

INTEGRAL Operations Coordination Group Meeting 3 - Feb. 2010

INTEGRAL Operations Coordination Group Meeting #03
ESOC
23 February 2010

Time Correlation Status

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Revolutions 1 to 890 Regenerated and supplied to ISDC.

- Orbit determination problem has been eliminated – confirmed by SRON and ESOC FD.
- Revolutions 1 to 8 problematic, unstable station timing.
- Revolutions 205 and 215 problematic.
 - DSN error was so large that the SW could not compensate
 - Fix now available.
- Up to revolution 820 data verified by ISDC
- Long delay after revolution 790 due to unexpected large error in 1st points in each revolution.
 - Eliminated by putting limit on allowed slope.
 - Problem does not exist in RT data

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Additional Improvements made:

- Incorrect station Delay for ESA Stations removed (47us at high bit rate).
- Incorrect on-board delay (incorrect sign up to revolution 87)
- Use of measured orbit rather than predictions
- Removal of occasional problems, in particular Ground Station timing problems.

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Current activities:

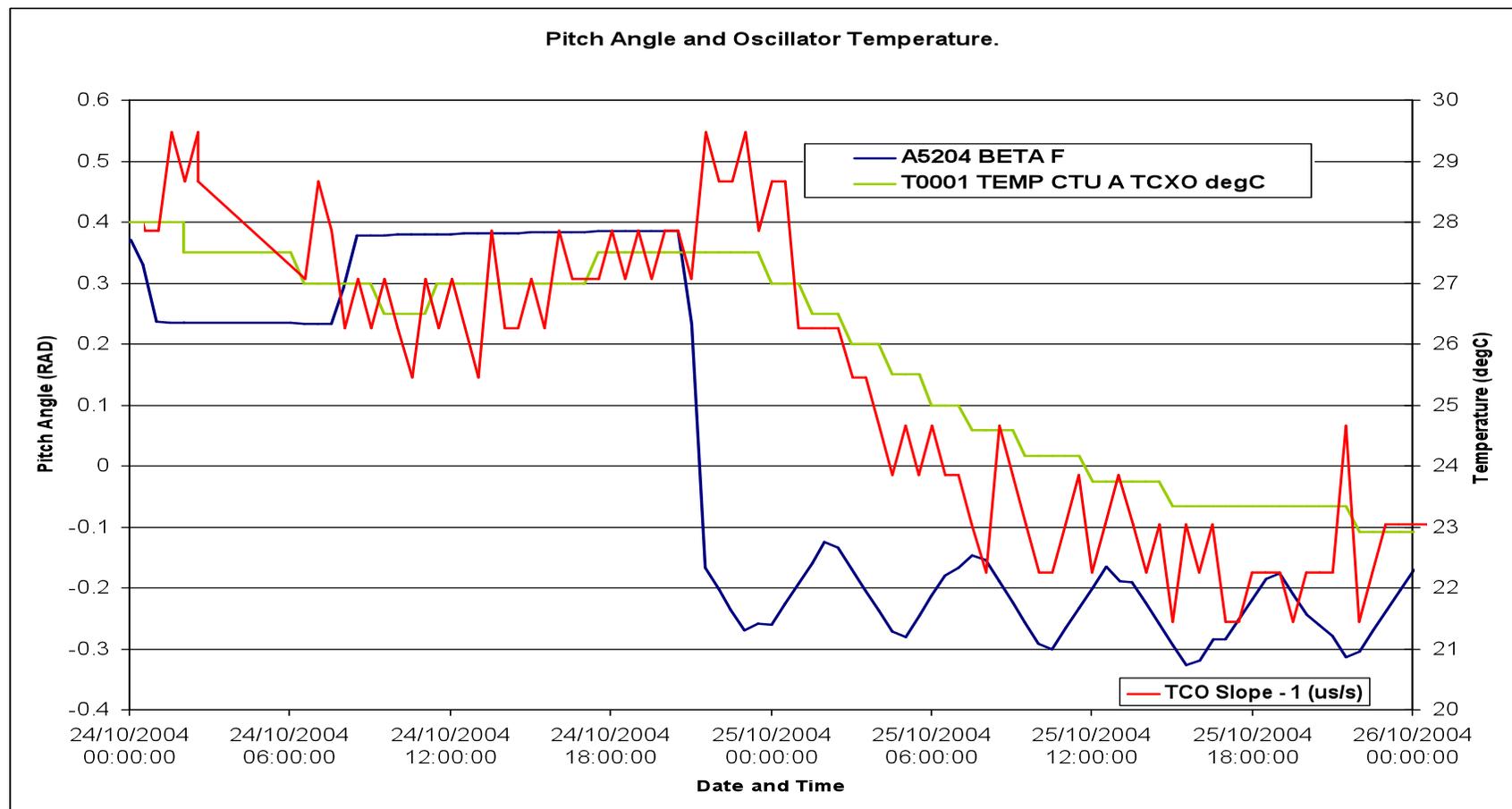
- Waiting for confirmation of correctness of data up to 890.
- Weekly check of TCO stability (in particular check for discontinuities at Station Handover)

Future Activities:

- Regeneration of entire data set, using agreed error criteria and correction for known historical ground segment problems.
- Documentation of fix applied and all errors corrected.
- Correction of station delay in NRT data.

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The Oscillator is not Temperature Controlled => TCO is only valid for short periods without update!



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Long Term Evolution of Time Correlation, probably due to ageing effects of Oscillator

