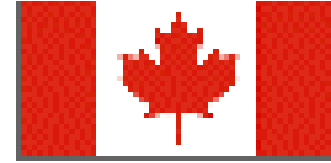


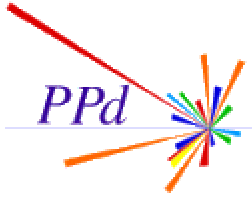


ATLAS Level-1 Calorimeter Trigger



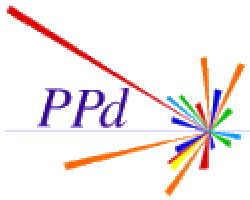
CP ROD Test Status

A few more bits in the bucket



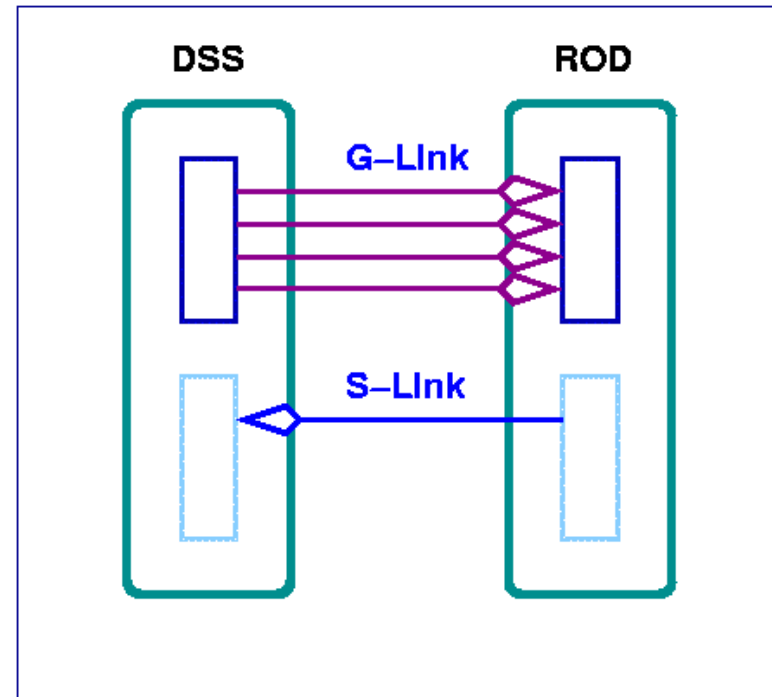
Overview

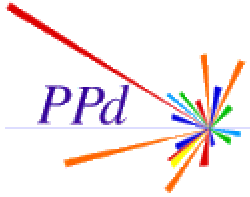
- Standard Test Setup
- Current Fault List (3)
- New Test Setups (2)
- Keeping Track of the Fixes
- Status List
- Documents to View



Standard Test Setup

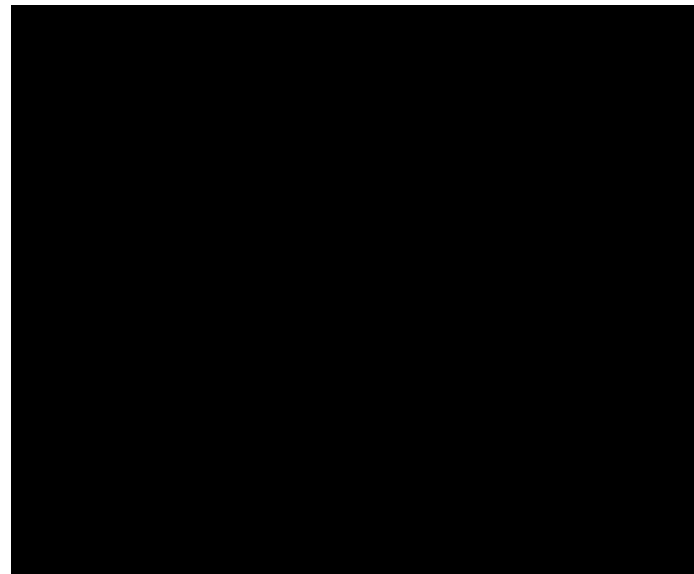
- Single DSS, ROD loop
 - L1As in bursts distributed through TTC system
 - Appropriate for testing ROD (slice or RoI mode) in absence of external interfaces (RoIBuilder)
 - Fast Flow (normally no LFF applied)

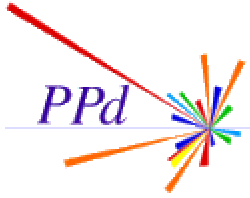




Current Fault List (DSS)

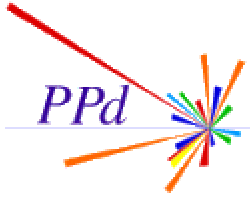
- DSS-1
 - S-link destination counter 1 too small (occasional).
 - reconfirmed 9.10.01
- DSS-2
 - DAV glitch (occasional)
- DSS-3
 - Cannot generate 4,5 slices of data.





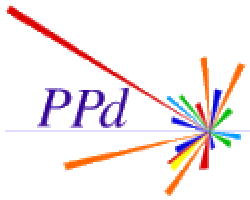
Current Fault List (ROD-1)

- CPSlice-1:
 - Link down behaviour
- CPSlice-2:
 - Substatus words
- CPRoI-3:
 - G-Link FIFO doesn't empty
- CPRoI-4:
 - Channel Module ID Bits
- CP-RoI-5:
 - BOF00001 appears in first fragment.
 - Attributed to s/w: 9.10.01
- CPSlice-6:
 - S-link LFF enable mask and S/W XOFF have no effect in slice mode.



Current Fault List (ROD-2)

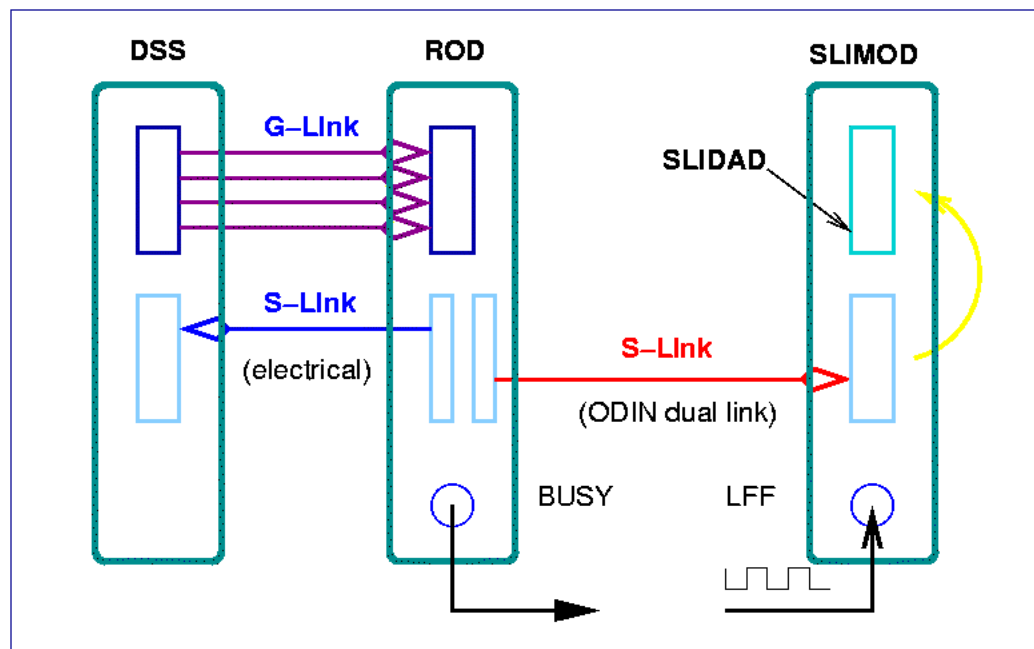
- CPSlice-7:
 - Slice readout modes with more than one slice fail. 2 or 3 slices have extra data words with illegal serialiser Ids.
- CPSlice-8
 - Sub-status words in multi-slice Operation do not carry the correct slice index
- CPRoI-9:
 - Spy buffer registers operation. Pulse register bit to clear selected spy buffer inactive.

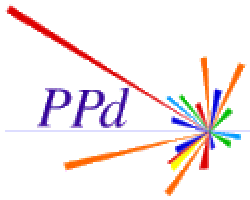


New Test Setups (1)

- Test for FIFO empty failure
 - due to flow control at high speed: LFF toggled at 0.5 MHz

- 2kHz event rate
- 2.4 million events (preliminary)
- no failures

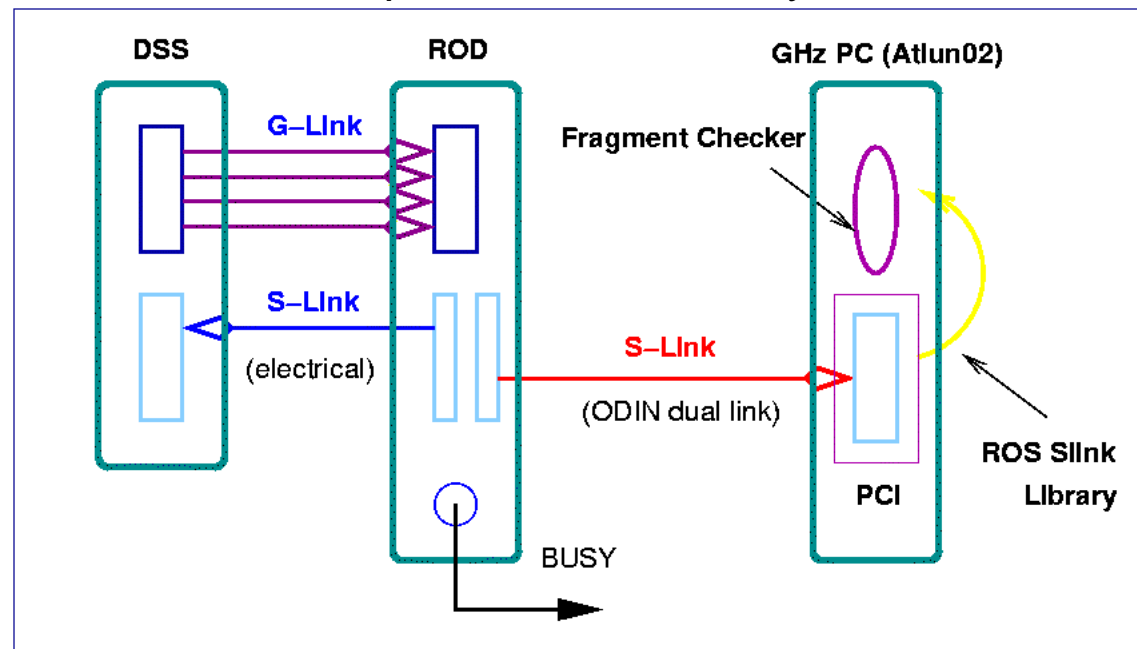


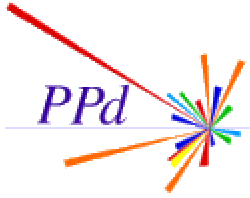


New Test Setups (2)

- Test for FIFO empty failure
 - due to flow control at lower speed: LFF driven by ODIN

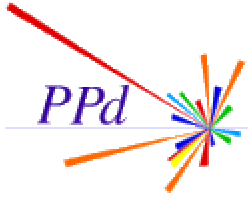
- 6 khz event rate
- some million events (very preliminary)
- no FIFO failures
- bit errors?





Keeping Track of the Fixes

- Viraj:
 - I have revisited the QA procedures on how to record the problems and their fixes encountered during module commissioning and testing.
 - There are two form we can use:
 1. Route Card, this will be for recording module specific problems and fixes during initial inspection, testing and operational phase.
 2. Problem Report, (see attached example) to record common design problems and solutions. I believe this will be the appropriate form to use for firmware problems.



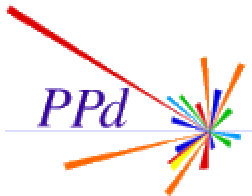
Status List

Fault Reported	Needs Confirmation	Awaiting Action	Fix Proposed	Fix Provided	Fix Under study	Fix Effective
DSS-1	x					
DSS-2		1				
DSS-3		1				



Fault Reported	Needs Confirmation	Awaiting Action	Fix Proposed	Fix Provided	Fix Under study	Fix Effective
CPSlice-1	x					
CPSlice-2	x					
CPRoI-3				1	1	
CPRoI-4			1			
CPRoI-5	x					
CPSlice-6		1				
CPSlice-7		1				
CPSlice-8		1				
CPRoI-9		1				





Documents to View

- An earlier report has been made available at:
 - <http://hepunix.rl.ac.uk/~bbarnett/forYourEyesOnly/rodTests.pdf>
- This report can be found at:
 - <http://hepunix.rl.ac.uk/~bbarnett/forYourEyesOnly/rodTests2.pdf>
- (UN/PW: level1/friend)
- Specifications:
 - [ROD: http://hepwww.rl.ac.uk/Atlas-L1/Modules/ROD/rod-spec-1-1.pdf](http://hepwww.rl.ac.uk/Atlas-L1/Modules/ROD/rod-spec-1-1.pdf)
 - [DSS: http://hepwww.rl.ac.uk/Atlas-L1/Modules/DSS/dss-version2d.pdf](http://hepwww.rl.ac.uk/Atlas-L1/Modules/DSS/dss-version2d.pdf)