

Enhancing your publications with DOIs from MAST

Tom Donaldson, Josh Peek & Sarah
Weissman

for

MAST: Karen Levay, Amanda Marrione

STScI Library: Jill Lagerstrom

AAS Journals: Gus Muench, Julie Steffen, Ethan Vishniac

IVOA Northern Spring Interop, 2016

To build on your work, readers may need your data. Getting data from tables is slow and difficult.

Table 1. Sample of PNe with *HST* WFPC2 or WFC3 H α and [O iii] observations

PNe G	Common Name	H α Exp. Time (s)	[O iii] Exp. Time (s)	Proposal ID	PNe G	Common Name	H α Exp. Time (s)	[O iii] Exp. Time (s)	Proposal ID
000.3+13.2	IC 4634	1000	1000	6856	084.2-01.0	K 4-55	2460	2440	11956
001.2+02.1	Hen 2-262	280	280	9356	084.9-03.4	NGC 7027*	500	100	11122
001.7-04.4	H 1-55	200	280	9356	089.8-05.1	IC 5117	240	320	8307
002.3-03.4	H 2-37	280	280	9356	096.4-29.9	NGC 5543	800	1600	5403
002.4+05.8	NGC 6369	640	640	9582	106.5-17.6	NGC 7662	200	500	6117, 6943, 8390
002.7-04.8	M 1-42	900	1800	11185	111.8-02.8	Hb 12	1600	1600	11093
002.9-03.9	H 2-39	280	280	9356	138.8-02.8	IC 289	2000	2000	11956
003.5-04.6	NGC 6565	160	320	11122	144.1+06.1	NGC 1501	1600	2000	11956
003.6+03.1	M 2-14	280	280	9356	189.1+19.8	NGC 2371-72	1600	1600	11093
003.8+05.3	H 2-15	280	280	9356	197.8+17.3	NGC 2392	400	400	8499
003.9-03.1	KFL 7	280	280	9356	215.2-24.2	IC 418	888	360	6353, 7501
004.0-03.0	M 2-29	200	160	9356	231.8+04.1	NGC 2438	2080	2080	11827
004.1-03.8	KFL 11	280	280	9356	215.6+03.6	NGC 2346	200	120	7129
004.8-22.7	Hen 2-436	200	160	9356	234.8+02.4	NGC 2440	1600	1600	11090
004.8+02.0	H 2-25	400	400	9356	249.0+06.9	SaB 1-1	200	280	8332
005.2-18.6	SW 2-21	280	280	9356	261.0+32.0	NGC 3342	100	1200	6117, 7501, 8773
006.1+08.3	M 1-20	200	160	9356	261.9+08.5	NGC 2818	1600	2000	11956
006.3+04.4	H 2-18	280	280	9356	272.1+12.3	NGC 3132	400	1200	6221, 8390
006.4+02.0	M 1-33	160	160	9356	285.6-02.7	Hen 2-47	1600	1600	11090
006.8-19.8	Wray 16-423	200	160	9356	285.7-14.9	IC 2448	200	320	11122
006.8+04.1	M 3-15	200	160	9356	294.6-04.7	NGC 3918	140	320	11122
007.5+04.3	Th 4-1	280	280	9356	305.1+01.4	Hen 2-90	2325	1210	8345, 9102
008.2+06.8	Hen 2-200	460	460	9356	307.5+04.9	MyC 18	600	1400	6221
008.6-02.6	MaC 1-11	280	280	9356	309.1-04.3	NGC 5315	1600	1600	11090
009.3+05.7	Hen 3-1475	830	800	7285	312.3+03.5	NGC 5307	1600	1600	11090
010.0+00.7	NGC 6537	1240	1000	6502	319.6+15.7	IC 4406*	540	600	8726, 9314
010.8+18.0	M 2-9	1240	1000	6502	324.0+03.5	PM 1-89	4900	2900	5404, 5864
010.8-01.8	NGC 6578	160	320	11122	327.8+10.8	NGC 5882	140	380	11122
019.4-05.3	M 1-61	240	320	8307	331.1-05.7	PC 11	200	280	8332
025.3+40.8	IC 4593	1600	1600	11093	331.3-12.1	Hen 3-1357	240	368	6039, 8390
036.1-17.9	NGC 6818	520	1300	6792, 7501, 8773	331.7-01.0	Mz 3*	1260	1160	6856, 9050
027.6+04.2	M 2-43	1800	1800	8307	341.8+05.4	NGC 6153	1000	1300	8594
034.6+11.8	NGC 6572	180	840	7501, 9839	349.5+01.0	NGC 6302*	2100	2220	11504
036.1-57.1	NGC 7293	1800	1800	9977	351.1+04.8	M 1-19	160	160	9356
037.7-34.5	NGC 7009	400	320	8114	351.9+01.9	Wray 16-286	200	280	9356
037.8-06.3	NGC 6790	160	200	8307	352.6+03.0	H 1-8	200	280	9356
043.1+37.7	NGC 6210	320	320	6792	353.5-05.0	JaFu 2*	3600	2000	6780
054.1-12.1	NGC 6891	1280	320	11122	354.5+03.3	Th 3-4	280	280	9356
054.2-03.4	Necklace Nebula*	2000	2000	12675	354.9+03.5	Th 3-6	280	400	9356
057.9-01.5	Hen 2-447	520	1800	8307	355.4-02.4	M 3-14	200	160	9356
060.1-07.7	NGC 6886	1120	1020	7501, 8345, 8773	355.9+03.6	H 1-9	280	280	9356
060.8-03.6	NGC 6853	2000	1000	8726	356.1-03.3	H 2-26	280	280	9356
063.1+13.9	NGC 6720	480	720	7632, 8726	356.5-03.6	H 2-27	360	400	9356
064.1+04.3	M 1-92	600	2080	6533	356.9+04.4	M 3-38	280	280	9356
064.7+05.0	BD+307 3639	484	900	8116, 8390	357.1-04.7	H 1-43	200	280	9356
065.0-27.3	Pa 1*	11420	1040	6751	357.2+02.0	H 2-13	280	280	9356
071.6-02.3	M 3-35	520	1000	8307	358.5-04.2	H 1-46	160	160	9356
073.0-02.4	K 3-76	6	18	6943	358.5+02.9	Wray 16-282	280	280	9356
074.5+02.1	NGC 6881	280	320	8307	358.9+03.4	H 1-19	200	280	9356
082.1+07.0	NGC 6884	1100	560	8345, 8390	359.2+04.7	Th 3-14	280	400	9356
082.5+11.3	NGC 6833	40	3	6943, 8353	359.3+00.9	Hb 5	1300	1000	6502
083.5+12.7	NGC 6826	100	100	6117					

Guerrero+ 2013

We present a catalogue of photometric and structural properties of **228** nuclear star clusters (NSCs) in nearby late-type disc galaxies. These new measurements are derived from a homogeneous analysis of all suitable Wide Field and Planetary Camera 2 (WFPC2) images in the Hubble Space Telescope (HST) archive.

We searched MAST for HST WFPC2 or WFC3 coeval H α and [O iii] images of PNe available by March 2013. This search yielded H α and [O iii] images for **103** PNe obtained through the F656N and F502N filters, respectively

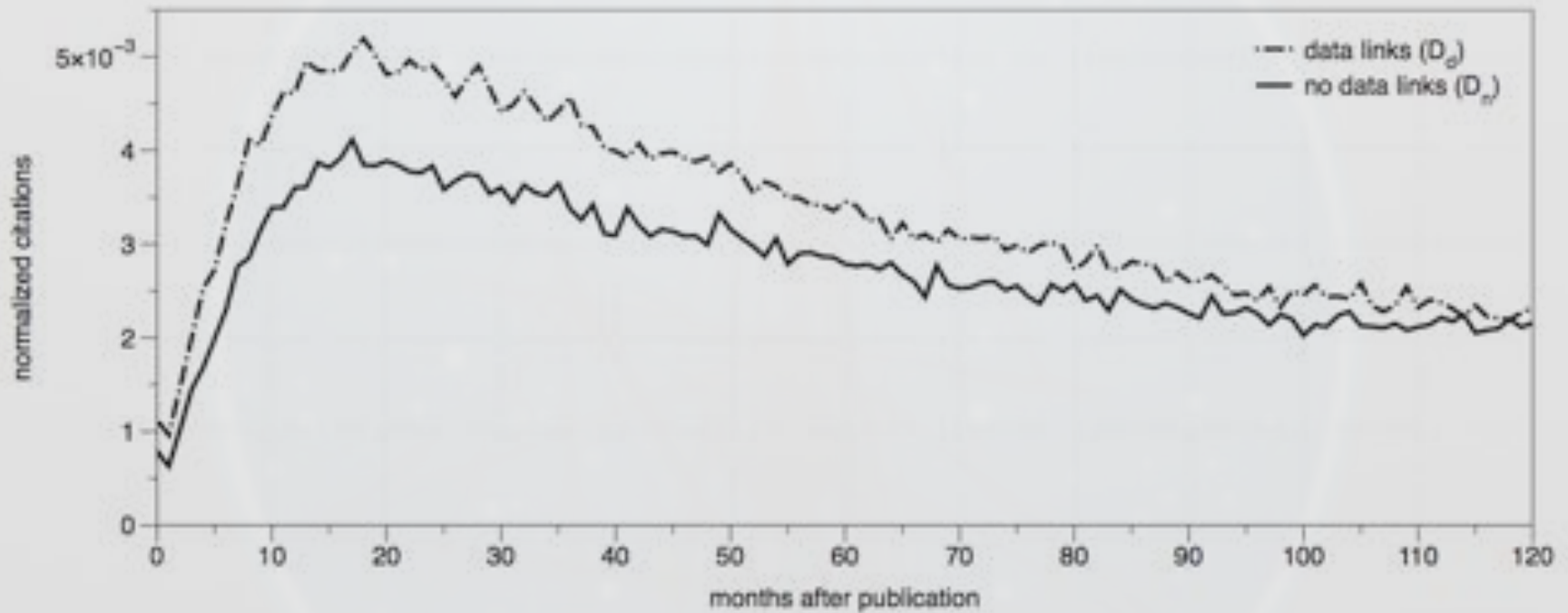
Table 1. Main properties of the galaxy sample with measured NSC properties. (All 228 galaxies are listed in the online version of the table).

Galaxy	RA (hh:mm:ss)	Dec. (dd:mm:ss)	$m - M$ (mag)	$E(B - V)$ (mag)	B (mag)	$B - V$ (mag)	I (mag)	R_{25} (kpc)	ϵ (10)	PA (deg)	Incl. (deg)	Type (13)	t (14)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
DDO078	10:26:27.78	67:39:25.1	27.82	0.018	15.8	-	-	1.063	0.00	-	0.0	I	10.0
IC 4710	18:28:37.95	-66:58:56.1	29.75	0.079	12.51	0.57	11.19	4.494	0.15	-	34.9	Sm	8.9
NGC 1258	3:14:05.50	-21:46:27.3	32.28	0.022	13.88	-	-	5.870	0.26	20.5	43.7	SABc	5.7
NGC 3319	10:39:09.47	41:41:12.5	30.7	0.013	11.77	0.41	11.46	7.289	0.51	36.	62.7	SBc	5.9
NGC 5334	13:52:54.44	-1:06:52.4	32.78	0.041	12.97	-	12.19	17.729	0.28	18.2	44.8	Sc	5.2
...

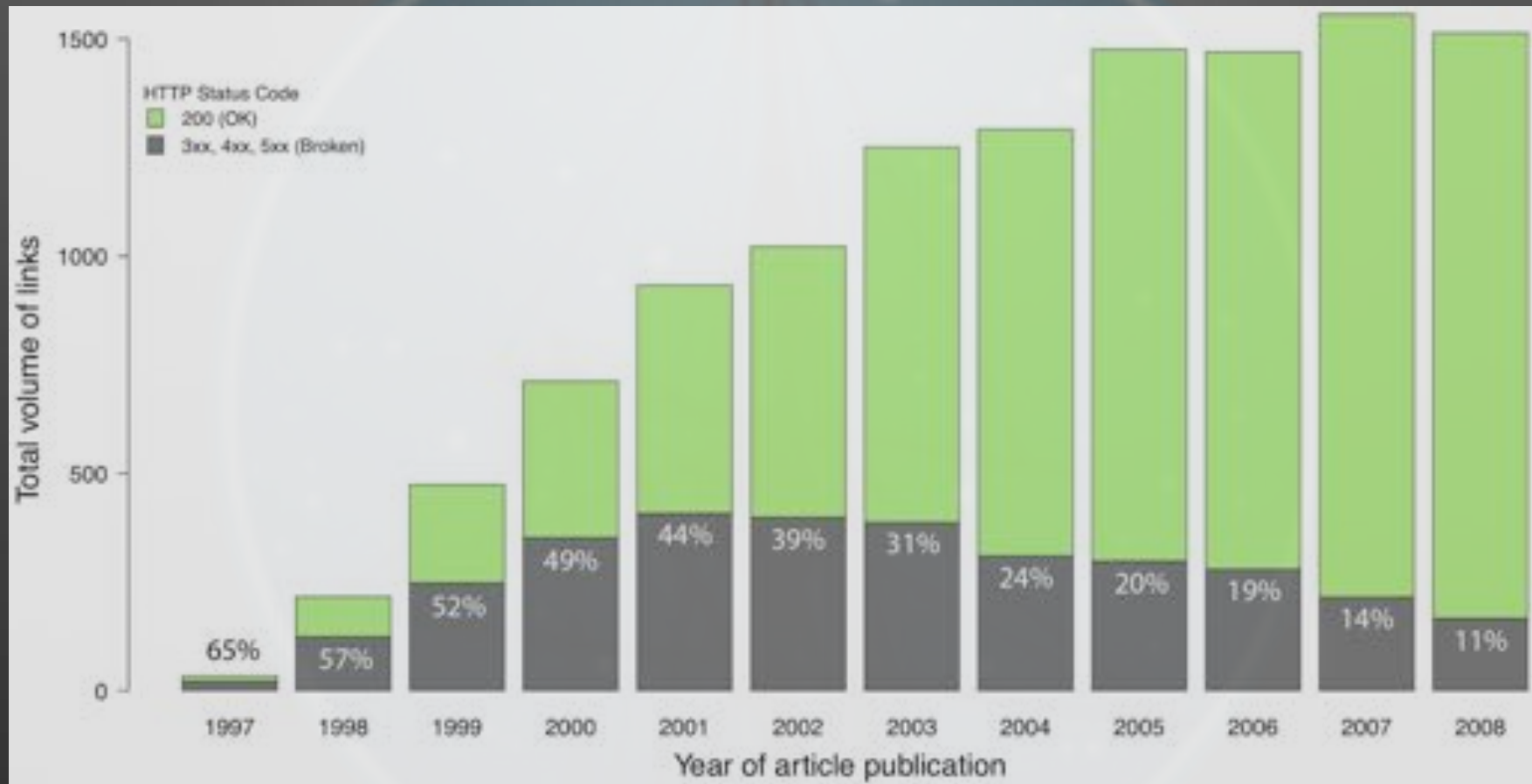
Notes: The values for all columns are taken from HyperLeda, except for columns 4 and 5, which are taken from NED. More specifically, the distance modulus $m - M$ in column 4 is the median value in NED. If the latter is not available, we adopt the redshift-derived distance modulus, modz, from HyperLeda.

Georgiev & Böker 2013

Papers with data links are more highly cited.



Links in papers decay over time.

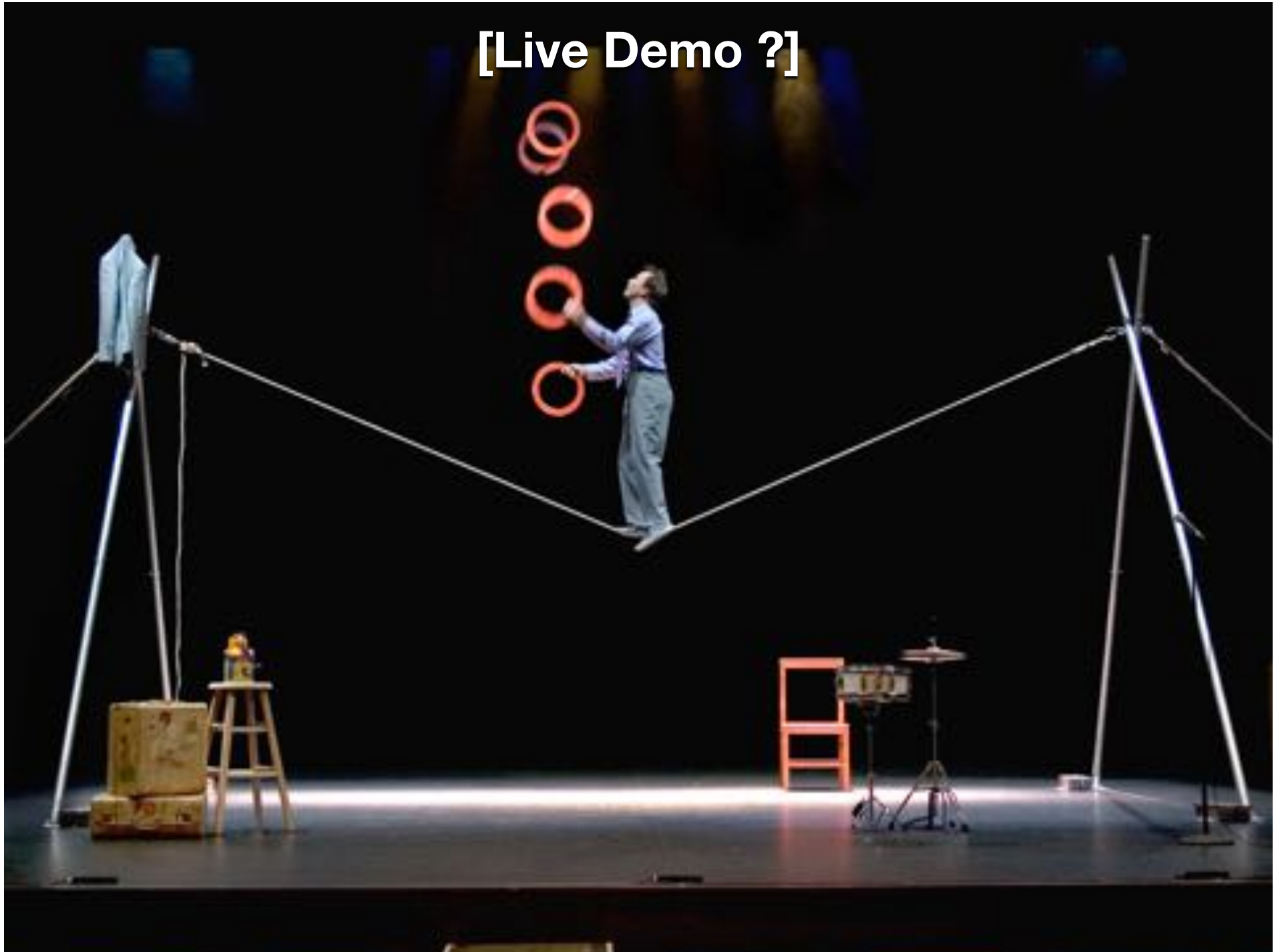


The new *MAST DOI system* makes it easy to link
MAST data in the literature

(DOI: Digital Object Identifier
i.e. “*permalink*”)



[Live Demo ?]



Suppose I'm Writing a Paper

☰
3
IONIZED GAS ACCRETION AT ...
🔍 🔄 🗨️

```

80
81 cause significant blending/sewing of the spectral lines.
82
83 Along sightline S8, two bright targets are present within
84 the COS aperture. The optical spectrum of this sightline
85 shows W5-type emission lines strongly affected by the
86 nearby K supergiant (Krause+Krause, Krause06). The (UV
87 HST)/COS spectrum obtained during our observations also
88 suggests its UV spectrum may be a combination of the two
89 stars. Its original spectrum (see Fig. 1) has broader P
90 profiles in most of the lines than
91 those of other sightlines. These stellar features
92 completely dominate the interstellar lines, which renders
93 its continuum normalization and Voigt-profile fitting
94 highly unreliable. Therefore, we decide to exclude this
95 target in our analyses. Note that this does not represent
96 a non-detection of interstellar lines along sightline S8,
97 but merely an inability of analyzing it due to strong line
98 blending. Our final target list includes 7 sightlines,
99 which are listed as S1-S7 in Table 1.
100
101 Additionally, we retrieve the (UV for Ultraviolet
102 Spectroscopic Explorer) (UVIS) spectra for our
103 sightlines from the MIST archive. The spectra span a
104 wavelength range of 305-1287Å, within which an important
105 absorption line (Si IV) is not the main focus of this work and we only
106 use it as a comparison with (Si IV), a quick spectral
107 reduction is performed. The stellar continuum within
108 1287Å of (Si IV) is normalized by fitting first
109 and second order polynomial functions. We do not attempt
110 to run Voigt-profile decomposition for this line given the
111 low S/N of the data. The normalized (Si IV) absorption
112 lines and relevant discussion is present in Section
113 3.
114
115 All these can be found in the MIST Archive here:
116 [link].
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131

```

Recompile
🔍 🗨️

The ionized gas accretion rate and velocity of the gas accretion
 onto the central star of the galaxy M81 is investigated using
 the Ly α emission line. The Ly α emission line is observed
 in the galaxy's disk and is found to be blueshifted relative
 to the rest frame of the galaxy. This blueshift is
 interpreted as evidence for gas accretion onto the
 galaxy's disk. The Ly α emission line is observed
 in the galaxy's disk and is found to be blueshifted
 relative to the rest frame of the galaxy. This
 blueshift is interpreted as evidence for gas
 accretion onto the galaxy's disk.

Table 1. M81 Targets

Name	δ (J2000)	RA (J2000)	Dec (J2000)	$v_{Ly\alpha}$ ^a (km s ⁻¹)	W ^b (Å)	W^c (Å)	Exp. T. (s)	No. Type ^d	Note
M81-LY-230	51	00 30 33.00	+30 30 33.00	-17.0	0.2	0.0	10,000	1000/W50	W5
M81-LY-240	51	00 30 34.00	+30 30 34.00	-100.7	1.5	1.5	11,270	1000/W50	Fast K-type supergiant ^e
M81-LY-404	51	00 30 39.00	+30 30 39.00	-100.7	1.0	1.0	11,000	1000/W50	Star
NGC 404	51	00 30 33.30	+30 30 33.30	-100.7	1.4	1.4	11,100	1000/W50	H II region, W50P
NGC 404	51	00 30 33.30	+30 30 33.30	-100.7	0.1	0.1	11,200	1000/W50	H II region, W50P
M81-LY-40-C	51	00 30 34.00	+30 30 34.00	-100.7	0.2	0.2	11,100	1000/W50	Star
M81-LY-404	51	00 30 39.00	+30 30 39.00	-100.7	0.1	0.1	11,200	1000/W50	W5 - S supergiant

^a Ly α blueshift from this paper, we will use position 1-6 to represent each star's name. The column is arranged in the order of galactocentric
 distance, with S1 being the closest star and S7 the most distant one. It does not follow this convention since it is not used in our analysis.

^b $v_{Ly\alpha}$, the rotation velocity of the gas disk of M81 at the position of the background star. It is derived using the (W) Ly α emission observation.
 Note the (W) Ly α emission line is used.

^c W , the projected galactocentric distance. W^c , the deconvolved galactocentric distance.

^d We do not include this star in our analysis. See Section 3.1 for the explanation.

^e (Krause et al. 2006)

^f Observed W50 stars are reported in the H II region (Krause et al. 2006). Based on available observations, we identify it as W50 by NGC 404
 and W50 by NGC 404.

^g Spectral type: S1, S2, S3, S4, S5, S6, S7, S8, S9, S10, S11, S12, S13, S14, S15, S16, S17, S18, S19, S20, S21, S22, S23, S24, S25, S26, S27, S28, S29, S30, S31, S32, S33, S34, S35, S36, S37, S38, S39, S40, S41, S42, S43, S44, S45, S46, S47, S48, S49, S50, S51, S52, S53, S54, S55, S56, S57, S58, S59, S60, S61, S62, S63, S64, S65, S66, S67, S68, S69, S70, S71, S72, S73, S74, S75, S76, S77, S78, S79, S80, S81, S82, S83, S84, S85, S86, S87, S88, S89, S90, S91, S92, S93, S94, S95, S96, S97, S98, S99, S100.

Operations
Done DCI

And I used data from MAST

IONIZED GAS ACCRETION AT ...

```
80 cause significant blending/smearing of the spectral lines.
81 Along sightline 58, two bright targets are present within
82 the COS aperture. The optical spectrum of this sightline
83 shows H $\beta$ -type emission lines strongly affected by the
84 nearby B supergiant (Schep2005, 2005). The [O III]
85 HST/COS spectrum obtained during our observations also
86 suggests its UV spectrum may be a combination of the two
87 stars. Its original spectrum (see Fig 1) has broader P
88 Cygni profiles in most of the lines than
89 those of other sightlines. These stellar features
90 completely dominate the interstellar lines, which renders
91 its continuum normalization and Voigt-profile fitting
92 highly unreliable. Therefore, we decide to exclude this
93 target in our analysis. Note that this does not represent
94 a non-detection of interstellar lines along sightline 58,
95 but merely an inability of analyzing it due to strong line
96 blending. Our final target list includes 7 sightlines,
97 which are listed as S1-S7 in Table 1.
98
99 Additionally, we retrieve the Far Ultraviolet
100 Spectroscopic Explorer (FUSE) spectra for our
101 sightlines from the MAST archive. The spectra span a
102 wavelength range of 985-1187Å, within which an important
103 absorption line (C IV  $\lambda$ 1042Å) lies. Since
104 C IV  $\lambda$ 1042 is not the main focus of this work and we only
105 use it as a comparison with C IV  $\lambda$ 1042, a quick spectral
106 reduction is performed. The stellar continuum within
107 C IV  $\lambda$ 1042 is normalized by fitting first
108 and second order polynomial functions. We do not attempt
109 to run Voigt-profile decomposition for this line given the
110 low S/N of the data. The normalized C IV  $\lambda$ 1042 absorption
111 lines and relevant discussion is present in Section
112 4.2.
113
114 All these can be found in the MAST Archive here:
115 MAST Archive.
116
117
118 \begin{figure}[t]
119 \centering
120 \includegraphics[width=\textwidth]{figures/fig1}
121 \caption{The original stellar spectra, which have been
122 binned by 5 pixels for illustration. In our analyses,
```

Recompile

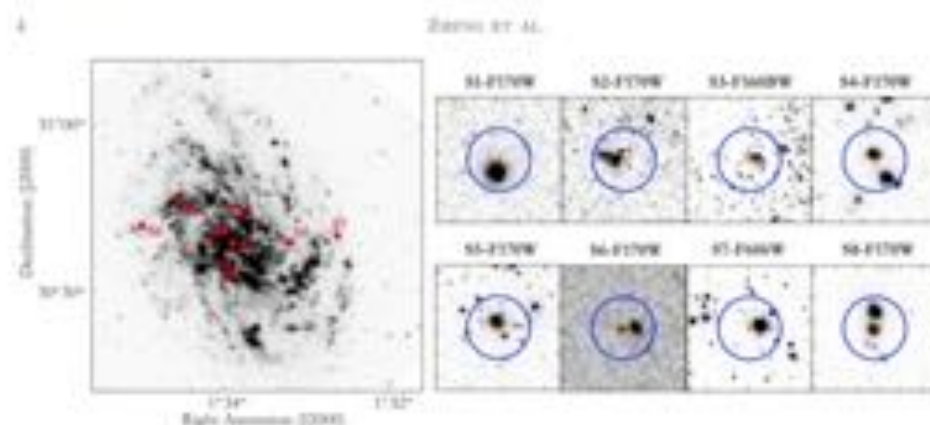


Figure 1. Left: the distribution of our sightlines in the star-forming disk of IC 348. The background image is from GALEX. It is specifically indicated by an open circle since it is not used in our analyses (see Section 4.2). Right: stellar population within the COS aperture. The background HST/WFC3 images are retrieved from the MAST archive. Images taken with the FUSE filter are downloaded from [FUSE](#), otherwise those with other filters are used. The red cross indicates the center of the COS aperture and the blue circle shows its size (2.5" in diameter).

Here of other sightlines. These stellar features completely dominate the interstellar lines, which renders its continuum normalization and Voigt-profile fitting highly unreliable. Therefore, we decide to exclude this target in our analysis. Note that this does not represent a non-detection of interstellar lines along sightline 58, but merely an inability of analyzing it due to strong line blending. Our final target list includes 7 sightlines, which are listed as S1-S7 in Table 1.

Additionally, we retrieve the Far Ultraviolet Spectroscopic Explorer (FUSE) spectra for our sightlines from the MAST archive. The spectra span a wavelength range of 985-1187Å, within which an important absorp-

pointed out that some problems may arise in terms of wavelength calibration and spectral re-binning by CalCOS (we have written their own pipelines to process the MFT/COS spectra in order to minimize the uncertainties).

To justify that CalCOS products are reliable for scientific analysis in our case, we use other authors' pipelines to calibrate and re-add the original spectra. We compare these results with the ones reduced by CalCOS. We explain these methods: [Winkler et al. \(2010\)](#), spectral re-add code (B. Winkler, private communication), and the PyCOS pipeline (C. Liang & H. Chen, private communication). Our investigation shows con-

The MAST DOI initiative is supported by the AAS Journals

Having problems? Contact the editorial office for help.

Submission Summary

Pending
Joshua E. Getmantsev
Article
N/A

Corridor and Journal

Corridor and Journal

Upload Files

Files

Manuscript Info

Title/Abstract
Author Information

Detailed Information

Enhanced Manuscript Information
Keywords

Review Material

Review Files
Review Submission

Submit Manuscript

Submit Manuscript

Save and Exit

Detailed Information

Please enter the information requested below. Required fields are marked with an asterisk (*).

Ethics Statement

Author(s) certifies that the article being submitted: (1) is original with the author(s), (2) does not infringe any copyright or violate any other right of any third parties or any obligations we may have with them, (3) is not defamatory or contrary to law, and (4) has not been previously published elsewhere and is not being considered for publication elsewhere in any form. (5) Have you received approval from all of your co-authors to submit this manuscript?

Yes, the article conforms with these stipulations.
 No, the article conflicts with one or more of these stipulations (explain in Manuscript Comments below).

Ethics Statement is required.

Manuscript Comment

Provide any additional manuscript comments such as deprecated reviewers, prior submission information, or notes to the Lead Editors.

MAST (Data hosted at Space Telescope Science Institute)

Does your manuscript directly refer to data in MAST (i.e. data from Hubble, Kepler, GALEX, IUE, etc.)?

Yes No

Why use DOIs for? Data DOIs (permanent links) allow readers to access the data you used directly from the text of your article.

How do I get one? MAST provides DOI for all data in two ways:


Find existing DOIs for catalogs (Kepler/KIC, GALEX/MCAT, etc.) and High-Level Science Products (CANDELS, K2SFF, etc.), or
Generate your own DOI using an interface for making custom collections of observations.

Please use this [link](#) to the MAST DOI site to find or generate the DOI relevant to your article's MAST datasets.

DOI*

File

MAST DOI Page



Barbara A. MIKULSKI ARCHIVE OF SPACE TELESCOPES

MAST STScI Tools Mission Search Search Website Follow Us Register

About MAST Getting Started

How to get a MAST DOI (permanent data link)

Help us provide a permanent reference to the data you used in writing your manuscript. Choose from these methods to identify all MAST data you used, and create or find a new permanent data link: a DOI. This DOI can then be included in the manuscript, which will help readers more easily find your data.

Choose one of the options below to get started:

Does your paper use...

- ▶ [A collection of specific observations?](#) (One or more observations from Hubble, Kepler, GALEX, IUE, etc.)
- ▶ [Data from a High-Level Science Product?](#) (CANDELS, K2SFF, etc.)
- ▼ [A catalog?](#) (Kepler/KIC, GALEX/MCAT, etc.)

At present, we provide a single DOI for each of the following MAST catalogs and surveys.

- [GALEX/MCAT](#)
- [Kepler/KIC](#)
- [GALEX/gPhoton](#)
- [K2/EPIC](#)
- [Hubble Source Catalog](#)
- [Guide Star Catalog 2](#)
- [Digitized Sky Survey](#)

- ▶ [An entire quarter or campaign from Kepler/K2?](#)

DOI Portal – Search by Program ID

The screenshot shows the MAST DOI Portal interface. At the top, there is a search bar with the text "Search by Program ID" and a "New Search" button. A yellow modal box is overlaid on the search bar, containing the text "add enter one or more program ID:" and a search input field with the value "13706". To the right of the input field is a "Search" button. Below the search bar, there is a "Feedback" and "About This Site" link. The main content area features a "Telescopes" section with the text "MAST: Barbara A. Mikulski" and "DOI Portal". A white pop-up box is centered on the page, containing the text "Enter your search here. This will either be one or more program IDs or an object or position, depending on which search you selected in the previous step. Run a search to continue the tutorial." and "Cancel" and "Next" buttons. Below the pop-up, there is a section titled "From this page you can:" with two bullet points: "Search for data and create DOIs. To start searching select a search and enter a target OR upload an existing list of targets. You can also search by individual Program IDs or a list of Program IDs. Add observations to the DOI Basket to create DOIs." and "View a list of DOIs associated with your user account. To view your DOIs, select 'Show my DOIs' in the collection box above." To the right of this section is a "Currently available data collections:" section with three bullet points: "MAST Observations: Millions of observations from Hubble, Kepler, GALEX, XUE, FUSE, and more." "For other data sets, visit the main MAST DOI Page." and "To access data for downloading, visit the MAST Discovery Portal." At the bottom, there is a section titled "Need more information? Check out" with two bullet points: "The DOI FAQ and the MAST DOI Home page" and "Data sets with existing DOIs (catalogs, HSBPs, etc.) at the MAST DOI Home page".

add enter one or more program ID:
13706

Enter your search here.
This will either be one or more program IDs or an object or position, depending on which search you selected in the previous step.
Run a search to continue the tutorial.

From this page you can:

- Search for data and create DOIs. To start searching select a search and enter a target OR upload an existing list of targets. You can also search by individual Program IDs or a list of Program IDs. Add observations to the DOI Basket to create DOIs.
- View a list of DOIs associated with your user account. To view your DOIs, select "Show my DOIs" in the collection box above.

See the [User's Guide](#) for more detailed documentation and [video tutorials](#). (Note: not all search features are currently available in the DOI Portal. See the [MAST Discovery Portal](#) for additional data retrieval features.)

Currently available data collections:

- **MAST Observations:** Millions of observations from Hubble, Kepler, GALEX, XUE, FUSE, and more.
- For other data sets, visit the main [MAST DOI Page](#).
- To access data for downloading, visit the [MAST Discovery Portal](#).

Need more information? Check out

- The [DOI FAQ](#) and the [MAST DOI Home page](#)
- Data sets with existing DOIs (catalogs, HSBPs, etc.) at the [MAST DOI Home page](#)

DOI Portal – Search Results

This version of the Portal is for the creation of ECRs. To download data, use the [Data Download](#) tool.

DOI PORTAL Search by... and enter one or more program ID:
Program IDs: 13706
[About Searches...](#)

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

Help Page: Program IDs: 13706

28 Total Rows

Filters
Clear Filters... Edit Filters... help...

- Keyword/Text Filter**
Filter All Columns
- Target Name**

Name	Quantity
<input type="checkbox"/> M33-PLV-444	14 of 40
<input type="checkbox"/> M33-PLV-350	14 of 40
<input type="checkbox"/> M33-PLV-016	14 of 40
<input type="checkbox"/> M33-OB-69-7	14 of 40
<input type="checkbox"/> NGC504	14 of 40
<input type="checkbox"/> M33-OB-2-4	14 of 40
<input type="checkbox"/> NGC593	14 of 40
- Target Classification**

Name	Quantity
<input type="checkbox"/> EXT-STAR	28 of 280
<input type="checkbox"/> SUPERGIANT O	14 of 140
<input type="checkbox"/> WOLF RAYET	8 of 80
<input type="checkbox"/> MAIN SEQUENCE O	14 of 40
- RA (deg)**

List of Observations
Edit Columns... Table Display: All

ID	Actions	Preview	Cutout	Mission	Instrument	Project	Filters	Wavelength
11		No Preview Available		HST	COS/PLV	DACS	GL30M	UV
12		No Preview Available		HST	COS/PLV	DACS	GL30M	UV
13				HST	COS/PLV	DACS	GL30M	UV
14				HST	COS/PLV	DACS	GL30M	UV

Astronview
01:35:01.808 +30:38:23.88 RA DEC
01:33:11.840 +30:38:53.54

Add Select Results to DOI Basket

The screenshot shows the DOI Portal interface. At the top, there is a search bar with the text "Search by... and enter one or more program ID." The search criteria is set to "Program ID" with the value "13706". Below the search bar, there is a "DOI Basket" window. The window title is "DOI Basket" and it shows "28 Total Rows" and "0 Observations Selected". The table in the basket has the following columns: Mission, Instrument, Observation ID, Filters, Wavelength, Proposal ID, and Principal Investigator. The data rows are as follows:

Mission	Instrument	Observation ID	Filters	Wavelength	Proposal ID	Principal Investigator
HST	COS/FUV	LC0906M6Q	G130M	UV	13706	PEEK
HST	COS/FUV	LC0906M7Q	G130M	UV	13706	PEEK
HST	COS/FUV	LC0906M9Q	G130M	UV	13706	PEEK
HST	COS/FUV	LC0906010	G130M	UV	13706	PEEK
HST	COS/FUV	LC0901P9Q	G130M	UV	13706	PEEK
HST	COS/FUV	LC0901PAQ	G130M	UV	13706	PEEK
HST	COS/FUV	LC0901PBQ	G130M	UV	13706	PEEK
HST	COS/FUV	LC0901010	G130M	UV	13706	PEEK
HST	COS/FUV	LC0907H2Q	G130M	UV	13706	PEEK
HST	COS/FUV	LC090700Q	G130M	UV	13706	PEEK
HST	COS/FUV	LC090711Q	G130M	UV	13706	PEEK
HST	COS/FUV	LC0907010	G130M	UV	13706	PEEK
HST	COS/FUV	LC0902010	G130M	UV	13706	PEEK
HST	COS/FUV	LC0903010	G130M	UV	13706	PEEK
HST	COS/FUV	LC0904010	G130M	UV	13706	PEEK
HST	COS/FUV	LC0908W5Q	G130M	UV	13706	PEEK
HST	COS/FUV	LC0908W6Q	G130M	UV	13706	PEEK
HST	COS/FUV	LC0908W7Q	G130M	UV	13706	PEEK
HST	COS/FUV	LC0908010	G130M	UV	13706	PEEK
HST	COS/FUV	LC090201Q	G130M	UV	13706	PEEK
HST	COS/FUV	LC090200Q	G130M	UV	13706	PEEK
HST	COS/FUV	LC090200Q	G130M	UV	13706	PEEK
HST	COS/FUV	LC090200Q	G130M	UV	13706	PEEK

DOI Portal – Search by Position



DOI Portal – Select More Results

This version of the Portal is for the creation of DOIs. To download data, use the [Data Download Tool](#).

DOI PORTAL Search by... and enter target:
Object name or position: M33 r=0.3 Search
About Searches... Show Examples... Favorite Search

















Upload Target List My DOI Basket: 30 observations User Manual/Help | Leave Feedback | About This Site

Help Page Program ID: 13706 MAST: M33 r=0.3 AstroView

Displaying 19 of 3069 Total Rows MESSIER 33, radius: 0.30000"

Filters
Clear Filters Edit Filters... Help...
[x] spectrum (19 of 479)
- Mission
Name Quantity
[x] HST (5 of 2628)
[x] SWFT (8 of 104)
[x] TUE (0 of 94)
[x] GALEX (0 of 20)
[x] FUSE (19 of 19)
[x] HUT (0 of 0)
- Instrument
Name Quantity
[x] FUSE (19 of 19)
[x] HUT (0 of 0)
Show 23 More
- Project
Name Quantity

List of Observations
Edit Columns... Table Display: All

	Actions	Preview	Cutout	Target Name	Mission	Instrument	Project
<input checked="" type="checkbox"/>	 			M33-LIT236	FUSE	FUV	
<input type="checkbox"/>	 			M33-FUV444	FUSE	FUV	
<input type="checkbox"/>	 			M33-595	FUSE	FUV	
<input type="checkbox"/>	 			M33-595	FUSE	FUV	

AstroView
01:33:50.890 +30:39:36.79 RA DEC
01:33:50.890 +30:39:36.79
+ -

DOI Portal – Create DOI for Selected Items

DOI Basket

40 Total Rows 40 Observations Selected

Edit Columns... Table Display: All

Filters		Mission	Instrument	Observation ID	Filters	Waveband	Proposal ID	Principal Investigat
<input checked="" type="checkbox"/>	1	GALEX	GALEX	24968964861811752...	FUV	UV		
<input checked="" type="checkbox"/>	2	GALEX	GALEX	24968964861811752...	NUV	UV		
<input checked="" type="checkbox"/>	3	FUSE	FUV	c0580201000		UV	C058	HUTCHINGS
<input checked="" type="checkbox"/>								ITCHINGS
<input checked="" type="checkbox"/>								ITCHINGS
<input checked="" type="checkbox"/>								EL
<input checked="" type="checkbox"/>								EL
<input checked="" type="checkbox"/>								QUEUX
<input checked="" type="checkbox"/>								tchings
<input checked="" type="checkbox"/>								ITCHINGS
<input checked="" type="checkbox"/>								IEEN
<input checked="" type="checkbox"/>								IEEN
<input checked="" type="checkbox"/>								EK
<input checked="" type="checkbox"/>								EK
<input checked="" type="checkbox"/>								EK
<input checked="" type="checkbox"/>	16	HST	COS/FUV	LCO906010	G130M	UV	13706	PEEK
<input checked="" type="checkbox"/>	17	HST	COS/FUV	LCO901P9Q	G130M	UV	13706	PEEK
<input checked="" type="checkbox"/>	18	HST	COS/FUV	LCO901PAQ	G130M	UV	13706	PEEK
<input checked="" type="checkbox"/>	19	HST	COS/FUV	LCO901PBQ	G130M	UV	13706	PEEK
<input checked="" type="checkbox"/>	20	HST	COS/FUV	LCO901010	G130M	UV	13706	PEEK
<input checked="" type="checkbox"/>	21	HST	COS/FUV	LCO907HZQ	G130M	UV	13706	PEEK
<input checked="" type="checkbox"/>	22	HST	COS/FUV	LCO90710Q	G130M	UV	13706	PEEK

Enter DOI metadata...

DOI Creator(s): Joshua Peek

Dataset Title: Data from "HST/COS OBSERVATIONS OF IONIZED GAS ACCRET

About this data: COS spectra from Proposal 13706, as well as archival COS and FUSE spectra and GALEX imaging.

Remove observations from DOI basket after DOI is created?:

Create DOI

MAST DOI Portal

DOI creation success!

Please note the following information for your records. If you are creating a DOI for a submission to AAS Journals, you can copy and paste the following information into the appropriate fields on the submission page:

DOI: 10.17909/T9FG6R

Dataset Title: Data from "HST/COS OBSERVATIONS OF IONIZED GAS ACCRETION AT THE DISK-HALO INTERFACE OF M33"

See how users will view your DOI [here](#). An email with your DOI details has also been sent to your account.

OK

Tell AAS About the DOI

Detailed Information

Enhanced Manuscript Information

Keywords

Review Material

Review Files

Review Submission

Submit Manuscript

Submit Manuscript

Save and Exit

Save and Continue

MAST (Data hosted at Space Telescope Science Institute)

Does your manuscript directly refer to data in MAST (i.e. data from Hubble, Kepler, GALEX, IUE, etc.)?

Yes No

What are DOIs for? Data DOIs (permanent links) allow readers to access the data you used directly from the MAST website.

How do I get one? MAST provides DOIs for its data in two ways:

Find existing DOIs for catalogs (Kepler/K2C, GALEX/MCAT, etc.) and High-Level Science Products (HLSP) or
Generate your own DOI using an interface for making custom collections of observations.

Please use this [link](#) to the MAST DOI site to find or generate the DOI relevant to your article's MAST data.

DOI*

Put the DOI in my Paper

scopic Explorer (FUSE) spectra for our sightlines from the MAST archive. The spectra span a wavelength range of 905-1187Å, within which an important absorption line O VI λ 1032Å lies. Since O VI is not the main focus of this work and we only use it as a comparison with Si IV, a quick spectral reduction is performed. The stellar continuum within $\pm 1000 \text{ km s}^{-1}$ of 1032Å is normalized by fitting first and second order polynomial functions. We do not attempt to run Voigt-profile decomposition for this line given the low S/N of the data. The normalized O VI absorption lines and relevant discussion is present in Section 6.1.

All these can be found in the MAST Archive here:

[\[10.17909/T9FG6R\]](https://doi.org/10.17909/T9FG6R).

2.2. Wavelength Calibration and Spectral Co-addition

As mentioned in Section 2.1, each sightline is observed with four exposures which result in four spectra that need to co-add. The standard CalcOS pipeline provides data reduction for spectral co-adding and wavelength calibration, which has an accuracy of $\sim 0.06\text{Å}$ ($\sim 15 \text{ km s}^{-1}$ at 1260Å). However, several authors have

DOI Landing Page

Barbara A. MIKULSKI ARCHIVE FOR SPACE TELESCOPES

MAST STScI Tools Mission_Search Search Website Follow Us Register

About MAST Getting Started

Information about DOI 10.17909/T9FG6R

DOI Creator(s): Joshua Peek

Date: 2016-05-05

Title: Data from MAST COS OBSERVATIONS OF IONIZED GAS ACCRETION AT THE DISK-HALO INTERFACE OF M82

Display Data: View data for [doi:10.17909/T9FG6R](https://doi.org/10.17909/T9FG6R)

About this data: COS spectra from Proposal 13706, presented as archival COS and FUSE spectra and color-mapping.

Last Updated: 2016-05-05 19:17:37

This DOI is provided by the MAST archive at Space Telescope Science Institute

- [DOI FAQs](#)
- [DOI Main page](#)

Top of Page Copyright Suggestions Email Us Printer Friendly page Contacts Last Modified: Apr 04, 2016 14:22

MAST Portal Shows the Data

The screenshot displays the MAST Portal interface. At the top, there is a search bar with the text "Select a collection..." and "and enter target:". Below this, there are several navigation and utility buttons: "About Collections...", "Upload Target List", "My Downloaded Observations", "User Manual/Help", "Leave Feedback", and "About This Site".

The main content area is divided into two primary sections. On the left is the "Filters" panel, which includes sections for "Keyword/Text Filter", "Product Type" (with checkboxes for "spectrum" and "image"), "Mission" (with checkboxes for "HST", "FUSE", and "GALEX"), "Instrument" (with checkboxes for "COS/FUV", "FUV", and "GALEX"), and "Project" (with a checkbox for "DACS").

The central section is the "List of Observations" table. It features a header with "Edit Columns...", "Table Display: All", and "Print". The table columns are "Actions", "Preview", "Cutout", "Mission", "Instrument", "Project", "Filters", and "Waveband". The table contains four rows of observation data, each with a checkbox, a number (34, 35, 36, 37), and a preview image of a spectrum.

On the right side of the interface is the "AstroView" panel, which displays a large astronomical image of a galaxy. At the top of this panel, there is a coordinate display: "01:33:53.589 +30:38:51.62" and "01:33:53.589 +30:38:51.62". A "RA DEC" label is also present. At the bottom of the AstroView panel, there are zoom in (+) and zoom out (-) buttons, and a gear icon for settings.