

DIVISION IX COMMISSION 30

RADIAL VELOCITIES

VITESSES RADIALES

PRESIDENT
VICE-PRESIDENT
PAST PRESIDENT
ORGANIZING COMMITTEE

Guillermo Torres
Dimitri Pourbaix
Stephane Udry
Geoffrey W. Marcy,
Robert D. Mathieu, Tsevi Mazeh,
Dante Minniti, Claire Moutou,
Francesco Pepe, Catherine Turon,
Tomaz Zwitter

PROCEEDINGS BUSINESS SESSION, 28 August 2012

1. Business

The meeting was attended by the President and Vice-President of the Commission, along with approximately 15 other members. The President reported on the election of new officers that took place at the end of March 2012, for four new members of the Organizing Committee as well as a new Vice-President, and thanked the outgoing members. Tomaz Zwitter (Slovenia) was elected as the new VP (2012–2015), and the new OC members for the period 2012–2018 are Alceste Bonanos (Greece), Alain Jorissen (Belgium), David Katz (France), and Matthias Steinmetz (Germany). The current VP, Dimitri Pourbaix, became the President through 2015.

Ten individuals became new members of the Commission, and another 24 astronomers applied for IAU membership and chose to be listed as Commission 30 members, pending approval of their IAU membership. This brought the total membership of C30 to 167.

The President also reported on the activities of C30 during the previous triennium, highlighting large-scale radial-velocity surveys, studies of the role of RV measurements for investigations of stellar angular momentum evolution and stellar age, radial velocity surveys in open clusters, efforts toward achieving higher radial-velocity precision, applications of high-precision RV studies to binary stars, and research on the Doppler beaming effect.

A discussion was also held about the future of C30 in the context of the restructuring of Divisions within the IAU. The President pointed out that the scientific scope of C30 is quite broad, including RVs of stars, galaxies, and interstellar gas, although in practice the emphasis has been almost exclusively on stars. Past efforts to bring the stellar and galactic communities together have not had much success (e.g., “RVs” versus “redshifts”). The RV technique is now well established: the past 20 years have seen the precision go from $\sim 300 \text{ m s}^{-1}$ to $\sim 1 \text{ m s}^{-1}$, driven by exoplanet searches. The small audience expressed their opinions on the various options for the continuation of C30, and in the end there was general consensus that it would be best for the Commission to be attached to a technical Division rather than to one associated with a specific type of object (e.g., stars).

2. Working groups

The President and Vice-President reported on the activities of the three WGs of the Commission. The WG on Radial-Velocity Standards has been mostly inactive in the last three years. Stephane Udry stepped down as the WG chair, and the position was assumed by Gérard Jasniewicz. As it turns out, however, other groups or individuals in the community not affiliated with the WG have effectively been compiling very useful lists of RV standards. One example is the work of Crifo *et al.* (2010), and another is the work of Chubak *et al.* (2012). The President gave a brief presentation about the latter effort. Despite its small size, the WG on Stellar Radial Velocity Bibliography, headed by Hugo Levato, has continued its tedious work of compiling all bibliographic references with RV data. The Vice-President expressed his support and recognition for the work accomplished by Levato and his team. He then reported that the activities of the WG on the Catalogue of Orbital Elements of Spectroscopic Binary Systems (SB9) that he leads continues, but that the level of completeness of the SB9 is still difficult to assess although the number of daily queries indicates that, even if incomplete, the resource is certainly being used very often by the community.

3. Other matters

Jos de Bruijne gave a brief presentation about his quest, in the framework of the Gaia astrometric mission, to secure at least one accurate radial velocity measurement for about 100 bright stars that do not appear to have ever been measured, based on a careful literature search. The motivation is that their RVs are needed in order to derive highly accurate proper motions for some of the Hipparcos stars that are single, using first-epoch Gaia positions. The level of RV accuracy required varies from star to star. de Bruijne used his presentation as a way of contacting the RV community for help on this project, and it was agreed to post a link to his paper on this subject on the C30 website.

Dainis Dravins reported on his work on large-scale simulations of stellar convection, in order to estimate its effects on the measured radial velocities. He pointed out that regardless of whether the net convective shift turns out to be blue or red, its amplitude is significantly larger than the radial-velocity precision quoted for current instrumentation, making the velocity *accuracy* difficult to quantify.

Finally, Matthias Steinmetz presented the status of the Radial Velocity Experiment (RAVE), a project to measure the velocities of about half a million stars in the southern hemisphere.

Guillermo Torres
President of the Commission