

Roman Community Forum

Early-Definition Survey Assessment

September 14, 2022

Tom Barclay

Operations Scientist

• NASA GODDARD SPACE FLIGHT CENTER • JET PROPULSION LABORATORY •
• L3HARRIS TECHNOLOGIES • BALL AEROSPACE • TELEDYNE • NASA KENNEDY SPACE CENTER •
• SPACE TELESCOPE SCIENCE INSTITUTE • IPAC • EUROPEAN SPACE AGENCY •
• JAPAN AEROSPACE EXPLORATION AGENCY • LABORATOIRE D'ASTROPHYSIQUE DE MARSEILLE •
• CENTRE NATIONAL d'ÉTUDES SPATIALES • MAX PLANCK INSTITUTE FOR ASTRONOMY •

- We recognize that some General Astrophysics science programs may significantly benefit from being selected early, to enable multi-year preparatory activities that can enhance the value of the survey and its data products.
- The Roman Project are considering the option to pre-select one Astrophysics Survey using the Wide Field Instrument to be executed within the first two years of the Roman mission and using up to 700 hours of wall clock time (i.e., the equivalent of one full month).
 - This allocations allows for a substantive survey, but does not commit to a large amount of early observation time
 - Leaves most of the general astrophysics survey time to be assigned closer to launch (and after the core community surveys are defined)
- In 2021 the Roman Project released a Request for Information to the science community to solicit comments on:
 - (a) whether to pre-select an Astrophysics Survey
 - (b) to outline and submit survey concepts that would demonstrably benefit from selection as an Early-Definition Astrophysics Survey.

- Twenty responses to the RFI were received – science themes covered large scale structure, galaxy evolution, Galactic structure, stellar populations, exoplanets, solar system science, plus other topics.
- The Roman Project are finalizing recruiting an Assessment Committee drawn from: (1) the Roman Science Interest Group, (2) the prior Roman Science Investigation Teams, (3) the broader Roman science community.
- The Committee will provide an assessment as to whether to proceed with specifying a Roman Early-Definition Astrophysics Survey, and if so, the Committee shall provide a ranked list of science/survey themes.

Next Steps



- If the Project opts to move forward with an Early-Definition Astrophysics Survey, then the next steps will be to define and optimize the survey. The survey will be defined via the community process.
- The definition process will be similar to the process for defining the Core Community Surveys.
- There will be support for preparatory activities available via multiple ROSES calls between now and launch.