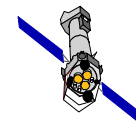


# MOS/pn cross-calibration CasA & PKS 2155

**Bruno Altieri**

**EPIC CAL/OPS meeting**

**VilSpa, June 2-4, 2002**



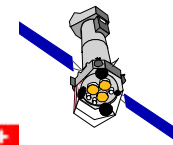
***XMM-Newton***

Bruno Altieri, ESA/RSSD

# Goal :

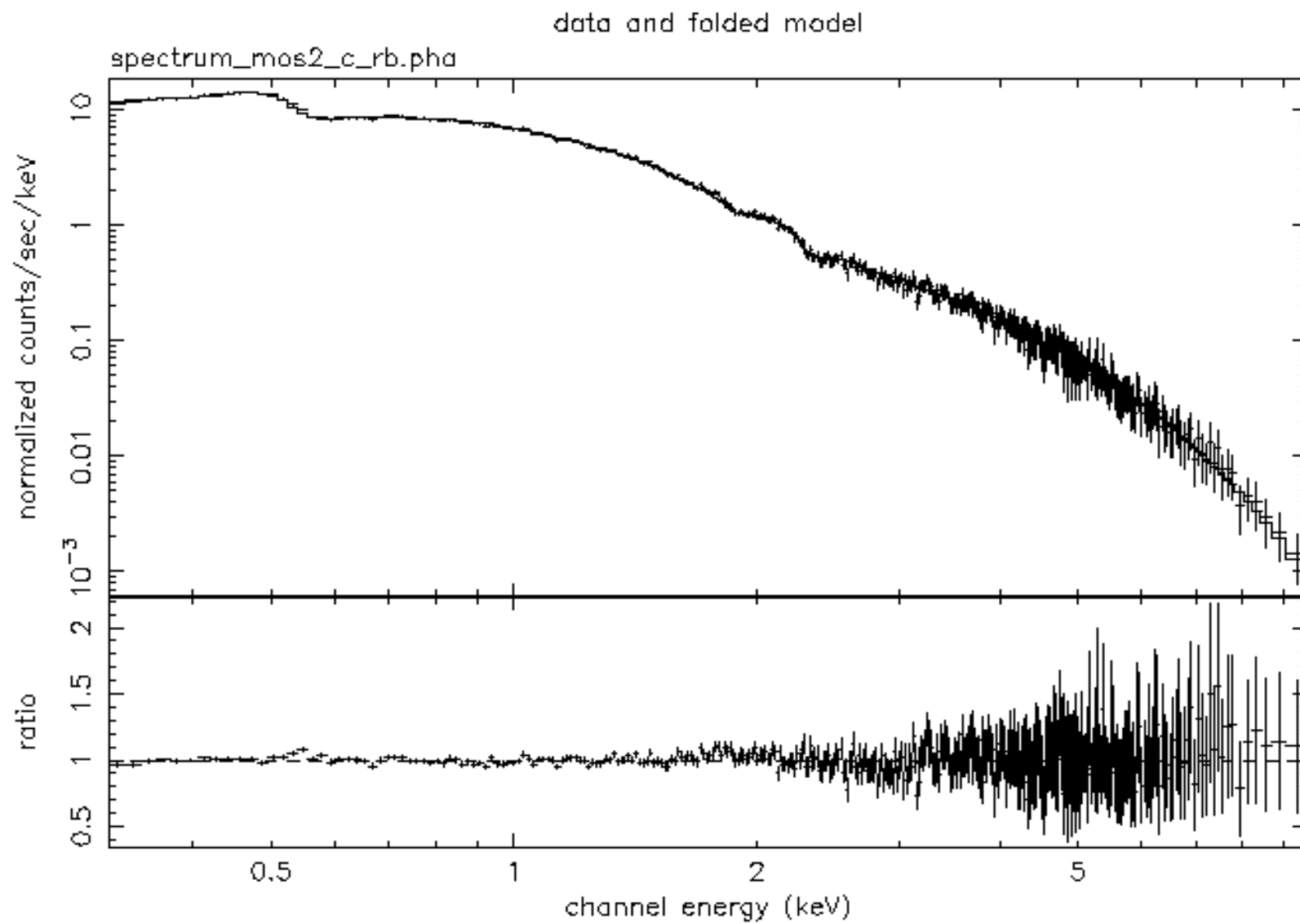
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- **1. Check possible residuals (gold-edge) with MOSs on a strong target due to imperfect CTI/gain calibration.**
  - Suggested by JWdH at x-cal telecom (June 2002)
- **2. Compare CasA MOS energy scale on another (blue-shifted) hot-spot with pn (and Chandra)**

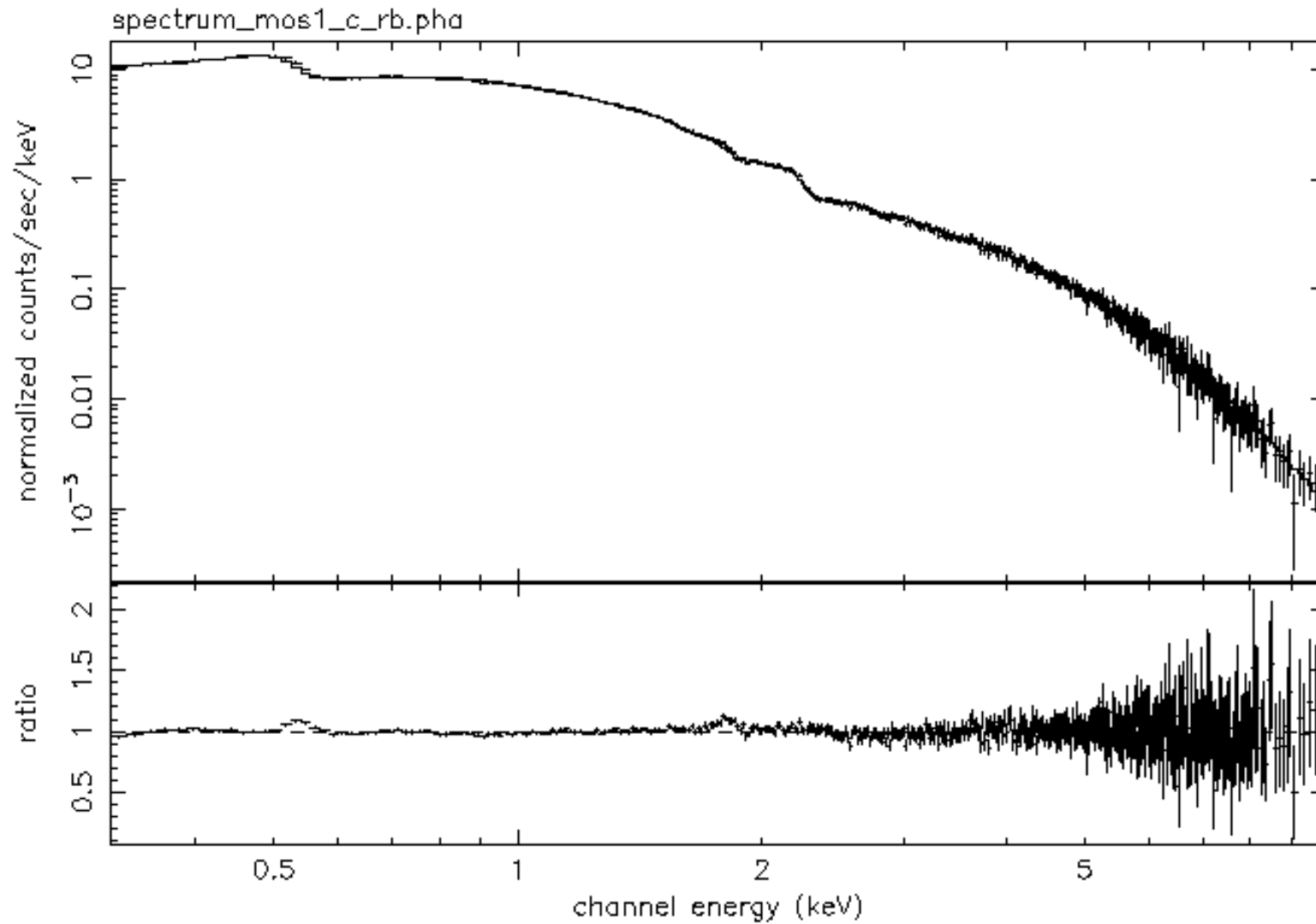


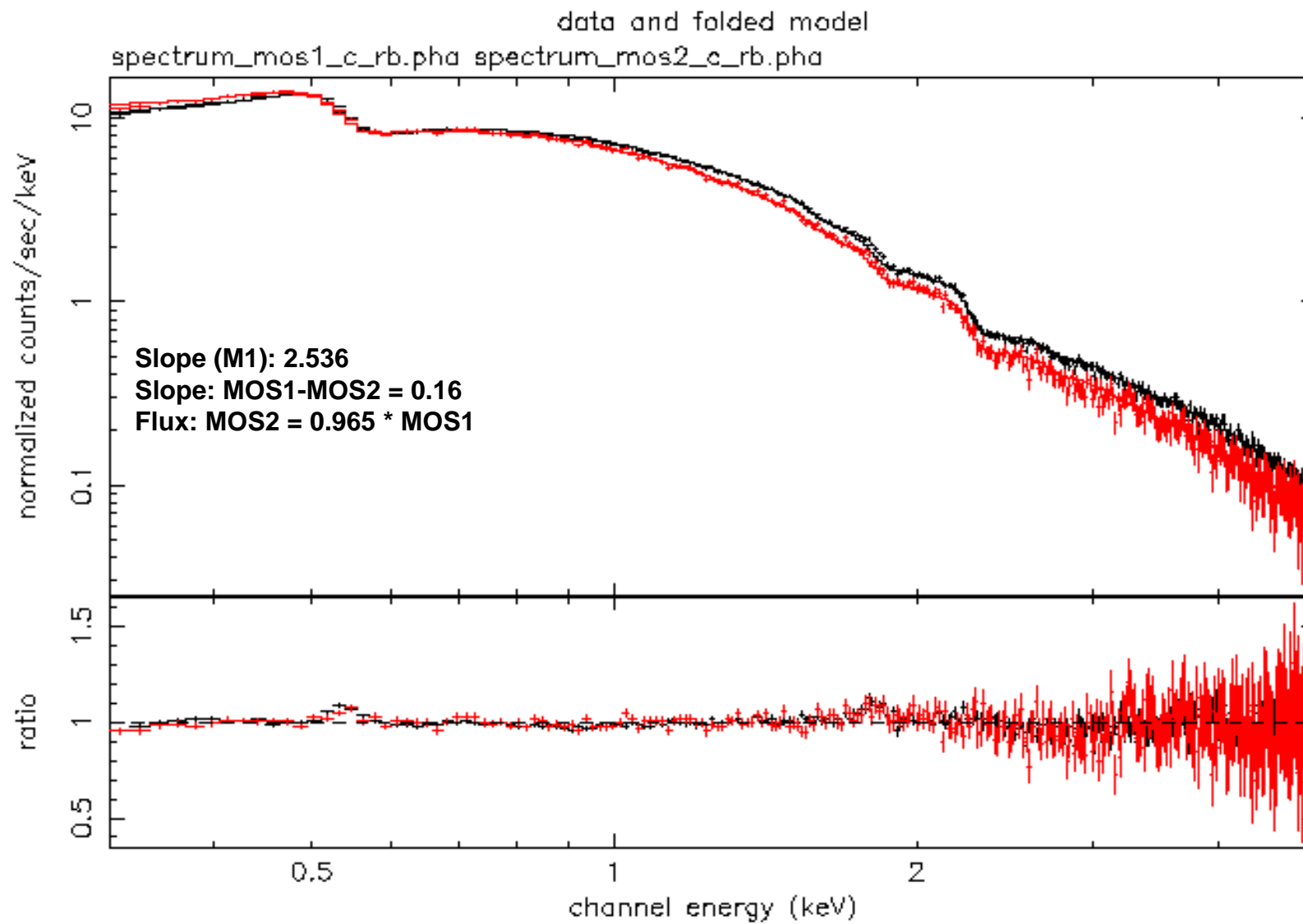
***XMM-Newton***

Bruno Altieri, ESA/RSSD



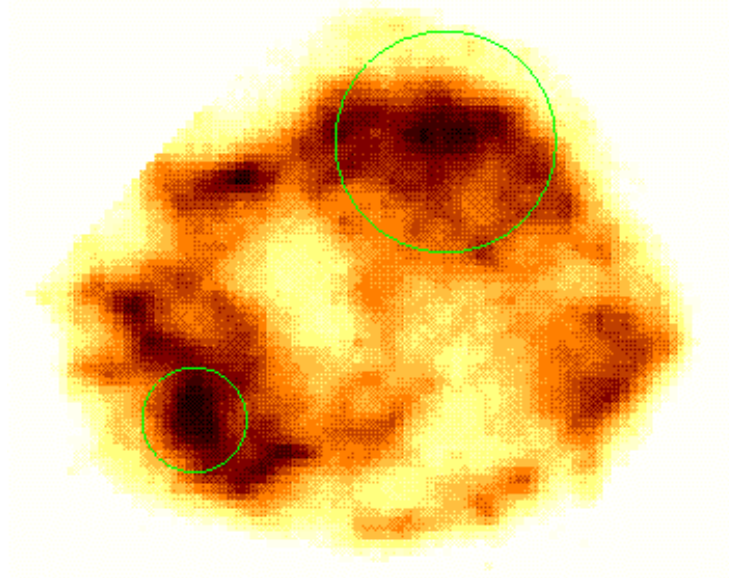
data and folded model





# Cas A

- MOS/pn cross-calibration on 2 hot spots.

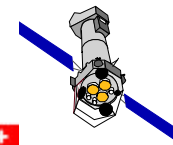


# CasA energy scale X-cal

- Tendency for MOS to overcorrects, shift worse at rev312 than rev115
- Points towards a count rate CTI dependence
  - but CasA is obviously an extreme case (central CCD fully illuminated)
  - opposite effect than seen with internal calibration source.

FeK line position		MOS1	MOS2	pn	Chandra
red-shited hotspot	rev115		?	6562	6583 (ACIS)
	rev312	6610 (6600)	-	6553	
blue-shifted hot-spot	rev115	6660 (6669)	6650	6671 (6663)	?
	rev312	6680 (6689)	-	?	
SiK line position		MOS1	MOS2	pn	Chandra
red-shited hotspot	rev115	?		1844	1850
	rev312	1865/-		1845 (1839)	

\* Gaussian fitting in PI space (XSPEC)



**XMM-Newton**

Bruno Altieri, ESA/RSSD