

VI. THE SYMPOSIA OF THE INTERNATIONAL ASTRONOMICAL UNION

There were 83 participants when the first General Assembly of the Union convened. By today's standards it was a medium-sized Symposium. It was not difficult to meet fellow participants and there was ample time and opportunity to discuss the interesting problems of that day. In the few decades following the first General Assembly astronomy developed rapidly; in particular, coverage became enormously broad. There is not a person today who could boast of keeping abreast of all new developments in astronomy. The membership of the Union grew accordingly and there remained few problems which were in the centre of interest of all 1600 Members of the IAU.

Parkinson would probably establish an exact formula for the number of participants of scientific meetings when the effectiveness is lost. We shall be satisfied with a rough estimate that an attendance of the order of 100 people at a meeting still allows a fruitful and lively discussion; each participant has the opportunity to give full vent to his ideas.

The increase in membership and coverage could have been faced in two ways. The first would have been to split the Union into several associations, each covering a branch of astronomy. Although this solution may prove to be unavoidable in the future, there are strong reasons for keeping all of astronomy together at present. Astronomy is one of the international sciences *par excellence* and there is still a single trend in the evolution of our science in the world. Each serious paper is based on results reached at all observatories, irrespective of country or continent. It would be difficult, if not impossible, to keep up this thoroughly international feature for a number of mutually almost independent associations.

The other possibility would have been to create smaller meetings with a strictly limited attendance and concerned with particular problems. This was the idea which led to the organization of Symposia, and it was a successful one. Symposia are organized according to the needs of any branch of astronomy and only experts united by a deep interest in the problems participate.

Besides the main goals, i.e. concentration of interest and the preservation of the unity of Astronomy, the Symposia offer several other advantages.

Experts in the different branches are brought together; e.g. at Symposium no. 20 "The Galaxy and the Magellanic Clouds", radioastronomers and optical astronomers met and discussed common problems approached by different methods and from different angles. At Symposium no. 25 "The Theory of Orbits in the Solar System and in Stellar Systems", stellar dynamists and celestial mechanists found that the three-body problem and motions of stars in the Galaxy pose the same questions and that the solutions can be expressed in analogical terms. Each Symposium gives an example of this kind.

Generally, the reactions of the scientific public to any result presented in a journal, are scattered in a number of other papers and appear much later. At a Symposium, the discussion follows immediately after the presentation of the results and the reader of the proceedings can easily compare the different opinions expressed.

The Symposia are thoroughly international and the Union usually makes a financial provision to this end. The importance of the international character of Symposia cannot be overstressed, as well from the standpoint of the development of science as from the standpoint of general understanding between people of different nations.

The history of the Symposia of the Union is not a very long one (see above pp. 9 and 43). Prior to 1953 some symposia were held during General Assemblies and are published in the *Transactions*. In 1953 a firmer basis of organization was established and a uniform series of Symposia created. Table 1 lists all Symposia of the new series. The title, date, place, joint organization with other scientific Unions, the editor and publishing house are shown. The longest monothematic series is on Cosmical Gas Dynamics (Symposia nos. 2, 6, 8, 12 and 28). Galactic structure was discussed at Symposia nos. 1, 5, 7 and 20. There is, however, no clear-cut limit between the branches covered by individual Symposia because border-line problems are frequently dealt with.

The results arrived at by a small group of participants must be disseminated to the general scientific public. Thus the publishing of the proceedings of a Symposium is of vital importance. According to the possibilities existing in each case, proceedings have been published in scientific journals, as commercial undertakings by professional publishers, or by the Union. This diversity had the inconvenient consequence of losing the uniform character of a series. To prevent this, Symposia from no. 24 onwards, will be published by the Union.

The different aspects of IAU Symposia are discussed in more detail in Part 2 of this Handbook, page 129.

Details regarding the availability of published proceedings of Symposia are included in the list of IAU publications on pages 43.

Table 1

No.	Title	Date and place	Editor and Publishing house	Organized in co-operation with
1.	Co-ordination of Galactic Research	June 1953 Groningen	A. Blaauw Cambridge University Press, 1955	
2.	Gas Dynamics of Cosmic Clouds	July 1953 Cambridge, England	H. C. van de Hulst and J. M. Burgers North-Holland Publ. Co., 1955	IUTAM
3.	Non-Stable Stars	September 1955 Dublin	G. H. Herbig Cambridge University Press, 1957	
4.	Radio Astronomy	August 1955 Jodrell Bank	H. C. van de Hulst Cambridge University Press, 1957	
5.	Comparison of Large-Scale Structure of the Galactic System with that of other Stellar Systems	September 1955 Dublin	N. G. Roman Cambridge University Press, 1958	
6.	Electromagnetic Phenomena in Cosmical Physics	August 1956 Stockholm	B. Lehnert Cambridge University Press, 1958	IUPAP, IUGG
7.	Second Conference on Co-ordination of Galactic Research	June 1957 Saltsjöbaden	A. Blaauw <i>et al.</i> Cambridge University Press, 1959	
8.	Third Symposium on Cosmical Gas Dynamics	June 1957 Cambridge, Mass., U.S.A.,	J. M. Burgers and R. N. Thomas <i>Reviews of Modern Physics</i> , 1958	IUTAM
9.	Paris Symposium on Radio Astronomy	August 1958 Paris	R. N. Bracewell Stanford University Press, 1959	URSI
10.	The Hertzsprung-Russell Diagram	August 1958 Moscow	J. L. Greenstein <i>Annales d'Astrophysique</i> , 1959	
11.	The Rotation of the Earth and Atomic Time Standards	August 1958 Moscow	D. Brouwer <i>The Astronomical Journal</i> , 1959	

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12.	Aerodynamic Phenomena in Stellar Atmospheres (Fourth Symposium on Cosmical Gas Dynamics)	August 1960 Varenna	R. N. Thomas <i>et al.</i> <i>Il Nuovo Cimento</i> , 1961	IUTAM
13.	The Future of the International Latitude Service	July 1960 Helsinki	P. Melchior <i>Bulletin Géodésique</i> , 1961	IAG
14.	The Moon	December 1960 Leningrad	Z. Kopal and Z. K. Mikhailov Academic Press, 1962	
15.	Problems of Extra-Galactic Research	August 1961 Santa Barbara	G. C. McVittie Macmillan Co., 1962	
16.	The Solar Corona	August 1961 Cloudcroft, New Mexico	J. W. Evans Academic Press, 1963	
17.	Visual Double Stars	August 1961 Berkeley	S. L. Lippincott <i>Publications of the Astronomical Society of the Pacific</i> , 1962	
18.	Theoretical Interpretation of Upper Atmosphere Emissions	June 1962 Paris	D. R. Bates <i>Planetary and Space Science</i> , 1963	IUGG
19.	Site Testing	October 1962 Rome	J. Rösch <i>et al.</i> <i>Bulletin Astronomique</i> , 1963	
20.	The Galaxy and the Magellanic Clouds	March 1963 Canberra and Sydney	F. J. Kerr and A. W. Rodgers Australian Academy of Sciences, 1964	URSI
21.	The System of Astronomical Constants	May 1963 Paris	J. Kovalevsky <i>Bulletin Astronomique</i> , 1965	COSPAR
22.	Stellar and Solar Magnetic Fields	September 1963 Munich	R. Lüst North-Holland Publ. Co., 1965	
23.	Astronomical Observations from Space Vehicles	August 1964 Liège	J.-L. Steinberg <i>Annales d'Astrophysique</i> , 1964, 1965	COSPAR
24.	Spectral Classification and Multicolour Photometry	August 1964 Saltsjöbaden	K. Lodén, L. O. Lodén and U. Sinnerstad IAU, 1966	
25.	The Theory of Orbits in the Solar System and in Stellar Systems	August 1964 Thessaloniki	G. Contopoulos IAU, 1966	COSPAR
26.	Abundance Determination in Stellar Spectra	August 1964 Utrecht	H. Hubenet IAU, 1966	
27.	The Construction of Large Telescopes	April 1965 Tucson, Arizona and Pasadena, California	D. L. Crawford IAU	
28.	Cosmical Gas Dynamics (Fifth Symposium)	September 1965 Nice	R. N. Thomas IAU	IUTAM