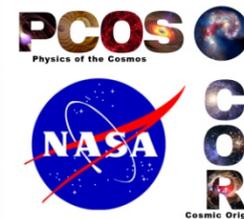


Fast Event Recognition for the ATHENA Wide Field Imager



PI: David Burrows / PSU



PENNSTATE

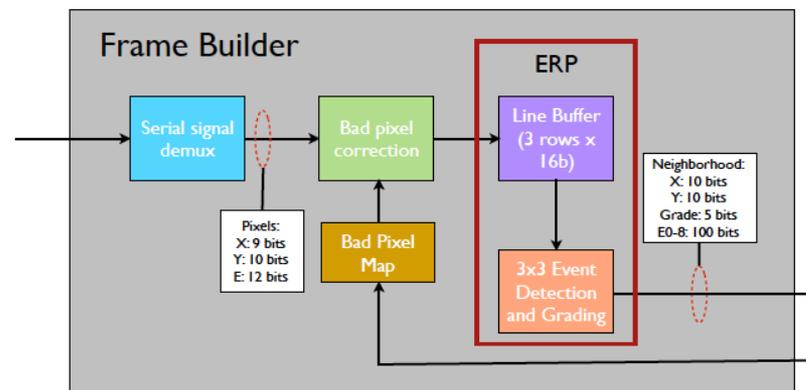


Objectives and Key Challenges:

- High-speed event recognition and data compression

Significance of Work:

- Required for future proposed X-ray imagers, including *Athena* WFI (ESA L2), *JANUS* XCAT (EX), *XTiDE* XCAT (SMEX), *Arcus* (ISS), *X-ray Surveyor* (Astrophysics Roadmap)



Approach:

- FPGA coding/simulation/testing
- Testing with fixed patterns up to 1GB/s
- Testing with real X-ray data up to 1GB/s

Key Collaborators:

- Dr. Karl Reichard, Eli Hughes (PSU/ARL)
- Dr. Zach Prieskorn, Dr. Tyler Anderson (PSU/ECOS)
- Dr. Mark Bautz (MIT), Dr. Steve Murray (SAO)

Current Funded Period of Performance:

- 1/2015 – 12/2016

Recent Accomplishments:

- ✓ Initiated internal funding codes, ordered development kit

Next Milestones:

- Design Review, July 2015

Applications:

- Including *Athena* WFI (ESA L2), *JANUS* XCAT (EX), *XTiDE* XCAT (SMEX), *Arcus* (ISS), *X-ray Surveyor* (Astrophysics Roadmap)...

$TRL_{In} = 3$ $TRL_{PI-Asserted} = 3$ $TRL_{Target} = 4$