2021-02-05 Meeting notes

Date

05 Feb 2021

Attendees

Julie McEnery, Anton Koekemoer, Ashley Villar, Brant Robertson, Cristina Oliveira, Dara Norman, David Spergel, Dida Markovic, Dimitri Mawet, Dominic Benford, George Helou, James Rhoads, Jeff Kruk, Jessica Lu, John Mackenty, Jonathan Hargis, Joshua Schlieder, Keith Bechtol, Ken Carpenter, Lee Armus, Megan Donahue, Neil Zimmerman, Olivier Doré, Peter Melchior, Rachel Akeson, Ryan Hickox, Saurabh Jha, Sangeeta Malhotra, Yun Wang, Zelijko Ivezic.

Agenda

- Dida Markovic on the Pilot Survey Workshop
- Continued discussion of deep field

Minutes

Julie McEnery

Defining a Deep Field location does not mean all those observations will happen early, and it doesn't preclude other kinds of GO observation during the first year.

What do we need to do to ensure community buy-in?

Core microlensing survey constraints means there will automatically be a "deep field" of the galactic bulge near the beginning of the mission.

Science centers lead the implementation

Dida Markovic - Pilot Workshop

Half-day workshop on Sep 16, 2020 with 50 inivited participants.

Defined an explanatory set of prototype pilot surveys

Hoping to hold another workshop (2-3 days) to produce detailed document as a menu. Not yet scheduled.

By the end of Commissioning, we have in-orbit checkout, science verification.

What is a pilot survey?

- Pilot surveys are part of the baseline survey. In terms of time, no more than a few percent of the core surveys.
- They are a "beta test" of observing modes, software pipelines, and the community use of Roman.
- They show off Roman capabilities to the community

Unresolved: GO pilots motivated by science as regular (competed) GOs?

Common goals are calibration and understanding uncertainties, science validation, testing and optimization, discovery

Next: We would like to refine boundary conditions for what pilot surveys, with assistance of Project.
What tools and products will be available by the time of pilot surveys?

Actions to refine plans, time-sensitive observations (RGES, SNe), ground-based observations,

Optimize the pilots by consolidating calibration work, pipelines.

Identify new ideas not presented, not thought of by the current SITs?

Discussion

Lee: Status of report?
Dida: Olivier and Dida have started a draft, not circulated yet.

Jessica: Constraints from project office. Does pilot survey time come out of core surveys or the GO allocation?
Julia: There is no special bucket of time for pilot surveys, so pilot surveys related to core surveys come out of their total survey allocation.
Jeff: We may require core surveys to each define pilot surveys.

Megan: Pilots for large GO projects?
Dida: borderline cases - deep fields may need to have a pilot that has a large scientific motivation
Dominic: If there is something that is necessary for core survey and also scientific motivation for the pilot , then that will be taken into account in the planning and scheduling

Julia: Going back to original question, do we think it's useful to define a deep field location now before the open GO call?
Megan: Choosing a location presumes you're doing a deep field.
Brant: The deep field idea has come up in many discussions from many segments of the community.
David: value of deep field is supported by discussions at conferences for 7 years.
Jessica: Should expose the process to a larger community.

Megan: How would a deep field differ from a high galactic latitude pilot
David: HLS would optimize for completeness at lower redshift, not science return from high-redshift.
George: There is still some overlap. The are coupled.

John: This mission will not have the first science results in the first 6 months to a year. Having a science home-run in the first year.

Sangeeta: A whole new generation could be inspired by a new deep fields.

Megan: Still, we should make the process open.

Julie: We could lose impact if we take too long to define these observations. Agree there is a disadvantage in locking things up too early.

We will still have flexibility closer to launch.

Dominic: If there is an early GO call, are projects restricted to only be completed in that time?

Brant: For something like a deep field or a nearby galaxy survey, prefer a community process. Don't want to duplicate things you can do with other surveys. For most people it will be archival investigations. Some of the info may not make it in.

Julia: Plan for next meeting is to have brief summary of how observations are planned for other projects like Rubin and ZTF.

John: If Roman provides an extended mission (it should be good for 10+ years), what mix of survey vs GO observation should be planned for in building out the operations and ground systems?
good question but we should table it for a future meeting.

Megan: a slack channel would maintain asynchronous discussion.

Julie: We could have both a slack RSIG channel and a discussion forum in Outerspace.

Saurabh:What is envisioned for the first GO call? Could part of that call reserve some fraction of time for (potentially large) pilot surveys/early science observations? A deep field could be a natural choice there, but also cluster fields, nearby galaxies (M31/LMC etc.). It seems like this discussion is strongly connected to what the plan for GO is in general.

Dominic: each GO call is envisioned to focus on fairly significant projects anyway. Roman is optimized for survey-mode observations and the GO is anticipated to exploit that capability.

Jessica: Agreed. Why not say the first 50% of GO will be allocated this year through some AAA process. This will be the first GO call and is defined early to allow future surveys to be optimized, etc. AAA = to be defined

Keith: I would like to hear about the specific value of advance planning for GO programs other than deep field. It seems clear that the deep field preparation has some specific need for advance planning.

Brant: I agree with Saurabh. I do think though that optimizing the relatively small GO allocation relative to the mission surveys is critical. Spending GO time on projects that can be completed using the mission surveys is not optimal. Roman is primarily an archival science facility, and the immense quality of the mission data needs to be accounted for in planning GO.

John: One reason to be cautious in pre-allocating too large a fraction of the GO time is that we won't yet know what JWST will discover (or Rubin, Euclid, etc...). We will have much improved wide and deep studies by 2026 compared to where we are today.

Jessica: agree with Brant and Megan on the value of community-style projects rather than PI. (e.g. SDSS). That is Roman's strength.

James: HST proposals already pretty much require justification of why new data is needed... at least if they are going to be approved.
David Spergel: PRoposals or White Papers?

Keith: Meta question: how should we provide feedback besides these meetings?
Dara: What Keith says... how to give feedback ask other questions, and get them answered