

2023_6_9 original

We'll use this WebEx:

<https://jpl.webex.com/meet/dstevens>

The suggested agenda is below. Of course, this is the NUC's meeting, so feel free to work with Dan Wik (Chair) to add or remove topics, and the Project will work to accommodate any additional requests for information or presentations.

Draft Agenda:

- NuSTAR status & updates
 - AO9 (Cycle 9) results, including XRISM PV plans
 - cross calibration updates (esp. XMM)
 - NUC rotations & logistics: plan is to rotate out 50% every other year, starting now
 - AOB
 - reserve time for NUC to meet w/o NuSTAR Project folk on the line
-

Agenda & Notes

- NuSTAR status & updates (Karl)
 - Senior Review: funded thru 2025
 - Subsystem Status is Nominal (no concerns about spacecraft, or instruments)
 - CHU4 star tracker (20 deg FOV): low gain area in central 1 deg due to solar observations, doesn't affect performance, restrict observations to be >20 deg from Sun to avoid damage elsewhere
 - Laser metrology system stabilized, will be 9 years before issues, but only if no further steps taken before then; predictive model can continue operations with only 1 laser in operation

- Altitude: 590 km currently, will drop more over the peak of this solar cycle, another 10 km, 550 km should be perfectly fine — expect another 10+ years before
- Cycle 8: 81 proposals selected, 23 ToOs, only 4 cat-C targets were not observed (93% completion), solar multi-cycle program continues into Cycle 9, all other observations will be completed this month
- Joint operations with 5 other observatories: NICER, Swift, XMM, Chandra, Integral
 - INTEGRAL has 1 observing cycle left, then decommissioning
 - IXPE and XRISM are upcoming
 - (Aarran) What about coordination with NRAO facilities? No agreement, but done on a best-effort basis with, e.g., EHT and some other (Chime triggers)
 - (Enrico) INTEGRAL will close operations in 2024, but final decision actually depends on GW coordination, could continue — hard boundary is 2029
- Goal to decrease ToO response time from 48 hours to 24 hours, under development using overguide funding from last Senior Review, have ready by next Senior Review
- Stray light calibration, increasing sensitivity above 100 keV
- Also can detect gamma ray bursts with detectors (saw the BOAT)
 - (Enrico) Still detect fainter GRBs? Yes, going back, NuSTAR did see many fainter GRBs, detected primarily in the anti-coincidence shields
- AO9 (GO Cycle 9) results, including XRISM PV plans
 - 86 proposals selected
 - 19 ToOs (1139 ks)
 - 28 joint proposals
 - 3 large proposals, a little more time allocated to account for XRISM launch delay (currently end of August)
 - 16 proposals coordinated with XRISM PV phase, (all proposed, including 3 ToOs, 1 as C category, 1230 ks)

- (Marco) Has number of proposals remained stable over time? Yes, 180-200 proposals per year, oversub. of 3-4, highest oversubscription is with ToOs, large program also oversub. of 2, sometimes 3
- cross calibration updates (esp. XMM)
 - MOS-PN corrarea calibration updates (bring instruments into agreement)
 - PN-NuSTAR cross-calibration (above 3 keV, adjusts XMM eff. area to bring measurements into agreement with NuSTAR)
 - Both of these implemented based on community input, to better model joint observations
 - low energy gain offset (Andrea & Dan Wik, presented briefly by Dan)
 - (Jack) How much do we expect the background to change as solar maximum approaches? Will see increase rate around SAA, also increased solar flares. Quiescent background should remain consistent Tear correction not applied automatically, right? Correct.
- NUC rotations & logistics: plan is to rotate out 50% every other year, starting now
 - change out every 1.5 years, 50% swap
 - Jack (2018), happy to rotate off, Anne (2018), Marco (2018), Enrico (happy either way, XMM users group connection so that might be useful)
 - Aarran, Joel happy to stay on
- AOB (N/A)
- reserve time for NUC to meet w/o NuSTAR Project folk on the line
 - (Marco) C targets in GO program, big plus that they are observed, but don't get funding, better to push some to B
 - (Aarran) Joint time been really successful, but focussed on other X-ray observations, not so much at other wavelengths (NRAO, JWST) — an agreement in place would be really helpful. Really need Karl to have resources to be able to maintain coordination (communication channels, navigate constraints, etc.

Attendance

Dan Stern, Dan Wik, Karl Forster, Joel Coley, Enrico Bozzo, Alina Kiessling, Anne Lohfink, Marco Ajello, Steph LaMassa, Aarran Shaw, Jack Steiner, Hashima Hasan
