

# 2024\_4\_23

## NuSTAR Zoom

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
  - AO10 status, including XRISM PV
  - AO exchanges of time with other missions
  - project response to previous NUC requests: gain offset
  - preparing for the 2025 Senior Review
  - Preference for continued NUC membership
  - AOB
  - reserve time for NUC to meet w/o NuSTAR Project folk on the line
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## **Agenda & Notes**

- NuSTAR status & updates (Karl)
  - Mission nominal, no technical concerns
  - NuSTAR orbit, declining more now (close to 570 km), solar cycle more intense than projected originally
  - LEO getting crowded, had 3 actions (total) to avoid collision (minimize cross-section, no maneuverability), but increasing number of alerts where planning has to be done
- AO10 status, including XRISM PV (Karl)

- GO program: >50% have coordinated observations, 75% with time constraints
- Cycle 10: increased A+B priority (600 ks) and ToOs (500 ks) due to less joint time used (across board, exp. XMM)
  - oversubscription: > 3x in general, ToO is 6.5x
  - 92 proposals selected (80-85 usually), more ToO too, 1.5 Ms for ToOs compared to 1 Ms last cycle
  - 100% success for XRISM cycle-1 proposals (same as PV coord last cycle)
- AO exchanges of time with other missions
  - adjust due to need, but given large fraction of NuSTAR observations that are coordinated,
- Professional communications: NuSTAR GO email list needs help getting updated (Brian)
  - When folks move institutions, need to resubscribe with new email
  - [nustargo-join@lists.nasa.gov](mailto:nustargo-join@lists.nasa.gov)
- project response to previous NUC requests: gain offset (Brian)
  - BAT catalog, use obscured AGN in sample that contain Fe K-alpha feature with a known, independent redshift (from NuSTAR)
  - 450 observations from 2013-2024 used, fitting each source twice
  - Bayesian approach, ~20 minutes per fit
  - Results should start appearing in next few weeks
  - Alternative approach: use Kepler SNR, diffuse, but need physical model; first attempt ambiguous due to line/continuum ratio error in current version
- preparing for the 2025 Senior Review (Dan Stern)
  - seek NUC advice in Fall/Winter once outline for proposal ready
  - ask NUC to be readers on the proposal before submission in January 2025
  - drop project a line if notice exciting science!

- Preference for continued NUC membership
    - complete google form
  - AOB
    - With facilities like Einstein Probe and Rubin LSST, need to continue to be able to accommodate increased numbers of ToO requests, should be factored in to GO and DDT time allocations
  - reserve time for NUC to meet w/o NuSTAR Project folk on the line (Dan Wik)
    - Enrico: no complaints about NuSTAR analysis, calibration, esp. on European side
    - Priority C funding:
      - \$20k not really enough, given constraints (e.g., spent in 1 year), it's hard to use effectively
      - IXPE allows submitting a proposal that's only awarded if target observed, perhaps a similar model where optional Phase 2 budget proposals can be submitted
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## **Attendance**

Dan Stern, Dan Wik, Karl Forster, Fiona Harrison, Joel Coley, Enrico Bozzo, Anne Lohfink, Marco Ajello, Steph LaMassa, Jack Steiner

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