

XMM-Newton CCF Release Note

XMM-CCF-REL-244

EPIC PN Bad Pixels

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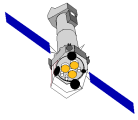
1 CCF Components

Name of CCF	VALDATE	EVALDATE	Blocks Changed	CAL Version	XSCS Flag
EPN_BADPIX_0131.CCF	2008-03-20T00:10:00	2008-03-20T02:47:00	BADPIX		NO
EPN_BADPIX_0132.CCF	2008-03-21T08:00:00	2008-03-23T07:00:00	BADPIX		NO
EPN_BADPIX_0133.CCF	2008-03-23T14:30:00	2008-03-24T20:25:00	BADPIX		NO
EPN_BADPIX_0134.CCF	2008-03-27T14:00:00	2008-03-27T17:48:00	BADPIX		NO
EPN_BADPIX_0135.CCF	2008-03-28T13:55:00	2008-03-31T07:00:00	BADPIX		NO
EPN_BADPIX_0136.CCF	2008-04-02T07:10:00	2008-04-04T06:00:00	BADPIX		NO
EPN_BADPIX_0137.CCF	2008-04-06T12:30:00	2008-04-07T06:15:00	BADPIX		NO
EPN_BADPIX_0138.CCF	2008-04-08T12:22:00	2008-04-09T03:07:00	BADPIX		NO
EPN_BADPIX_0139.CCF	2008-04-10T07:00:00	2008-04-14T06:00:00	BADPIX		NO
EPN_BADPIX_0140.CCF	2008-04-14T11:58:00	2008-04-14T14:43:00	BADPIX		NO
EPN_BADPIX_0141.CCF	2008-04-16T06:10:00		BADPIX		NO

2 Changes

The CCFs cover the new bad pixel table which is systematically in use from Revolution 1530 onwards, as well as several observations in revolutions prior to that owing to re-scheduling or manual commanding.

The changes affect CCD 11 column 64 only. This column has row intervals with extremely noisy pixels, the locations of which shift through the column over time. The new bad pixel table masks those pixels which are currently excessively noisy.



3 Scientific Impact of this Update

Reduced telemetry load due to the on-board masking of these noisy pixels will lower the chances of counting mode excursions, thus increasing the quadrant 3 live-time.

4 Estimated Scientific Quality

Note that in all the EPIC cameras there are intermittent bad pixels that may arise in only one exposure. The user is recommended to run the bad pixel finding algorithm, and remove after processing.

5 Test Procedures and Summary of the Test Results

Correct bad pixel contents confirmed with *calview*. Correct functionality and validity dates tested with *epproc* (SAS 7.1.0).