

XMM-Newton CCF Release Note

XMM-CCF-REL-403

EPIC canned matrix epochs

R.D. Saxton

10 October 2023

1 CCF components

Name of CCF	VALDATE	EVALDATE	Blocks changed	XSCS flag
XMM_RMFEPPOCH_0001.CCF	1999-12-10	-	RMFEPPOCH	NO

2 Changes

This is the first release of this document. It describes a new calibration file which will give the epochs of canned matrices which are available from the XMM-Newton web site. This will be used by the SAS software to generate the full canned matrix filename which will avoid the need for a software update each time that a canned matrix for a new epoch is generated. The contents and use cases for the canned matrix files themselves are described in CAL-SRN-0247.

The SAS will select a given epoch for dates between the corresponding start date and the start date of the next epoch. Note that these epochs will be identical to those specified in the canned matrix pages on the XMM-Newton web site¹.

The contents of XMM_RMFEPPOCH_0001.CCF are given in table 1.

3 Scientific Impact of this Update

There is no scientific impact. This CCF will allow canned matrix updates to be independent of updates to the SAS software.

¹<https://www.cosmos.esa.int/web/xmm-newton/epic-response-files>

INSTRUME	EPOCH	START
EMOS1	1	1999-12-10T00:00:00
EMOS1	2	2000-10-03T00:00:00
EMOS1	3	2001-04-22T00:00:00
EMOS1	4	2001-11-07T00:00:00
EMOS1	5	2002-05-26T00:00:00
EMOS1	6	2002-11-05T00:00:00
EMOS1	7	2004-01-14T00:00:00
EMOS1	8	2005-02-14T00:00:00
EMOS1	9	2006-03-22T00:00:00
EMOS1	10	2007-04-24T00:00:00
EMOS1	11	2008-05-28T00:00:00
EMOS1	12	2009-07-01T00:00:00
EMOS1	13	2010-08-03T00:00:00
EMOS1	14	2011-09-07T00:00:00
EMOS1	15	2013-04-27T00:00:00
EMOS1	16	2014-12-16T00:00:00
EMOS1	17	2016-08-05T00:00:00
EMOS1	18	2018-03-26T00:00:00
EMOS1	19	2019-11-14T00:00:00
EMOS2	1	1999-12-10T00:00:00
EMOS2	2	2000-10-03T00:00:00
EMOS2	3	2001-04-22T00:00:00
EMOS2	4	2001-11-07T00:00:00
EMOS2	5	2002-05-26T00:00:00
EMOS2	6	2002-11-05T00:00:00
EMOS2	7	2004-01-14T00:00:00
EMOS2	8	2005-02-14T00:00:00
EMOS2	9	2006-03-22T00:00:00
EMOS2	10	2007-04-24T00:00:00
EMOS2	11	2008-05-28T00:00:00
EMOS2	12	2009-07-01T00:00:00
EMOS2	13	2010-08-03T00:00:00
EMOS2	14	2011-09-07T00:00:00
EMOS2	15	2013-04-27T00:00:00
EMOS2	16	2014-12-16T00:00:00
EMOS2	17	2016-08-05T00:00:00
EMOS2	18	2018-03-26T00:00:00
EMOS2	19	2019-11-14T00:00:00
EPN	1	1999-12-10T00:00:00
EPN	2	2007-01-01T00:00:00
EPN	3	2014-01-01T00:00:00
EPN	4	2021-01-01T00:00:00

Table 1: Table of canned matrix epochs

4 Estimated Scientific Quality

5 Expected Updates

This file will be updated whenever a new canned matrix epoch is made publically available. Historically, this has happened every few years.

6 Test Procedures

The SAS task *especget* was ran using the new CCF and datasets with various different dates for the three instruments. In all cases, the response matrix was selected with the correct epoch.

References

Calle 2008, CAL-SRN-0247-1-1.pdf, "EPIC canned response matrices".