

Pipeline Status

Pedro Rodriguez on behalf of the Data Systems Group

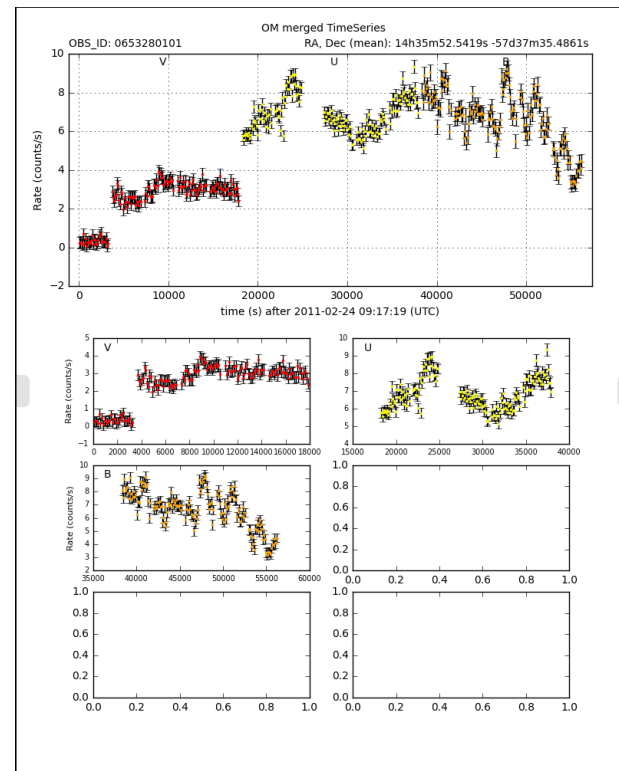
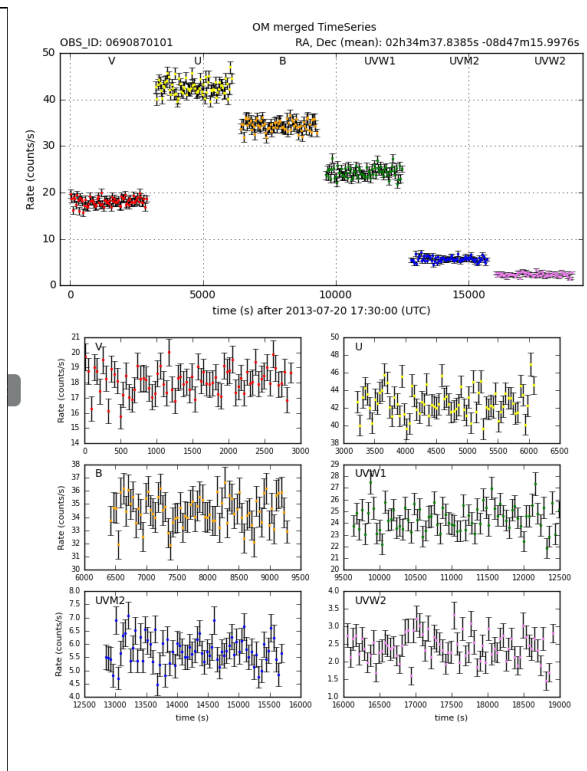
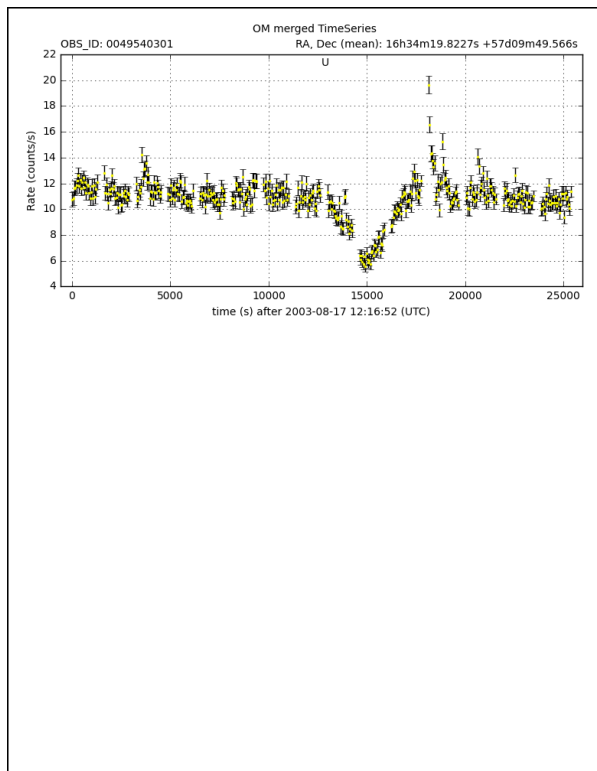
17/06/2020

New features for next pipeline



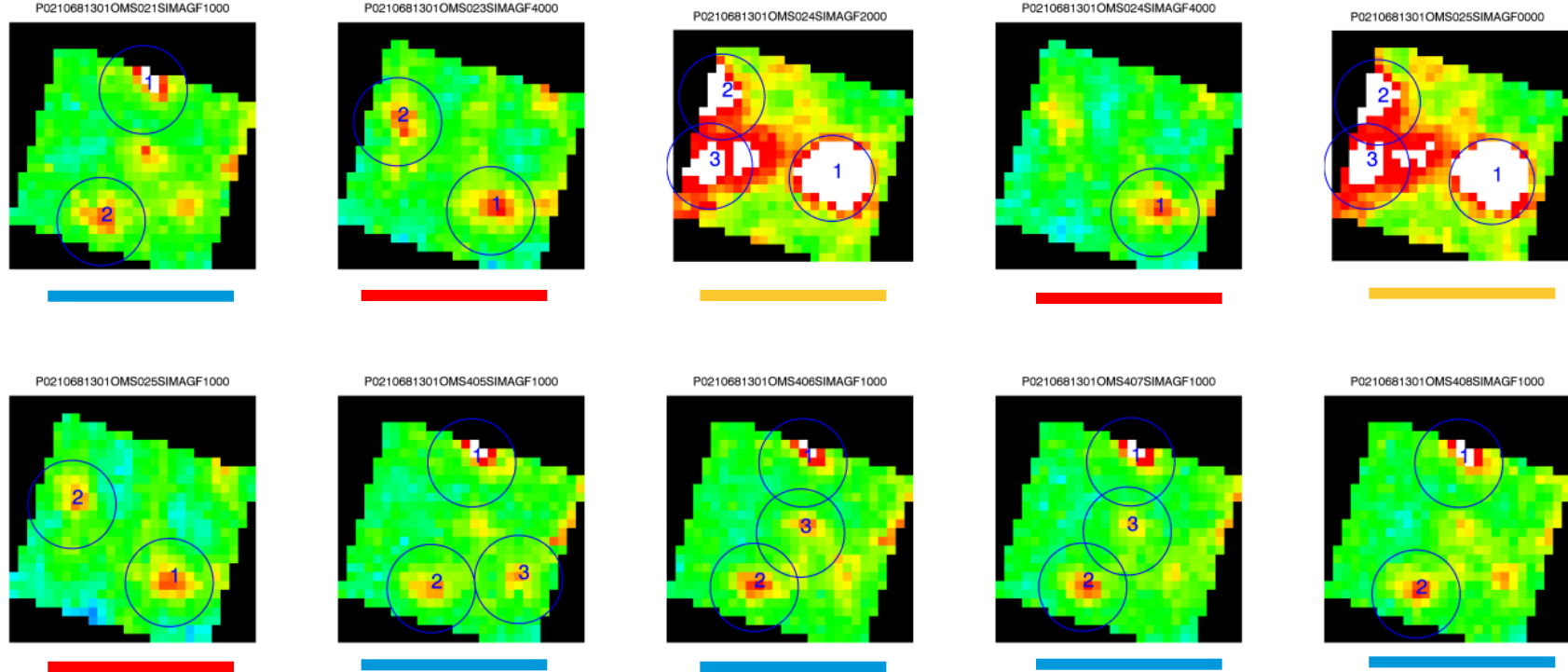
- Merged OM lightcurves
- OM broad band fluxes in OGIP compliant files
- EPIC-OM Spectral Energy Distribution Plots
- Flaring background filtering when more than one exposure in an EPIC camera
- FWC scaling according to relation between background rate and NSDLIN in pn
- Core excised EPIC spectra for bright sources

Merged OM Lightcurves (I)



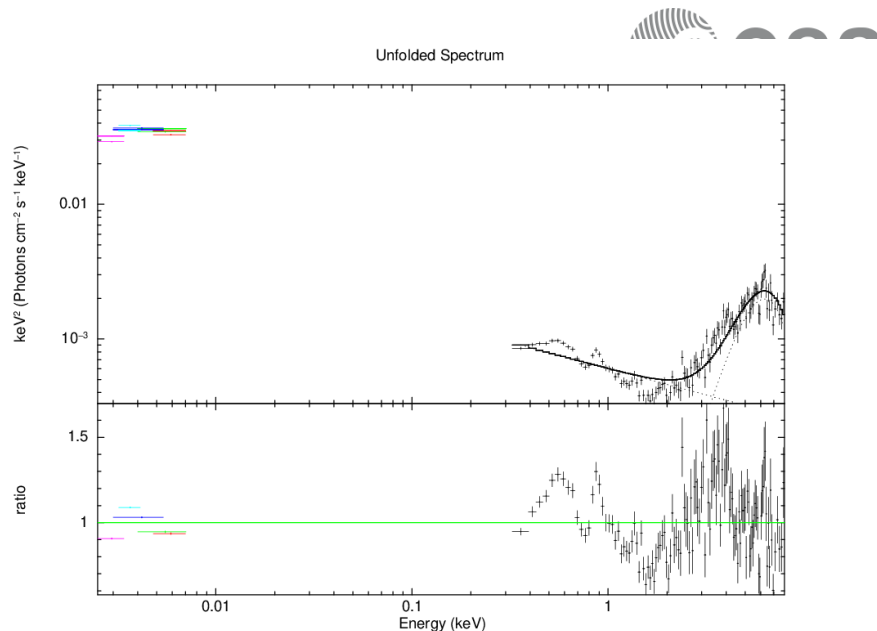
Merged OM Lightcurves (III)

OM Fast Mode Images



OM broad band OGIP spectra

- >+5M OM Sources
- ~10M OM Detections → ~10M Files !!!!
- ~+1000 files per observation

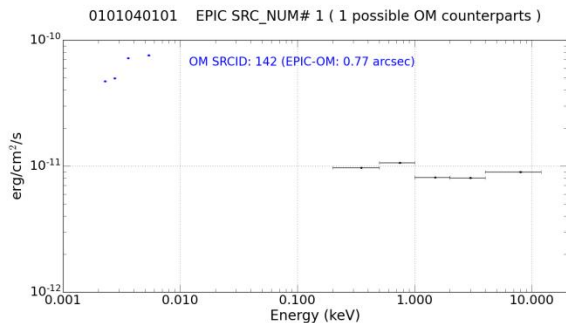


prodrigu 24-May-2020 13:18

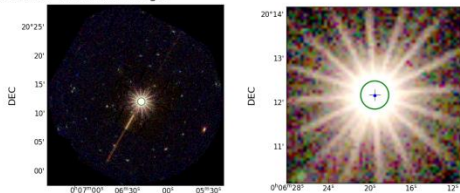
Options:

- Only for OM sources candidate to EPIC counterpart (200k)
- **Only for OM sources candidate to EPIC counterpart with spectrum (100k)**
- Only when at least one UV filter available (50k)
- Only when all UV filters available (2k)

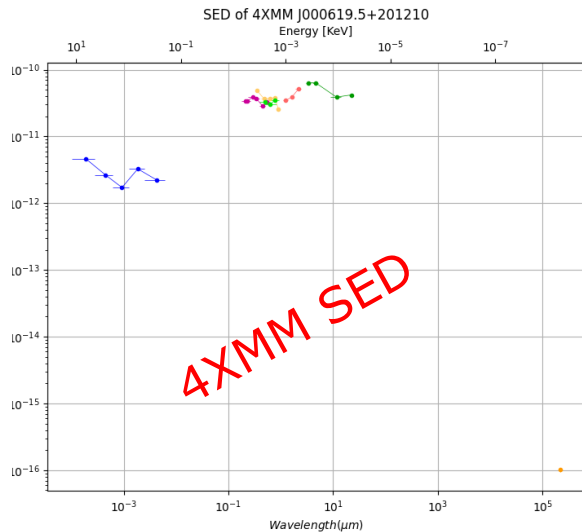
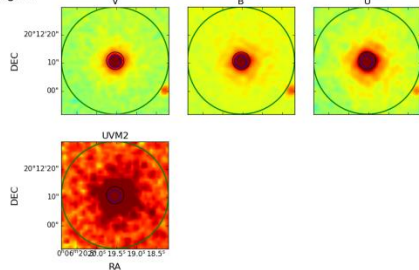
EPIC-OM Spectral Energy Distribution



EPIC 3Colour combined image



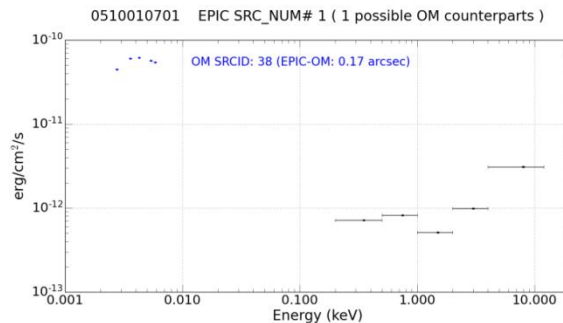
OM Images:



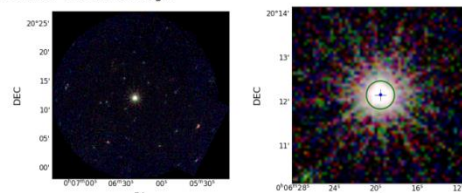
- 4XMM [4XMM J000619.5+201210] (EP5 EP4 EP3 EP2 EP1)
- XMM-SUS54.1 [11561] (UVW2/4 UVM2/4 UVW1/4 OMU/4 OMB/4 OMV/4)
- GALEX GR6+7 (no match)
- APASS DR9 (no match)
- SDSS DR12 [1237680246815064097] (up gp rp ip/1 zp)
- Gaia DR2 [2798344508160161280] (G BP RP)
- 2MASS [00061953+2012105] (J H K)
- AllWISE [J000619.53+201210.6] (W1 W2 W3 W4)
- AKARI (no match)
- NVSS+FIRST [106221] (1.4 GHz)

FITS file SED201010401010001_0.fits
Source ID 201010401010001
Probability 99%
Flag /1 : possible saturation - /2 : possible artifact - /4 : possible flux error - /8 : upper limit

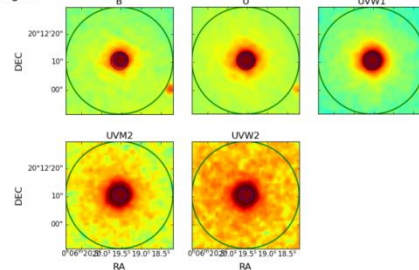
SSC XMM-Newton - Observatoire Astronomique de Strasbourg - 2020



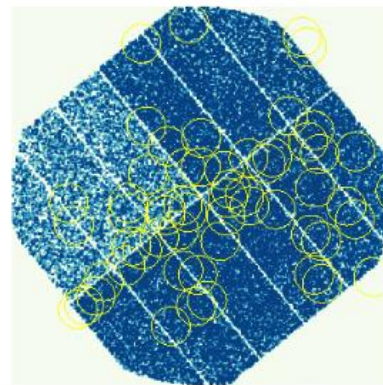
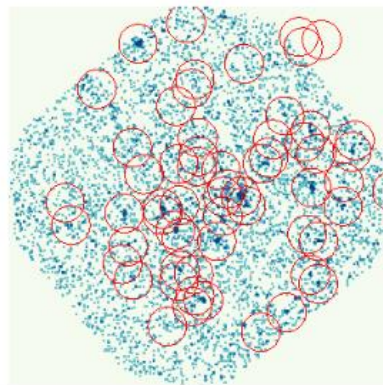
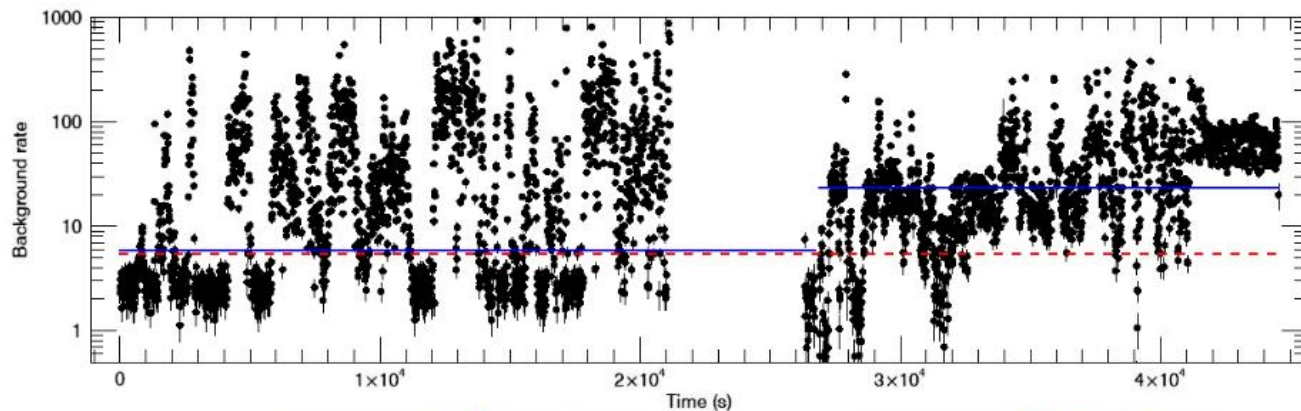
EPIC 3Colour combined image



OM Images:



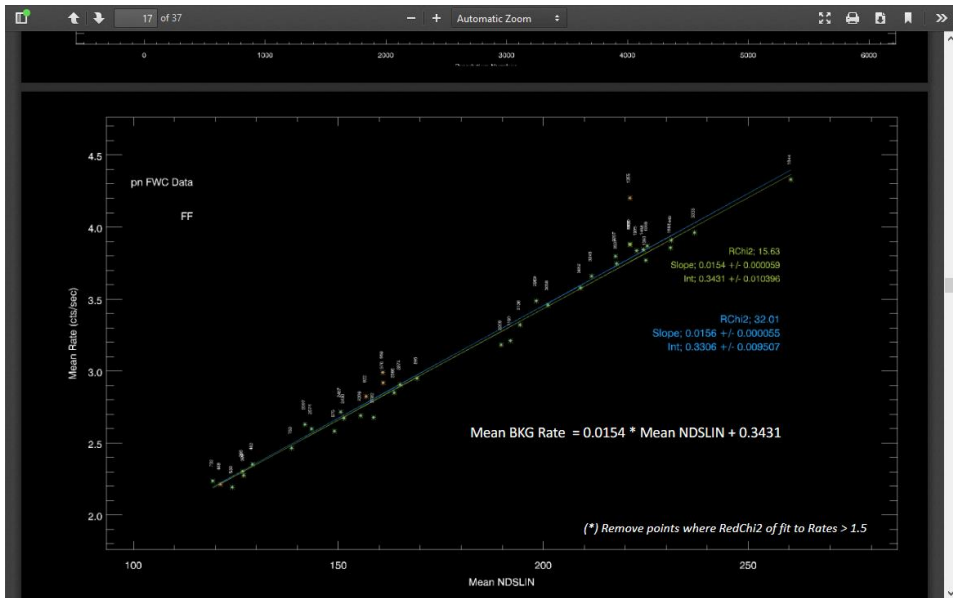
Flaring background filter per observation



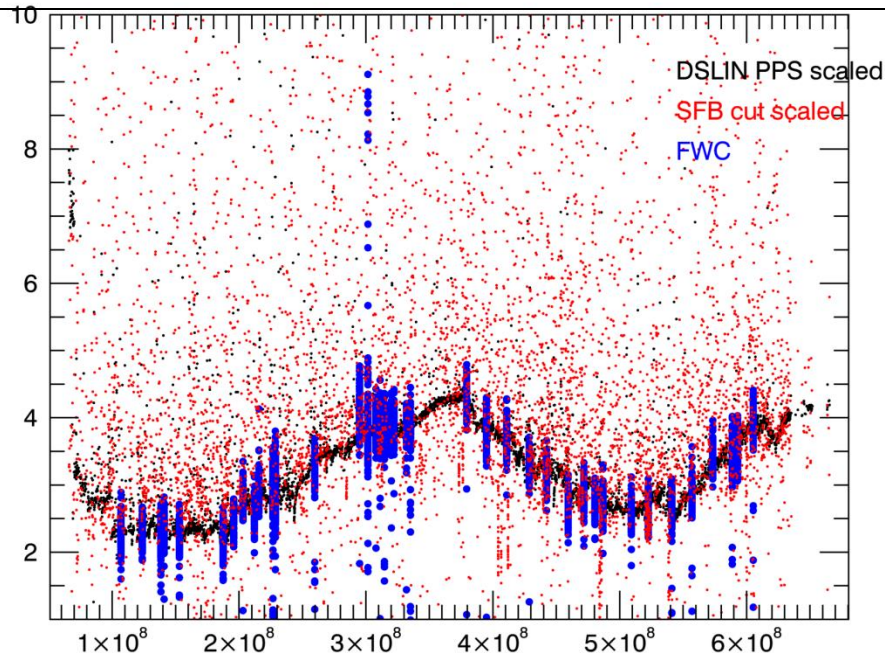
FWC scaling with NDSLIN

Using NDSLIN in EPIC-pn as a proxy for the QPB", I. de la Calle, XMM-Newton SOC (2019)

((FLAG & 0XFFFFFFEF) == 0) &&(PI IN [500:7500]) &&(PATTERN<=4)



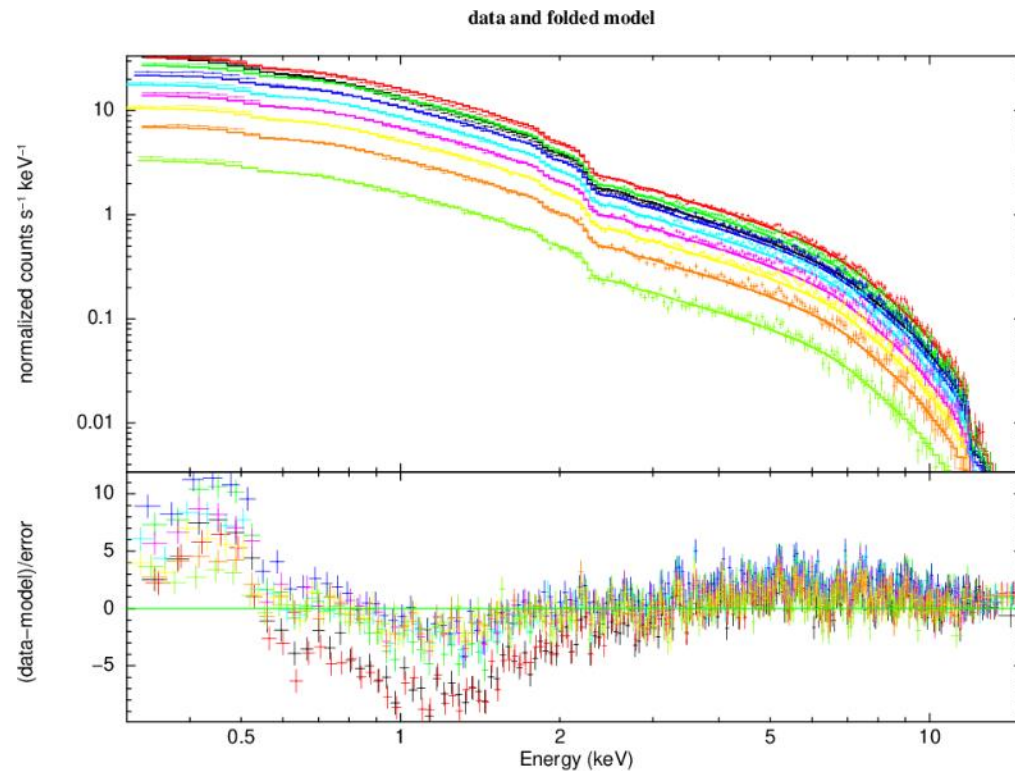
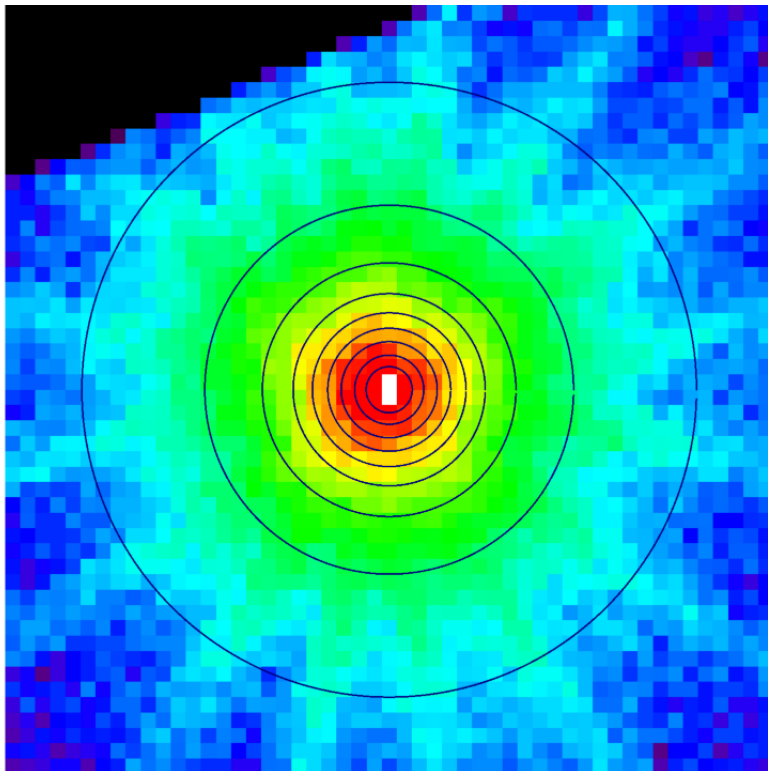
#XMMEA_EP && (PI in [200:10000] && PATTERN==0)



Core excised EPIC spectra

PATTERN==0 full circle

8 annular extractions with PATTERN<=4



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**ONLY GEOMETRICAL CRITERIA
NO POSITIVE IDENTIFICATION**

Merged source list for Fast Mode

Only for candidates to EPIC counterpart with spectrum

Only for EPIC sources with OM counterpart candidates + Finding chart

Adjust scale factor for different events selection criteria