

Space Telescope Users Committee (STUC) Report: November 12-13, 2019

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Meeting Summary:

The STUC heard presentations on the following topics: reports from the HST project & Mission Office, perspectives from NASA Headquarters, instrument status reports, results from proposal cycles 27 & mid-term and preparations for Cycle 28 & including perspectives on the dual-anonymous rollout and training of other NASA missions, development of new science-enabling tools/websites for the community, conclusions from the HST-TESS working group, an update on the ULYSSES program, ESA Scientist update, and planning for JWST user tools. This report summarizes the key issues that were discussed and the resulting recommendations. For a full account, the community is encouraged to review the STUC meeting presentations, accessible through <http://www.stsci.edu/institute/stuc>.

Mission Status & Senior Review:

- The most recent Senior Review delivered great news -- the STUC was happy to hear that Hubble has support from both parties in Congress and the White House, as well as protection in the form of forward funding during uncertain political/budget times.
- Next year will be Hubble's *30th* year on orbit; there will be a big push to make a worldwide splash and publicity when revealing the images taken to celebrate this big anniversary, including a scientific conference hosted by ESA.
- We strongly agree with the point raised in the senior review, that it is important to keep an eye on Hubble's future, i.e. the Archive. A number of science-enabling tools have already been developed for the community (point source catalog, HLA, etc); [at our next meeting we would like to hear about the Institute's plan for additional development of the Archive](#). The STUC continues to strongly support the idea of a well-funded Archival data analysis program after the operational lifetime of HST, and believes this is a good time to begin planning for future tools (for example a query tool to group like objects by their numerous identifiers in the MAST/HST archive).

Instrument Status:

- All instruments continue to operate nominally, and each instrument team continues their impressive efforts to improve the quality of the observations obtained by the community, to better calibrate the data, to study COS lifetime positions, and more.
- The STUC was delighted by the new, optimistic expectations for the lifetime of 3 gyro mode observations.

Proposal Review:

- As the community moves into the Webb era, we recommend that the Institute keep an eye on how mid-cycle proposals are scheduled. The STUC feels that it is important that the selected mid-cycle proposals and targets are released before the next GO cycle deadline. Currently, this isn't always possible with two mid-cycle deadlines. Going forward, [we recommend that the Institute consider whether or not two mid-cycles are needed, or whether one mid-cycle + DDT deadline would be sufficient.](#)
- The STUC supports the 'hybrid' review process put in place for the Cycle 28 review, and were happy to see that there were 5 external reviews of each proposal during the recent mid-cycle. Given the proposal pressure, separating out IGM/CGM proposals into their own panel seems like a reasonable change. The STUC anticipates that the pressure on large proposals will continue, and [recommends that the Institute develop clear guidelines & directions for how panels \(and panelists\) should handle discussions of the large proposals, including what reading is expected prior to arriving for the in-person panel review.](#) Some specific suggestions to consider: recommend that panels do not automatically discuss triaged proposals to cut down on work load, make sure support people have a list of conflicts within the panel to make discussion smoother.
- The number of highly constrained orbits will likely continue to increase. [The STUC requests that a simple 'tracking system' be implemented, perhaps starting back ~1-2 years, so we can track the current \(and any increase in the\) rate of difficult-to-schedule observations, as well as the science focus areas that most strongly drive these trends \(e.g., is it more than just exoplanets?\).](#) At the moment, we are not recommending any policy changes, but this may become necessary in the future. One statistic would be to track the nature of observations in the 'tail' - are they rapid turn-around, TOO, transits, etc.

Website:

- The STUC continues to be concerned about the STScI website (www.stsci.edu), that it is much more difficult to find basic information now (e.g., photometric zeropoints, COS airglow data repository) than it used to be. The STUC will collect specific issues that we find & email to Carol Christian. [We request an update on the website conversion to the new system and perhaps a tutorial at our next meeting.](#)

New Tools & Initiatives:

- The ULLYSES group and project team are making excellent progress; the STUC commends the Director & Institute for putting significant resources behind this initiative (& for putting Julia Roman-Duval in charge). The observing strategy & target selection are sufficiently mature that the first *HST* observations are anticipated in ~half a year or so, and there are well-developed plans to make these available to the community.
- The STUC was impressed by the significant development of new python tools for the community, and that many of the tools can be used with data from any telescope, even if they are branded for JWST. We like the idea of a joint JSTUC-STUC subcommittee, and STUC member Jennifer Andrews has volunteered to fill this role. We continue to believe that tutorials made available on public platforms like YouTube would be very helpful to the community.
- The STUC appreciates the very clear, comprehensive report written the HST-TESS working group. (notes based on 11/13/19 morning discussion below)
 - In Cycle 28, the STUC recommends that STScI should:
 - 1. announce a HST-TESS exoplanet “Initiative” in the Call for Proposals.
 - 2. Develop the key guidelines based on the working group report, and include a link to the guidelines in the Call.
 - 3. Panelists on the exoplanet, stellar and TAC should be given the guidelines, and the full HST-TESS working group report should be recommended reading
 - 4. For future cycles, proposals submitted as part of this initiative should explicitly explain how their program will build on existing targets/observations
 - 5. Given that HST and JWST will likely operate at the same time (for at least a few cycles), in future cycles HST proposers should be asked to explicitly justify why HST is required (rather than JWST), particularly at near infrared wavelengths where JWST observations are expected to be more efficient
- The STUC is happy to see that other NASA missions are going to the dual-anonymous system, and [would like to hear how the roll-out goes for the smaller NUSTAR mission at our next meeting](#), and any other updates.
- The STUC commends the Institute for the development of the new z.MAST portal -- this type of initiative is a wonderful way to enable science by the community.