

SETI PERMANENT STUDY GROUP (PSG)

Minutes of Meeting held Tuesday, October 3, 2006

2:30 p.m. – 5:00 p.m., Museo De Las Ciencias Príncipe Felipe, Room CMR-3

57th International Astronautical Congress, Valencia, Spain

Seth Shostak (Chair)	Andrew Howard	Ray Norris
Ivan Almar	Ernst Fasan	Carol Oliver
Linda Billings (left early)	Claudio Maccone (Co-Chair)	Alexander Ollongren
Richard Carrigan	Curtis Mead	Salvatore Pluchino
Robert DeBiase	Michael Michaud	Paul Shuch (Co-Chair)
Kathryn Denning	Jader Monari	Doug Vakoch
Steven Dick	Stelio Montebugnoli	Lori Walton
John Elliot	Paolo Musso	

In the absence of the secretary, Guillermo Lemarchand, L. Walton was asked to take minutes of the meeting.

1. Review and approval of minutes from 2005 Fukuoka meeting

- Moved by S. Shostak, seconded by J. Elliot, unanimously approved.

2. Review of SETI Sessions at Valencia, 2006 and upcoming SETI Sessions in India, 2007

- There was discussion regarding the papers presented in Valencia. It was noted that the quality was very good, but the talks were too short (10-15 minutes per talk) to accommodate the number of accepted papers. There were twelve papers presented, as opposed to the usual 8 or 9 papers; however there were still people with accepted papers who did not attend. More people attended the sessions than at previous conferences.
- There was a general preference for longer (15-20 minutes per paper) talks in India.
- The possibility of adding a third session to accommodate additional papers and longer talks was discussed.

DECISION:

- The *SETI I: Technical Aspects Session* will be re-named to *SETI: Science and Technology*
- Papers for Hyderabad, India will be solicited in March, 2007. C. Maccone will review the papers in Paris. If there are too many acceptable papers, then SETI I (Science and Technology) will be split into two sessions.
- The call for papers will be posted on various websites. Efforts will be made to solicit papers from new people to generate fresh ideas.

Reinstatement of Pasek Lecture

- It was suggested that since the 2007 conference is in India, Govind Swarup would be an excellent choice for the Pasek Lecture.

Billingham Cutting Edge Lecture

- S. Shostak reported that Allen Tough will fund the Billingham Cutting Edge Lecture for three years. Allen also provided the Chair with options on how to select the lecturer.

- There was discussion about the selection process. A nomination has been received for the 2007 lecture. P. Shuch nominated Alexander Zaitsev. There was a suggestion to nominate an Indian scholar.
- Although K. Denning clarified that Allen Tough would prefer the PSG committee to have the final vote on the choice of lecturer, some felt that Allen Tough, as the benefactor, should have the privilege of selecting the lecturer.

MOTION: P. Shuch put forward, and C. Oliver seconded, that Allen Tough should select the lecturer, subject to the Chair of the PSG having a veto on the choice. The motion failed.

MOTION: Steven Dick moved, and D. Vakoch, seconded that the Chair of the PSG receive nominations for the Billingham Cutting Edge Lecture for a period of one month. The motion was passed. (18 in favor, 2 opposed).

ACTION: The Chair will list the nominations and circulate the nominated contenders to the PSG. If there is a tie, the Chair breaks the tie. The vote will select one person and not rank the nominations. There will be a firm cut-off for vote response. Allen Tough, the benefactor, will have a vote, but no other influence.

3. Permanent Study Group Website

- P. Shuch informed the PSG that the Seti League, through the generosity of Richard Factor, can provide space to host the PSG website through to 2015.
- P. Shuch offered to continue as webmaster and thanked the SETI Institute for covering the cost of registering the domain name.

MOTION: R. Norris moved, and C. Oliver seconded, that P. Shuch's offer to maintain the website be gratefully accepted by the PSG and that P. Shuch should remain webmaster in perpetuity, health permitting. The motion was passed unanimously, and all in the PSG thanked P. Shuch for his outstanding service as PSG webmaster.

4. Publication of Papers from Past IAC's

- S. Shostak reiterated the information provided by Pierre Molette (Editor of Special Issues for *Acta Astronautica*) at the PSG meeting in Fukuoka, adding that he has received the previous years Rapporteur's Reports from Annie Moulin.
- The last major publication of SETI papers was in 1999; there are many papers to be published from the year 2000 to present.
- Pierre Molette had recommended that Guest Editors be assigned by the PSG to review the Papers for quality and select the "best" papers.
- It was decided at the Fukuoka meeting that C. Maccone and C. Oliver would be the primary Editors for SETI I and SETI II papers, respectively.
- Both C. Maccone and C. Oliver reported that they were unable to devote the time needed to sort through a backlog of 60 papers.
- During the general discussion that followed, it was noted that:
 - some authors may not want a dated paper to be published in a Special Issue of *Acta Astronautica*, or they may request a re-write or an update before publication.
 - Past Chairs could be asked to be responsible for their sessions.

- Papers since 2004 have been included on the IAC conference proceedings CD, but there is no clear citation for these papers.
- P. Shuch noted that IAC papers not endorsed by the Rapporteurs are then eligible to be printed elsewhere (e.g. *Journal of British Interplanetary Society* or *Astrobiology*). He also noted that for members belonging to the IAC academy, papers of four pages or less in length can be published as a “Transaction Note”.
- C. Oliver noted that she was not aware one of her papers was being published in JBIS.
- There was discussion regarding publication time –the IAA can take up to six months, although the actual publishing time is variable. It is possible that “rejected” SETI papers could be published in other journals ahead of IAA publication.

DECISION: The PSG decided that the editors (C. Oliver and C. Maccone) designated at the Fukuoka meeting to work on publishing previous SETI papers be relieved of that task.

MOTION: D. Vakoch moved, and R. Norris seconded, that C. Oliver and C. Maccone be responsible for papers from 2003 to 2006 inclusive. They are to contact Pierre Molette and inform him that the papers will be published “as is”. For years previous to 2003, S. Shostak and J. Elliot will contact the previous Chairs of the PSG, provide them with the Rapporteur’s reports, and ask the Chairs to contact the authors of the approved papers. The authors will be informed that no modifications will be allowed to the papers. A firm deadline for response will be set. The motion passed (unanimous).

5. Subcommittee Reports

a) Lunar Far-Side Subcommittee

- C. Maccone reviewed the issue of protection for Daedalus crater on the far side of the moon. Daedalus crater is the best location known to date for a future radio telescope and it is essential that the facility be shielded from electromagnetic radiation in order to optimize operations.
- The PSG all agreed that the issue is important and urgent. C. Maccone reported that Commission 1 of the IAA also agreed that the issue is important and that he will be reporting to them on this matter in March, 2007, as well on related European moon projects.
- Commissions 5 and 6 are also interested in the lunar farside issue, as are people who are not IAA members. Legal aspects were discussed. C. Maccone wants to prepare a position paper for the Academy.
- I. Almar mentioned that Commission Five discussed forming a special study group for protection of sites on the lunar surface. This would include not just Farside, but also the north and south poles and the historic Apollo landing sites.
- The new moon treaty should include the issue of protection and the L points.
- There is an L2 point above the proposed Farside site. C. Maccone reiterated that a shield between the L2 point and Daedalus crater should be required or another L2 point selected. He suggested that whoever builds the space station should be responsible for building the shield.
- It was suggested that C. Maccone could elicit legal support.

b) Post-Detection Subcommittee

- C. Oliver reported that Paul Davies, the Chair of the Subcommittee, regrets not being in Valencia. He is on a new book tour, and he has moved from Australia to Arizona, U.S.A.
- C. Oliver said that the 24/7 alert system, the WIKKI website, and a well-defined policy on post-detection procedures all need to be addressed at the next meeting.
- She informed the group that an internet meeting of the Post-Detection Subcommittee will take place in the near future.

c) **Transmissions from Earth Subcommittee**

- M. Michaud reviewed the issue regarding the re-drafting of the second protocol and explained the history and background to the topic.
- A motion was passed unanimously by the PSG at the Fukuoka meeting to re-draft the second protocol to be consistent with the earlier document. The earlier document states that no transmissions should be made in response to the detection of an extraterrestrial intelligence without international consultation.
- S. Shostak expressed disappointment over the continued correspondence by those in the PSG and others who did not agree with the straw vote on the issue and the subsequent motion passed in Fukuoka. He stressed that the straw vote on the re-drafting of the protocol issue took place over three months, was fair and transparent, and that the motion was made and passed unanimously in Fukuoka, Japan.
- He noted that individuals who did not agree with the straw vote results and subsequent approved Motion are continuing to bypass the Chair of the committee to pressure for another vote.
- P. Shuch would like entered into the minutes the contents of an email by John Billingham.
- S. Shostak clarified that, due to health reasons, M. Michaud was not able to spend the time to make the change in the documents.
- It was also clarified that “transmissions de novo” would be replaced with “reply”. M. Michaud pointed out there was an important difference in terminology ie “reply” vs “response”.
- I. Almar thought that the straw vote last year was confusing, and there was not enough clarification on what transmission means and what a reply means. Clarification is needed as to a procedure to address transmissions.
- There was discussion about signing of the original protocol – it was noted that Harvard did not sign the Declaration, feeling that the document was too ambiguous and restrictive. P. Shuch noted that that signing the Declaration was important to give legitimacy to the SETI League.
- Discussion then moved to the straw vote and the subsequent votes requested by members and non-members of the PSG.
 - It was felt some clarification was needed to ensure the PSG follow proper voting procedures.
 - Robert’s Rules of Order was suggested as a vehicle to conduct PSG business, but not all of the PSG members were familiar with Robert’s Rules of Orders.

MOTION: J. Elliot moved, and P. Shuch seconded, that the PSG adopt Roberts Rules of Order for conducting PSG business. The motion failed.

MOTION: P. Shuch moves and J. Elliot seconded that all votes pertaining to PSG business be conducted through the Chair of the Committee. The motion passed (12 in favor, 7 abstain).

MOTION: P. Shuch moved, and C. Oliver seconded, that the PSG reiterates and confirms the motion unanimously passed in Fukuoka, 2005. The motion approved a re-draft of the second protocols to make consistent with the earlier document, which specifies that no transmissions should be made in response to the detection of an extraterrestrial intelligence without international consultation (17 in favor, 1 opposed, 2 abstain).

ACTION: S. Shostak will ask a small committee consisting of C. Oliver, D. Vakoch, P. Shuch and K. Denning to amend the protocol back to the original language. The Chair will circulate the document to members for comment. A package including all three documents will be sent to IAA for approval and then sent to COPUS to replace the document on file.

“Active SETI” Conference Proposal

- Discussion took place about a conference on “Active SETI”. It was noted that:
 - Active SETI is different from the current SETI. Proponents of Active SETI and those who feel they have the appropriate expertise should lobby for a separate group within the IAA. They can then choose to undertake a separate Protocol covering “Active SETI”.
 - Active SETI pursuit is a risk to the credibility of passive SETI.
 - What can and should PSG do to initiate an Active SETI conference?
 - The current PSG is too narrow in scope and need a broader representation of people.
 - An Active SETI conference is not necessarily the basis for new protocols.
 - Those interested and motivated in the Active SETI issue should form a subcommittee.
 - Fission of the SETI PSG into two groups would cause a problem with the IAA. Right now the Academy has respect for the SETI PSG, but a separate Active Group would cause problems in terms of survival/acceptance for the SETI PSG.
 - Passive SETI runs a risk of getting a “little green men” reputation in the public eye if associated with Active SETI.
- S. Shostak suggested that a Subcommittee/Taskgroup be formed for people to discuss the feasibility of an Active SETI conference and report back to the Chair.
- There was concern about the mechanism for the subcommittee and whether such a group would be operating outside the Terms of Reference for the PSG.
- It was also noted that since the PSG belongs to Commission One, any Active SETI conference would refer to Commission One. A new subcommittee might convey to Committee One that the PSG is getting divided.
- Since the PSG is in Commission One, there was discussion on how an Active SETI conference is related to Science.

MOTION: C. Oliver moved, and R. Norris seconded, that the PSG create a Taskgroup to study the feasibility of an Active SETI conference. The Taskgroup is to report back to the

PSG at the Hyderabad, India meeting in 2007. The motion passed (13 in favor, 3 opposed, 4 abstain).

- It was noted that a Chair of the Taskgroup would need to be appointed and Terms of Reference created.

6. Membership Changes and Current Membership List

- There was discussion about inactive members.

MOTION: D. Vakoch moved and C. Oliver seconded that the PSG review the roster and remove members that have been inactive for five years. The motion passed (unanimous).

ACTION: The following members were removed from the PSG: V. Ascheri, H. Butcher, S. Santoli and V. Plester. Curtis Mead and Paul Davies were added to the PSG. Three additional people have been nominated to the PSG; Sabrina Mugnos, Ricky Lee and Slavatore Pluchino. They are to submit short biographies to the person supporting their nomination.

7. New Business

Chairs for SETI Sessions at IAC Glasgow, 2008

- S. Shostak and C. Maccone agreed to coordinate on paper submission.

SETI I: P. Shuch and S. Montebugnoli are Co-Chairs. S. Shostak will be the Rapporteur

SETI II: C. Oliver and J. Elliot are Co-Chairs. A. Ollegren will be the Rapporteur.

Allen Tough

MOTION: R. Norris moved and C. Oliver seconded that the PSG send its best wishes to Allen Tough, who could not attend the sessions in Valencia. The motion was passed (unanimous).

Valencia IAC Website and SETI Session Conference Facilities

- It was noted that the IAA website for Valencia and the facilities for the SETI sessions were of poor quality. The SETI Session room was very hot and noisy.

ACTION: The Chair of the PSG shall write a letter to Lubos Perek informing him that both the website and the facilities for the SETI sessions were substandard.

8. Adjournment – the motion to adjourn was made by D. Vakoch and seconded by P. Shuch.

ADDENDUM: email correspondence

Dear Seth,

With regard to your last paragraph below, please note that I did not say "the UN agreement between Nation States", but "a UN agreement between Nation States". In contrast, I said "the SETI researchers informal compact". The "a", (indefinite article), is putative, meaning "any future agreement between Nation States". I would be pleased to change the wording of the original if it causes anyone to believe that there is a current agreement between Nation States on the Position Paper. In fact, my suggestion for alternative wording is given below:

For further clarification, I would refer specifically to the IAA Position Paper, (the second Protocol) which was, and is, a proposal to the UN, so that my paragraph should be changed to read:

"The two Protocols are currently saying something different. They should be the same, since the principle should be the same for the SETI researchers' informal compact (first Protocol) and for the IAA Position Paper (second Protocol) as already formally presented by the IAA to the UN, and indeed for any future UN resolution embodying the Position Paper."

Note that the particular principle at issue here, among all the other principles, is the one which recommends international consultation before transmitting to ETI.

It's probably better to say "resolution" than "agreement". Michael Michaud has pointed out that future UN action on our Position Paper is most likely to take the form of a "Non-Binding Resolution" or a "Non-Binding Declaration of Principles" (See Section III of the Position paper). Non-Binding Resolutions have moral force but not legal force.

Yes, there has been no action by UN COPUOS subsequent to the briefing on the Position paper by Jill, Ernst Fasan, and Jean-Michel Contant, Secretary-General of the IAA, in June of 2000. In other words, the Committee has not placed the Position Paper on the formal agenda for any of their meetings. This can be done only at the request of one or more member States. The original Position Paper, as the current document of record, does remain in the hands of the UN, and would be available to the Committee should they put it on their agenda for discussion in the future. In the report of COPUOS to the UN General Assembly, of June 26, 2000, A/55/20, on page 2, para 16, it says "The Committee, on the basis of the presentation, agreed that the Office of Outer Space Affairs retain a copy of the position paper on file for review.....".

If we can ever agree on the proposed revision of the Position Paper, and were supported in this by the IAA Board of Trustees and the IISL, the IAA would then ask COPUOS to replace the original version with the new version.

Best wishes,

John

----- Original Message -----

From: [Seth Shostak](#)

To: [Lori Walton](#) ; [Seth Shostak](#) ; [Paul Shuch](#) ; [Allen Tough](#) ; [John Elliott](#) ; [Michael Michaud](#) ; [Ernst Fasan](#) ; [Alex Ollongren](#) ; [Ivan Almar](#) ; [Valeria Ascheri](#) ; [John Billingham](#) ; [Rosa Ramirez de Arellano](#) ; [Donald Tarter](#) ; [Steven Dick](#) ; [Claudio Maccone](#) ; [Andrew Howard](#) ; [Ian Morison](#) ; [Salvatore Santoli](#) ; [Jason Gallicchio](#) ; [John Rummel](#) ; [Guillermo Lemarchand](#) ; [Leslie Tennen](#) ; [Mike Davis](#) ; [Carol Oliver](#) ; [Lubos Perek](#) ; [Remington Stone](#) ; [Robert De Biase](#) ; [Doug Vakoch](#) ; [Stelio Montebugnoli](#) ; [Patricia Sterns](#) ; [Jill Tarter](#) ; [Tom Pierson](#) ; [Ray Norris](#) ; [Harvey Butcher](#) ; [Elizabeth Back Impallomeni](#) ; [Richard Clar](#) ; [Al Harrison](#) ; [Roger Malina](#) ; [Jader Monari](#) ; [Paolo Musso](#) ; [Dick Carrigan](#) ; [Yvan Dutil](#) ; [Frank Drake](#)

Sent: Friday, September 02, 2005 6:13 PM

Subject: Additional comments from John Billingham

Dear SETI PSG Members,

I received several communications from John Billingham after sending you the information for my "straw vote" on proposed language for SETI protocols. John is concerned that my presentation of this issue had problems, and may have muddled your understanding of same.

Ergo, I suggested that he write a clarification in his own words, and I have pasted his response in-line below as sent to me. He also suggested that I attach the latest versions of the protocols, which I have done.

If any of you who have already indicated your opinions on this matter wish to alter them, please feel free to do so in a reply to me.

There is one thing that I note in John's missive that might be confusing to some of you, to wit:

The second protocol is, at one point in his narrative, described as a "UN agreement between Nation States." In fact, Jill Tarter presented this document to COPUOS in June, 2000, where it was duly minuted and filed. No further action has been taken.

John's commentary follows.

Cheers,

Seth

Dear Colleagues,

I wanted to send this supplement to Seth's e-mail on soliciting your reaction to a proposed change in the "Declarations", because the issue being raised is complex. In what follows below, I have attempted to bring as much clarity into the situation as possible, without burdening everyone with an analysis which is forbiddingly dense and detailed.

The Declarations Seth sent you are Annexes to the proposed revision of IAA Position Paper on "A Decision Process for Examining the Possibility of Sending Communications to Extraterrestrial Civilizations". It is a Proposal to the United Nations Committee on the Peaceful Uses of Outer Space, and is designed to replace the original and currently existing document, now some ten years old, by making it crisper and clearer. It is basically addressed to the UN COPUOS Nation States. Annex 1 is actually a revised version of a different document, the original "Declaration of Principles Concerning Activities Following the Detection of Extraterrestrial Intelligence", which was an informal compact agreed to some twelve years ago between SETI researchers, and which was included in the Position Paper for reference.

Note that the proposed revisions to both documents (loosely called "Protocols") were put together over the last two years by a SETI PSG team on Transmissions from Earth. The team was chaired by Michael Michaud. I have attached for you the final versions of both revisions, so that you can see the complete texts. If you would like to have the old documents, which these revisions are intended to replace, please let me know.

There is an important discrepancy between the two documents, in both the existing and revised versions. Principle 7 of Annex 1 says "No transmission to extraterrestrial intelligence in response to a signal or other evidence of extraterrestrial intelligence should be sent until appropriate international consultations have taken place". Principle V of Annex 2 says "No communication should be sent to extraterrestrial intelligence by any State until appropriate international consultations have taken place".

Put another way, The Annex 1 recommendation says "consult before you send a response to an ETI signal", but it does not mention consulting before sending transmissions de novo. That is, it does not address Active SETI. Annex 2 says "consult before transmitting from Earth under any circumstances, which means "consult before conducting Active SETI, as well as in response to an ETI signal.

The two Protocols are saying something different. They should be the same, since the principle should obviously be the same for the SETI researchers' informal compact and for a UN agreement between Nation States.

The discrepancy has historical origins, for which I must take some blame. The original Declaration of Principles came out first, in 1994. By the time the IAA SETI Committee had later embarked on the original Position Paper, which came out in 1996, we decided to extend the recommendation to consult before transmitting to include Active SETI, hence the wording of Principle V. I had thought at the time that we would go back and alter Principle 7 to read the same way (with the approval of SETI researchers, of course). But then I thought we should make the change when we came to revise the documents, which is now, so that we would not have to go through two lengthy sets of revisions with the IAA Board of Trustees and the Boards of the six international space societies which had endorsed the original Declaration of Principles.

My proposal to reconcile the two Protocol documents is to modify Principle 7 in Annex 1 to have essentially the same recommendation as that of Principle V in Annex 2. To be specific, I would leave the wording of Principle V as it is, and change the wording of Principle 7 to read "No transmission should be sent to extraterrestrial intelligence until appropriate consultations have taken place". Active SETI is now included in the recommendation to consult before transmitting, and the two documents become compatible in this important sense.

I, and others, believe this to be the rational, responsible, and prudent step to achieve reconciliation. My reasons are laid out in my one-page paper Seth already sent you.

Seth and others believe that it should be the other way round. To achieve reconciliation, he would modify Principle V of Annex 2 to read basically the same as Principle 7 of Annex 1. In other words, for both Protocols, Active SETI would not be covered by the recommendation to consult before transmitting. Seth's reasons are given in his one-page paper he already sent you.

I should mention that I think all the other changes in the revised Protocols as developed by Michael's team are appropriate for cleaner documents, and that they do not bring up any serious issues.

I have suggested an international meeting on Active SETI to address the issue, which is quite complicated. However, to be effective, this would need careful planning, organization and funding, and could take some time to complete. The question arises as to whether we should wait until after such a meeting to attempt the reconciliation between the Protocols, or whether we should try to go ahead and do it now. Whichever course we follow, a reconciliation has to occur. Once we have decided which option to pursue, or even to explore others, we will have to get approval from the IAA Board of Trustees, and from the international organizations which endorsed the original Protocols.

I hope all the above will help you in formulating your opinion on my proposed change. Please let Seth know how you feel.

A last point. To my chagrin, I have found a mistake in the placement of a phrase in Principle 7 of Annex 1 which Seth sent you. (I was responsible for some of the final editing of the revised documents for Michael). The phrase is "to extraterrestrial intelligence". It should come after "No transmissions". Please alter this in the Annex 1 document you already have. It has been corrected in the complete Protocol documents which are attached herewith.

With best wishes,
John Billingham

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