# VERITAS Time Allocation Procedure

**01/10/10 RAO – original document for Agency Operations Review**

**07/08/11 RAO – updates to term limits and overall scope of TAC evaluations**

The VERITAS Time Allocation Committee (TAC) consists of 7 collaboration members. Candidates for this committee are nominated to the Science Board by the collaboration, and the Science Board then votes to select committee members. Each TAC member serves for a maximum of two consecutive years. Starting summer 2009, the TAC membership was increased (from 5 to 7 members) and it was stipulated that two TAC members would be postdocs and one TAC member would be a graduate student. In summer 2010, the Science Board voted to establish two (2) year terms for senior members and one (1) year terms for postdoc/student members and to retain the two consecutive years maximum for all members. The only exception to the two year maximum is for the TAC Chair who can serve up to three consecutive years on the TAC.

The TAC receives formal proposals for observing time from all collaboration members once per year, typically in August. Non-collaborators are also eligible to apply for time by co-authoring proposals with collaboration members.

The following describes the TAC procedure during the period 2007-2011:
Approximately 40% of observing time is reserved for Key Science Projects (KSPs); the exact amount for each KSP is determined by the Science Board. For the 2009-10 observing season the KSP time amounted to 150 hours for Galactic sources, 150 hours for AGN, 50 hours for dark matter targets and 25 hours for sky survey follow-up observations. Targets to be observed within the Key Science Project allocations are selected by the relevant Science Working Groups and are given highest priority by the TAC. The remainder of the observing time (~50% of total) is then open for proposals on any topic.

The following describes the TAC procedure starting with the 2011-2012 observing seasons:
The Science Board decided that full observing program would be decided by the TAC, except for any DDT time. In essence the KSPs are no more. However, the overall strategy for VERITAS is now governed by the long-term (5 year) plan presented to the ESAC and the agencies in February and March 2011. The TAC will evaluate proposals based on scientific merit, feasibility, and so forth, and will, in addition, consider how the overall observing portfolio dovetails with the long-term plan.

TAC Proposers are expected to present their plans first to the Science Working Groups before submission to the TAC. In this way, conflicts or overlaps can be resolved within the groups at an early stage, prior to TAC submission. The Science Working Groups also supply the TAC with their preferred rankings of sources. This information is used to by the TAC to guide their decisions, within the constraints of the overall observing program. Up to 10% of observing time is reserved for Director's Discretionary Time, which is typically used to respond to fast transient events or other Targets of Opportunity. The TAC proposals are all posted on a public website, as well as all TAC decisions.

The TAC is usually over-subscribed by a factor of two to three. Since the exact amount of observing time in any month is weather dependent, targets are ranked in priority within each 2 hour band of Right Ascension. When the allocation for the highest priority target in a given RA band is fulfilled, the next target on the prioritized list is observed. Scheduling for each month is handled by the TAC Chair, through Wiki pages and direct communication with the observers. The observing plan for each month is posted on the Wiki and updated during the month by the observer and the TAC Chair. A standard prescription is followed for determining whether a run is considered of good-quality (A/B data).

For the 2009-2010 season, 10% of VERITAS observing time was opened to members of the Fermi-LAT team. In practice, many of the sources proposed by LAT members are also the subject of internal VERITAS proposals. Cooperation on analysis and publication of these overlapping sources are governed by the VERITAS-Fermi-LAT MoU. Although the collaboration with Fermi-LAT led to some successful proposals and a number of papers, it was not repeated during following observing seasons.

Given the active nature of the gamma-ray sky, and the rapid release of new results from Fermi-LAT and other instruments, the TAC endeavors to be flexible. New proposals, or modifications to existing proposals, are accepted throughout the year, discussed in monthly 'phone conferences (or immediately, if the topic is urgent), and, if accepted, inserted into the ranking scheme.

The TAC procedure has evolved, and will continue to evolve, throughout the lifetime of VERITAS. At present, it seems to be working well, allowing us to maintain a reasonable balance between long exposures on weak sources (e.g. M82, 150 hours), and quick reaction to changing events (e.g. GRBs and AGN flares).

Disputes over observing are handled on a day by day basis by the TAC Chair, in consultation with the Spokesperson. More significant disputes are handled by the Science Board.