­­List of the necessary work and status for ECal

Albert Shahinyan 12/05/2022

1. Platform for ECal – Jessie

* Layout in Test Lab – Mark Jones has it
* Move to Test Lab and modify for ECal
* Move to Test Lab cable hanger

1. ECal frame

* Design Frame – Derek
* Develop procedure of transportation – Albert
* Frame parts need to be modify to allow the top SM layer to be pressed from the top
* Install calorimeter part of the frame on the ECal platform
* Stacked SMs, filler lead glass blocks and Al bars (for perimeter heating) in the frame
* Install heating tape on the Al bars and SM heaters

1. Installation PMTs

* List of consideration – centering of the light guide on the SM
* Production of the cookies - Samvel
* Ordered long screw 4-40 for attachment of the PMTs - Albert
* Inventory Getinax/G10 parts which go on back of the PMT (need 1700) - Galust

1. Front-end electronics

* Layout of the Front-End modules in the Relay Racks - Donald
* Crates (NIM, VME and CAMAC) in the Relay Racks on ECal platform - Galust
* Inventory all interior cables and label according to circuit diagram – Donald & Albert
* Install all fans at right position under the crates and power supplies - Galust
* Patch panels (34-BNC) in the Relay Racks on ECal platform - Donald & Galust
* Connect all interior cables according to circuit diagram – Donald & Albert
* Checking of the system – Karen?

1. DAQ electronics

* TS and Fastbus 1881m - Bob
* Layout of the DAQ Relay Racks – Donald & Albert
* Fast Bus modules, VME, CAMAC, NIM crates in the Relay Racks on DAQ platform
* Flat cable patch panels (BNC-34) in the Relay Racks on DAQ platform - Galust
* Make a flat cable chain to connect from PP to Fast Bus ADC – Samvel
* Restore HV crates and HV-boxs, short SHV cables the weldment – Samvel&Galust
* Checking of the HV system and DAQ cable (front-end – to ADC) – Karen

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1. Coda and online diagnostic software – Bob

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1. HV system

* Layout of the HV side of DAQ weldment - Albert
* 36 boxes each of them has two multi-pin (27) connectors and 48 SHV connectors – Albert
* Test HV long cables – need 61 available 48
* There are on hands 31 boxes of the this type and 5 additional need to be modified after– Samvel
* A HV box with 2 multi-pin connectors and 48 plastic connectors has 14 pcs, 22 pcs need to be made – Donald and Samvel
* There are 48 pcs of 24-channel cables, need 72 pcs, need to make 24 cables with 27-pin connector. We have a 27-core cable at hand, we need to cut 75 m and solder a 27-pin connector on both ends – Donald and Samvel
* Short cables HV 2/c for soldering to the HV base. Available in 1200 pieces with plastic connectors – Galust and JMU
* 6 m 2 /c HV cables with plastic connectors 1692 are needed, 736 pcs are on hand 960 pcs are to be made – Galust

1. SM heater and remotely power control

* Heat SM to use new type heater and remote control – Marc
* 6 SM thermal test to use new type heater – Donald
* Installation of the heaters on SM

1. Signal Cables

* Layout of the signal cables between Front-End and DAQ - Donald
* 490ns RG58 BNC-BNC cables need 1692 have about 1000 need to make 681 (number from Donald) – Samvel and Galust
* RG58 cables are on hand and located in the ESB
* BNC connectors for RG 58 there are 1400 pieces located in the TestLab in the cabinet
* 8 m RG174 cable Lemo-Lemo from PMT to summing module, need 1692 (have on hand 740 from RCS and 1020 from Protvino one end Lemo need to be crimp female Lemo other end – Donald and Albert
* 34-pin twisted-pair cable from summing module to the patch panel needs to be made 120 each 5 feet – Donald and Albert
* Checking of the system – Karen?

We need manpower, please welcome!