



MAST
Users
Group
Meeting

December
15-16,
2016

MAST Discovery Portal

<http://mast.stsci.edu>

- 2016 New Features
- Future Work
- Demo
- Q/A

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MAST Portal Demo

2016 New Features

- ✧ Advanced Search for MAST Observations
- ✧ HSC Version 2 (Released in September)
 - Includes new interface to some curated spectral data
 - GUI enhancement to add download HST images directly from HSC detection results
- ✧ Direct Distribution of Mission Data from 'Online Cache'
 - Enabled for all missions except HST. (Feb 2017 release).
- ✧ Portal Search "Save Your Link To Data"
- ✧ DOI Project (Sarah Weissman)



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MAST Portal Demo

2016 New Features

(Coming Any Day Now...)

- ✧ PanSTARRS all sky background
- ✧ HST image overlays directly from CAOM results
- ✧ New Album View
 - Includes compressed grid view with optional previews
- ✧ New Catalogs fully integrated with the Portal: PanSTARRS, Gaia, TIC
 - crossmatch
 - cone search
 - advanced search



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MAST Portal

Future Work

- ✧ HST Direct Download (~Feb 2017)
 - Includes user SSO login
 - Persisted user preferences and history
- ✧ Public release of JWST features
- ✧ Integration with new missions:
 - JWST
 - PanSTARRS
 - TESS
- ✧ Web API ('Programmable Interface')
- ✧ Advanced Visualization Tools
- ✧ Advanced Catalog Searching and Tools
- ✧ Interface to Subscription Service (Oliver Oberdorf)



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CAOM: Advanced Search

MAST Advanced Search

Records Found: 2,129,889
(Load Limit: 50,000)
(Download Limit: 500,000)

Enter object name or RA and Dec to cone search [Show Examples...](#)

Applied Filters

Columns

Defaults Hide All

Filter columns:

- Product Type
- Mission
- Instrument
- Project
- Filters
- Waveband
- Target Name
- Target Classification
- Observation ID
- RA
- Dec
- Proposal ID
- Principal Investigator
- Calibration Level

Filters

Product Type

Enter text here or choose from below

Name	Quantity
<input type="checkbox"/> timeseries	(846,876 Total)
<input type="checkbox"/> image	(525,662 Total)
<input type="checkbox"/> spectrum	(495,270 Total)
<input type="checkbox"/> cube	(262,081 Total)

Mission

Enter text here or choose from below

Name	Quantity
<input type="checkbox"/> K2	(681,020 Total)
<input type="checkbox"/> HST	(575,357 Total)
<input type="checkbox"/> GALEX	(330,914 Total)
<input type="checkbox"/> SWIFT	(214,944 Total)
<input type="checkbox"/> Kepler	(212,993 Total)

Instrument

Enter text here or choose from below

Name	Quantity
<input type="checkbox"/> Kepler	(898,681 Total)
<input type="checkbox"/> GALEX	(330,914 Total)
<input type="checkbox"/> UVOT	(214,944 Total)
<input type="checkbox"/> ACS/WFC	(87,096 Total)
<input type="checkbox"/> STIS/CCD	(86,671 Total)

Filters

Enter text here or choose from below

Name	Quantity
<input type="checkbox"/> KEPLER	(898,681 Total)
<input type="checkbox"/> NUV	(170,670 Total)
<input type="checkbox"/> FUV	(160,244 Total)
<input type="checkbox"/> DETECTION	(87,719 Total)
<input type="checkbox"/> LOW DISP	(67,063 Total)

Waveband

Enter text here or choose from below

Name	Quantity
<input type="checkbox"/> OPTICAL	(1,383,312 Total)
<input type="checkbox"/> UV	(657,623 Total)
<input type="checkbox"/> INFRARED	(109,952 Total)
<input type="checkbox"/> EUV	(1,686 Total)

Target Name

Enter text here

This column must be searched via the text box at the top of this panel



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Album View

Select a collection... and enter target:
All MAST Observations m83 Search

[About Collections...](#) [Show Examples...](#) [Random Search](#) [Advanced Search](#)

[Upload Target List](#) [My Download Basket: 0 files](#) [User Manual/Help](#) | [Leave Feedback](#) | [About This Site](#)

anonymous
[Login...](#)
[Account Info...](#)

Home Page MAST: m83

Displaying 528 of 1111 Total Rows of Observations MESSIER 083, radius: 0.10750°

Filters

Clear Filters Edit Filters... Help...

Keyword/Text Filter
Filter All Columns

Product Type

Name	Quantity
<input type="checkbox"/> spectrum	(52 of 571)
<input type="checkbox"/> image	(476 of 487)
<input type="checkbox"/> cube	(0 of 53)

Mission

Name	Quantity
<input checked="" type="checkbox"/> HST	(528 of 528)
<input type="checkbox"/> GALEX	(0 of 463)
<input type="checkbox"/> IUE	(0 of 59)
<input type="checkbox"/> SWIFT	(0 of 53)
<input type="checkbox"/> HUT	(0 of 5)
<input type="checkbox"/> WUPPE	(0 of 2)
<input type="checkbox"/> FUSE	(0 of 1)

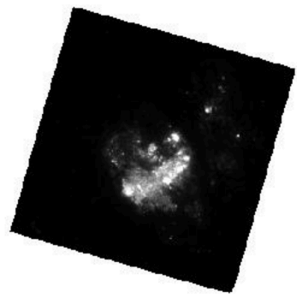
Instrument

Name	Quantity
<input type="checkbox"/> GALEX	(0 of 463)
<input type="checkbox"/> WFC3/UVIS	(148 of 148)
<input type="checkbox"/> ACS/WFC	(108 of 108)
<input type="checkbox"/> IWT	(0 of 53)

List View Album View

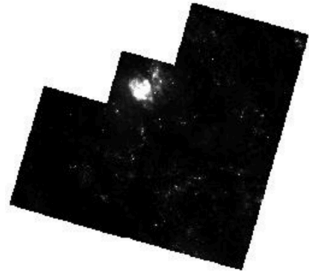
Edit Columns... Table Display: All Page 1 of 6 Displaying 1 - 100 of 528

HST: hst_08234_01_wfpc2_f300w_pc
Selected:



M83
Collection: HST
Instrument: WFPC2/PC
Filters: F300W
Obs ID: hst_08234_01_wfpc2_f300w_pc

HST: hst_08234_01_wfpc2_f300w_wf
Selected:



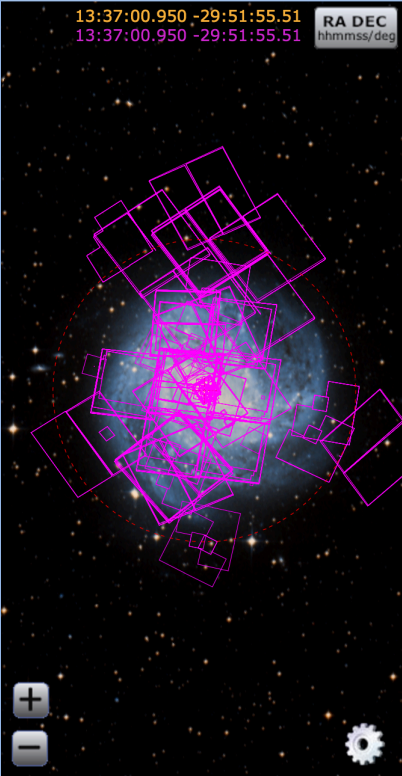
M83
Collection: HST
Instrument: WFPC2/WFC
Filters: F300W
Obs ID: hst_08234_01_wfpc2_f300w_wf

HST: hst_08234_01_wfpc2_f547m_pc
Selected:

HST: hst_08234_01_wfpc2_f547m_wf
Selected:

AstroView

13:37:00.950 -29:51:55.51 RA DEC
13:37:00.950 -29:51:55.51 htmms/deg





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Search Link, PANSTARRS Background

Browser address: <https://masttest.stsci.edu/portal/Mashup/Clients/Mast/Portal.html>

Select a collection... and enter target:
All MAST Observations Enter object name or RA and Dec to cone search Search

Upload Target List My Download Basket: 0 files User Manual/Help | Leave Feedback | About This Site

Home Page MAST: Advanced Search 1

Displaying 3523 of 26688 Total Rows of Observations

Filters

- Keyword/Text Filter**
JUPITER
- Product Type**
Name Quantity
 image (3,523 of 20,870)
 spectrum (0 of 5,818)
- Instrument**
Name Quantity
 WFC3/UVIS (914 of 9,044)
 WFC2/PC (347 of 2,978)
 STIS/CCD (0 of 2,930)
 ACS/HRC (117 of 2,214)
 HRS (0 of 1,229)
Show 18 More
- Project**
Name Quantity
 HST (3,523 of 26,669)
 HLA (0 of 19)
- Waveband**
Name Quantity

Actions	Preview	Mission	Instrument	Project	Filters	Waveband
<input checked="" type="checkbox"/>		HST	WFC2	HST	F218W	UV
<input checked="" type="checkbox"/>		HST	WFC2	HST	F255W	UV
<input type="checkbox"/>	No Preview Available	HST	STIS/FUV-MA...	HST	MIRFUV	UV
<input type="checkbox"/>	No Preview Available	HST	STIS/FUV-MA...	HST	MIRFUV	UV

AstroView

14:26:54.601 -13:38:23.93
14:27:18.404 -13:32:47.97 RA DEC hhhmss/deg

AstroView Settings

Move To:
[Input field] Go

Grid Lines: Off

Search Radius: On

[RA, DEC]: On

Crosshair: On

Background Survey:
PANSTARRS

More Surveys:
Select...

Close



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HSC: Catalog Search, Spectral Search, Crossmatch

← → ↻ <https://masttest.stsci.edu/portal/Mashup/Clients/Mast/Portal.html> ☆ 🗨️ 🌟 🔔 📱 📄 54

Select a collection...
Hubble Source Catalog Spectra
[About Collections...](#)

[User Manual/Help](#) | [Leave Feedback](#) | [About This Site](#)

anonymous
Login...
Account Info...

Home Page **HSC Spectra**

Displaying 406 of 45000 Total Rows of Spectra

List View Album View

Edit Columns... Table Display: All Page 1 of 5 Displaying 1 - 100 of 406

B21512+37	B21512+37	B21512+37	B21512+37
<p>Selected: <input type="checkbox"/> <input type="button" value="📄"/> <input type="button" value="🗑️"/> <input type="button" value="📊"/> <input type="button" value="⋮"/></p> <p>Target Name: B21512+37 Dataset Name: Y0RV1703T Detector: FOS/RD Object Type: Seyfert Galaxy</p>	<p>Selected: <input type="checkbox"/> <input type="button" value="📄"/> <input type="button" value="🗑️"/> <input type="button" value="📊"/> <input type="button" value="⋮"/></p> <p>Target Name: B21512+37 Dataset Name: Y0RV1704T Detector: FOS/RD Object Type: Seyfert Galaxy</p>	<p>Selected: <input type="checkbox"/> <input type="button" value="📄"/> <input type="button" value="🗑️"/> <input type="button" value="📊"/> <input type="button" value="⋮"/></p> <p>Target Name: B21512+37 Dataset Name: Y0RV1705T Detector: FOS/RD Object Type: Seyfert Galaxy</p>	<p>Selected: <input type="checkbox"/> <input type="button" value="📄"/> <input type="button" value="🗑️"/> <input type="button" value="📊"/> <input type="button" value="⋮"/></p> <p>Target Name: B21512+37 Dataset Name: Y0RV1706T Detector: FOS/RD Object Type: Seyfert Galaxy</p>
MRK270	NGC1275	NGC1275	NGC1275
<p>Selected: <input type="checkbox"/> <input type="button" value="📄"/> <input type="button" value="🗑️"/> <input type="button" value="📊"/> <input type="button" value="⋮"/></p>	<p>Selected: <input type="checkbox"/> <input type="button" value="📄"/> <input type="button" value="🗑️"/> <input type="button" value="📊"/> <input type="button" value="⋮"/></p>	<p>Selected: <input type="checkbox"/> <input type="button" value="📄"/> <input type="button" value="🗑️"/> <input type="button" value="📊"/> <input type="button" value="⋮"/></p>	<p>Selected: <input type="checkbox"/> <input type="button" value="📄"/> <input type="button" value="🗑️"/> <input type="button" value="📊"/> <input type="button" value="⋮"/></p>