

Minutes of User Group Meeting 2 (16/17 September 2002)

edited by Norbert Schartel

approved by voting members (1 October 2002)

Meeting 16th of September

Participants:

Juergen Schmitt (Chairman), Jacqueline Bergeron (Mission Scientist), Xavier Barcons (External), Phil Charles (External), Andrea Comastri (External), Richard Griffiths (Mission Scientist), Jelle Kaastra (RGS-PI), Keith Mason (OM-PI), Richard Mushotzky (Mission Scientist), Roberto Pallavicini (Mission Scientist), Martin Turner (EPIC-PI), Michiel Van der Klis (External), Mike Watson (SSC-PI), Fred Jansen (XMM-Newton Project Scientist), Norbert Schartel (Secretary),

Leo Metcalfe (Science Support Manager), Ramon Munoz (Operations Support Manager) and interested staff from Vilspa

First Part:

Juergen Schmitt (Chairman) opened the meeting at 14:07 and welcomed the participants.

There was a general agreement on the proposed final agenda.

According to the agenda the following talks were provided:

- Report from Project Scientist (Fred Jansen)
- Action items and recommendations from last UG meeting (Norbert Schartel)
- Report from OTAC chairman on AO2 (Fred Jansen)
- Report about AO2 OTAC questionnaire (Norbert Schartel)

The Users Group encourage the Project management to make publicly available all the accumulated knowledge on the background in XMM instruments. This material should provide estimates on the probability of an observation being affected by high background as a function of orbital phase. XMM proposers should be alerted to this material.

The instrument PIs agreed to reduce the Earth-avoidance angle from 48 degree to 42 degree based on the submitted analysis and data of several test observations. The reduced earth-avoidance angle will increase the efficiency of XMM-Newton's science observations for targets at the boarder region of the visibility window.

After the talk "Action items from last meeting" the UG reviewed every item individually and agreed on the status. The following actions and recommendations are closed:

Action 2002-03-06/01

Action 2002-03-06/02

Recommendation 2002-03-06/05

Recommendation 2002-03-07/08
Recommendation 2002-03-07/09
Recommendation 2002-03-07/10
Recommendation 2002-03-07/12 (not feasible from Project)

The following recommendations are pending:

Recommendation 2002-03-06/02
Recommendation 2002-03-06/03
Recommendation 2002-03-06/04
Recommendation 2002-03-07/07

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 2002-03-06/01
Recommendation 2002-03-07/06
Recommendation 2002-03-07/11
Recommendation 2002-03-07/12

The pending recommendations will be reviewed in the next UG meeting. The actions and recommendations declared as "general" will only be reviewed on request. UG encourage the Project to finish the up-date of the SAS User Manual.

Second Part:

During the second part (approximately 16:45 to 19:15) the Users Group discussed extensively the AO-2 review process with the aim to formulate recommendations for AO-3. The discussion was based on the provided talks, the experiences of many participants as panel members within the XMM-Newton proposal review and the experiences of several participants with the review process of other astronomical facilities (HST, Chandra, ESO and others). Special attention was given to the established sub-panel system, the size of each panel, feedback to proposers, scoring of proposals, timing of entire Call and OTAC review, timing of XMM-Newton review vs. Chandra review, availability of resources in the XMM-Newton SOC for OTAC support and large programs. The Project Scientist explained that the next XMM-Newton call for observing proposals (AO-3) will be issued mid March 2003 with a deadline for submission by the end of April 2003.

The formulation of the final recommendation was postponed to the discussion on the next day.

The discussions ended at 19:00.

Meeting 17th of September

Participants:

Juergen Schmitt (Chairman), Jacqueline Bergeron (Mission Scientist), Xavier Barcons (External), Phil Charles (External), Andrea Comastri (External), Richard Griffiths (Mission Scientist), Jelle Kaastra (RGS-PI), Keith Mason (OM-PI), Richard Mushotzky (Mission Scientist), Roberto Pallavicini (Mission Scientist), Martin Turner (EPIC-PI), Michiel Van der Klis (External), Mike Watson (SSC-PI), Fred Jansen (XMM-Newton Project Scientist), Norbert Schartel (Secretary),

Leo Metcalfe (Science Support Manager), Ramon Munoz (Operations Support Manager), and interested staff from Vilspa

First Part:

The UG meeting started at 9:15.

According to the agenda the following talks were provided:

- Status of SSC (Mike Watson)
- Status of Calibration (Leo Metcalfe)
- Status of timing calibration (Marcus Kirsch)

The input from the mission scientists, i.e. comments received from the community, was not presented in separated talks. It was found to be more appropriate to provide this input during the discussion of the corresponding topic.

Second Part:

UG agreed on action items and recommendations which were discussed during the previous day.

Action 2002-09-17/04 The Project Scientist should make the background presentations publicly available. This material should include orbital background variations. XMM proposers should be alerted to this material.

Action 2002-09-17/05 The Project should define a new standard default OM mode which is used if no other OM setup is requested by the PI of a proposal.

Action 2002-09-17/06 In future AOs the abstracts of selected proposals should be made publicly available on the web.

Action 2002-09-17/07 From AO3 the feedback to proposers should occur by making the rank of the proposal/target available to the proposing PI (from AO-3 onwards). The information given to the PIs should consist of the ranks of the selected proposals/targets and the ranks of the PI proposal. This information should be given only to the PIs of the respective proposals.

Recommendation 2002-09-17/14 The AO-3 OTAC panels should consist of at least five panel members. The panel members need not be restricted to experts in X-ray astronomy. The composition of the panel w.r.t. geographical distribution should have lower priority than the size of the panels and the overall competence of the panel members. In order to improve proposal selection the panel meetings should be arranged as following:

- a) A the chairpersons meeting should be extended to allow more time for subpanel merging and large program discussions.
- b) The topical subpanels should preferably meet at the same time and place.
- c) It would highly desirable to have all the panel meetings and the chairpersons meeting at the same place and time

Recommendation 2002-09-17/15 Based on the experience of the previous AOs the Users Group suggests to discontinue the "Survey Panel" and compose only "science-driven" panels.

Recommendation 2002-09-17/16 The Users Group suggests to introduce the possibility of submitting proposals as "Large Programs" Category. Proposals submitted as Large Programs (LP) should request at least 350 ksec per proposal. The Large Program proposals should be reviewed by the science panel(s) they are submitted to, but the time for LPs is not taken out of the time for the respective subpanel, but from the general pool of time. The final review and acceptance of Large Programs should occur through the OTAC chairpersons meeting. It should be aimed to allocate 15% of the observing time to Large Programs.

Endorsement 2002-09-17/01 The Users Group explicitly endorses the plan to finish AO-2 observations by September 2003. With a 16-month AO-3 and future 12 months AO XMM-Newton will then be in anti-phase with Chandra. Future AOs should then occur in a 12 month cycle.

The Users Group discussed the value of joint programs. Besides the two joint programs offered in AO-2, XMM-Newton/Chandra and XMM-Newton/ESO, the value of joint programs with other ground based facilities was considered. Recommendations were formulated (see below) considering the scientific impact in comparison to the over-subscription factor in various observatories and the organizational overhead.

The Users Group discussed at length the presented plans for the cooling of RGSs and MOSs. The scientific and technical case for cooling as well as several cooling strategies were discussed. The UG took note of the instrument scientist's statement that the risk involved in the cooling operation is small. The UG does not see itself in a position to independently evaluate this risk, which it feels requires the collaboration between the ESA project management and the EPIC and RGS PIs. The final decision on this must rest with the instrument teams and Project Scientist, but UG trusts that both will fully investigate and test any adjustments in the instrument parameters they wish to undertake. The UG however encourages the project to take all necessary steps to make sure that the XMM data are of the best possible quality and at the same time strongly recommends that the project take measures that keep the impact on users in terms of data delivery etc. at a minimum.

The users group feels that in order to make sure that the scientific capabilities of XMM-Newton can be maximally exploited the MOS and RGS CCDs should be cooled despite small remaining risks. Recommendations were formulated considering the expected scientific improvements as well as the delay in data delivery.

The Users Group discussed the adopted policy regarding TOO observations and discretionary time observations. The Users Group feels that the policy adopted by the Project Scientist is appropriate and explicitly encourages the project to continue with the same policy. The UG does not see the need for an additional rapid reaction time AO within an ongoing AO; scientifically urgent observations can and are handled via the Project Scientists discretionary time.

The Mission Scientists and other members of the UG reported that the SAS has significantly improved in comparison to the previous version. The SAS is running now robust and in general covers the tasks required for the scientific analysis. Concerns about the support of the SAS were answered by the Project Scientist: As long as XMM-Newton is operated, the most common platforms will be supported with a binary version of the SAS provided by the XMM-Newton SOC. On the short time scale it will not be possible to make the SAS source code and the corresponding makefiles available to the community.

The need for a continued SAS support even after the end of XMM-Newton operations was pointed out. It was discussed to open the SAS in order to utilize expertise gained outside the SAS development teams, i.e. routines developed in Columbia for the background subtraction should be made available as SAS packages. Given the experiences with the development of the SAS at different locations and by different groups, it seems reasonable that this will be possible.

Several members of the UG reported on experiences with X-ray data analysis and especially on targets observed by XMM-Newton and other X-ray satellites. UG acknowledged the complexity of the calibration task and the efforts taken. Whereas the calibration of the individual instruments is in reasonable shape, the cross-calibration of the instruments still needs significantly to be improved. The UG acknowledge the calibration efforts hitherto undertaken by the SOC as well as a larger number people in the EPIC and RGS consortium. UG endorses the continuation of these efforts as a reliable calibration is seen as a key issue to make the full use of XMM-Newton's scientific capacity. One recommendation and one action were formulated. UG acknowledged the policy of publicity adopted by the project with respect to the calibration uncertainties (see pages with overview of calibration status of EPIC, RGS and OM at http://xmm.vilspa.esa.es/external/xmm_sw_cal/calib_frame.shtml). The UG also endorses all efforts to further study the cross-correlation between XMM-Newton and Chandra calibrations.

UG discussed the possibility of improving the public relation efforts for the astronomical community taking into account the restricted resources. Especially, there is not an easy way to get images or spectra of XMM-Newton observations for an overview talk. The User Group feels that the ESA PR support for XMM-Newton is totally inadequate and that steps must be taken to improve this situation. It was pointed out that with relatively little effort the public image of XMM-Newton can be vastly improved. XMM-Newton is one of the scientific flagship of ESA at the moment, but this is not apparent in XMM-public perception.

Some statistics of the oversubscription of AO-2, and the number of received proposals should be provided. Actions were formulated (compare below).

It was agreed that the voting members who are not commenting on the draft version of the minutes before Friday (27th of September) are counting as voting for it.

The discussions ended at 15:00.

Endorsement 2002-09-17/02: The Users Group endorses the plan to continue the XMM-Newton/Chandra joint program during AO-3.

Recommendation 2002-09-17/17: The Users Group feels that the current mechanisms for coordinated observations of XMM-Newton with ground-based facilities are sufficient. Special arrangements and procedures are therefore not required.

Recommendation 2002-09-17/18: The Users Group appreciates the effort to maximize and to maintain the high performance of the instruments. Also, a steady data flow from XMM-Newton to the scientific community has now been achieved. The impact of the cooling on the data delivery should thus be minimized.

Action 2002-09-17/08: As far as data delivery is concerned, XMM-Newton SOC and XMM-Newton SSC should evaluate the possibility to deliver initially data with a preliminary calibration and to re-process such data after the cooled instruments are calibrated.

Action 2002-09-18/09: Within the next Users Group meeting an overview of calibration status of all modes of all instruments should be provided. Possible new modes (as suggested by the instruments teams) should be presented. In addition the project should report on the results of the cross-calibration between XMM-Newton and Chandra.

Action 2002-09-18/10: Every member of the Users Group should provide the Project Scientists with an image or spectra of an exciting XMM-Newton observation. These images or spectra are intended to build the core of an XMM-Newton image page.

Action 2002-09-18/11: The Project Scientist should give an overview of the financial situation of XMM-Newton and the future planning at the next UG meeting.

Date of next meeting: 31st of March and 1st of April 2003 at VILSPA, (start at 14:00 2003/03/31)

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 2002-03-06/01: Observations suffering of high radiation background should not be re-scheduled or granted compensation time without a (re)evaluation of the scientific case by OTAC, i.e. observers are recommended to (re)submit their proposal in a following AO.

Recommendation 2002-03-07/06: Future AOs should be issued as late as possible.

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.

Recommendation 2002-03-07/12: The Public Relation efforts on XMM-Newton should be significantly improved.