Creating Effective Poster Presentations

For Fun and Profit!

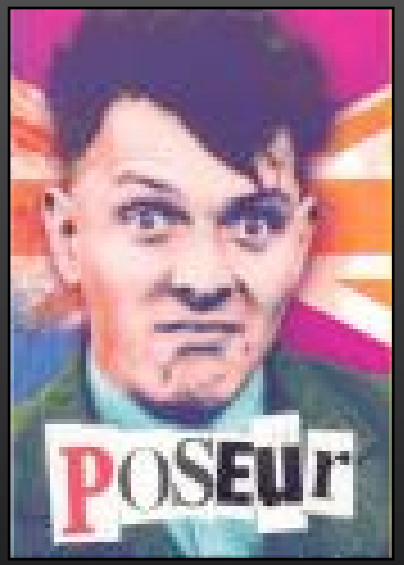
Aaron Price, AAVSO

95th Spring Meeting of the AAVSO

Rockford, IL

Poster, not Poseur!

- Posters are legitimate forms of publication
- Many important discoveries begin as posters
- They are published and indexed in ADS



Smithsonian/NASA ADS Astronomy Abstract Service

· **Find Similar Abstracts (with default settings below)**
· **Also-Read Articles** (Reads History)
·
· **Translate Abstract**

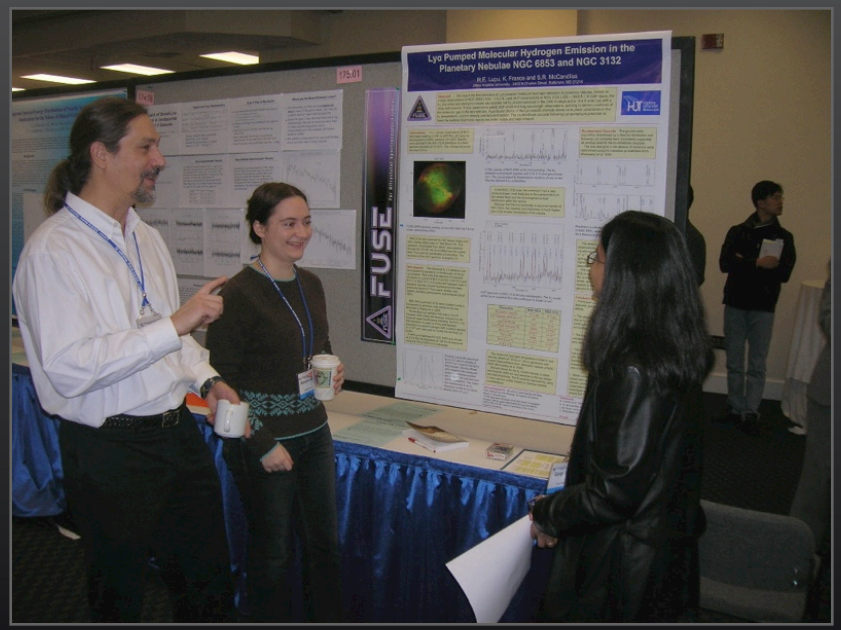
Title:	BZ UMa and Var Her 04: Orphan TOADS
Authors:	Price, A.; Howell, S.
Affiliation:	AA(AAVSO), AB(NOAO)
Journal:	American Astronomical Society Meeting 206, #42.03
Publication Date:	05/2005
Origin:	AAS
Abstract Copyright:	(c) 2000: American Astronomical Society
Bibliographic Code:	2005AAS...206.4203P

Abstract

Both BZ UMa and Var Her 04 are cataclysmic variable stars without a home. Neither fit easily into current classification systems so may extend the

To *pose* a question: Why?

- Early results
- Easier to prepare than a paper
- Not referee'd*
- More details than a presentation
- Social interation/networking
- Reuseable
- AAS Awards



AAS January 2005

...earch for Superhumps in Possible SW Sextantis Stars

A.J. Carver (UW-Madison), Alan Whiting (CTIO), Linda Schmidtobreick (ESO)

Abstract

...the 2005 CTIO REU research projects, ...for permanent superhumps in two ...riable stars: AH Men and V393 Hya. ...H 0551-819) and V393 Hya are ...ariables in the 3-4 hour period range and therefore likely members of the SW Sex population. There might be a connection between this population and systems showing superhumps resulting from high mass transfer and large discs. To test this idea we obtained images using the 0.9m Cassegrain telescope on Cerro Tololo to determine light curves of these stars by differential photometry. Approximately 4.25 orbital periods of AH Men were observed over two nights and 3 orbital periods of V393 Hya were observed over three nights. Superhumps were not observed in V393 Hya. Evidence for superhumps was observed in AH Men in agreement with previous observations. Power spectra of AH Men also qualitatively agree with the power spectra from past observations. The National Science Foundation supported this research with grant no. 0353843

Cataclysmic Variables

- Red Dwarf (RD) and White Dwarf (WD) (Fig 1)
- RD fills its Roche lobe and loses matter to WD
- Matter forms a disc around WD
- Matter hitting disc creates 'hot spot'
- Unique opportunity to study accretion disks
- Changes observed on short time scales

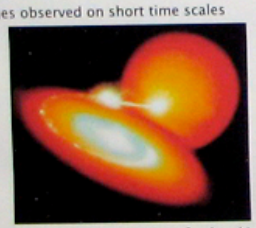


Figure 1: Artists conception of a close binary system

SW Sextantis Stars

- Subset of Nova-Like Variables, typically eclipsing
- High velocity emission line wings
- Line core absorption near phase 0.5
- Orbital periods of 3-4hrs

The Project

- Search for superhumps in possible SW Sextantis Stars
- Selected four stars to observe: AH Men, V1193 Ori, IM Eri, and V393 Hya
- Searching for new systems to observe that can help constrain disc models

Superhumps

- Are light curve features (Figure 2)
- Period slightly longer than CV orbital period
- Often triangular in shape
- Thought to be caused by energy dissipation of colliding disc orbits

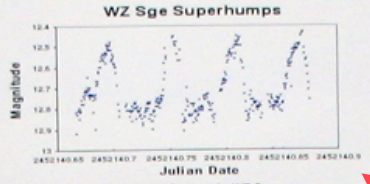


Figure 2: Superhumps in WZ Sge

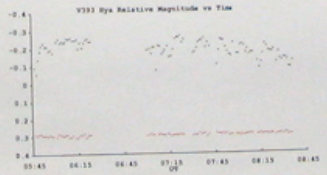
Photometry by AAVSO Observer, Lew Cook (COO)

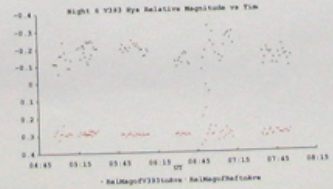
Observing & Reduction

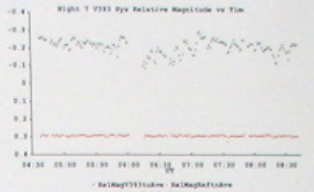
- Seven observing nights: Jan 25 - Jan 31, 2005
- .9m Cassegrain, 2048x2046 CCD w/ quad readout
- 1024x1024 ROI, 30 sec exposures
- V filter (5443Å peak 1060Å FWHM)
- AH Men 936 images, V393 Hya 386 images
- Reduced Image = (Raw Image - Bias)/Flat Field
- Averaged 43 dome flats (from nights 2, 4, 5, 6, 7)
- Averaged 63 biases (from nights 2, 4, 5, 6, 7)

V393 Hya

Other Name: EC 10578-2935, RA: 11:00:17.45 ,DEC: -29:51:58.9, Galactic Longitude: 276, Galactic Latitude: 27, Object Type: NL, Magnitude Range: 15.9V, Period: 0.135d (~3h 15m)

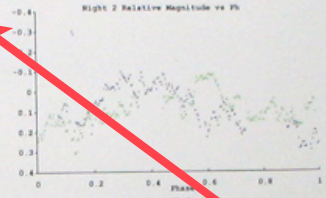


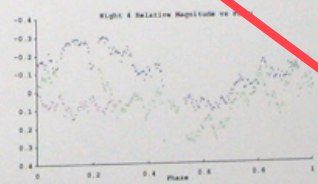




AH Men

Other Names: Men1; 1H 0551-819; RA: 06:11:44.07; DEC: -81:49:24.1; Galactic Longitude: 294; Galactic Latitude: -28; Object Type: NL/DQ:; Magnitude Range: 13.2 V -14.0 V; Period: 0.12721d (~3h)





Summary and Conclusions

- Flickering observed in V393 Hya light curve
- Superhumps not observed in V393 Hya light curve
- Flickering observed in AH Men light curve
- Broad features observed in AH Men light curve
- Superhump candidates in AH Men
- AH Men has been observed before

Future Work & Acknowledgements

- Observe more systems
- Synchronous photometric and spectroscopic observations

The National Science Foundation supported this research with grant no. 0353842. A.J. Carver has also been supported by the Wisconsin Space Grant Consortium. Thank you Alan Whiting, Linda Schmidtobreick, Don McCarthy, Bob Morse, Ken Nordsieck, Cary Forest, Aaron Steffen, Mike Stamatikos, Stefan Gerhardt, and Masaaki Yamada.

Correspondence to A.J. Carver: ajcarver1@gmail.com

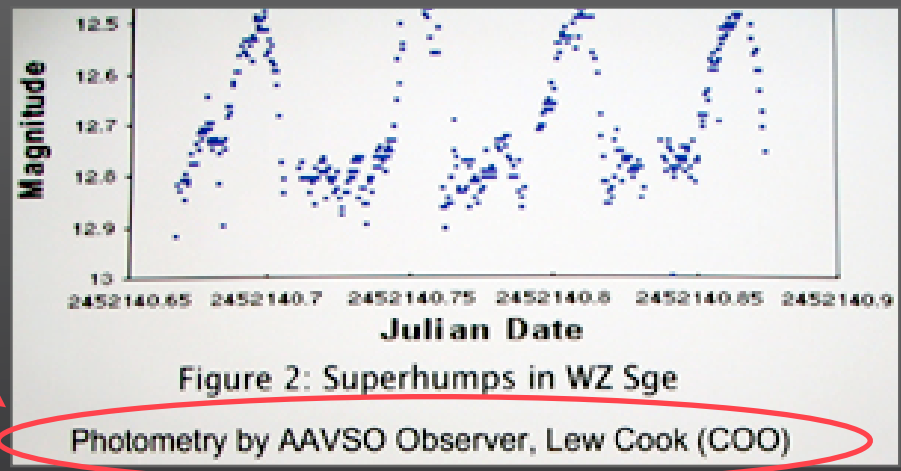
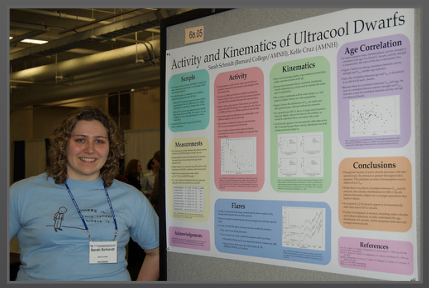
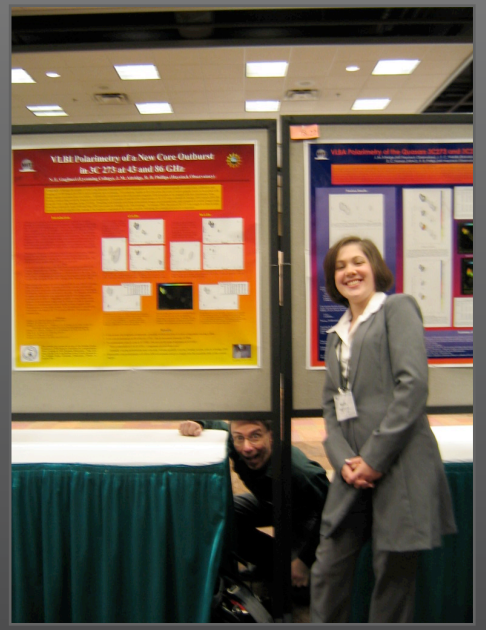


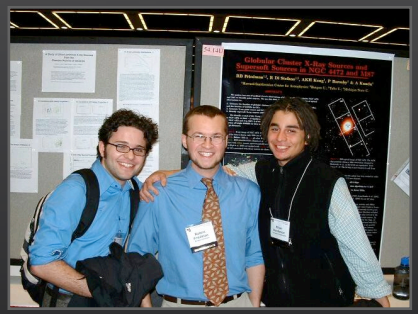
Figure 2: Superhumps in WZ Sge

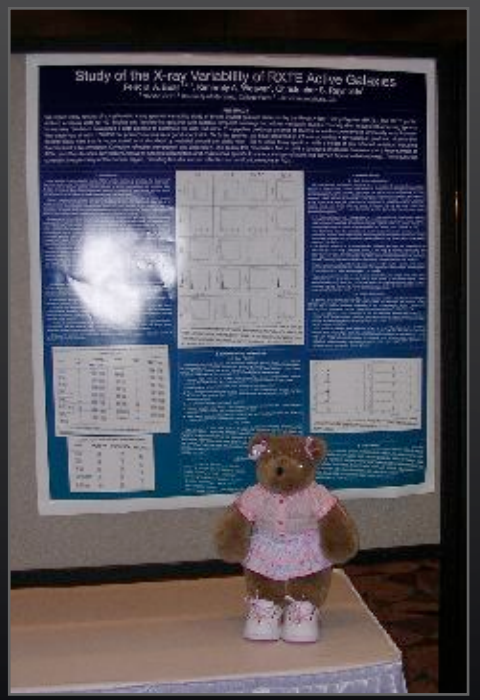
Photometry by AAVSO Observer, Lew Cook (COO)

Strike a *pose!*









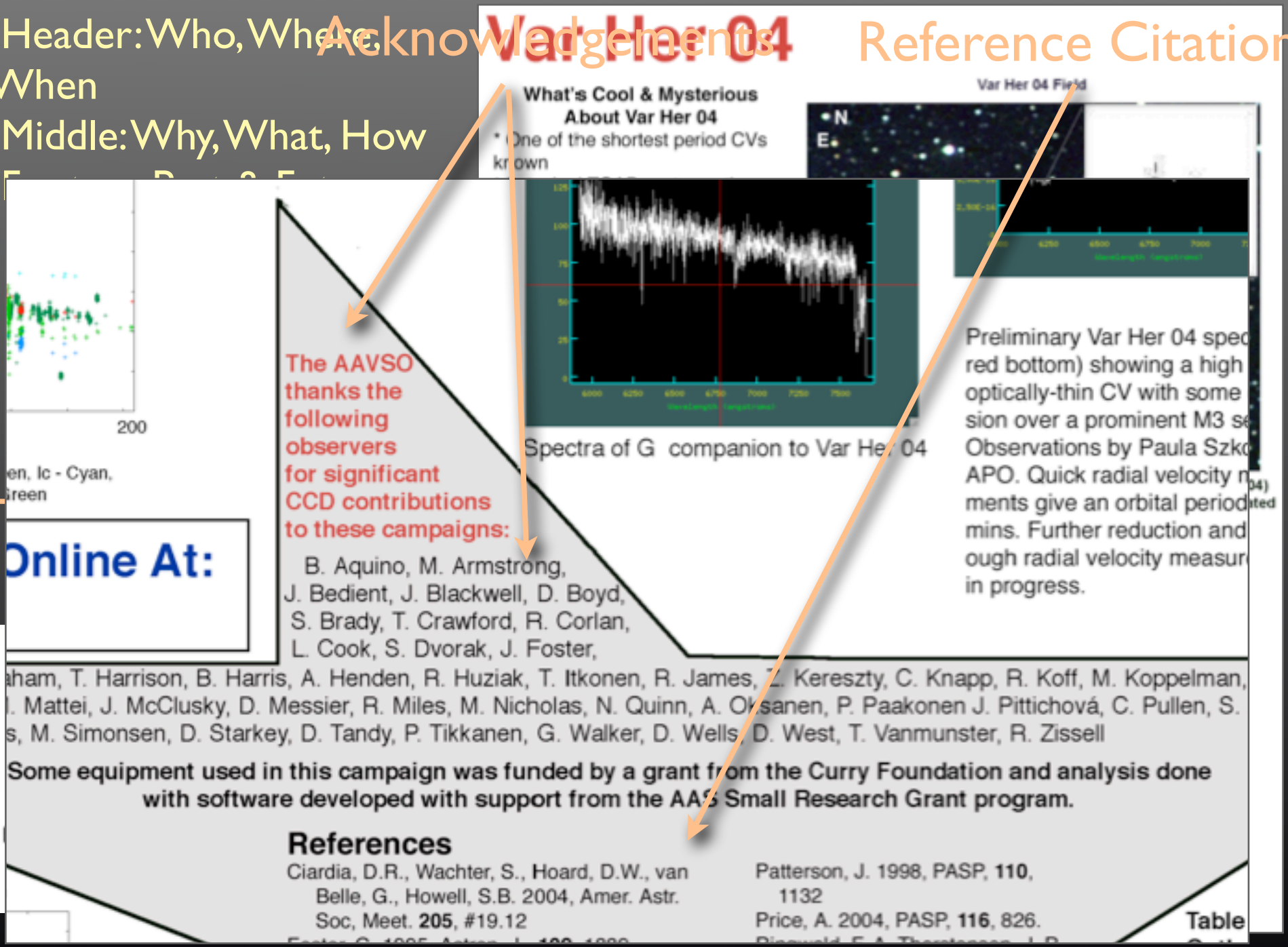
Content

- Header: Who, Where, When
- Middle: Why, What, How
- [illegible]

Acknowledgements

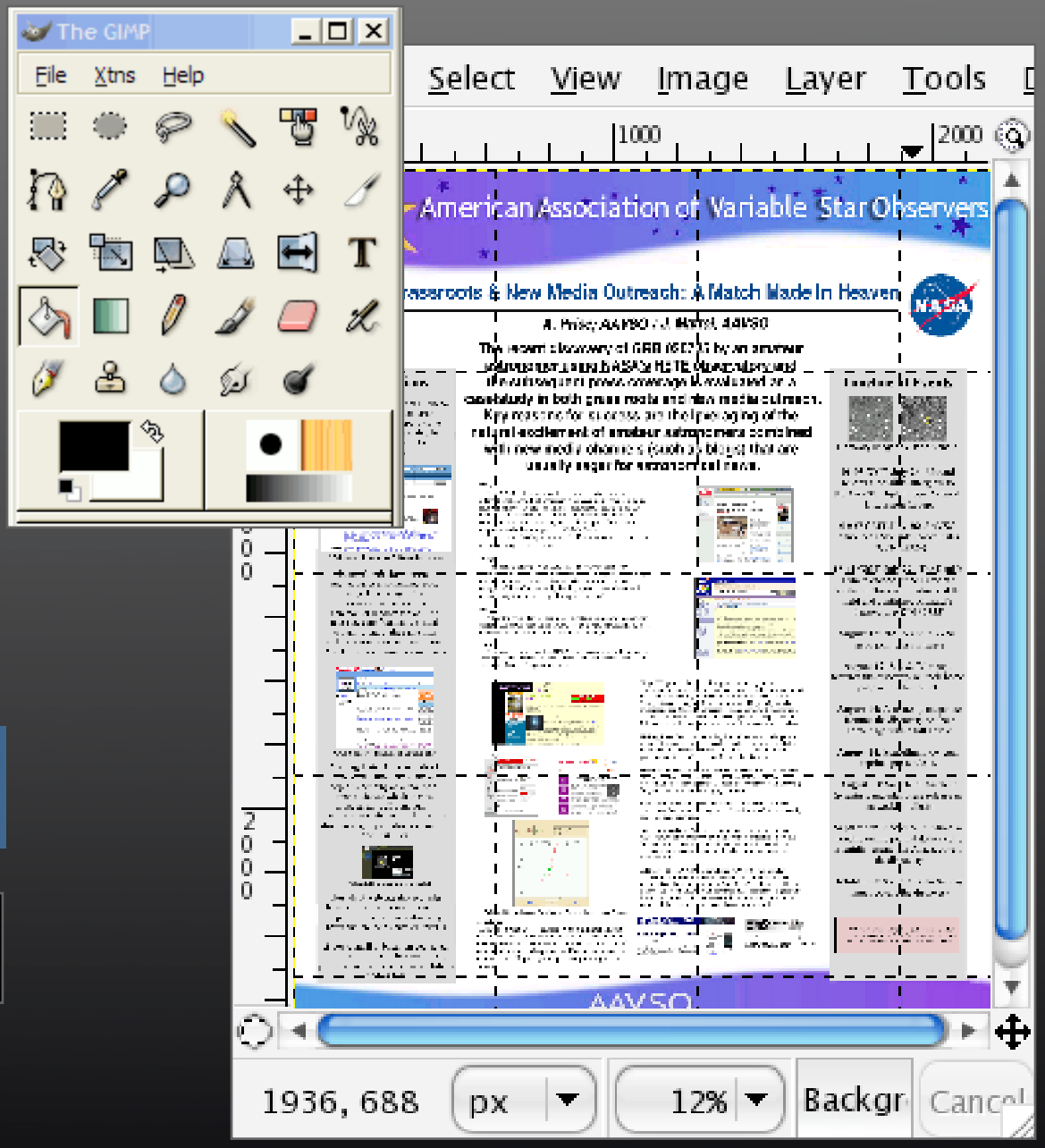
Var Her 04

Reference Citations



Software

- Adobe InDesign ($$$)
- Adobe Photoshop ($$$)
- Microsoft PowerPoint ($$)
- Apple Aperture ($$)
- Shareware: Paint Shop Pro (Windows) ($)
- *Freeware:* GIMP (OS X, Linux, Windows)
- Good hardware
- Ask for help!



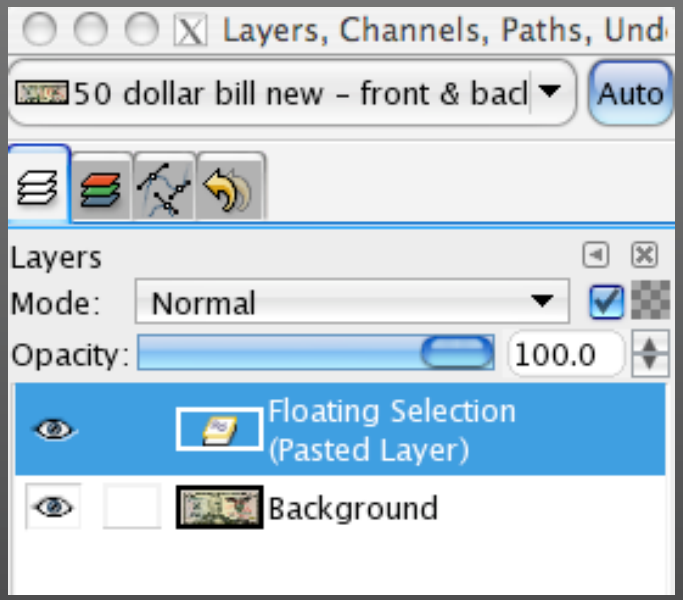
GimpFAQ.org

Photoshop911.com

The Photoshop Blog

Wanna be a player? Then Layer.

Layers allow you to make changes easily and try out design ideas.



Rules of Thumb

- Each meeting has its own guidelines, read up!
- AAVSO: Flexible
- AAS: 44”x44” inches
- Bring thumbtacks
- Photos > 3”x3”
- Text > 18pt
- Sans serif fonts such as Helvetica for short text
- Serif fonts such as Times New Roman for long text
- DON’T SCREAM!
- Don’t underline

Layout

- Short summary!
- Title
- Pictures
- Abstract
- Conclusion
- Present logically
- View at 100%
- Large margins
- Use bullets, *style*, and color!
- Ask a non-astronomer

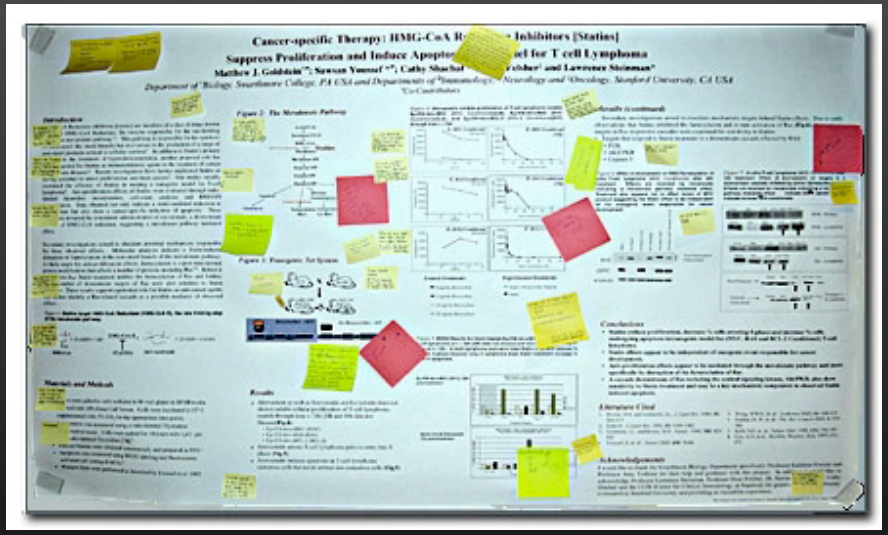


Photo By Colin Purrington
From Swathmore College
http://www.swarthmore.edu/NatSci/cpurrin1/posteradvice.htm

Alignment

Balance

Full left justification

Around the rough and rugged rock the ragged rascal randomly ran.

Around the rough and rugged rock the ragged rascal randomly ran.

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ototypes of
The second
high priority

are in perl.

1. **Authoring (Price):** A perl script and HTML interface was written to create the XML packets based on a recent real event.
2. **Signing (Allen):** A digital signature was assigned to the XML packet using an x509 certificate with the W3C XML signature schema.
3. **Routing (Seaman):** The shareware routing system Elvin was used to distribute the packets. Open source alternatives to Elvin include Apache Pubscribe, ICE, JMS, Mule and Jabber.

Align Columns

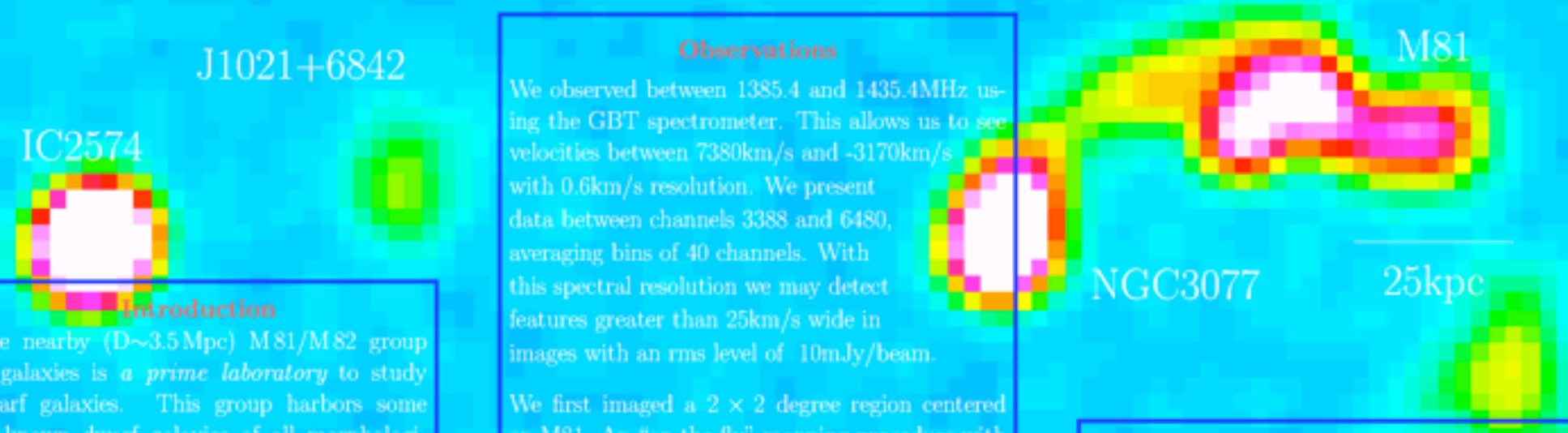
Streams of Neutral Hydrogen in the M81 Group of Galaxies

K. Rubin (Yale), G. I. Langston (NRAO), and F. Walter (NRAO)

ABSTRACT

The nearby M81/M82 group of galaxies is embedded in a cloud of neutral hydrogen that traces the history of the interaction between these galaxies. At ~ 3.5 Mpc the M81/M82 group is one of the closest groups.

A complete census of dwarf galaxies and high velocity clouds (HVCs) in the M 81 group is important for understanding the mass distribution of this group. We set a 6σ detection limit for H_I of 3×10^6 $M_\odot$. This study has relevance to studies of our own Galaxy/Local group. The exact location of HVCs surrounding our galaxy still remains a puzzle. Our observations show the M81/M82 group has connected streams of hydrogen, not isolated clouds.



Introduction

The nearby (D~3.5 Mpc) M 81/M 82 group of galaxies is *a prime laboratory* to study dwarf galaxies. This group harbors some 40 known dwarf galaxies of all morphological types (dIrrs, dSphs/dEs as well as a tidal dwarf). Since the distance to all group members is approximately the same, galaxy properties can be compared directly. A detailed

Observations

We observed between 1385.4 and 1435.4MHz using the GBT spectrometer. This allows us to see velocities between 7380km/s and -3170km/s with 0.6km/s resolution. We present data between channels 3388 and 6480, averaging bins of 40 channels. With this spectral resolution we may detect features greater than 25km/s wide in images with an rms level of 10mJy/beam.

We first imaged a 2×2 degree region centered on M81. An "on-the-fly" mapping procedure with integrations of 5 seconds, declination steps of 4' and a rest frequency of 1420.4058MHz was used. We mapped the entire M81/82 region by dividing the 22.5×9 degree region into 6 adjacent sections.

Data Reduction

Each of the 45 scans of the map were calibrated using the following equation:

$$S(RA, Dec, \nu) = T_{reference}(\nu)\frac{C_{signal} - C_{reference}}{}$$

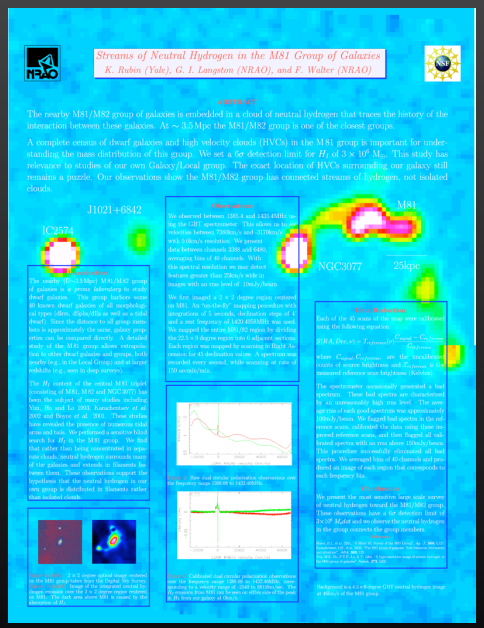
Color

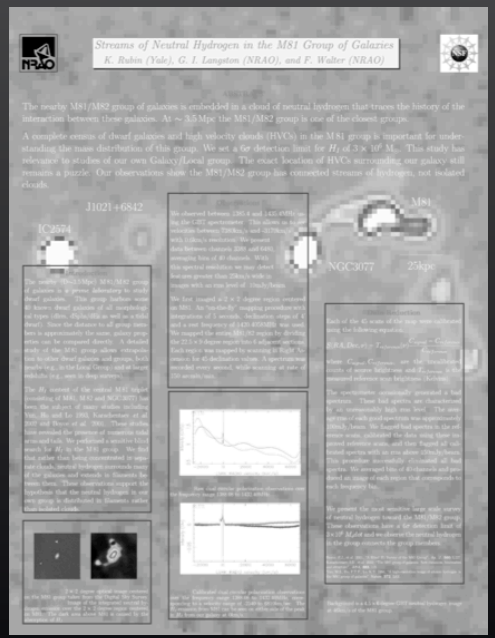
Contrast

Test in black and white

Color blindness (avoid red-green differentials)

Be consistent: hot, warm, cool, cold palletes





Normal	Protan	Deutan	Tritan
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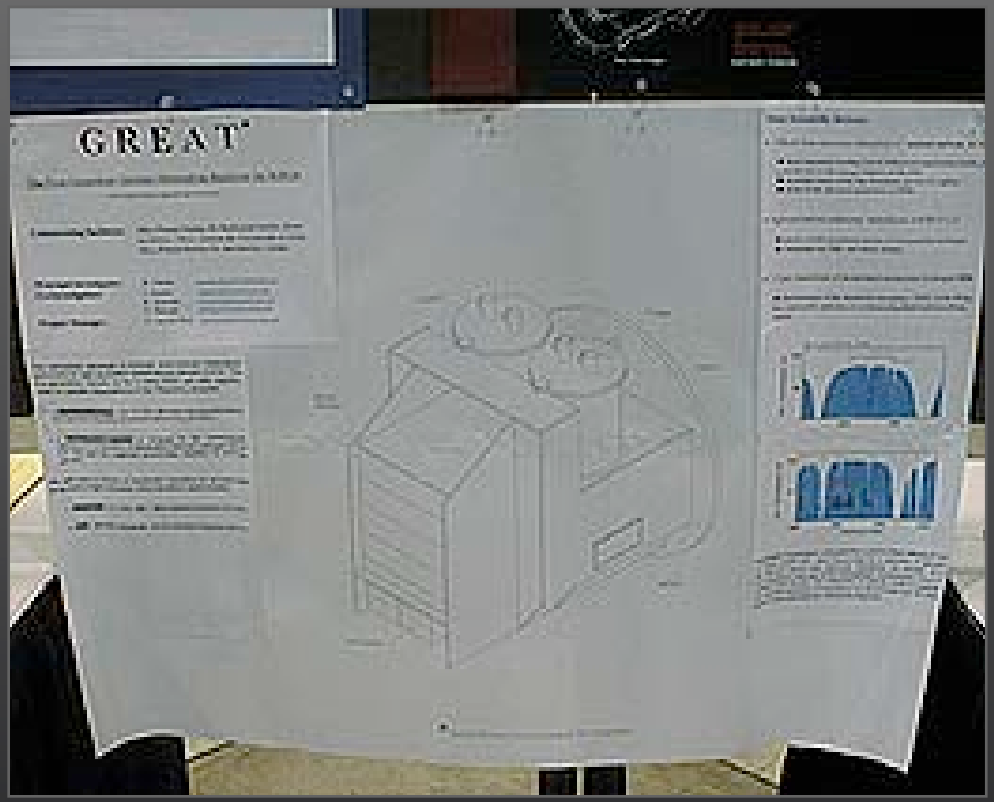
000033	000E1F	000F1A	001111
000066	001D3E	001F34	002223
000099	002C5D	002F4F	003335
0000CC	003B7C	003F69	004447
0000FF	004A9C	004F84	005559

From Designing for Color Challenged
http://www.internettg.org/newsletter/mar99/color_challenged_table.html

GREAT vs. GLAST



Don't *Post*pone

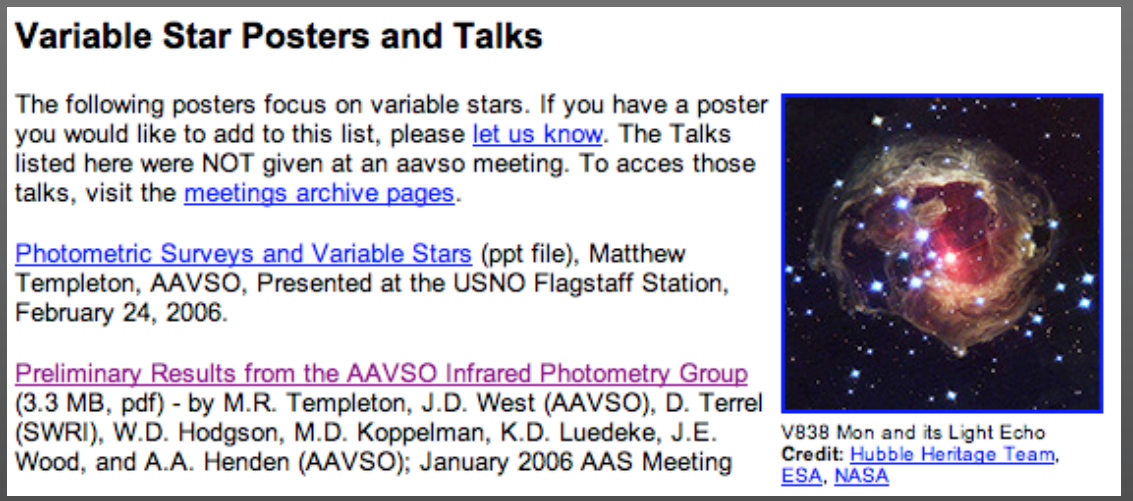
- Kinko's: ~$80-$140
- PDF format or 300dpi TIFF
- Submit via Internet
- Two CDROMs
- Respect Uncle Murphy!
  Expect Kinko's et al. will make a mistake.
- Plan at least 2 business days for printing.
- DIY

*Post*humously

- Dress appropriately with poster in mind (comfy shoes)
- Bring printouts/CDROMs
- Leave sign up sheet/cards
- Attach personal photograph?
- Take poster home and reuse
- Place PDF on personal web site (or AAVSO)
- Finish the work!

More Info

AAVSO posters are on our web site - send us yours!
http://www.aavso.org/vstar/posters.shtml



Variable Star Posters and Talks

The following posters focus on variable stars. If you have a poster you would like to add to this list, please let us know. The Talks listed here were NOT given at an aavso meeting. To acces those talks, visit the meetings archive pages.

Photometric Surveys and Variable Stars (ppt file), Matthew Templeton, AAVSO, Presented at the USNO Flagstaff Station, February 24, 2006.

Preliminary Results from the AAVSO Infrared Photometry Group (3.3 MB, pdf) - by M.R. Templeton, J.D. West (AAVSO), D. Terrel (SWRI), W.D. Hodgson, M.D. Koppelman, K.D. Luedeke, J.E. Wood, and A.A. Henden (AAVSO); January 2006 AAS Meeting

V838 Mon and its Light Echo
Credit: Hubble Heritage Team, ESA, NASA

Advice on designing scientific posters
http://www.swarthmore.edu/NatSci/cpurrin1/posteradvice.htm

Internetworking: Designing for Color Challenged
http://www.internettg.org/newsletter/mar99/color_challenged_table.html

Tips for creating scientific posters
http://bildmakarna.kib.ki.se/posters/tips/index_en.html

fin.

Where's the Fun?

- Use all parts of the brain
- Nice shoes!
- Handouts

Where's the Profit?

fghfttyyyttttt

- hj