Community Support and Mission Planning

Rosario González-Riestra

XMM-Newton Science Operations Centre

on behalf of the XMM-SOC Community Support and Scientific Planning Team

Mission Planning and Community Support Group Tasks Overview

CALL FOR PROPOSALS

- Project Scientist and OTAC Support

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 Calibration observations

PLANNING AND SCHEDULING

- Long term Plan
- Coordinations
- Short term Plan
- Detailed Schedule
- MP interface with MOC

ToO SUPPORT

HELPDESK

DOCUMENTATION

- Users Handbook
- Proposal Submission Manuals

SAS

- Validation of new SAS versions
- SAS Manual
- SAS Threads: maintenance and testing after new SAS releases

INVOLVEMENT IN

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

OUTREACH

NEWSLETTER and WEB PAGES

ORGANISATION OF SCIENCE CONFERENCES

Mission Planning and Community Support Group Tasks Overview

CALL FOR PROPOSALS

- Project Scientist and OTAC Support

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 Calibration observations

PLANNING AND SCHEDULING

- **AO17 Statistics**

ToO SUPPORT

HELPDESK

DOCUMENTATION

- Users Handbook
- Proposal Submission Manuals

SAS

- Validation of new SAS versions
- SAS Manual
- SAS Threads: maintenance and testing after new SAS releases

- **XMM Science Archive (XSA)**

NEWSLETTER
and WEB PAGES

OUTREACH

ORGANISATION OF SCIENCE CONFERENCES

Planning and Scheduling

Open Time Program AO17 (up to May 1st 2019)

	A and B	C
Number of allocated targets	313	317
Allocated cumulative exposure time	12974 ksec	10974 ksec
Number of successfully observed targets	294 (**93.9 %**)	153 (**48.3 %**)
Successfully observed cumulative exposure time	12268 ksec (**94.6 %**)	4139 ksec (**37.7 %**)

LIGO/Virgo Alerts

- Third observing run ("O3") began on 2019 April 1st 15:00 UTC

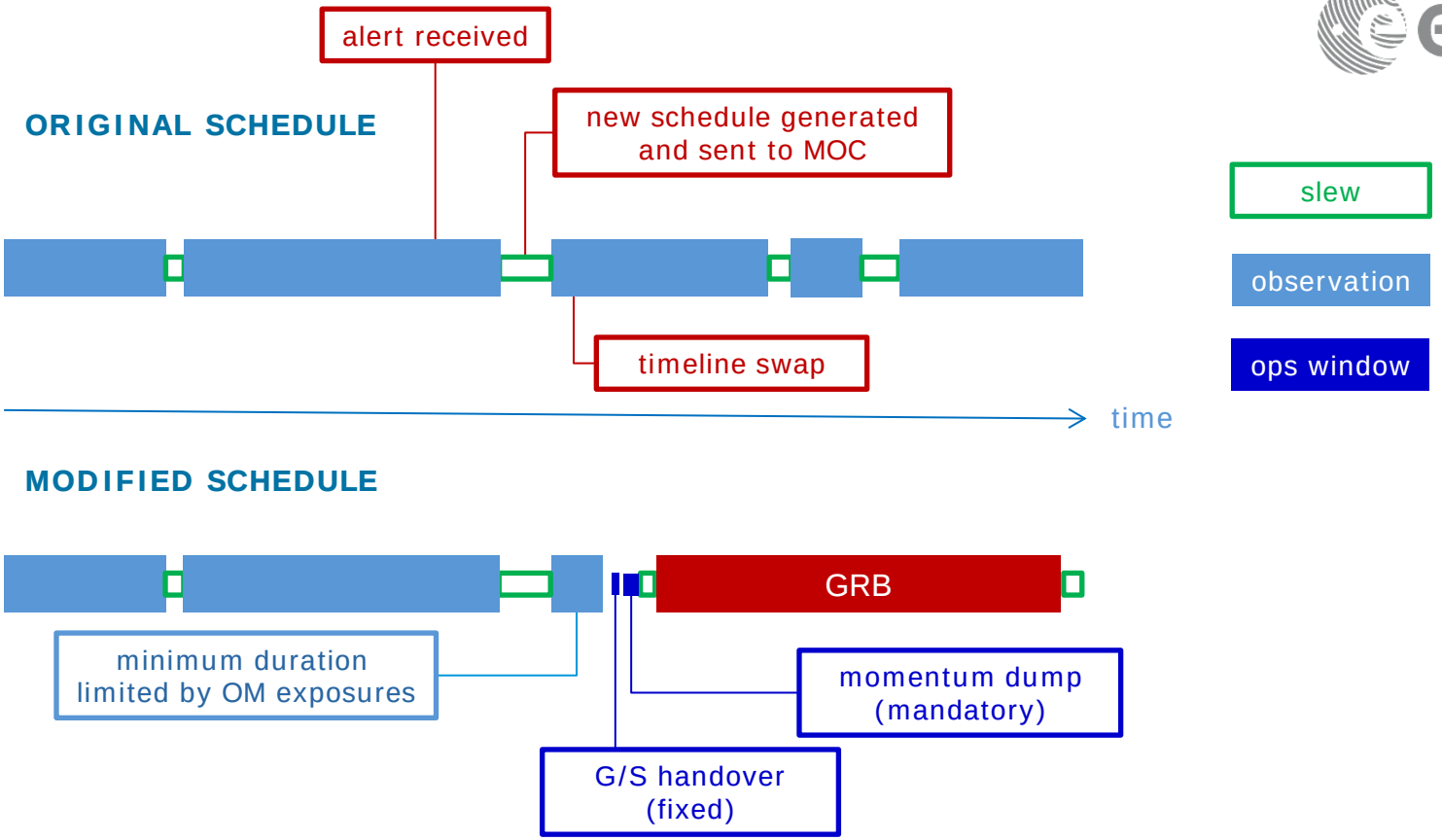
- Alerts issued in this run:
  - S190408an (April 8th)
  - S190412m (April 12th)
  - S190421ar (April 21st)
  - S190425z (April 25th)
  - S190426c (April 26th)
  - S190503bf (May 3rd)

- Procedures in place to generate and handle urgent alerts

Urgent Target of Opportunity Alerts

ToO observation of GRB 190114C

January 14th 2019	20:57	GCN with discovery of a bright GRB by SWIFT issued
	21:01	Alert received by on-call scientist
	21:40	ToO approved by PS
	...	on-call scientist to ESAC / Flight Dynamics on-call person to ESOC
	...	definition of strategy for changes in the schedule
	...	preparation of GRB observation (instrument modes, OM filters...)
	...	modification of on-going observation
	...	generation of modified schedule
	23:58	New schedule ready and exported to MOC
	...	generation of new timeline at MOC
January 15th 2019	02:09	Swap of timelines
	04:13	Start of slew to GRB
	04:45	Observation started (for 55 ks) **7h 48m after discovery**


alert received
ORIGINAL SCHEDULE
new schedule generated
and sent to MOC
timeline swap
time
slew
observation
ops window
MODIFIED SCHEDULE
GRB
minimum duration
limited by OM exposures
momentum dump
(mandatory)
G/S handover
(fixed)

Urgent Target of Opportunity Alerts

Is it possible to do better?

- At working hours
  - Several people working in parallel
  - Manual operations if Operations Analyst or Spacecraft Engineer available
- With favourable conditions, e.g. short distance from current pointing
- No slew constraints (G/S Handovers or Earth/Moon proximity)
- Possibility to shorten further the current observation

$4^h\ 15^m$ shortest reaction time, GRB040223A

$\leq 6^h$

XMM-Newton Science Archive

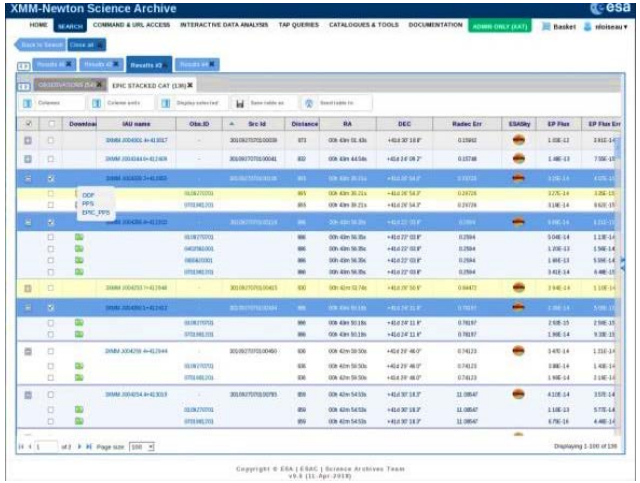
CONTENT

- ODF/PPS of ~ 13,800 pointed observations
- ~ 916,000 EPIC PPS sources
- ~ 10,201,000 OM PPS sources
- ~ 31,000 Slew Survey PPS sources (rev.>3137)
- SDF of ~ 4,300 Slew Survey observations
- 775,153 3XMM-DR8 EPIC Catalogue detections (>500,000 sources)
- **71,951 EPIC Stacked Catalogue sources**
- 8,176,156 OM Catalogue sources (OM-SUSS4.1 catalogue)
- **> 700 sources in the OM SUSS3 Supplementary Catalogue of bright sources**
- 72,352 Slew Survey Catalogue sources (XMMSL2)
- **Radiation Monitor files up to revolution 3000**
- Ancillary info: proposal information, publications (>6000), etc.

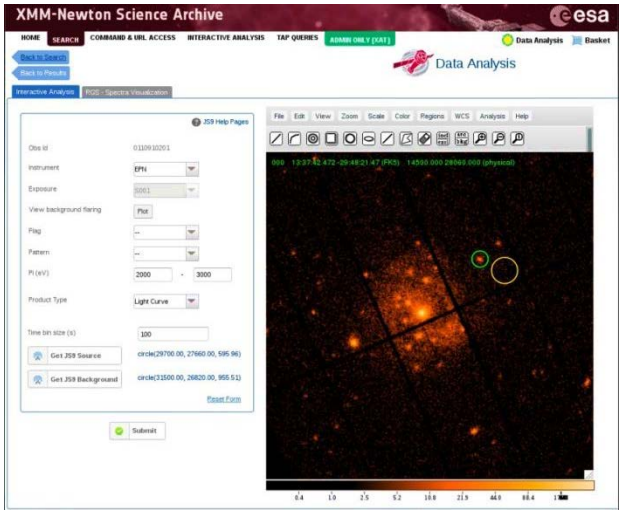
XMM-Newton Science Archive

MAIN NEW FUNCTIONALITIES (7 RELEASES SINCE LAST MEETING)

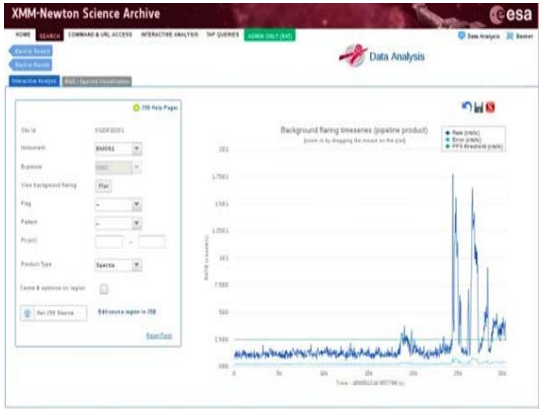
- Search/Display of EPIC Stacked Catalogue (3XMM-DR7s) source products, linked to 3XMM-DR8 sources information



- On-the fly data analysis via RISA using the integrated js9



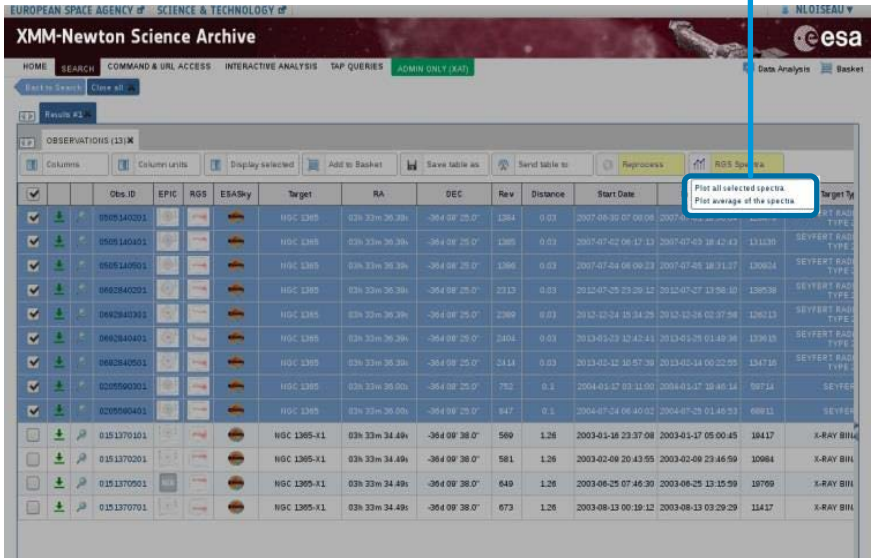
- Display of more EPIC PPS source products (i.e. background flaring plot)

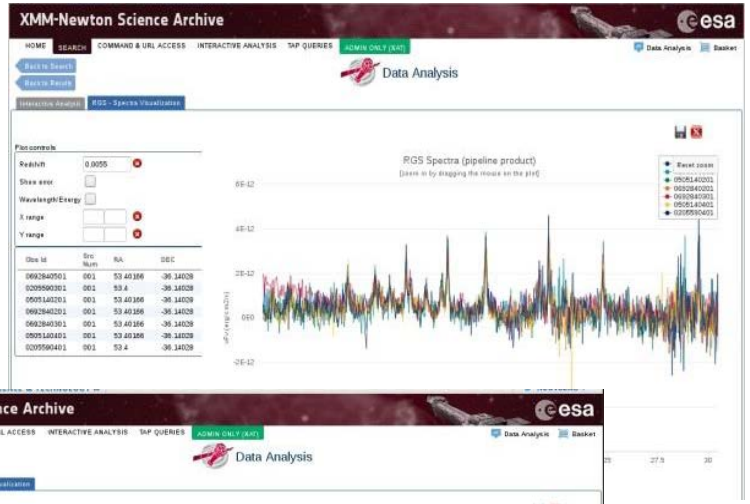


XMM-Newton Science Archive

MAIN NEW FUNCTIONALITIES

- RGS Fluxed Spectra visualizer





XMM-Newton Science Archive

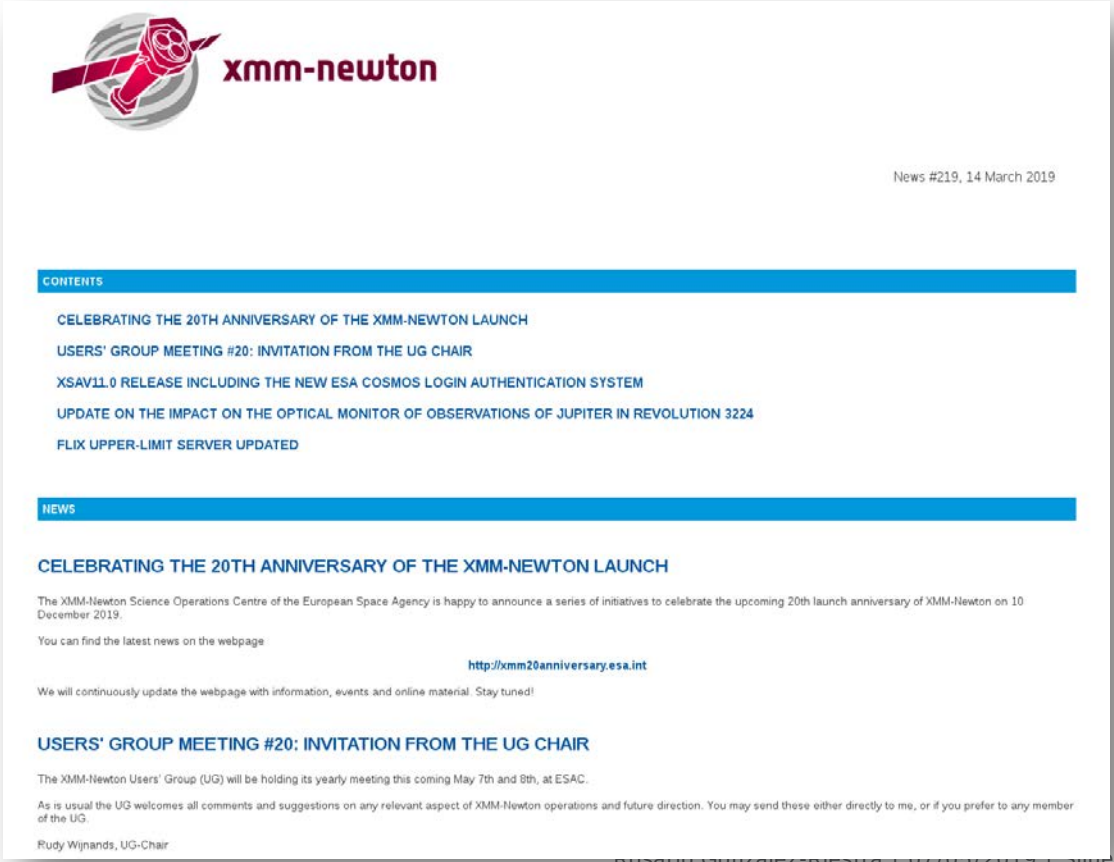
PLANS FOR THE FUTURE

- More options for the RGS spectra visualizer
- Better handling of results display for searches on a list of targets
- Additional RISA data analysis options (see talk by R. Saxton)
- Display of more PPS products after bulk reprocessing
- Integration of the upper limit server (ULS) tool
- Astroquery module to access the XSA Database

XMM-Newton Newsletter

Starting with XMM-News #219

new look-and-feel



xmm-newton

News #219, 14 March 2019

CONTENTS

CELEBRATING THE 20TH ANNIVERSARY OF THE XMM-NEWTON LAUNCH

USERS' GROUP MEETING #20: INVITATION FROM THE UG CHAIR

XSAV11.0 RELEASE INCLUDING THE NEW ESA COSMOS LOGIN AUTHENTICATION SYSTEM

UPDATE ON THE IMPACT ON THE OPTICAL MONITOR OF OBSERVATIONS OF JUPITER IN REVOLUTION 3224

FLIX UPPER-LIMIT SERVER UPDATED

NEWS

CELEBRATING THE 20TH ANNIVERSARY OF THE XMM-NEWTON LAUNCH

The XMM-Newton Science Operations Centre of the European Space Agency is happy to announce a series of initiatives to celebrate the upcoming 20th launch anniversary of XMM-Newton on 10 December 2019.

You can find the latest news on the webpage

http://xmm20anniversary.esa.int

We will continuously update the webpage with information, events and online material. Stay tuned!

USERS' GROUP MEETING #20: INVITATION FROM THE UG CHAIR

The XMM-Newton Users' Group (UG) will be holding its yearly meeting this coming May 7th and 8th, at ESAC.

As is usual the UG welcomes all comments and suggestions on any relevant aspect of XMM-Newton operations and future direction. You may send these either directly to me, or if you prefer to any member of the UG.

Rudy Wijnands, UG-Chair

Scientific Conferences and Events

Annual Dedicated Workshops at ESAC

Time-Domain Astronomy: A High Energy View
13 - 15 June 2018

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

20 years from launch

ESAC
10 December 2019
(see talk by S. Migliari)

The X-ray Universe 2020

ESTEC
25-29 May 2020

Thanks!

XMM-Newton Community Support and Mission Planning Group

aka USG

Lucia Ballo

Ignacio de la Calle

Jacobo Ebrero

Felix Fürst

Rosario González

Nora Loiseau

Simone Migliari

Jan-Uwe Ness

Pedro Rodríguez

Laura Tomás