

MEMORANDUM OF UNDERSTANDING BETWEEN THE NUCLEAR SPECTROSCOPIC TELESCOPE ARRAY (NuSTAR) AND THE SWIFT GAMMA-RAY BURST MISSION

1. Scope and Purpose

This agreement aims at establishing a reciprocal and cooperative arrangement in which observing time on NuSTAR and on Swift is made available for coordinated observations on a competitive basis. The intent is to maximize data availability and scientific return for the entire user community.

This agreement commits observing time on NuSTAR for correlative observations of Swift sources, and observing time on the Swift mission for correlative observations of NuSTAR sources.

1.1 The available time will be awarded on a competitive basis, and will be subject to approval by the NuSTAR Guest Investigator Program and the Swift Guest Investigator Program.

1.2 The scientific programs supported under this program are restricted to those that are enhanced by the combination of NuSTAR observations with investigations using the multi-wavelength Swift observatory.

1.3 All standard observing restrictions for both observatories will apply to joint proposals under this program.

This program supports two distinct types of joint opportunities between NuSTAR and Swift that will take place within the GI program. The two opportunities are described below.

2. Joint Proposals Opportunity: Access to NuSTAR Observations

By this agreement, NuSTAR permits the Swift GI Program to award up to 300 ks of NuSTAR observing time.

2.1 Proposals of high scientific merit will be identified through the peer-reviewed Swift GI evaluation process. The selected proposals will be allocated NuSTAR observing time without additional scientific review, if judged technically feasible.

2.2 The NuSTAR GI Program will perform feasibility checks on the proposed observations and reserves the right to reject any observation determined for any reason to be technically unfeasible or to jeopardize the NuSTAR mission. Such a rejection would likely affect the entire proposed science program and could impact the award of Swift observing time as well.

2.3 The minimum NuSTAR response time is 48 hours, however fast Target of Opportunity (ToO) observations are difficult to execute. Observations with a turnaround time less than one week must be well-justified and of high scientific value.

2.4 NuSTAR data acquired through the Swift GI Program will have a standard 12-month exclusive-use period commencing at the time of receipt of the processed data by the observer. This period is restricted to 6-months for peer-reviewed ToOs.

2.5 The Swift Mission Project will make funding available to successful U.S.-based investigators who request NuSTAR observing time through the Swift GI process. No funds will be awarded from the NuSTAR Project for such joint investigations.

3. Joint Proposals Opportunity: Access to Swift Observations

By this agreement, the Swift Program permits the NuSTAR mission to award up to 300 ks of Swift observing time per year. This award of time shall occur without further scientific review by the Swift mission.

3.1. Proposed observing time on Swift may be time-constrained, including coordinated, monitoring, and ToO observations, if full justification is included in the proposal. Note that proposed Swift observing time can include monitoring that precedes, follows and/or (for ToOs) triggers NuSTAR observing time.

3.2 The Swift Project will perform feasibility checks on the proposed observations and reserves the right to reject any observation determined to be technically unfeasible for any reason. Such a rejection could jeopardize the entire proposed science program and impact the award of NuSTAR observing time as well.

3.3 Swift data sets obtained under this agreement will not be proprietary to the PI and will be immediately released publicly via the HEASARC data archive.

3.4 The NuSTAR Mission Project will make funding available to successful U.S.-based investigators who request Swift observing time through the NuSTAR GI process. No funds will be awarded from the Swift Project for such joint investigations.

4. Criteria for Award of Joint Observing

Observing time under this program will be awarded only to proposals that require use of both observatories to meet the primary science goals and shall not apply to usage of archival data. No NuSTAR time will be allocated without Swift time, and vice versa.

5. Establishing Technical Feasibility

Establishing technical feasibility is the responsibility of the PI. To do so, proposers are strongly encouraged to:

- consult the [NuSTAR Proposals and Tools](#) and [Frequently Asked Questions](#)
- consult the [Swift Technical Handbook](#), or the Swift GI [webpage](#)
- contact the [Swift Helpdesk](#) and/or the [HEASARC Helpdesk](#) in case of questions