XMM-Newton CCF Release Note

XMM-CCF-REL-9

EPIC TIMING

D LUMB

October 4, 2000

## 1 CCF components

Name of CCF	VALDATE	List of Blocks changed	CAL VERSION	XSCS flag
EMOS1_TIMECORR_0003	2000-01-01T00:00:00	FRAMETIME		YES
EMOS2_TIMECORR_0003	2000-01-01T00:00:00	FRAMETIME		YES
EPN_TIMECORR_0004	2000-01-01T00:00:00	FRAMETIME TIMECORR		YES

2 Changes

First Release

The time between detection of a photon in a CCD, and the time which is written into a time stamp datum associated with a readout frame is partially indeterminate, but the mean time of the frame is generally assigned to this detection. The TIMECORR files provide a means of correcting for the mode-dependent readout delay.

The timings are derived at present from a knowledge of the ground measurements of clock timings and sequences. The absolute timing are further dependent on spacecraft OBT to UTC corrections, and these will dominate the error budget (TBC).
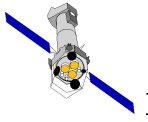
3 Scientific Impact of this Update

4 Estimated Scientific Quality

It5 is known taht in the phase resolved analysis of the Crab pulsar, and ABSOLUTE timing error of 13ms $\pm$N$\times$PERIOD was noted. The source of the error could be in barycentric correction, orbit files or the EPIC pipeline processing.