

STUC REPORT 04/06/11

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The STUC is pleased that HST and its instruments continue to operate at an efficient and high level. We commend the staff at STScI and GSFC for their excellent and dedicated service.

While there continue to be some ongoing issues with the telescope (e.g., gyros) and instrument (e.g., COS sensitivity) performance, most of these have been addressed or are being monitored. Because of the scheduling and science ramifications, the STUC would like to be kept abreast of any changes in COS sensitivity. We support the necessary transition to automated operations development (AOD) and appreciates the careful planning and flexibility available for critical observations or telescope/instrument issues.

The STUC is pleased by the progress of the three MCT teams, and we encourage STScI to continue to communicate with and assist them to ensure success, including timely delivery of high level science products. Based on these presentations, the STUC (1) reiterates the need for updated Tiny Tim PSFs, an accurate distortion correction, and solutions to the persistence problem for WFC3; and (2) encourages close communication with and assistance from the MCT teams in identifying and fixing instrument calibration issues since they are more familiar with them than average users. The STUC also recommends that the PIs present updates on their progress (including revised release schedules) at the next STUC meeting (in 6 months), with yearly updates thereafter.

Concerning Science Policies, the STUC identified a few issues and had the following recommendations :

(1) The STUC discussed orbit allocation and subsidies between small, medium, and large proposals and concluded that we are happy with the current policy; however, there is some concern that we may be missing out on high-impact science from other large programs because of the reduction of orbits due to the MCTPs. The balance between small, medium, and large proposals, and the subsequent allocation of orbits, should continued to be reviewed in light of various metrics being collected to ensure that we are optimizing the science output.

(2) Given the large (8-11 times) oversubscription rate, the STUC suggests that instructions to the TAC specifically include a recommendation to consider past productivity and publication record from previous HST observations as described in "Past HST Usage" section of the proposal and listed at the "TALL" website (<http://archive.stsci.edu/hst/tall.html>).

(3) In light of recommendation (2) and the benefit of accurate statistics for both STScI (for the Senior Review) and the PI, we encourage STScI to ensure that the information listed at the "TALL" website is consistent and up to date by periodically contacting the PI

and stressing the importance of this information.

(4) The STUC suggests that STScI settle on a few, choice metrics for long-term tracking and use these year after year when presenting information to the STUC or other panels so that there is consistency and clarity. The STUC is happy to review these metrics and help STScI chose appropriate ones.

(5) The STUC realizes the importance of multi-wavelength studies and a strong collaboration with the Europeans that can be afforded by joint XMM-HST proposals; however, given the extreme value of HST time (see item 2), we initially suggest an exchange on a smaller scale than Chandra (which perhaps has a better synergy with HST) to gauge the demand and scientific overlap. In addition, based on previous experiences, the STUC expressed some concern about XMM flaring issues and their adverse affect on achieved exposure times and efficiency. It is prudent for STScI to evaluate these issues and, if necessary, ensure that future proposers address their effect on the science goals.

The STUC notes that HST is a shining example of the success and scientific productivity of NASA + ESA partnership. We applaud the smooth transfer of knowledge and support from ST-ECF to STScI but also highlight the continuing activities within Europe on behalf of the HST mission in terms of public outreach and maintenance of a European HST archive site. European astronomers are making more use of HST than ever before, and it is crucial to support their use of the telescope and maintain a high public profile for HST within Europe. As such, the STUC encourages ESA/ESO to continue their fruitful efforts at public outreach in Europe. This outreach enhances the current forefront research and strengthens the NASA/ESA scientific relationship.

With the peak performance of HST and its instruments, the telescope is poised to continue its exceptional record of cutting-edge, high-impact scientific advances for the next 5-10 years. Especially considering possible delays in JWST, the STUC firmly believes that it is essential that HST maintains the necessary funding levels to adequately operate the telescope and support GO science. With this commitment, HST will retain its position as NASA's premier astronomical telescope.