



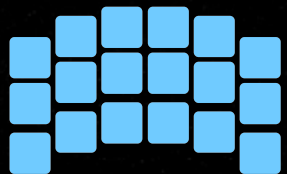
# The Roman Science Support Center at IPAC

January 15, 2021

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*L. Armus for the SSC team*

NANCY GRACE  
**R.OMAN**



SPACE TELESCOPE

The SSC at IPAC works as part of the Ground System to support the scientific and operational goals of the Roman mission. Key SSC responsibilities include:

– **Science Data pipelines**

- *Science data processing for the Exoplanet Microlensing Survey*
- *Science data processing for the High Latitude and the Supernova Spectroscopic Surveys*

– **CGI Technology Demonstration Operations**

- *CGI observation scripts and procedures*
- *Data Analysis Environment for CGI data processing*
- *High Order Wave Front Sensor ground operations*

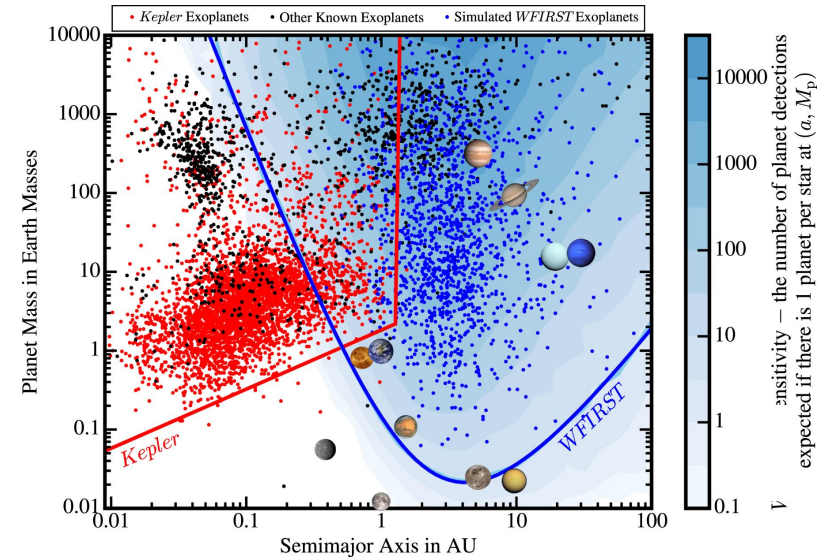
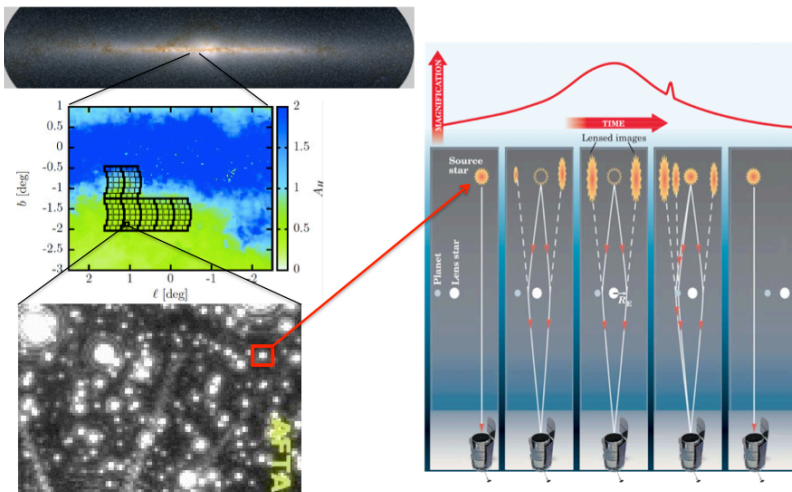
– **Proposal calls, peer reviews and community grants management**

- Issue General Observer (GO) /Guest Investigator (GI)/Theory calls for proposals
- Manage peer review and time allocation process for GO/GI/Theory proposals
- Manage GO/GI/Theory grants

– **Community engagement**

The SSC will implement and operate the **Roman Microlensing Science pipeline** to:

- Identify microlensing events and derive stellar and planetary parameters
- Produce images, light curves, catalogs and estimate detection efficiency, completeness, and reliability
- Support the community in analyzing microlensing data
- Release pipeline modules and associated documentation to the community

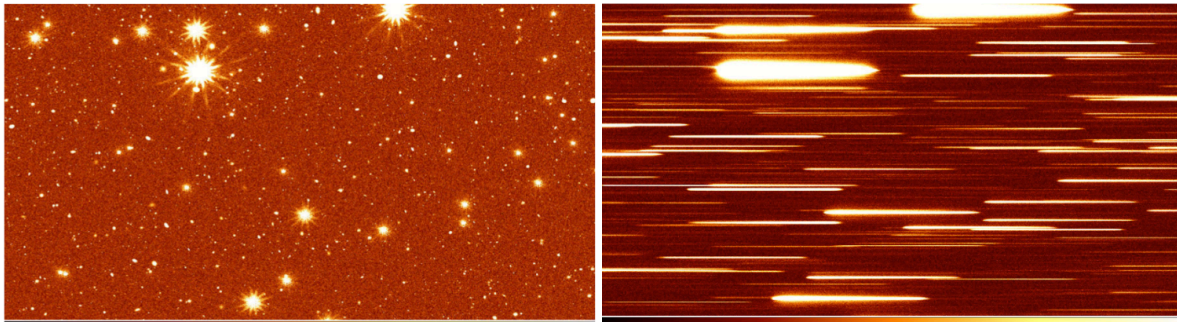
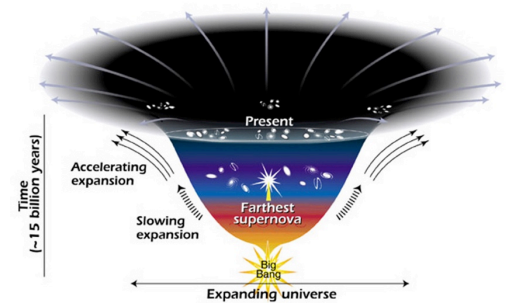


Penny +19

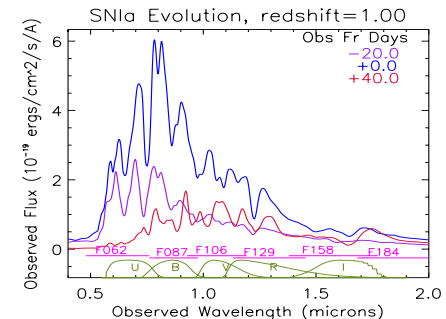


The SSC will implement and operate the **Roman Wide-Field Spectroscopy science pipeline** to:

- Calibrate grism and prism survey mode and GO spectroscopic data
- Identify, spatially decontaminate, catalog and produce 2D and 1D spectra for all detected spectroscopic sources
- Fit all 1D spectra for redshift, best fit spectral type, emission and absorption line parameters, continuum shape, etc.
- Support the community in the preparation of spectroscopic observations and data analysis
- Release pipeline modules and documentation to the community



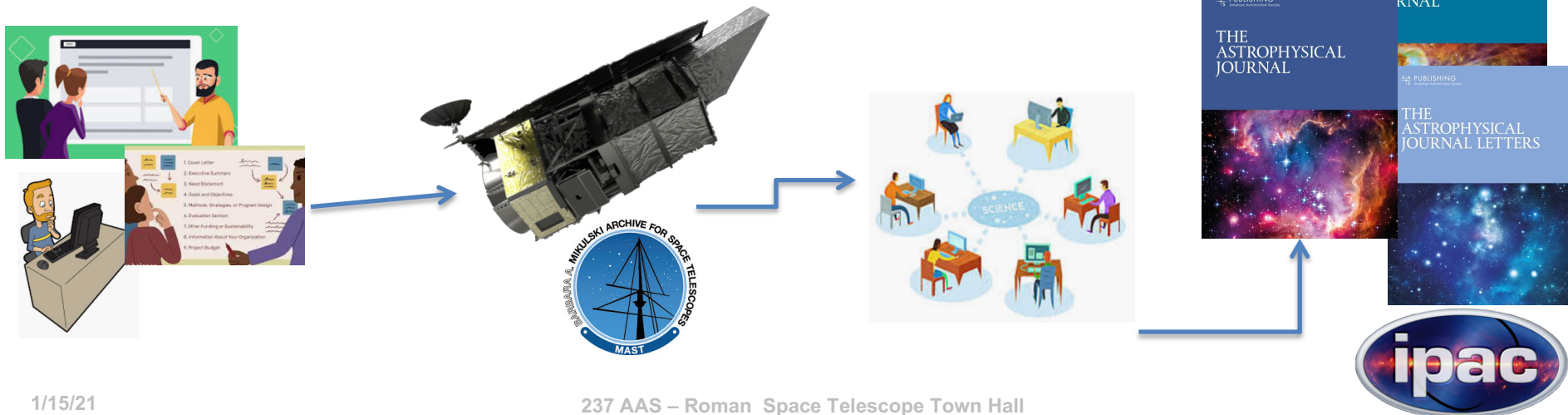
*Simulated WFI image and corresponding grism data for a single exposure of roughly one half of a single Roman detector*





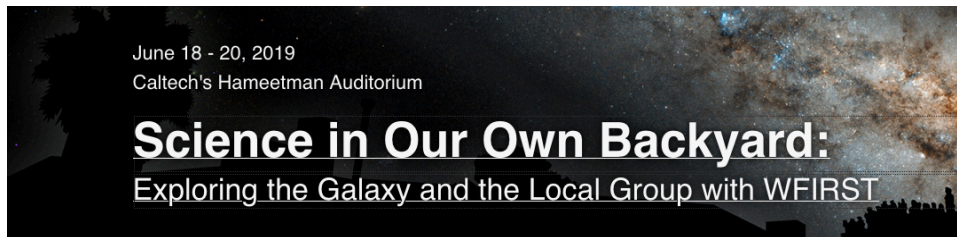
The SSC will manage the the **Roman Telescope Proposal System** to:

- Issue the call(s) for GO, GI and Theory proposals
- Support the community in proposal submission, accept and ingest proposals
- Design and maintain proposal submission software
- Manage the peer review process for all proposals
- Manage General Observer, Guest Investigator, and Theory grants
- Support the proposal preparation and submission process via regular workshops, on-line documentation, and a helpdesk

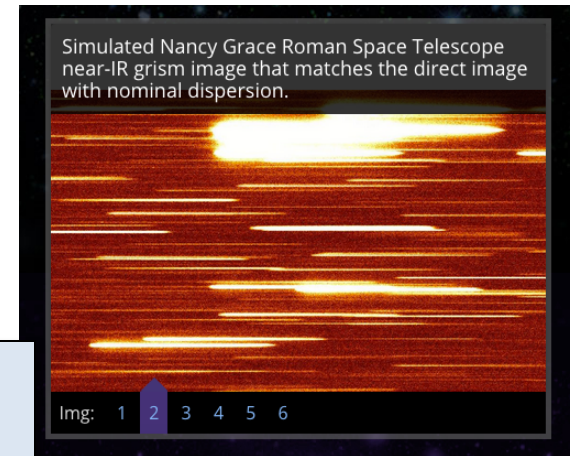


To effectively engage the Roman community, the SSC will:

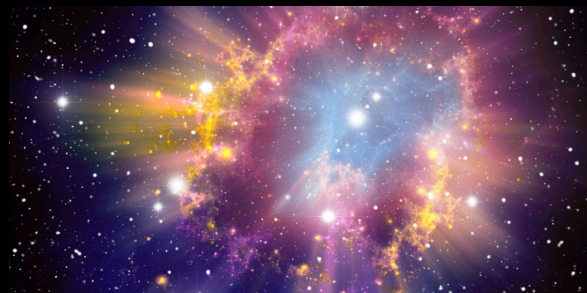
- Interface with the scientific user community for Roman exoplanet science, WFI spectroscopy, CGI operations and observations, and proposal submission
- Develop and maintain an SSC Roman website and helpdesk system
- Support and organize Roman science conferences and workshops for the astronomical community
- Support the general public and provide educational and public outreach products in these areas, in coordination with the Roman Communications Board.



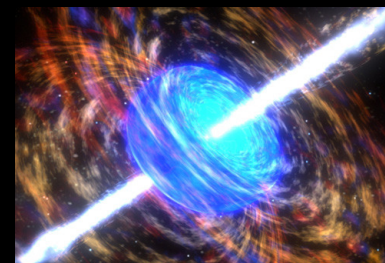
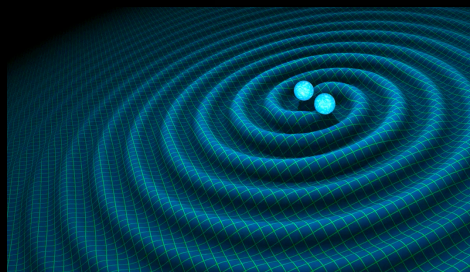
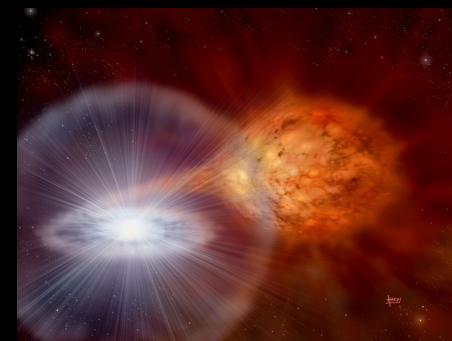
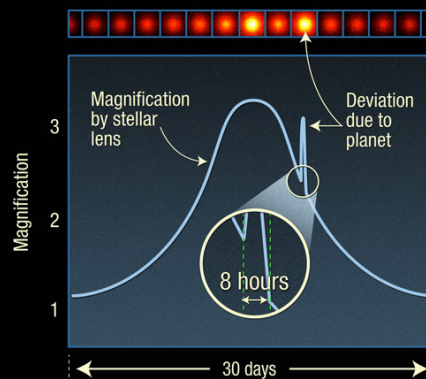
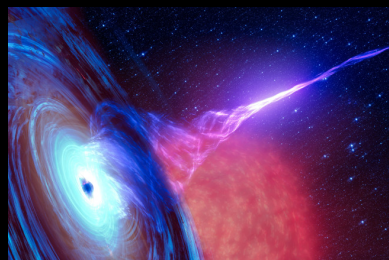
Next SSC-sponsored Roman science conference:  
**Exploring the Transient Universe with The Roman Space Telescope** ..Coming in Fall 2021



# Exploring the Transient Universe with The Roman Space Telescope



..an international meeting to be held in Fall 2021 at IPAC/Caltech



For updates and information see: <https://roman.ipac.caltech.edu>



IPAC advances the exploration of our Universe through science operations, data archiving, and community support, with a special focus on:

- *Cosmology*
- *Galaxy evolution*
- *Exoplanets*
- *Asteroids and the Solar System*
- *IR/Sub-mm Astrophysics*

Our goal is to maximize Roman science and engage the community.

Please contact us at:

[roman-help@ipac.caltech.edu](mailto:roman-help@ipac.caltech.edu)

Our website: <https://roman.ipac.caltech.edu>

