

XMM remote proposal submission

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ABSTRACT

XMM proposal submission is facilitated via the XMM Remote Proposal Submission (XRPS) software. This paper introduces the software based on selected screen shots from a development version. A calendar of events for XMM proposal submission is presented.

1. Introduction

The XRPS software is currently under development at Logica UK, under contract with ESA. The software will be publicly available on January 4, 1999, for the submission of proposals in response to the first Announcement of Opportunity for XMM observations. Potential XMM observers will be required to register as users of the XRPS software before being able to use it for submitting proposals. XRPS is a compromise between the need to keep the proposal submission tool as simple as possible while at the same time offering maximum flexibility.

XRPS will be described in detail in the XRPS Users' Manual, which is currently under development at the XMM SOC. This document will be made available at the same time as the software itself. XMM user support for assistance during the proposal preparation and submission phase will be available, but limited (to a staff of three).

The location (URL) at which XRPS will be made available will be announced as soon as it is available.

2. Calendar of events for AO-1

Release of first Announcement of Opportunity (AO-1)	16.11.1998
Availability of XRPS software	04.01.1999
Availability of XRPS Users' Manual	04.01.1999
AO-1 deadline	31.03.1999

3. General information

Each XRPS page has a “commit” button. When finished entering all required information on a form, use that button to store the input. Failing to do so might cause (partial) loss of the user’s input.

Beginning at an early stage, namely on the top-level page containing proposal title and abstract, the “Submit Proposal” button becomes available. This button should be used with care. Only a FINAL, that is completely finished, proposal should be submitted!

The general order in which entries are (or should be) made in XRPS is:

1. Principal Investigator personal data
2. Top-level proposal information (title, abstract, etc.)
3. Personal information on co-authors
4. Observations to be conducted
5. Exposures and further details for each observation for each instrument

For each observation, entries at the exposure (and/or instrument level) should preferably be made by instrument, not chronologically. This means that for each observation, all exposures of one instrument (e.g., EPIC MOS) should be entered consecutively before starting with the exposures of the next. The recommended order in which exposures for individual instruments should be entered is EPIC MOS, EPIC pn, RGS, OM. This will keep the automatically created directory tree easy to follow.

XRPS displays various frames on the viewer, including one on the left hand side with a directory listing. The directories and files shown there correspond to the various pages that are filled in by the user. The directory tree is the XRPS navigation tool. If, for example, all exposures have been defined for one observation, the user can use the navigation tool to go back up to the top-level proposal page (with the title “Proposal Details” (Fig. 1) to start filling in the next observation to be conducted by pressing the “Add Observation” button.

Complete observations can be copied and then edited to minimise the work effort for sets of similar observations (like, e.g., a list of targets to be observed in the same or similar fashions).

Entries marked with an * are mandatory. Proposal validation will fail if these are not all filled in.

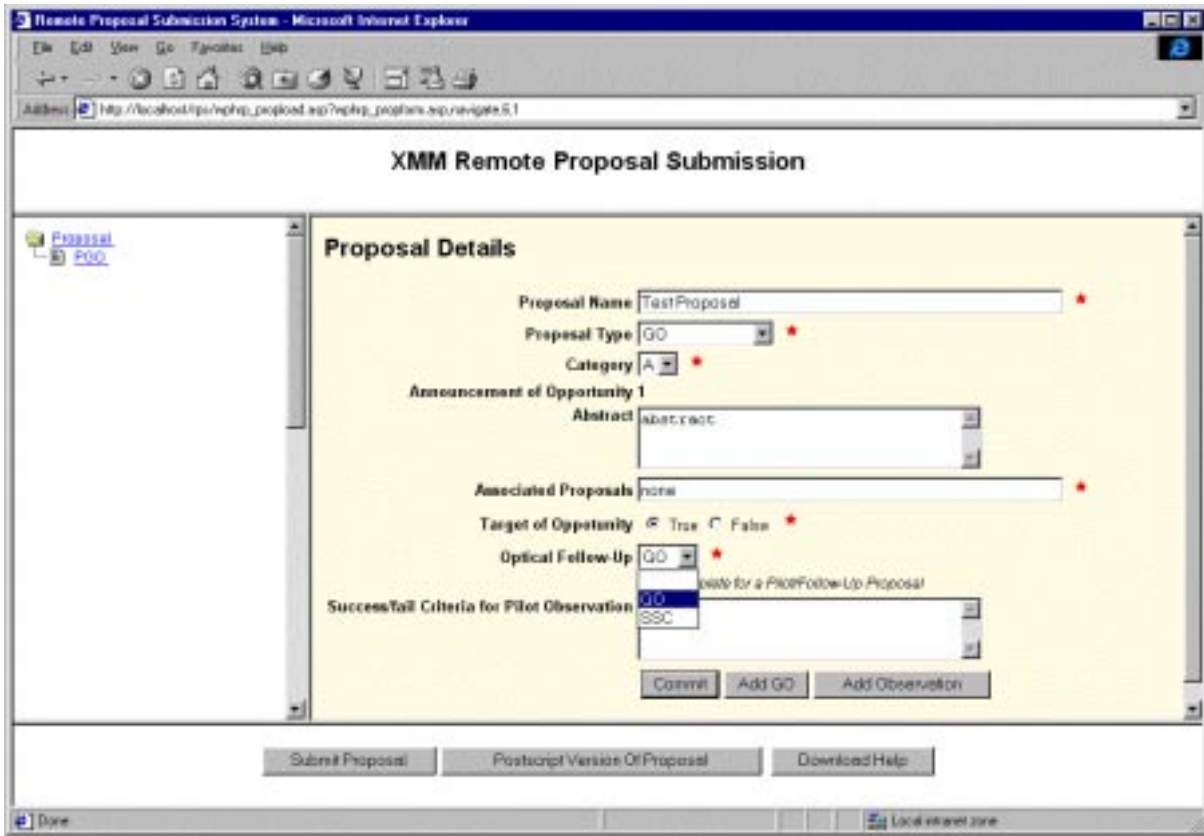


Fig. 1.— Screen shot of the top-level page containing proposal-specific information, like e.g. title and abstract.

4. On overview of XRPS

4.1. Principal Investigator personal data

After registration users can enter XRPS with their assigned user ID and password. When starting a new proposal, users will be prompted for personal information first.

When re-entering an already existing (“old”) proposal, this personal information will be re-loaded.

4.2. Top-level proposal information

Then users are prompted for general proposal information, such as title, type (Guest Observer or Target of Opportunity), abstract, etc. A screen shot of the top-level page containing proposal-specific information is presented in Fig. 1.

4.3. Personal information on co-authors

At this stage, after committing the entries made on the “Proposal Details” page (Fig. 1), information about co-authors (“Add GO”) or planned observations (“Add observation”) can be entered. It is recommended to first provide all information on Co-Investigators (not shown here), before specifying observation details.

4.4. Observations to be conducted

Then, returning to the “Proposal Details” page using the navigation tool on the left, users should proceed to “Add observation” and enter the first observation details. Fig. 2 displays which information will be required at this level. Note that the boresight position can differ from the source coordinates for offset pointings. **All coordinates must be entered in the J2000 equinox.** Accurate source and boresight coordinates are the user’s responsibility.

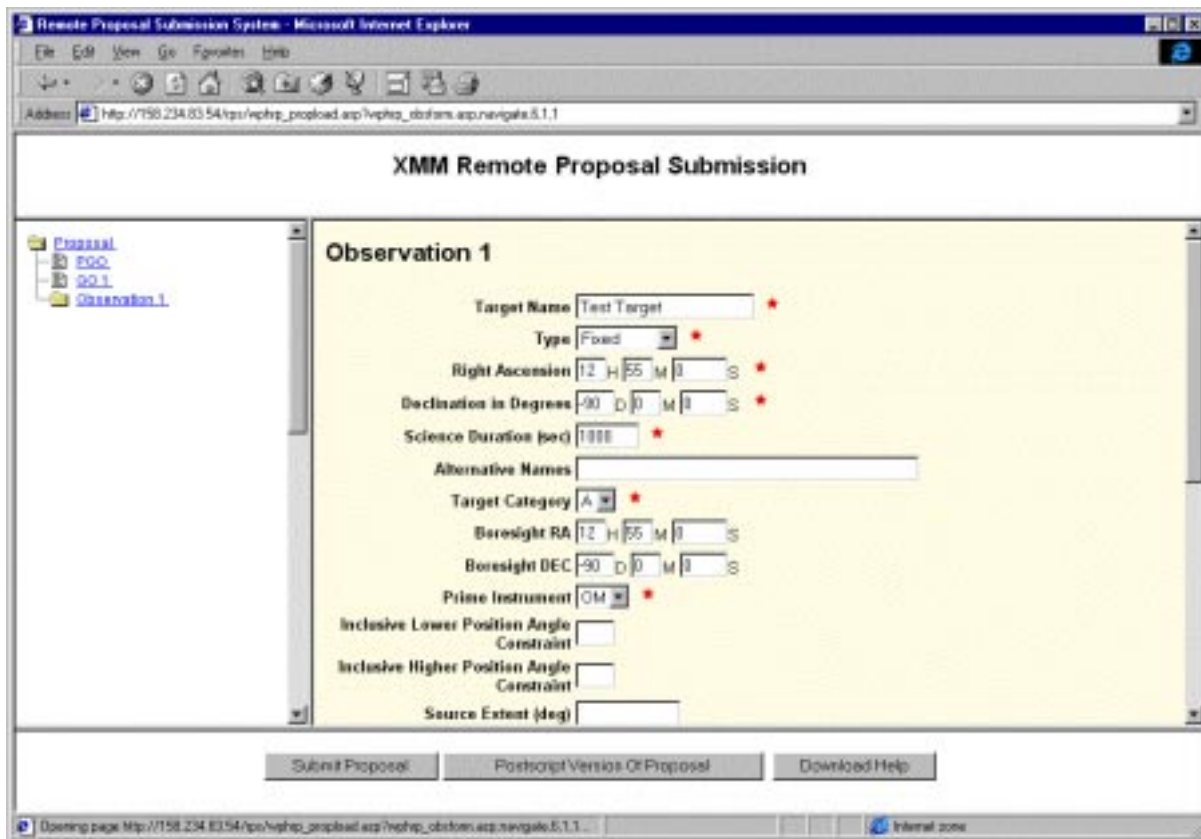


Fig. 2.— Screen shot of the top part of the page containing observation-specific information, like e.g. source coordinates and the total duration of the proposed observation.

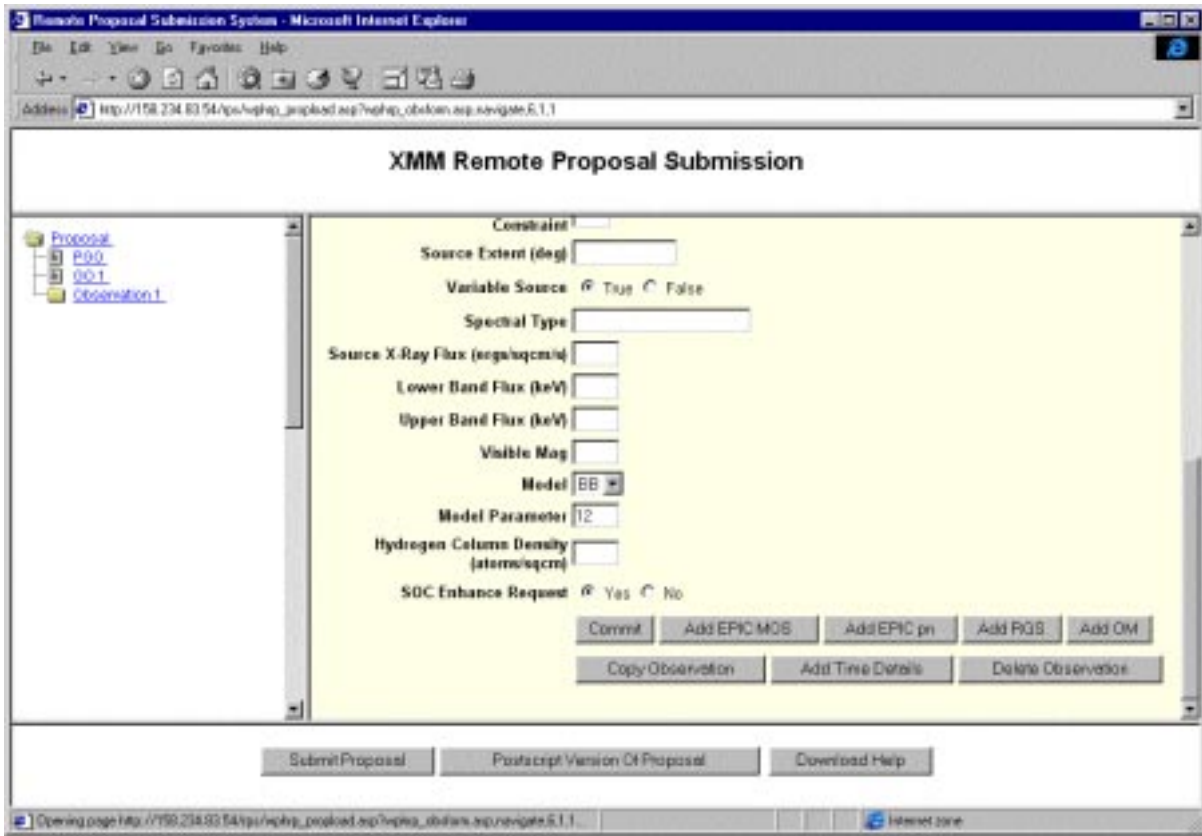


Fig. 3.— Screen shot of the bottom part of the page containing observation-specific information, like e.g. approximate X-ray and optical spectral source characteristics.

Note that providing the science target’s spectral characteristics requested as displayed in Fig. 3 will help the XMM SOC to assess the technical feasibility of an observation.

At the bottom of the top-level observation page users find the “commit” button again, which should be used to store all information before proceeding. Then, all exposures should be specified, preferably by instrument (see above), for that particular observation. Some more details on entries at the exposure level will follow below. Once all exposures are specified (and thus an observation completely characterised), users can either copy (duplicate) that observation (for re-use when planning to specify a second, similar observation, e.g. of another target) or delete an entire observation (e.g., in case a target is dropped from the target list). A button is also provided to “Add Time Details” for time-critical observations at this point (page not displayed).

4.5. Exposures and further details for each observation

Once the top-level information for an observation has been entered, more details must be provided, in particular the exposures must be defined for each of XMM's science instruments. As mentioned above, this should preferably be done by instrument, in the order EPIC MOS, EPIC pn, RGS, OM. The sums of all exposure times for a given observation should match up with the total duration of the observation as specified at the level above.

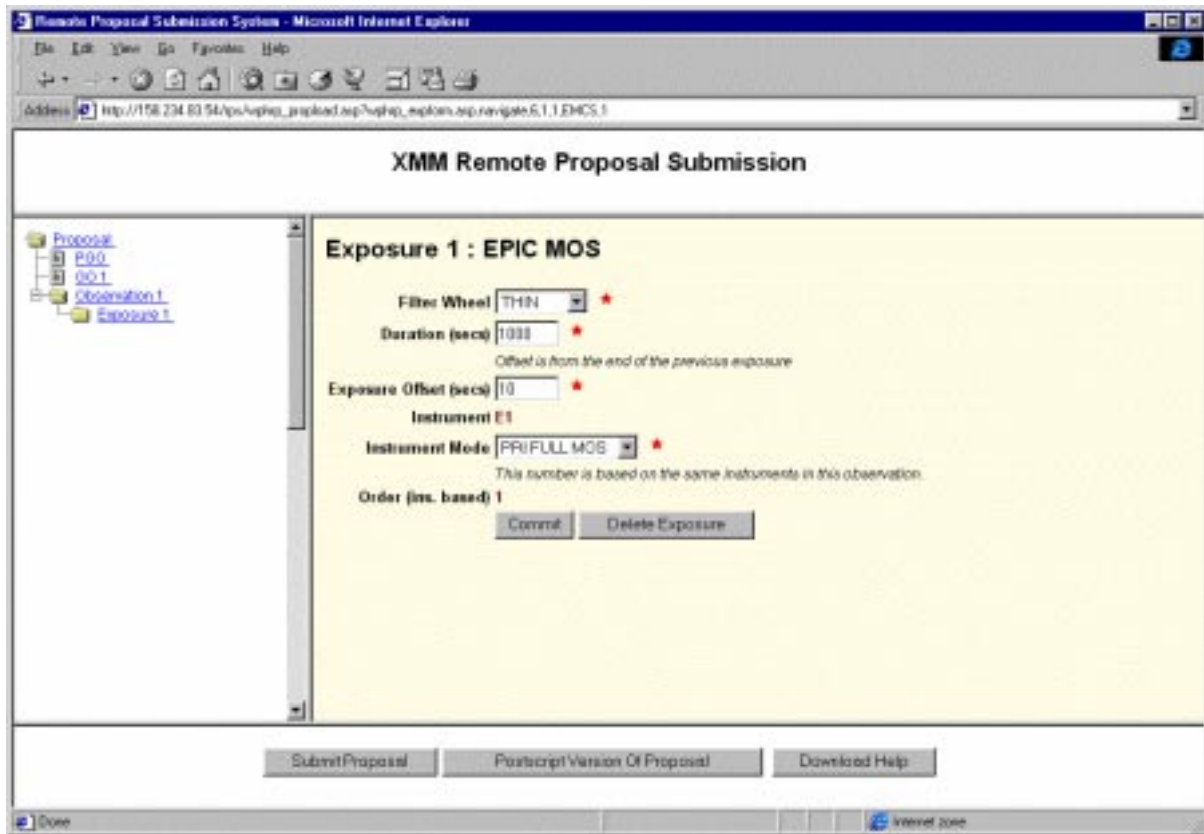


Fig. 4.— Screen shot of an EPIC MOS exposure form.

Fig. 4 gives an example for the input required for an instrument exposure. In this case, for EPIC MOS, users can specify the optical blocking filter to be used (see the XMM Users' Handbook for more information), the exposure time and the mode in which the MOS camera should be operated (again, check the XMM Users' Handbook for details). The sum of all exposure times for each XMM instrument should match that of the total duration of the observation that the exposures are part of.

Similar input is required for EPIC pn, RGS and OM. For RGS and OM additional input forms exist with details about the instrument settings. **No** entries need be made there if standard

instrument modes in default configurations are used for the observations. In general, non-default observations with XMM in AO-1 are discouraged by the XMM SOC. As an example the “RGS setting” page is presented in Fig. 5.

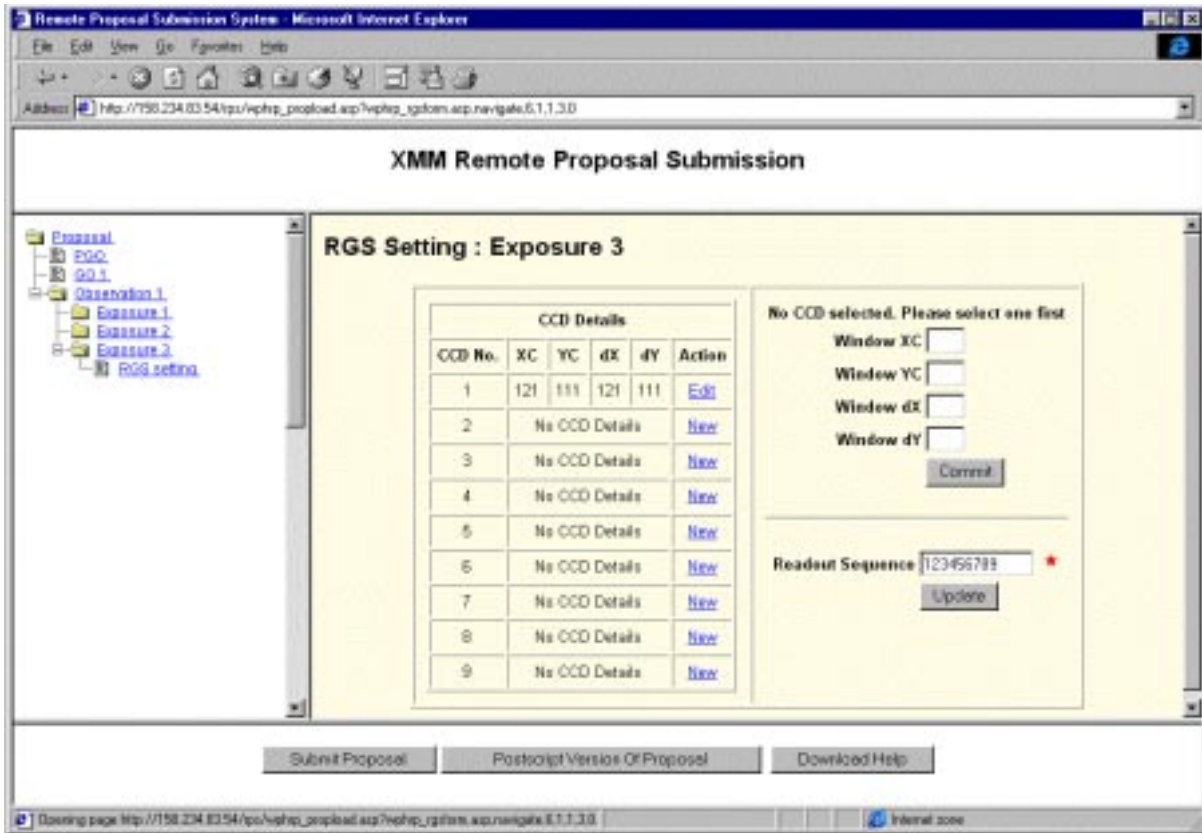


Fig. 5.— Screen shot of the “RGS settings” input form. Here details on the area of the RGS chips to be read out can be specified. In case a default instrument mode and configuration is used, no entries need be made here.

5. Proposal validation

Once all observations, including exposures for all instruments, have been defined, users must first commit all entries and then proceed to the proposal validation process. The checks performed in XRPS comprise only a formal validation. A technical feasibility assessment will be conducted later by the XMM SOC.

6. Inserting the scientific justification

For their XMM proposal users can prepare a postscript file containing the scientific justification and associated information (i.e., figures and tables; instructions will be provided by the XMM SOC with the first Call for Proposals). This file can be uploaded from the user's computer. Once this is done, a postscript version of the entire proposal can be prepared, which will remain with the proposer as his/her personal copy. Only after verification that the proposal is complete and all entries correctly filled in, the proposal should finally be submitted to the SOC's proposal database.

7. Caveat

Note that the screen shots presented here are from a preliminary version of the XRPS software. They might thus differ slightly from the final versions to be released shortly as part of the XRPS Users' Manual.