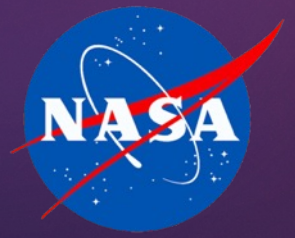
28 JULY 2023

2023 Sagan Summer Workshop Wrap Up

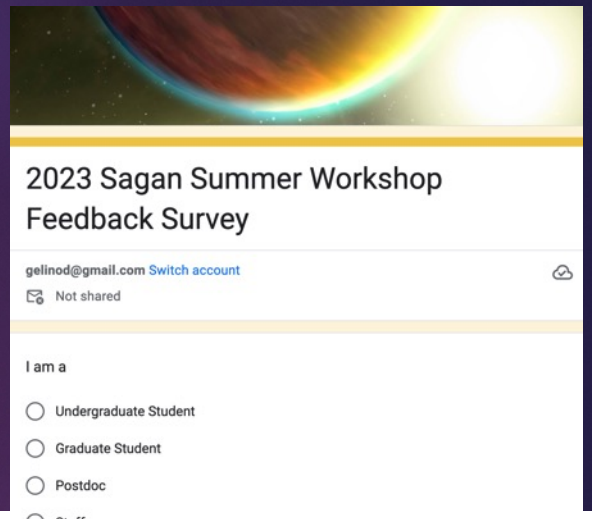


Caltech

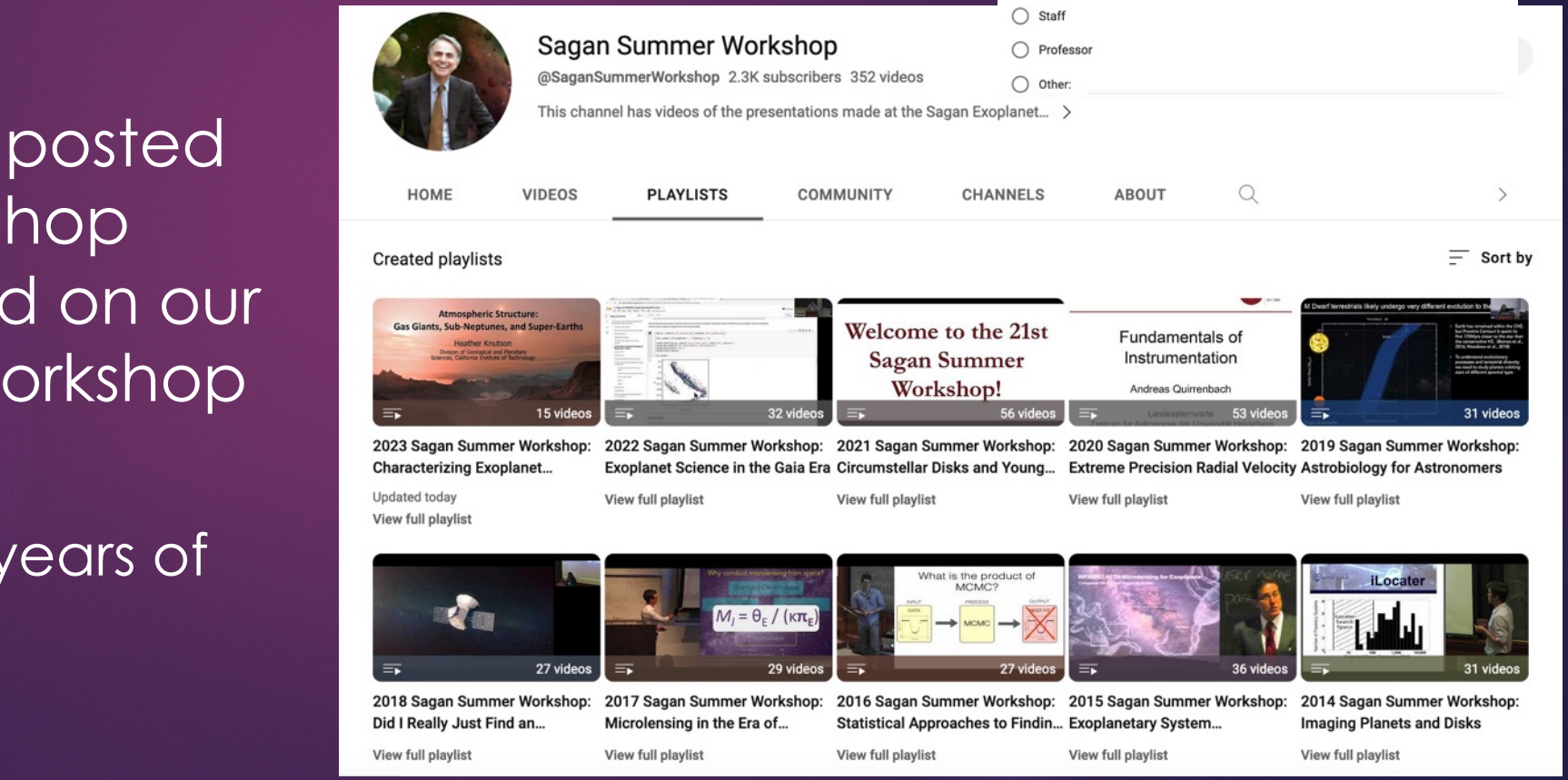
Feedback Survey & Resources

- Please fill out the feedback survey:

https://tinyurl.com/sagan2023



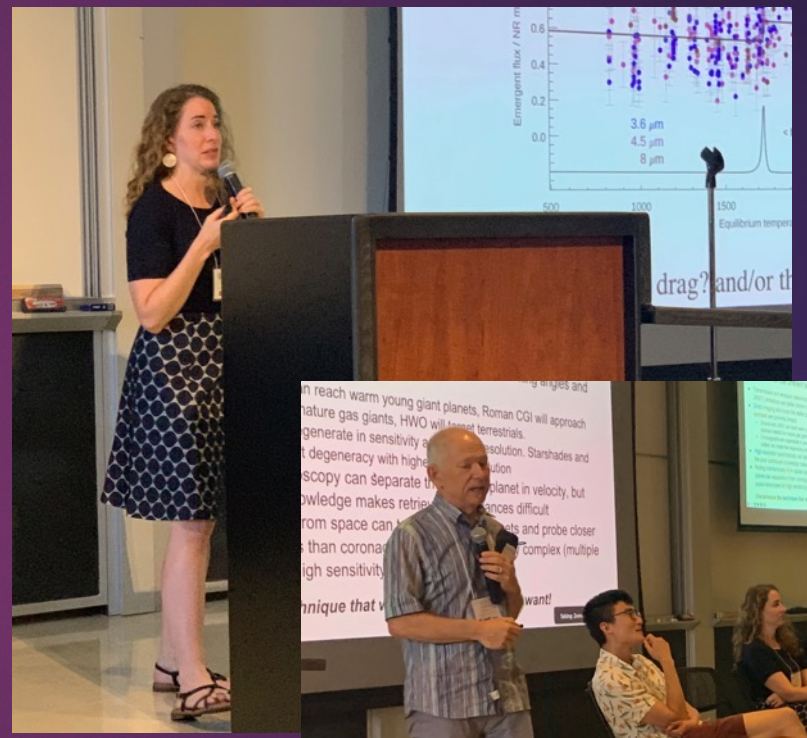
- Videos of the presentations are posted both on the workshop agenda page and on our Sagan Summer Workshop YouTube channel
  - Now includes 10 years of workshop videos!



Many Thanks…

…to the SOC for a great agenda and choice of diverse and dynamic speakers:

- **Ian Crossfield, Co-Chair (University of Kansas)**
- **Tiffany Kataria, Co-Chair (NASA JPL)**
- Chas Beichman (Caltech/IPAC-NExScI)
- Jayne Birkby (University of Oxford)
- Jonathan Fortney (UC Santa Cruz)
- Dawn Gelino (Caltech/IPAC-NExScI)
- Tom Greene (NASA Ames)
- Renyu Hu (NASA JPL)
- Laura Kreidberg (MPIA)
- Kevin Stevenson (Johns Hopkins University/APL)



...to those behind the scenes...

<u>NExScI Science Affairs Team (L to R)</u>

- Elise Furlan
- Melanie Swain
- Dawn Gelino
- **Ellen O'Leary**
- Megan Crane
- **Tracy Chen**

...to those behind the scenes...

IPAC

- Frank Aragon
- Mari Castillo
- Teresa Molano
- Nancy Solis

- Wendy Burt
- Alex Hui
- Niles McElveney
- Daniel Pina-Muro

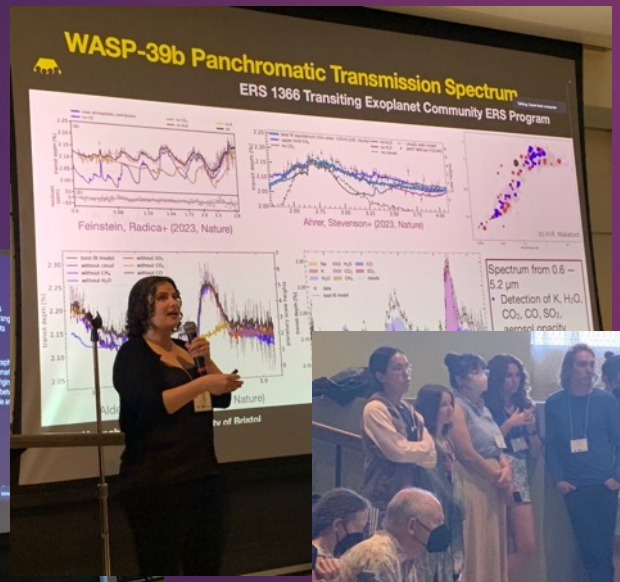
Caltech

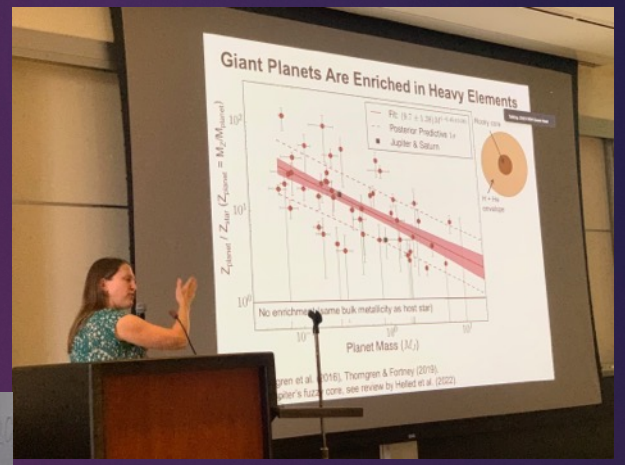
- Laurel Auchampaugh (Baxter/HSS)
- Hanna Ramsey (Dabney/HSS)
- Becca Rose (Academic Media Technologies)

...to our Speakers...

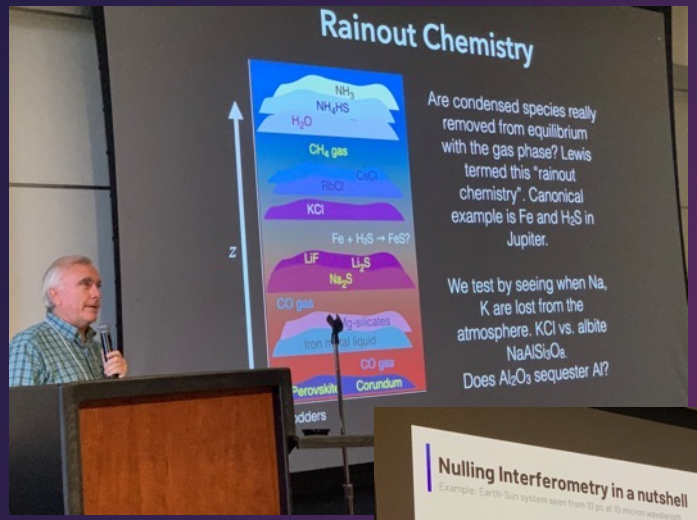
Thank you for:

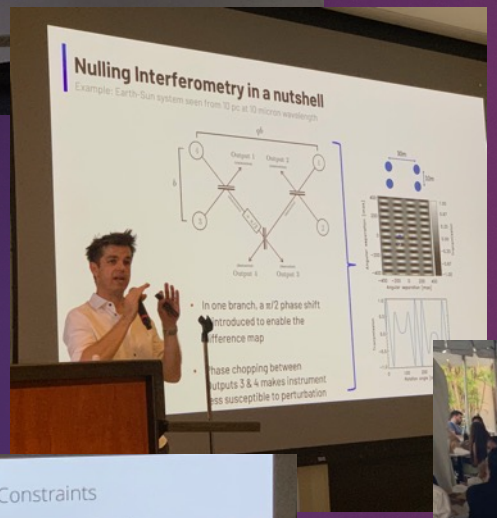
- Your *excellent* talks
- Answering questions in-person and on-line
- Participating in both in-person and remote "lunches"

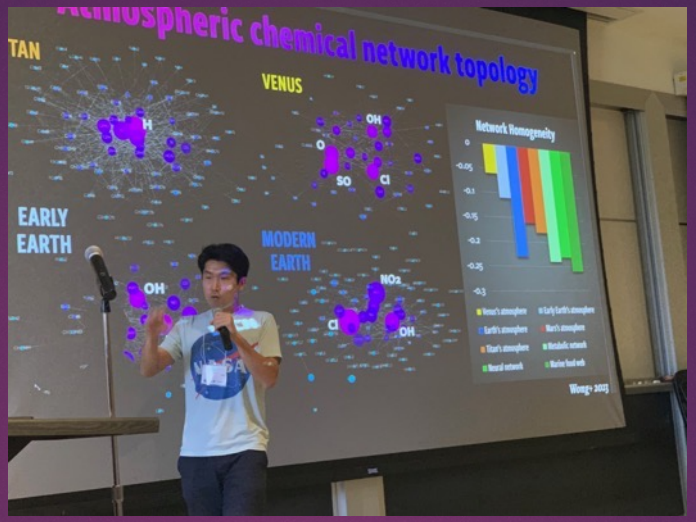


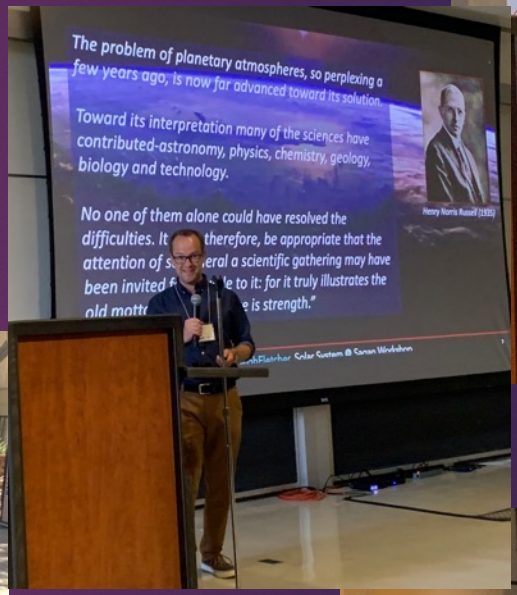


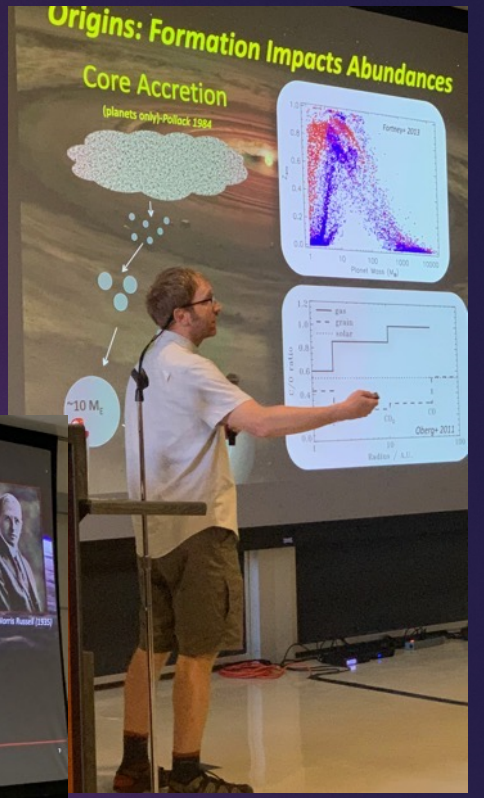
...to our Speakers...

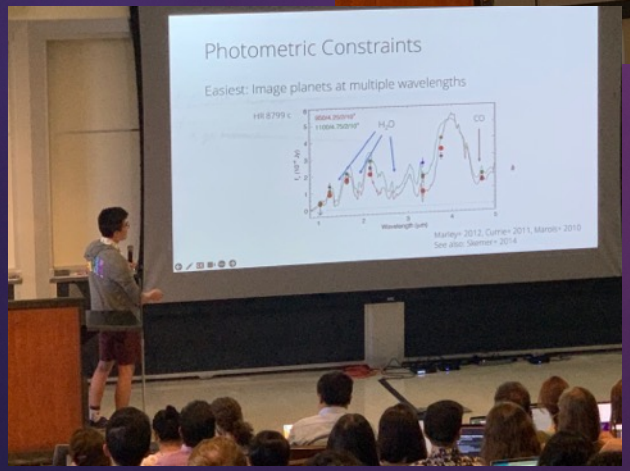


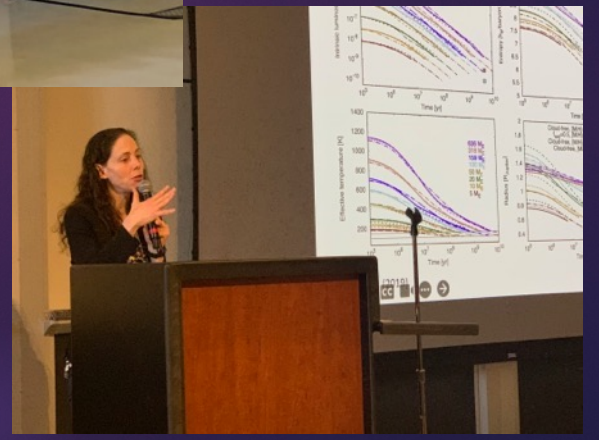












...and to our Hands-on Session Leaders!

The preparation and technical support in getting ready for the hands-on sessions would not have been possible without the dedicated help from:

- Natasha Batalha
- Taylor Bell
- Laura Kreidberg
- Paul Molliere
- Kevin Stevenson
- Melanie Swain

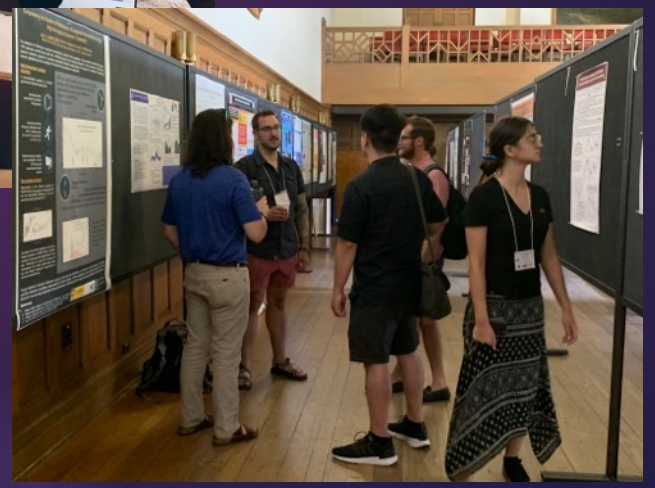
...and to our **60** Hands-on Session Helpers!

- Qier An
- Crystal-Lynn Bartier
- Jonathan Brande
- Rosario Cecilio-Flores-Elie
- Roy Forestano
- Samantha Hasler
- Sean McCloat
- Jorge A. Sanchez
- Evan Sneed
- Pa Chia Thao
- Ashley Walker
- Michael Bess
- Jordan Ealy
- Lakeisha Ramos-Rosado
- Eyup Bedirhan Unlu
- Xueqing Chen
- Pengyu Liu
- Germain Garreau
- Juan Camilo Zapata Trujillo
- Anitha Raj Rajkumar
- Jack Davey
- Prune August
- Luke Parker
- TomásAzevedo Silva
- Annabella Meech
- Alexandra Thompson
- Sean Jordan
- Arianna Saba
- Jerry Xuan
- Tiara Andamari Saraswati
- Rohan Mukherjee
- Federico Biassoni
- Jessica Libby-Roberts
- Ashley Elliott
- Vaibhav Baldaniya
- Avijeet Palit
- Muhammad Shajahan
- Viduranga Landers
- Rajesh Mudaliyar
- Emeline Fromont
- Somsubhra De
- Ayesha Mujtaba
- Ashutosh Tripathi
- Doriann Blain
- Cyril Gapp
- Shubhonkar Paramanick
- Yu-Chia Lin
- Sahpar Ozer
- Qiao Xue
- Vera Berger
- Umadevi Velmurugan
- Hardik Medhi
- Evert Nasedkin
- Zhoujian Zhang
- Yapeng Zhang
- Abhisek Mohapatra
- Laura Mayorga
- Sagnick Mukherjee
- Mikołaj Karawacki
- Sarah Moran

Thank You In-Person & On-line Attendees!

- This would not be a success without your interactions and involvement in asking questions and working on the hands-on sessions
- Spread the word (#sagan2023) if you enjoyed and learned something from this year's workshop!

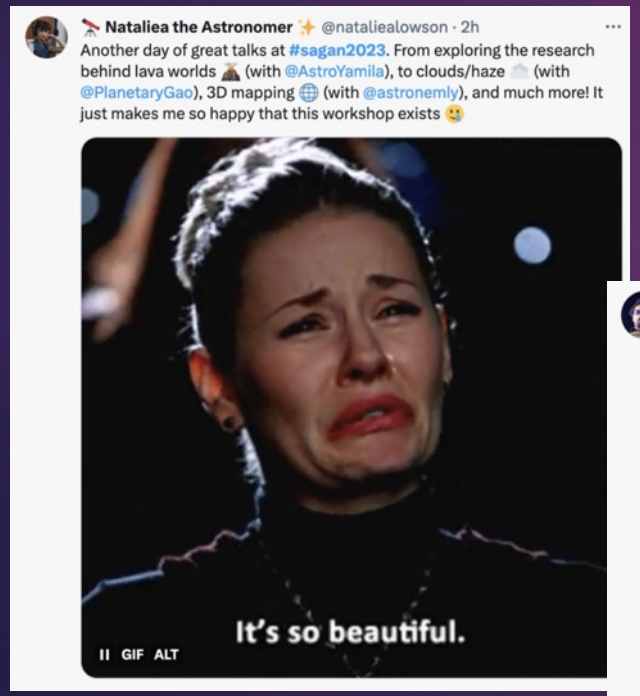
- Feel free to keep interacting on Slack
- Check out the posters on the website and ask your questions in Slack

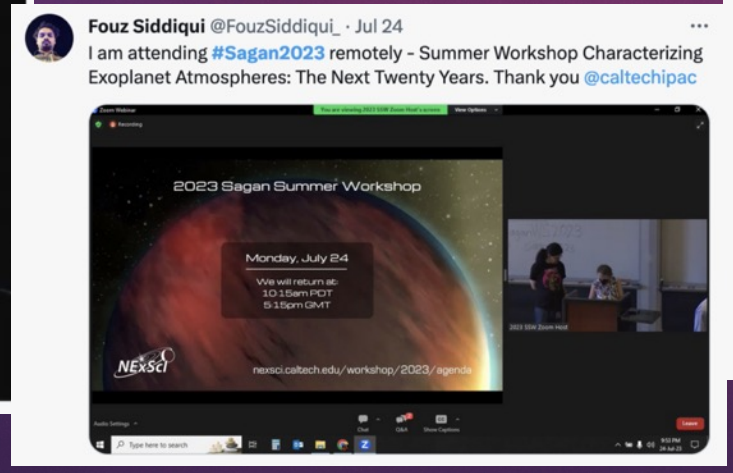


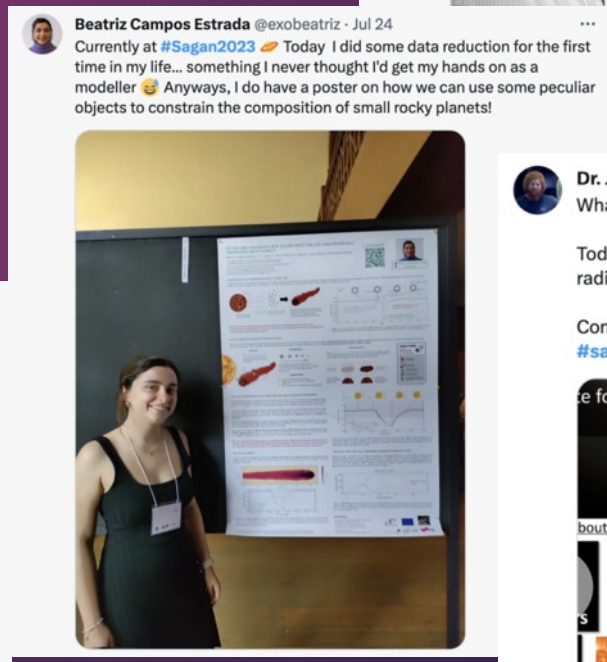
- Submit your headshot to be part of the Class Photo
- Fill out the survey: https://tinyurl.com/sagan2023

Thank You for Tweeting/X'ing!!

- Twitter: *#sagan2023*
  - Guest takeover of IPAC Twitter @caltechipac
    - Michael Wong (in-person attendee)
    - Kevin Hardegree-Ullman(remote attendee)



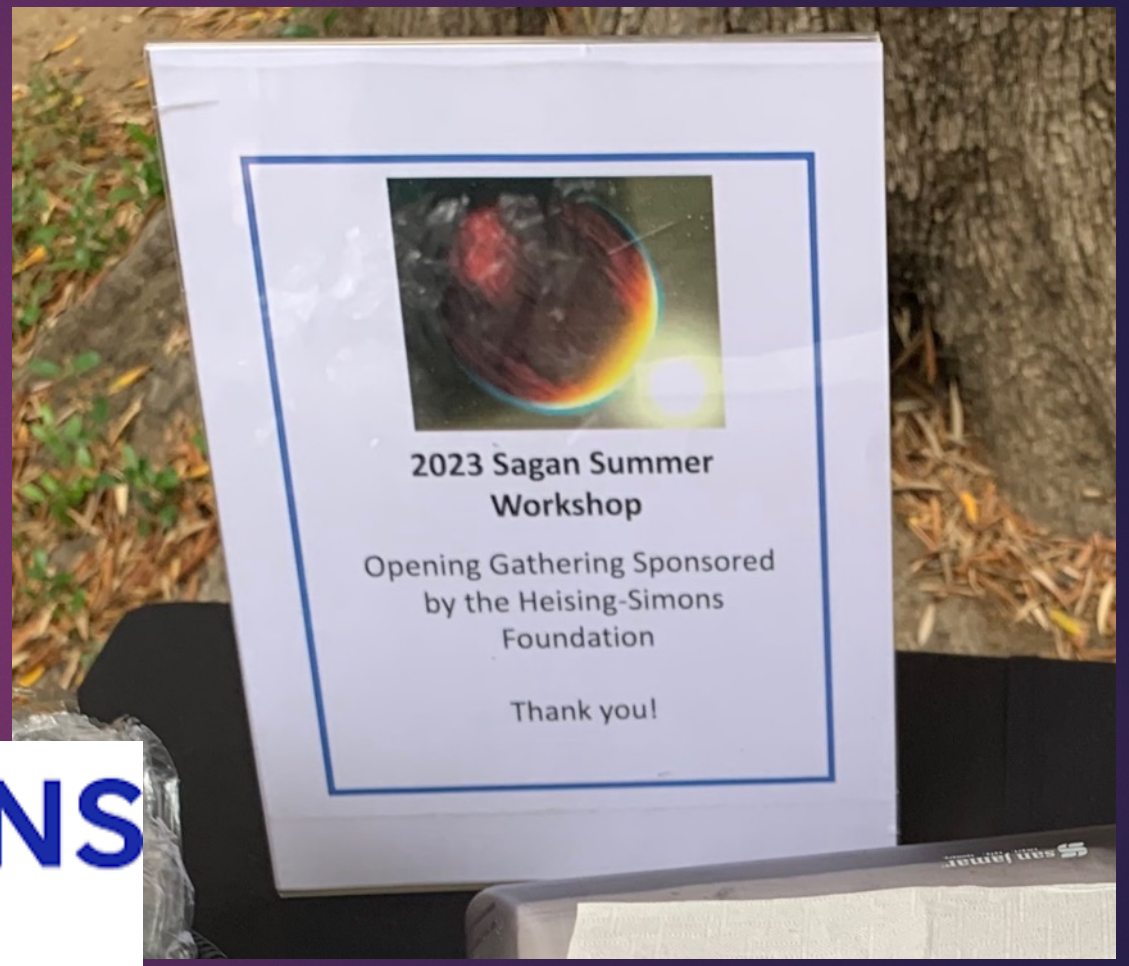




And Now a Word From our Sponsors…

NExScI

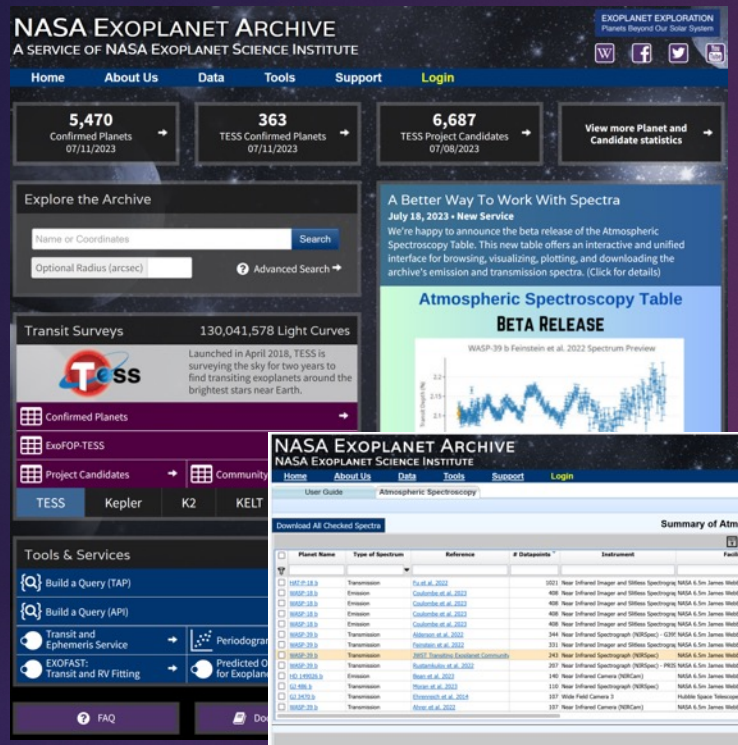
NASA Exoplanet Science Institute

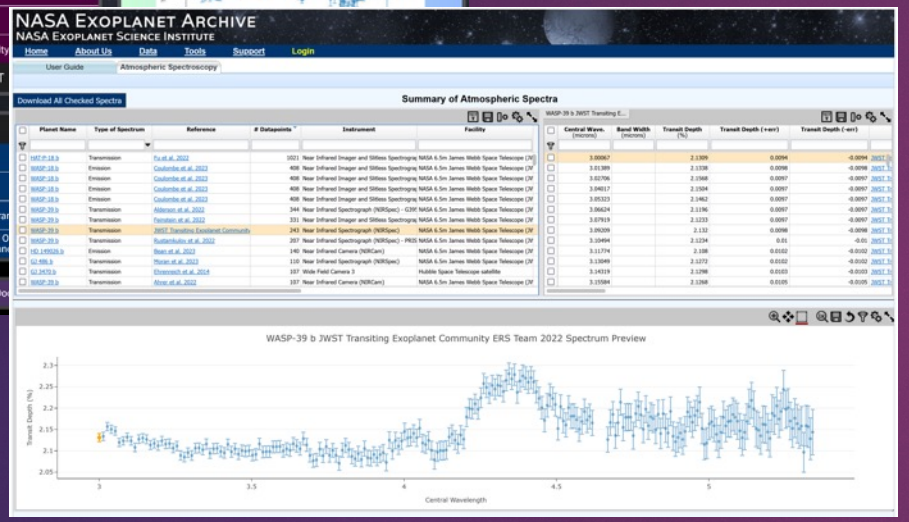


HEISING-SIMONS FOUNDATION

Thank you!!!

NASA Exoplanet Archive/ExoFOP



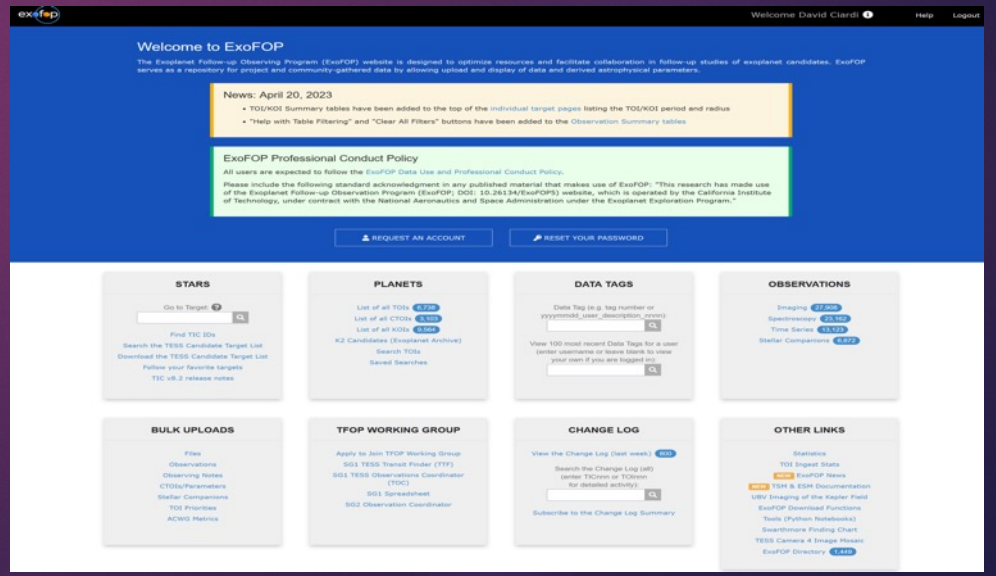


NASA Exoplanet Archive

- The premiere exoplanet database of confirmed planets and candidates
- Almost 5,500 exoplanets with ~35,000 planetary system solutions
- All Kepler, K2, and TESS candidates
- All Kepler high level products
- Tools including a new Exoplanet Spectroscopy Visualization Environment
- exoplanetarchive.ipac.caltech.edu

Exoplanet Follow-up Observing Program (ExoFOP)

- The premiere service to share exoplanet follow-up observations, data, and notes
- Built on the entire TESS Input Catalog (i.e., Gaia DR2)
- 70,000+ observations and > 1 million files, data, and notes uploaded by users
- exofop.ipac.caltech.edu



NASA-Keck Observing Time

- Access to ~47 nights/semester spread over the two 10m telescopes in Maunakea, HI
- Astronomers based at any U. S. institutions may apply as a PI; Co-Is may be international
- Proposals are evaluated for NASA strategic relevance and proposed science goals
- Twilight, Cadence, and Target of Opportunity proposals accepted
- Financial support for successful PIs, contingent upon NASA funding
- KSMS, GO, MS Proposals for 2024A due September 14, 2023
  - Key Strategic Mission Support (KSMS) NoIs due August 16
  - Dual Anonymous Proposal Review process
- Cycle 3 joint NASA Keck/JWST program!

https://nexsci.caltech.edu/missions/KSA

NASA Hubble Fellowship Program (NHFP)

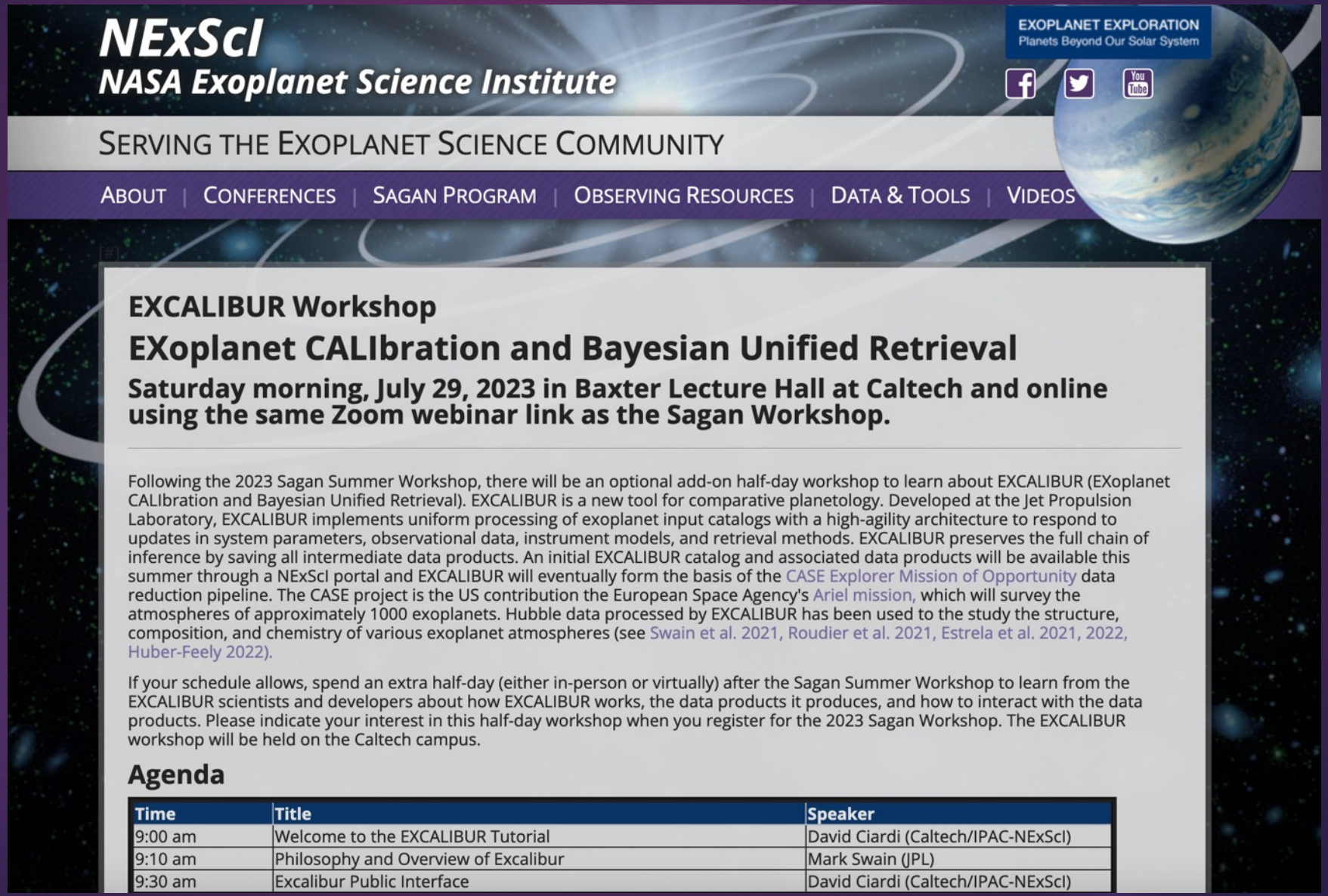
- For independent research related to the goals of NASA Astrophysics
  - Observational, theoretical, experimental, or instrumental
  - Within 4 years of your PhD
  - Applicants can be from *anywhere* around the world, but must serve their fellowship at a US institution
  - Fellows named Sagan, Hubble, or Einstein depending on their field of study
- Call for applications online in early September
- 2024 applications are due November 2, 2023

https://nexsci.caltech.edu/sagan/fellowship.shtml

Reminders

- Letter request website is now available
  - Letters will be sent to those who have requested them no earlier than late August, so please be patient!
  - https://catcopy.ipac.caltech.edu/ssw/certificate.php
- Submit your headshot to be part of the on-line Class Photo
  - August 18 deadline
  - https://catcopy.ipac.caltech.edu/ssw/enter_photo.php
- Slack will remain open, but messages older than 90 days will not be accessible
  - If you are still working on the hands-on sessions, please search in the relevant channels for answers to your questions. There are many answers in there!

Tomorrow!


NExScI
NASA Exoplanet Science Institute
EXOPLANET EXPLORATION
Planets Beyond Our Solar System
SERVING THE EXOPLANET SCIENCE COMMUNITY
ABOUT | CONFERENCES | SAGAN PROGRAM | OBSERVING RESOURCES | DATA & TOOLS | VIDEOS
EXCALIBUR Workshop
EXoplanet CALIbration and Bayesian Unified Retrieval
Saturday morning, July 29, 2023 in Baxter Lecture Hall at Caltech and online using the same Zoom webinar link as the Sagan Workshop.
Following the 2023 Sagan Summer Workshop, there will be an optional add-on half-day workshop to learn about EXCALIBUR (EXoplanet CALIbration and Bayesian Unified Retrieval). EXCALIBUR is a new tool for comparative planetology. Developed at the Jet Propulsion Laboratory, EXCALIBUR implements uniform processing of exoplanet input catalogs with a high-agility architecture to respond to updates in system parameters, observational data, instrument models, and retrieval methods. EXCALIBUR preserves the full chain of inference by saving all intermediate data products. An initial EXCALIBUR catalog and associated data products will be available this summer through a NExScI portal and EXCALIBUR will eventually form the basis of the CASE Explorer Mission of Opportunity data reduction pipeline. The CASE project is the US contribution the European Space Agency's Ariel mission, which will survey the atmospheres of approximately 1000 exoplanets. Hubble data processed by EXCALIBUR has been used to the study the structure, composition, and chemistry of various exoplanet atmospheres (see Swain et al. 2021, Roudier et al. 2021, Estrela et al. 2021, 2022, Huber-Feely 2022).
If your schedule allows, spend an extra half-day (either in-person or virtually) after the Sagan Summer Workshop to learn from the EXCALIBUR scientists and developers about how EXCALIBUR works, the data products it produces, and how to interact with the data products. Please indicate your interest in this half-day workshop when you register for the 2023 Sagan Workshop. The EXCALIBUR workshop will be held on the Caltech campus.
Agenda
Time | Title | Speaker
9:00 am | Welcome to the EXCALIBUR Tutorial | David Ciardi (Caltech/IPAC-NExScI)
9:10 am | Philosophy and Overview of Excalibur | Mark Swain (JPL)
9:30 am | Excalibur Public Interface | David Ciardi (Caltech/IPAC-NExScI)

2009 SSW: Exoplanet Atmospheres (101 registered)

2009

(101 registered)

2023

(1400+ registered)