Pipeline Status

Pedro Rodriguez on behalf of the Data Systems Group
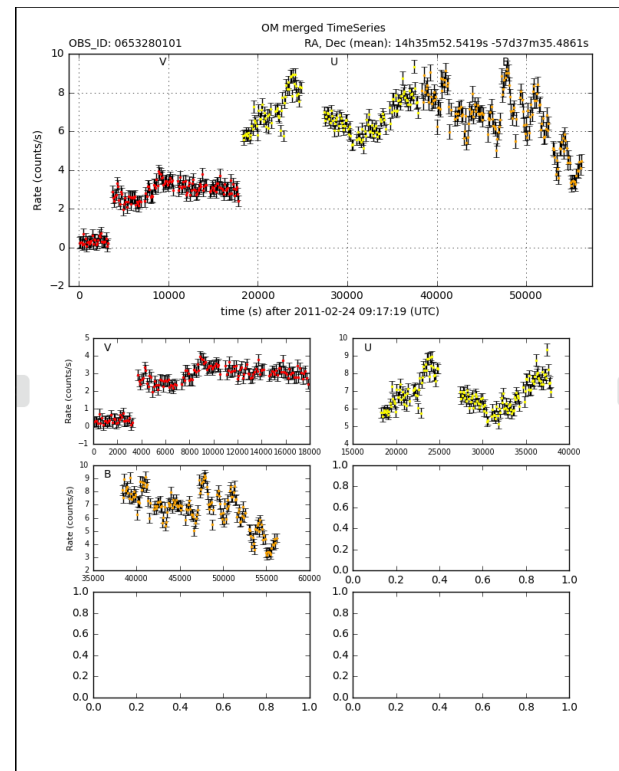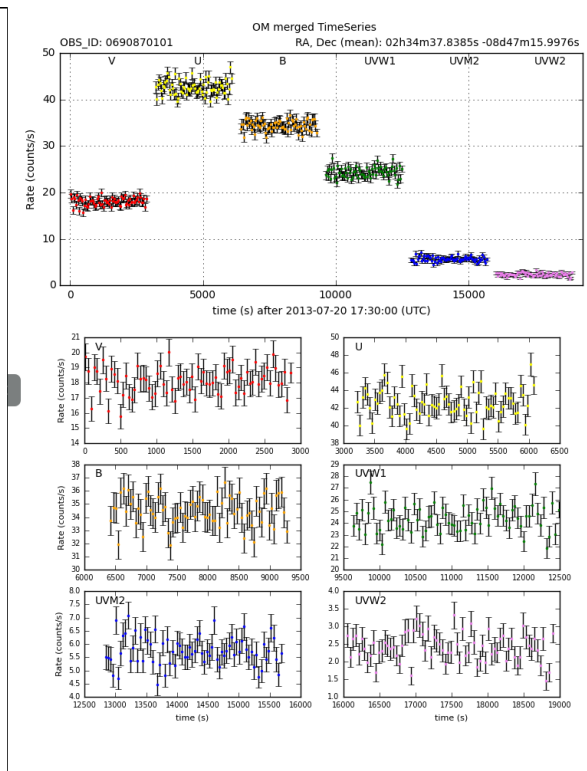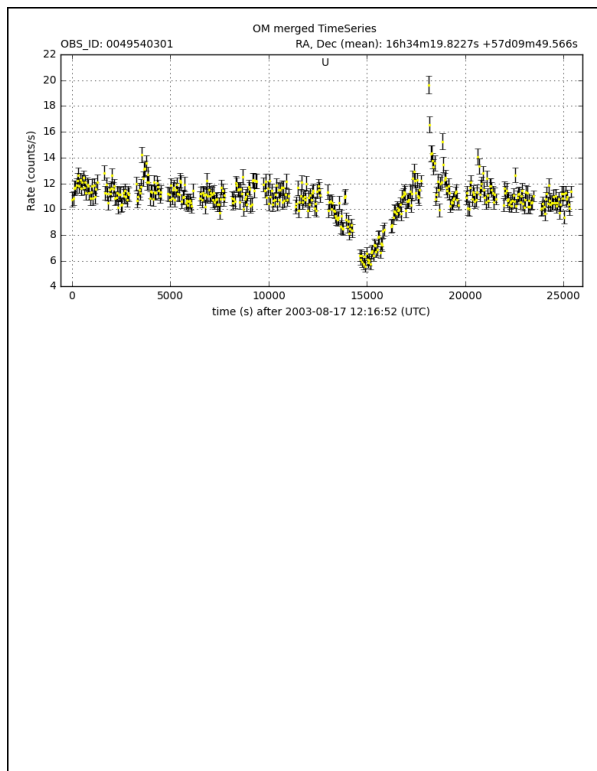
17/06/2020

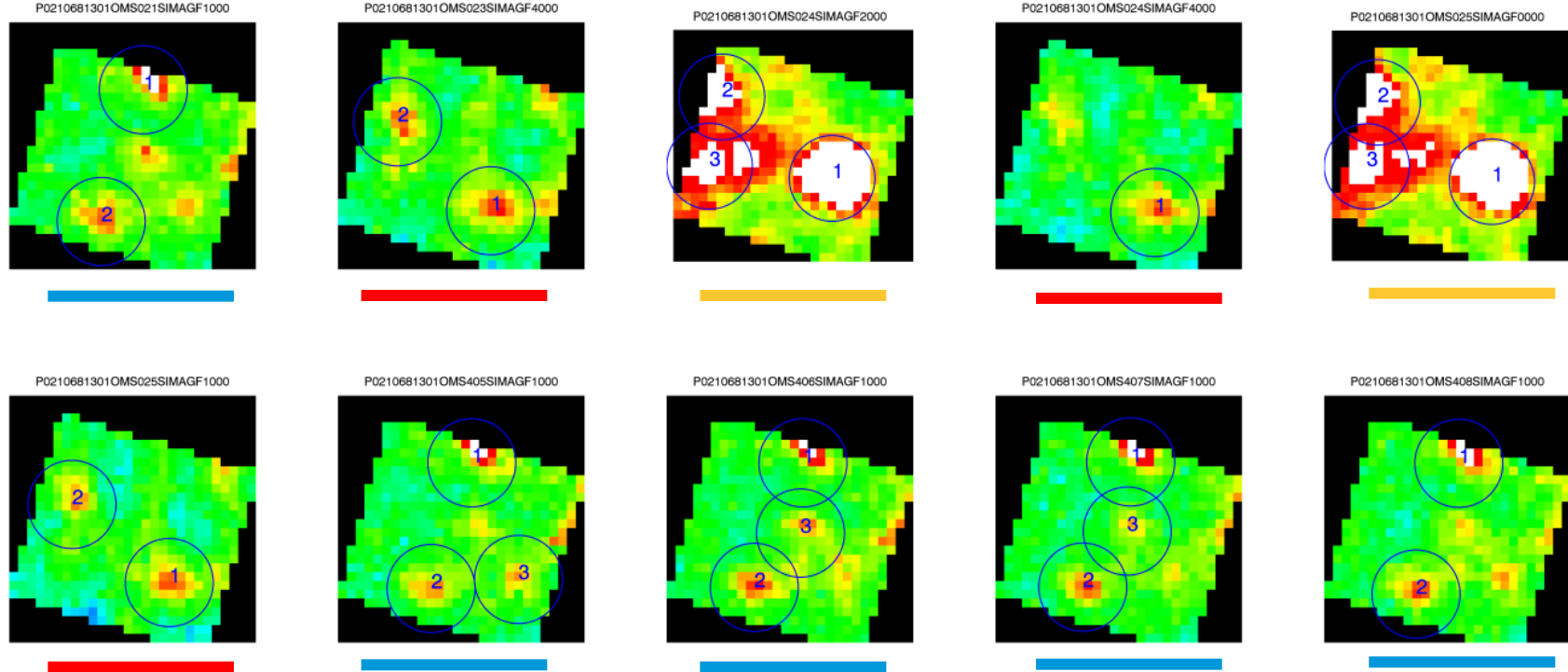# New features for next pipeline

- 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
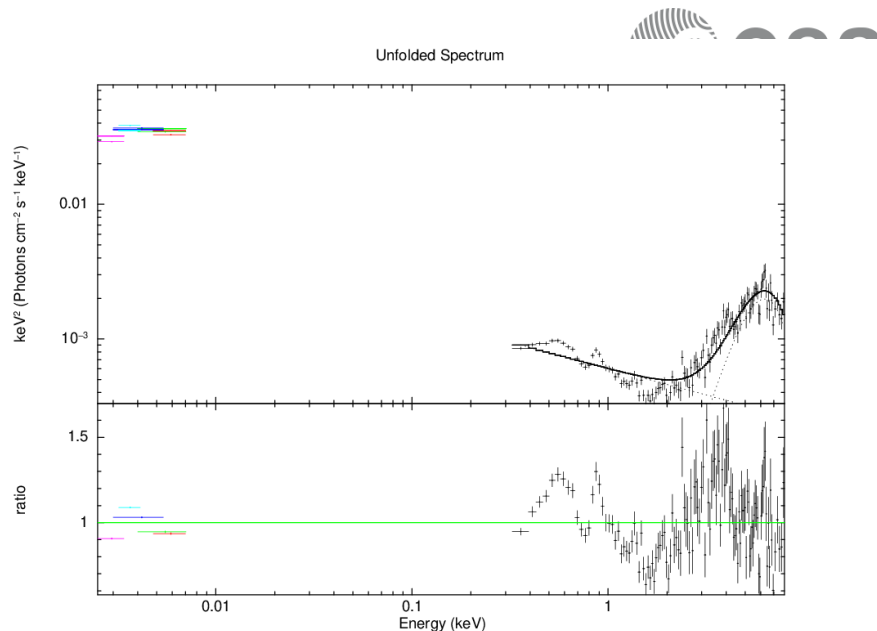
Merged OM Lightcurves (I)

Merged OM Lightcurves (III)

OM Fast Mode Images

European Space Agency

OM broad band OGIP spectra

- \>+5M OM Sources

- ~10M OM Detections ➔ ~10M Files !!!!

- ~+1000 files per observation
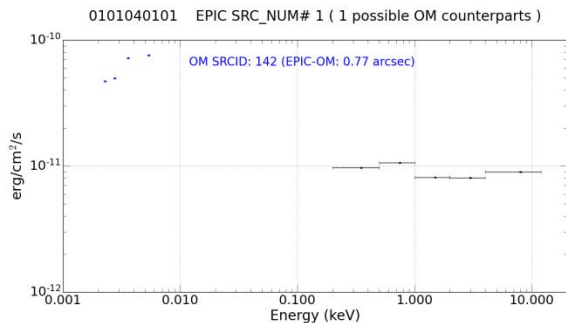

Unfolded Spectrum
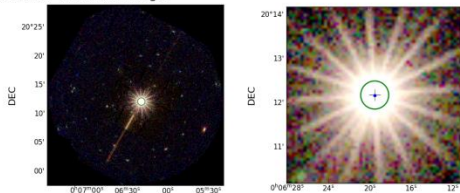
prodrigu 24–May–2020 13:18

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)
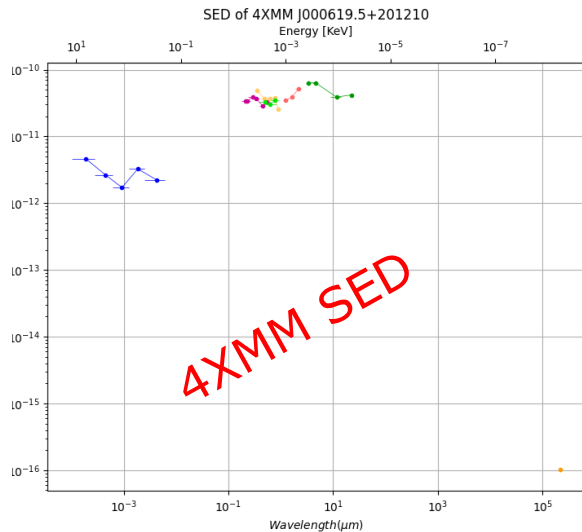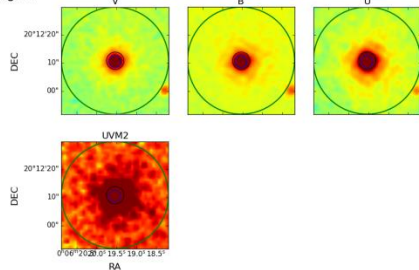- Only when all UV filters available (2k)

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EPIC-OM Spectral Energy Distribution

SED of 4XMM J000619.5+201210

4XMM SED

0101040101   EPIC SRC_NUM# 1 (1 possible OM counterparts)

OM SRCID: 142 (EPIC-OM: 0.77 arcsec)

EPIC 3Colour combined image

OM Images:

0510010701   EPIC SRC_NUM# 1 (1 possible OM counterparts)

OM SRCID: 38 (EPIC-OM: 0.17 arcsec)

EPIC 3Colour combined image

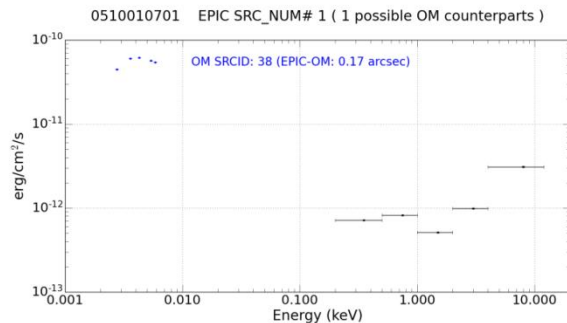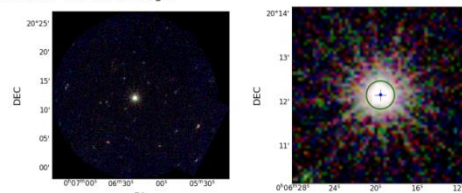OM Images:

4XMM [4XMM J000619.5+201210] (EP5 EP4 EP3 EP2 EP1)
XMM-SUSS4.1 [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%
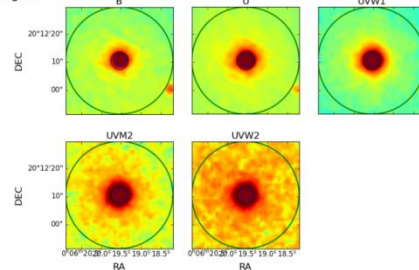Flag   /1 : possible saturation - /2 : possible artifact - /4 : possible flux error - /8 : upper limit

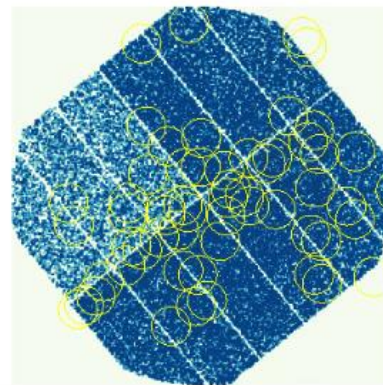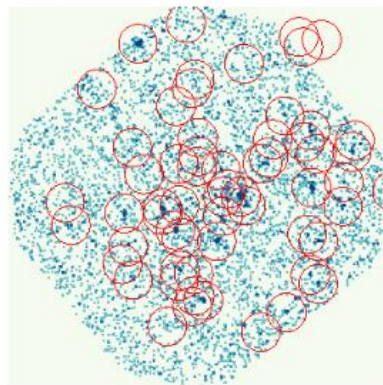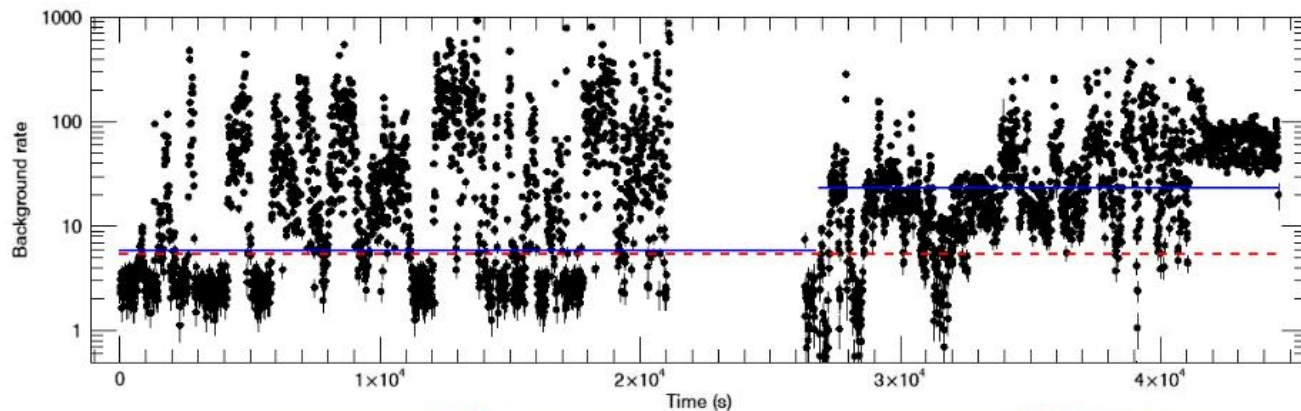SSC XMM-Newton - Observatoire Astronomique de Strasbourg - 2020
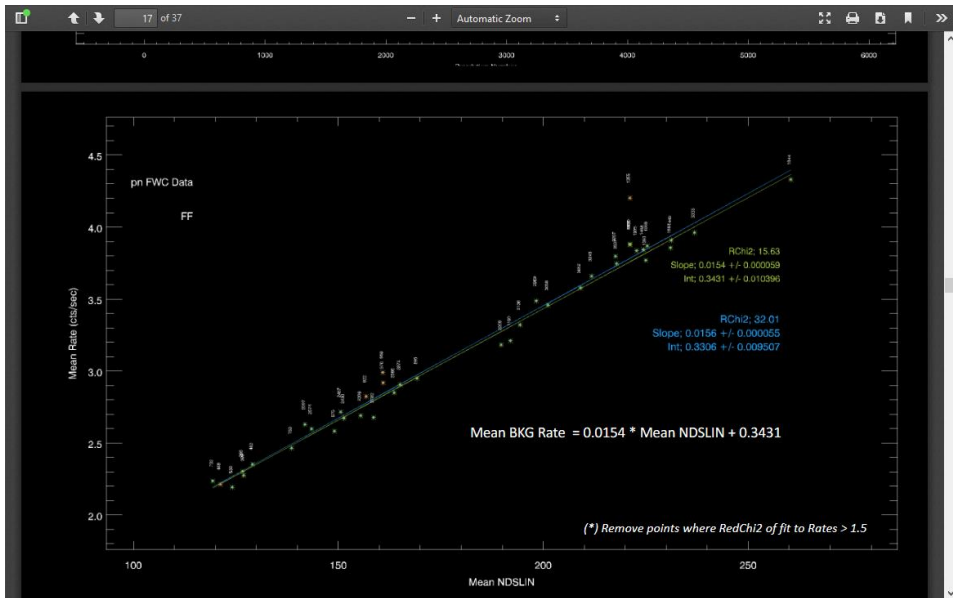
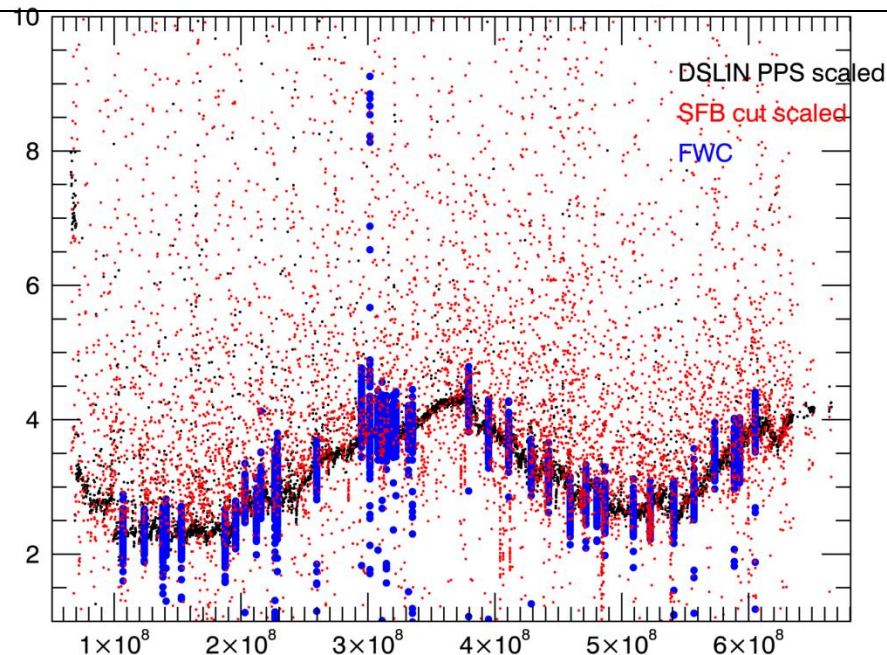# Flaring background filter per observation

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FWC scaling with NDSLIN

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

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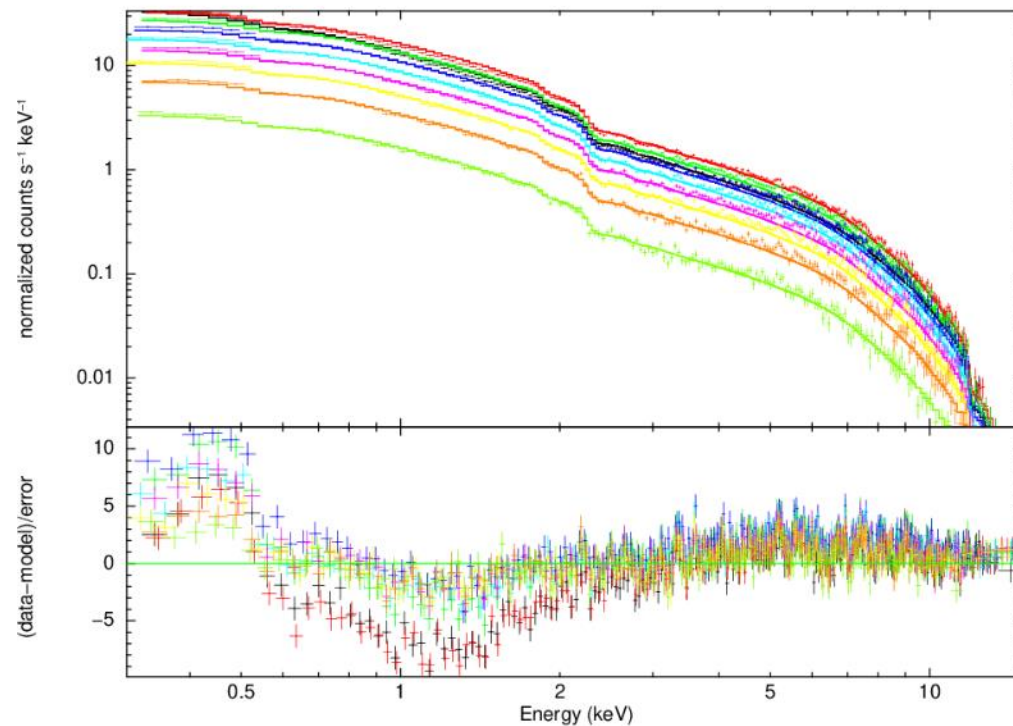

#XMMEA_EP && (PI in [200:10000] && PATTERN==0)

Core excised EPIC spectra

PATTERN==0 full circle
8 annular extractions with PATTERN<=4

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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

ONLY GEOMETRICAL CRITERIA NO POSITIVE IDENTIFICATION