

# XMM-Newton CCF Release Note

XMM-CCF-REL-301

## EPIC MOS Fixed Offset Tables

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### 1 CCF Components

Name of CCF	VALDATE	EVALDATE	Blocks Changed	CAL Version	XSCS Flag
EMOS1_DARKFRAME _0035.CCF	2013-04-23T00:07:42		OFFSET_CCD2 OFFSET_CCD4		NO

### 2 Changes

This CCF reflects a further modification to the uploaded MOS1 fixed offset table following the suspected MOS1 impact event of revolution 2382.

In order to mitigate the effects of saturated or noisy CCD areas, the latest change consists of the vetoing of MOS1 CCD4 up to RAWY = 7 and a MOS1 CCD4 column at RAWX = 150. In addition, the offset of MOS1 CCD2 column at RAWX = 237 was raised by 8 ADU.

### 3 Scientific Impact and Estimated Quality

Note that the values in the OFFSET extensions of the DARKFRAME CCFs are not used to determine the E1 event energies; this is already done on board in the EDU. The main reason for reflecting the on board offset values in the DARKFRAME CCFs is correctly to determine the reconstructed event energies, for which knowledge of the contemporary on board offsets is required.

## 4 Expected Updates

As analysis of the effects of the CCD damage continues, other MOS1 offset values may require modification.

Additionally, the background of all CCDs changes in time and will need to be compensated through changes of the fixed offsets.

## 5 Test Procedures and Results

Correct functionality tested with `cifbuild` and `emproc` (SAS version 13.0.1). Reducing data with mismatched uploaded fixed offsets and DARKFRAME CCF issue may result in SAS warnings **\*\* emevents: (spGatti11), reconstructed energy larger than 4095.**

As expected, use of the CCFs in this release result in correct reconstructed energies and no such warnings are issued.