

# COMMUNITY SUPPORT AND MISSION PLANNING

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ON BEHALF OF THE XMM-SOC COMMUNITY SUPPORT AND SCIENTIFIC PLANNING TEAM

## COMMUNITY SUPPORT

### •CALL FOR PROPOSALS

- Project Scientist and OTAC Support

### •SAS

- Scientific validation of new versions
- Manual
- Threads: development, maintenance and testing after new releases

### •INVOLVEMENT IN

- Pipeline Processing System (PPS)
- XMM Science Archive (XSA)

### •DOCUMENTATION

- Users Handbook
- Proposal Submission Manuals

### •HELPDESK

### •NEWSLETTER, TWITTER AND WEB PAGES

### •ORGANISATION OF SCIENCE CONFERENCES

### •OUTREACH

### •PROPOSAL ENHANCEMENT

- XMM and joint proposals allocated by other observatories
- Technical evaluation of proposals requested by other observatories
- Preparation of Routine and Non Routine Observations

## MISSION PLANNING

### •PLANNING AND SCHEDULING

- Long term Plan
- Coordinations
- Short term Plan
- Detailed Schedule
- Interface with MOC

### •TOO SUPPORT

## COMMUNITY SUPPORT

- **CALL FOR PROPOSALS**
  - Getting ready for AO20
- **SAS**
  - Scientific validation of SASv19
  - Update of the SAS manual
  - Development, evaluation and testing of Threads for SASv19
- **INVOLVEMENT IN**
  - Pipeline Processing System (PPS)
  - XMM Science Archive (XSA)
- **DOCUMENTATION**
  - Update of Users Handbook for AO20
  - Update of the RPS Manual
- **HELPDESK**
- **NEWSLETTER, TWITTER AND WEB PAGES**
- **ORGANISATION OF SCIENCE CONFERENCES**
- **OUTREACH**
- **PROPOSAL ENHANCEMENT**
  - XMM and joint proposals allocated by other facilities
  - Technical evaluation of proposals requesting XMM time submitted to other observatories
  - Preparation of Routine and Non Routine Cycle observations

## MISSION PLANNING

- **PLANNING AND SCHEDULING**
  - Long term Plan
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  - Detailed Schedule
  - Interface with MOC
- **TOO SUPPORT**

# Planning and Scheduling



**WORKING REMOTELY SINCE MID MARCH**

**FIRST TEST ON MARCH 11<sup>TH</sup>**

**PROCEDURES IN PLACE FOR REMOTE ACCESS TO OPERATIONAL AREAS**

**STARTING REMOTE SCHEDULING ON MARCH 16<sup>TH</sup>**

**EVERYTHING RUNNING NOMINALLY**



## OPEN TIME PROGRAM AO18 (UP TO MAY 1<sup>ST</sup> 2020)

	<b>A and B</b>	<b>C</b>
Number of allocated targets	368	390
Allocated cumulative exposure time	14526 ks	13683 ks
Number of successfully observed targets	328 ( <b>89 %</b> )	112 ( <b>29 %</b> )
Successfully observed cumulative exposure time	12970 ks ( <b>89 %</b> )	2783 ks ( <b>20 %</b> )

## AO19 STARTED MAY 1<sup>ST</sup>

## CONTENT

- ODF/PPS of ~ **14,500** pointed observations (full reprocessed PPS)
  - ~ **913,000** EPIC PPS sources (\*)
  - ~ **12,400,000** OM PPS sources
  - ~ **48,000** Slew Survey PPS sources
  - SDF of ~ **4,500** Slew Survey observations
  - **810,795 4XMM-DR9 EPIC Catalogue detections (>550,000 sources)**
  - **288,191 4XMM-DR9s EPIC Stacked Catalogue sources**
  - 8,176,156 OM Catalogue sources (OM-SUSS4.1 catalogue)
  - > 700 OM SUSS3 Supplementary Catalogue of bright sources
  - 72,352, Slew Survey Catalogue sources (XMMSL2)
  - Radiation Monitor files up to revolution 3000
  - Ancillary info: proposal info, publications (>**6500**)
- (\*) *The new Pipeline provides a more reliable detection of sources*

## MAIN NEW FUNCTIONALITIES

### 7 NEW XSA RELEASES SINCE LAST MEETING

- Ingestion and display of the PPS reprocessed data
- Ingestion and display of the 4XMM-DR9 and 4XMM-DR9s catalogues
- Display of SED plots produced by the SSC for 4XMM-DR9 sources
- Display of the PPS EPIC background time-series plot in the Results panel
- JS9 visualization of EPIC and OM PPS image products, including moving targets in their reference frame
- Links to SSC (IRAP) and XcatDB for each 4XMM-DR9 source
- Results of the search on a list of objects displayed in a single table
- Search in the FOV using PPS footprints
- Additional options for the RGS spectral visualiser
- Creation of the XMM-Newton astroquery module

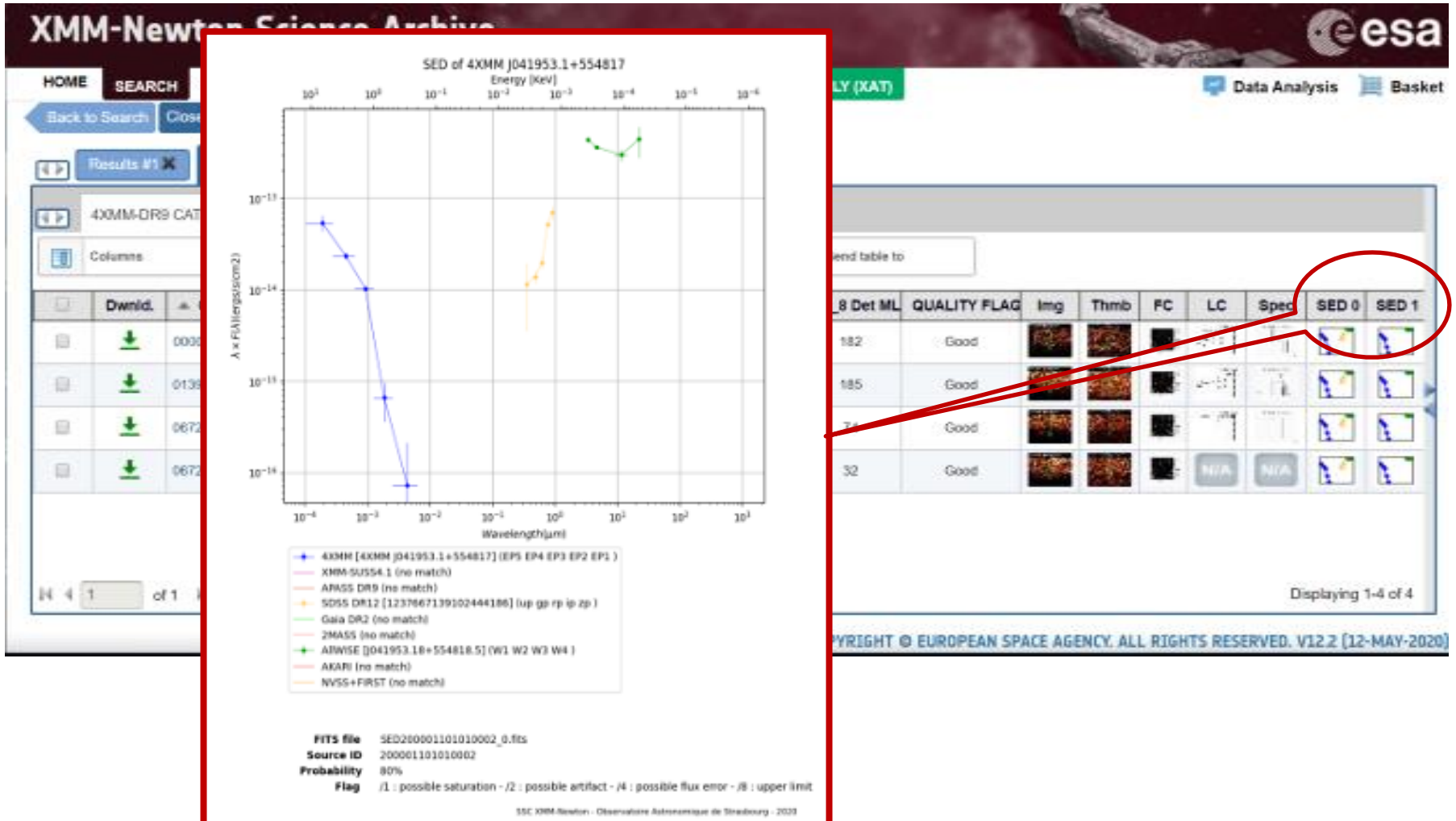
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## Display of SED plots for 4XMM-DR9 sources



Display of the EPIC Background time-series, and possibility to examine it in the "Interactive analysis" TAB

The screenshot displays the XMM-Newton Science Archive interface. At the top, navigation tabs include HOME, SEARCH, COMMAND & URL ACCESS, INTERACTIVE ANALYSIS, TAP QUERIES, and ADMIN ONLY (XAT). A 'Basket' icon is visible in the top right. Below the navigation, there are buttons for 'Back to Search' and 'Close all'. The main content area shows a table of observations with columns for Obs.ID, EPIC, RGS, BKGD, ESASky, and Target. A red circle highlights the BKGD column for observation 0200980101. An inset window provides a detailed view of the EPIC Exposures for this observation, including a 'Background flaring timeseries (pipeline product)' plot showing Rate, Lines, and FPS threshold over time. The plot shows a significant increase in the rate starting around 60 seconds. Below the plot, there are controls for 'RISA analysis of EPIC Exposures' and a 'Reset' button. The bottom of the interface shows a table of observation details, including coordinates and dates, and a footer with the text '© EUROPEAN SPACE AGENCY. ALL RIGHTS RESERVED. V12.2 (18-MAY-2020)'.

Obs.ID	EPIC	RGS	BKGD	ESASky	Target
0112521101					Holmberg IX
0200980101					HOLMBERG IX
0693850801					Holmberg IX X-1
0693850901					Holmberg IX X-1
0693851001					
0693851101					

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**XMM-Newton Science Archive**

HOME | SEARCH | COMMAND & URL ACCESS | INTERACTIVE ANALYSIS | TAP QUERIES | ADMIN ONLY (XAT) | Data Analysis | Basket

Back to Search | Back to Results

Interactive Analysis | RGS - Spectra Visualization

Open images with: JIS EPIC Exposures | Add SRC regions

File | Edit | View | Zoom | Scale | Color | Regions | WCS | Analysis | Help

EPIC Exposures

Obs. ID: 001930801

Instrument: EPIC02

Exposure: 3002

View background fitting: Plot

RISA analysis of EPIC Exposures

Flag: -

Filter: -

PI (s): -

Product Type: Spectra

Centre & optimize src region

See JIS source | Edit source region in JIS

Reset Form

**Visualizer**  
 and OM  
 source regions.

**Visualise with the PPS images of Moving Targets in the target reference frame**

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Back to Search | Back to Results

Interactive Analysis | RGS - Spectra Visualization

Open images with: JIS MT EPIC Combined int. | Add SRC regions

File | Edit | View | Zoom | Scale | Color | Regions | WCS | Analysis | Help

FN Events List

MOS1 Events List

MOS2 Events List

MT EPIC Combined image

MT EPIC Three colour image

MT EPIC Exposure Map

MT EPIC Background Map

12 50 27 642 -26 13 43 4163 - 271 800 616 500 (physical)

Target	RA
Jupiter	11h 00m 19.29s
Jupiter	12h 50m 22.50s
Jupiter	12h 55m 00.19s
Jupiter	12h 57m 05.70s
Jupiter	14h 56m 37.49s
Jupiter	14h 43m 45.90s
Jupiter	14h 44m 04.49s
Jupiter	14h 33m 53.68s
Jupiter	16h 56m 55.99s

Postcard Preview

Postcard Preview

Summary | Science Exposures | Publications

Obs. ID: 001930801

Revolution: 3221

Target: Jupiter

Exposures: 3 EPIC, 0 OM, 2 RGS

Proposal Abstract

**Joining Juno in Exploring Jupiter's Aurora**

Over the next year, NASA's Juno spacecraft will fly through the magnetospheric regions that trigger Jupiter's X-ray aurora. This provides a once-in-a-generation opportunity to

## PLANS FOR FUTURE RELEASES

- Ingestion and display of new catalogues:
  - 4XMM-DR10
  - 4XMM-DR10s
  - New version of the OM catalogue
- Visualisation of EPIC spectra and light curves with the “spectra” visualizer
- Additional options for the RGS spectra visualiser
- Upgrade of the XMM-Newton Astroquery module
- Integration of the Upper Limit Server

# Scientific Conferences and Events

## ANNUAL DEDICATED WORKSHOPS AT ESAC

Astrophysics of Hot Plasma in Extended X-ray Sources  
12 -14 June 2019

## 20 YEARS FROM LAUNCH

ESAC  
10 December 2019

see

<http://xmm20anniversary.esa.int/>

and

<https://www.cosmos.esa.int/web/xmm-newton/20th-anniversary-event>

## THE X-RAY UNIVERSE 2020

ESTEC  
25-29 May 2020

**TOPICS**  
 Submillimetre Emission  
 Galaxies  
 Clusters of Galaxies  
 Plasma modes  
 Plasma modelling and spectral fitting

**→ ASTROPHYSICS OF HOT PLASMA IN EXTENDED X-RAY SOURCES**  
 12-14 June 2019  
 ESAC, Villanueva de la Cañada, Madrid, Spain  
*XMM-Newton Science Workshop 2019*

**Scientific Organising Committee**  
 Monique Arnaud, ESA Saclay, FR  
 Rita Corbelli, U. of Tokyo, JP  
 Hans Böhringer, U. of Munich, DE  
 Joel K. Shapman, U. of Michigan, USA  
 Anne-Dorothea Schmitt, ESA Saclay, FR  
 Andy Fabian, U. of Cambridge, UK  
 Jimmy Irwin, U. of Alabama, USA  
 John Scaife, SOA, NL  
 Rosine Lefrancis, Paris Observatory, FR  
 Pasquale Mazzotta, U. of Rome, IT  
 Takaya Shioya, TCU, JP

**Local Organising Committee**  
 Luca Ballo, Ispacio de la Calle, ES  
 Jacobo Estera, Felix Fort, ES  
 Cristina Hernandez, Alan Zhang, ES  
 Simone Migliari, ESA, San-Diego, US  
 Richard Smith, Robert Scharif, ES  
 Michael Smith, Ana Wilson, ES  
 Ivan Valtchanov, ES

<http://xmmworkshop.esa.int>  
 www.esa.int  
 European Space Agency

**xmm-newton**  
**→ 20 YEARS FROM LAUNCH**

XMM-Newton  
 20th Anniversary Event