## Welcome to the EXCALIBUR Tutorial

David R. Ciardi NExScI-Caltech/IPAC 28 July 2023

## Purpose of the EXCALIBUR Tutorial

- To learn about a tool that has been developed up at JPL to enable comparative atmospheric exoplanetology
- Developed at the Jet Propulsion Laboratory, EXCALIBUR implements uniform processing of exoplanet input catalogs with an architecture that responds to updates in system parameters, observational data, instrument models, and retrieval methods
- An initial EXCALIBUR catalog and associated data products is being made available through a NExScI portal
- EXCALIBUR will eventually form the basis of the NASA CASE
  contribution for Ariel data reduction pipeline

Some Logistical Notes

- Today's session isn't intended to be a full hands-on session like the rest of the week has been
- But rather introduce you to
  - Members of the EXCALIBUR Team
  - EXCALIBUR as whole
  - The EXCALIBUR content and portal that serves the content
  - Get you thinking about this program and engaging with the team
- And one sad note: there is no coffee at the break



Finally ... a thank you

- To the NExScl Sagan Summer Workshop team ...
- To the participants ...
- To the EXCALIBUR team ...
- For all staying one more day past the nominal workshop



## Agenda for the Excalibur Tutorial

Time	Title	Speaker
9:00 am	Welcome to the EXCALIBUR Tutorial	David Ciardi (Caltech/IPAC-NExScl)
9:10 am	Philosophy and Overview of Excalibur	Mark Swain (JPL)
9:30 am	Excalibur Public Interface	David Ciardi (Caltech/IPAC-NExScl)
9:45 am	Overview of the Excalibur Data Products Working Example	Raissa Estrela (JPL)
10:15 am	Overview of the Atmospheric Retrieval and its application to the Excalibur datasets	Gael Roudier (JPL)
11:00 am	Break	
11:15 am	Validating the Transit Spectra: An Automated Flagging System	Kate McCarthy (JPL/Univ. of Virginia)
11:30 am	Engaging with the Excalibur Team	Mark Swain (JPL)
12:00 pm	Engagement Examples	Lorenzo Mugnai and other Excalibur contributors
12:15 pm	Ending Comments	David Ciardi (Caltech/IPAC-NExScl)
12:30 pm	adjourn	