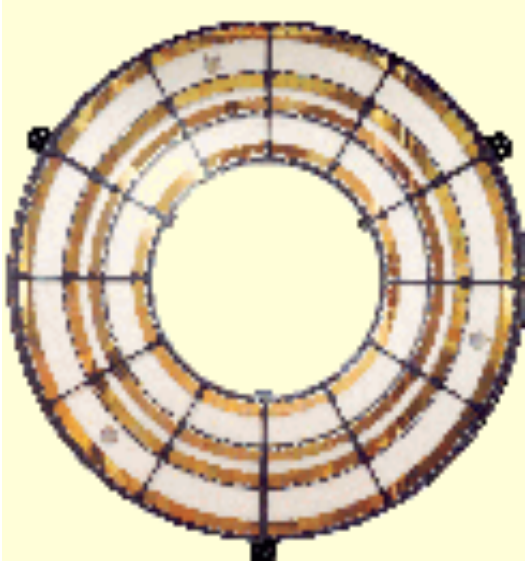
MIT Kavli Institute
for Astrophysics
and Space Research



HETG - Status

Chandra Quarterly Review No. 21, August 16, 2006

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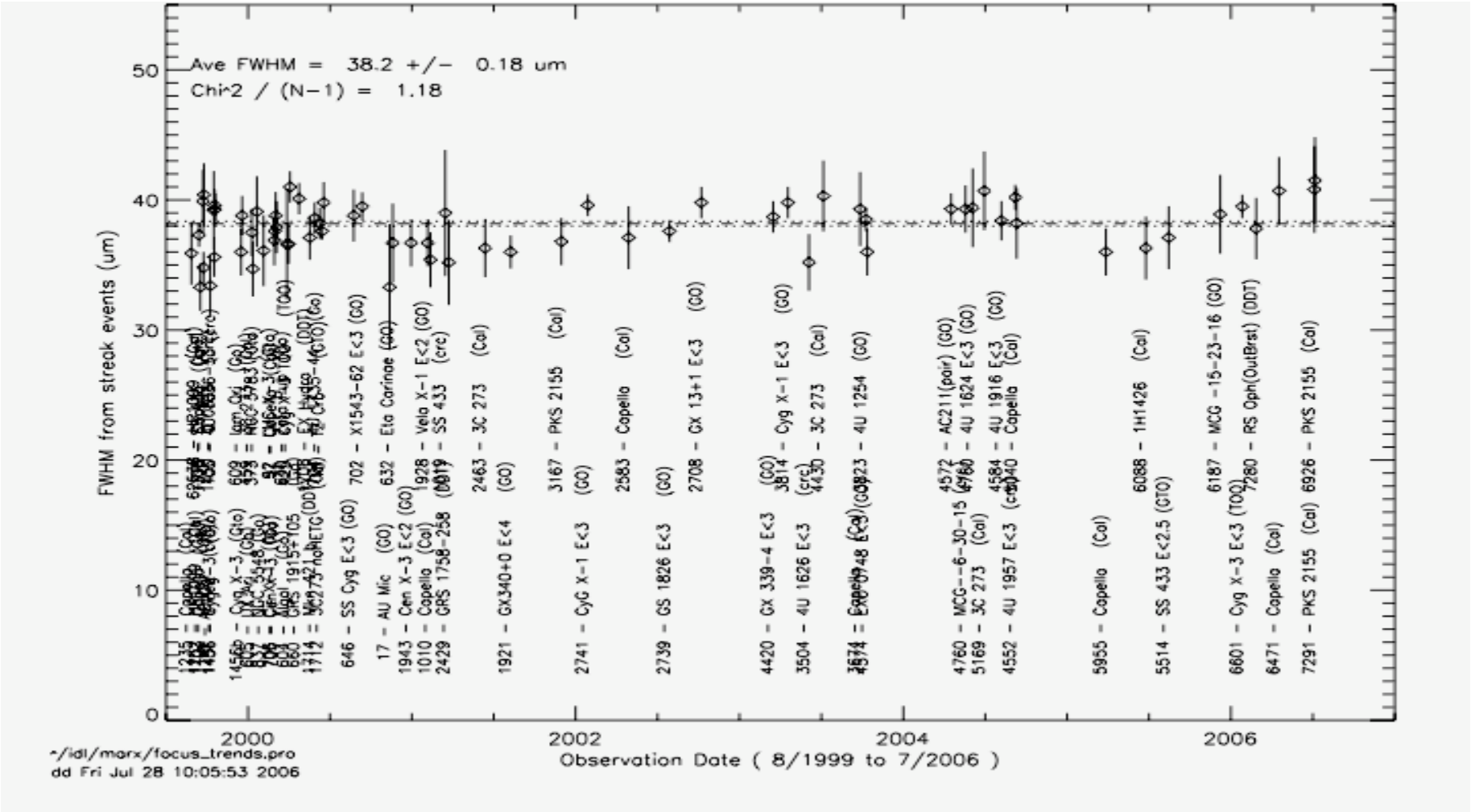
HETG IPI: Prof. C.R. Canizares
MIT Kavli Institute

Ongoing HETG Team Activities Summary

- HETG Performance
  - 35 HETG obsids, March '06 - July 2006; 3 Cal obs.: Capella, PKS(2)
  - Monitoring HRMA FWHM - 3 observations added - next slide.
  - HETG performance is unchanged and nominal.

- HETG Calibration
  - Wavelength stability, Ishibashi et al. , ApJ 664, L117; astro-ph/0605383
    - Systematic wavelength scale accurate to ~ 20 km/s
  - Current / Future work:
    - Absolute effective area; cross-calibration w/XMM, RXTE/PCA
    - Piled-up spectra; Higher orders; CC mode data (Sco X-1)
    - Inclusion of systematic errors in model fitting.

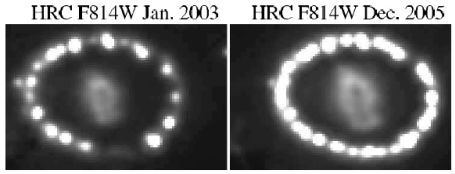
HRMA FWHM from ACIS streak



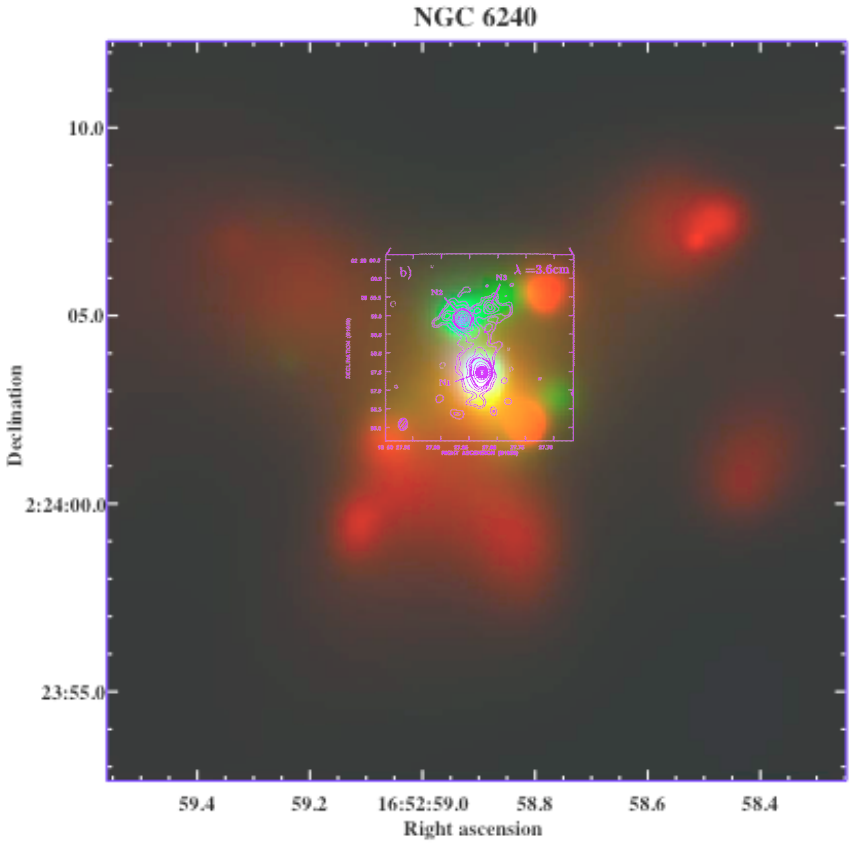
Ongoing HETG Team Activities, cont.

- Science Support to CXC, etc.
  - Supported peer review w/reviewers.

- GTO Science Program
  - Cycle 7 observations complete
    - NGC 6240 - colliding galaxies/AGN
  - GTO Targets finalized for Cycle 8
    - SNR 1987A: 370 ks w/HETG and 300 ks w/LETG (McCray PI)

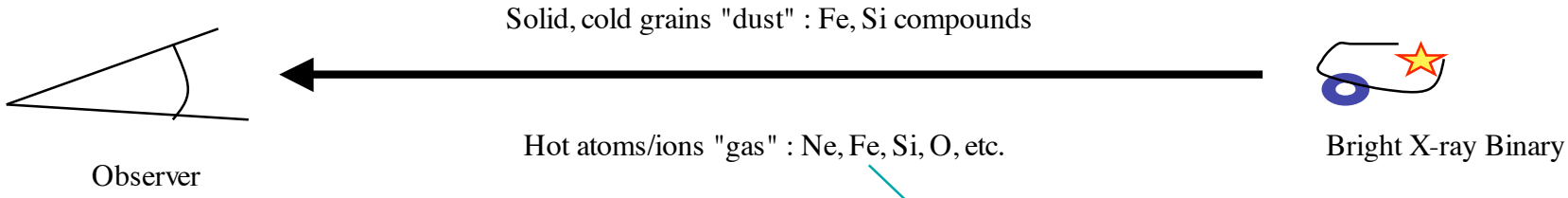


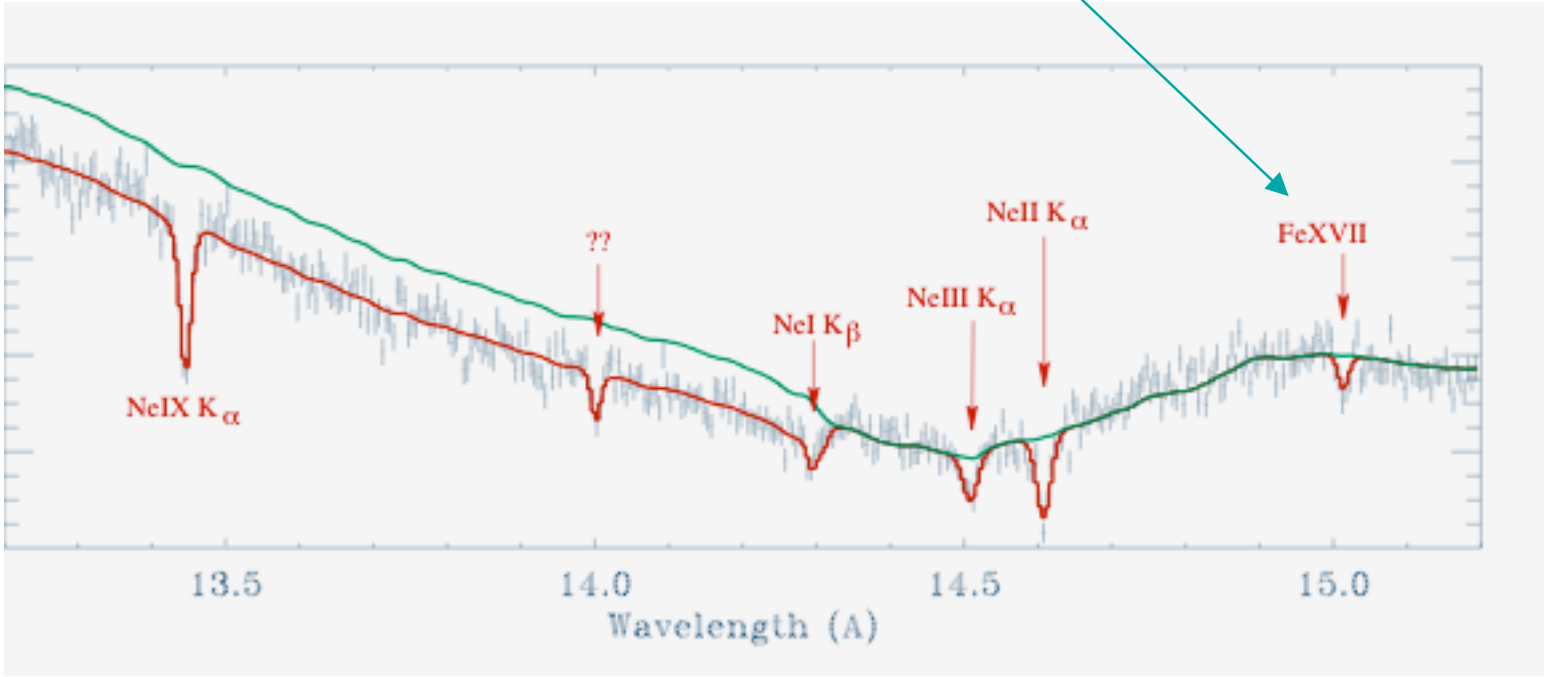
  - New Postdoc:
    - Tracey Delaney, "Cas A enthusiast"



Zeroth-order image from NGC 6240 GTO data showing the two nucleii (white, green) with radio contours overlaid (purple.)

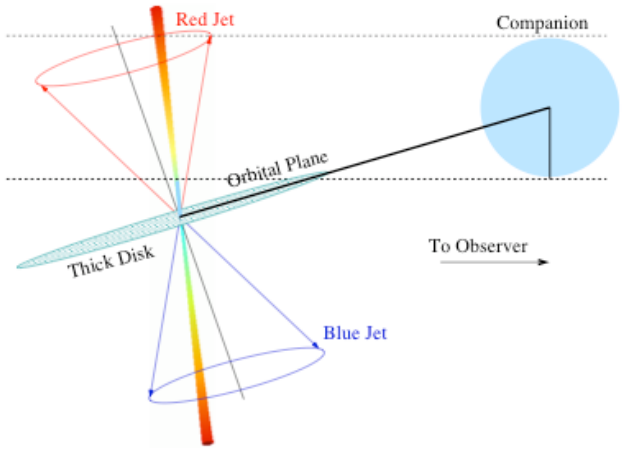
HETG Science: Hot Iron in Space ?!

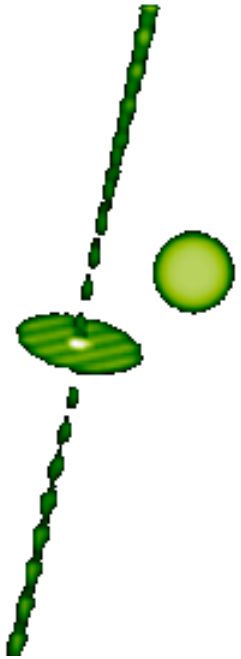




Courtesy of Yangsen Yao, HETG Postdoc.

HETG Science: Modeling the SS 433 System





Recent paper:
"Determining the Nature of the SS 433 Binary from an X-ray Spectrum During Eclipse",
L.A. Lopez, H.L. Marshall, C.R. Canizares, N.S. Schulz, and J.F. Kane;
ApJ accepted; astro-ph/0605574.

Model of the SS 433 system created recently by MIT undergrad E. Boroson.