XMM-Newton CCF Release Note

XMM-CCF-REL-83

RGS Bad Pixels

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1 CCF components

Name of CCF	VALDATE	List of Blocks changed	CAL VERSION	XSCS flag
RGS1_BADPIX_0006	2001-06-13T00:00:00	BADPIX		NO
RGS2_BADPIX_0006	2001-06-13T00:00:00	BADPIX		NO

2 Changes

Analysis of the diagnostic data corresponding to the first 200 revolutions has shown that the number of permanent hot columns in the RGS instruments is very low (XMM-SOC-INST-TN-0001). Since the number of single hot pixels is also low there is no need from the point of view of the telemetry to upload them. Only the few hot columns should be eliminated from the telemetry. Bad pixel tables derived from that analysis were uplinked to the instrument on June 13, 2001. They contain 3 hot columns for RGS1 and one hot column for RGS2.

3 Scientific Impact of this Update

It is correctly interpreting what is uplinked to on-board bad pixel rejection since June 13, 2001. With respect to the not uplinked bad pixels, there are no changes to the former (0005) issue.

4   Estimated Scientific Quality

Since the telemetry is not compromised by RGS data, only hot columns which are detected with a very high frequency in the diagnostic data (¿ 90% of the time) have been selected for upload. Single hot pixels are not uploaded, but only flagged. The same comments apply as for the former release notes on RGS bad pixels (XMM-CCF-REL-75).

5   Expected Updates

Complementary studies using science data covering the same long period have started already. They should confirm or modify the results with respect to not uplinked bad pixels obtained using diagnostic data.