

The INTEGRAL Users Group

23 September 2004

Introduction

In November 2003, the SPC approved a mission extension for INTEGRAL (ESA/SPC(2003)45, rev. 1). This paper stated the Executive's intention to set up an INTEGRAL Users' Group (IUG) for the extended mission: "*Based on the successful experience with XMM-Newton*"... "*to institute a Users' Group for Integral in order to maximize the connection of the mission with the widest community*".

This paper proposes terms of reference and composition for an IUG and discusses its relationship to the INTEGRAL Science Working Team (ISWT). The necessary changes to the "Science Management Plan" (SMP) are presented.

The AWG is asked to:

- **approve the terms of reference and composition of the IUG,**
- **recommend acceptance of the proposed changes to the SMP,**
- **make suggestions for members (and the Chair) of the IUG.**

Implementation

The Executive and the ISWT reviewed and evaluated the role and responsibilities of the XMM-Newton Users' Group in order to establish the Terms of Reference for the INTEGRAL Users' Group (IUG). There is a fundamental difference between XMM-Newton and INTEGRAL in the definition and optimization of the Guaranteed Time observing programme (Core Programme) during the extended mission phase: XMM-Newton defined the Core Programme for the entire mission well in advance, before its Users' Group was established and the XMM-Newton Science Working Team was dissolved. On INTEGRAL, the ISWT review and define the Core Programme prior to each AO. The ISWT is convinced that the Core Programme should not be frozen for several years in advance, as this would prohibit any reaction to new scientific priorities, to forthcoming missions, or to changes in the instrument performance. Following discussions with the ISWT, it was concluded that for INTEGRAL, rather than replacing the SWT by the UG as was done on XMM-Newton, the IUG and the ISWT should exist in parallel as separate – but communicating – bodies.

Terms of References for the IUG

Taking these (and other) considerations into account, the Executive – supported by the ISWT – proposes the following Terms of References for the IUG.

The tasks of the INTEGRAL Users Group (IUG) are to:

1. Advise the Project Scientist on all matters relevant to maximising the scientific return of INTEGRAL within the boundary conditions.
2. Advise the Project Scientist on how to ensure that INTEGRAL maintains the principal characteristics of an observatory satisfying the objectives of the scientific community at large.
3. Act as a focus for the interests of the scientific community in INTEGRAL and act as an advocate for INTEGRAL within that community.
4. Maintain contact with the wider scientific community on matters specific to INTEGRAL (e.g. coordinated observations, science operations and General Observer interface) and to provide a route so that the community can advise ESA on INTEGRAL's scientific goals from a general point of view.
5. Monitor the ISOC and ISDC activities to ensure that they best meet the needs of the user community within the resources available.
6. Participate in major programme reviews.

The following applies:

- The IUG shall meet approximately twice a year, and the meeting venue is normally either ESAC (Villafranca, E) or ESTEC (Noordwijk, NL).
- The IUG chairman will be invited to participate as an observer to ISWT meetings. He or she will report on IUG meetings and recommendations.
- In all cases where the Mission Manager judges that the recommendations made by the IUG violate the resources available, or jeopardize the mission's safety, or if the ESA management otherwise disagrees, the recommendation will be taken to higher ESA management for a final decision. At that point, the chairman of IUG will also be invited to provide his or her input. It is, however, envisaged, that these cases will be an exceptional situation, as the decision process in the IUG should be one of consensus rather than conflict.
- It is not expected that recommendations from the ISWT will conflict with recommendations from the IUG as the two bodies have different terms of reference. However, should this occur, the Project Scientist can decide to consult his or her management for a final decision.
- The chairman of the IUG will make annual reports to the AWG (Astronomy Working Group).

Membership of the IUG

The IUG will consist of a chairperson and five members (all external to ESA). IUG members should be active researchers in the field of high-energy astrophysics and be regularly using INTEGRAL scientific data. They should not formally be affiliated with INTEGRAL PI teams (neither instruments nor ISDC). The INTEGRAL Mission Scientists do not, ex officio, sit on the IUG but may be nominated individually as members of the IUG. The Project Scientist (Chair of the ISWT) and the Mission Manager attend the IUG meetings as observers.

Membership of the IUG is for two years. It is foreseen that two years after the formal start of the IUG, half the members will be replaced, and in another two years (i.e. four years after set-up) the full membership and composition of the IUG will be reviewed.

IUG members will be appointed by D/SCI, after consultation with the Astronomy Working Group, the outgoing IUG and the ISWT.

Update to INTEGRAL Science Management Plan

The tasks of the IUG, as described above, were part of the responsibilities of the ISWT during development and the nominal mission phases as described in the INTEGRAL Science Management Plan (SMP, ESA/SPC(94), rev.1, Section 3.1 on pages 9-11). Supported by the ISWT, it is proposed to augment the SMP with a new paragraph at the end of Section 3.1 in order to document the existence of the IUG and the revised role for the ISWT in the SMP. This new section would read as follows:

3.1.1. ISWT and Users Group during extended mission phase

The tasks of the ISWT as described in the previous section are valid for the development and the nominal operational phases of the mission.

For the INTEGRAL mission in its extended phase (see e.g. section 5.2.5) ESA has decided to implement an INTEGRAL Users Group (IUG) which will be charged to:

- 1. Advise the Project Scientist on all matters relevant to maximising the scientific return of INTEGRAL within the boundary conditions.*
- 2. Advise the Project Scientist on how to ensure that INTEGRAL maintains the principal characteristics of an observatory satisfying the objectives of the scientific community at large.*
- 3. Act as a focus for the interests of the scientific community in INTEGRAL and act as an advocate for INTEGRAL within that community.*
- 4. Maintain contact with the wider scientific community on matters specific to INTEGRAL (e.g. coordinated observations, science operations and General Observer interface) and to provide a route so that the community can advise ESA on INTEGRAL's scientific goals from a general point of view.*
- 5. Monitor the ISOC and ISDC activities to ensure that they best meet the needs of the user community within the resources available.*
- 6. Participate in major programme reviews.*

Consequently, the tasks of the ISWT during the extended mission phase will focus on:

- *Establishing and optimizing the Core Programme*
- *Identifying and maintaining a coherent calibration and performance verification policy*
- *Participation in major programme reviews*
- *Advising on the maintenance and possible further enhancement of the science ground segment with particular reference to the operational scenario, observatory products and database structure.*

APPENDIX: ISWT membership

For information to the AWG, the current composition of the ISWT is as follows:

Mission Scientists (in alphabetical order):

Wim Hermsen (SRON, Utrecht, NL)
Neil Gehrels (NASA/GSFC, Greenbelt/MD, USA)
Sergei Grebenev (IKI, Moscow, Ru)
Giorgio Palumbo (U Bologna, I)
Jacques Paul (CE-Saclay, Gif-sur-Yvette, F)

PIs and Co-PIs

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|---------------------------------------|-------------------------|
| Jean-Pierre Roques (CESR, Toulouse) | Co-PI Spectrometer, SPI |
| Volker Schoenfelder (MPE, Garching) | Co-PI Spectrometer, SPI |
| Pietro Ubertini (IAS, Roma) | PI Imager, IBIS |
| Francois Lebrun (Sap, Saclay) | Co-PI Imager, IBIS |
| Niels Lund (DSRI, Copenhagen) | PI JEM-X |
| Miguel Mas-Hesse (LAEFF-INTA, Madrid) | PI OMC |
| Thierry Courvoisier (ISDC, Geneva) | PI ISDC |

International representatives:

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| Rashid A. Sunyaev (Moscow) | Representative Russian Academy of Sciences |
| Bonnard. J. Teegarden (Goddard) | Representative NASA |

ESA:

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| Christoph Winkler | ESA Project Scientist. |
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