



SANTA CRUZ, CALIFORNIA 95064

UNIVERSITY OF CALIFORNIA OBSERVATORIES/LICK OBSERVATORY
DEPARTMENT OF ASTRONOMY AND ASTROPHYSICS

December 28, 2009

Dr. Matt Mountain, Director
Space Telescope Science Institute
3700 San Martin Drive
Baltimore, MD 21218

Dear Dr. Mountain:

At its November meeting, the James Webb Space Telescope Advisory Committee (JSTAC) considered at some length what "observing time" actually means for the JWST GOs and GTOs. The question posed to us regarding "observing time" concerned how the inevitable overheads associated with the Observatory operation, and also those associated with the GO and GTO observations, should be handled. The participants in this discussion included the JSTAC, the NASA project attendees and STScI attendees. The JSTAC committee consensus view that developed is captured in the following two paragraphs, and was built around the understanding that the time-averaged sum of the overheads had been recognized for a long time as being significant (expected to be ~30%), and that the recommended approach should be both fair and, as much as practical, relatively simple to implement.

JSTAC recommendation regarding JWST overheads:

"The JSTAC discussed the issue of GO and GTO "observing time". The total overheads associated with the operation of JWST are poorly understood at this time, but are expected to be approximately 30% when averaged over a typical year. Approximately half of the overhead time will be for "indirect overheads", i.e., the overhead from the mission-level activities such as wavefront sensing observations, external calibrations, momentum dumps, etc., and half for "direct overheads", i.e., those associated with the actual observation such as the average slew to position, instrument configuration, filter motions, readout times, dithers, etc. The JSTAC recommended that observing time for the GOs and GTOs should be handled in the same way, with both GOs and GTOs being charged both overheads. The JSTAC also noted that the two classes of overheads differed, and probably needed to be handled differently. The consensus was that the indirect (or "observatory") overheads should be taken off the top of the GO and GTO time allocations, while those associated with the observations (the direct



overheads) should be part of the observation planning process. The JSTAC also discussed with those present from STScI and NASA how this might be implemented and recommended that the direct overheads should be accounted for in APT (or its equivalent). The JSTAC also felt that STScI, in consultation with the Program Scientist Eric Smith, should develop the details of how the overheads are implemented.

In addition to the above recommendations of the JSTAC there were two aspects of this approach that were considered to be important by the JSTAC, namely, (1) having the direct overheads as part of the observation planning process engages the GO and GTO community in maximizing the efficiency of the Observatory, and (2) the indirect overheads could be adjusted for both GOs and GTOs periodically, using results gathered from experience and/or revised estimates of the observatory efficiency.”

We appreciate that STScI and the JWST Program Scientist brought this important issue to our attention.

Sincerely yours, on behalf of the Committee,

A handwritten signature in black ink, appearing to read "Garth D. Illingworth".

Garth D. Illingworth,
Chair, JSTAC

JSTAC Committee Members

Roberto Abraham, Neta Bahcall, Stefi Baum, Roger Brissendon, Malcom Longair, Christopher McKee, Bradley Peterson, Joe Rothenberg, Sara Seager, Lisa Storrie-Lombardi, Monica Tosi

JSTAC Ex-officio representatives of the space agencies:

Alain Berinstain (CSA), John Mather (GSFC), Mark McCaughrean (ESA), Eric Smith (NASA HQ)

Cc. STScI

Kathryn Flanagan, Massimo Stiavelli, Peter Stockman