

Minutes and Actions of Site Qualification Task Force

Phone Conference – 25th of November 2004

Present: G. Darbo, P. Gerlach, D. Giugni, F. Huegging, (V. Kostioukhine), E. Vigeolas.
Excused: M. Garcia-Sciveres, L. Rossi.

CPPM: News from S4031 and Test of Module Replacement.

Test of module replacement was made on the 4-module FE-I3 stave loaded in Wuppertal (S4020). One module in the middle of other two has been detached. A dummy module has been deposited at its place. Functionality of the remained modules have been checked and no degradation found. The test was planned with the use of a bad quality module, but CPPM did not received any yet. *The Module Assembly TF is requested to select one and to ship to CPPM.* Once the replacement test will be concluded the 3 malfunctioning modules on stave S4031 will be replaced.

CPPM is still investigating on the reason of the damage occurred on the 3 modules of stave S4031. Tests are ongoing on power supply. No more tests on stave will be made until more conclusions. It is considered the possibility to load a new stave in CPPM and then test it in Genova. *CPPM requests 13 FE-I3 production modules to be selected and sent to Marseilles.*

Wuppertal

New survey of the 4-module Wuppertal loaded stave has been done in CPPM. The previous survey made in CPPM was made using a transport cradle. The new measurements reduced the difference between CPPM and Wuppertal of the position in X to ~20 μm from the 90 μm before.

A new loading test with 7 dummy modules made in Wuppertal to further check the module deposition procedure. It is foreseen to start next week the loading of the first production stave.

After discussion also Wuppertal decided to drop the electrical test after each module loading, being not negligible the risk of module damage (no proper cooling and mechanical support for pigtail). Electrical testing of each module deposited reduces also the module loading rate, being advisable to wait ~24 hours before touching a glued module (wait for complete polymerization).

Genova.

Giovanni presented few transparencies summarizing the news from the site:

http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes_04-11-25_aux/04-11-25_GD_SiteQA.ppt.

A new chiller has given on evaluation and for replacement of the broken one. The new chiller, Lauda mod. RP855, is more powerful. It is able to reach -55°C , with respect to

the -45C of the one on repair (mod RP845). Burn-in of stave S4028 between -30 and 30 °C have been completed. In fig:

http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes_04-11-25_aux/ThermalCycles.jpg are shown the temperatures measured on 6 modules for 5 thermal cycles. Each thermal cycle requires 2 hours. Bubbling in the chiller tank has been noticed and some C8F18 loss observed. There is the suspect that the suction pump creates cavitations in the fluid and thus a lost of it.

LOAD test on stave S4028 is completed and summary table updated, STAVE test is ongoing.

A new stave is currently under loading (11 modules loaded) and will be finished by tomorrow.

Upgrade of the loading robot to improve precision of module positioning is underway: a linear encoder (Heidenhain) of 92 cm and 1 µm precision has been ordered and will be added to measure Z. It is also under evaluation the acquisition of a digital microscope together with measuring software to check the position of a module when put in the garage position.

LBL

Gil was absent (Thanksgiving holiday) but sent a few pages of update:

http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes_04-11-25_aux/TaskForceNov252004.ppt.

Five production sectors are completely loaded (S9006/7/8/9/10). One is completely tested. At least a full disk equivalent (8 sectors) is expected to be completed by Christmas.

The qualification of a second assembly station is nearly complete. Survey comparison with the other station is done and agreement is within few microns. They expect to start using the second station next week for sector S9011.

The assembly rate is slowly ramping up. It is limited by manpower and will be soon limited by module delivery rate. Manpower can be added if module rate improves.

Testing is fully operational but keep making small improvements. They will shortly start planning to replicate the test system to allow faster rate

Bare staves.

Bare staves in Genova are under mechanical qualification that will be completed by the end of the week. About 35 staves will be ready to be shipped to Marseille next week for final parylene deposition. Eric asked that only good staves be sent to Marseille. Vadim replied that he would not have results of qualification before 2÷3 weeks. All the staves will be shipped (and maybe parylined) and only after be selected the ones to be used for production.

Danilo claimed that the data on bare stave is not up-to-date on PDB. Vadim replied that he will do it, but he has several other priorities taking off his time.

Next phone conference: Thursday 2nd of December 2004 at 17:30.