

2021-03-05 Meeting notes

Date

Attendees

Julie McEnery, Bernie Rauscher, Cristina Oliveira, David Spergel, Dimitri Mawet, Gisella de Rosa, Gregory Mosby, Harry Ferguson, James Rhoads, Jeffrey Kruk, Jessica Lu, John Mackenty, Joshua Schlieder, Karoline Gilbert, Keith Bechtol, Kenneth Carpenter, Lee Armus, Megan Donahue, Peter Melchior, Rachel Akeson, Roeland van der Marel, Sangeeta Malhotra, Saurabh Jha, Zeljko Ivezic, Neil Zimmerman

Agenda

- [News](#) - Julie McEnery
- Survey discussion - All

Minutes

Julie McEnery - news

Wide Field Instrument passed CDR

Upcoming CDR> CGI (April), ground system (July), mission (September)

Have 20 WFI flight detectors

STScI SOC has compiled list of Roman science publications

Take aways from previous discussion:

- Avoid trying to take up significant time early in the mission
- open to science topic
- should benefit from being defined early/soon, though this does not mean it needs to happen early in the mission
- open community process, resulting survey community owned

Strawman plan

Assign up to 1 month of observations to one survey, executed with the first 2 years of the mission.

Discussion

Would there be a concern about sharing competition-sensitive survey ideas for white papers in advance of the General Investigator call?

Why is deep field not part of the extragalactic (high latitude) survey plan? The HLS responds to specific dark energy goals, not the same requirements.

We can postpone the "how" question for now. Still figuring that out for the core community surveys.

This is only worth doing if we can find a consensus on a science case that will hold up through launch.

Is 2 years before launch sufficient advance time?

The value of deep field is tied to coordination of many facilities targeting one location.

True for other community surveys as well.

The Subaru observing time opportunity is one reason for defining a field earlier.

How to balance between making the framework lightweight, without making it too time consuming for the community?

White papers should address the motivation for early planning

Kicking this off as a community process could send the right message.

An uninvolved (2 or 3 pages) white paper call to define a 1-month observation time now (4 years prior to launch), including an argument for the scientific benefits of early planning.

This committee should be involved in evaluating them.

We could merge this with the question asking how we can use the core surveys for other science cases. The advantage is consolidating the number of times we reach out to the community.

Summary from Jessica: white paper prompt: Roman is considering identifying new community surveys well in advance of Roman launch (in addition to the core surveys defined in the 2000 decadal survey). The project is calling for white papers that would inform the project decision. The call would ask: (1) What new community survey do you propose? What scientific questions would it address? (2) Why does this community survey need to be identified early (2-4 years prior to launch)? (3) What ancillary data/simulation would be needed to maximize the output of the proposed community survey? does it need to be done in advance of survey definition?

Saurabh: How much would it "hurt" the HLS and SN core community surveys to ask them to carve out a ~1 month deep field as envisioned? This might give a better sense of the cost versus taking it out of the GO allocation.

other comments from chat window

from Harry Ferguson (Ext) to Everyone: 1:22 PM

I'm a bit surprised by David Spergel's statement. I've heard a lot of enthusiasm for having a deep reference field to help constrain systematics in galaxy shape measurements. Not only are these observations deeper, but they can be better sampled spatially and spread out in time to sample psf variations.

from Keith Bechtol (Ext) to Everyone: 1:25 PM

I'm thinking about the process of how the community converges on single survey concept if it is left open as in the strawman. Are we expecting that there might be a period with multiple concepts being considered before some form of down-select? I'm thinking in part from the perspective of community members who spend time developing an alternative concept that isn't selected, as well as efficiently developing the concept that ultimately would be selected.

from Megan Donahue (Ext) to Everyone: 1:28 PM

Taking advantage of something like Chandra now might be one factor. other time-limited facilities also might be on this list.

from Keith Bechtol (Ext) to Everyone: 1:29 PM

(Personally, it is difficult for me to imagine that Roman does NOT do a deep field. This seems like such a high-value observation and such broad interest that it seems extremely likely that there will be concrete proposals from the community in this regard.)

from Saurabh Jha (Ext) to Everyone: 1:30 PM

How much would it "hurt" the HLS and SN core community surveys to ask them to carve out a ~1 month deep field as envisioned? This might give a better sense of the cost versus taking it out of the GO allocation.

from Keith Bechtol (Ext) to Everyone: 1:38 PM

+1 for Jessica's suggestion here. Getting at the specific value of advance planning make sense as a key criterion.

from Harry Ferguson (Ext) to Everyone: 1:40 PM

Another free parameter is to define the observations early, but not execute them earlyspreading out over multiple years may even open up time-series studies not otherwise possible. In the big picture 1 month out of 5 years is 1.6%. It's almost 50% of the planned GO time if executed in the first year, or 9% of the year 1+2 GO time or 4% of the total year 1+2 time.

from Megan Donahue (Ext) to Everyone: 1:41 PM

Yes, it's crucial to answer what is the scientific reason(s) to do it and what is the reason it needs to be done early (e.g. opportunity for Subaru/ possibility to get new data from fading great observatories between now and launch)

from Keith Bechtol (Ext) to Everyone: 1:41 PM

I think Saurabh's comment is an interesting opportunity, thinking about coordination / consolidation of HLS and SN deep field components, and how that might enable a dedicated deep field for other extragalactic science

from Megan Donahue (Ext) to Everyone: 1:42 PM

I just think the statement that some early definition applies to more than just a deep field direction

from Megan Donahue (Ext) to Everyone: 1:43 PM

(or it could)

from Megan Donahue (Ext) to Everyone: 1:47 PM

Won't there be a similar decision on where to point the dark energy survey , the supernova field ?

from Lee Armus (Ext) to Everyone: 1:48 PM

its hard to imagine people will submit a whitepaper to not do an early observation with Roman. will they really take the time to write such a whitepaper, or just opt out of putting something in?

from Megan Donahue (Ext) to Everyone: 1:49 PM

maybe they would write please retain max time for general astro science beyond the core curves

from Keith Bechtol (Ext) to Everyone: 1:50 PM

I like Roeland's suggest that this first call defines what this new survey would optimize for

from Sangeeta Malhotra (Int) to Everyone: 1:51 PM

We could have a white paper call to comment on whether or not to have a white paper call.

from Jessica Lu (Ext) to Everyone: 1:51 PM

For clarity: white paper prompt: Roman is considering identifying new community surveys well in advance of Roman launch (in addition to the core surveys defined in the 2000 decadal survey). The project is calling for white papers that would inform the project decision. The call would ask: (1) What new community survey do you propose? What scientific questions would it address? (2) Why does this community survey need to be identified early (2-4 years prior to launch)? (3) What ancillary data/simulation would be needed to maximize the output of the proposed community survey? does it need to be done in advance of survey definition?

from Megan Donahue (Ext) to Everyone: 1:52 PM

It is important for the project to communicate that the community surveys ARE open access, by definition.

from Saurabh Jha (Ext) to Everyone: 1:52 PM

I strongly support Julie's last point that defining the core community surveys early would provide a lot of clarity on these other issues.

from Jessica Lu (Ext) to Everyone: 1:54 PM

I agree with Saurabh's points.