

COMMISSION 30: RADIAL VELOCITIES (*VITESSES RADIALES*)

PRESIDENT: A Tokovinin

VICE-PRESIDENT: B. Nordström

ORGANIZING COMMITTEE (2000–2003): D. Dravins, H. Levato, T. Mazeh, N. Morell, H. Quintana, M.A. Smith, L. Szabados, S. Udry

Attendance: The meeting opened at 16.00 p.m. on Wednesday 16 July 2003 with about 20 IAU members in attendance.

1. President's report

1.1. Membership

Commission 30 has 129 members and consultants in 28 countries who are active in the area of radial velocities (RVs). The president reported that the following new members had joined Commission 30 since the last IAU General Assembly: E. Glushkova (Russia), G. Torres (USA), J. Sperauskas (Lithuania), J. Skuljan (New Zealand), G.J. Federico (Argentine). The last 2 names are new IAU members who joined the Union at this GA. On the other hand, 4 persons who were on the list of C30 but are no longer in the IAU directory are excluded: J. Boulon, F. Giesecking, C. Huang, N.B. Sanwal. The president noted that only 106 members have e-mail and can effectively participate in the work of the Commission. Of the remaining C30 members, some do not have e-mail at all, some changed their address without informing IAU. The list of "lost persons" is thus a constant worry for the president. A potential resource for new C30 members is large, mostly related to modern projects in exo-planet searches, stellar oscillations and large RV surveys including extragalactic.

1.2. Election of new Organizing Committee and vice-president

Birgitta Nordström from the Niels Bohr Institute for Astronomy, Physics and Geophysics (Copenhagen Denmark), was appointed unopposed as the new president of C30 for the triennium commencing July 2003. Only one candidate for the vice-president – Stephane Udry from the Geneva Observatory (Switzerland) was nominated, so there was no need of election.

Four members of the OC retire in July 2003. The nominating Committee identified 4 candidates for the vacant positions: Elena Glushkova (Sternberg Astronomical Institute), Francis C. Fekel (Tennessee State University), Dimitri Pourbaix (University of Brussels), Guillermo Torres (Center for Astrophysics). Again, there was no need for election. The OC members that remain in service until 2006 are Dainis Dravins (Lund Observatory), Hugo Levato (Complejo Astronomico El Leoncito, Argentine), Laszlo Szabados (Konkoly Observatory), and Myron A. Smith (CSC/IUE Observatory).

1.3. Conference proposals

Commission 30 receives each year several requests for the support of IAU meetings. Five meetings in 2003 supported by C30 are IAU Colloquium 191 "The environment and evolution of binary and multiple stars" (Mérida, Mexico, February 3-7 2003), IAU Symposium "Large Scale Surveys, Stellar and Galactic Astronomy" (not accepted by IAU), Joint Discussion (JD) on "Solar-like oscillations: observations and theory", JD on determinations of stellar masses (not accepted by IAU), and JD on extragalactic binaries. Support was given by C30 for the two meetings in 2004: Symposium "The A star puzzle" and Symposium "Multi-wavelength investigations of solar activity".

The president noted that the activity of the OC in considering meeting proposals is quite low: of 8 OC members, only 2-5 usually give their opinion on the proposed meetings. Some relevant meetings go without our support even being asked.

1.4. Commission web site

The web page of C30, linked to the main IAU site <http://www.iau.org>, is the main instrument for disseminating in the astronomical community the information related to radial velocities. It gives information on C30 organizational matters (member lists, OC, newsletter, reports, etc.), on the activity of C30 working groups, and a collection of useful links. The html version of the Triennial Report (2000-2003) is available – extended with respect to the published report and with direct access to the abstracts of the cited papers by means of ADS services. The web page compares favorably to pages of some other IAU Commissions, although many things could definitely be improved.

1.5. Working groups of Commission 30

Commission 30 had 3 Working groups in the past triennium.

Standard radial-velocity stars (R.P. Stefanik and S. Udry): this WG did not show any activity since 1999. Its existence should be re-considered by the new OC of C30. C. Scarfe noted that the work on RV standards for hot stars is still unfinished, and that high-precision RVs of late-type standards can be used for new analysis of their stability, hence there remains a task for the WG on standards.

Bibliography of stellar radial velocities (chaired by Hugo Levato): a catalog of stellar RVs is being maintained and updated. It is available on the web at <http://www.casleo.gov.ar/catalogo/catalogoin.htm>

Ninth catalog of the orbital elements of spectroscopic binary stars (chaired by A. Tokovinin): see the report of D. Pourbaix below.

1.6. The future of Commission 30

The Commission 30 has a clearly defined mission: perfection of radial-velocity techniques. After a very successful meeting on precise RVs (1998) some members voiced the opinion that this mission is accomplished. However, several projects for massive RV surveys of stars using new techniques of data acquisition and reduction, robotic telescopes, etc. are being started now. Together with the ever expanding field of redshift surveys (some 10^6 redshifts have been measured by now), this indicates a necessity of continuing work on the RV techniques and the usefulness of C30. Recent contributions of C30 include precise definition of radial velocity (D. Dravins and co-authors) and new catalog of spectroscopic binaries. The Triennial Report makes it clear that astronomical research that makes use of RVs is more vigorous and innovative than ever.

As noted by C. Scarfe, this is not the first time that C30 has reviewed its own reasons for continuing to exist. During his term as president, R. Griffin proposed that

it be disbanded, and argued the case for doing so. This caused many other people to think about the matter, which proved to be a very useful exercise, as well as leading to the commission's continued existence since then.

The current activity of C30 and the composition of its OC make it clear that we are a Commission on *stellar* radial velocities. Several past C30 presidents, particularly David Latham, tried very hard to include non-stellar RVs within the scope of the commission, and to involve non-stellar astronomers in the commission's work. For several years C30 had such persons on the OC, but this is no longer the case. Work on extragalactic RVs is covered in the triennial reports of the Commission, but nothing else is done. C30 is irrelevant outside the visible range of spectrum, despite the stated claim to cover all techniques and wavelength ranges. Apparently, the Doppler effect alone cannot unite specialists in different fields and cannot justify the existence of IAU Commission.

The future of C30 is closely related to the future of IAU as a whole. IAU is important for communication and information exchange among astronomers world-wide, but the forms of its activity are changing. Internet is nowadays the main vehicle of communication, accompanied by a slowly diminishing role of meetings. Now some young astronomers do not see any particular reasons for joining IAU. IAU should also be important in maintaining the infra-structure of our science – things that everybody needs but nobody wants to do like standards, constants, definitions, catalogs, databases etc. Infra-structure is usually an activity with low “impact” in terms of public relations and is often threatened by big projects. Developing countries play an important role here and can take care of infra-structure in the world-wide division of labor in astronomy, orchestrated by IAU.

Members of C30 and especially its OC are urged to continue their service to astronomical community and to search for new areas where useful contributions can be made. Active recruitment of new C30 members is possible, especially from the teams of new projects like RAVE or exo-planet searches. Organizing a major conference should be given a thought. Finally, we have to consider and evaluate the possibilities to re-structure C30 (merging with other Commissions, re-profiling or even closing).

In the discussion following president's report, opinions on the future of C30 were expressed by Colin Scarfe, Birgitta Nordström and others.

2. The report on the Ninth catalog of the orbital elements of spectroscopic binary stars

Dimitri Pourbaix has presented a report on the status of the 9-th catalog of the elements of spectroscopic binary orbits – SB9. The benefits of this web-based catalog are numerous: permanent update, accessibility from other databases, easy connection to the original articles via bibcodes and ADS, ease of catalog use for various studies including statistics. The SB9 can be accessed at <http://sb9.astro.ulb.ac.be>

As of July 1, 2003, SB9 contained 1999 orbits for 1985 systems (for comparison: 1469 systems in SB8). Most of entered orbits are new ones, only 50 are improvements of SB8 orbits. Unlike SB8, the new catalog contains individual RVs (now available for 599 systems). Major work of entering orbits still remains to be done (at least 675 papers, with an average of 2.5 orbits per paper, await entering). The goal of the SB9 WG is to achieve reasonable completeness by the next GA in 2006. Help of various researchers who contributed their data to SB9 is acknowledged. At the same time, some WG members have not yet entered their own data! Few unsolved issues and plans for new tools were presented as well.

3. Announcement of the SPS3 meeting

Brian Mason announced the Special Session SPS3 on a new classification scheme for double stars on July 18, 2003, and presented the proposed WMC scheme of component designation. This scheme was recommended for further development at the IAU GA 24 in Manchester, and a resolution “ON DESIGNATING COMPONENTS OF BINARY/MULTIPLE STAR SYSTEMS” was passed at GA 25. The Commission 30 was not required to formally endorse this resolution, but this activity is clearly of relevance to the Commission. The web page of SPS3 is <http://ad.usno.navy.mil/wds/wmc/sps3.html>

The meeting closed at about 17.00.

A. Tokovinin,
Outgoing president, Commission 30.

with the assistance of
B. Nordström
Current president, Commission 30.