

COMMISSION 14

ATOMIC AND MOLECULAR DATA (*ATOMIC AND MOLECULAR DATA*)

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PROCEEDINGS BUSINESS SESSIONS, 17 August 2006

Present: S. Federman (co-chair), F. Kupka, G. Nave, G. Peach, R.C. Peterson, T. Ryabchikova, D. Smits, S. Tayal, G.M. Wahlgren (co-chair), G. Zhao

Officers: In our commission the Vice President (VP) becomes the President, and a new VP is chosen from members of the Organizing Committee. The position of Secretary was discontinued and its responsibilities incorporated into the VP position. The Chair announced the new officers are those listed above.

Organizing Committee: Our commission's usual practice is for a member to serve on the Organizing Committee (OC) for six years, with past Presidents serving for three years past their term as President and other officers serving longer than six years if necessary to complete their service as officers. At this time the entire OC was replaced due to the completed service of past OC members S. Adelman, E. Biemont, J. Lawler, M. Mickelson, D. Morton, T. Ryabchikova, C. Stehle and the promotion of G.M. Wahlgren to VP. The new OC is listed above.

Working Groups: A new Working Group (WG) structure will be implemented, which combines the former eight WGs into four. The new WGs and their (parenthetic) former WG compositions will be Atomic Data (Atomic Spectra & Wavelengths, Atomic Transition Probabilities), Molecular Data (Molecular Structure, Gas Phase Reactions), Collision Processes (Collision Processes, Line Broadening), and Solids and Their Surfaces (Molecular Reactions on Solid Surfaces, Optical Properties of Solids). The new structure aims to reduce redundancies and streamline the structure of the tri-ennial report. The chairpersons for these WGs are still being finalized.

Membership: Wahlgren reported that the Commission membership has 199 members, including new members to be inducted during the current General

Assembly. During the past three year period, 27 members were removed from the Commission roster, and a similar number added. The membership represents a total of 30 countries. Recent efforts at new member recruitment emphasized bringing young members into the Commission. The membership list was updated by the Secretary and placed on the Commission's web site.

Communication between the OC and the membership is now fully conducted by electronic mail. A number of news-letter style updates were sent by the Secretary during the past three years. Members remarked that the email updates are appreciated and should continue. In addition, it was suggested that these updates be posted on the Commission's web site. A small fraction of the membership continually does not receive the emails due to various problems with mail servers and discontinued email addresses.

Meeting Report and Future Meetings: Important aspects of the work of this Commission are to bring together providers and users of atomic and molecular data and to disseminate data. A number of meetings serve as forums for these discussions. Federman reported on the NASA-sponsored Workshop on Laboratory Astrophysics, held in Las Vegas, Nevada, USA during February 2006. His report highlighted the major points discussed, which culminated in the creation of a 'white-paper' on the status and needs of atomic, molecular, and solid state data in support of NASA missions. Such workshops take place every four years.

Other recent forums emphasizing data for astronomy included a special session of the American Astronomical Society, co-organized by S. Federman, and the triennial Atomic Spectroscopy and Oscillator Strength (ASOS) conference. The most recent ASOS meeting occurred in 2004 in Madison, Wisconsin, USA, and the next in the series is scheduled to take place in Lund, Sweden in 2007. Richard Monier announced a workshop on non-LTE codes and their use during summer 2007; the issue of atomic data requirements is a focus.

New ground- and spaced-based telescopes and instrumentation for infrared (IR) wavelengths will drive the need for new atomic and molecular data. The subject of data for spectrum analysis in the IR is expected to be included in upcoming meetings. In anticipation of this development, the Commission sponsored a science session with more than two dozen attendees following its business meeting. Three invited talks were presented by G.M. Wahlgren (*Atomic Data for IR Spectroscopy*), S.Federman (*Molecular Data for IR Spectroscopy*) and E. van Dishoek (*Solid State and the IR*). Brief contributions of relevance to the work of the Commission were presented by T. Gull (*Spectroscopy of Eta Carinae*), G. Nave (*NIST Data Bases*), G. Peach (*Brown Dwarf Spectral Line Shapes*), and R. Peterson (*Spectroscopy of Metal-Poor Stars*).

Steven Federman and Glenn M. Wahlgren
President of the Commission and Vice-President 2006-2009, respectively