

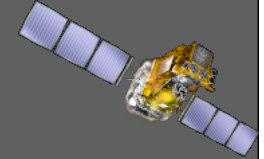
Integral Mission Status MOC & ISOC

Prepared by Peter Kretschmar

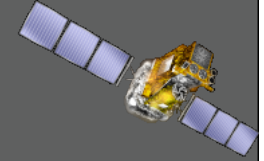
Integral Mission Manager

IUG 08, ESTEC

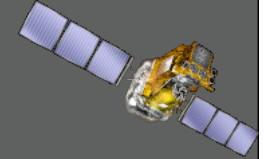
10 December 2009



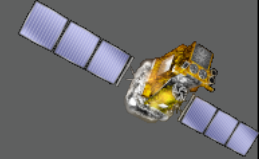
- AOCS: Nominal with all prime units in use.
Avg. monthly fuel usage ~0.5kg, remaining fuel ~131.1kg.
- EPS: Nominal with all prime units in use.
Available power from solar arrays is ~2100W.
Battery 1 reconditioning 16-28 Nov 2009.
Battery 2 reconditioning to be performed in December.
- OBDH: Nominal with all prime units in use.
- TCS: Nominal with all prime units in use.
- RF: Nominal with all prime units in use.



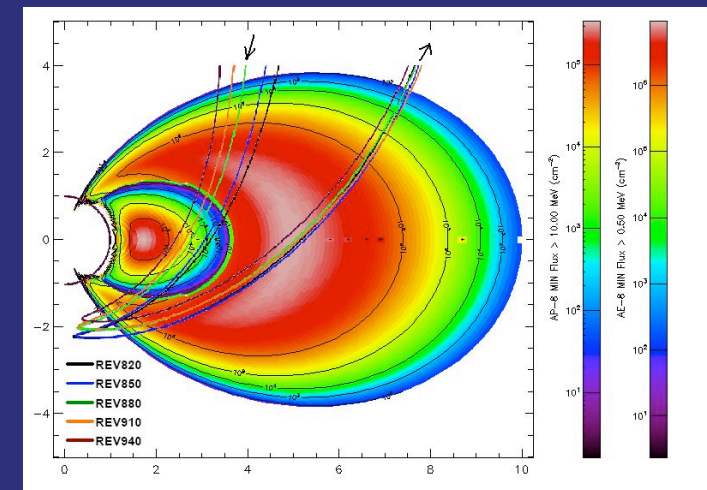
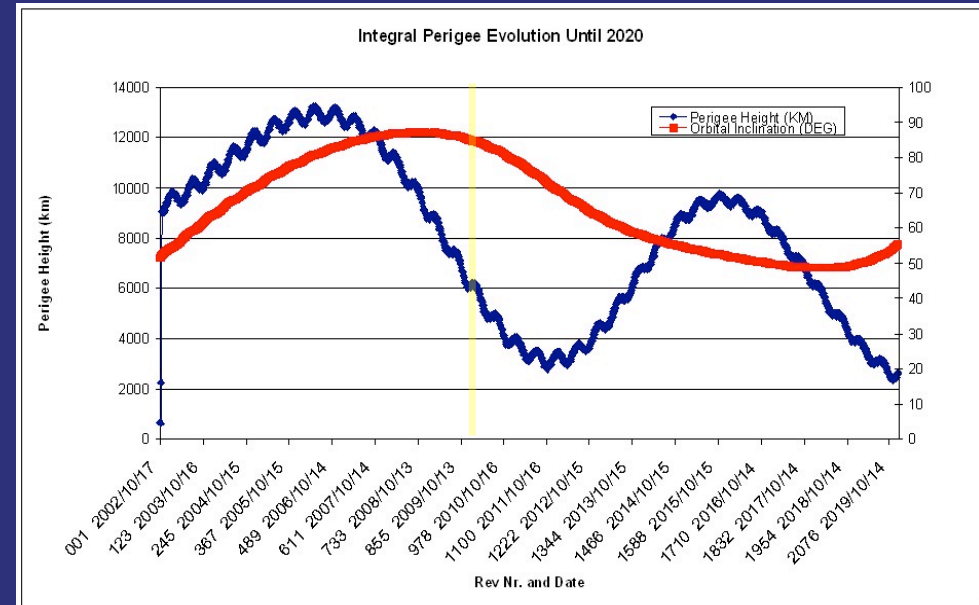
- SPI: Nominal with prime units in use, but cooling issues.
 - Annealing #13 from 19/04/2009 to 11/05/2009.
 - 29/04/2009 failure to change Compressor Drive Electronics unit 1 (CDE1) internal relays to allow higher stroke settings for longer duration between annealings. Under investigation.
 - Instrument Application SW upgraded on 2/11/2009: PSD Event compression functionality and reduction of Ge detector high voltage during radiation belts.
 - Annealing #14 from 19/10/2009 to 6/11/2009.
 - 4/11/2009: during active cooling following annealing LCL of Compressor Drive Electronics unit 2 (CDE2) tripped off (probably due to SEU), switching off compressors C and D. CDE2 reactivated within 2 hours however apparent negative impact on Cold plate Temperature evolution
⇒ **early annealing likely or otherwise Cold Plate temperature will drift outside of 80K range.**

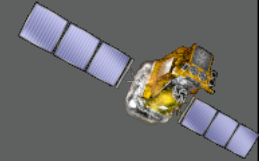


- IBIS: Nominal with prime units in use.
No unrecoverable anomalies.
- JEM-X: Nominal, no unrecoverable anomalies.
Swap from JEM-X1 to JEM-X2 from revol. 856 (16/10/2009).
- OMC: Nominal, prime equipment in use.
No unrecoverable anomalies.
- IREM: Nominal, prime equipment in use.
No unrecoverable anomalies.

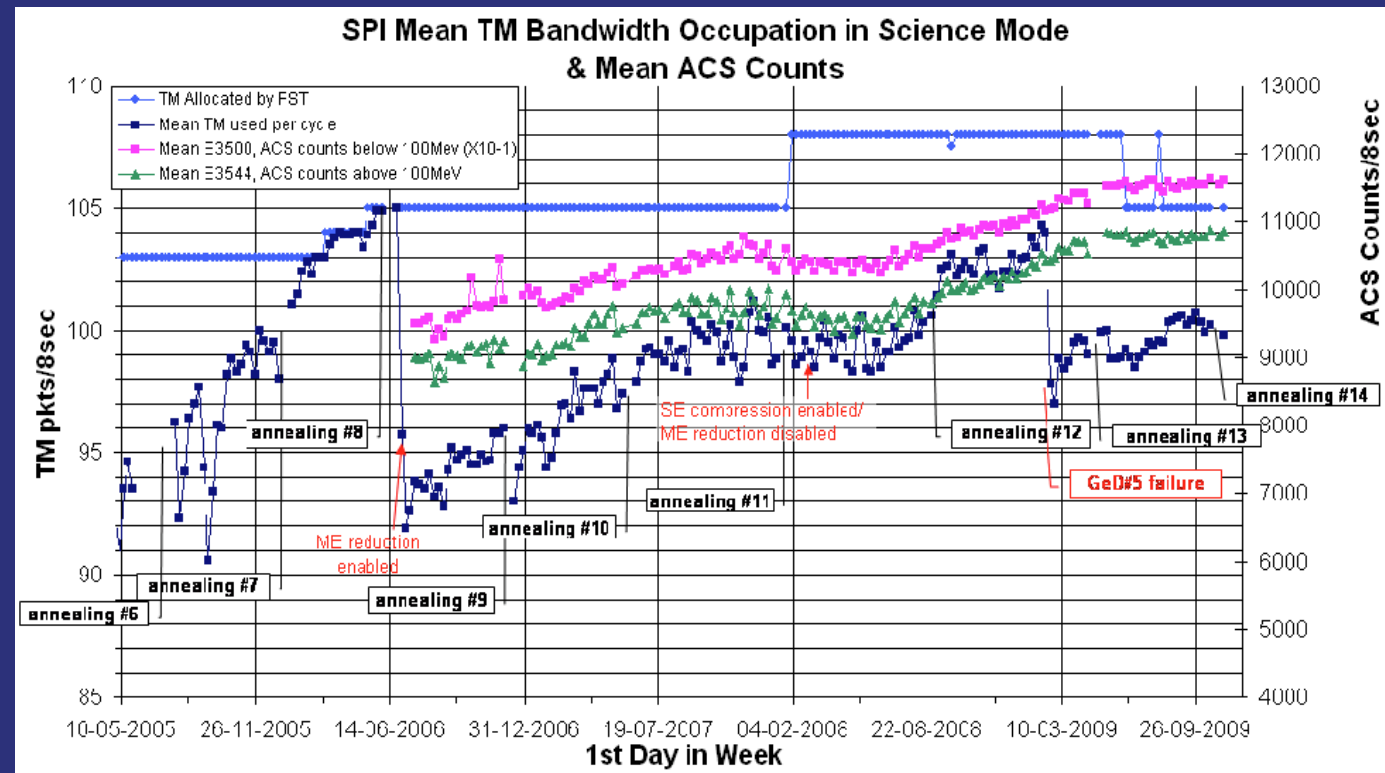
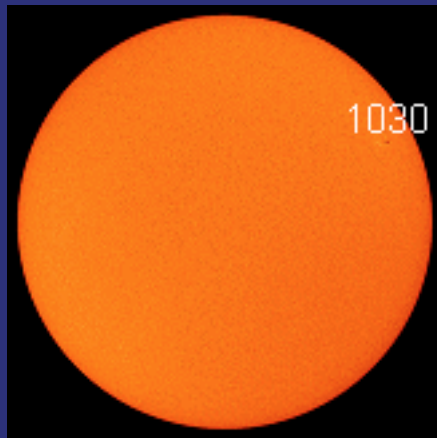


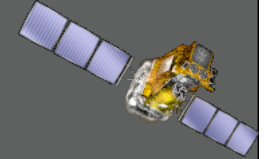
- Perigee altitude dropping quickly: ~6000 km at end 2009. Predicted minimum ~3000 km in 2011.
- Start to pass through proton belts. MOC is paying special attention and has requested instrument teams to monitor instrument behaviour and data quality closely.
- So far no reports of negative effects.





- Latest data may indicate stable particle background and TM usage, but too early to discuss changes to current set-up.
- Solar activity remains very low.
- Will be a topic for IOCG Meeting, 23 Feb 2010.





- **System performance:** Nominal. Timeline execution performance and average real-time data return from the stations both well above the requirement of 95%.
- **MOC team:** Final reduction in team since February 2009. Team fully merged with XMM. Intensive training ongoing due to team turnover. Reduced team led to longer implementation times for change requests and delayed reporting (to be reduced from 2010). No major impact in anomaly recovery however most major anomalies have occurred at “convenient” times.
- **Interface to ISDC:** Good, no major interruptions to NRT data. Time correlation regeneration ongoing but further problems detected.
- **Interface to ISOC:** Good, normal mission planning activities ongoing.



- One developer, Pieter Jan Baeck left in June and was replaced in mid October by Marnix Bindels, who already worked at ISOC 2006-2007.
- Delphine Anger is extending her YGT project (Long-Term Plan tool) by another year.
- Team has been very busy with new AO two-staged scheme leading to many changes in software, database, interfaces and procedures.
- Three TOO observations (A0535+26, IGR J17511-3057 and 3C 454.3) since last IUG meeting.
- Archive copy from ISDC progressing normally. Reprocessed data waiting for full set before ingestion. Raw TM copied routinely but occasional gaps.





- New TAC support pages, appreciated by panels. Improved capture of comments for users.
- Main complications for proposal handling:
 - Two rounds of attribution of data rights, once for successful observing proposals, once for dedicated data right proposals.
 - Complex set of conflicts between proposals, especially for Compact Objects. Not trivial to track (varying names, coordinates imprecise, ...) ⇒ improve tools for AO-8.

INTEGRAL AO-7 TAC Proposal Package

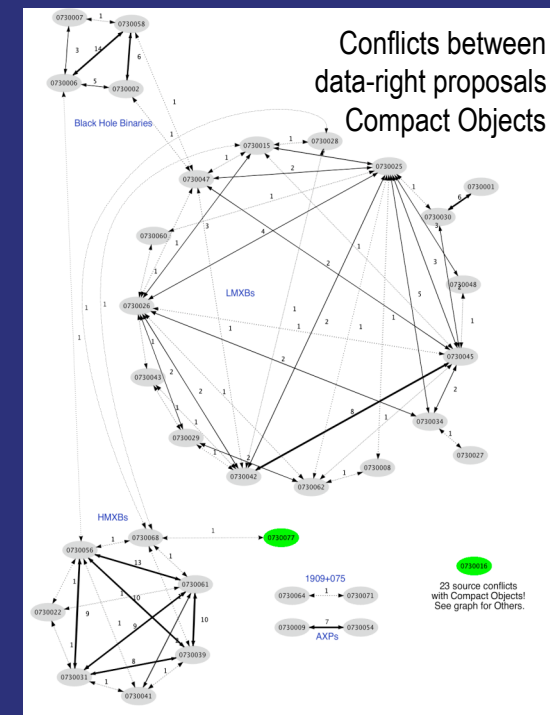
Member id: ao7tac

PROPOSALS

Please click on the proposal ID for a more detailed view.

Compact Objects

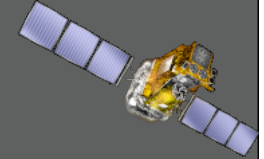
ID	PI	Country	Title
0720001	Koulikers	Spain	Regular and frequent INTEGRAL monitoring of the Galactic Bulge region
0720011	Revnivskiy	Russian Federation	Physics of the high energy tail of luminous accreting neutron stars - Ultra-Short Observations of SSs X-1
0720012	Shalora	Russian Federation	Hercules X-1 - the detailed study of cyclotron lines, magnetic field and accretion
0720014	Chernopalkovskiy	Russian Federation	INTEGRAL searches for change in hard X-ray spectrum during primary eclipse of galactic superaccreting microquasar SS433
0720015	Dean	United Kingdom	Polarimetric Observations of the Vela Pulsar
0720017	Coe	United Kingdom	Understanding the X-ray binary populations of the Magellanic Cloud Family - Large, Small & Bridge
0720019	Sanchez-Fernandez	Spain	Characterizing the INTEGRAL all-sky exposure
0720020	Walter	Switzerland	STELLAR WIND PHENOMENA IN THE NEW INTEGRAL SUPER-GIANT HIGH MASS X-RAY BINARIES
0720023	Galbraith	Australia	Thermonuclear Pathways in X-ray Bursts from GS 1826-24
0720028	Misanovic	Australia	Thermonuclear Bursts of the Slow Burst





- Schedule mostly settled, year remains busy throughout, due to two AO stages: spring for observing, fall for data-right proposals.
- Will improve software to better capture source data rights and identify conflicts.
- AO scheme expected to remain as for AO-7.

Call for observing proposals	15 March 2010
Deadline observing proposals	23 April 2010
TAC Meeting, observing proposals	1-3 June 2010
Call for data-right proposals	end August 2010
Deadline data-right proposals	early October 2010
TAC Meeting, data-right proposals	mid November 2010
Begin of observations	1 Jan 2011



- INTEGRAL funded until end 2012 but with mid-term review in 2010 for 2011/2012 funding.
- Another Mission Extended Operations Review (MEOR) will be held at ESOC (30.6./1.7.). Scope to be clarified, but probably 'presentation-only' light review after larger effort in 2007.
- Need to prepare also request for new funds (2013+2014).

This will need very good arguments and new ideas!

