

## COMMISSION 53

## EXTRASOLAR PLANETS

*PLANÈTES EXTRA-SOLAIRE*

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### TRIENNIAL REPORT 2006-2009

#### 1. Introduction

Commission 53 on *Extrasolar Planets* was created at the 2006 Prague General Assembly of the IAU, in recognition of the outburst of astronomical progress in the field of extrasolar planet discovery, characterization, and theoretical work that has occurred since the discovery of the pulsar planets in 1992 and the discovery of the first planet in orbit around a solar-type star in 1995. Commission 53 is the logical successor to the IAU Working Group on *Extrasolar Planets* WG-ESP, which ended its six years of existence in August 2006. The founding president of Commission 53 is Michael Mayor, in honor of his seminal contributions to this new field of astronomy. The vice-president is Alan Boss, the former chair of the WG-ESP, and the members of the Commission 53 Organizing Committee are the other former members of the WG-ESP.

#### 2. WG-ESP

The WG-ESP was charged with acting as a focal point for research on extrasolar planets and organizing IAU activities in the field, including reviewing discovery techniques and maintaining a list of identified planets. The WG-ESP maintained a list of planetary candidates that met its criteria for acceptance as planets up until August 2006. This list also established a criterion for discovery rights, namely the date of submission for publication in a refereed journal. This list can be found on the WG-ESP web pages at [www.dtm.ciw.edu/boss/iauinindex.html](http://www.dtm.ciw.edu/boss/iauinindex.html).

Commission 53 has decided not to try to continue to maintain this list of planets, given the immense popularity and greater usefulness of the list maintained by Jean Schneider and his colleagues at the Extrasolar Planets Encyclopaedia web site [exoplanet.eu/](http://exoplanet.eu/).

The WG-ESP also developed in 2001 a Working Definition of what is a ‘planet’, subject to change as we learn more about the population of extrasolar planets. The Working Definition was modified in 2003 to address the question of objects found by imaging surveys in regions of active star formation. The current Working Definition can be found on the WG-ESP web pages. Note that this definition does not attempt to address the

lower mass end of the range of bodies that should be considered as planets. This is because, with the exception of certain pulsar planets, all the extrasolar planets discovered to date are more massive than the Earth.

### **3. Organizing Committee**

The Commission 53 Organizing Committee (OC) has thirteen members, seven from the USA, and six from Europe, as a result of its formation from the WG-ESP. Given that IAU rules state that the OC should not have more than eight members, we need to allow at least five current members of the OC to rotate off. We should also attempt to add OC members from regions that are not currently represented on the OC, such as from Africa, Asia, and South America. This issue needs to be addressed prior to (or at) the Commission 53 business meeting at the 2009 IAU General Assembly (GA) in Rio de Janeiro.

### **4. Symposium and Special Session sponsorship**

Commission 53 has been asked to support various proposals to hold IAU Special Sessions and Symposia, either at the 2009 IAU GA, or on their own. Several of these proposals were judged to be appropriate for Commission 53 support.

### **5. New Members**

As a newly formed IAU Commission, Commission 53 is seeking astronomers who wish to be recognized as members. We encourage interested IAU members to ask to join Commission 53, which can be accomplished simply by sending an e-mail to the Commission 53 Vice President <boss@dtm.ciw.edu>).

### **6. Closing remarks**

We look forward to holding our first Commission 53 business meeting at the 2009 IAU GA. At this meeting, we will need to finalize plan for changes in the OC, selecting a new Vice President, and accepting new members of Commission 53. The web pages for Commission 53 will be located at <[www.dtm.ciw.edu/boss/Commission\\_53index.html](http://www.dtm.ciw.edu/boss/Commission_53index.html)>.

Alan P. Boss  
*vice-president of the Commission*