HET Users Committee
Meeting Minutes 2020 September 18

Members Present: W. Cochran. D. Fox, W. Kollatschny, G. Zeimann, S. Janowiecki, C. Morley, H. Lee, M. Fabricius, G. Hill, S Finkelstein, S. Mahadevan, A. Cochran (guest)

The primary topic of discussion at this Users Committee (UC) meeting was the apparent mismatch between the total amount of time allocated to each partner to be distributed by their TACS, and the total amount of HET partner science time that is actually achieved. (Anita Cochran was invited to the meeting as a guest, in order to give the perspective from a TAC.) The HET has recently experienced oversubscribed queues, where many P3 (and P4) targets were unobserved. HET summary reports for the beginning and end of each trimester are posted at https://het.as.utexas.edu/HET/hetweb/TACReport/tacreport.html. These reports include a breakdown of how the TAC science hours are computed. The algorithm assumes a night is defined by astronomical twilight (sun 18° below horizon), a weather loss (figured separately for each month), an efficiency loss fraction, and time committed by the HET Board for commissioning, engineering and GTO observations. The "End Trimester" HET reports give information about program completions, HETDEX interruption and partner allocation usages. The major variable is the time lost to weather. This includes time when an observation was attempted, but the results were not acceptable.

The UC discussed whether some amount of over-allocation of available time is indeed healthy. The argument is that the users target distribution on the sky will never match the HET observability window function exactly over a trimester. There are often "holes" in the queue toward the end of a trimester, where the unobserved targets in the queue do not match the available sky. The UC does not recommend cutting back on the amount of time that TACs may allocate, in order not to exacerbate his problem. Instead The UC recommends better education of the users and TACs. In particular, HET users need to be aware that there is a significant likelihood that P3 targets may not be observed, particularly if they are in dark time or are visible only during the early months of the trimester. Programs with a small number of targets, or targets confined to a small region of the sky will also face target completion challenges.

Before the 2013 HET shutdown for the HETDEX upgrade, the HET used an algorithm to modify target priorities for factors such as program completion, partner share, sky brightness, filling factor, etc. This system was not re-implemented after the upgrade completion. However, a new HET scheduling algorithm is now being developed. The UC will approach Niv Drory and his team to offer our input into this system.

The UC discussed the impact of HETDEX observations on HET users' program planning and completion. The web tool to estimate the number of HETDEX-constrained tracks does not account for the regions of the sky already observed by HETDEX. In addition, users have started programs that are now conflicted by the extension of the HETDEX field. The UC has communicated with Karl Gebhardt and the HETDEX group to attempt to determine whether there is any guidance we can offer HET science users concerning targets that might conflict with HETDEX observations. Their response appeared to indicate that HETDEX always wants to attempt observations during dark time, and there are no simple seeing or transparency limitations that we can offer to other users. This basically then leaves only P0 HETDEX interruption time as the only tool available for TACs to use for user science programs in conflict with HETDEX fields.