UV Legacy Library of Young Stars as Essential Standards: ULLYSES

Implementation plan

Introduction:

The Director has decided to accept the recommendations made by the Hubble UV Legacy Initiative working group and undertake COS and STIS spectroscopic observations of 200-400 young stars spanning a wide range of masses. Up to 1000 orbits of Director's Discretionary time will be devoted to the program in Cycles 27, 28, and 29. Data taken for the ULLYSES program will be non-proprietary and STScI will produce a series of high-level data products.

STScI as an institution needs to maintain the highest level of integrity in its treatment of the observations, analysis tools and high-level data products associated with the ULLYSES program. STScI staff members are entitled to pursue scientific research with public HST data. However, additional considerations apply when they have access to calibration and analysis tools or to high-level data products that are being developed with HST Project funds and are not yet public. STScI Policy III-B-7 gives general guidelines on ethical use of data; this document covers issues that are specific to the ULLYSES program.

Structure:

The final design and implementation of the data program and the production of high-level data products will be undertaken by a Core Implementation Team (CIT), working in conjunction with Science Advisory Committee (SAC). The overall program will be coordinated by the CIT lead, who has the final authority for decisions. They will be assisted by an observing technical lead and data technical lead. The HST Mission Head, Tom Brown, and the Associate Director for Science, Neill Reid, will serve as a Program Advisory Council (PAC) to provide advice on high-level issues, as needed.

> The SAC comprises 8-10 research scientists from STScI and the community who are committed to providing scientific advice to the CIT on scientific aspects of the implementation process, including the selection of appropriate targets, filter selection, distribution of exposure times, and the relative priorities of different analysis tools. The SAC will help define the high-level science products generated by the CIT. The SAC will advise the CIT on the scientific aspects of program implementation and will be briefed regularly on progress by the CIT Lead or their designate. Members of the SAC will not participate in any functional activities connected with the ULLYSES program

implementation, and will not have access to either high-level data products or associated tools until those products and tools are released to the general community.

The CIT will be responsible for preparing the Phase II proposals, designing and implementing the observing schedule, processing the data, and preparing the high-level data products. CIT members will be drawn from the STScI staff. The CIT Lead may convene topic-specific working groups related to the implementation. The CIT Lead or their designate will keep the general community informed of progress, including regular briefings to the Space Telescope User Committee, and will provide an avenue for receiving their input.

The CIT Lead, working in conjunction with the PAC, will recruit the membership of the SAC and CIT; both membership lists will be made available through the ULLYSES website.

Data release schedule:

ULLYSES has an extensive target list, with sources spanning a wide range of RA and Dec, but with concentrations in certain parts of the sky such as the Magellanic Clouds. In general, observations of individual targets will require fewer than 5 orbits. Those observations will be interspersed with other GO and DD programs throughout the year. All data will be non-proprietary and available immediately through the MAST archive. Higher-level data products for ULLYSES targets will be released on a regular (2-3 month) cadence, with the details set by the implementation team.

Requirements:

General:

- The program implementation will be designed to achieve the science goals developed by the UV Legacy Initiative Working Group.
- **Any data products or analysis tools developed in the course of the ULLYSES program may not be used for personal research until they are made available to the general community.**
- STScI staff working on the implementation team must clearly separate their functional work from any scientific research undertaken using these data or associated tools and data products.
- The following restrictions apply to all members of the SAC and the CIT, irrespective of institutional affiliation.

SAC:

- There are no restrictions on SAC members with regard to participation in HST proposals or involvement in scientific publications based on data taken for the ULLYSES program and/or enhanced data products associated with that program.

CIT:

- Members of the CIT must not serve as PIs on HST Cycle 27 proposals that are associated directly with the ULLYSES programs. Those proposals include AR programs that aim to utilize ULLYSES data, Theory programs designed to support analysis of those data, or observing programs that aim to supplement the ULLYSES datasets.
- Members of the CIT may participate as co-Is in HST Cycle 27 proposals that are associated with the ULLYSES programs. They must inform the CIT lead of their involvement in those proposals and they may not apply for or receive grant funding if those proposals are accepted. First author papers by CIT members that utilize data from ULLYSES may not be either submitted for publication or appear on astro-ph until at least 6 weeks after the release of the high-level data products for those observations.
- Members of the CIT may participate as PIs or co-Is in HST Cycle 28 and 29 proposals that are associated with the ULLYSES programs. They must inform the CIT lead of their involvement in those proposals and they may not apply for or receive grant funding. There are no publication restrictions for analyses of ULLYSES data taken in Cycles 28 and 29.

Core implementation team leads: Roles and responsibilities

Implementations team lead

- Overall responsibility for program implementation, in consultation with the scientific community
- Functions include target selection, observing strategy, instrument configuration, coordination of HST observations with those from other facilities, communications strategy, and concept for high-level data products

Observing technical lead

- Responsibility for the technical implementation of the observations
- Functions include development of Phase II APT files, planning the detailed schedule, oversight of the observation execution, and working with staff in the instrument and scheduling branches

Data technical lead

- Responsibility for the technical implementation of the data products
- Functions include detailed definition of the high-level science products, oversight of the production, verification and validation of the data products, development of enhanced community access to the data products, and working with staff in the instrument and