

# Minutes of User Group Meeting 3 (31st of March / 1st of April 2003)

edited by Norbert Schartel

approved by voting members (11st of April 2003)

## Meeting 31th of March

### **Participants:**

Juergen Schmitt (Chairman), Xavier Barcons (External), Phil Charles (External), Andrea Comastri (External), Jacqueline Bergeron (Mission Scientist), Richard Griffiths (Mission Scientist), Richard Mushotzky (Mission Scientist), Roberto Pallavicini (Mission Scientist), Jelle Kaastra (RGS-PI), Keith Mason (OM-PI), Martin Turner (EPIC-PI), Mike Watson (SSC-PI), Fred Jansen (XMM-Newton Project Scientist), Norbert Schartel (Secretary), Leo Metcalfe (Science Support Manager), Ramon Munoz (Operations Support Manager), Calibration Scientists and interested staff from Vilspa

### **First Part:**

Juergen Schmitt (Chairman) opened the meeting at 14:00 and welcomed the participants.

There were small adjustments to the agenda. The report on the "XMM-Newton timing/clock drifts" was shifted to the next UG meeting, because no new results could be obtained further to the last meeting. Reports of A. Comastri and R. Mushotzky were added to the agenda.

The following talks were provided:

- Report of the Project Scientist (F. Jansen)
- Instrument Operations (R. Munoz)
- Science Support (L. Metcalfe)
- EPIC Calibration Status (M. Krisch)

### **Second Part:**

During the second part (approximately 17:25 to 19:15) the Users Group discussed extensively the following items:

Cooling and calibration: The UG was impressed by the results of decreasing the operational temperature of RGS and MOS ("cooling") and the progress in the calibration. The UG was very satisfied with the fact that the delay in data delivery was limited and that the recovery in data delivery by the SSC occurred very quickly. An endorsement was formulated the next day. Data taken by XMM-Newton after the "cooling" does require analysis with SAS version 5.4 or later, and so the SOC will issue a warning in the next XMM-Newton Newsletter.

R. Mushotzky mentioned that he is aware of a data set taken from a Galaxy Cluster, which shows different temperatures in MOS 1 and MOS 2. M. Turner explained

that such behavior can result if emission lines, which are critical for temperature determination, coincide with sharp features in the mirror or CCD response (gold or silicon edges). Decreasing the operational temperature ("cooling") of the EPIC MOS and RGS was performed after XMM-Newton had been in orbit for almost 3 years. This "late" date was chosen in order to avoid any risk of contamination. Should the MOS detectors seriously degrade further due to micrometeorite impacts, then there remains the possibility of re-heating the CCDs to 100 degree C and subsequent re-cooling.

SAS: UG recognizes the different requirements and constraints for providing the SAS software package. Given the manpower constraints, not every platform and operating system (OS) can be supported. The development of new SAS versions (usually) requires specific features in the supported OS. Therefore, a new version of SAS may require a version of the OS which is not the most recent one. An additional area of problems are "flavors" of the OS, i.e. parts of the OS are up-dated in respect to the official release. Furthermore, to build the SAS requires commercial software, such as the NAG library, which precludes users undertaking their own local build. The UG felt that new releases of the SAS and the relevant OS version must not drift apart too far. A recommendation concerning SAS support on different platforms was subsequently formulated.

Mission extension and options for budget reduction: The mission extension must be proposed to ESA in autumn 2003, and presented to the AWG (Astronomical Working Group) and SPC (Science Program Committee). The UG is seriously concerned about the impact of possible budget reduction on the scientific output of XMM-Newton. Several scenarios were discussed, and a strong recommendation subsequently formulated.

Report of Chairman of UG to AWG: The chairman of the UG will report to the AWG at their next meeting the following week, and so the contents of this report were discussed.

Public Relations: R. Mushotzky and R. Griffiths reported on the efforts undertaken by NASA to ensure effective PR activities within high profile missions. Typically, 3% of the budget is allocated to this work. e.g. within the Chandra project, a manpower of more than 3 FTE was devoted to PR. The UG is extremely dissatisfied with the ESA PR effort on XMM-Newton. The UG feel that this is primarily an ESA resource problem, and not an XMM-Newton problem. The VILSPA team do their best within their allocated resources, but the UG feels that ESA should build a much better PR infra-structure for all their missions. There is a clear need to have enhanced ESA support for the specific XMM-Newton PR effort. The XMM-Newton PR team should work autonomously but liaise closely with the Project Scientist.

## Meeting 1st of April

**Participants:** Juergen Schmitt (Chairman), Xavier Barcons (External), Phil Charles (External), Andrea Comastri (External), Jacqueline Bergeron (Mission Scientist), Richard Griffiths (Mission Scientist), Richard Mushotzky (Mission Scientist), Roberto Pallavicini (Mission Scientist), Jelle Kaastra (RGS-PI), Keith Mason (OM-PI), Martin Turner (EPIC-PI), Mike Watson (SSC-PI), Fred Jansen (XMM-Newton Project Scientist), Norbert ScharTEL (Secretary), Leo Metcalfe (Science Support Manager), Ramon Munoz (Operations Support Manager), Calibration Scientists and interested staff from Vilspa

### **First Part:**

The meeting started at 9:00 with the following talks:

- RGS Calibration Status (A. Pollock)
- OM Calibration Status (A. Talavera)
- Input from community (A. Comastri)
- Input from community (R. Mushotzky)
- SAS status and plans (C. Gabriel)
- SSC status and XMM-Newton catalogue (M. Watson)
- Action items from last meeting (N. ScharTEL)

The talk "Input from community" (A. Comastri) raised several open technical analysis questions, which will be evaluated by the SOC. R. Mushotzky reported on the development performed at GSFC to model the background radiation for extended sources. This tool will be made available to the wider community. After N. ScharTEL's presentation the XMM-Newton UG decided to close the following actions and recommendations:

Action 2002-09-17/04

Action 2002-09-17/05

Action 2002-09-17/08

Action 2002-09-18/09

Action 2002-09-18/11

Recommendation 2002-03-06/01

Recommendation 2002-03-06/02

Recommendation 2002-03-06/03

Recommendation 2002-03-07/06

Recommendation 2002-03-07/07

Recommendation 2002-03-07/12

Recommendation 2002-09-17/14 (partly not feasible from Project)

Recommendation 2002-09-17/15

Recommendation 2002-09-17/16

Recommendation 2002-09-17/17

Recommendation 2002-09-17/18

Endorsement 2002-09-17/01

Endorsement 2002-09-17/02

The following action and recommendations are pending:

Recommendation 2002-03-06/04

Action 2002-09-17/06

Action 2002-09-17/07

Action 2002-09-18/10

The following actions and recommendations are considered as permanent and are transferred to a compilation of general recommendations (attached):

Action 2002-03-07/03

Recommendation 2002-03-07/11

The open and pending actions and recommendations will be reviewed at the next UG meeting.

The first part of the meeting ended at 12:45

### **Second Part:**

The second part (approximately 13:45 to 16:15) was devoted to discussions.

XMM-Catalog: The UG is very much impressed by the efforts of the SSC team to construct and release the first XMM serendipitous source catalog. The UG points out that it is important that the team continue their effort throughout the XMM life time.

AO3: The UG is satisfied with the present status of the AO3 call for proposals and preparation for the review process. UG particularly notes that most of the recommendations from the previous meetings with respect to the AO call and review process have been implemented by the SOC. In the next XMM-Newton Newsletter SOC will inform the community that it is possible to submit color postscript justification files and will remind potential proposers of the size limit for the justification (10 Mbyte).

TOO: The UG is aware of differing views in the community on how to handle XMM-Newton TOOs. The UG is satisfied with the handling of TOO requests by the XMM project, the fraction of accepted targets and the decision-making process. For the actual call there is no need for any change in the policy adopted for TOOs. However, following points raised by P. Charles and R. Pallavicini concerning particular science areas, this issue will be re-discussed before the opening of AO-4, if there should be a significant increase in the number of TOO requests or possibilities for TOO observations.

Recommendations and Actions: The UG agreed on the following recommendations and Actions:

**Endorsement 2003-04-01/03** The UG appreciates the effort of all parties involved in the decreasing of the operational temperature of the RGS and MOS instruments ("cooling").

**Endorsement 2003-04-01/04** The UG explicitly endorses the policy of TOO observations and their subsequent handling. This issue may be re-discussed before AO-4, if there should be a significant increase in the number of TOO requests or suitable events.

**Action 2003-04-01/12** SOC should evaluate the technical analysis problems reported by A. Comastri and provide a written answer to him (via e-mail).

**Action 2003-04-01/13** The ending of the CD production should be announced in advance via the XMM-Newton News

**Recommendation 2003-04-01/19** The UG encourages the SSC/SOC to maintain support for the largest reasonably possible number of different platforms to maximize the SAS portability. Should it be necessary to reduce/discontinue support, then support for old versions should be discontinued first. If the support for whole platforms or specifications is discontinued, then users should be alerted sufficiently far ahead of time. The UG will be informed about plans to discontinue SAS support for any specific platforms.

**Recommendation 2003-04-01/20** The UG strongly supports an XMM-Newton mission extension. Given that the scientific output of XMM-Newton is high and increasing it is premature to reduce critical mission support. There must be no impact on the scientific return of XMM-Newton. In particular, it is necessary to adequately maintain all required software systems to at least the end of the science observations.

**Date of next meeting: 22nd and 23rd of September 2003, (start at 14:00 2003/09/22)**

## Appendix

### Compilation Of General Actions And Recommendations

**Action 2002-03-07/03:** Project Scientist should report on ToO and discretionary time observations in each Users Group Meeting.

**Recommendation 2002-03-07/11:** Users Group encourage the project to provide information on the project in a clear and transparent fashion to the astronomical community.