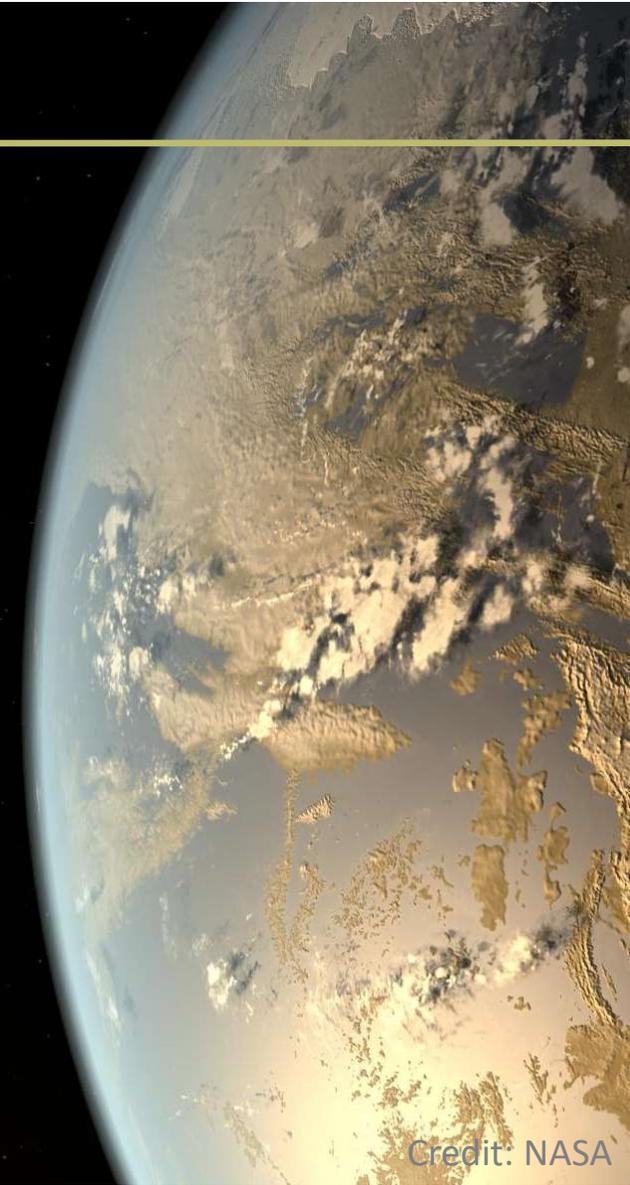


SIG 3 ExoSS Update for ExoPAG 23

Victoria Meadows (UW/NExSS/ExoPAG), Kathy Mandt (JHU/APL/OPAG)



Credit: NASA

SIG 3 ExoSS Overview

- **Chairs:** Victoria Meadows (UW/NExSS/**ExoPAG**), Kathy Mandt (JHU/APL/**OPAG**)
- **Founding Members:** Giada Arney (GSFC/**VExAG EC**, ExoPAG), Chuanfei Dong (Princeton), Tony Del Genio (GISS/retired), Shawn Domagal-Goldman (GSFC), Noam Izenberg (JHUAPL, **VExAG Deputy Chair**) Stephen Kane (UCR, **VExAG, ExoPAG**), Tiffany Kataria (JPL/Caltech, **ExoPAG EC**), Mark Marley (Ames), Niki Parenteau (Ames), Abi Rymer (JHUAPL, **OPAG EC**), Karl Stapelfeldt (JPL).
- **Goal:** To provide a forum for interaction between the Solar System and exoplanet communities on topics of mutual interest, and to work to identify ways in which NASA and the scientific community could enhance these interactions.
- SIG3 is a mechanism to continue the community dialog started with the cross-P/AG organized Exoplanets in our Backyard Conference (Feb 5-7, 2020, Houston).
 - Findings: <https://www.hou.usra.edu/meetings/exoplanets2020/EioB-Findings.pdf>
- SIG3 approved on March 26, 2020. Held its inaugural meeting on July 14.
- SIG3 is now open to all interested scientific community members (please contact meadows@uw.edu or Kathleen.Mandt@jhuapl.edu to join)

Credit: NASA

SIG 3 ExoSS Recent Activities

- ExoSS Slack Channel – news updates, paper-sharing, collaborations, all are welcome! 170 members (If you would like to join: meadows@uw.edu)
- Gathering community input on key ExoSS synergies:
<https://tinyurl.com/yxbnyfwu>
 - This document started as notes from the unconference session at EiOBY and is now being used as a resource for new initiatives.
- Promoted community-led Planetary Decadal activities: List of lists - <https://bit.ly/3fu6ang>
- EiOBY 1.5 organized and held at 2020 Winter AGU. This session focused on lab/field/Solar System observations and what they could bring to exoplanetary science (and vice versa!) 40 participants.
- Input to ExoPAG Science Gap List (also input to VEXAG GOI by SIG3 members)
- Helped coordinate speakers for the ExoPAG23 ExoSS Science Symposium

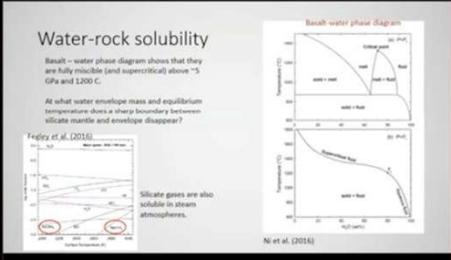
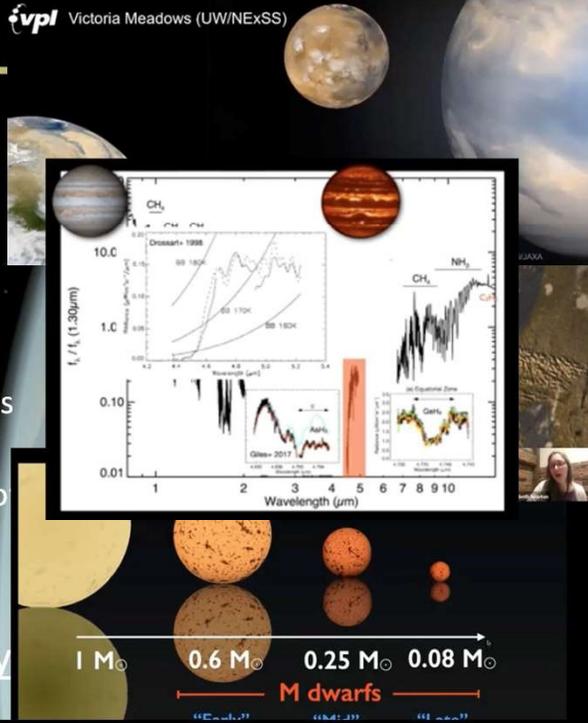


Credit: NASA

SIG 3 ExoSS Tutorial Talks

- Initiated monthly SIG3 Tutorial/Journal Club to explain key concepts within our different scientific communities
 - August 2020, Laura Schaefer (Stanford), Solutions and Solubilities,
 - September 2020, Nancy Chanover (NMSU), The Planetary Data System,
 - October 2020, Elisabeth Newton (Dartmouth), The Advantages and Challenges of M dwarfs as Planet Hosts
 - November 2020, Mark Marley (Ames) & Victoria Meadows (UW), Spectra of Solar System Planets (Jovians/Terrestrials) for Exoplanet Scientists
 - December 2020, Eric Agol (UW) & Caroline Dorn (U. Zurich), Transit-Timing and Photodynamics of the TRAPPIST-1 System/Possible Interiors of the TRAPPIST-1 planets.
- Average attendance of 60 per talk, with 212 unique attendees over 5 months
- All talks recorded and available here: <http://nexss.info/community/exoss-synergy>

Spectra of Solar System Planets for Exoplanet Scientists
Part 2: The Terrestrials



- ### Lessons From Giants
- Planets are not blackbodies
 - Tradeoff of scattering, clouds, gas opacity, T structure
 - Reflection vs. thermal emission
 - Broad wavelength coverage constrains clouds, abundances & T profile
 - Photochemical/disequilibrium species
 - Cooler exoplanets from direct imaging will place our planets into a family of worlds, like the brown dwarfs have with Jupiter

SIG 3 ExoSS Plans

- Continue the Tutorial Talk Series
 - Next one is January 28th, Ravit Helled (U. Zürich) and Chris Mankovich (Caltech) on why fuzzy cores are expected for Jovians, and supporting Jupiter data from the Juno mission.
- Restart monthly SIG3 strategy meetings to identify beneficial avenues for future joint discussions/research between the exoplanet and Solar System communities and set up SWG to address these.
- Organize SIG3 community event at HabWorlds2 (Feb 22-26)
- Planning for EiOBY 2.0 (2022; SOC leads Ravi Kopparapu and Stephen Kane)

Let me or Kathy Mandt know if you'd like to join our collaborative community!

...And please enjoy the following mini-symposium that highlights synergistic Solar System/exoplanet research (a BIG thank you to Laura Schaefer for the organization)!