Further, it seems that, having in view the frequent earthquakes in Japan, a wish for the organization of a new station on the Continent was expressed. The Pulkowo Observatory, after having discussed the question of the International Latitude Service, firstly in a special Committee consisting of Prof. A. A. Ivanoff, Director of the Observatory, Messrs J. I. Belaieff, N. I. Dneprovsky, S. K. Kostinsky, G. S. Maxinow, L. L. Natkiewicz, F. P. Renz, Mrs S. V. Romansky, astronomers of the Observatory, and Prof. B. V. Numerow, of the Leningrad University, and thereupon in the Council of Astronomers, concluded on the desirability of reorganization of the Latitude Service as a whole.

Thus, the Observatory begs to bring before the Committee on Latitude Variations of the International Union the following proposals:

(1) That the International Latitude Stations be removed to the parallel + 44° 58′. It will present important advantages because on this latitude two bright zenith stars, viz. β Aurigae and α Cygni, may be observed, the importance of which is to be understood of itself. Further, in the case of such a removal the Observatory may hope, especially with the support of the International Union, to obtain from the U.S.S.R. Government the permission to organize a new station, for example, near Feodosia (Crimea). It would be desirable, of course, that besides this new station in U.S.S.R. two stations at least should be organized on the same latitude, approximately on equal longitude differences, i.e. the one in America and the other in the Republic of the Far East. The equipment of the former stations might be given over to these new stations.

(2) That observations be made according to a new, enlarged plan, similar to the plan of the great zenith-telescope at Pulkowo on which observations have been made since 1915, published in the Nr. 75 and 83 of the *Bulletin of the Central Russian Observatory*, Pulkowo. The introduction of a new plan which is based on continuous observations from sunset till sunrise, gives the possibility of resolving a set of important problems, e.g. on the separation of the daily term from the aberration-constant, etc., which came out on elaborating the first sets of Pulkowo observations made according to the new plan.

Immediately after having received this circular in June, 1925, I had copies made and distributed to all the Members of the Committee. Kind replies* from six members containing several interesting opinions were received by me.

The following seem to be the common opinions of all members responding to the president as to the circular issued from Pulkowo:

(1) To keep the present international parallel and to re-occupy the old stations at the earliest possible time.

(2) To welcome observations at daytime at several stations near + 45°. And to encourage the free co-operation and research regarding latitude-variation by different methods at many stations differing in latitude and longitude all over the world. It is noted here that the duration of the observation should be as long as possible.

(3) When the necessity occurs, to change the programme to make the all-night observation at the present international parallel + 39°.

The report from Mr PATTON, *Acting Director, U.S. Coast and Geodetic Survey*

Mr Patton has kindly sent the following report by letter to the President.

The latitude observatory at Ukiah, California, has been maintained in operation during the entire year, with Mr H. G. Wrocklage in charge. He has been sending you the records of observations from month to month. As far as I am aware, his observations have been entirely satisfactory to you and to the Joint Commission; at any rate, no adverse criticism has reached me.

The land on which the Ukiah latitude observatory stands was purchased with funds supplied by the International Geodetic Association and title to the property was given in the name of Dr Henry S. Pritchett, at that time Superintendent of the U.S. Coast and Geodetic Survey. Funds supplied by the same association were also used for the erection of the observatory and dwelling house. After Dr Pritchett resigned from the U.S. Coast and Geodetic Survey he transferred title to the property to the University

* See the *Bulletin Géodésique*, No. 9, 1926.

of California which held it until October, 1927, when Dr W. W. Campbell, President of the University, had title to all the property, land and buildings, transferred by deed to the U.S. Coast and Geodetic Survey. The property is now owned outright by the Government and there will never be any objection to the Government's making repairs to buildings and enlarging the observatory as it may be found necessary.

Mr Wrocklage has been endeavouring to correct the tendency of the latitude pier at the Ukiah Observatory to change its position. This change was indicated by the movement of the levelling vials on the astronomic instrument used by him in his observations. An article on the subject, written by Mr Wrocklage, was recently printed in the *Astronomical Journal* and I assume that he sent you a copy of it. I shall communicate with him and ask him whether or not he sent you a reprint.

With regard to the Gaithersburg observations, the situation is as follows:

The International Geodetic Association paid a sum of money which was equivalent to buying the property but it was really leased for 99 years with the Coast and Geodetic Survey holding the lease, instead of the Association doing so. The buildings on the property were also paid for with funds supplied by that Association. You will recall that, at the Rome meeting of the International Geodetic and Geophysical Union, it was decided that the interests of the Reduced Geodetic Association (which succeeded the International Geodetic Association) in the two latitude stations at Ukiah and Gaithersburg should be transferred to the U.S. Coast and Geodetic Survey on the assumption that the Survey would conduct the observations at those stations in the future.

The Coast and Geodetic Survey has not yet been able to secure the authority of Congress to resume observations at Gaithersburg. During the coming year the best that we shall be able to do, according to the present outlook, is to make some repairs to the roofs of the buildings and to paint the buildings themselves. Unless Congress gives us authority and additional funds for our geodetic work, the U.S. Coast and Geodetic Survey will not be able to resume observations at Gaithersburg before July 1, 1929, at the earliest. We had hoped to begin on July 1, 1928.

There are many people in the United States, especially those engaged in astronomical and geophysical work, who are anxious to have observations resumed at Gaithersburg and I can assure you that the officials of the U.S. Coast and Geodetic Survey are doing all that is in their power to secure this happy result.

A somewhat more detailed report, enlarging upon the items mentioned herein, will be submitted next spring, for presentation at the Leiden meeting of the International Astronomical Union, and the matter will be brought up to that date.

Report from Mr W. D. LAMBERT, *Chairman of the Committee on the Variation of Latitude of the American Section*

Mr W. D. Lambert, Chairman, at the request of the Secretary of the American Section of the International Astronomical Union, communicated to me the following report of the Committee on the Variation of Latitude which was unanimously adopted by the American Section at its recent meeting held at New Haven, Conn., on December 31, 1927.

The American Section recommends that the Union urge the establishment of additional observations of latitude variations in the Southern Hemisphere and that the importance of this work be brought to the attention of those agencies that are in a position to foster it.

(*Members of the Committee*: W. D. Lambert (Chairman), E. W. Brown, A. C. Lawson, F. B. Littel, F. E. Ross, Frank Schlesinger.)

Suggestions from the Members

The following two members have suggested the following by letter to the President.

(1) Mr H. S. JONES, *His Majesty's Astronomer at the Cape Observatory.*

With reference to your circular letter of September 27 last, I understand that latitude observations have been commenced or are about to be commenced at a station in Russian Turkestan not far from the old station at Tschardjui. This would be a welcome addition to the list of international stations and any information on the subject which you can include in your report to be presented at the General Meeting of the International Astronomical Union in Leiden next year would be appreciated.

I believe that observations were continued for some years at Tschardjui after the outbreak of war in 1914 but that on account of the general upheaval the observing books did not become available for use in the reduction and discussion of the International Latitude Variation observations. I should like to enquire whether any steps have been taken to secure these observing books and to revise the discussion for the years in question by incorporating the Tschardjui results. The observations during this period were reduced at the old Zentralbureau der Internationalen Erdmessung. I would suggest that if the additional Tschardjui results can be made available the whole of the material for these years should be placed in your hands for re-discussion.

Any information as to the present position at Gaithersburg would be appreciated.

No observations for latitude variation have been secured at the Cape Observatory, as there is no suitable equipment for the purpose. Owing to the exacting nature of latitude variation observations, extensive co-operation of observatories which are already fully occupied with other programmes of work can only be effected by the use of an instrument on the lines of that designed by Prof. Schlesinger, in which the exposures are made automatically. But until this design has thoroughly proved itself, no steps in this direction can be looked for. The incorporation in your report of a statement from Prof. Schlesinger on the present position of his investigations with this instrument would be of great value.

(2) Prof. G. BEMPORAD, *Royal Observatory at Capodimonte, Naples.*

1. Accueillant le desideratum exprimé par la Commission à Cambridge, j'ai entrepris l'observation méridienne des étoiles qui sont actuellement observées dans les stations du service des latitudes. Les observations, soit en A. R. soit en Decl., sont faites par moi et par le Dr Aurino au cercle méridien de Repsold de 18 cm. d'ouverture. J'espère que le petit catalogue des 192 étoiles sera achevé pendant l'année 1928.

2. J'ai considéré le desideratum, exprimé de même par la Commission, sur l'utilité des observations systématiques de la latitude par de diverses méthodes. En vue de l'incertitude, encore bien considérable à présent, de l'influence des conditions climatologiques d'un côté, et de la méthode d'observation de l'autre, je pense qu'une double série d'observations dans le même lieu et par deux méthodes diverses et opposées donnerait de très utiles renseignements. J'aurais pour cela l'intention, à peine mon actuel programme d'observations méridiennes soit achevé, d'entreprendre, toujours avec la collaboration de Dr Aurino, des observations de la latitude par la méthode de Talcott et, en même temps, par la méthode des couples en I^{er} vertical, méthode qui, comme on sait, est un heureux perfectionnement de celle de Struve, suggeré par Mr A. Alessio, et étudié soigneusement par le régretté Zappa.

En vue de la considérable étendue d'un tel travail, il me serait très agréable que notre Commission voulût bien donner son avis sur l'utilité de l'entreprise.

(3) H. KIMURA *made the following suggestion.*

In connection with the investigation of the non-polar variation of latitude such as the Z phenomenon, especially the secular part included in it, an accurate knowledge of the values of the proper motions of the stars used in the International Latitude Service in their declinations is essential. The proper motions in their Right-Ascensions should also be known though approximately; they are necessary data for the correction of those of the declinations.

Now the accurate determination of such a delicate quantity as the proper motion can only be made satisfactorily by specialists in this subject. I, therefore, suggest that "*the International Astronomical Union should pass a resolution entrusting to an astronomer who has had long experience and is now engaged in this kind of work, the determination of the proper motions of both coordinates of the stars used in the present International Latitude Service.*" And I hope that some amount of remuneration will be paid to the authorized persons for such laborious and complicated work.

REPORT ON THE FINANCIAL POSITION

During the past three years, the Central Bureau of the International Latitude Service at Mizusawa has received the following grants from the International Astronomical Union and the Geodetic Section of the Geodetic and Geophysical Union.

From I.A.U.				From Geodetic Section	
Amount			For the year	Amount	For the year
£	s.	d.		Fr.	
77	0	0	1926	7,000	1925–26
22	4	0	Deficit for 1926		
99	4	0	1927	7,000	1926–27
99	4	0	1928		
Total £297	12	0		Fr. 14,000	

H. KIMURA
President of the Commission

March 28, 1928