STUC Report 2/14/13
L.-G. Strolger (WKU), Chair

The STUC continues to be impressed with the overall operation and performance of HST and its instruments. The demand for HST time, and overall science productivity from the observatory, remain exceptionally high. HST continues to operate at its peak; a testament to lessons learned in 21+ years of operation and the remarkable and sustained efforts of staff at GSFC and the institute. It is timely to consider legacy observations that take advantage of HST unique capabilities, some of which will not again be available post HST, and others which provide “pathfinder” observations in preparation for JWST. The directorate is appropriately considering and acting on these legacy opportunities, with an appropriate level of community input.

The life extension initiatives for HST are good and should continue as events dictate. The STUC agrees with the goal of staying in 3-gyro mode as long as possible, and the hardware management and operations plan are excellent. NASA Headquarters should strive to support HST as long as the observatory remains highly productive, and not ramp down according to an arbitrary schedule. It would be a programmatic mistake to reduce operations support or GO funding too soon.

The Committee is impressed with the many calibration advances, especially for WFC3, including CTE correction and spacial scan support. The recent COS configuration changes to access lower wavelengths and mitigate gain sag appear to be working well. Moreover, the new post-flash configuration for WFC3/UVIS seems like a positive step to mitigating charge transfer inefficiency. We point out that an algorithm for CTE correction for WFC3/UVIS continues to be a major priority for its users and every MCT team, as it limits astrometry, photometry, and morphology. We also note that the community still anticipates a super-resolution PSFs for all WFC3 filters.

Clearly, the funding reductions and the budgeting process negatively affected the MCT projects. The annual uncertainty in funding was a problem for maintaining student and postdoc support, and to executing the full scope of these projects. The STUC recommends further consideration of additional resources to support out-year funding.

The STUC is pleased with the progress of the MCT programs. The teams have been very productive and have already delivered several data products. Numerous team publications have already appeared, as well as several papers by the broader community from these data. Of particular concern now is the development and maintenance of an infrastructure to support the unprecedentedly large volume of data products; one which allows these products to be mined to their full potential. It is fortuitous that MAST and the archive groups have been considering these issues for the Hubble Source Catalog project and the PanSTARRS database. We encourage the institute to continue working with the MCTs, and to bring these new archival capabilities at STScI to fruition.

The Hubble Deep Fields Initiative, now called the Frontier Fields, will build further on HST's strong contributions to deep-field science, and is viewed positively by a majority this committee. We are pleased with the process in defining this DD program; it was open, and led by a diverse (in gender and seniority) science working group. We note that some STUC members were concerned that not all science cases were considered or fully explored by the SWG, and others felt Frontier Fields would necessarily compromise future MCT-like opportunities.

The STUC was more clearly in consensus on the priority of UV imaging and spectroscopy. The orbit allocation for Cycle 21 in UV GO and AR proposals is positive. However as the allocation details are not provided in the call for proposals, it is vague how the allocation will be used in the TAC panels, and therefore unclear what the incentive is to proposers. The orbit allocation should be made public in some general announcement before the Cycle 21 deadline. Further, the STUC recommends that the UV initiative be continued and enhanced as long as instrumentation permits. The STUC feels *le mieux est l'ennemi du bien* for these UV legacy initiatives, and asks the SMO to continue efforts to spur important use of HST's UV modes, while they are still available.

The STUC supports the Medium Program proposal category for Cycle 21. We have been concerned for some time on the obstacles that proposals of this size face, and agree that robust solutions are difficult. This new category solves many problems associated with the limited orbit allocations per panel, and should encourage PIs to put forth their competitive proposals without these additional concerns.

Finally, the STUC would like to remind HST users of the importance of coordinating press releases with STScI. We also recommend polite (and periodic) reminder messages to PIs.