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Date: December 15, 2015 at 4:48:45 PM MST
To: <sag15@as.arizona.edu>
Subject: SAG15 Telecon 1 Summary

Dear SAG15 Team,

thank you for the productive first SAG15 telecon today. This email provides a brief summary of the meeting and describes our next steps.

Attached to this email you will find a copy of the slides I showed at the telecon.

If you were not able to call in to the telecon, you may want to read the slides as they should provide a good summary of most of the presentation and discussion.

Below are additional comments and questions captured during the presentation.

Action items for me:

- 1) Set up doodle poll for identifying a monthly meeting time for future telecons
- 2) Contact and inform Aki Roberge on the SAG15 activity

Shawn kindly volunteered to help with:

- 3) Set up a web-based location for sharing files, such as telecon slides and relevant papers

Action items for all SAG15 members:

- 4) Identify list of high-level science questions and relevant observables (planet or planet population properties) for the next telecon.

Email these to me or add them to the cloud-based document.

- 5) Email any other questions/comments to me.

Thank you,
Daniel

Notes:

SAG15 Telecon - December 15

Present: Ian Crossfield, Daniel Apai, Alan Boss, Ravi Kopparapu, Caroline Morley, Shawn Domagal-Goldman, Nick Cowan, Maggie Turnbull

Daniel Apai presented the slides also shared as PDF with the group.

Comments/questions on the charge/scope:

Shawn/Nick/Alan: The report should also identify topics where progress in model development is important in order to properly explore the potential of future missions for answering science questions;

Shawn: Everyone on SAG15 is invited to SAG16 ("Biosignatures SAG")

Shawn/Nick: "Habitability signatures" can provide important context for biosignatures; SAG15 can provide characterization of abiotic planets as a context for interpreting biosignatures

Maggie: Although the report does not advocate for specific mission architectures, identifying connections between observations discussed and planned missions capable of carrying them out is important to keep the report relevant when parallel studies may be ongoing.

Timeline:

Alan: Insert update at the summer EXOPAG meeting

Shawn/Maggie: Identify possibility for SAG15 team to meet in person at an upcoming exoplanet meeting: DPS, Exoclimes, Exoplanets, Summer AAS

Nick/Shawn/Alan: The milestones/timeline should be shared with the STDTs to make sure the impact of our work is maximized

Nick: Some previous SAG work was complicated significantly by a parallel operating and better-funded STDT. To avoid duplicating work and minimize overlap, we must keep any to-be-formed STDTs abreast of our specific activity and plans

Shawn: Confidential and not final (pending approval from NASA HQ): Aki Roberge will oversee the LUVOIR STDT operations at GSFC. Someone else will be selected from JPL to oversee the HabEX STDT. We need to contact Aki and her equivalent at JPL and keep them informed on our progress. Shawn will probably serve as Aki's deputy, guaranteeing a link between SAG15 and LUVOIR STDT.

Alan/Shawn: Paul Hertz is going to announce next steps for STDT at the AAS; aggressive schedule is expected, i.e. STDT will probably run parallel with SAG15.

Workflow:

- We should host files locally or through cloud-based tools (Dropbox, google docs, etc.) to allow easy access; Shawn volunteered to help with this.
- We agreed that the specific major contributions of the SAG15 members will be identified in the report, either at the section level or in the appendix.

Science Topics and Organization:

Nick: Many science questions and observables are cross-cutting many different types of planets

Shawn: An important question can be "How do we define meaningful categories for planets"? We need tests/hypothesis for differentiating planets and we may want to proposed approaches for this.

Questions:

Nick: What wavelengths are covered?

Discussion, agreement that we should also include MIR wavelengths.

Maggie: Ground-based observations?

Which journals may be interested in publishing a short review version of the report?

Nature?

Nick: ARA&A may be interested;

Maggie/others: Agreement that this should be discussed again at a later point, possibly at ExoPAG

Additional possible science questions:

Ravi: We should identify questions that are directly linked to observations.

Daniel: Yes, but I want to encourage everyone to try to think beyond the immediate observable properties (which will be captured in the observables section), and also think on what ambitious big picture questions could be answered, given enough data, from direct imaging missions.

Shawn: Planet classification scheme; How representative is the Solar System?

Nick: Diversity of the planetary evolutionary process and what are the key factors influencing it? As an example, what differences led to present-day Venus and Earth?

Maggie: How strongly do stellar properties influence the properties of the planets and planetary systems and habitability?