Daily Meeting Minutes

# 2019-06-03 (from TC meeting)

* Half-Layer 2
	+ Electronics rack completed
	+ Cabling prepared
		- Data cables between PP1-PP2 and PP2-PP3
		- PU and RU in place
		- Next step: place Detector in the Service Barrel
* Half-Layer 6
	+ Finalization of DCS communication with multiple RU/PUs simultaneously today (Matteo + Michael) [done]
	+ Interlock setup after the TC meeting (Paolo) [done]
	+ Testing of the full sub rack with the load tomorrow morning (Paolo + Hartmut) [ongoing] => [half-way through, FRED unstable, issues with board 16 and 23 => takes longer, tomorrow morning as well]
	+ Testing of the DCS and its safety mechanisms tomorrow afternoon (Paolo, Hartmut, Michael, Matteo, Jochen, Ivan) => tomorrow afternoon because dependencies, discussions ongoing
	+ Switching on staves on Wednesday morning (Jochen, Matteo, Michael, Ivan) => after the safety test
	+ Operation of up to 4 staves at a time (limited by amount of values that can be polled in 2s)
	+ Do we run over night on Wednesday? Need to decide at latest tomorrow during the daily meeting!
* ALF/CRU version hot fix => seems stable, need access to the repository
* Readout.exe issues =>
	+ one reported, not seen as bug as the packets are dropped and this is ok from their point of view => need to give feedback that this is not ok for us
	+ super pages order not ok with LZ4 => should have been addressed

# 2019-06-04

Attendees: Artem, Svetlana, Paolo, Hartmut, Gianluca, Johan, Arild, Matteo, Jochen, Michael, Zhaozhong, Markus, Ivan, Miko, Antoine, Franck, Corrado

Status

* Half-Layer 2
	+ One stave needs to be replaced, waiting for Ivan’s histograms
* Half-Layer 6
	+ See above under 2019-06-03
* QC
	+ Implementation with the pipes (incl. compressed data) is working
	+ Will clean up the histograms and give documentation [tomorrow, Markus, Zhaozhong]
* DCS
	+ Debug FRED stability issue [Ivan, Michael, Hartmut and Paolo]
	+ Watchdog behavior [Ivan, Michael, Jochen]
* Services [Antoine, Gianluca]
	+ Optical terminal plate for HL2 and trunks have to connected [Antoine]
	+ Patch cords have been ordered
	+ Testing the second rack of HL6 [Hartmut, Paolo]
* Assembly [Corrado]
	+ Environment sensor will be installed today and tomorrow
	+ Outer Barrel staves can be installed
	+ Second Half-Layer 4 for next week
* Readout electronics
	+ Jo tested last night the new CRU firmware
	+ Matteo will test the new CRU firmware on flpits1 starting from 17:00 [Matteo]
	+ Tests on flpits0 tomorrow during lunchtime [Matteo]
	+ Need to update the bit files of the PA3s (not urgent but should done before the layer will be powered on [Arild]

# 2019-06-05

Attendees: Artem, Miko, Paolo, Corrado, Matteo, Michael, Antoine, Franck, Johan, Markus, Jochen, Ivan, Gianluca, Hartmut, Marc, Svetlana, Sylvain

* Half-Layer 2
	+ We can add layer 1 on top of Layer 2 in the CYSS => need to change the stave now
	+ Need to find replacement stave (waiting for answer from Ivan Ravasenga)
	+ Testing the cooling for layer 2
	+ All data and power cables are in place, need to be connected
	+ Power Boards and Readout Units are in place, need to be connected to the cooling [Antoine]
	+ Missing: fibers
	+ Optical patch cords expected tomorrow or Friday (enough for temporary testing)
	+ Dip switches and Jumpers on RUs were corrected
* Half-Layer 6
	+ One power cable to be replaced => do additional test and in case replace the cable [Jochen]
	+ PA3 on all boards updated, jumpers set correctly
	+ CRU updated 3.1
	+ Other activities delayed by ALF FRED => shift all by one day
* QC
	+ One layout with basic information for shifters, still working on user-friendliness [Zhaozhong]
	+ Need to verify the decoding [Zhaozhong, Miko]
* DCS
	+ Fixed issue with the configuration
	+ Installed latest version and it is running as a service now
	+ Stress test pending (crate testing + simultaneous powering of RUs)
	+ Occasionally RU FIFOs go out of sync (when reading while there is now data in the FIFO); data in FIFO will get a tag, which is implemented by Jo; does not affect the temperatures but voltages and currents
	+ Hardware interlock is set to 10s in the watchdog
	+ Still an issue in the Power Unit initialization
* Services
	+ Optical equipment should be in place by the end of this week [Gianluca]
	+ Ordered extra optical equipment for rack 3 and 4 [Gianluca]
	+ Protection for fibers [Gianluca]
	+ Trigger equipment still being procured [Piero]
	+ Wiring of interlock started, material ordered [Johan]
	+ Environmental sensors PP2 to EMLB, discussion tomorrow at 10:00 in 23/R-20 [Johan]
* Assembly
	+ Environmental sensors in HL6 will be glued this afternoon
	+ Second Half-Layer 4 on track for next week (including cover)
* Readout electronics
	+ All ok for HL2 and HL6 in terms of RUs
	+ New CRUs expected next week at CERN, need to be tested after arrival
	+ Gianluca will ask Alex about the CRUs
* Cooling
	+ Two interlocks caused today
		- Misunderstanding in one case
		- All channels are in the interlock, even if not used for the detector
		- All interventions need to be scheduled from now on in this meeting
		- Log book entries are missing
		- Cooling intervention at 9:00
* Phone not working in case of network problems 🡪 Go to general announcement
* Need to find a way for expert communication [Felix]
* USE THE LOGBOOK

# 2019-06-06

 Attendees: Antonello, Ivan, Hartmut, Markus, Gianluca, Johan, Paolo, Michael, Matteo, Miko, Svetlana, Zhaozhong, Artem

* Half-Layer 0:
	+ Intervention on cooling loop interlock intervention tomorrow at 9:00 about 30min [Paolo, Felix] => DONE
	+ Intervention on CRU at the same time [Ivan, Miko, Matteo] => DONE
	+ Intervention to change back to 1.2 Gbps [Matteo, Miko] => DONE
	+ Intervention after lunch (13:30) to go to global clock on RU [Matteo]
		- Bit file uploaded
		- Not tested yet, can load on demand and test
		- Not tested as priority to debugging of the Temperature module in the RU
* Half-Layer 2:
	+ 4 staves need potentially replaced (hot spots in the threshold map), took radioactive source data, analyzing now
	=> Miko’s recommendation is not to replace them
		- Higher threshold confirmed
		- Small number of pixels (less 1024 affected)
		- Taking additional data which can be clusterised
		- Will take decision on Tuesday
	+ Need to take a general discussion on the usage of such staves
		- If we don’t replace tomorrow
		- If we replace Tuesday
* Half-Layer 6:
	+ Because of the DCS still in the same status
* QC:
	+ Userfriendliness improved [Zhaozhong]
	+ Shifter instructions improved [Markus]
	+ Found problems in the comparison of the decoders [Miko, Zhaozhong], asked Ruben to patch it => Implemented this feature and comparison is successful
	+ Old layouts were removed from the web interfaces [Zhaozhong]
* DCS:
	+ Found a bug, but needs to be analyzed
		- Configuration file parsing error
	+ Ramp-time of the CAEN system is not setable from ICEcontrols [Hartmut] => no news
	+ Power-down sequences to be implemented (correct display of the status) [Michael] => post-poneds
	+ Interlock intervention with super capacitors, what are the effects [NEED TO ASSIGN MANPOWER] => Gianluca and Paolo assigned
* Services:
	+ Set back-bias maximum currents
		- Define the current [Gianluca, Felix] => NOT DONE
		- Setting the power supplies [Hartmut, Paolo]
	+ Trunk cable installation done yesterday [Matteo, Gianluca]
	+ Powering is not safety compliant [Gianluca]
	+ Power Board for L2 need to be set to IB mode [Gianluca] => DONE
	+ Safety of computer installation in the rack [Gianluca]
	+ Order for interlock components send [Johan]
	+ Work on environmental sensors started [Johan] => will send out the orders
* Assembly:
	+ Environment sensors being glued today to HL6
* Readout electronics:
	+ No news on the CRUs, still have to contact Alex
	+ Still running on the local clock on the RUs
* Cooling:
	+ Changing the IB rack interlock removing everything but IB00, IB01, IB10, IB11, IB20 and IB21 from the input

# 2019-06-07

Attendees: Markus, Ivan, Hartmut, Michael, Matteo, Svetlana, Artem, Zhaozhong, Paolow, Miko, Corrado, Gianluca, Antoine

* Half-Layer 0:
	+ Test with global clock on the RUs
* Half-Layer 2:
	+ Take decision on hotspots
* Half-Layer 6:
	+ Managed to reproduce the issue leading to loss of control with the Power Board which could only be resolved by a power cycle the Power Board; cause not understood; could be interleaving of the WB transactions with T checking => certain I2C instructions bring the PB into a stall state
	+ Difficult to reproduce in Python
	+ Matteo found firmware issues in the temperature module, Jo preparing the fixes; they’re not causing the issue
	+ No crashes in ALFRED since yesterday evening
	+ Coordinating with Harmut and Paolo to run the HL6 at the same time
* DCS:
	+ Fix the temperature module issue with the RU interplay
* QC:
	+ Added another state for the status of reading the files
	+ Need to adapt shift instructions
	+ Need to start to use it
* Services:
	+ Set back-bias maximum currents
		- Define the current [Gianluca, Felix] => NOT DONE
		- Setting the power supplies [Hartmut, Paolo]
	+ Powering is not safety compliant [Gianluca] => NOT DONE
	+ Power Board for L2 need to be set to IB mode [Gianluca] => DONE
	+ Safety of computer installation in the rack [Gianluca] => NOT DONE
	+ Work on environmental sensors started [Johan] => will send out the orders
* Assembly:
	+ Installation planned for Tuesday, Thursday and Friday afternoon [Corrado]
	+ Need to one half-layer to the dry assembly area to have more space for installation [Corrado]
	+ Ask for second cleaning in the clean room [Corrado]
	+ Service Barrel of L6 bottom should be ready
	+ Add print outs of the naming scheme next to the racks [Gianluca]
* Readout electronics:
	+ No news on the CRUs, still have to contact Alex [Gianluca]
	+ Still running on the local clock on the RUs
* Cooling: