



MAST Multimission Archive at Space Telescope

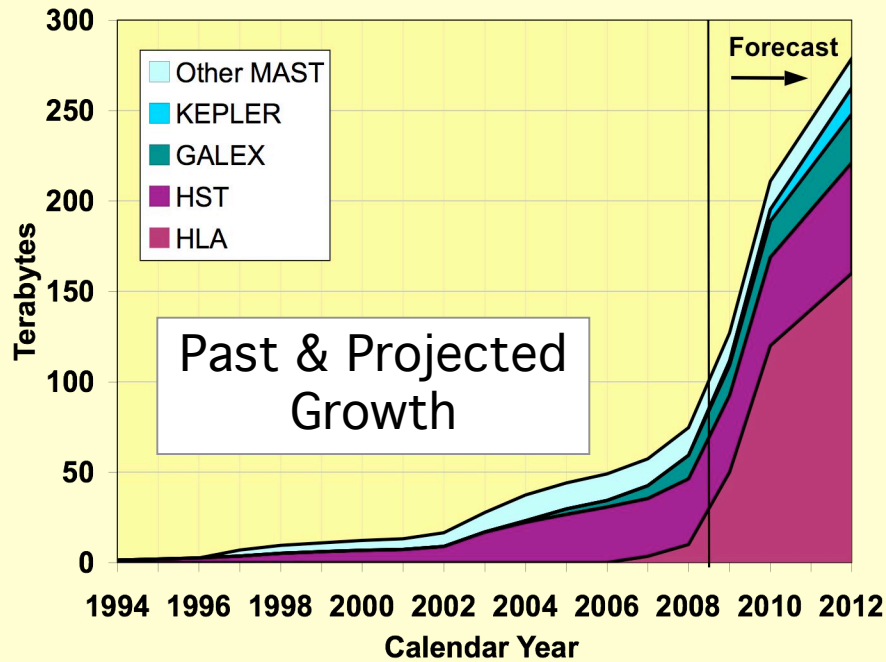
MAST Users Group – July 18, 2008

Highlights of MAST Activities

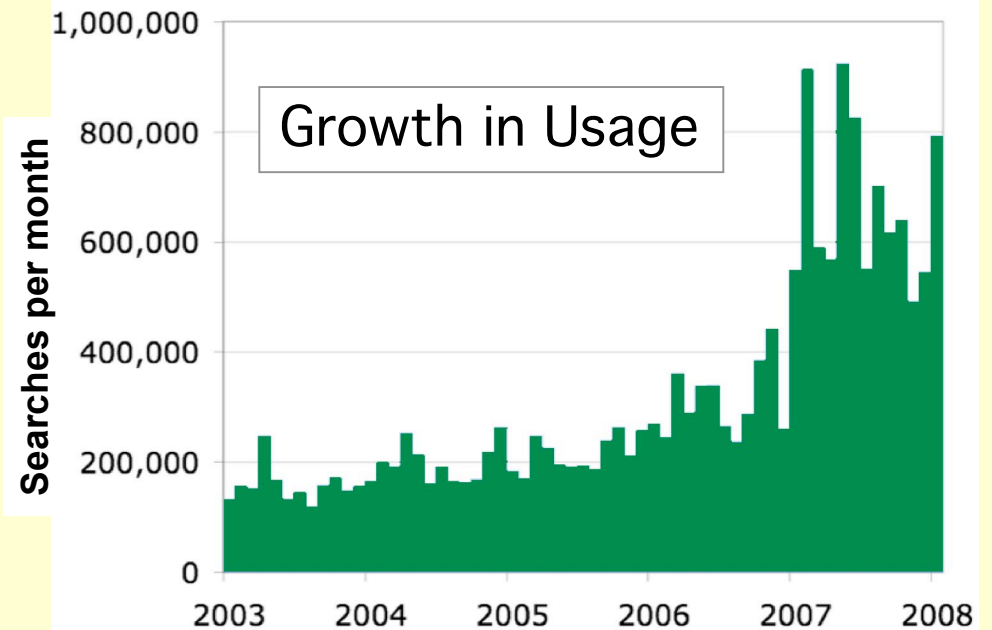
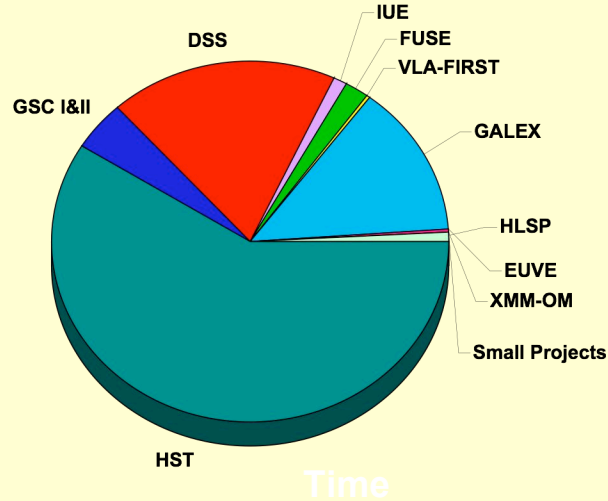
Rick White

MAST Users Group

2008 July 18

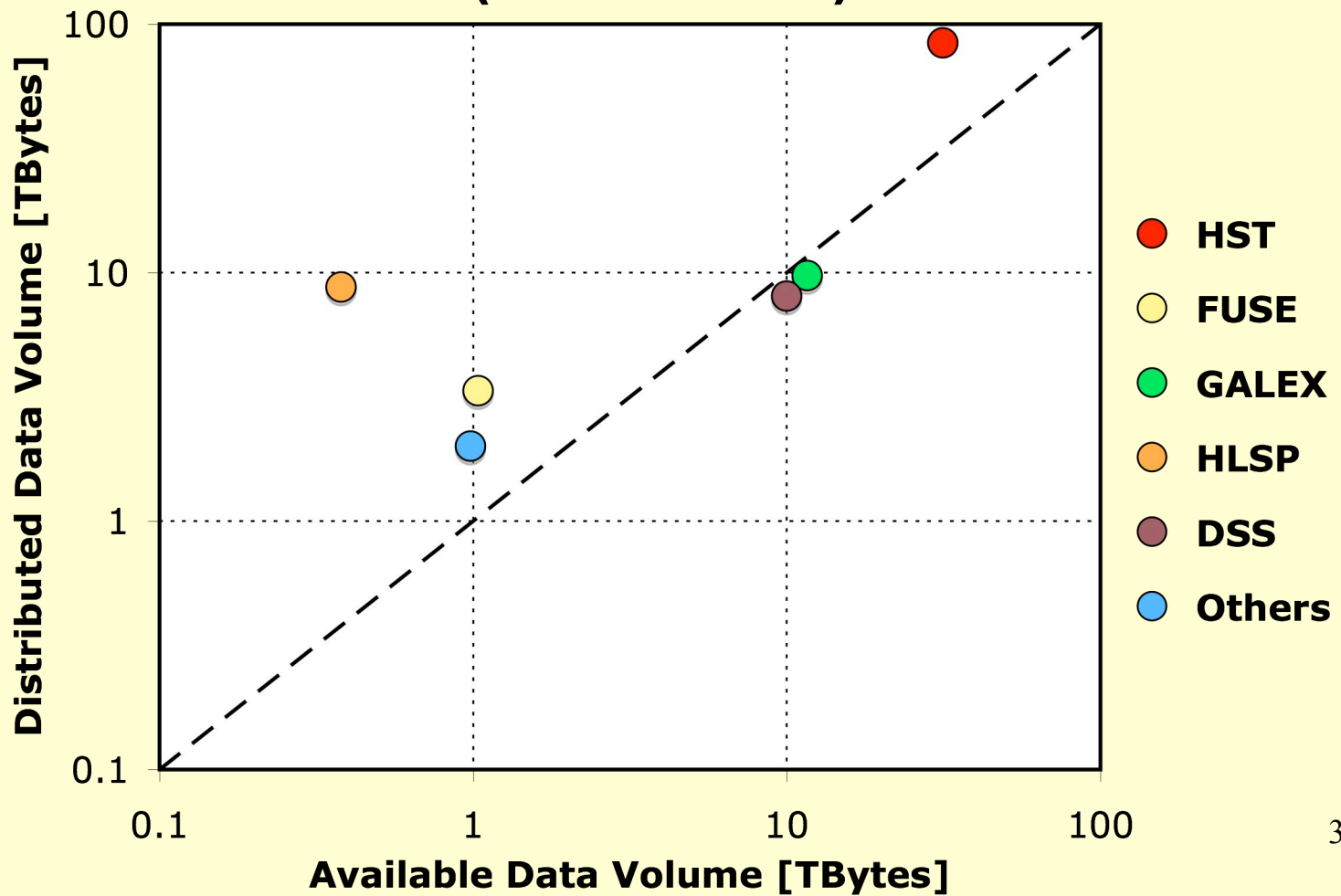


MAST Data & Usage Growth



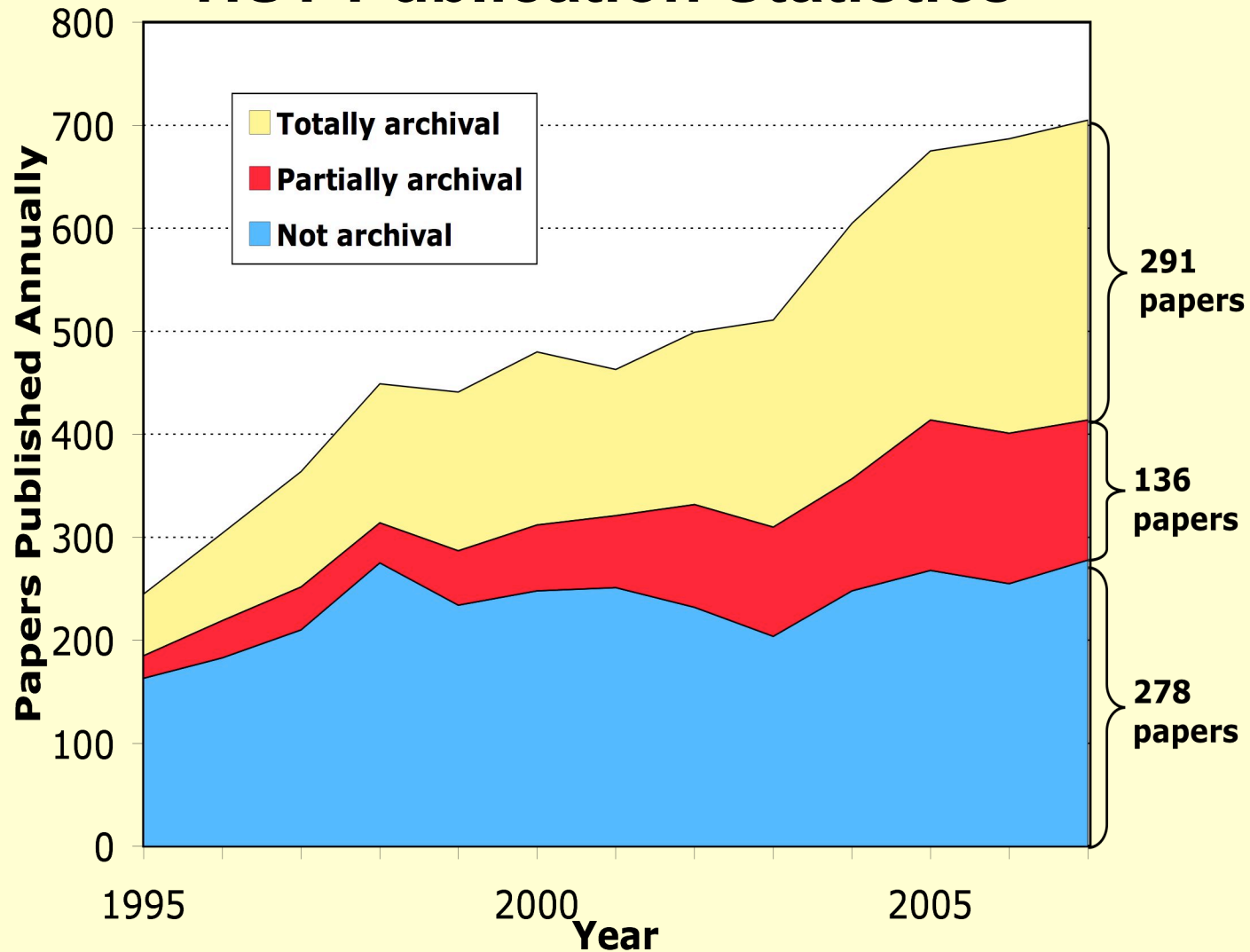


Distribution and Data Volume (2004–2007)



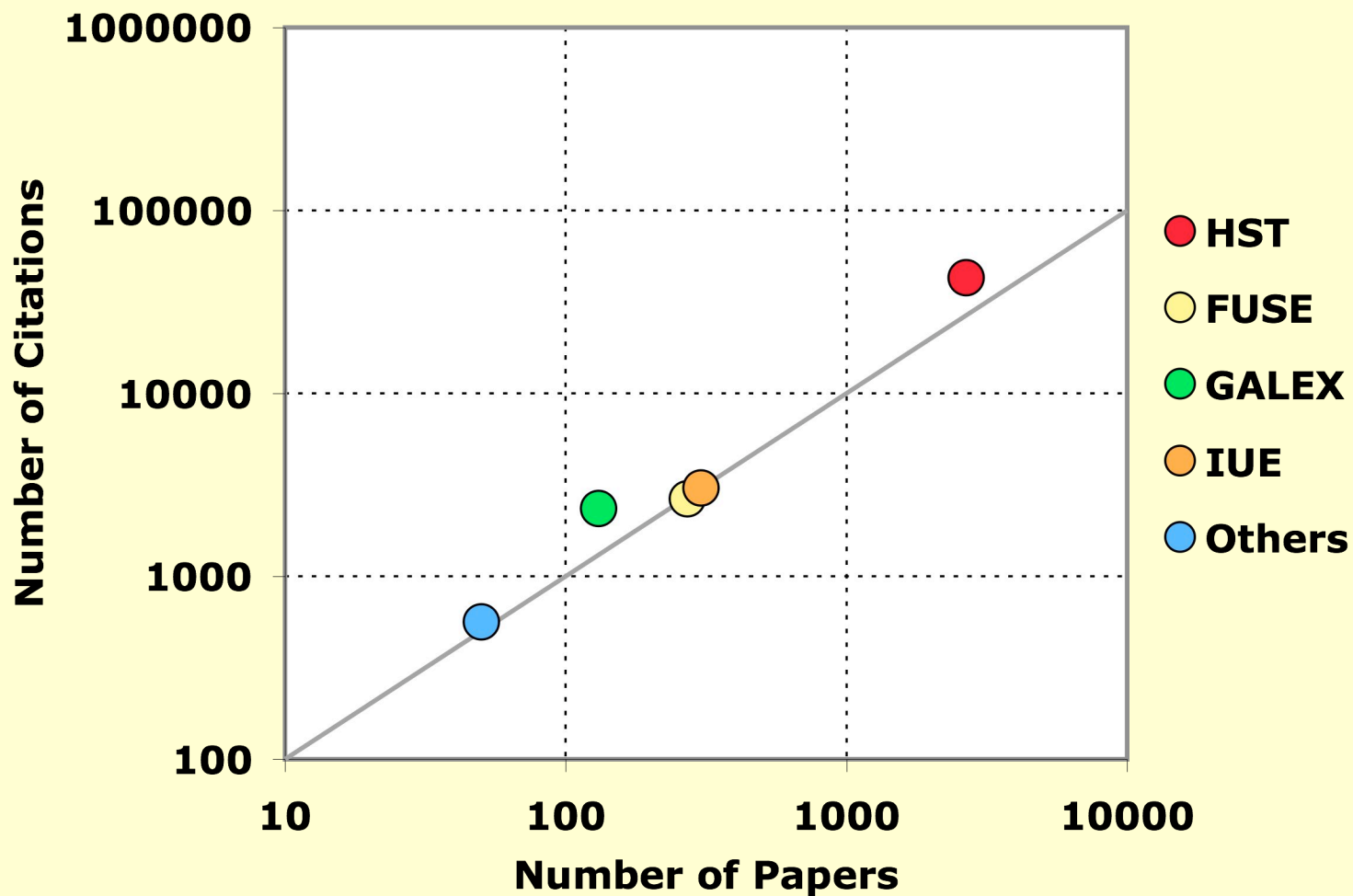


HST Publication Statistics



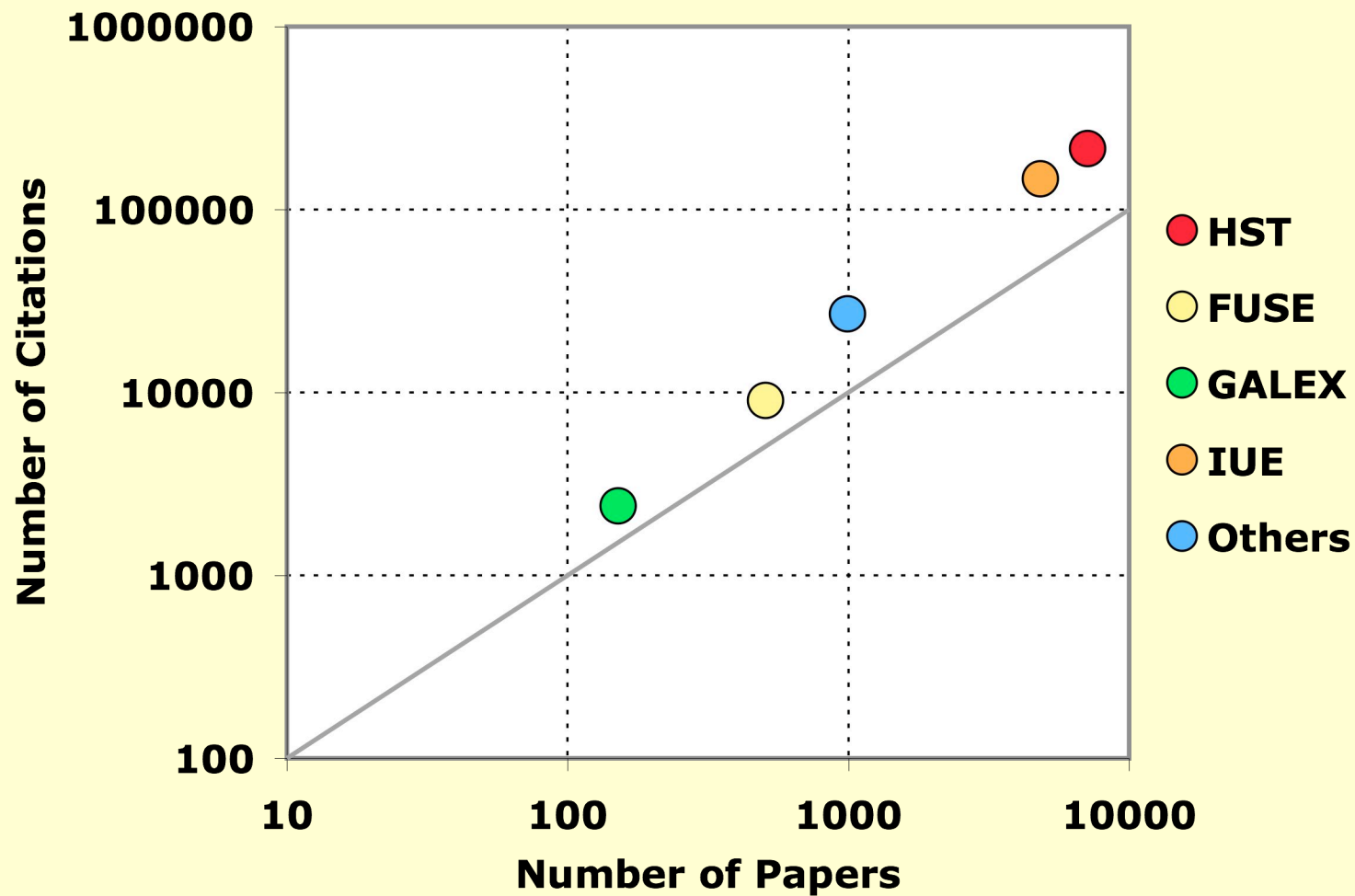


Citations versus Publications (2004–2007)





Citations versus Publications (All Years)





MAST/ASB Staffing Changes

- Departure:
 - Inga Kamp left in December for a faculty position at Univ. of Groningen
- Additions:
 - Theresa Dower (NVO software engineer)
 - November 2007
 - Kim Gillies (HLA/NVO software engineer)
 - February 2008
 - From Gemini South
 - Rachel Somerville (archive scientist)
 - Returned to STScI March 2008



Current ASB & MAST/NVO Staff

Theresa Dower	Tony Rogers
Dorothy Fraquelli	Bernie Shiao
Kim Gillies	Myron Smith
Tim Kimball	Rachel Somerville
Karen Levay	Randy Thompson
Charlie Loomis	Shui-Ay Tseng
Brian McLean	Rick White

(All are not full-time on MAST/ASB; does not include operations or most Hubble Legacy Archive staff; some are funded through NVO)

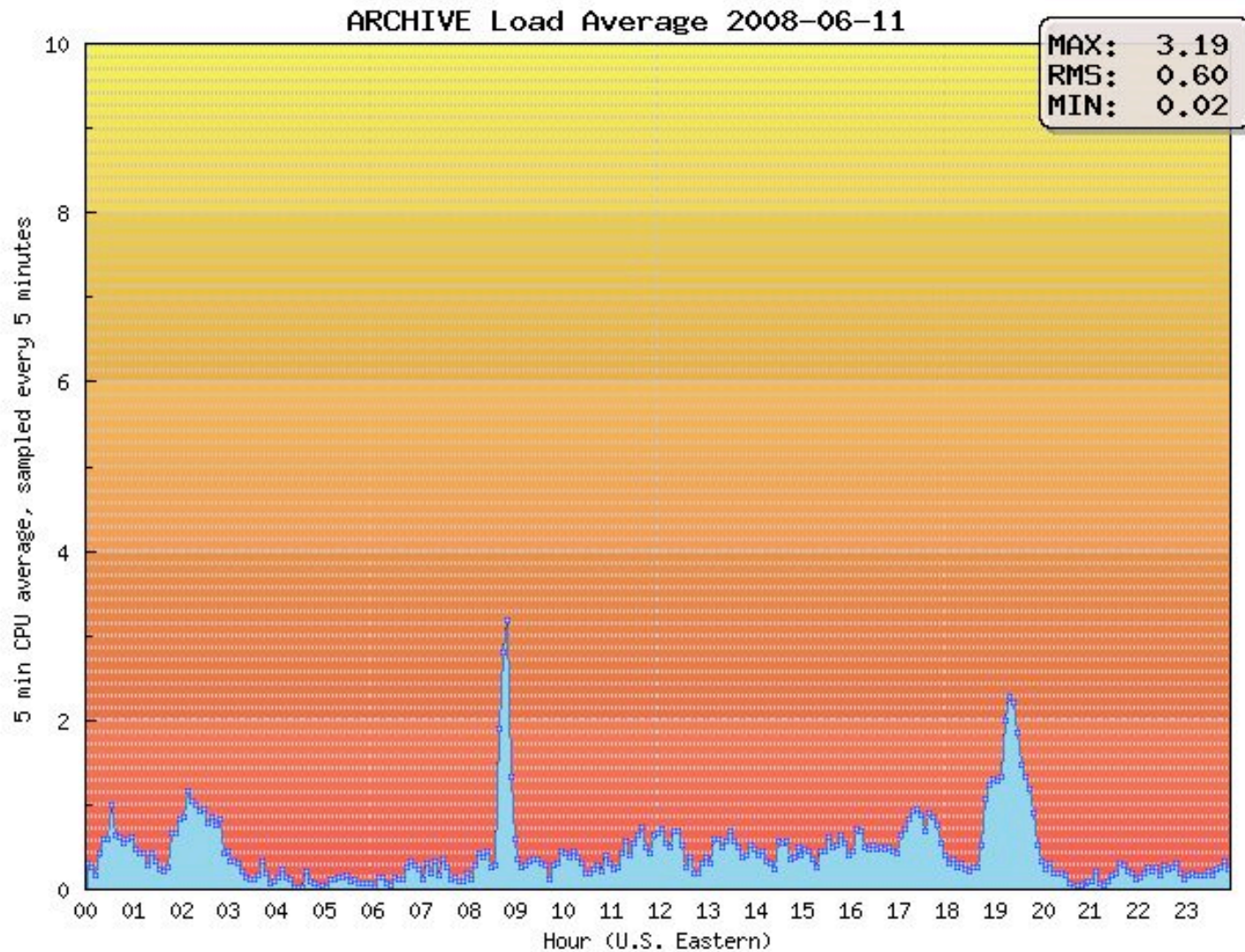


2007–2008 Highlights

- Cross-mission activities
 - New web servers in August 2007
 - Many interface enhancements (sortable tables, bigger search results, new name resolver, user forum, ...) *[R.Thompson]*
 - Revised archive handbook
 - NVO: *[G.Greene]*
 - SSAP/Spectral container work *[R.Thompson]*
 - Spectral classification project *[M.Smith]*
 - Google Sky/Microsoft World-Wide Telescope *[B.McLean]*
- HST
 - Servicing Mission 4 – 2008 October 8 *[C.Biagetti]*
 - COS, WFC3, ACS/STIS repair, gyros, batteries, ...
 - Starview retired, “Starview on the Web” is coming
 - WFPC2 closeout work underway *[V.Dixon]*



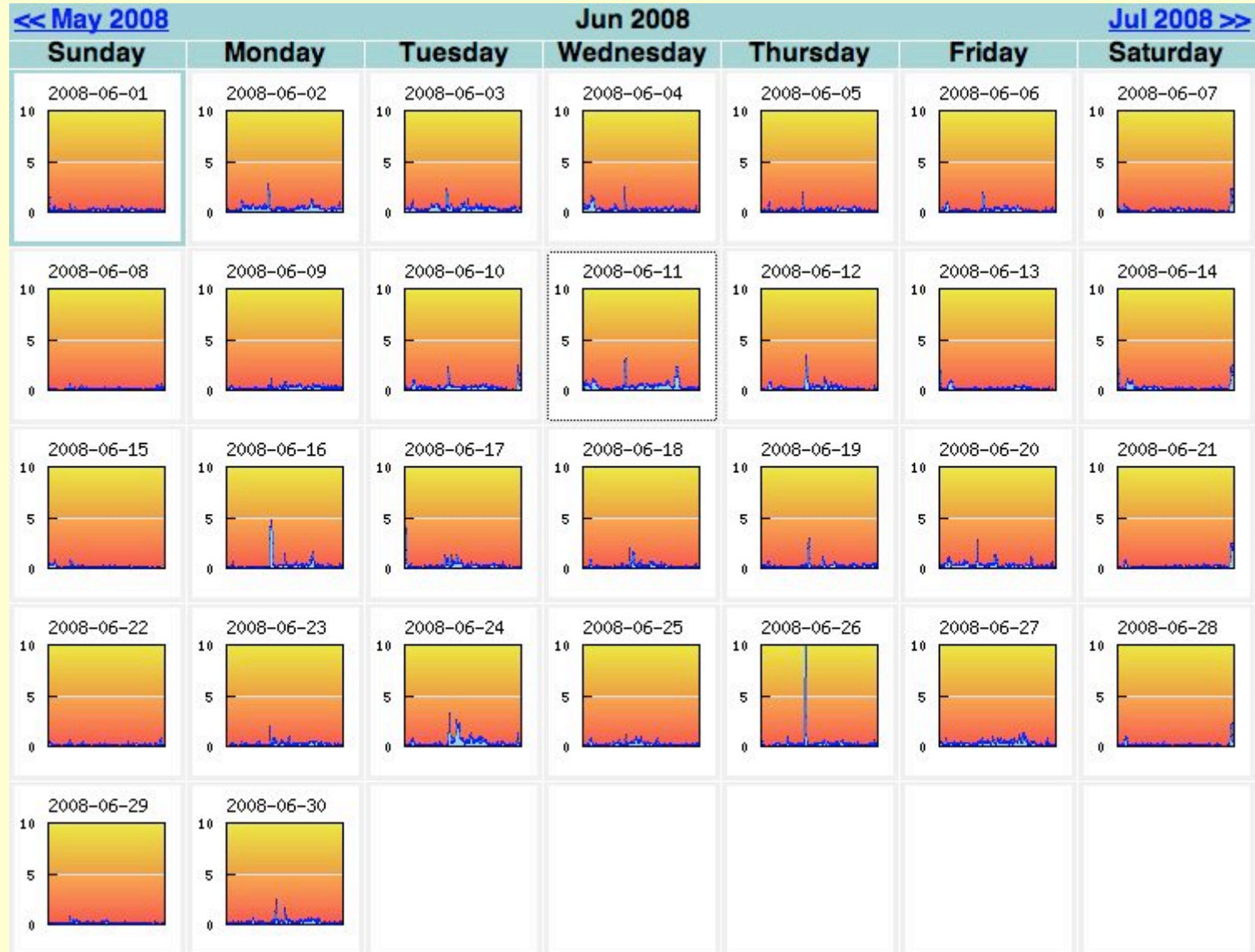
Effect of New Servers on Load Average





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HLA Footprints

Inventory Images Footprints **NICMOS Grism (ST-ECF)** Help

Pleiades r=0.5 RA = 56.869089 Dec = 24.105313 r = 0.500000 [03:47:28.581 +24:06:19.13]

Instrument	#Footprints
<input checked="" type="checkbox"/> ACS	22
<input checked="" type="checkbox"/> WFPC2	67
<input checked="" type="checkbox"/> STIS	34
<input checked="" type="checkbox"/> NICMOS	90
<input checked="" type="checkbox"/> NICMOS GRISM	11
<input checked="" type="checkbox"/> FOS	6
<input checked="" type="checkbox"/> GHRS	50

DSS Image On Off

Data Product
 Exposure(Level 1)
 Combined(Level 2)
 Best Available

Submit

To Zoom, go to Advanced Search and enter a smaller value for Radius (smallest value 0.01 degrees)

Click here for NVO STC Web Services

Reset Selection Save Table

2007–2008 Highlights

- Hubble Legacy Archive (HLA) *[B. Whitmore]*
 - Early Data Release (EDR) in July 2007
 - DR1 in February 2008
 - DR2 in August 2008

- FUSE wrapup *[M. Romelfanger]*
 - Reprocessing complete in August
- GALEX *[M. Smith]*
 - GR4 release (huge volume, AIS complete)
 - GALEX Map interface released
 - GalexView interface released

GalexView

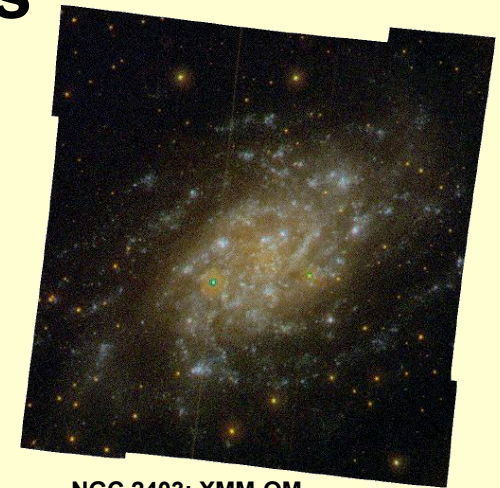
Instrument	Value	ra_cent	dec_cent	fov_exptime	fov_exptime	fov_exptime	imagingTiltium
NGA_M31_M0504	Download Imaging Value	11.59615	41.53788	3599.7	3599.7	3599.7	5403
NGA_M31_M0500	Download Imaging Value	10.17134	40.83624	1811.3	1811.3	1811.3	5403
NGA_M31_M0517	Download Imaging Value	10.59574	41.58024	1533.36	1533.36	1533.36	5403

GALEX Map



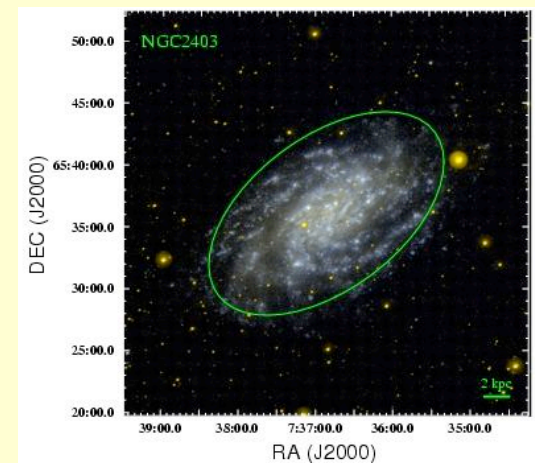
2007–2008 Highlights

- XMM-OM
 - New data added in March
- Swift UVOT
 - Similar to XMM-OM, getting started
- Kepler [*D.Fraquelli*]
 - Launch still planned for February 2009
 - Basic archive infrastructure and interfaces done
 - Archive user guide



NGC 2403: XMM-OM
U, UVW1 (300 nm), UVM2 (230 nm)

NGC 2403: GALEX Atlas of Nearby Galaxies

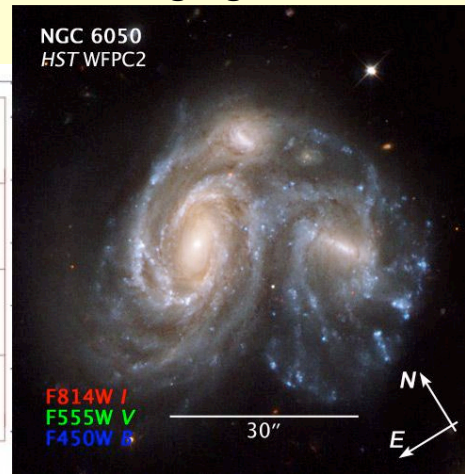




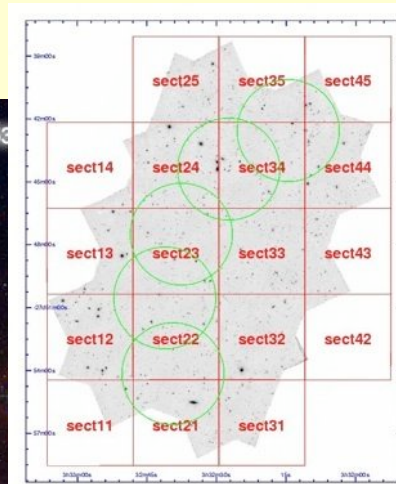
HLSP Highlights

- Numerous new High Level Science Products [*K.Levay*]
 - GOODS v1.9, FUSE Magellanic Cloud, HST 3CR snapshots, STAGES, GHOSTS, PEARS, STIS Next Generation Spectral Library, Merging Galaxies, etc.

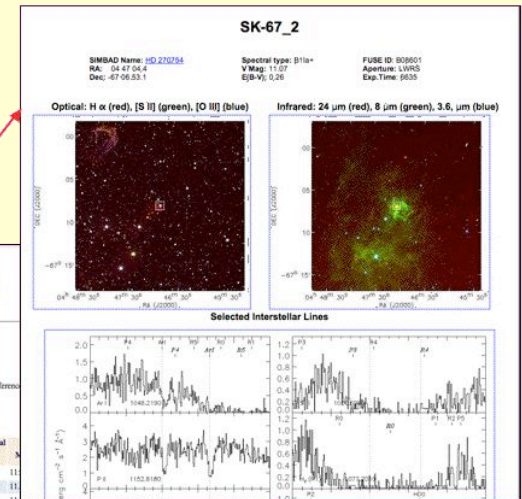
Merging Galaxies



PEARS



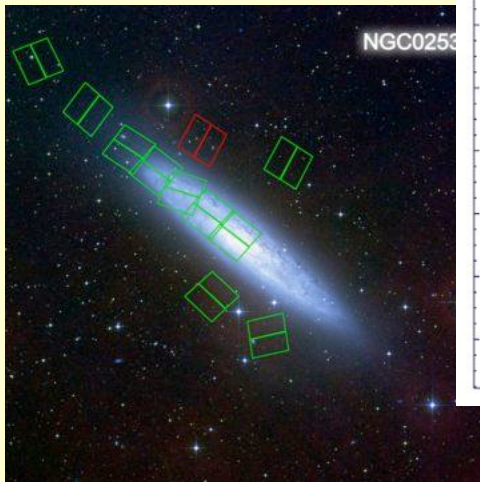
FUSE Magellanic Clouds



Main FUSE Magellanic Cloud page

Mark	Data ID	Target Name	SIMBAD Name	RA (J2000)	Dec (J2000)	Spectral Type	Spectral Type Ref
<input type="checkbox"/>	F10307	SK-67_10	HD 268600	04 50 18.96	-67 39 37.9	O9.7Ib	W32
<input type="checkbox"/>	F11723	SK-67_14	HD 268685	04 54 31.92	-67 15 24.9	B1.5Ia	F88
<input type="checkbox"/>	F11724	SK-69_52	HD 268667	04 57 48.50	-69 52 22.0	B2Ia	F88
<input type="checkbox"/>	F11730	SK-68_52	HD 269050	05 07 20.40	-68 32 09.6	B0Ia	W72
<input type="checkbox"/>	F11728	SK-69_104	HD 269357	05 18 59.57	-69 12 54.7	O6Ib(O)	W36c
<input type="checkbox"/>	A08902	SK-68_75	HD 269463	05 23 28.52	-68 12 22.8	B1I	Z01
<input type="checkbox"/>	A13301	SK-67_166	HD 266698	05 31 44.31	-67 38 00.6	O4I+	W72

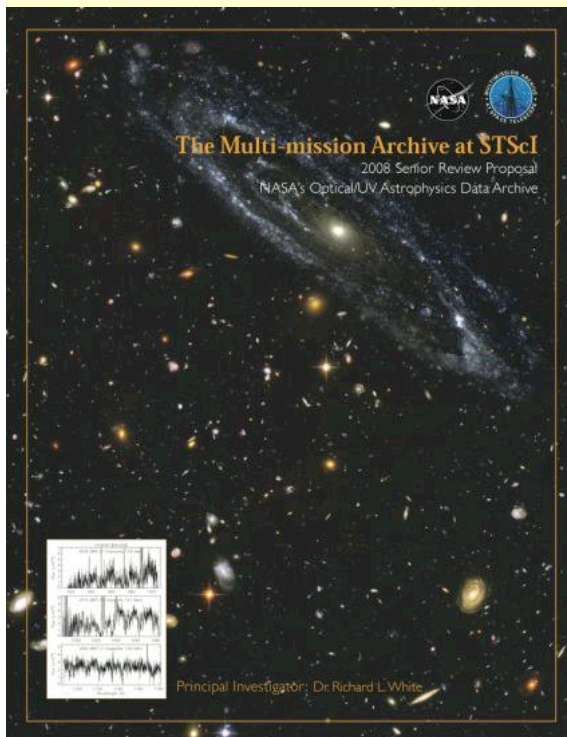
GHOSTS





MAST Senior Review

- NASA Senior Review
 - MAST and other NASA archive centers are reviewed by NASA HQ every 4 year to set funding
 - Proposal submitted May 16, presentation at HQ June 17
 - All contributed to proposal
 - White, Whitmore, McLean at presentation
 - Major change: HLA included (at directive of NASA)





Highlights of Senior Review Proposal

- Support active missions (HST, GALEX, Kepler, XMM-OM, Swift UVOT)
- Fulfill the promise of the HLA project
- Merge HLA, MAST
 - Incorporate all MAST missions into HLA (footprints, interactive display, etc.)
 - Extend MAST capabilities (esp. GALEX) to HLA
- Science keyword index for archive
- Time-domain search tools
- Other science enhancement projects: user workspace, GALEX/SDSS database (with JHU), upgraded Internet bandwidth, ...



MAST Senior Review (cont.)

- Presentation and proposal were well-received
- Major issue: Budget guideline did not include support for HLA
 - Twice the guideline budget is needed for current MAST plus HLA projects
 - Not clear whether the review panel was given the resources to support HLA
- Results expected (according to rumor) in August



2007 MUG Report

- *Publicize MAST in AAS newsletter, special AAS sessions*
 - Nothing done yet...
- *Make home page easier to navigate*
 - HLA link at top level
 - Getting Started page has been enhanced (direct links to tools, other changes) but doesn't replace top page
 - HLA DR1 has a shopping cart (wait to see how that is received)
 - Further improvements planned, but difficult to strike right balance between simplicity, exposing all options



2007 MUG Report (cont.)

- *MAST should not reproduce what NVO does but keep NVO requirements in mind*
 - We concentrate on making our data available as VO services
 - Important to stay involved with VO standards development to ensure suitability for MAST data
 - Note HLA has “VO inside” – uses VO protocols for internal communication
- *Don't expect users to know SQL (e.g., it's hard to find GALEX data on specific objects)*
 - GalexView is a big step forward on this
 - HLA has another style of SQL-free query interface



2007 MUG Report (cont.)

- *GALEX: Cutouts would be useful, add tile number to output, provide additional info on columns, show “Download Images” icon in search results*
 - Working on all of these, GalexView provides some
 - VO SIAP cutouts possible now; cutout access through GalexView planned within the next year
 - Integration of other MAST missions with HLA will make cutouts possible for all imaging missions
 - *Aside:* Suggestions and comments on buttons, controls, columns, etc., are welcome any time to help@stsci.edu



2007 MUG Report (cont.)

- *Get calibrated spectra in ASCII format, error maps on images, detection thresholds for images*
 - ASCII format available (maybe could be easier to find)
 - Error maps provided where possible (e.g., in HST/HLA images)
 - Using HLA catalogs for detection threshold assessment