



MAY 2017

MAST NEWSLETTER

THE LATEST UPDATES FROM THE BARBARA A. MIKULSKI ARCHIVE FOR SPACE TELESCOPE

STSCI

MAST DISCOVERY PORTAL 3.0: STREAMLINING ACCESS TO HST DATA

THE MAST TEAM HAS RELEASED A NEW VERSION OF THE DISCOVERY PORTAL. HIGHLIGHTS INCLUDE FASTER, DIRECT ACCESS TO PUBLIC AND PROPRIETARY HST DATA AS WELL AS A REDESIGNED DOWNLOAD BASKET.

MAY 5, 2017



The MAST Discovery Portal has released version 3.0 which includes the following highlights:

User Login: There is now a login panel in the upper right corner of the page (Fig 1). You may now access your proprietary data using an existing authorized MAST account (MyST). Future software releases will include user customization, preference saving, search history and more.

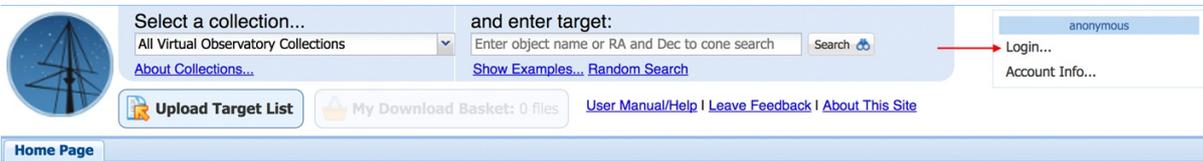
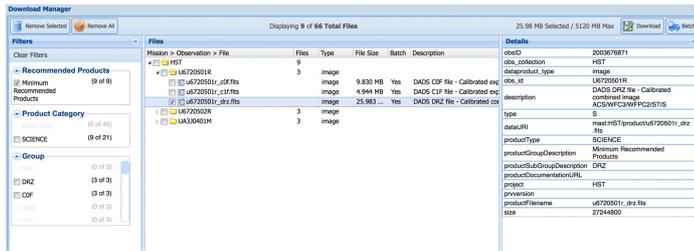


Figure 1: Top of the MAST Discovery Portal homepage showing the login panel in the upper right corner.

Redesigned Download Basket: The Portal has a redesigned download basket which offers a nested tree view, data details view, and updated filters and buttons (Fig 2). Learn more here: https://www.youtube.com/watch?v=DVgtrQ_zafg



Streamlined access to standard HST data (beta release): HST users may now get direct access to public and proprietary data via the Portal. Learn more

Figure 2: Redesigned download basket for the MAST Portal.

here: <https://www.youtube.com/watch?v=GrlTe8tTuc8>

You can watch a live demonstration on the features of the Discovery Portal 3.0 release -- including examples of how to use the Virtual Observatory and Advanced Search features -- here: <https://webcast.stsci.edu/webcast/detail.xhtml?talkid=5590>

Questions and feedback about the MAST Discovery Portal can be sent to archive@stsci.edu or posted on the [MAST Forum](#).

Back to top   

HIGH LEVEL SCIENCE PRODUCTS: BOSZ STELLAR ATMOSPHERE MODELS

MAST IS NOW HOSTING A NEW SET OF MORE THAN 1 MILLION ATLAS₉ MODEL STELLAR ATMOSPHERES.

MAY 5, 2017



BOSZ is a collection of new ATLAS9-APOGEE model atmospheres, spanning a wide range of effective temperatures, surface gravities, metallicities, carbon abundances, and alpha enrichment levels (see Fig 1). More than a million models are available to download through the project's HLSP page: <https://archive.stsci.edu/prepds/bosz/>. A paper describing the simulations and comparing to HST standards and LTE grids from Castelli and Kurucz is now public: [Bohlin et al. 2017, AJ, 153, 234](#). The models cover wavelengths $1000 \text{ \AA} < \lambda < 32 \mu\text{m}$.

Most of the parameter combinations are available, but a small subset is still being calculated and ingested into MAST. See the [HLSP page](#) for instructions on how to search for models using our web form. Pre-packaged bundles will also be made available once all the models are ingested into MAST.

Questions about the MAST archive of the BOSZ data can be sent to toarchive@stsci.edu or posted on the [MAST Forum](#).

Back to top   

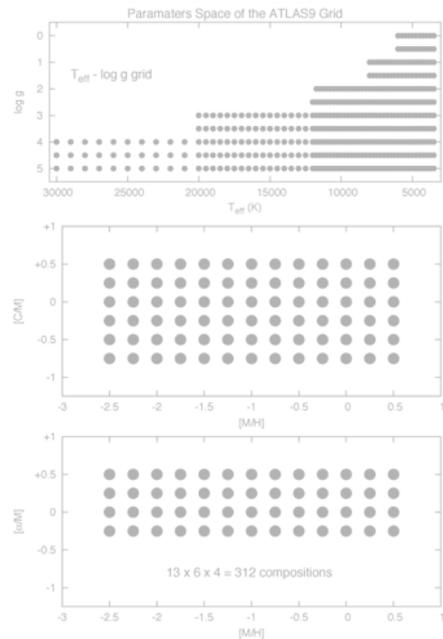


Figure 1: Parameter space of the BOSZ models in effective temperature/log(g) space (top), carbon abundances (middle), and alpha element abundances (bottom). Figure from Bohlin et al. (2017).

HIGH LEVEL SCIENCE PRODUCTS: HZ₃C

THE HST-3C TEAM HAS DELIVERED A CUSTOM-REDUCED SERIES OF HST WIDE FIELD CAMERA 3 OBSERVATIONS OF 22 HIGH-REDSHIFT 3C RADIO GALAXIES. THE SCIENCE-READY FITS FILES ARE NOW AVAILABLE FROM MAST.

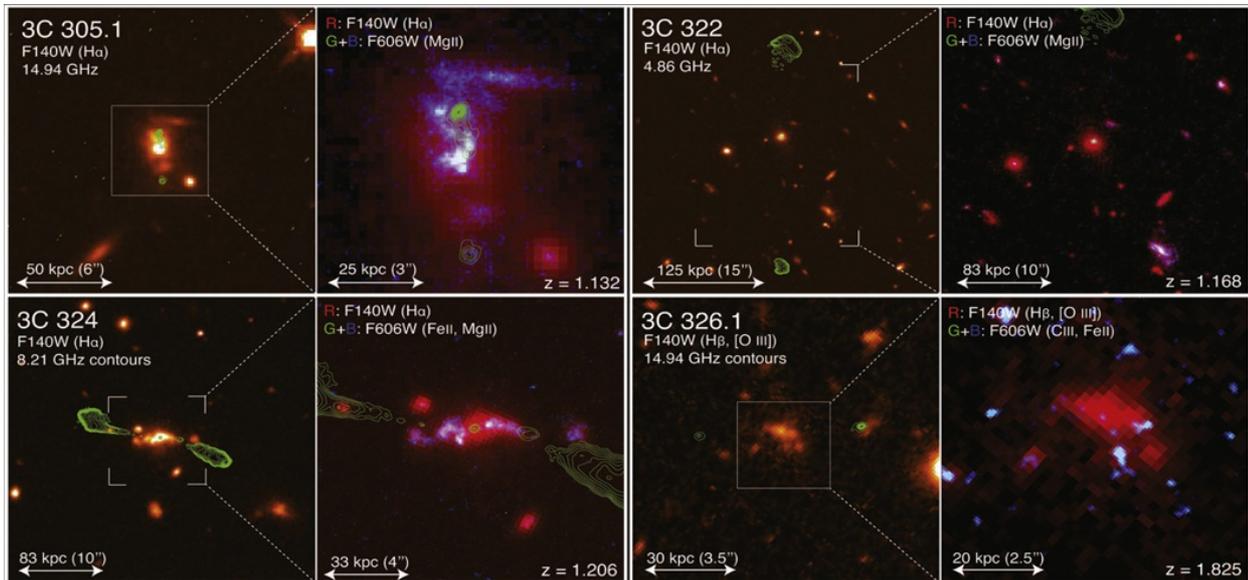


Figure 1: HST WFC3 optical and IR observations of a subset of the Hz3C sample shown with overlain radio maps. From Hilbert et al. (2016).

Hz3C is a collection of multiband HST Wide Field Camera 3 (WFC3) observations of 22 high-redshift ($1 < z < 2.5$) 3C radio galaxies in the rest frame UV and IR. Science-ready images in the F606W and F140W FITS images are available from MAST at the Hz3C website (<https://archive.stsci.edu/prepds/hz3c/>). These images were produced using a custom data reduction strategy to remove cosmic rays, persistence signal, and other artifacts. Figure 1 shows a sample of four Hz3C galaxies.

A discussion of the sample selection, data reduction approach, and a comparison of the HST data to archival VLA observations can be found in Hilbert et al. (2016). Questions about the HST data products can be sent to MAST at archive@stsci.edu or posted on the [MAST Forum](#).

Back to top   



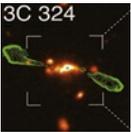
HIGH LEVEL SCIENCE PRODUCTS: BOSZ STELLAR ATMOSPHERE MODELS

SCOTT FLEMING



HIGH LEVEL SCIENCE PRODUCTS: HZ₃C

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ABOUT

This newsletter is a MAST publication produced by Jonathan Hargis and Randy Thompson, on behalf of the entire MAST staff, who welcome your [comments and suggestions](#).

The Mikulski Archive for Space Telescopes (MAST) is a NASA funded project to support and provide to the astronomical community a variety of astronomical data archives, with the primary focus on scientifically related data sets in the optical, ultraviolet, and near-infrared parts of the spectrum. MAST is located at the Space Telescope Science Institute (STScI).

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