

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
2. 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
3. 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**
4. 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?**
5. 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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6. Coda and online diagnostic software – **Bob**
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7. HV system
 - Layout of the HV side of DAQ weldment - **Albert**
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- 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**
8. 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
9. 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!