

August 18, 2018

The NuSTAR Users Committee (NUC) had a telecon on August 13, 2018. The following includes a list of attendees from the NUC, a list of ex-officio attendees, a summary of the outcomes of the discussion, and the detailed minutes.

NUC attendees:

John Tomsick (chair)
Raffaella Margutti
Fred Baganoff
Stephanie LaMassa
Enrico Bozzo
Jack Steiner
Anne Lohfink
Slavko Bogdanov
Marco Ajello

Ex-Officio attendees:

Fiona Harrison (PI, Caltech) (first 30 minutes)
Karl Forster (SOC manager, Caltech)

Outcomes of discussion (summary/recommendation/action):

Topic#1 (Legacy time and Large proposals): The NUC recommends moving Legacy time to: Required Observations (these will be written into the Senior Review proposal and examples are given in the minutes); and a new category of Large GO proposals. Some current Legacy programs (such as the Swift/BAT AGN snapshots) should be continued, and these can either go into the Required Observations or be rebranded in some way. For AO-5, the NUC recommends that the uncertainty about the number of high-quality Large proposals be addressed by indicating a fairly large range of time that will be allocated. A suggestion would be a range of 1-2 Ms. If large proposals are required to be at least 400 ks, then this would still allow for 3-4 Large proposals to be accepted in AO-5. If the Large programs are successful, then the range can be reduced (1.5-2 Ms?) or eliminated (2 Ms?) in future AOs.

Topic#2 (DDT time): If the number of requests for DDT Target of Opportunity observations increases, then the NUC recommends that a Transient Advisory Committee is formed to assist with evaluating the DDT requests. The NUC also suggests that the project consider whether such a committee is needed sooner to estimate how many transients are likely to need NuSTAR observations.

Telecon minutes:

Topic#1: Legacy time and large proposals

- New information was considered: John read the statement from the 2016 Senior Review panel report encouraging moving time from Legacy programs to “expand the GO program to include very large programs;” Karl presented statistics on Large proposal statistics from the first four GO cycles. In AO-4, only 1 out of 10

proposals asking for >400 ks was approved. The panel took this as evidence that there is pressure for large proposals.

- John led the group through the e-mail from Daniel describing the current Legacy programs. There are some that should continue: Swift/BAT AGN snapshots are providing useful science and are also important for scheduling; some have been agreed to with the Swift project; and some are part of PhD theses.
- An important piece of information (from Karl) is that nearly all of the current Legacy programs will be completed by the end of AO-4, so, even if we decide on changes for AO-5, we will not be recommending stopping programs in the middle (one that might not be completed is the one on Intermediate Polars).
- Fiona also mentioned that there is a category of "Required Observations" that will be listed in the Senior Review proposal. These include cases like a supernova in the Milky Way. Follow-up of Gravitational Wave counterparts is also likely to be in this category. Coordinating on observations of Sgr A* with the EHT is another one that is likely to be added. It was unclear if Swift/BAT AGN snapshots would fall into this category or if a new category would need to be created.
- Fiona said that the goal is to have every approved observation go through some level of review. We can consider that the Required Observations are reviewed by the Senior Review committee. John said that it seems like the Legacy observations currently receive a fairly low level of review.
- The following options were considered: 1. Keep Legacy time separate from GO time but make the Legacy process more formal; 2. Move Legacy time into the GO but don't necessarily specify that it becomes Large proposal time; 3. Move Legacy time into the GO and specify that it becomes Large proposal time.
- There was little enthusiasm for #1. Marco and John both made statements about possible benefits of additional smaller proposal that might push us toward #2; However, people seemed to think that at least some time should specifically be put toward Large proposals (#3), and the concern about having too much time set aside for Large proposals can be solved by giving the GO reviewers some discretion.
- Then, the NUC had a discussion about how much time should be put into the GO for Large programs. Karl said that the target allocation for Legacy time is 4 Ms/yr (25%), and John estimated that the programs that Daniel and Fiona wanted to protect (Swift/BAT AGN snapshots, Sgr A* with EHT, the Cosmic X-ray Background experiment, etc.) is no more than 2 Ms/yr. Thus, the balance (4-2=) 2 Ms/yr should be the upper limit for Large proposal time in AO-5, which would allow for 3 or 4 Large proposals to be accepted if they are required to be >400 ks. Furthermore, the committee thinks that it makes sense specify a fairly large range in the AO-5 documentation (perhaps 1-2 Ms) to give the project and/or the GO reviewers some discretion.
- The times mentioned above should be double-checked with the actual values.

Topic#2: DDT time

- Karl reminded the NUC that the DDT time is 15% of the mission time and that all of it has been used in previous years.

- At the face-to-face meeting, we had discussed the fact that pressure could increase with Gravitational Wave and high energy neutrino follow-ups, ZTF, and LSST coming on line. Thus, it may be a good idea to consider increasing the allocation of DDT time.
- Raf made the point that it is really unclear how many of these follow-ups will be best done by NuSTAR (going back to the face-to-face meeting, a point was made that NuSTAR observations would probably most often follow Swift/XRT detections).
- John said that a dedicated study, requiring work that is beyond the scope of the NUC, is probably necessary to make estimates about increased time pressure.
- The best solution might be to form a Transient Advisory Committee that could either undertake this study or be a group that Fiona can consult with when DDT requests are made.