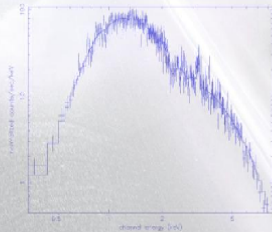
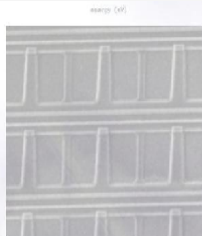
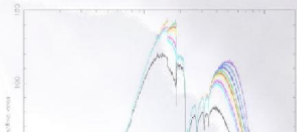
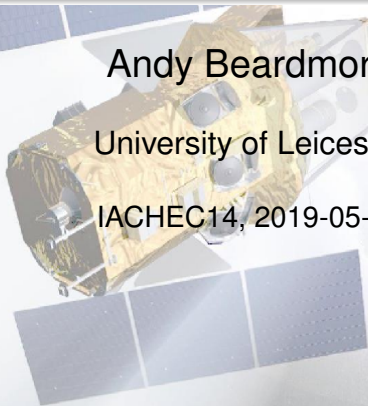


Cas A

Andy Beardmore

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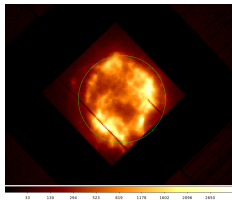
IACHEC14, 2019-05-22



- Yes, the Cas A SNR might not be the most ideal source to be thinking about for calibration (e.g. ± 15 eV velocity variations across the remnant at Si- $K\alpha$), but sometimes beggars can't be choosers...
- *Swift*-XRT needs some way to make column-by-column trap measurements in WT mode.
- Cas A diameter is approx half size of our WT window width
 - Perform 2×10 ks each bottom, middle, and top to get trap depth estimates at 6 positions
- Other instruments with lower angular resolution (e.g. ASTROSAT SXT, SMiLE, EP, THESEUS) are interested in such a model
- Other SNRs
 - e.g. Kepler $\rightarrow 10\times$ fainter



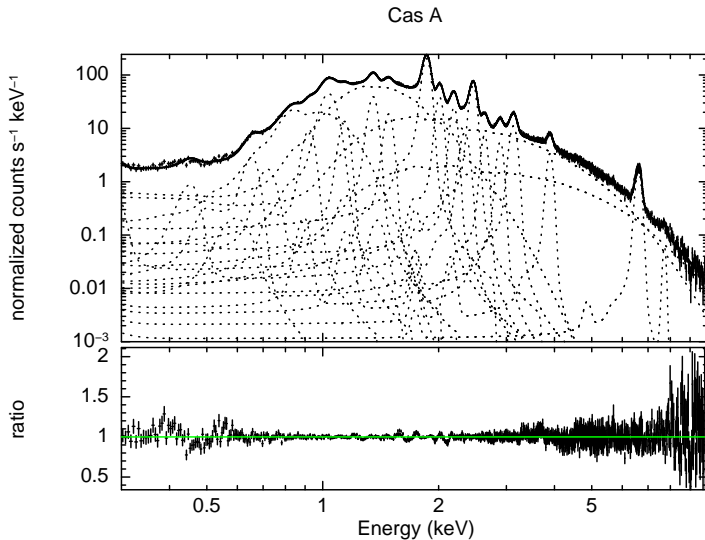
- Took MOS1 data XMM observation from obsid 0097610501 (2000-07-25) – large window (0.9s readout) meant extraction radius restricted to 141 arcsec; extended source ARFs; no checks to see if pile-up is an issue



- Model stands at : TBABS * (4 BREMS + 17 GAUSS)
 - No physics !
- Identical extraction region for pn gives const factor of 0.95 plus some residuals
 - pn spectrum is shifted by 12 eV to lower energies compared to MOS1 at Si- $K\alpha$
- 4 arcmin extraction region for pn gives a const factor which is 1.17 higher than 141 arcsec one



- MOS1 (pattern 0)



- pn (pattern 0)

