

Popular Astronomy.

Vol. XXX, No. 8

October, 1922

Whole No. 298

SECOND MEETING OF THE INTERNATIONAL ASTRONOMICAL UNION HELD IN ROME, MAY 2-10, 1922.*

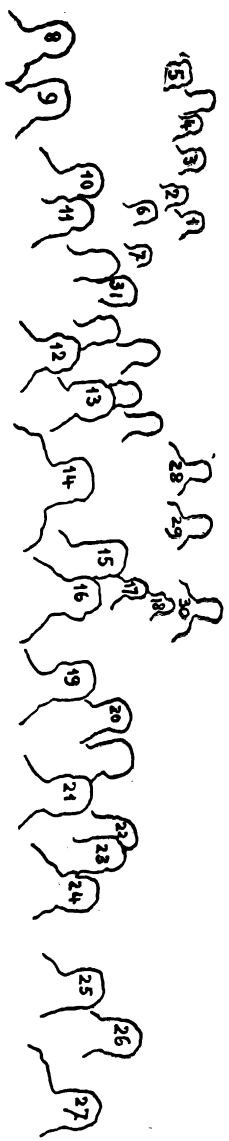
By OLIVER J. LEE.

This association of the astronomers of many countries is so definitely the spiritual successor to the International Union for Co-operation in Solar Research that a word about the latter organization may be of interest. George Ellery Hale, famous for his individual discoveries, has from the first of his career realized the importance of co-operation. It was through his activity that the Solar Union, as it came to be called for convenience, was organized at the Scientific Congress held in connection with the St. Louis Exposition in 1904-5. It is interesting in view of recent events to note that of 17 societies and academies, 14 foreign, which were invited by a committee of the American National Academy of Sciences to take a part in this organization, all accepted save two—the Prussian Academy of Sciences declined, and the *Astronomische Gesellschaft* did not answer the invitation. German participation was, however, assured through the German Physical Society, which accepted the first invitation although no representative was present at the St. Louis meeting. The second conference of the Solar Union took place at Oxford in 1905, the third at Meudon near Paris in 1907, the fourth at Mount Wilson in 1910, the fifth at Bonn in 1913. The sixth meeting was set for Rome in 1916 but, naturally, it was not held. At the Bonn meeting in 1913 German astronomers appear for the first time as representatives of the Royal Academy of Science of Berlin, although individual Germans had attended the third and fourth meetings as well.

Before the war broke out the Solar Union had become a powerful instrument for unifying and amplifying the work of solar physicists and spectroscopists all over the world. The momentum gained by the Solar Union lost its force in the war, but the experiences of benefit and pleasure derived from it in the past were no doubt still fresh in the minds of "the American delegation to the conference of the Inter-allied Academies held in London in October 1918, when it proposed that the existing organizations relating internationally to one and the same subject, to astronomy for example, should be succeeded by a single society so formulated as to serve the purposes of all the associations from which they should withdraw. The suggestion was approved by the conference. At a later meeting in Paris it was decided

*The photographs, reproductions of which accompany this article, were kindly sent us by Pio Emanuelli of the Vatican Observatory.

KEY TO PLATE XXVI.



- 1.—B. Viaro, director Catania Observatory.
- 2.—A. Bemporad, director Naples Observatory.
- 3.—V. Cerrulli, president Italian Astronomical Society.
- 4.—G. Abetti, director Arcetri (Florence) Observatory.
- 5.—G. Horn d' Arturo, director Bologna Observatory.
- 6.—N. V. Ginori, Florence.
- 7.—W. A. Parr, British Astronomical Association.
- 8.—C. E. St. John, Mount Wilson Observatory.
- 9.—A. L. Cortie, director Stonyhurst Observatory (England).
- 10.—H. Shapley, director Harvard College Observatory.
- 11.—R. G. Aiken, Lick Observatory.
- 12.—A. Fowler, Imperial College of Science and Technology, secretary of the Congress.
- 13.—H. N. Russell, director of Princeton University.
- 14.—B. Baillaud, director of Paris Observatory, president of the Congress.
- 15.—S. E. Strömgren.
- 16.—F. W. Dyson, director Greenwich Observatory.
- 17.—S. Hirayama, director Tokio Observatory.
- 18.—J. Gallo, director Tacubaya (Mexico) Observatory.
- 19.—P. Stroobant, director Uccle (Bruxelles) Observatory.
- 20.—J. G. Hagen, director Vatican Observatory.
- 21.—G. Bigourdan, Paris Observatory.
- 22.—H. D. Curtis, director Allegheny Observatory.
- 24.—G. Armellini, Pisa University.
- 25.—Ch. Lallemand, Bureau des Longitudes, Paris.
- 26.—H. H. Turner, director Oxford Observatory.
- 27.—H. A. Deslandres, director Meudon Observatory.
- 28.—J. Baillaud, Paris Observatory.
- 29.—L. Tuffara, Rome.
- 30.—H. Vanderlinden, Uccle Observatory.
- 31.—F. Schlesinger, director Allegheny Observatory.

PLATE XXVI.



PLENARY SESSION OF THE INTERNATIONAL ASTRONOMICAL UNION AT THE
R. ACCADEMIA DEI LINCEI, ROME.

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that representatives of astronomy in the allied and associated nations should meet in Brussels in July 1919, to create the International Astronomical Union."

"The American Section of this Union was organized under the auspices of the National Research Council" and the following delegates went to Brussels: W. W. Campbell, *Chairman*, W. S. Adams, Benjamin Boss, Philip Fox, S. A. Mitchell, Charles E. St. John, F. H. Seares, Frank Schlesinger and Joel Stebbins, *Secretary*. Thirty-three astronomical delegates were present, 8 from Belgium, 8 from Great Britain, 7 from France, 1 from Italy, and 9 from the United States of America.

After much conference and study it was decided to name 32 working committees which should include most of those astronomers who are active in any special branches of astronomy. Each committee was given power to coöpt into its membership additional persons by a two-thirds vote. "The constitution provides that all committees shall automatically go out of existence at the end of each triennial meeting of the Union. This offers the opportunity for reorganization upon the basis of those who work."

The officers chosen for the first period of three years were: *President*, Benjamin Baillaud, Director of the Paris Observatory. *General Secretary*, Alfred Fowler, Professor of Astrophysics, Imperial College of Science and Technology, South Kensington, London. *Vice Presidents*, W. W. Campbell, Director of the Lick Observatory; Sir Frank Dyson, Astronomer Royal, Greenwich, England; Georges Lecointe, Director of the Royal Observatory of Belgium, Brussels; Annibale Ricco, Director of the Observatory of Mt. Etna, Sicily. These officers constitute the executive committee of the Union.

It was the plan to have the members of each of the committees work along individually as before upon their special problems, but establishing a rather close family connection with the others as time goes on and finally to prepare a committee report for the next general meeting of all the committees where stock of progress is taken and plans for the future are agreed upon, especially in the matter of linking together the activities which will react upon each other most effectively.

During the past three years there has been much wholesome intercourse in the various committees. Many members have been helped materially in formulating the plans and policies of their own work. Many of the committees have added to their membership. Every incentive to creative work on the part of the individual remains and the Union has definitely emphasized the synthetic element in our scientific endeavors, which we recognize as of the highest importance.

Naturally the national sections act more or less as units. Thus the American Section met in Washington for two days of conference, before the delegates sailed for Rome, to discuss and adopt the reports

of the committees. This meeting, under the chairmanship of Dr. Schlesinger, was attended by all astronomers who could conveniently be present. Fully 20, besides delegates, took part in this conference.

In the evening of April 3, the delegates to Rome and a number of other astronomers and geophysicists were entertained most pleasantly at the Naval Observatory as the guests of the Superintendent, Captain W. D. MacDougal and Mrs. MacDougal.

The American astronomers who went to Rome were:

Frank Schlesinger, <i>Chairman</i>	John A. Miller
Robert G. Aitken	Henry N. Russell
Heber D. Curtis	F. L. Seares
Oliver J. Lee	Harlow Shapley
Frank B. Littell	Charles E. St. John

The ladies in the party were Mesdames Aitken, Lee, Littell, Miller, Russell, Shapley.

Individualism with emphasis marked the mode of travel of our people. Several had left before the Washington meeting, several travelled alone. The largest single party was that composed of 7, who went together on the Fabre Line SS Canada, sailing from New York on April 6.

The geographical dispersion experienced by the American delegates was from Longitude 118 degrees West to 35 degrees East and from latitude North 32 degrees to North 61 degrees. This seems a fairly wide range of motion, but when compared to the travelling habits of our Australian and Japanese friends it looks almost as if we had really stayed at home.

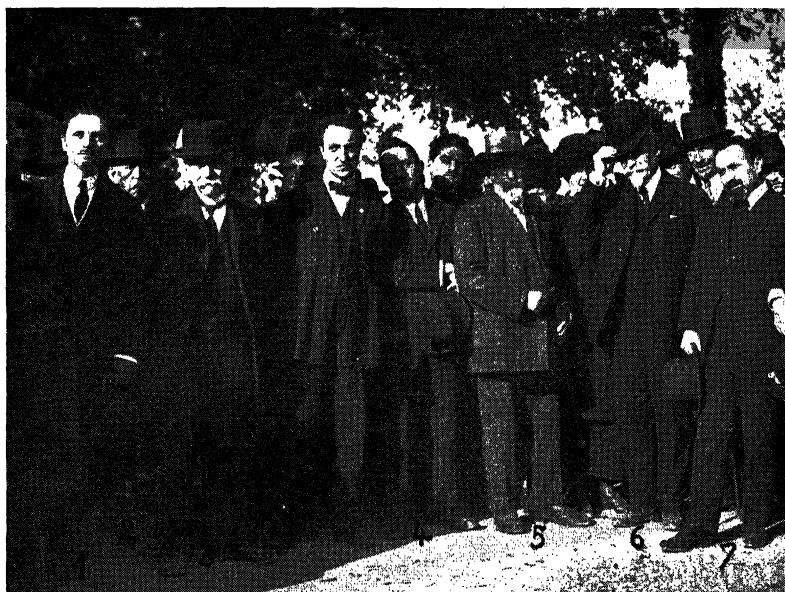
Various reports were heard of adventures abroad. One small party coöpted the captain of their vessel for a trip to Jerusalem to insure against the departure of the ship before their return.

Not very long after the visit by a small group of our people to those parts, trouble broke out between the Greeks and the Turks. Since, however, it seems certain that their difficulty is not about the quantum theory in the spectral classification of stars, it is possible that our friends may prove their innocence in the matter. One member is reported to have paid only \$1.50 for his passage to France. However, he by chance lost some money out of his pocket, while in Rome, so that we did not feel quite so envious of his privileges as an officer in the Navy, as we might otherwise have done.

Those of us who sailed on the SS Canada on April 6 had, before landing in Naples on the 21st, gotten a splendid view of the volcanic Azores, the citadel, Gibraltar, and had mixed for more than a day with the handsome Arab chieftains from the deserts who had come to Algiers to pay their respects to President Millerand of France on the occasion of his visit to that part of the Republic.

The English came down in a party under the arrangements of Thos. Cook and Son, 23 strong, with Mr. Parr, an accomplished Italiophile, as a supplementary guide—the English were more circumspect than

we Americans. The ladies in their party were Lady Lockyer, Mrs. W. J. S. Lockyer, Mrs. Fowler, Mrs. Newbegin and Mrs. Dodwell of Australia. Among the French who were present besides President Baillaud were Dr. and Mrs. Jules Baillaud from the Paris Observatory. One or several representatives were present from each of the follow-

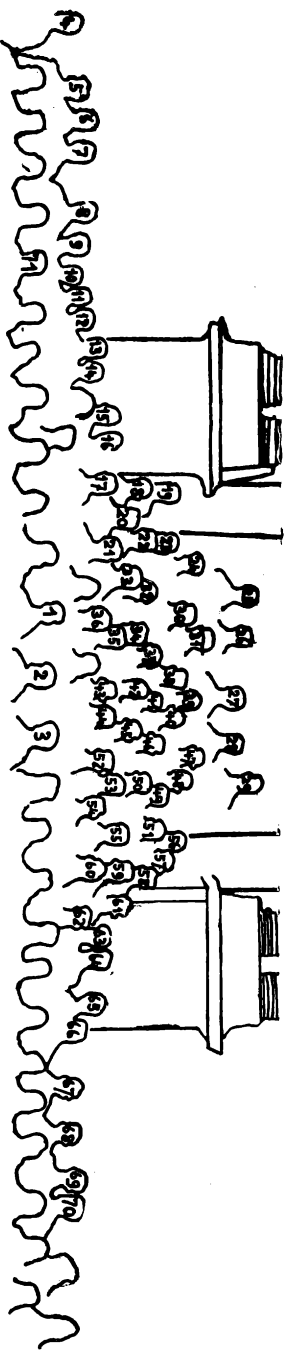


1. P. EMANUELLI. 2. K. NAKAMURA. 3. G. BIGOURDAN. 4. G. ARMELLINI.
5. G. BONI. 6. CH. LALLEMAND. 7. A. ANILE.

ing countries: Argentine, Australia, Belgium, Brazil, Canada, Czecho-Slovakia, Denmark, Egypt, England, France, Holland, Italy, Japan, Mexico, Norway, Poland, Scotland, South Africa, Spain, Sweden, and the United States.

At Rome the Italian Committee on Arrangements, headed by Senator Vito Volterra, the mathematician, had taken good care to provide for a number of social events of both formal and informal nature. Although one large hotel had been designated as the center for the visiting scientists, they were soon scattered in pensions and hotels all over the newer part of the city.

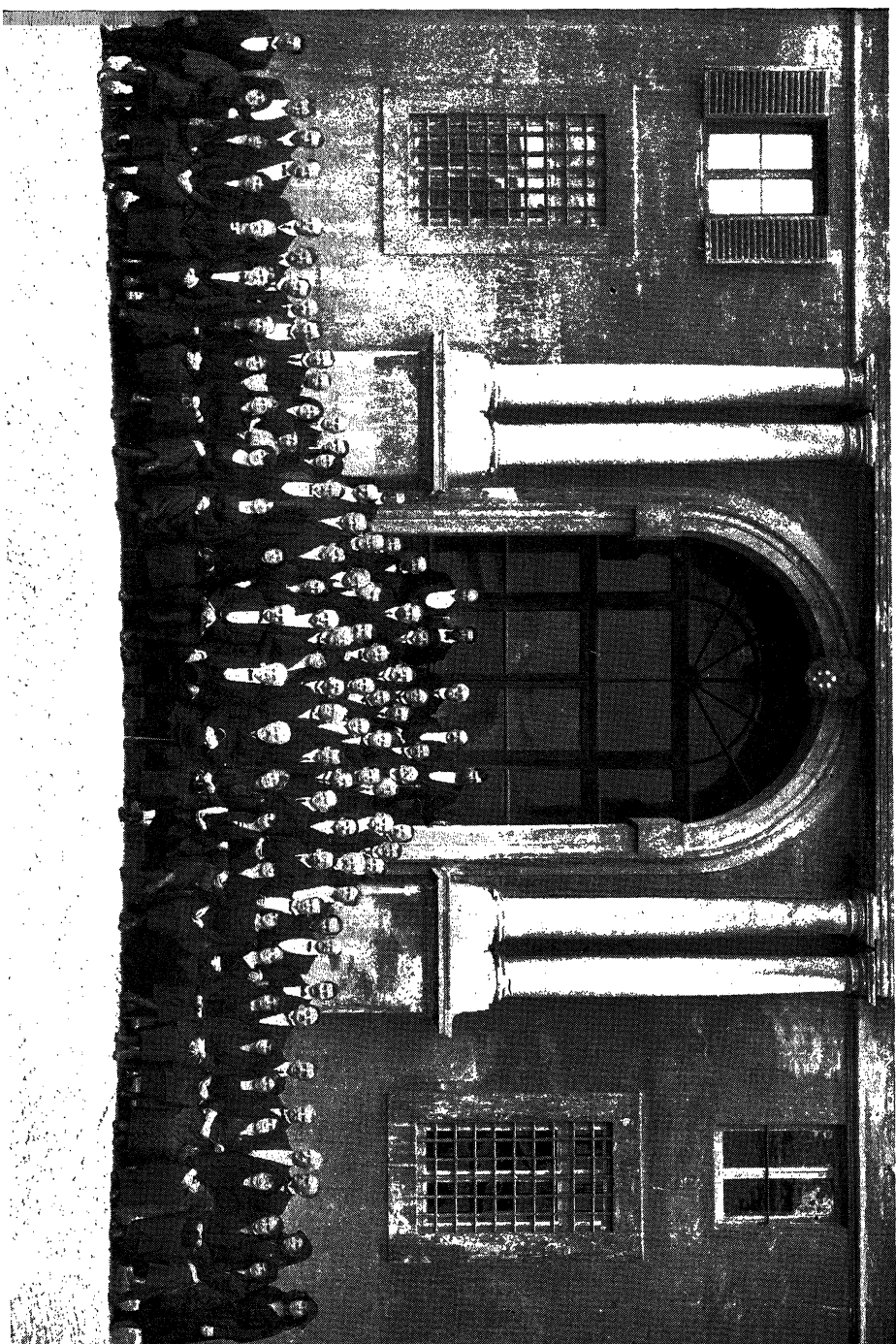
The opening exercises in the Campidoglio or State House came first. To this meeting were invited not only the astronomers but also the members of the Geophysical Union, which held its triennial congress in the city at the same time. Speeches were read by the Mayor of Rome, by the Minister of Education, and by the presidents of the two unions. King Victor Emmanuel and the Crown Prince sat in the front seat and by their side a prince—cardinal with his red cap representing the Holy Father, Pope Pius XI. We were told that this was the first time since 1870 that a papal representative had appeared in



KEY TO PLATE XXVII.

- 1.—F. W. Dyson, director Greenwich Observatory.
- 2.—B. Bailland, director Paris Observatory.
- 3.—V. Cerulli, vice president of the Astronomical Council.
- 5.—Col. E. E. Marwick, British Astronomical Association.
- 6.—E. Hertzsprung, Leiden (Holland) Observatory.
- 7.—A. M. Newbigin, British Astronomical Association.
- 8.—W. Bowie, director of Geodetic Service (Washington).
- 9.—P. Dittsheim, Paris.
- 10.—G. Platania, Catania Observatory.
- 12.—R. A. Shaw, British Astronomical Association.
- 13.—J. N. Baldwin, Melbourne Observatory.
- 14.—Rev. Th. E. R. Phillips, British Astronomical Association.
- 15.—R. A. Sampson, director Edinburgh Observatory.
- 16.—G. F. Dodwell, Government Astronomer of South Australia.
- 18.—L. F. Murguia, Mexico Weather Bureau.
- 19.—H. H. Kimball, Washington Weather Bureau.
- 20.—H. Philippot, Observatory in Uccle (Bruxelles).
- 21.—J. Gallo, director Tacubaya (Mexico) Observatory.
- 22.—E. F. Pigot, director Riverview (Sydney) Observatory.
- 23.—G. Perrier, chef de la Section de Geodesie (Paris).
- 24.—Ing. Doré, Firenze, Italy.
- 25.—A. D. C. Crommelin, Greenwich Observatory.
- 27.—G. Bigourdan, Paris Observatory.
- 28.—J. Bailland, Paris Observatory.
- 30.—J. C. Conde, director of Spain's Meteorological Service.
- 31.—S. P. Boskovic (Czechoslovakia).
- 33.—H. N. Russell, director Princeton University Observatory.
- 34.—Banochewicz, of the Observatory in Cracovie.
- 36.—G. B. Rizzo, Messina University.
- 39.—Littlehales, U. S. Naval Observatory.
- 40.—C. Somigliana, Turin University.
- 44.—C. E. St. John, Mount Wilson Observatory.
- 45.—J. Jaumotte, director Meteorological Institute at Uccle (Bruxelles).
- 46.—H. Vanderlinden, Uccle (Bruxelles) Observatory.
- 47.—F. Vercelli, director Trieste Observatory.
- 48.—Col. Norrel, Service geogr. de l'Armée, Paris.
- 49.—J. Galbis, director Spanish Meteorological Service.
- 50.—L. Rodés, director Ebro (Tortosa) Observatory.
- 51.—H. Deslandres, director Meudon (Paris) Observatory.
- 52.—G. Abetti, Arcetri (Florence) Observatory.
- 53.—L. Volta, Milan Observatory.
- 54.—E. Bianchi, director Milan Observatory.
- 55.—P. E. E. Emanuel, Vatican Observatory.
- 56.—J. Krassowski, Université de Pologne, Varsovie.
- 57.—G. Ferrié, membre de l'Institut (Paris).
- 58.—A. de La Baume Pluvinel, membre du Bureau des Longitudes.
- 59.—A. Di Legge, director Capitoli (Rome) Observatory.
- 60.—G. Armellini, Pisa University.
- 61.—O. J. Lee, Yerkes Observatory.
- 64.—F. Bowers Littell, U. S. Naval Observatory.
- 65.—J. Bosler, Meudon Observatory.
- 66.—Col. G. Ferri, Italian Military Geographical Institute (Florence).
- 67.—Col. C. Bardeloni, Italian Military Wireless Service (Rome).
- 68.—Delambre, directeur du Bureau National Meteorologique (Paris).
- 69.—H. D. Curtis, director Allegheny Observatory (U. S. A.)
- 71.—L. A. Bauer, director Department of Terrestrial Magnetism, Carnegie Institute, Washington.

PLATE XXVII.



PHOTOGRAPH TAKEN AT THE CORTILE DI S. DAMASO AT THE VATICAN, ROME, MAY 10, 1922.

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the Campidoglio and this event taken with many others indicates a rapproachment, or "getting together" as we would say, of the Church and the Roman State. All the speeches, except that of President Bailaud, were in Italian so that most of us had ample time to study the mural decorations of the fine hall, depicting events from early Roman history, and to admire the gorgeous uniforms and powdered heads of the statehouse guards. The Campidoglio, as we had opportunity to find out a few evenings later, is an old palace filled with works of art and historical relics. Great tapestries, large and small paintings cover every available wall, room upon room and corridor upon corridor, while in display cases all over, could be seen antiquities ranging from



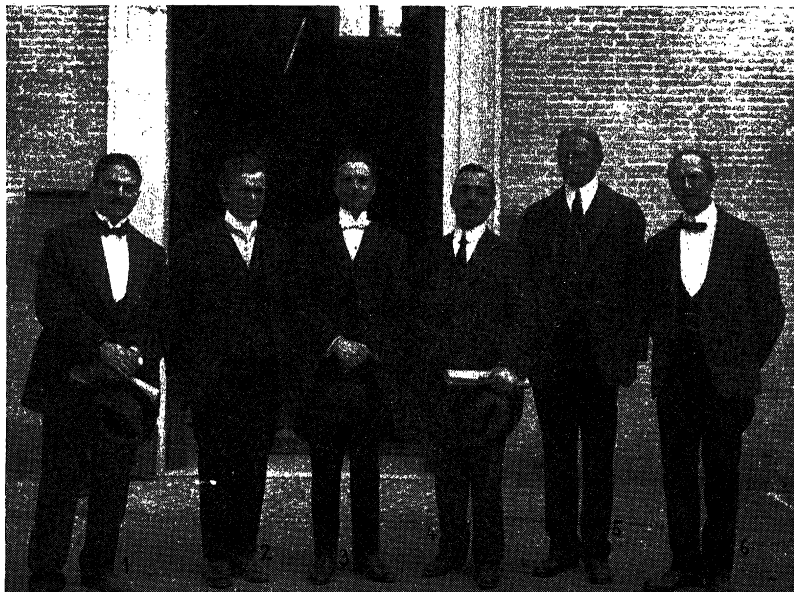
1. H. H. TURNER. 2. L. RODÈS.

the mummified remains of early Romans to the gems and jewels with which they decorated themselves when alive. Italians seem to have had this for a motto, "Count any space on a wall waste space unless thou canst paint a picture or portrait or group thereon." Of necessity many of these must be bad or even grotesque, but masterpieces occur frequently enough to make the independent search for them a fascinating pastime.

Outside the Campidoglio, on the terrace, a gaunt wolf and a pair of eagles are kept in cages, presumably to remind citizens of their vigor-

ous beginnings as a state.

During one of the first evenings of our stay in Rome a brilliant reception was given by city and state officials in the Campidoglio. One afternoon the ladies of the committee on arrangements gave a tea in the halls of the Accademia dei Lincei where the sessions of the two congresses were held. On another afternoon we were shown through the Palatine Gardens by expert archaeologists and were given a reception by the Ministry of Public Instruction. In each of these cases the refreshments were quite elaborate. The reader will be interested to



1. G. FERRI. 2. G. F. DODWELL. 3. P. EMANUELLI. 4. C. BARDELONI.
5. H. N. RUSSELL. 6. F. B. LITTELL.

know what attitude was taken by the American members when confronted with the array of wines which has made Italy famous. The remark by an experienced observer, not of our group, will be appreciated when he says,

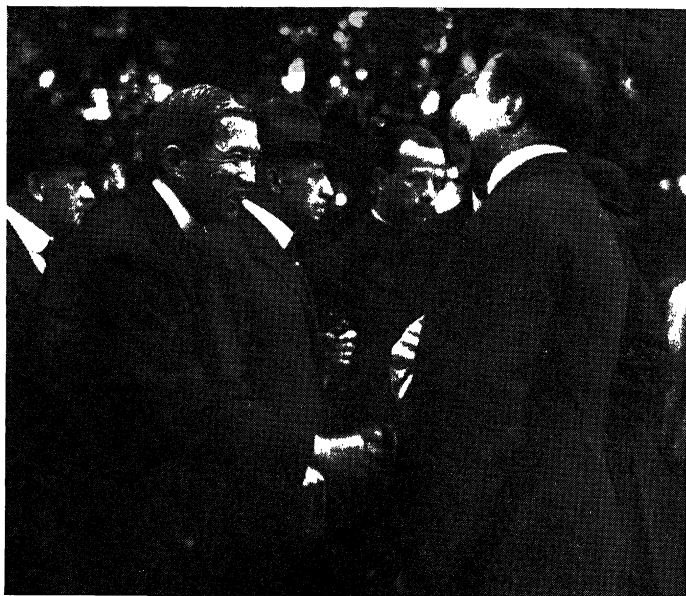
"Overjoyed were we to find
That though on prohibition bent
They've kept an open mind."

The old Palazzo Corsini, on the northwest banks of the Tiber, is the home of the Accademia dei Lincei. This palace, like the Campidoglio, is of great size and is a gallery of art as well as the seat of the Academy. The astronomers had the second floor and the geophysicists the third.

English, French and Italian were used in the general sessions. Dr. Giorgio Abetti, Col. Stratton, Count de la Baume Pluvinel and Dr.

Seares were official secretaries and translators. These men won our constant admiration for their masterly abstracting and translations of speeches and remarks from one language to another. Many of the members were able to make their remarks in two languages and one, at least, our genial and gifted friend from Mexico, talked in three languages in succession with equal fluency. Everyone laughed when on one occasion we had heard a report in English, he got up and began commenting on it in French, indicating that accidentally he had been thinking in French while the English was spoken.

Most of the time of the congress was taken up by the conferences of the International Committees. Visiting of these meetings by members



H. KIMURA SHAKING HANDS WITH THE ITALIAN MINISTER OF PUBLIC INSTRUCTION, A. ANILE.

of other committees was encouraged and was widely practised. Some of our members, who are polymaths, were almost attending two different meetings at the same time.

The general sessions were presided over by President Baillaud or in a few cases by one of the vice-presidents, Dyson, Cerulli acting for Ricco (deceased), Stroobant acting for Lecointe (absent), and Schlesinger acting for Campbell (absent).

Several changes were made in the list of committees. This is an indication that the Union is fluid rather than static in its tendencies. Therein, of course, lies the guarantee that it will long serve its purpose in a world where changing points of view is the daily order and where ability to make quick readjustments is a basic condition of life. The

Committee on Republication of Early Astronomical Works, the Committee on Astronomical Expeditions, Eclipses, etc., and the Committee on Reform of the Calendar were all dropped. Three committees, that on Solar Radiation, that on the Spectro-Helio-Enregistreur and that on the Solar Atmosphere were consolidated into one, the Committee on Solar Physics. The committees on Asteroids and on Comets were united as a Committee on Asteroids, Comets and Positional Work on



1. G. ARMELLINI. 2. A. ANILE. 3. P. EMANUELLI. 4. F. W. DYSON.

Satellites. In this manner the number of International Committees was reduced from 32 to 26.

The invitation of the English astronomers to hold the next meeting of the Union at Cambridge in 1925 was accepted. On behalf of the Americans Dr. Schlesinger stated that we should look forward to having the Union meet in America in 1928.

The following officers were elected to serve for the next three years:

President, W. W. Campbell
General Sec., Alfred Fowler
Vice Presidents, Cerulli, De Sitter,
Deslandres, Hirayama,
and Hough.

Full reports of the various committees as finally adopted by the Union, as well as complete lists giving the memberships of these committees, will be published later as a Circular of the National Research Council. In view of this fact it is not thought necessary to give these technical details at this time.

After the conclusion of the meetings in Rome, many of the members of the Union went to Florence upon invitation of the various scientific institutions of that city. For one whole and very full day we were entertained by the Mayor of the City, who is the Director of the Physical Institute, the Military Geographical Institute, and our ever-present friend and guide Dr. Giorgio Abetti. At the Military Institute we were shown every stage in the process of making military maps, both on a plane and in relief. After a reception in the city hall we were taken in automobiles to the Galilean Museum and to the Observatory on Arcetri hill. At the Museum the mayor had the case containing Galileo's first telescope unlocked and we were permitted to handle and look through the actual telescope with which this pioneer first saw mountains on the moon, the satellites of Jupiter and Saturn's rings. I think each one of us experienced a unique thrill when we read with ease the calibrations on an ordinary thermometer 60 feet away with this light telescope made of paper tubes. At Arcetri the old observatory was inspected, as well as the foundations of the new tower telescope and the physical laboratories of the university. Nearby still stands, in good preservation, the house where Galileo lived for some time and where he died. Across a small ravine is the convent where his daughter lived and died as a nun. A little farther away stands an old house in which Savonarola lived for some time. The view across the busy city to the calm wooded heights of Fiesole cannot easily be forgotten.

The greatest appreciation was voiced on every hand among the visiting delegates of the thoughtful arrangements and the entertainment provided for them by the committees both at Rome and at Florence.

DRAWINGS OF MARS AND JUPITER.

By D. W. MOREHOUSE.

The accompanying drawings of Mars were made at the Drake University Municipal Observatory during the 1922 opposition. In the new location in Waveland Park, a grassy plot of about 190 acres, the seeing has been unusually good at times and this fact coupled with the ability of Parmelee Daniels to draw what he sees has resulted in the most satisfactory study of Mars which we have been able to make at Drake University.

Mr. Daniels has been with the department for two years and has had considerable training in sketch making. He is ambidextrous, drawing or writing equally well with either hand. His sense of proportion seems to be very keen and with deep interest and wholesome

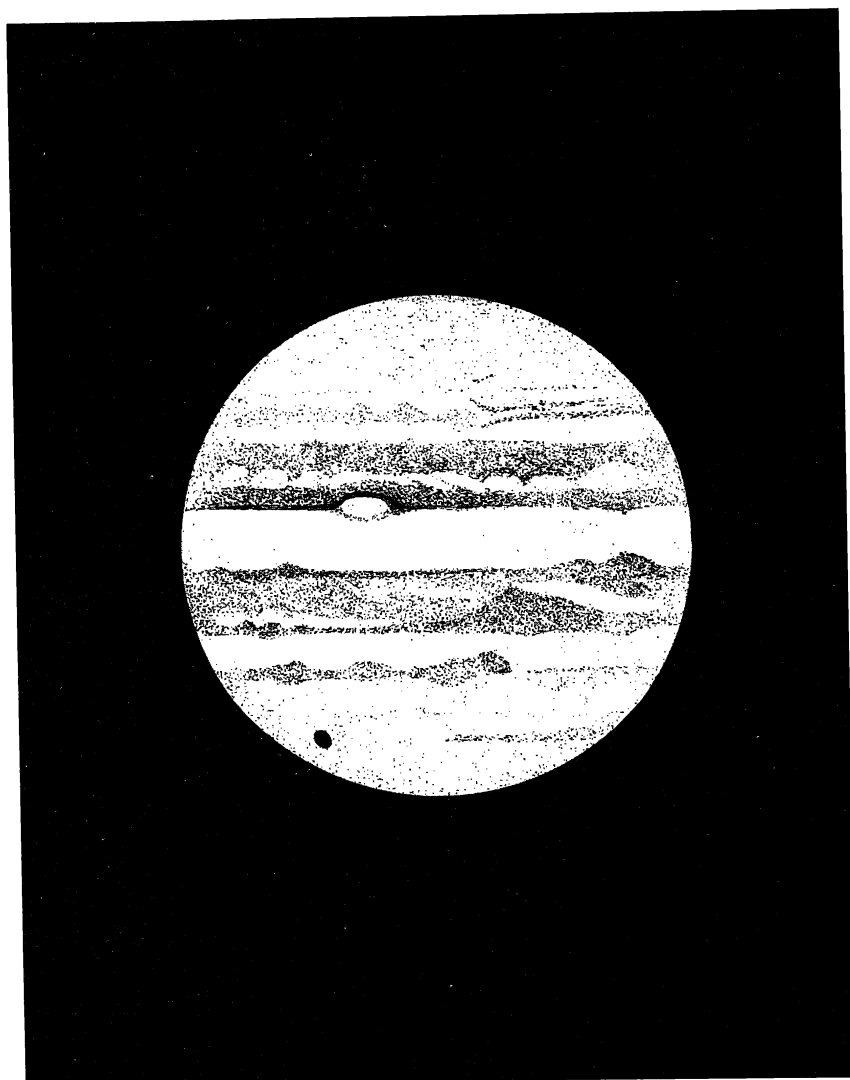
PLATE XXVIII.



THE PALAZZO CORSINI IN ROME
containing the rooms of the R. Accademia dei Lincei where the Inter-
national Congress of Astronomy, Geodetics and Geophysics
held its sessions.

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PLATE XXIX.



DRAWING OF JUPITER BY P. C. DANIELS

at the Drake University Municipal Observatory, Des Moines, Iowa, 1922, May
19d 10h 45m C.S.T. The shadow of satellite II is seen in transit near the lower
left edge of the disc.

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