

SERVICES OF THE INTERNATIONAL ASTRONOMICAL UNION

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1. Introduction

The IAU has as its task (Statute 1):

- (a) to develop astronomy through international cooperation;
- (b) to promote the study and development of astronomy in all aspects;
- (c) to further and safeguard the interests of astronomy.

The Union to carry out its mandate is organized into 11 Divisions representing major branches of astronomical activity. The Divisions are composed of specialist Commissions –out of 39 Commissions, 31 operate within the divisional structure: of the 8 Commissions which do not, 6 may be regarded as representing "Services". Additionally there are 4 Working Groups of the Executive Committee. Table 1 lists the Divisions and their constituent Commissions.

The Union also organizes, and partially funds, its triennial General Assembly, Regional Meetings, a Symposium and a Colloquium series of meetings. The Union, as a member union of the International Council of Scientific Unions (ICSU) partakes actively in ICSU activities, for example, through Inter-Union Committees, e.g. IUCAF, COSPAR, SCOPE: the IAU is also represented at certain inter-governmental organizations, e.g. the Scientific and Technical sub-Committee of the UN COPUOS, WMO, and through IUCAF, at ITU.

2. Services of the IAU

The Service Commissions of the IAU are listed in Table 2. These Commissions are not members of Divisions! For completeness, there are also Commissions 7 (Celestial Mechanics) and 41 (History of Astronomy) that are not in any Division.

The "Service" commissions cover a wide range of tasks –from documentation to protection of observing sites. C5 has a mandate covering bibliography and library provision to recommendations for use of standard ways of reporting information and data. It tries to ensure that astronomical information is as clear and unequivocal as possible. C6 is concerned with rapid dissemination of new discoveries through its Telegrams and Minor Planet Circulars. Again, it uses standardisation to ensure dissemination is compact and decipherable. In today's circumstances it makes use of the facilities of the Internet. Its products are not free but subscriptions are modest. C14 ensures that astronomers are provided with the best attainable atomic and molecular data for astrophysical analysis. This is a three-way process –namely the assessing of existing data, promoting the determination of better data and determining those areas where new data will be required. C38 provides travel funding for astronomers wishing to develop a research project at an astronomical institution outside their home country. A minimum stay of three months at the host institution is required, the research project has to be assessed for viability and a scientific return to the candidate's home country/institution must be demonstrable. See IAU Information Bulletins for details. C46 has a great deal to offer. Good astronomical education is the basis of a lively research base. C46 attempts, within a very limited budget, to improve and support astronomical education as widely as possible. In particular, it assists young graduates through International Schools for Young Astronomers (ISYA) and through Teaching for Astronomy Development (TAD) it aims to help countries which

TABLE 1. Divisions and Commissions of the IAU

Division	Name	Division	Name
<i>I</i>	<i>Fundamental Astronomy</i>	<i>II</i>	<i>Sun and the Heliosphere</i>
C4	Ephemerides	C10	Solar Activity
8	Positional Astronomy	12	Solar Radiation & Structure
19	Rotation of the Earth	49	Interplanetary Plasma & Heliosphere (3)
24	Photographic Astrometry		
31	Time		
51	Bioastronomy (6)		
<i>III</i>	<i>Planetary System Sciences</i>	<i>IV</i>	<i>Stars</i>
C15	Physical Study of Comets, Minor Planets & Meteorites	C26	Double & Multiple Stars
16	Physical Study of Planets & Satellites	29	Stellar Spectra
20	Position & Motions of Planets, Comets & Satellites	35	Stellar Constitution
21	Light of the Night Sky	36	Theory of Stellar Atmospheres
22	Meteors & Interplanetary Dust (5)	45	Stellar Classification (5)
<i>V</i>	<i>Variable Stars</i>	<i>VI</i>	<i>Interstellar Matter</i>
C27	Variable Stars	C34	Interstellar Matter (1)
42	Close Binary Stars (2)		
<i>VII</i>	<i>Galactic System</i>	<i>VIII</i>	<i>Galaxies & the Universe</i>
C33	Structure and Dynamics of the galactic system	C28	Galaxies
37	Star Clusters & Associations (2)	47	Cosmology (2)
<i>IX</i>	<i>Optical Techniques</i>	<i>X</i>	<i>Radio Astronomy</i>
C9	Instruments & Techniques	C40	Radio Astronomy (1)
25	Stellar Photometry & Polarimetry		
30	Radial Velocities (3)		
		<i>XI</i>	<i>Space & High Energy Astrophysics</i>
		C44	Space & High Energy Astrophysics (1)

TABLE 2. Service Commissions

Commission No.	Name
C5	Documentation and Astronomical Data
C6	Astronomical Telegrams
C14	Atomic and Molecular Data
C38	Exchange of Astronomers
C46	Teaching of Astronomy
C50	Protection of Existing and Potential Observing Sites

are developing their astronomical base from scratch with visiting lecturer support, library support and where appropriate with *modest* equipment support. The TAD programme is flexible and can be tailored to suit the circumstances of any given country or group of countries. C50 exists to protect observatory sites. It is essential in an era of rising electromagnetic pollution at all wavelengths and of a range of mankind's activities leading to degradation of observing conditions. These Commissions are available for consultation and can clearly be of support at all levels of astronomical activity.

The Working Groups of the EC (Table 3) are available to assist –in particular the WGWWDA has arranged this Joint Discussion and is a valuable entry point to the IAU to seek for effective assistance.

TABLE 3. Working Groups of the Executive Committee

Designation	Full Name
WGDA	Working Group for encouraging the international Development of Antarctic Astronomy.
WGFSLSF	Working Group for Future Large Scale Facilities
WGSPN	Working Group for Planetary System Nomenclature
WGWWDA	Working Group for the Worldwide Development of Astronomy

Very often it is not a Division or Commission that can be most helpful in particular instances. Often problems arise which are science specific. Many Commissions have set up their own Working Groups, either alone, or in conjunction with other Commissions. These Working Groups are superb resources of expertise. It is not possible to give a complete listing of them. Some are semi-permanent, while others are set up to deal with a particular problem as it arises, and disband when their jobs are done. Some Working Groups are set up jointly with other scientific Unions. They deal with problems as diverse as the cartographic coordinates of planets and satellites, information handling, libraries, molecular structure and transition data, comet names, prevention of interplanetary pollution, radial-velocity standards and plasma astrophysics. One list of the Groups available contains over fifty entries and is known to be incomplete! Those seeking advice on specific scientific matters would be well advised to enquire of a suitable Commission President whether or not an appropriate Working Group exists.

3. Conclusion

The IAU exists to facilitate astronomical science. The IAU is run by astronomers for astronomers. Unlike many Scientific Unions, the IAU has individual membership. Therefore you count. It is up to you to seek assistance when needed and, if approached, also up to you to assist if you can. By communicating freely, the IAU has flourished. It has done so by reflecting the interests and concerns of the whole community of astronomers. It is up to us to maintain that 78-year-old tradition by exercising the expertise that the IAU represents.