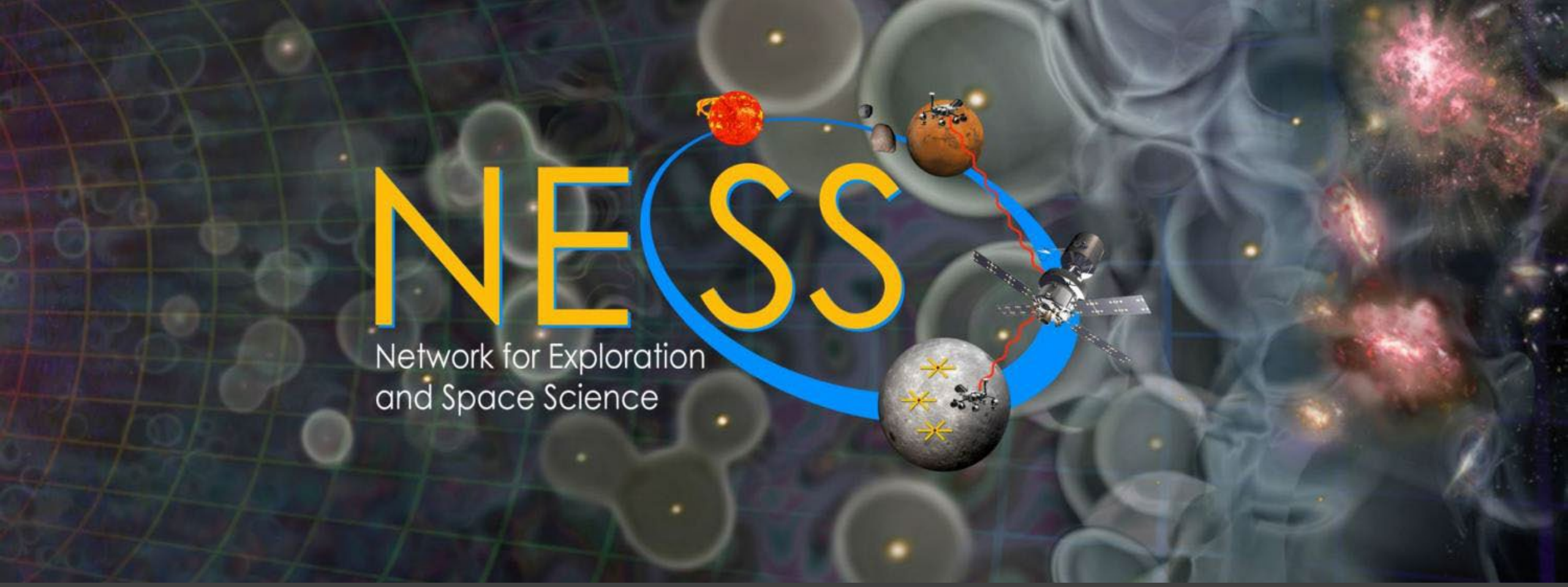


SSERVI NESS Virtual Site Visit

November 30, 2020

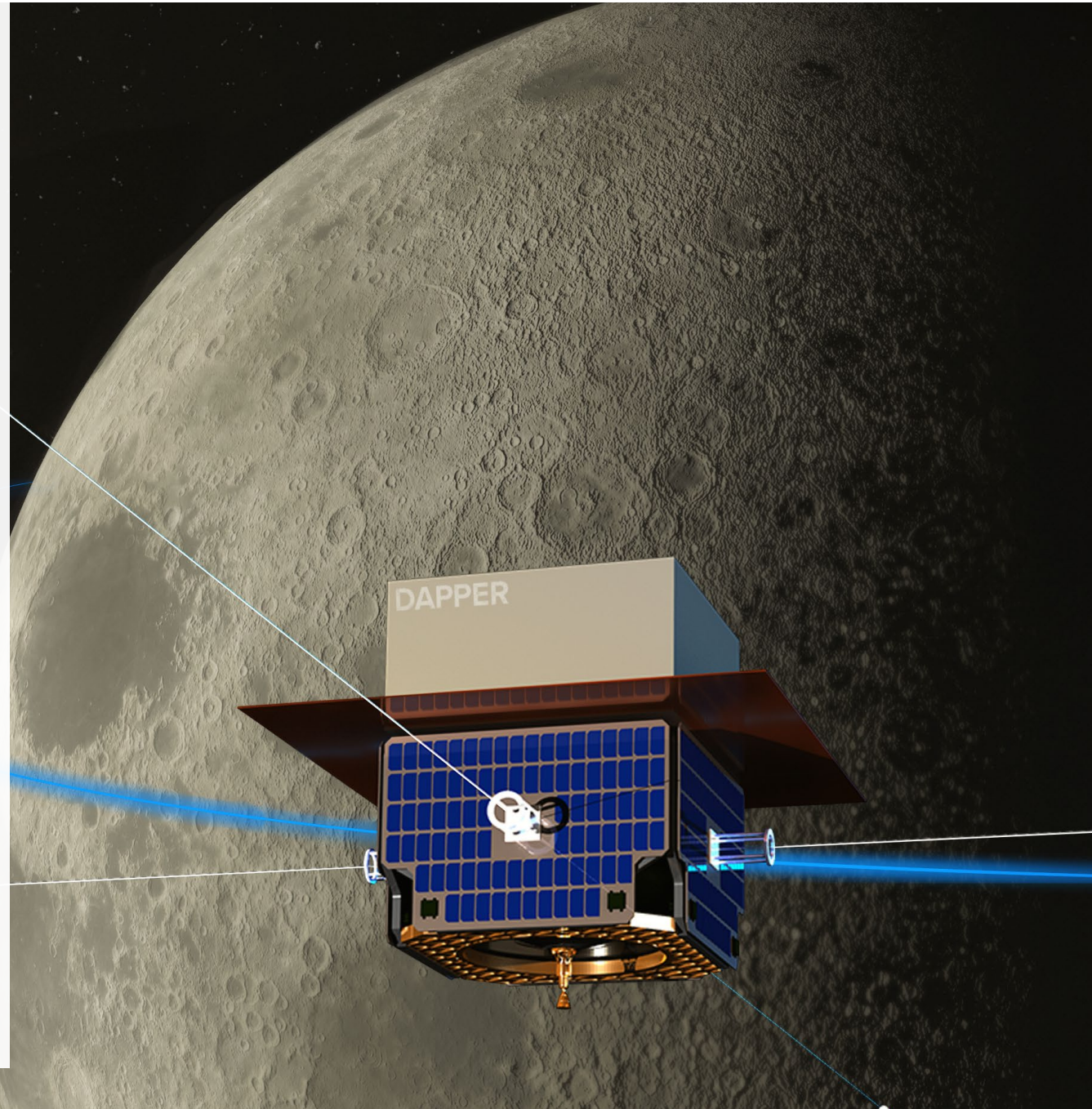
NESS website: https://www.colorado.edu/ness/

NESS Goals

NESS is pursuing a transformative space science agenda supported by NASA's exploration objectives at target destinations. Our technical approach includes humans and robots working in tandem to explore at target bodies as well as building, operating, and servicing scientific instrumentation in cis-lunar space. Our four interconnected science key projects focus on:

- Discovery science, including exploration science and surface telerobotics
- Heliophysics and space physics
- Astrophysics and 21-cm Cosmology
- Habitable exoplanets

NESS Projects: https://www.colorado.edu/ness/ness-projects



THE NESS TEAM

AGENDA

Morning Schedule

9:00-9:15am **Introductions & Welcome** (NESS PI: Jack Burns, U. Colorado)

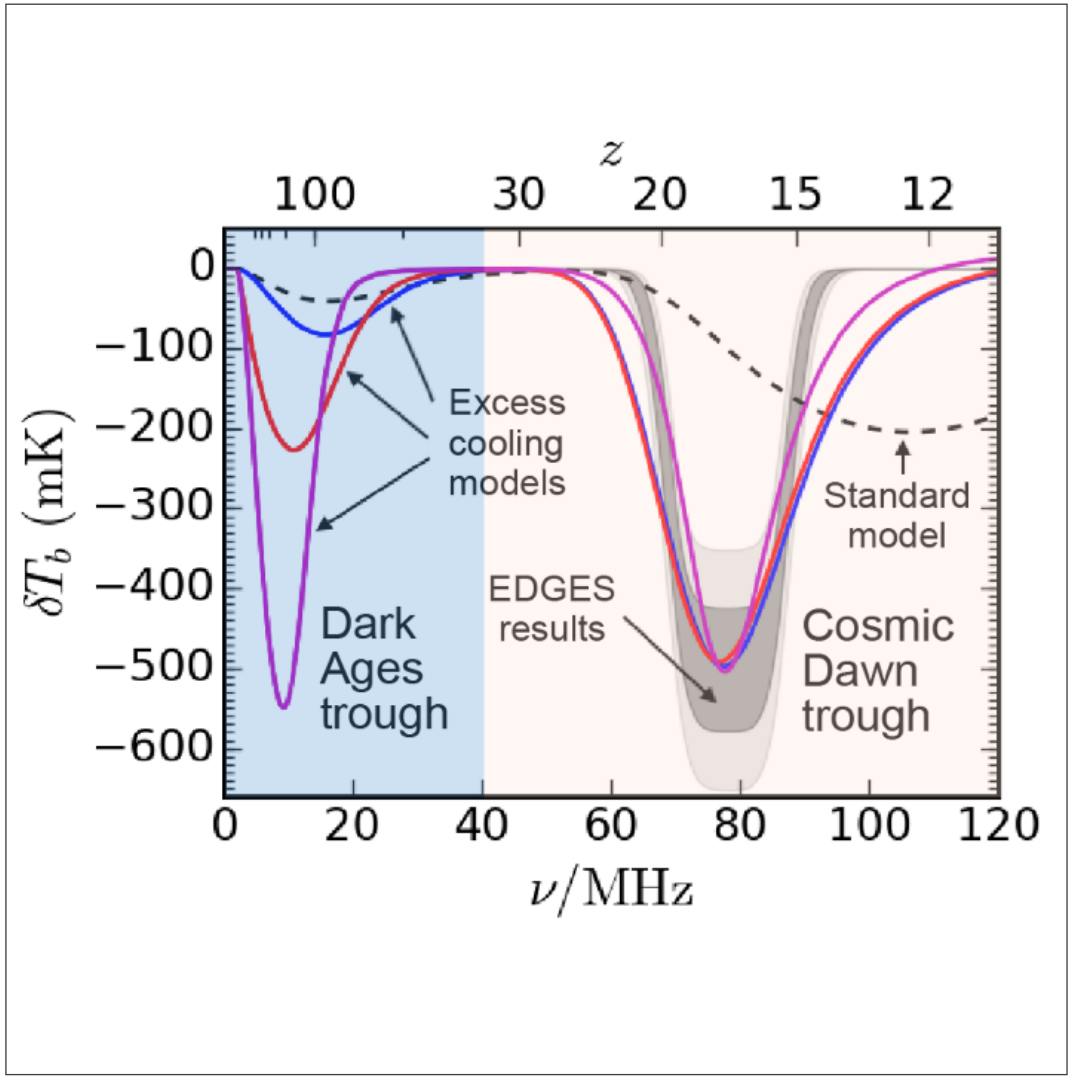
9:15-10:00am **Heliophysics** (Moderator: Justin Kasper, U. Michigan)
9:15-09:20am Overview
9:20-09:30am SunRISE *(Alex Hegedus, U. Michigan)*
9:30-09:40am ROLSES *(Bob MacDowall, NASA GSFC)*
9:40-09:50am Simulations of Type II solar bursts with FARSIDE *(Alex Hegedus)*
9:50-10:00am Discussion

10:00-11:00am **Exoplanet Magnetospheres** (Moderator: Gregg Hallinan, Caltech)
10:00-10:05am Overview
10:05-10:20am Preparing for FARSIDE: OVRO-LWA *(Marin Anderson, JPL)*
10:20-10:35am Exoplanetary System Observations with FARSIDE *(Gregg Hallinan)*
10:35-10:50am FARSIDE Polarization Configuration *(Nivedita Mahesh, ASU)*
10:50-11:00am Discussion

11:00-11:45am **Global 21-cm Signal I** (Moderator: Steve Furlanetto, UCLA)
11:00-11:05am Overview
11:05-11:35am Theory
- 11:05-11:20am First stars and galaxies with FARSIDE *(Jordan Mirocha, McGill U.)*
- 11:20-11:35am What Can Future Lunar Observatories Teach Us About Population III Star Formation? *(Rick Mebane, UCLA)*

11:35-11:45am Discussion

11:45-12:15pm **Lunch Break**



Afternoon Schedule

12:15-01:15pm **Global 21-cm Signal II** (Moderator: Rich Bradley, NRAO)
12:15-12:20pm Overview
12:20-01:05pm Global Signal Experiments
12:20-12:35pm Preparing for the Moon with EDGES *(Judd Bowman, ASU)*
12:35-12:50pm Cosmic Twilight Polarimeter (CTP) *(David Bordenave, NRAO)*
12:50-01:05pm Status Report on DAPPER *(Keith Tauscher, U. Colorado)*
01:05-01:15pm Discussion

1:15-1:45pm **Outreach Programs** (Moderator: Jack Burns)
1:15-1:25am Cosmic Dark to Cosmic Dawn Website *(Steven Furlanetto)*
1:25-1:35pm Forward! To the Moon Planetarium Show *(John Keller, U. Colorado)*
1:35-1:45pm Discussion

1:45-2:00pm **Coffee Break**

2:00-3:00pm **Global 21-cm Signal III** (Moderator: David Rapetti, NASA ARC/USRA/U. Colorado)
2:00-2:05pm Overview
2:05-2:50pm Analysis of Observational Data
2:05-2:20pm A Pattern Recognition Pipeline for DAPPER Spectra *(Neil Bassett, U. Colorado)*
2:20-2:35pm Sky & Beam Models at Low Radio Frequencies *(Joshua Hibbard, U. Colorado)*
2:35-2:50pm Global Bayesian Models for Global 21-cm Experiments *(Steven Murray, ASU)*
2:50-3:00pm Discussion

3:00-4:00pm T**elerobotics** (Moderator: Terrence Fong, NASA ARC)
3:00-3:05pm Overview
3:05-3:20 pm Mixed Reality Interfaces for Lunar Robot Supervision & Teleoperation *(Michael Walker, U. Colorado)*
3:20-3:35pm Telerobotic Deployment Strategies for Lunar Radio Arrays *(Mason Bell & Phaedra Curlin, U. Colorado)*
3:35-3:50pm Deployable Optical Receiver Aperture for Lunar Communications and Navigation (DORA) *(Daniel Jacobs, ASU)*
3:50-4:00 pm Discussion
4:00-4:15 pm **Final Remarks/Questions/Conclusions** (Jack Burns)