

## IAA Study Group Status Report

**Responsible Commission:** Commission 1 (Space Physical Sciences) and Commission 6 as an involved commission.

**Study Number and Title:** SETI Permanent Study Group

**Short Study Description:** SETI is an acronym for the Search for Extraterrestrial Intelligence. The primary goal is to examine all aspects of possible future contact with extraterrestrial civilizations, with special reference to international issues and activities. These aspects include technical efforts to find evidence for extraterrestrial intelligence as well as the social consequences of such a discovery. In addition, this group promotes the interest and eventual involvement of students in this work, primarily through education initiatives, the Internet, and the mass media.

**Progress in past six months:**

The SETI Permanent Study Group (PSG) has, in the past year, addressed several substantive issues relevant to its activities within the IAA, as well as producing study materials bearing on the future use of the lunar far side.

In particular, one of the recurring difficulties of the PSG has been the failure to get into print the papers presented at IAF congresses. Publication has not occurred on a regular basis since 1999. Pierre Molette, editor of special editions of *Acta Astronautica*, attended the PSG's annual meeting in Fukuoka, on October 17, 2005, and laid out suggested procedures for how the SETI PSG could have its work published in special editions. This requires the group to edit and review these papers themselves. The PSG has taken steps to do this over the course of two years, to try and eliminate the backlog of unpublished work. The difficulties with publishing have been a disincentive for members to attend the IAF.

A second major issue addressed in Fukuoka was the matter of a draft Second Protocol bearing on the reaction to a SETI detection. The current draft, which is on file at CUOPOS, states that no transmission intended for extraterrestrial reception should be made without "international consultation." The PSG has had a year-long debate on this subject, as many members felt that this was both an unenforceable and undesirable statement, putting the SETI community in the position of trying to dissuade the world at large from activities that are thoroughly legal. A straw vote was conducted over many months to gauge the general feeling of the PSG membership: the overwhelming preference was to change the second protocol to be congruent with the first, which states that no transmission *in response* to a detected signal should be made without international consultation. A vote on this matter during the annual meeting concurred with the straw vote, and unanimously endorsed changing the draft second protocol accordingly. It was suggested that Michael Michaud, who headed up a subcommittee charged with drafting this document, make these changes. As he is unable to do this for personal reasons, the SETI PSG chair has assembled a small group of PSG members for this task.

Claudio Maccone, an active PSG member, has, during the course of 2006, published two Academy Transactions Notes on the important matter of preserving as much of the lunar far side as possible as a radio quiet zone. This is a matter of substantial importance, not just for future SETI studies (the far side of the moon is, after all, the only real estate in the universe that is permanently shielded from terrestrial interference), but also for radio astronomy. Maccone has carefully considered the amount of the moon's back surface that would be shielded in the case various Lagrange points of the Earth-moon system are exploited. This is yet another area in which the SETI PSG is dealing with what it believes is a very substantive issue.

At the Fukuoka, 2005 meeting, approximately twenty papers were presented in two SETI sessions: one dealing with the technical aspects of the field, and the second with the societal consequences. Sessions similar to these are scheduled for the IAC in Valencia, in 2006. The Pesek Lecture has been reinstated as part of these sessions, as well as a new review lecture in honor of John Billingham, as proposed by PSG member Allen Tough. The first Billingham lecture will be given by Steve Dick, of NASA.

**Website Study Information up to date?:** The Web site at <http://www.setileague.org/iaaseti/index.html> continues to contain updated information regarding the SETI Permanent Study Group.

**Issues requiring resolution?:** (1) See above: publication, (2) affordability of the Congress, and (3) documents including discussion of active SETI.

**Product Deliveries on Schedule?:** Yes.

**Study Team Member Changes?** None at this time.

**Name of person providing Study Group Status:** Seth Shostak, Chair

**Status Report Date:** September 7, 2006