



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, GALEX, IUE, Copernicus, EUVE, HUT, UIT, WUPPE, HPOL, IMAPS, BEFS, TUES, VLA-FIRST, and XMM-OM data archives supported by MAST. Inquiries should be sent to archive@stsci.edu.

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PyDrizzled Images for WFPC2

Users requesting WFPC2 data from the MAST archive now receive an additional data product, a quick-look mosaic of the images from all four detectors. The new files, labeled *drz.fits, are produced by the program PyDrizzle, which was recently incorporated into the WFPC2 calibration pipeline. PyDrizzle uses the WFPC2 distortion corrections recently derived by Luigi Bedin. Output images have a plate scale of 0.1" per pixel. Because PyDrizzle is run on each WFPC2 exposure independently, it cannot perform sub-pixel sampling or cosmic-ray rejection. The DRZ files are provided in standard (multi-extension) FITS format, rather than the waivered FITS (GEIS) format used by the other WFPC2 files. The primary extension contains only header information; the first extension contains the drizzled image. A Space Telescope Analysis Newsletter (STAN) describing the DRZ files will be issued later this month. An Instrument Science Report (ISR) describing the new geometric distortion corrections will be issued in a few months. Because they lack cosmic-ray rejection, DRZ files are intended as quick-look images, rather than as science data products.

Over the next several months we will be reprocessing all of the WFPC2 data, using the best calibrations available, and archiving the fully calibrated datasets in both GEIS and FITS formats. More information will follow in the next newsletter.

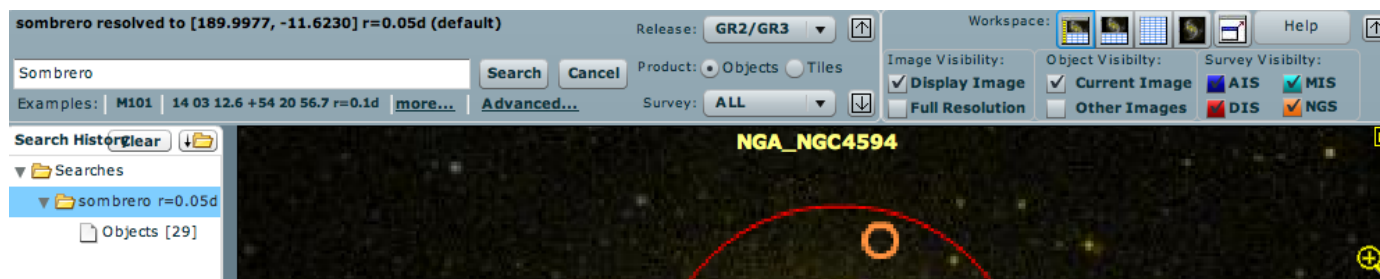
GALEX Release 4 (GR4) imaging completed

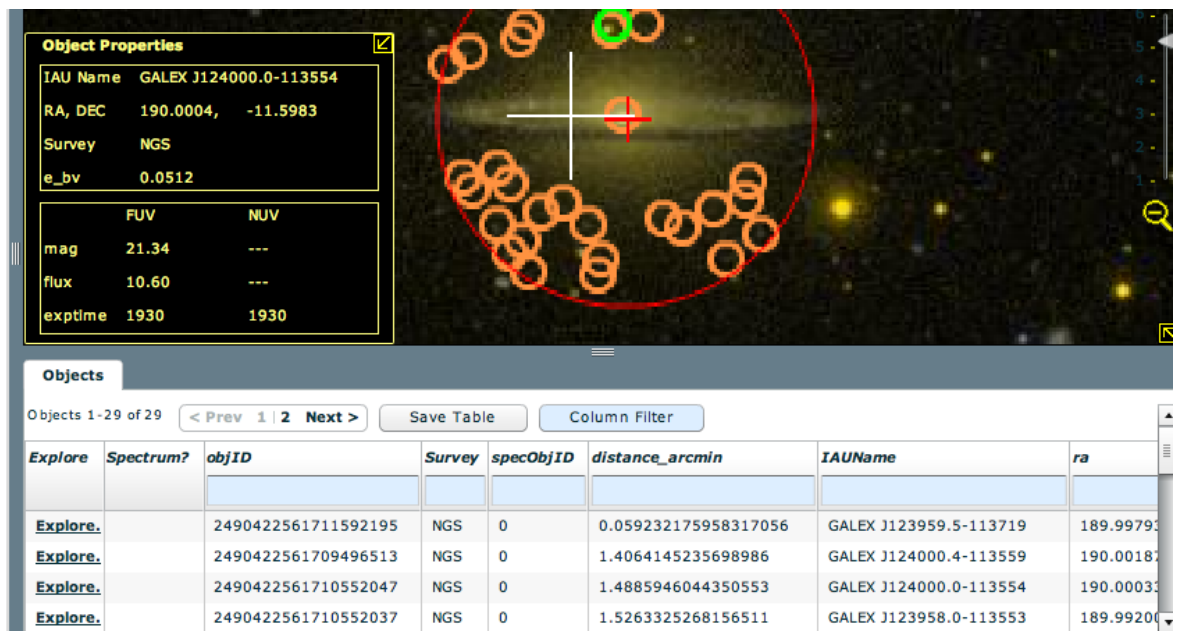
The completed AIS (all sky) survey has been delivered and staged on the [MAST GALEX website](#), thereby completing the imaging component of the GR4. Grism data is being ingested at this writing, and at 143 tiles will almost triple the MAST holdings of GALEX spectra. The GR4 imaging dataset is huge (11.6 TB, including its database of 1TB) and covers some 31,000 tiles (almost the same number of square degrees on the sky). The GR4 delivery completes what the GALEX project terms its "primary mission."

Users now have a choice to go to the old [GR2/GR3 pages](#) or to the new [GR4 website](#). The default homepage will be switched shortly when images are created for the Map tool, which will also point to one or the other GR datasets.

The new galexView data search/discovery tool.

The MAST GALEX team is pleased to announce the inauguration of the ["galexView" web application](#). The galexView tool easily accommodates searches for tiles or objects. By using the new Adobe Flex technology, galexView gives the user the instantaneous "desktop feel" once the data are loaded. We have just rolled out version 1.2, and a snapshot is shown in the figure below.





The galexView browser page may be divided into up to 3 separate panes that show the image for the tile the user has selected, a table giving information about each of the objects, and a search history, such that one can readily return to previous visits. Version 1.2 also provides an upload target list facility that allows one to collect search results for a large number of targets, specified by coordinates. Catalogued objects in the tile (or neighboring tiles) may be switched on, color coded by survey. The snapshot shows an example of a search on the GR4 dataset for the Sombrero galaxy. The orange circles in the snap are the objects from the Nearby Galaxy Survey returned from the request out to a designated search radius (red circle). A specific object may be 'clicked on', turning its circle green and bringing up an Objects Properties box, as shown in the snap to the lower left of the image. We are currently developing a new generation of this tool and also investigating ways to modify the Map tool (see [article in the February 2008 newsletter](#)) to exploit the best of its native Mapserver technology as well as the capabilities of Flex.

MAST Forum

MAST has established the "[MAST Forum](#)" in response to suggestions from our user community. You can find a link to the Forum on the second line of the top navigation bar of most MAST web pages. It should be the right most link on each page.

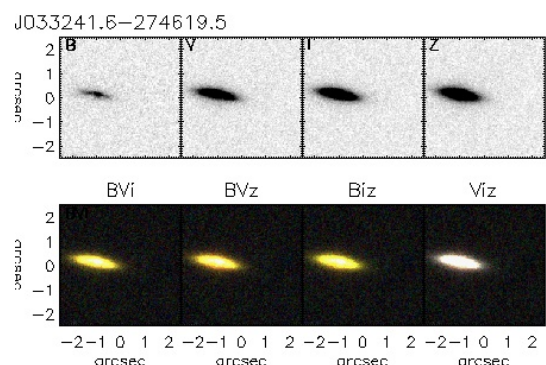
The forum is a place for MAST users to post topics related to the MAST archive, either suggestions or questions on using MAST tools and services are welcome. Recently we have been considering changes to the MAST website to improve navigation. We have posted a topic related to this in the forum and are looking forward to seeing a discussion on this topic by our users. To avoid spam postings, you will need to register on the forum to post.

Community-contributed High Level Science Products

GOODS - Version 2.0

The [GOODS](#) team released Version 2.0 of the data and catalogs in May 2008. Version v2.0 is a significant improvement upon the previous v1.0 release. The v1.0 data release provided data acquired as part of the original GOODS HST/ACS program (HST Cycle 11, program IDs [9425](#) and [9583](#)). Version 2.0 augments this with additional data acquired on the two GOODS fields during the search for high redshift Type Ia supernovae carried out during Cycles 12 and 13 (Program ID [9727](#), P.I. Saul Perlmutter, and [9728](#), [10339](#), and [10340](#), P.I. Adam Riess).

In addition to the data, a new version of the [GOODS cutout tool](#) is also available. The cutout tool allows users to create a cutout image (in FITS format) from the GOODS data sets based on a target name or coordinates and a width in arcseconds. Several qualifiers can be used to create image cutouts. The tool can be used from either the HTML search form, or as a Web service following the Virtual Observatory (VO) Simple Image Access Protocol (SIAP) cutout protocol (e.g. http://archive.stsci.edu/eidol_v2.php?pos=53.17366791,-27.772089&size=0.1). The webservice returns an VOTABLE (XML) file. The cutout service produces fits files and a set of preview images.



Sample of the preview images from the GOODS cutout tool

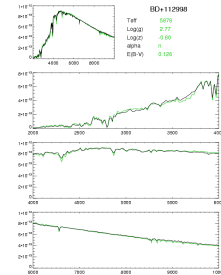
Coma Cluster Treasury

The HST ACS Coma cluster Treasury survey is a deep two-passband imaging survey of one of the nearest rich clusters of galaxies, the Coma cluster (Abell 1656). The PI of this program (HST Proposal number [10861](#)) is David Carter.

The survey was designed to cover an area of 740 square arcmin in regions of different density of both galaxies and intergalactic medium within the cluster. The ACS failure of January 27th 2007 leaves the survey 28% complete, with 21 ACS pointings (230 square arcmin) complete, and partial data for a further 4 pointings (44 square arcmin).

STIS Next Generation Spectral Library

The [STIS Next Generation Spectral Library \(NGSL\)](#) contains STIS spectra of 370 stars observed in HST programs [9088](#), [9786](#), and [10222](#). The Library was produced as part of the archival research program, 'Constraining Both the Star-Formation History and Metal-Enrichment History of Galaxies' ([AR10659](#)) and was provided by Don Lindler and Sara Heap. Each spectrum includes spectral segments from gratings G230LB, G430L, and G750L merged to form a single spectrum covering ~0.2-1.0 μ m. NGSL spectra were constructed via custom pipeline processing followed by corrections for in-order scatter by grating G230LB and corrections for throughput variations caused by the mis-centering of the target in the 0.2 arcsecond-wide slit.



Preview plot of BD+11 2998
(click to see full size plot)

UV images of the UDF and HDF fields

[Wavelength coverage of the Hubble Ultra Deep Field \(HUDF\)](#) has been extended with deep ultraviolet wavelength observations. Observations acquired with the ACS-SBC in the Far-UV {1500 Angstrom} and WFPC2 in the Near-UV {F300W} during execution of the HST Treasury program [10403](#) (PI Harry Teplitz -- California Institute of Technology) complete the coverage. Included with this set of data are ACS/SBC observations of the Hubble Deep Field North.

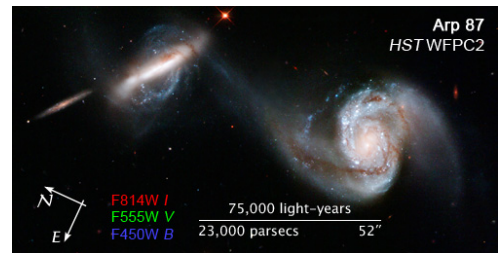


Ultra Deep Field FUV data purple over white/black
B-band image.
Click on image to see full-size version.

Merging Galaxies

In association with the press release of merging galaxies for the HST 18th anniversary, three objects (ARP 87, NGC 6050 and ARP 148) were made available as [High-Level Science Products](#). As with most MAST hosted HLSP, you may see a list at the web site and download the data through your browser or retrieve the data via anonymous ftp.

ftp archive.stsci.edu
cd /pub/hlsp/merggal



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