

Mission Planning and Community Support

XMM-NEWTON USERS' GROUP MEETING #23

ROSARIO GONZÁLEZ-RIESTRA

XMM-NEWTON SCIENCE OPERATIONS CENTRE

ON BEHALF OF THE **XMM-SOC MISSION PLANNING AND COMMUNITY SUPPORT TEAMS**

Mission Planning Group Activities Overview

- Generation and Delivery to MOC of Mission Planning Products

- Short term Plan
- Detailed Schedule
- Interface with MOC

- Downlink Information consolidation

- Evaluation of observations success/failure (according to the guidelines in the P&P Document)
- Re-ingestion of failed observation in the scheduling queue

- ToOs evaluation and implementation

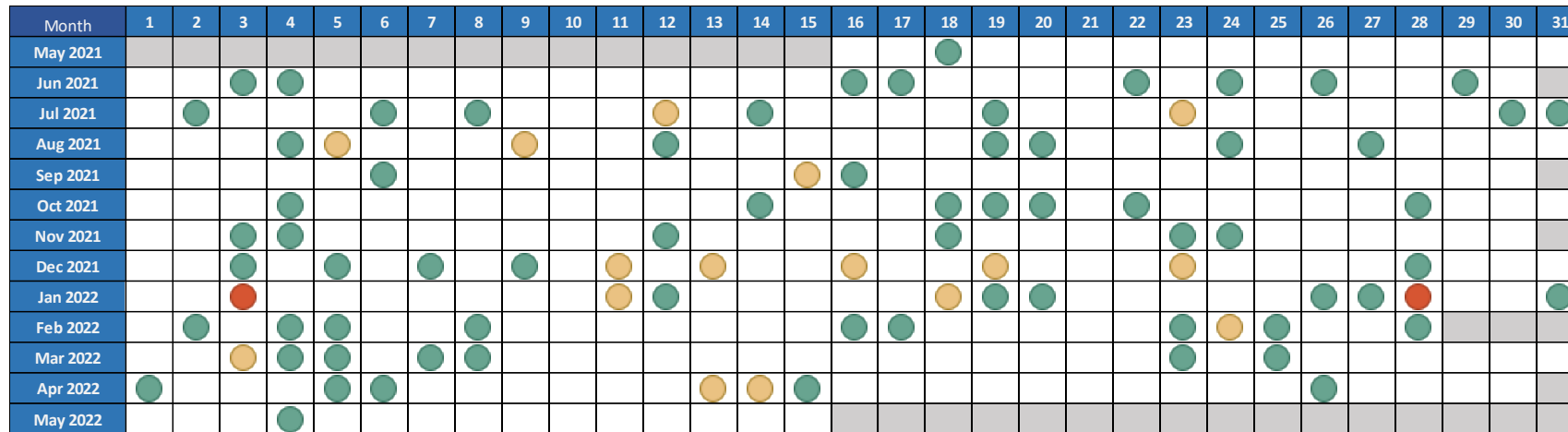
- ToO on-call 24/7
- Planning and scheduling of anticipated and un-anticipated ToOs
- Interface with Project Scientist

Planning and Scheduling

- HST problems Summer/Autumn 2021
 - Required re-planning/repetition of several observations
- EHT campaign 2nd half March 2022
 - Multiple changes requested in short timescales due to update of coordinations
 - Targets observed by XMM: Mkn 501, SgrA*
- Coordinations with IXPE
 - IXPE schedule known about two weeks in advance. As of May 1st :
 - Two observations performed
 - Three observations scheduled (1 simultaneous with MAGIC and NuSTAR)
- Tanks replenishment activities
 - Selection of optimal target fulfilling MOC specifications

Planning and Scheduling: Targets of Opportunity

Reported in previous UG Meeting: One trigger every 5 days
 1-2 triggers per week
 5-6 triggers per month



#of triggers
 1 2 3

Since May 15th 2021...

One trigger every 3 days
 2 triggers per week
 10 triggers per month

Planning and Scheduling: Targets of Opportunity

May 15th -August 2021

- One trigger every 3 days
- 10 triggers per month

September-November 2021

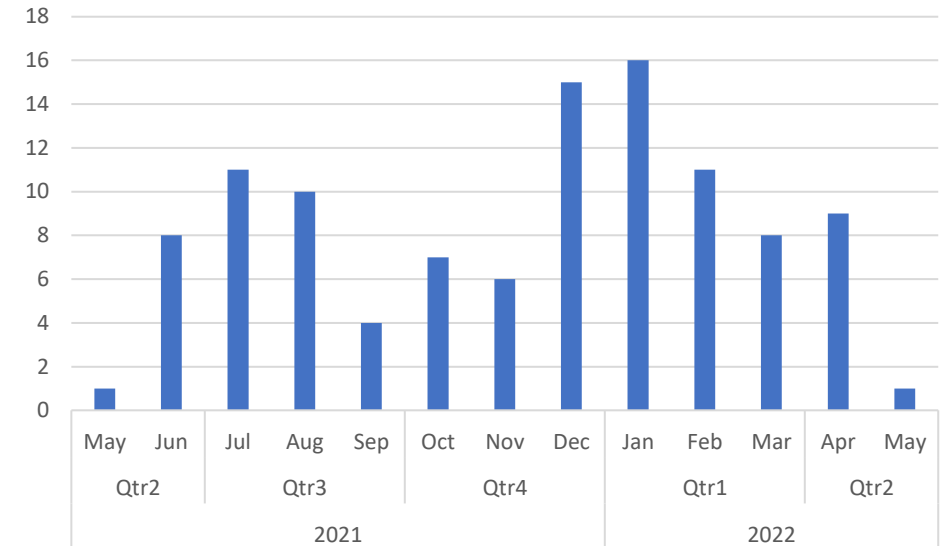
- One trigger every 5 days
- 6 triggers per month

December 2021 – February 2022

- One trigger every 2 days
- 15 triggers per month

March – May 15th 2022

- One trigger every 4 days
- 8 triggers per month



Complex replanning:

- Large number of constrained / coordinated observations
- Scheduling of a single ToO may imply the re-planning of several revolutions

Community Support Group Activities Overview

• Web, Conferences and Outreach

- Newsletter, Web Pages
- Organisation of Science Conferences
- Social Media presence (Twitter)
- Outreach

• HelpDesk, Validation and Documentation

- HelpDesk support
- Science Analysis Software (SAS)
 - Scientific validation
 - Development, maintenance and testing of Threads
 - Edition of Manual
- Pipeline Processing System (PPS)
- XMM Science Archive (XSA)
- Edition of Users Handbook
- Proposal Submission Manuals

• Support during AO, peer review and joint programmes, Enhancement and Long-term Plan and Coordinations

- Support to Project Scientist and OTAC (including Proposal Submission System and OTAC evaluation tools)
- Enhancement of XMM and joint proposals approved by other facilities
- Technical evaluation of proposals requesting XMM time submitted to other observatories
- Preparation of Calibration observations
- Long term Plan: compilation of time constraints
- Coordinations with other facilities

Community Support: Technical Evaluation and Enhancement

# of proposals	Technical Evaluation	Enhancement
NuSTAR	43 [Cycle 8]	16 [Cycle 8]
HST	13 [Cycle 30]	3 [Cycle 29]
MAGIC	9 [Cycle 17]	6 [Cycle 17]
Chandra	8 [Cycle 24]	3 [Cycle 23]
INTEGRAL	4 [AO19]	3 [AO19]
NRAO	3 [22A + 22B]	
VLT		2 [P109]
Total	80	43
XMM AO21		184

Community Support: HelpDesk

Questions received from 2021-04-15 to 2022-04-15:	409
	8 per week
	34 per month
Hours for first reply:	11.5 (median)

95% of the questions get a reply in less than 48 h

Community Support: XIPS [XMM-Newton Interface for Proposal Submission]



Phase I Proposal Submission System (replaced HRPS in AO21)

New in AO22:

- Re-cycling of AO21 Proposals and Targets
- Pre-built list of Institutions
- Gender Information
- Fix of minor bugs