

## **Minutes of February 21, 2006 U.S. INTEGRAL Users Committee (IUC) NASA Goddard Space Flight Center**

### **Attendees:**

**IUC members:** C. Kouveliotou, C. Dudley, K. Hurley, B. Paciesas, M. McConnell, S. Starrfield ; (absent: G. Madejski)

Instrument Team Co-I's: R. Rothschild, S. Boggs, M. Finger

**Ex-Officio Members:** C. Shrader, V. Beckmann, S. Sturner,(NASA INTEGRAL GOF), B. Teegarden,(US Project Scientist), A. Smale (NASA HQ); (not in attendance: HQ Program Scientist, R. Harnden

**Guest Participant:** Dieter Hartmann

Agenda and some view-graph presentations are available on the INTEGRAL GOF Web site <http://integral.gsfc.nasa.gov>

The US IUC met on Tuesday, February 21, 2006 at the NASA Goddard Space Flight Center.

B. Teegarden presented a status report on the observatory. There have been no significant changes since the July 2005 IUC meeting; the instruments and subsystems continue to perform nominally. It was noted that the current NASA (Deep-Space Network) telemetry and command support may not be required after 2007, as a result of orbital evolution. The mission is expected to continue at least through 2008, and very likely through 2010.

B. Teegarden also reviewed ongoing an analysis effort based on the recent Earth observations. The potential for modeling out Earth emission; reflected cosmic gamma-rays, aurora, and cosmic-ray induced bremsstrahlung) and thus making a determination of the DCGRB was discussed. Images from SPI, IBIS and JEM-X were shown. By ISWT agreement, the Russian team will lead the publication effort. The committee advocated coordination and involvement in all press activities that ESA may decide to pursue. The committee strongly recommended that all press activities where there is a significant US participation be run in parallel between ESA and NASA.

C. Kouveliotou reviewed the minutes of the November 2005 ESA IUG. Of particular interest was the planned implementation of key projects, and the potential impact this would have on the US fraction of open time programs likely to be selected in future AOs. IUG discussion regarding possible INTEGRAL-XMM joint proposals was reviewed, as was the IUG proposal to periodically rotate the ESA TAC. If this occurs, it was noted that a request for expanded US participation be requested.

A. Smale presented an overview of the proposed (i.e. President's) FY07 NASA budget and its likely implications for astrophysics programs. At present, it does not appear that

the Senior Review portion of MO&DA will be significantly impacted, although other NASA research activities will be negatively affected. The in-guideline recommendations (from SR04) for FY-7 and 08 are still realistic. The guidelines for the 2006 Senior Review (SR06) were presented and discussed. The (IUC) committee inquired about the makeup of the (SR06) committee. This is undetermined (and proprietary) at present, but it was noted that, as in the past, the previous chair person will carry over as a committee member (but not as chair), and an “institutional memory” of an additional 2-3 reviewers is likely. The committee expressed its desire for significant high-energy astrophysics representation.

B. Teegarden reviewed the current and proposed FY07 project budget. Significant anticipated carry-over funds were noted, and should they be sufficient to continue the GO program through at least AO4. Additional planning to stay within the SR04 guideline budget, but still continue the GO program was presented. The IUS members agreed on preserving the EPO efforts and the GSFC instrument support efforts. A gradual de-scope of the US Co-I activities was proposed, and extensively discussed. Some US Co-I team representatives strongly objected to the de-scoping, but reached a final consensus on the issue. However, the committee unanimously agreed and strongly recommended a de-scope of the GSFC-ISDC activity, specifically to reduce the current 2 FTE level to 1 FTE over a 1-year timescale. This plan will be presented to (US ISDC Co-I) Nick White. Other elements of the GSFC budget were critiqued. The IUC requested a detailed breakdown of the funds allocated to GSFC (tax, FTEs, fringes, etc.), as there were concerns about double charges. The IUC advocates seeking over-guide funding from HQ for an Archive/Theory research program in AO5 (FY07) and possibly an INTEGRAL Fellowship Program.

C. Shrader presented a summary of the INTEGRAL GOF's activities since the last IUC meeting, notably addressing the specific actions from that meeting. A data analysis workshop was held at GSFC in November 2005. The consensus view among participants was positive, and the GOF will likely conduct future workshops, probably on 1.5-2 year cycles. An E/PO work plan was developed and implemented. About 1/3 FTE is committed for FY06, and work is ongoing. The GI letter proposed at the July 2005 IUC was mailed in September 2005. Feedback was discussed. Progress regarding the US publication rate (for US authored INTEGRAL-related journal articles) was discussed. The US receives about 15% of the total open program observing time (based on about 25% of the approved proposals). The percentage of US first author journal articles is very close to this number (about 14%), and only France, Italy and Russia have more 1<sup>st</sup>-author articles. Discussion of how to convey this to the SR06 committee was discussed.

C. Shrader discussed plans for the INTEGRAL response to the forthcoming (MO&DA) SR06 call for proposals. Specific criticisms from SR04 were enumerated and progress towards addressing each item was discussed. The January 2006 proposal draft was extensively discussed, and a few specific recommendations made. These include some reorganization (expand introduction and move instrument description to the technical section). There was consensus opinion to note scientific synergies between high-energy missions, notably Swift, and highlight these in the proposal, however, details of how to

do this were unclear. Plans for a subsequent revision schedule, and for the oral presentation were also discussed. A “red team” committee will be formed to offer final oversight on the proposal, and to critique a rehearsal of the oral presentation. D. Hartmann (Clemson Univ., INTEGRAL Guest Investigator) will assist the project with the oral presentation.

S. Sturmer reported on the current status of the US archive. The archive was opened on schedule, and has remained up to date since. Monthly download statistics were presented. INTEGRAL is typically, the 3<sup>rd</sup> or 4<sup>th</sup> most popular among the HEASARC data bases, and has been as high as 2<sup>nd</sup> during certain months.

V. Beckmann discussed the high-level data products developed at GSFC (in collaboration with ISDC), and demonstrated how they can be accessed through the GOF web site or the HEASARC Browse facility. Most IUC members seemed unaware of these products, and it was recommended that they be highlighted in the technical section of the SR06 proposal. The improved capabilities of the OSA 5+ software and calibrations were highlighted and briefly discussed.

Following the formal presentations and discussions, the following action items were identified and assignments were made:

C.K. will consult with C. Winkler to obtain the ESA project review text.

C.K. will query NASA HQ regarding the possibility of reinstatement of the Archive/Theory program.

C.S. will post a revised draft of the SR06 proposal in 1 week. The instrument team Co-I groups submit revised justification text to C.S. B.T. and K.H. will submit proposed figures and caption text for the Introduction section to C.S.

C.S. will compile statistics on INTEGRAL triggered ATels, and note this in the SR06 proposal.

C.S. will discuss the possibility of NASA-ESA coordinated press activities with the GSFC press liaison and science writer (C. Wanjek).