1 Format Description

1.1 Binary Table

The binary table and its columns are:

EVTID ID number of the event (running int) – perhaps unnecessary
CCD_ROW Row of the CCD (1-7)
CCD CCD type (SM1/2, BAM)
OBMT_BEG OBMT for start of observation
OBMT_END OBMT for end of observation – some SM frames have different lengths
EVENT A 2D uint16 matrix of electrons converted to ADU
LEN_AC Event length in AC
LEN_AL Event length in AL
ETOT Total event energy – in either electrons or ADU
D_ETOT Uncertainty on total event energy – in either electrons or ADU

1.2 Header Keywords

Note that, in case we decide to make individual files or individual extensions per observations, the columns **CCD_ROW**, **CCD**, **OBMT_BEG** and **OBMT_END** could be moved to the headers of individual extensions. As different SM CCDs have different gains, I think this would be a good idea.

NOTE: According to `heasarc.nasa.gov/docs/software/fitsio/user_f/node36.html`, file sizes are limited to 2.1 GB and the maximum number of extensions per fits file is 512

The keywords of the header are:

OBSTYPE Type of observation (SM-SIF, BAM-SIF, BAM-OBS)
PIX_AC Pixel length in AC (m/μm)
PIX_AL Pixel length in AL (m/μm)
BIN_AC Pixel binning in AC
BIN_AL Pixel binning in AL