Thermal SNRs Working Group Report

Paul Plucinsky on behalf of the IACHEC Thermal SNR Working Group

Thermal SNR Working Group

One of the "Standard candle" working groups.
This presentation is a summary report of this group's work:

XMM-Newton RGS	Jelle Kaastra (SRON)
XMM-Newton MOS	Steve Sembay (Leicester)
XMM-Newton pn	Michael Freyberg & Konrad Dennerl (MPE)
Chandra ACIS	Paul Plucinsky (SAO) Terry Gaetz (SAO)
Suzaku XIS	Eric Miller (MIT)
Hitomi SXS	Hiroya Yamaguchi (GSFC)
Swift XRT	Andrew Beardmore (Leicester)
ASTROSAT	Sunil Chandra(CSR NWU), Firoza Sutaria (IIA)

N132D IACHEC Model v2.11 Released before the IACHEC Meeting

Only change from v2.10 v2.11:

- *use APEC v3.0.9*

N132D ACTION ITEMS FROM 2017 IACHEC

- *Miller and Yamaguchi will suggest changes to the Fe K region and the addition of a high temperature component based on the Suzaku XIS and Hitomi SXS data*
- *Plucinsky will ask someone from NuStar to join the model development team to help in constraining the high temperature component*
- *Freyberg will propose a dedicated pn calibration observation in small window mode with the source positioned outside the window*
- *Chandra will work with the SPEX files provided by Kaastra to transform them into XSPEC format*
- *Miller will work on improving the Suzaku XIS background model*
- *Sembay and Plucinsky will work on SIXTE simulations of N132D and E0102 for Athena X-IFU and WFI*

The IACHEC E0102 Paper is more than one year old

Many thanks to Andy B., Adam, Frank, Eric, Andy P. and Steve for their patience

SNR 1E 0102.2-7219 as an X-ray calibration standard in the 0.5–1.0 keV bandpass and its application to the CCD instruments aboard *Chandra*, *Suzaku*, *Swift* and *XMM-Newton*

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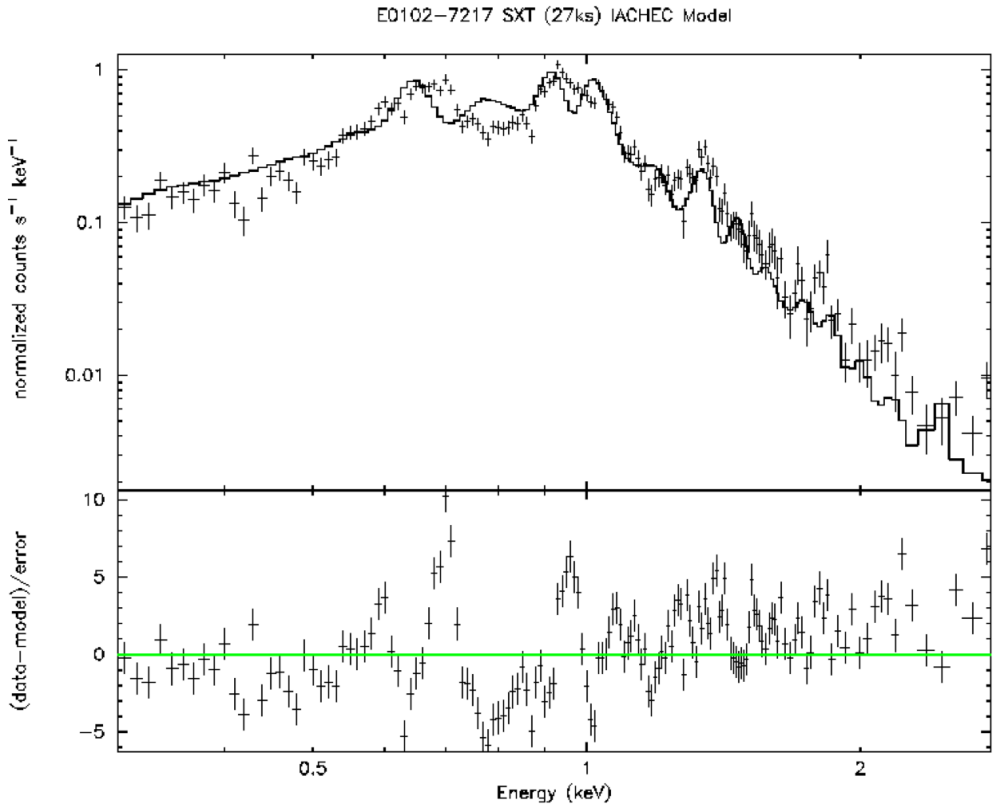
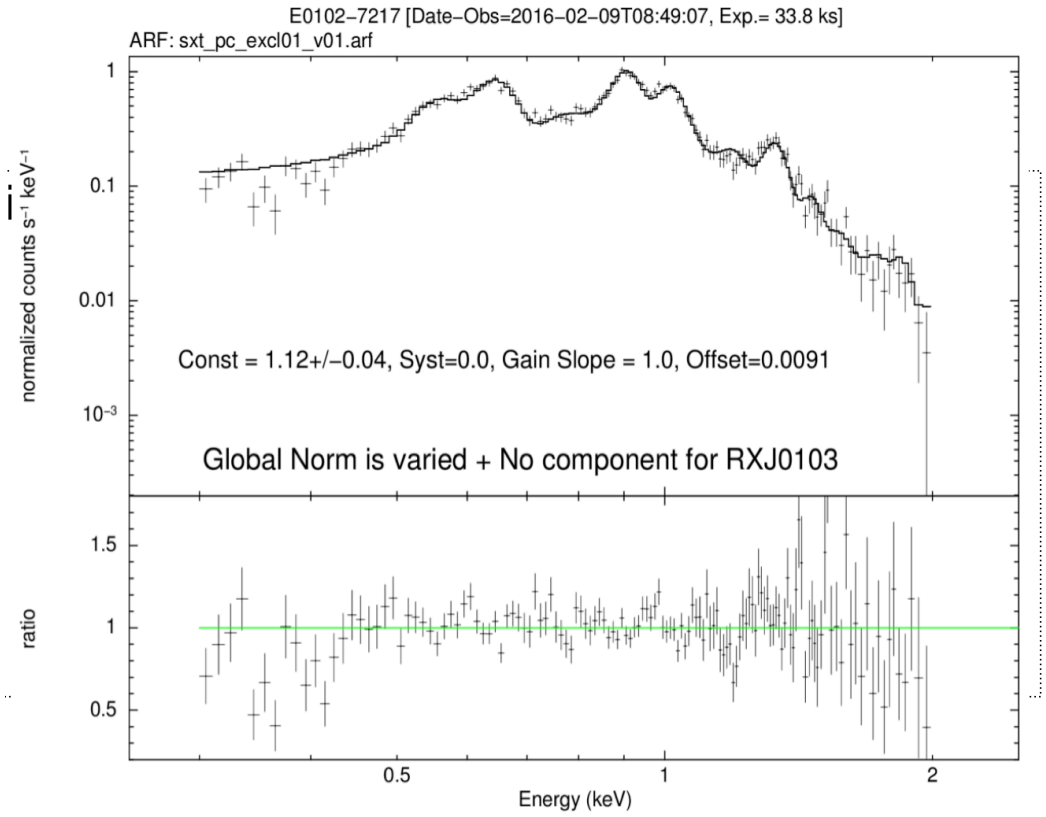
Received 29 April 2016 / Accepted 30 June 2016

ABSTRACT

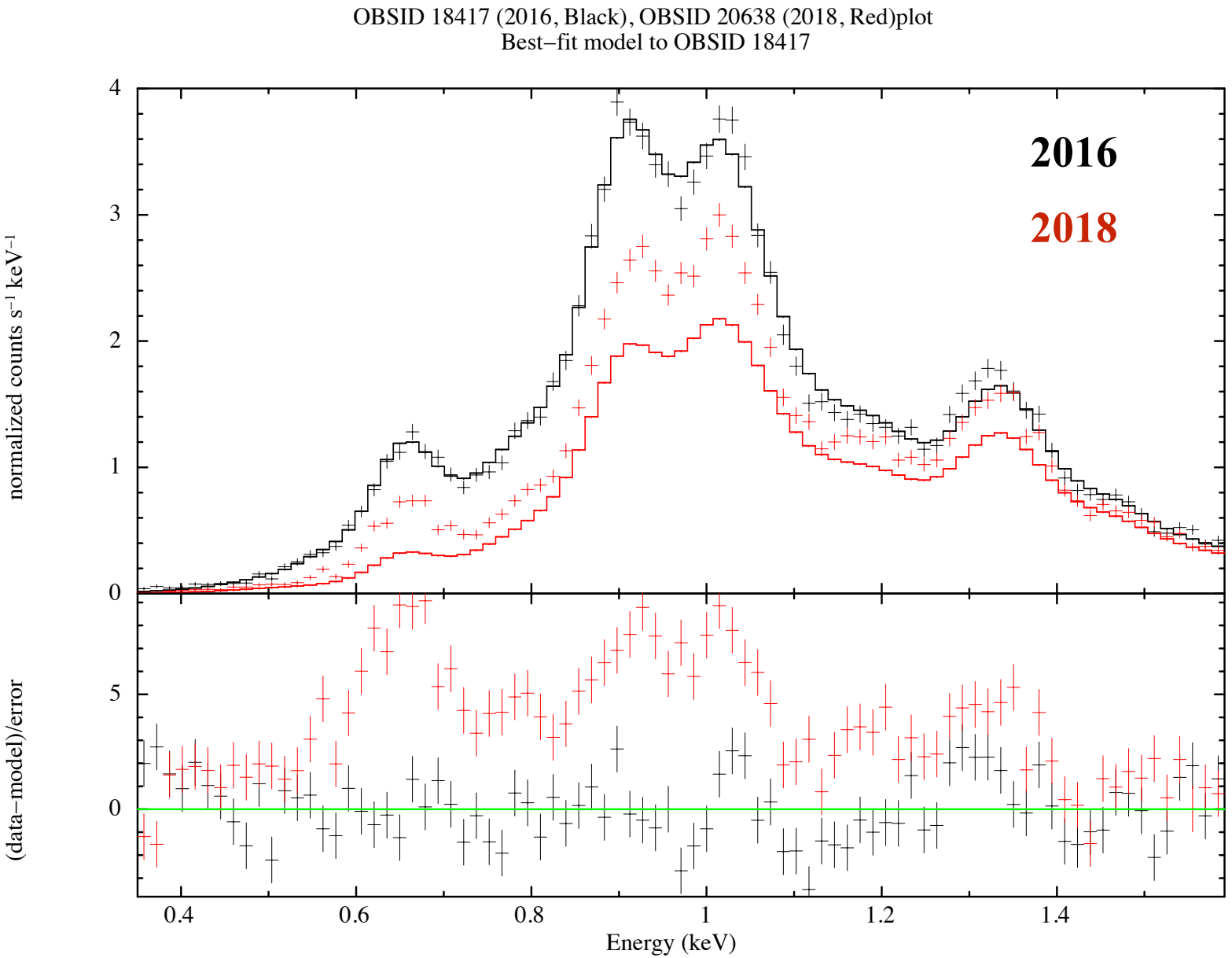
Context. The flight calibration of the spectral response of charge-coupled device (CCD) instruments below 1.5 keV is difficult in general because of the lack of strong lines in the on-board calibration sources typically available. This calibration is also a function of time due to the effects of radiation damage on the CCDs and/or the accumulation of a contamination layer on the filters or CCDs.

IACHEC E0102 Model is Used for ASTROSAT Calibration





IACHEC E0102 Model is Used to Monitor ACIS Contamination



contaminant is still accumulating on ACIS-I but the rate is significantly lower than what is in the current contamination model