

BACKGROUND MAPS

ALGORITHM

Compute background maps from Energy **E4** of mono and bi-pixel events

IDL function from J.-L. Sauvageot, modified to remove smoothing process

DATA ANALYZED

All Routine Phase **cal_closed** files in any Imaging mode

ANALYSIS PERFORMED

For each mode and CCD:

- ◆ Time evolution of **average** values (mean, median and standard deviation)
- ◆ Median value and maximum variation of averages over **rows** and **columns**

All averages are computed excluding the pixels close to the CCD boundaries and the ones with local background = 0 (i.e. included in no 5x5 matrix for any event)

WORK IN PROGRESS

- ◆ Optimised fixed tables to be produced:
 - ✓ **Small Window** (MOS1&MOS2): +1
 - ✓ Peripheral CCDs MOS1: -1

- ◆ Fixed tables for **Timing** mode (starting with normal boresight)

CONCLUSIONS

- ◆ The **results** (“offset_stab_*.ps” for the time evolution and “offset_lines_*.ps” for the spatial variation) are available on **xvsas01** in the directory:

/data/xmm/epic_pi/TREND_ANALYSIS/mos_bkg

- ◆ Offset **variations** with time:
 - ✓ Related to **temperature** variations
 - ✓ **Less than 1 ADC** \Rightarrow **no** possible correction modifying offset tables
- ◆ Spatial **variations**:
 - ✓ CCD **boundaries** very noisy (but few x-ray events)
 - ✓ **Features** in Window modes and isolated columns: **stable** and **small** (less than 2 ADCs) \Rightarrow OK!