

# Science Operations Status

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EPIC cal & ops meeting, Mallorca

29-30 March, 2011

- XMM-Newton project status
- Science Support team
- Science program status
- Mission planning
- Instruments
- Community Support
- SAS
- Users Group
- Science and outreach

- Mission status: spacecraft and instruments performing nominally, fuel until > 2019
- ESA:
  - AWG: “one of ESA’s flagships” , “highest quality science”: “continuation of operations considered of high merit and to deserve a high ranking”
  - SSAC: category 1 mission
  - SPC and IPC unanimously approved extensions: operations until end 2012, indicative approval until end 2014, subject to review in 2012 within the normal procedure
- ESA-UKSA: support to UK instrument teams and data centres for extended mission operations
- SSC Pipeline to be transferred to the SOC

- M. Diaz Trigo left 15 September 2010:

New community support scientist to start on 1 July 2011

- M. Guainazzi: Instrument Dedicated Team leader since 15 October 2010, continues as EPIC Calibration Scientist (no change)

➤ AO9, May 2010 - April 2011: status as of 25 March:

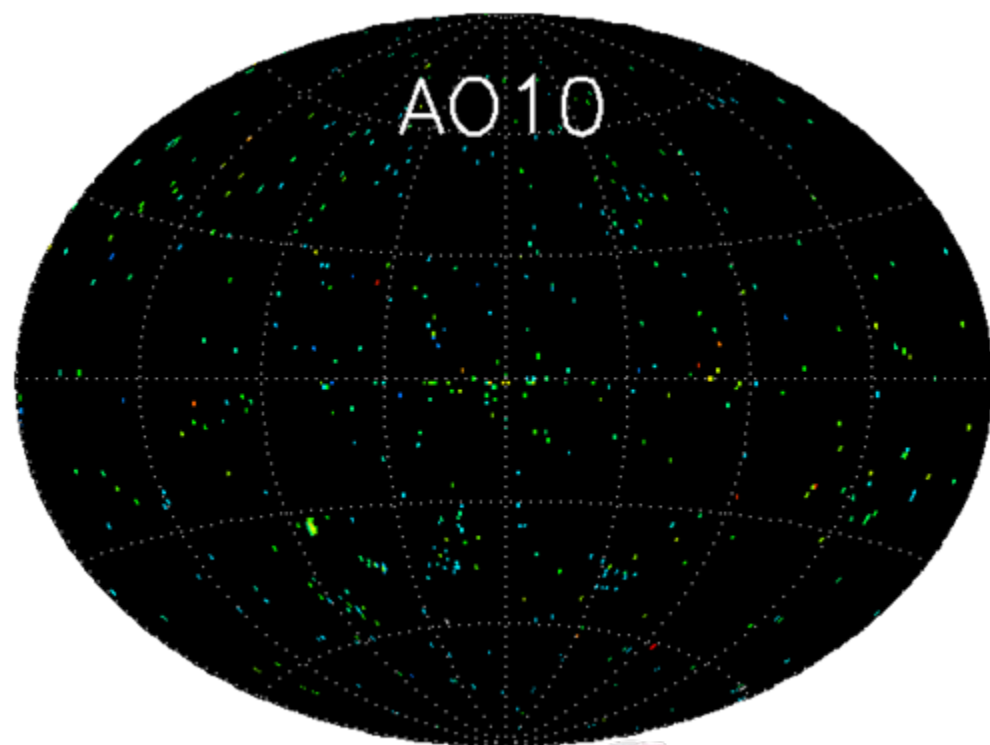
- **A+B** performed: 12,370 ks: **96%**
- **C**: 2720 ks: **34%** of recommended C time

➤ AO10, May 2011 – April 2012

- OTAC decisions on Dec 1
- Second phase finished Feb 4
- Enhancement ~ finished

➤ AO11 milestones:

- Call open on 23 August 2011
- **Closure on 7 October (12UT) 2011**
- Approved programme: mid Dec 2011
- Second phase: 10 Jan – 4 Feb 2012
- Start observations: May 2012



## ➤ AO10

- New: ToO-triggered observations have “ deadlines” (1-3 AO cycles, pending on priority given by OTAC)
- Long Term Plan in preparation, to go public ~ May
- One Very Large Program:
  - 130 x 13 ks; RA~2<sup>h</sup>.3 Dec~-5°
  - 100 x 13 ks; RA~23<sup>h</sup>.5 Dec~-55°
  - ➔whole program recommended by OTAC for two AOs
  - ➔Data public

## ➤ Scheduling

- Smooth

- **RGS:** annual meeting, March 22-23, 2011
  - RGS contamination time evolution corrected in April 2010
  - RGS data analysis performed by default on a wavelength grid
  - Under study: LSF, wavelength scale, effective area
  
- **OM**
  - Time sensitivity degradation monitoring: correction is being updated
  - Draft paper on OM calibration circulated within the OM team
  
- **EPIC – RGS cross-calibration**
  - RGS-pn rectification: Dec 2010

- SAS 11.0 released 28 February 2011
  - New EPIC-MOS redistribution
  - ESAS (analysis EPIC extended sources) for pn
  - xmmextractor task
  - 64-bit versions, VM versions
  
- See Carlos presentation for SAS changes and plans



- Users Handbook: next update needed for AO-11:
  - Calibration scientist (Matteo) will ask for inputs in early May
  
- SAS manual update to follow SAS release
  
- Reminder: send your preferred pictures to the Gallery
  - [http://xmm.esac.esa.int/external/xmm\\_science/gallery/public/index.php](http://xmm.esac.esa.int/external/xmm_science/gallery/public/index.php)
  
- Reminder: let us know about any thesis done with XMM-Newton data

- Upper limit server (R.Saxton):

[http://xmm.esac.esa.int/external/xmm\\_products/slew\\_survey/upper\\_limit/uls.shtml](http://xmm.esac.esa.int/external/xmm_products/slew_survey/upper_limit/uls.shtml)

updated to include upper limits from pointed observations, note they are as well in FLIX

- RadMon data made available through a web page (in XSA in future):

[http://xmm.esac.esa.int/external/xmm\\_products/radmon/](http://xmm.esac.esa.int/external/xmm_products/radmon/)

- XSA v7.0 released 10 Dec 2010

- Access to Slew Survey data products: event lists, images and exposure maps for 3 energy bands

- XSA v6.5 released 28 April 2010

- Access to 2XMMi-DR3
- Access to XMSL1 Delta-4

## ➤ XSA re-engineering: migration to a new technology

- Nora Loiseau, the XMM-Newton Archive Scientist, compiled inputs:

Dear colleague,

29 March 2010

We are investigating ways to significantly improve the performance and the service that the XMM-Newton Archive (XSA) currently provides. We are therefore in the process of compiling improved requirements for the new XSA. We would be very thankful if you could spend a short time in sending us your comments and suggestions.

We would like to know from your usage of the present XSA (<http://xmm.esac.esa.int/xsa>):

- what kind of searches and downloads of XMM-Newton data do you usually perform?
- what kind of searches you would like to perform that are presently not possible?
- which facilities that you found in other archives you would like to see in the XSA?

We would appreciate hearing from you by the 26th April, if possible. Please feel free to distribute this message to colleagues in your group.

With best regards,

XMM-Newton SOC

- If you have any further suggestion, please get in touch with Nora (helpdesk is fine)

➤ **The X-ray Universe 2011: 27-30 June 2011, Berlin**

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

➤ **The Starburst-AGN Connection under the Multiwavelength Limelight,**

14-16 Sep 2011, ESAC, (Sponsored by the ESAC Faculty)

[http://www.sciops.esa.int/index.php?project=ESACFACULTY&page=workshop\\_starburstAGN2011](http://www.sciops.esa.int/index.php?project=ESACFACULTY&page=workshop_starburstAGN2011)

➤ **Ultra-luminous X-ray sources and Middle Weight Black Holes,** May 2010, ESAC

- Presentations on-line:

[http://xmm.esac.esa.int/external/xmm\\_science/workshops/2010\\_science/](http://xmm.esac.esa.int/external/xmm_science/workshops/2010_science/)

- Refereed proceedings will be in AN July 2011, dedicated issue

➤ **SAS workshop:** 6-10 June 2011 ESAC (previous 21-25 June 2010)

- Meeting #11: 12-13 May 2010 at ESAC
  - See Matteo' s summary of EPIC-calibration related recommendations
  
- Meeting #12: 19-20 May 2011 at ESAC
  - Comments or suggestions can be sent via UG members

## ➤ Science:

- Output still being recognized as 'highest quality' by committees
- Over-subscription factor still very high (6.2 in AO10)
- Refereed papers based on XMM-Newton > 2700 (continues ~ 300/yr)
- Project currently underway (Alberto Salama): detailed analysis of XMM-Newton publications, based on XMM-Newton GOF publication list which is cross-checked by the PS who keeps only papers making direct use of data. ObsIds and instruments are being included in the list. Work being validated by SOC (USG). Results will be presented to SPC

## ➤ Outreach:

- BBC 2 Science Programme: [Stargazing Live](#), 4 Jan 2011 (presented by Brian Cox & Dara O' Briain) XMM-Newton & Herschel image of Andromeda



**Thank you for your continued support  
& contribution to science operations.**

**Questions?**