

# XMM-Newton CCF Release Note

XMM-CCF-REL-40

## EPIC Energy Scale

D Lumb

November 8, 2000

### 1 CCF components

Name of CCF	VALDATE	List of Blocks changed	CAL VERSION	XSCS flag
EMOS1_ADUCONV_0009	2000-01-01T00:00:00	OFFSET_GAIN		NO
EMOS2_ADUCONV_0009	2000-01-01T00:00:00	OFFSET_GAIN		NO

### 2 Changes

Since launch, the MOS FAST modes have been operating with an incorrect number of clock cycles for the amplifier sampling. As a result the gain is DIFFERENT than that for other modes. This needs to be treated coherently, as we know the PHA to PI correction is actually pattern type dependent, and also non-linear. However we know this will be fixed in the next release of clock sequences, so a permanent investigation and correction is not warranted or possible at this time.

Ad interim we have examined a number of CLOSED CAL observations in the FAST UNCOMP mode and determined a proportional gain shift for both cameras. This value is added as a new keyword in the offset-gain extension, and used as a quick fix in the software in order to have something available for the first public release of SAS.

### 3 Scientific Impact of this Update

Modifies the gain for the FAST mode of EPIC MOS



## 4 Estimated Scientific Quality

The gain change was estimated by using CAL CLOSED observations of the 3 internal emission line targets. We estimate that the gain in this mode is now much improved but still may be correct only to  $\sim 1\%$

## 5 Expected Updates