



Cabling Status

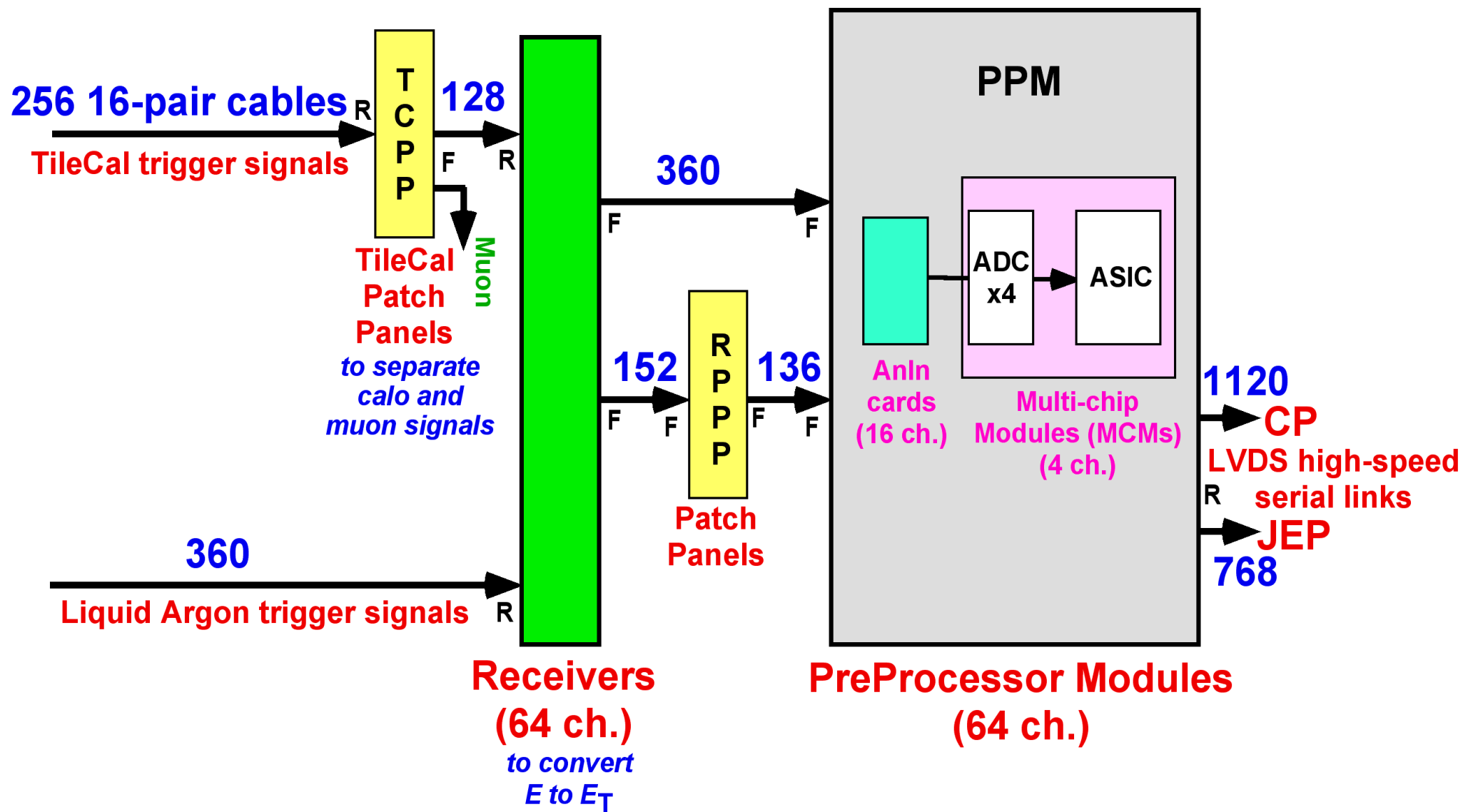
Murrough Landon
28 June 2007

Nearly the end of a long story...

- Overview
- Analogue cables
- LVDS cables
- Glink fibres
- Remaining work



Overview





Analogue Cables

- Almost all short analogue cables are now installed
- Remaining are 80 lower C side RPPP cables
 - About 2 or 3 days work, considered low priority
- About 40 connectors needed minor repairs
 - Open connector, broken glue
 - These should be retested using the Saclay tester in USA15
 - Need extension cables?
- Alain Le Coguie still has all the test results
 - He plans to write a tool to parse his files and enter the results in a database, both for LAr and our cables
 - Tricky as many test files are misnamed
- Connectivity tests still required for almost all cables!
 - Only 32 of 776 checked properly with calo pulses



Analogue Cables: First Full PPM Rack





LVDS Cables (1)

- All LVDS cable bundles installed, including spares
 - 1888 cables plus 100 spares in about 200 bundles
 - Many thanks to large number of helpers
- Both JEP crates and 2 of 4 CP crates connected
 - Lot of work tidying the cable bundles so the power supplies and back doors can be closed
- Three (of 8) PP crates connected (A side)
- Still to be done:
 - middle two CP crates, one A side & four C side PP crates
 - comprehensive testing (needs full PP and CP crates)



LVDS Cables (2)

- Small fraction of LVDS cables now tested
 - Four JEMs and two CPMs fed from eight PPMs
 - 68 out of 1888 LVDS cable assemblies
 - Only basic connection tests (no check for swaps)
- One error so far
 - four cables displaced upwards by one row of pins
 - top of CPM slot so easiest to correct

Serialiser W (h:0123 e:0123)	■ ■ ■ ■ ■	■ ■ ■ ■ ■
Serialiser H (h:0123 e:0123)	■ ■ ■ ■ ■	■ ■ ■ ■ ■
Serialiser G (h:0123 e:0123)	■ ■ ■ ■ ■	■ ■ ■ ■ ■
Serialiser F (h:0123 e:0123)	■ ■ ■ ■ ■	■ ■ ■ ■ ■
Serialiser E (h:0123 e:0123)	■ ■ ■ ■ ■	■ ■ ■ ■ ■
Serialiser D (h:0123 e:0123)	■ ■ ■ ■ ■	■ ■ ■ ■ ■
Serialiser C (h:0123 e:0123)	■ ■ ■ ■ ■	■ ■ ■ ■ ■
Serialiser B (h:0123 e:0123)	■ ■ ■ ■ ■	■ ■ ■ ■ ■
Serialiser A (h:0123 e:0123)	■ ■ ■ ■ ■	■ ■ ■ ■ ■
Serialiser V (h:0123 e:0123)	■ ■ ■ ■ ■	■ ■ ■ ■ ■
Cp Chips 0..7	■ ■ ■ ■ ■	■ ■ ■ ■ ■

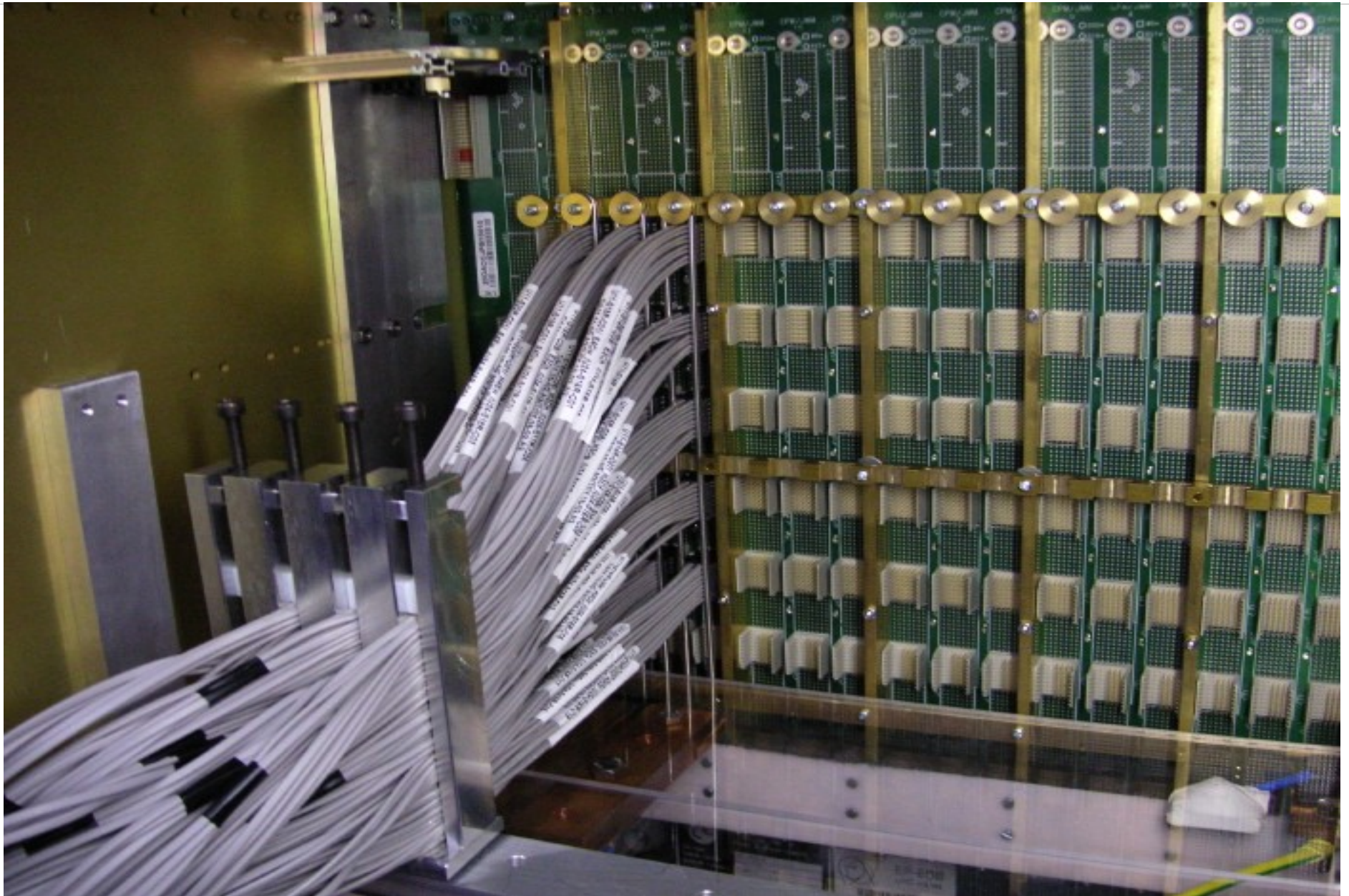


LVDS Cables: Before and After





LVDS Cables: First Few Connections





LVDS Cables: First Complete Crate





LVDS Cables: Beautifully Tidy!





Glink Fibres

- Need 124 fibres, under the floor, from PP crates
 - Separate lengths for C, A sides
 - Ordered, not yet delivered
- Need 200 fibres from CP and JEP crates
 - Across the front of the racks
 - Large number of separate precise lengths (to 10cm)
 - Ordered (a bit later), not yet delivered
- Requested protective wrapping from R. McLaren
- Aim to install late July or early August



Summary of Remaining Work

- Install last 80 RPPP cables: half a cabling week
- Connect last two CP crates: half a cabling week
- Test repaired analogue cables: half a week?
 - Connectors on TCPP cables not yet checked?
- Connect remaining five PP crates: two weeks?
 - Paul and Klaus according to their own schedule...
- Install underfloor glink fibres: one day?
- One further cabling week planned: 9 July
 - Might need one more week?
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- Also need to install muon terminators at TCPPs
 - Except for channels used for TileCal cosmic trigger



Caveat

- Few of the installed cables have been tested
 - Neither analogue nor LVDS cables
- Any bad LVDS cables will be hard to reconnect
 - Very fiddly and hard to access
- Ditto any miscablings in the analogue system
 - Cables cut to "correct" length
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- Any problems could mean a lot more work!