Winter 2026

PRIMA

Community Newsletter

Concept Study Report Submitted!

Jason Glenn
PRIMA PI

Hello astrophysics community! I am very excited to share with you that we submitted the PRIMA concept study report to NASA in late January, on time and fully compliant! The report is the culmination of the year-long Phase A study, a huge effort by PRIMA scientists, engineers, and managers across our partner institutions. The year brought extraordinary challenges, but our team persevered and has emerged with a compelling report and eagerness to implement PRIMA. There are far too many people to acknowledge individually for this effort, but please take a look the personal highlights at the end of our newsletters – this is our explicit recognition of students, engineers, and staff who do not usually get to share the spotlight with the scientists.

We eagerly look forward to the PRIMA site visit this spring and hopefully news about selection of a Probe for implementation this fall. Go PRIMA!

News and Updates:

- All 38 papers in the JATIS Special Section on the PRIMA Probe-Class Mission Concept are now published in JATIS Vol. 11 No. 3. We kindly ask the community to please cite Glenn et al. 2025 as the definitive reference to PRIMA in your publications.
- The PRIMA General Observer (GO) Book Vol 2 is now published! You can find the entire 664-page volume at https://arxiv.org/abs/2511.10927 . Science cases were submitted by more than 400 members of the international astronomical community. The 120 individual cases in Vol 2 were edited by a team of 11 editors, led by Arielle Moullet (NRAO) and Denis Burgarella (LAM). All of the cases in the book are also individually listed and citable on ADS. The PRIMA GO Book Vol 2 joins Vol 1 (Moullet et al. 2023; 76 cases) to create a set of 170 unique science cases that represent >60,000 hours of community observations, spanning more than 90% of the areas covered in Astro2020 science questions.
- The PRIMA team welcomes 6 new co-Is from our partners at NASA-GSFC, UK, Canada, and Korea:

Key Dates:

• **May**	PRIMA site visit in Pasadena, CA
• **June 14-18**	PRIMA at Summer AAS in Pasadena, CA
• **July 5-10**	PRIMA at SPIE in Copenhagen
• **Late 2026**	Probe Selection Announced

Darren Dowell (JPL/Caltech)

Thomas Essinger-Hileman (GSFC)

Woong-Seob Jeong (KASI)

Alan Kogut (GSFC)

Seb Oliver (University of Sussex)

Locke Spencer (University of Lethbridge)

Help to develop the NASA Infrared Telescope Facility (IRTF) 10-year Strategic Plan! Researchers in any field where IRTF can contribute are encouraged to fill the google survey - https://shorturl.at/yR1Ih

Keep up with PRIMA at prima.ipac.caltech.edu

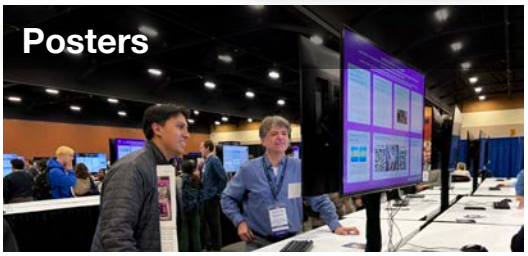
PRIMA at AAS 246

Thanks to everyone who joined us at the 247th AAS in Phoenix, AZ this January. PRIMA was well-represented by the team and the community, and we loved to see all of the excitement!

We hosted a special session on “The PRobe Infrared Mission for Astrophysics (PRIMA) Mission Concept” which featured talks that highlighted community contributions to the PRIMA Vol. 2 GO book. Topics ranged from Little Red Dots and time domain astronomy in the far-infrared to stars, disks, and extrasolar Kuiper belts. There was so much interest we ran out of chairs!

Our prime placement in the IPAC booth at the entrance to the exhibition hall gave us great visibility and community interaction. Special thanks to BAE for sponsoring our fun swag! We also had lots of visitors to our PRIMA posters and hosted a great evening community meetup.

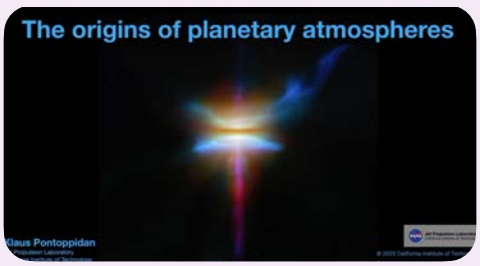
We look forward to doing it again in Pasadena, CA this summer and hope you will join us there to get to know our JPL team better!



P-CAST Talks

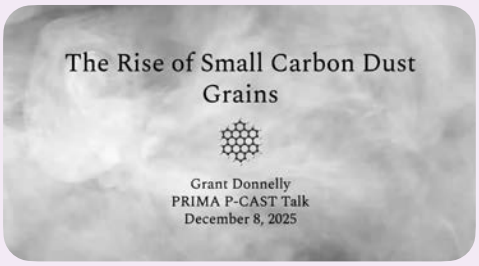
Our monthly online talk series typically takes place on the 4th Monday of the month at 12 PM Eastern

Next up: Susan Clark (Feb 23) Rebecca Levy (Mar 23) *Find out how to join on our P-CAST page!*

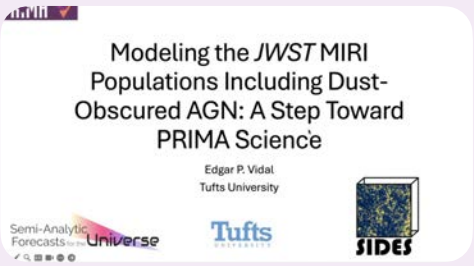


September 8: Klaus Pontoppidan (Caltech/JPL)

October 18: Dylan Paré (JAO)

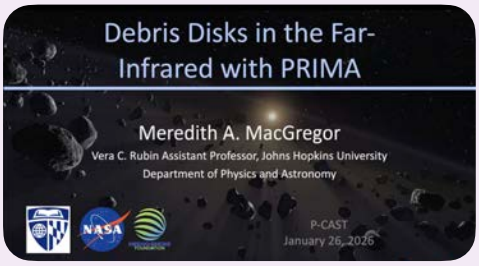


December 18: Grant Donnelly (U. Toledo)



September 22: Edgar Vidal (Tufts U.)

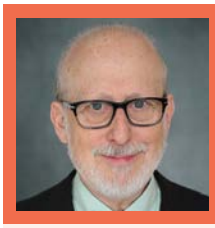
November: Katia Dutkowska (U. Leiden)



January 25: Meredith MacGregor (JHU)

Recordings of all P-CAST talks can be found on our YouTube channel!

PRIMA spotlight Highlighting the people who make PRIMA happen!



Peter Basch (JPL)

PRIMA Documentarian

Peter was responsible for editing and formatting the Concept Study Report and will prepare the slides that answer the Significant weaknesses, Questions and Requests for information List from the review committee.

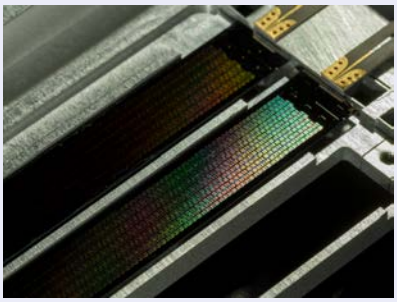
Peter has been a Technical Writer and Editor at JPL for almost 15 years. He has worked on dozens of proposals, including SPHEREx. He managed documentation for the building and testing of the Perseverance rover (his signature, along with those of the rest of the build/test team, is etched on a little plaque on the rover) as well as the NISAR instrument.

Chris Albert (Caltech/JPL)

Logan Foote (Caltech/JPL)

Elijah Kane (Caltech/JPL)

PRIMA Detector Development at JPL/Caltech



Prototype FIRESS kinetic inductance detector

Postdoctoral scholar Logan Foote, and Ph.D. students Elijah Kane and Chris Albert are working under the guidance of Matt Bradford and the JPL microdevices research staff to characterize prototype FIRESS kinetic inductance detector (KID) 1008-pixel subarrays, refine the software tools for KID operation, and interface with the readout electronics team. Key measurements underway in the 100 mK testbeds at JPL include: per-pixel sensitivity, optical efficiency, pixel operability (yield), cosmic ray resilience, and generation of preliminary calibration parameters. Look for these folks at SPIE this summer presenting aspects of this work!

Tracy Borden (GSFC)

NASA GSFC Cost Volume Manager

Tracy contributed to the PRIMA Step 1 proposal development and collaborated with the JPL team members from different levels to integrate cost inputs into a cohesive and viable cost volume, prior to supporting the PRIMA team for the Concept Study Review submission.

“I have served as a Cost Volume Manager at NASA Goddard Space Flight Center since 2016, coordinating cost estimating efforts across multidisciplinary teams to develop comprehensive cost documentation for science and space missions.My earlier experience as a Program Analyst and Financial Manager provided a strong foundation in budget analysis and financial management that supports my current work on Announcement of Opportunities and directed mission efforts.”

Emma Dahl (Caltech/JPL)

PRIMA protoplanetary disk modeling for FIRESS

I was part of the Phase A team that worked to confirm PRIMA’s ability to detect water emission lines in the planet-forming regions of protoplanetary disks. Water is arguably the most important building block of life, so in order to know how habitable exoplanets might be, it’s critical to be able to trace the chemical makeup of the disks in which they form and how much water might be available to those baby planets.

I work on both protoplanetary disks and Solar System-centric planetary science (Dahl et al. 2021), so I get to study both the initial stages of planet formation in disks across the galaxy as well as the final form of those planets in our own backyard. One of the big mysteries of planet formation is how exactly our own Solar System ended up in its current state (e.g., the size of the planets, their chemical composition, and their positions relative to each other), so it’s exciting to essentially explore the planet formation process from both the beginning and the end in order to help fill in the missing steps in the middle.