

## Preface

IAU Colloquium 170, on Precise Stellar Radial Velocities, was sponsored by IAU Commission 30 (Radial Velocities), with the support of Commissions 9, 26, 27, 29, 36 and 42; Division IX was the coordinating division. The scientific organizing committee was chaired by John Hearnshaw (New Zealand), with David Latham (U.S.A.) as deputy chairman, and included Gilbert Burki (Switzerland), Paul Butler (U.S.A. - Australia), William Cochran (U.S.A.), Dainis Dravins (Sweden), David Gray (Canada), Roger Griffin (U.K.), Alan Irwin (Canada), Michel Mayor (Switzerland), Tsevi Mazeh (Israel), Robert McMillan (U.S.A.), Larry Ramsey (U.S.A.), Colin Scarfe (Canada) and Robert Stefanik (U.S.A.)

Fourteen years of rapid progress had elapsed since the last IAU meeting on stellar radial velocities (Colloquium 88), and hence this meeting was timely. In particular, the previous three years had seen the first detection of extrasolar planets, as a result of the substantially higher precision of radial velocities achieved by the use of CCDs.

The scope of the Colloquium was deliberately broad, and included all effects on stellar spectral lines which involve the Doppler effect, and give rise to line broadening and line asymmetry, as well as a discussion of gravitational redshifts. Thus stellar rotation, stellar convection, binary star orbits, pulsating variable stars, spotted stars and asteroseismology were all discussed at Colloquium 170.

The meeting took place between Sunday June 21 and Friday June 26, 1998, at Victoria, B.C., Canada. Its venue was Dunsmuir Lodge, a conference center of the University of Victoria, located on a wooded hillside some 20 km from the university campus, but overlooking the Victoria airport. Almost all the participants from outside Victoria were housed at the Lodge, which provided much opportunity for informal discussion away from sessions. Seventy people from nineteen countries participated in the Colloquium.

The local organizing committee was chaired by Colin Scarfe, with Alison Marchant, administrative officer of the university's Physics and Astronomy Department, as its treasurer. Other members were Russell Robb, Stephenson Yang and Alan Irwin from the university, and Murray Fletcher and Alan Batten from the Dominion Astrophysical Observatory (DAO), part of the Herzberg Institute of Astrophysics of the National Research Council of Canada. Lorraine Charron served briefly as the committee's secretary, and Ann Scarfe, assisted by Margaret Robb, organized a program of activities for the companions of participants.

The meeting was structured around a series of about 20 invited talks, with contributed papers related to them presented either orally or as posters. It proved to be possible to allow each poster paper to be discussed briefly orally as well. The discussion was often quite lively, but with controversial topics treated in a good-humored fashion. The difficult task of summing things up was ably handled by Gordon Walker.

Subsequent to the meeting, a few papers were published elsewhere, or were merged by agreement between their authors. Three of the invited talks, however, had not been submitted to the editors after more than a year, despite

repeated reminders and entreaties. They were “Searching for Giant Planets at the Haute Provence Observatory”, by Michel Mayor et al., “Radial Velocities: Other Planetary Systems, Solar and Stellar Seismology”, by George Isaak, and “Asteroseismology of Sun-like Stars with the Advanced Fiber Optic Echelle”, by Tim Brown. To avoid further delay, the editors reluctantly decided to proceed without those contributions, although aware that this volume would be the poorer as a result.

The editors would like to thank all the other participants for providing their manuscripts, many of them promptly and a few somewhat more tardily. The organizers would like to thank the IAU Executive Committee for its support, as well as the University of Victoria administration, primarily Dean of Science John Weaver and Acting Associate Vice-President for Research Howard Brunt. Many members of the Physics and Astronomy Department, and several members of the staff of the DAO, in addition to those named above, provided material assistance with the arrangements. In particular, Russell Robb, Rob Cardinal and Chris Aikman set up and maintained the audio-visual equipment and recorded the discussion, Gerry Justice arranged Internet links to Dunsmuir Lodge, and Don Moffatt and Frank Younger conducted an evening tour of the DAO. Another evening was enlivened by a concert of the marimba music of Graham Hargrove and Nicholas Coulter. The entire staff of Dunsmuir Lodge, led by its manager, Robin Cameron, and its conference officer, Leslie Solojuk, worked hard to ensure a pleasant and comfortable environment for the meeting. To all, we express our gratitude on behalf of all the participants.

1999 July

John Hearnshaw  
Colin Scarfe

*Cover illustration:* Two of the themes of this meeting are represented in the cover picture, which juxtaposes a schematic view of the principles of Doppler imaging of spotted stars (see Collier Cameron, page 233) and a plot of the measured velocities for Gliese 876, from which the existence of an accompanying planet was deduced (see Marcy et al., page 121).