

Impact of recent solar activity on MOS

- ◆ CTE: degradation but NOT clear “jump” as in previous “flares”
- ◆ Offset level: increase of background maps mean value ($< \sim 1$ ADU) and variance

MOS CTI degradation due to recent solar activity

- ◆ A **degradation** exists but it is difficult to evaluate



More “clean” **calclosed** measurements needed
(New eclipse season in September: ~10ks exposure every 5 revolutions?)

- ◆ **When** did the damage occur?

➤ **1 jump** (rev 245-246) for MOS1 and **2 jumps** (rev 245-246 and 254) for MOS2? Why?

➤ Or **gradual** degradation modified by high count rate?



Correction of the effect of **trap saturation** needed



CTI vs count rate relation (discussion tomorrow)

Why did the MOS offset level increased during the flare?

REAL INCREASE

- ◆ Charged particles hit **electronic** components \Rightarrow noise \Rightarrow higher offset

EFFECT OF BKG MAPS ALGORITHM

- ◆ **Signal below threshold** around MIP tracks can be seen as “E4” from neighbor events
- ◆ Higher **particle/x-ray** ratio
- ◆ ?

Note that the solar activity has had **NO permanent effects** on MOS offset level