

Meeting Notes
International Academy of Astronautics –
SETI Permanent Committee (SETI PC)
“Informal Update” Meeting – Video Format

August 10, 2017 at 1:00 p.m. to 3 p.m. Eastern Daylight Time (United States) Starts at 5:00 p.m. (17:00) UTC

Meeting Moderator: Denise Herzing

- The Zoom technology worked very well –
- Themes brought up include Rio Scale update, SETI PC protocols, preserving dark and quiet skies (COSPAR), machine learning for data analysis, project updates (Breakthrough Listen, SETI Institute (laser optical), Italian SETI, standardization of SETI data, KLT, null data set issue, upcoming publications/events of interest, sharing of SETI education materials
- Logistical items for SETI PC meeting and SETI session I and II at International Astronautical Congress in Adelaide, 2017 were discussed.

MEMBERS	
Ivan Almar Carl DeVito Martin Dominik Emilio Enriques Michael Garrett Denise Herzing (Moderator) Claudio Maccone Stelio Montebugnoli	Ian Morrison Rosa Ramirez de Arellano Paul Shuch Andrew Siemion Jill Tarter Douglas Vakoch (left the meeting) Lori Walton
GUESTS	
Barbara Hoversten Griffin Foster Vishal Gajjar	Jader Monari Greg Hellbourg Danny Price

Round Table Discussion

D. Vakoch – In 2020 Springer will publish the next edition of its Encyclopedia of Astrobiology (for the current version, published in 2015, see <http://www.springer.com/us/book/9783662441848#aboutAuthors>)

“I've been asked to oversee encyclopedia entries related to "intelligence and the search for intelligent life," and in the coming weeks and months I'll be in contact with SETI researchers and intelligence researchers, as we identify specific topics for the encyclopedia and identify specialists to write the articles for each entry.”

M. Garrett – provided update on the Breakthrough Listen/University of Manchester collaboration to use Jodrell Bank for SETI. 30 people attended conference.

J. Tarter - noted the Future of Humanity Institute at Oxford is studying the Fermi Paradox

M. Dominik – For awareness – The Royal Society in the UK will be hosting a SETI exhibit in 2019. J. Tarter suggested an interactive Rio Scale would be an interesting component.

I. Morrison – standardizing SETI datasets is important, there will be a paper coming out on this

S. Montebugnoli –computer science students are available and want to learn on SETI datasets. Also mentioned SETI projects in Italy are seeking funding.

I. Almar – students are available to work on SETI – is there help from other universities? C. Maccone offered to send email to Ivan about Greg Hellbourg’s work on the KLT and A. Siemion noted that all of the Breakthrough Listen data is available on-line for the students to work on. I. Almar, C. Maccone and G. Hellbourg to coordinate KLT data exchange. C. Maccone discussed the relativistic KLT.

R. Ramirez de Arellano –

- summarized the “Dark and Quiet Skies” Initiative - Committee for the Peaceful Uses of Outer Space
- Offered to write short summary of COPOUS for IAA SETI PC members.
- J.Tarter and C. Maccone provided additional detail on the project– several organizations support protecting far side of moon to preserve the radio spectrum, but at the same time there are proposals to establish space station at the L2 point. See Cosmic Study

C. Maccone described his trip to Lima, Peru and noted that optical SETI is not as expensive as radio SETI

D. Herzing recently attended a Google Science multidisciplinary event. P. Worden also attended this event. D. Herzing led a well-attended session on applying AI to decoding animal communication signals. P. Worden led a well-attended session on SETI including messaging and decoding issues.

C. DeVito

- Is teaching a course on SETI
https://cearizona.augusoft.net/index.cfm?method=ClassInfo.ClassInformation&int_class_id=11670&int_category_id=0&int_sub_category_id=0&int_catalog_id=0
- Is publishing a paper on the Fermi Paradox in Blue Marble Special Issue
- ACTION: A. Siemion will send educational material on SETI to Carl and the rest of the IAA SETI PC

J. Tarter

- Described SETI Institute Crowdfunding campaign for laser SETI (www.laswerseti.org)
<http://www.seti.org/node/3280>
- Noted technology for optical/laser SETI has advanced faster than anticipated
- Also noted potential value of machine learning in examining archived data from ATA

G. Foster and D. Price from Berkeley provided an update on the work at Arecibo and FRB's. Discussion on null sets to use in machine learning came up – J. Tarter reiterated that a new data null data set is needed.

A. Siemion provided an update on Breakthrough Listen including the new University of Manchester/Jodrell Bank partnership and the FAST radio telescope collaboration. Also mentioned that Matt Lebofsky and others are working hard on the new IAA SETI PC website. P. Shuch renewed the iaaseti.org website address.

P. Shuch would like to see the SETI PC work on supporting and helping with an upgraded Rio Scale and noted that the SETI PC Protocols are out of date and need updating.

G. Hellborg organizes a Monthly International SETI Collaborative meeting every month. Anyone interested in participating should contact him at Berkeley. About 30 to 50 people call in at each meeting. The timing of the meetings are varied to allow for different time zones. Also, there are tutorials and a YouTube Channel about the Breakthrough Listen raw data:

Concerning the tutorials, we have currently the two following:

<https://github.com/UCBerkeleySETI/breakthrough/blob/master/GBT/README.md>

<https://github.com/UCBerkeleySETI/breakthrough/blob/master/GBT/voyager/voyager.pdf>

Moreover, we just started a new technical youtube channel on which we are going to regularly publish video tutorials on Breakthrough Listen data handling and processing:

<https://www.youtube.com/channel/UCJj26Gaq3xcffRHTEw604Q>

IAA SETI PC Administrative Action Items

ACTION: Duncan Forgan to send a request to Claudio Maccone to allow time for Duncan to present in SETI 1 session in Adelaide, Australia

ACTION: L. Walton to send distribution list to be sent to Matt Lebofsky at Berkeley