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The Multimission Archive at STScI Newsletter

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The Multimission Archive at STScI (MAST) Newsletter disseminates information to users of the HST, FUSE, IUE, Copernicus, EUVE, HUT, UIT, WUPPE, IMAPS and VLA-FIRST data archives supported by the MAST. Inquiries should be sent to archive@stsci.edu.

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PDF "Paper Products" on the Web

A new World Wide Web (WWW) interface allows users to search for, and display, the HST observation summaries now offered only in Portable Document Format (i.e., PDF). These documents, formerly available only in hardcopy form and referred to as the HST "paper products", provide a quick first look at the data, drawing on information in the data quality (PDQ) file. The WWW interface is available at http://archive.stsci.edu/hst/pdf_home.html. The page can be used to select various search criteria to locate particular PDF files. The PDF documents are password protected (unless the proposal is a calibration program) and users will need their archive name and password to access documents. Users will need to have been authorized to access their data (including paper products) before they attempt to use this interface. PIs should request authorization by sending mail to archive@stsci.edu with their proposal number. The Paper Product interface is not available to general archive users but only to PIs of HST programs. Note that as of August 1 general production of paper products in hardcopy form has been terminated. These can still be provided if needed in very special cases.

- Damian Christian and Paolo Padovani

Archive Manual

A new, revised version of the Archive Manual (version 7.0) is available. It provides information a user needs to know to access the STScI archive via its two user interfaces: StarView and the WWW interface. A completely new chapter describes the WWW interface and briefly the various MAST datasets. The description of the StarView screens is now up-to-date and On-The-Fly Calibration (OTFC: see below) screens are also discussed. The manual is available on the WWW at <http://archive.stsci.edu/hst/manual/>. A choice of on-line (HTML), PDF, or Postscript is offered. The PDF version includes active hyper-links and should be preferred over the on-line version, as some chapters might take some time to load.

- Paolo Padovani

On-The-Fly Calibration

In the June 1999 issue of the STScI Newsletter Steve Lubow has described the On-The-Fly Calibration (OTFC) system, which will allow users to request HST data that are calibrated as they are retrieved ("on-the-fly"), using the most up-to-date calibration parameters, files, and software. The system will also make header keyword repairs, as necessary to allow optimal processing and interpretation. The system is undergoing internal use at STScI. We are on schedule for external release in September 1999, after the installation of new hardware to support the increased data load. Right now, only WFPC-2 and STIS data are processed in the OTFC pipeline, but an OTFC pipeline for NICMOS is in development. OTFC is slated to be the only means of retrieving calibrated ACS (Advanced Camera for Surveys) data.

OTFC requests can be made through a new version of the StarView screen or via the archive WWW interface, once OTFC is released externally. Also, dedicated StarView screens for each instrument can be used to extract more information about the recalibration. These screens are useful for the user interested in determining the most recent dates of any calibration software changes or keyword updates, in viewing all the steps of the recalibration, and in matching each step with its corresponding calibration file. The Instrument OTFC screens will be accessible from the screen or the StarView [Searches] menu, but we note that the screen should fulfill the needs of most users.

- Megan Donahue

HST Duplication Checking on the World Wide Web

Many of our readers have probably had to check their proposed HST observations against the catalog of previously executed or accepted programs to see if some of their observations would qualify as duplications. (An observation is defined as duplicating a previous one if it is on the same astronomical target or field, with the same or similar instrument, a similar instrument mode, similar sensitivity, similar spectral resolution, and a similar spectral range.) Until recently, this had to be done either by going through the Planned and Archived Exposures Catalog (PAEC) ASCII files or by using StarView. Now one can do this on the World Wide Web. Namely, a form at http://archive.stsci.edu/hst/duplication_checking.html allows a user, by simply entering her/his proposal ID or name, to check for duplications amongst cycle 7, 8, and 9 proposals. This is especially useful for cycle 6 and 7 PIs, who are now required to check for programs conflicting with their own observations. For more complex duplication-checking one can use the form at <http://archive.stsci.edu/cgi-bin/duplication>.

- [Tim Kimball](#) and Paolo Padovani

MAST ROSAT Interface

Many astronomers still think in terms of observing bands and consider themselves, for example, radio, optical, infrared, or X-ray astronomers. This "narrow-band" view may soon change given the many all-sky surveys at various wavelengths already available and the many more in progress. Multiwavelength astronomy allows researchers to take a global approach to astronomical problems, not to mention the huge increase in the selection efficiency of samples for specific classes. As a first step towards a retrieval interface that crosses the boundaries between two data centers, MAST is proud to announce its new ROSAT interface. Available at <http://archive.stsci.edu/rosat/>, this interface provides access to the ROSAT Master observations log (ROSMASER) at the High Energy Astrophysics Science Archive Research Center (HEASARC) as a service to our optical/UV community. The MAST ROSAT interface is in fact very similar to the other MAST interfaces, so MAST users should find it easier to access the ROSAT archive through this channel. ROSAT, the ROentgen SATellite, was an X-ray observatory developed through a cooperative program between Germany, the United States, and the United Kingdom. The satellite was designed and operated by Germany, and was launched by the United States on June 1, 1990. It was turned off on February 12, 1999. ROSAT data cover the 0.1 - 2.4 keV range (or 5 - 124 Angstrom). The ROSAT Master observations log can be searched on a variety of parameters, ranging from position and object name to exposure time and PI name. Selected data can then be retrieved. Various data products are available, e.g., abstracts, FITS files (which allow one to extract images, light curves, and spectra), calibration files, and images in GIF format in different bands. The page provides links to various HEASARC WWW pages which give information about the ROSAT mission, data analysis documentation and software, and the ROSAT archive.

- Paolo Padovani and [Tim Kimball](#)

MAST to Archive FUSE Data

We are happy to announce a new addition to the missions archived at MAST: the Far Ultraviolet Spectroscopic Explorer (FUSE). FUSE, a NASA-supported mission, was successfully launched on June 24 1999 to explore the Universe using the technique of high-resolution spectroscopy in the far-ultraviolet spectral region. The Johns Hopkins University has the lead role in developing and operating the mission, in collaboration with the University of Colorado at Boulder, the University of California at Berkeley, the Canadian Space Agency (CSA), and the French Space Agency (CNES). FUSE is part of NASA's Origins Program under the auspices of NASA's Office of Space Science. FUSE will cover the 905 - 1195 Angstrom spectral region and obtain pointed observations of hot and cool stars, solar system

objects, active galactic nuclei, supernova remnants, and planetary nebulae. MAST will be the FUSE archive site, providing access to both proprietary and public FUSE data. The MAST FUSE interface can be accessed at <http://archive.stsci.edu/fuse/>.

- Paolo Padovani

Access to Highly Processed Data Sets

MAST has begun to assemble a set of highly processed data sets from missions supported by MAST. To date, these data sets consist of spectral atlases, grayscale images of time series spectra, and a composite spectrum of a QSO. In some cases these data were published as figures, a form for which it is impossible to reconstruct the numbers. In other cases, our data sets include data referred to by their original observers and not published. Our pages include the tabular data (e.g. fluxes, wavelengths) in addition to the plots, so it is possible to work with them conveniently. We have already discovered just a few of many ways to use these data for scientific purposes other than those envisaged by the authors. We invite you to take a look at the top level page pointing to these data at http://archive.stsci.edu/prep_ds.html and to give us feedback (to 'archive@stsci.edu') or to suggest additional data sets.

- Myron Smith

MAST Archive of Interstellar Medium Absorption Profile Spectrograph (IMAPS) 1 Raw Data

MAST now has Interstellar Medium Absorption Profile Spectrograph (IMAPS) 1 raw data available for retrieval. The web site for IMAPS data is at <http://archive.stsci.edu/imaps/>. Currently only the raw data are available. Soon, the corrected, co-added files will be added to the archive. MAST will archive the IMAPS 2 data when they are no longer proprietary and are received from the IMAPS project. For both flights IMAPS was flown as a partner with the Orbiting Retrievable Far and Extreme Ultraviolet Spectrometer (ORFEUS) experiments. MAST will archive data from the Berkeley Extreme and Far-UV Spectrometer as they become available. The data from the first ORFEUS mission are currently being calibrated, and are expected to arrive from the project this fall. The data from the second flight should follow a few months after delivery of the first set. MAST also plans to archive the data from the ORFEUS 2 Far Ultraviolet Spectrometer, when those data are available. No data was acquired for the FUV experiment during the ORFEUS 1 flight.

- [Karen Levay](#) and [Randy Thompson](#)

Ingest of UV Archives at MAST

All MAST data are accessible via World Wide Web pages which contain links for users to search the database, obtain help, retrieve data, and get access to on-line documentation and analysis software. Until recently, not all databases were physically stored at MAST. We are currently in the process of storing all data at STScI by copying MAST databases to CDROMs. As of July, IUE (NEWSIPS), HUT, UIT, and Copernicus data have all been successfully ingested into our juke-boxes. Ingest of the older IUESIPS version of the IUE data is now in progress. These amount to more than half a Terabyte of data (uncompressed). One of the positive effects of having all MAST data stored on-site will be the possibility of direct retrievals for MAST datasets (see below).

- [Karen Levay](#) and Paolo Padovani

Direct Retrievals for ASTRO Datasets

New interfaces for the three Astro missions in MAST (HUT, WUPPE, and UIT) have been installed. These new interfaces allow the user to retrieve data directly to her/his disk simply by "clicking" on the dataset name. No username or password is required. Datasets may be downloaded as .tar, .tar.gz, .tar.Z, or .zip files. This system will be the model for the delivery of all CDROM-based MAST data, which are currently being ingested into the MAST juke-boxes. The ASTRO missions are available on MAST at <http://archive.stsci.edu/astro/>. An alternative method for downloading UIT data has also been made available at <http://archive.stsci.edu/uit/uitcat.html>. This will allow users to download selected files rather than the entire dataset.

- Paolo Padovani and [Tim Kimball](#)

IUEDAC Software Update

The IUE IDL Data Analysis software libraries have been updated and can now be downloaded from <http://archive.stsci.edu/iue/iuedac.html>. Most of the changes involved the FITS-handling routines and are described at <http://archive.stsci.edu/iue/rdafnews.html>. The changes also

include several Y2K-related modifications made last fall. The software was installed on the unix cluster at STScI earlier this month.

Besides the previously supported platforms, a WindowsNT-compatible version is now supported and available for download from the above URL. Note that one still must purchase IDL in order to use any of the IUEDAC routines.

Users experiencing any errors are requested to send e-mail to archive@stsci.edu.

- [Randy Thompson](#)

FITS Standard Available Online

The recently approved FITS Standard document (V100-2.0) is now available online at http://archive.stsci.edu/fits/fits_standard. This document, dated 29 March 1999, is available in Postscript, compressed (gzip) Postscript, and PDF formats at <http://fits.gsfc.nasa.gov/>.

- [Karen Levay](#)

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If someone would like to subscribe to the mailing list they should send mail to archive_news-request@stsci.edu and put the single word subscribe in the BODY of the message. Information on the subject line will be ignored. The subscriber will be asked to confirm the subscription.
