

## V3 Candidate

- First version 3 candidate is ready for testing:
  - Includes multiple BS capability
  - Bypass mode controlled by the version field in raw data
  - Threshold not included.

# Multiple BS Capability

- Scrapped the original idea of reading from multiple files:
  - Could not get Filesystem library (or the experimental version) to work properly.
  - Other solutions system dependent.
- Simpler to modify the pedestal file format.
- Pedestal data format, single file: ScrodID01-Pedestals01-...ScrodID32-Pedestal32
- This file should be remade (need a python? script) each time a BS is reprogrammed. For use at UH or any other test, all values for nonexistent BS can be set to a negative number.

# Threshold

- The (FE) threshold value used for cuts in PS feature extraction is NOT the same as the analogue threshold calculated individually for channels during BS configuration.
- It is a single value for each boardstack (PLControls.minCfdPk) which is controlled by register “AXI\_CFD\_MIN\_ADDR = AXI\_SCROD\_PS\_BASE\_ADDR + (0x21 << 2)”
- Set to 200 in firmware. Likely set to some other number? during configuration. Need more investigation.
- Unclear how exactly this value was derived. Kurtis believes FE threshold can be derived per channel using laser to remove maximum noise while keeping maximum signal. Need more investigation and maybe input from other experts.