

Librarians' Brave New World

Jill Lagerstrom
Chief Librarian, STScI
IAU General Assembly
August 3, 2009

I. The New HST Bibliography

A Focus on Methodology

II. “Renovations” Survival Guide

Downsized? Make the most of it

Why bibliography?

- Productivity and Impact
- Decision making
- Political good will
- Tells a story
- Part of academic culture

Methodology Matters

- Age of Searching
- Age of Attention
- Age of Outcomes

Be a good consumer of statistics!
Create data sets responsibly!

Methodology :

Searching

- FULL TEXT search of Major Astronomy Journals (eyeball, Adobe then FUSE)
- Search string = HST Hubble and all instruments
- Weed out “false hits” – ACS can stand for “Attitude Control System” or “Advanced Camera for Surveys”

Methodology :

Selection Criteria

We select:

Refereed papers that use HST data to reach a scientific conclusion, whether previously published or not.

Don't select :

*Instrument papers, Other conclusions based on HST,
Call for future observations, Target selection alone,
Overlay image alone.*

Methodology :

Tagging

- Instruments used
- Program IDs
- Automated classification of archival, not archival, partly archival

The Publications Database

Finally :

- 1. Put it in a searchable database**
- 2. Connect to the ADS and MAST Data Archive**
- 3. Make it public with a good description of methodology**

[DEMO](#)
[ADS Filter](#)

I. Challenges

Comparisons : Buyer Beware!

Know your datasets! Like with like?

- Are these papers systematically collected? Or provided on a volunteer basis?
- Did the collector search the abstract or the full text?
- What journals are searched?
- How up-to-date?
- What can we do about it? Is it possible to have a set of best practices? To do this fairly?

II. Challenges

Search responsibly!!!

- Recall and Precision must be considered in any systematic search
- Using only abstracts is an easy yet imprecise way of finding papers
- Is the presence of a single word in an abstract an index of the content of that article? No!

g processes during PMS evolution
ne relative relevance of the contri-
s is partially caused by the similar
l temperatures ($10^{4.5}$ – $10^{4.8}$ K) of
ponents in the circumstellar envi-
layer, the outflow, and the accre-
temperature of the plasma makes
(~ 70 km s $^{-1}$) leaving ultraviolet
oring as the only technique to res-
s since variability timescales are
for the various components (see,
igo 2007).

real targets to unveil some of the
circumstellar accretion disks are
these systems since the strong
a into rings. The inner boundary
shed outward by the binary orbit
ch individual star is not locked
ed that a strong coupling between
ne stellar magnetic fields ought
spheric/magnetospheric heating.
spheric properties of close PMS
s regarding the possible role of
MS evolution.

or this purpose; it is the only PMS
all eccentricity and composed of
et as close as $11R_*$ at periastron
ed accretion have been detected

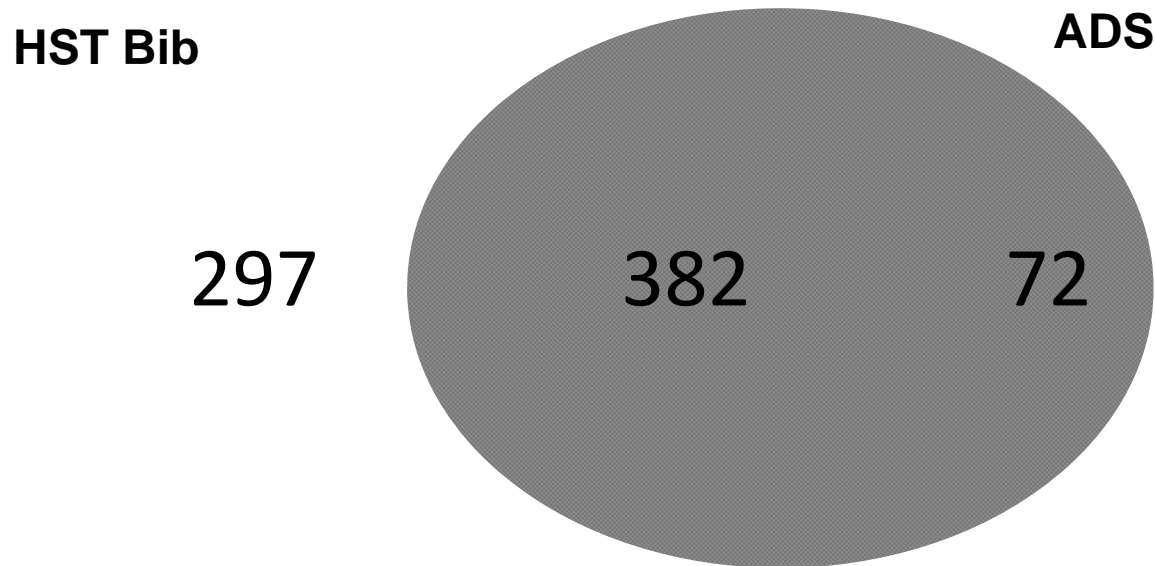
$4.9R_*$ around each star containing hot ($\log T_e = 4.8$) and highly
perturbed gas that produces a Gaussian-like profile broadening
with $\sigma \sim 100$ km s $^{-1}$. Although this broadening is highly
suprathermal, it could be sufalvénic if AK Sco's magnetic field is
similar or higher than that reported for other PMS stars (see, i.e.,
Johns-Krull 2007).

2. OBSERVATIONS AND MEASUREMENTS

AK Sco was observed with the **Space Telescope Imaging Spectrograph (STIS)** on 2001 March 10. The observations were carried out with grating G230M to target the semiforbidden lines of Si III] at 1892 Å and C III] at 1908 Å. The spectra were obtained at phase 0.2814 according to the Andersen et al. (1989) ephemeris (see Table 1). At this phase, the radial velocity of both components is the same; thus the profiles represent the co-added contribution of both components in the same velocity space. As all indications are that the two components are equal in all respects, including spectral type, the contribution from both stars is expected to be the same.

AK Sco displays strong and very broad Si III] and C III] profiles. The observed line profiles have been converted to a velocity distribution using the Doppler shift formula. Data have been processed with the Routine Science Data Pipeline (RSDP). The major source of inaccuracy in the calibration is the centering of the target in the aperture that can account for as much as 2.8 km s $^{-1}$. The exposure duration was 1944 s that was split into three subexposures; the average value for each pixel

- ADS search for “Hubble Space Telescope” OR HST in the abstract yields 444 refereed articles in 2008.
- HST Bibliography yields 689.



FUSE

- An elegant and efficient full text search program.
- Uses the ADS.
- Designed with workflow of full text article searching in mind.
- Developed by Christopher Erdmann at the ESO Library.
- Saves time, increases recall and precision of your bibliographies!

fuse : fulltext search - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://archive.stsci.edu/Fuse/telbibFS/SearchRecords.php?qid=128

Most Visited Getting Started Latest Headlines Phonebook SAO/NASA ADS Journ... fuse : fulltext search HST Bibliography Search Managing the HST Gra...

fuse
fulltext search

Search

- » Insert
- » Queue

Admin

- » Journals
- » Displays
- » Stop Words
- » Keywords
- » Searches
- » Help

Last Resort

- » Insert
- » Manual

Current Query

User: Elizabeth ApJ 698
 Query Date: 2009-06-29 11:42:05
 Journals Searched: ApJ
 Query Link: http://esoads.eso.org/cgi-bin/nph-abs_connect?vers...
 Dates Searched: 0000-00-00 - 0000-00-00
 Notes:
 Records Searched: 115
 Keywords found: 229

[View Search Log](#)

Delete Selected | [Delete All Records](#) | [Fulltext Search](#) | Export Records - choose -

ID#	Status	Search	Record/Keyword(s)	LookInside	Online	Delete	Debug
8301	Not Included		<p>2009ApJ...698.1620G URL Graham, J. F. GRB 070714B—Discovery of the Highest Spectroscopically Confirmed Short Burst Redshift The Astrophysical Journal, Volume 698, Issue 2, pp. 1620-1629 (2009).</p> <p><i>"GRB 070714B based on Hubble Deep Field (HDF) galaxy counts (Williams et al. 1996). Thus, only i" does not seem that problematic. Planned Hubble Space Telescope (HST) imaging should allow us to" Levan et al. 2006b). Recent additional HST and Spitzer observations of the host of SGRB 060121" ematic. Planned Hubble Space Telescope (HST) imaging should allow us to tell whether the simila"</i></p>	8301.txt	PDF/HTML	<input type="checkbox"/>	debug
8239	Included		<p>2009ApJ...698L..68F URL Frost, Mark I. A Pilot Search for Population III Supernova Candidates in the Spitzer/IRAC Dark Field The Astrophysical Journal Letters, Volume 698, Issue 1, pp. L68-L71 (2009).</p> <p><i>"andra and Hubble Space Telescope (HST)/ Advanced Camera for Surveys (ACS) F814W imaging (Krick " as well as deep Hubble Space Telescope/ Advanced Camera for Surveys F814W imaging available ove" a contract with NASA, and the NASA/ESA Hubble Space Telescope, obtained at the Space Telescope" in the dark field including Chandra and Hubble Space Telescope (HST)/ Advanced Camera for Surve" e Spitzer imaging data, as well as deep Hubble Space Telescope/Advanced Camera for Surveys F814" ave resolved-source counterparts in the HST data, and are therefore candidate low-redshift acti" t curves and the corresponding IRAC and HST imaging were all visually inspected by custom-built" ope (HST)/ Advanced Camera for Surveys (ACS) F814W imaging (Krick et al. 2008). To find transie" om our master catalog. Imaging with HST/ ACS F814W was obtained between 2006 November and Decemb" ing Chandra and Hubble Space Telescope (HST)/ Advanced Camera for Surveys (ACS) F814W imaging (" m from our master catalog. Imaging with HST /ACS F814W was obtained between 2006 November and De"</i></p>	8239.txt	PDF/HTML	<input type="checkbox"/>	debug
8228	Not Included		<p>2009ApJ...698L..116P URL Pannella, M. Star Formation and Dust Obscuration at z ≈ 2: Galaxies at the Dawn of Downsizing The Astrophysical Journal Letters, Volume 698, Issue 2, pp. L116-L120 (2009).</p> <p><i>"is context the Cosmic Evolution Survey (COS MOS; Scoville et al. 2007), with its state-of-the-ar" al properties. We take advantage of the COS MOS database to select a large sample of 1 < z &l"</i></p>	8228.txt	PDF/HTML	<input type="checkbox"/>	debug

Done

start | Inbox for lagerstrom... | Gmail - Inbox (957) - ... | AK Sco, First Detectio... | Fuse : fulltext search ... | I.doc - Microsoft Word | Microsoft PowerPoint ... | zotero | 6:01 PM

Renovations

- The Library has a new “place” at STScI
- Lost 25% of our space to make room for new offices for JWST folks.
- Rearranged entirely.
- What did we do?

Renovations

- Stored older issues of journals that are currently available online. Kept the print in the building because of bad scanning, bibliographic emergencies.
- Keeping current print issues because of current awareness, browsing needs.
- Books take up more shelf space now – more of a need to browse, not searched for in the same way as articles.

Renovations

Social networking

- Comfortable but agile furniture
- “Magic” board = Plasma screen, Wii remote, infrared pen, open source software.
- No walls!

Visions of the Universe

FOUR CENTURIES OF DISCOVERY



For centuries, mankind has gazed at the heavens, but how are we understanding of the planets, stars, and galaxies within it?

In 1609, Galileo improved the century-old telescope, pointed it toward the heavens, and gave birth to modern astronomy. Over the years, telescopes advanced, grew larger, and moved from backyard to mountaintop, to space. Astronomers pushed ever deeper into the universe, probing by both searching for new stars and planets, and by creating images.

Our current state of the universe is based on knowledge of our universe as well as images we and wonder it is today.



© 2003 American Museum of Natural History
All rights reserved. No part of this publication may be reproduced without the written permission of the American Museum of Natural History.

THE MOON IS AN ANCIENT WORLD, WITH COUNTLESS CRATERS, BARREN PLAINS, AND NO ATMOSPHERE.

When a celestial body passes within 30 to 40 light years of the Sun, it is called a comet. The Moon has a very peculiar shape, and is the only celestial body in our solar system.



Microscopic view of the Moon's surface.



Astronomers use powerful telescopes to study the Moon.



The size of the Moon is about the same as the Earth.



Astronomers use powerful telescopes to study the Moon.



The Moon is a very ancient world.



Exploring the Moon

© 2003 American Museum of Natural History
All rights reserved. No part of this publication may be reproduced without the written permission of the American Museum of Natural History.







Renovations!

Challenges :

- Print/online dichotomy
- Nostalgia

Renovations!

Interesting blend of contradictory uses :

- Quiet, Noisy
- Individual, Collective
- Technical, Popular
- Mixed Media
- Exchange of ideas – from page to the eye, from mouth to ear, from near to far

Just like your living room!

Renovations!

Defining principles

- Bring people and ideas together -- social networking face to face!!!.
- Support the work of the organization by connecting staff with information they need.
- Provide a social, historical and cultural context for the work done in the organization.
- Connect print and online collections.
- Do all this...very comfortably.

Questions? Comments?

Jill Lagerstrom

lagerstrom@stsci.edu