

# Minutes and Actions of Site Qualification Task Force

Phone Conference – 24<sup>th</sup> of March 2005

*Present:* (A. Andreazza), (J.-C. Clemens), G. Darbo, K. Einsweiler, M. Garcia-Sciveres, D. Giugni, V. Kostyukhin, (M. Zdrzil).

*Excused:* P. Gerlach, F. Huegging, E. Vigeolas,

## ***Status of Module Loading.***

To monitor the status of loading in the 4 sites a little questionnaire has been circulated a few days before the phone conference. The questions were:

1. List of loaded stave/sectors:
2. List of Staves/Sectors that have survey made.
3. List of passed LOAD/thermal cycles/STAVE tests.
4. List of Stave/Sectors with spreadsheets and survey raw data in the Raw PDB and in the PDB.
5. Status of the "mini milestone":
6. What is missing for the full chain of load/test setups?
7. Number of modules available for loading.

The received answers:

- Jean Claude (CPPM): [http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes\\_05-03-24\\_aux/CPPM\\_ProdStatus\\_050324.rtf](http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes_05-03-24_aux/CPPM_ProdStatus_050324.rtf)
- Giovanni (Genova): [http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes\\_05-03-24\\_aux/Genova\\_ProdStatus\\_050324.rtf](http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes_05-03-24_aux/Genova_ProdStatus_050324.rtf)
- Peter (Wuppertal): [http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes\\_05-03-24\\_aux/Wtal\\_ProdStatus\\_050324.rtf](http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes_05-03-24_aux/Wtal_ProdStatus_050324.rtf) and from Fabian (Bonn): [http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes\\_05-03-24\\_aux/Bonn\\_Status\\_050324.rtf](http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes_05-03-24_aux/Bonn_Status_050324.rtf)
- Marian (LBL): [http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes\\_05-03-24\\_aux/LBL\\_ProdStatus\\_050324.rtf](http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes_05-03-24_aux/LBL_ProdStatus_050324.rtf)

are summarized here in the table below.

**Status of the production in the 4 loading Sites.**

	CPPM	Genova	Wuppertal	LBL
Loaded	5 + 1 <sup>(1)</sup>	8	3	18
Surveyed	5 <sup>(2)</sup>	7	3 <sup>(5)</sup>	18
El./Therm. Qual	5	6	2 <sup>(6)</sup>	18
Raw PDB / PDB	4 / 0	3 / 0	0	18 / ?
Mini milestones	1 <sup>(3)</sup>	2 <sup>(4)</sup>	1 <sup>(7)</sup>	3

**Table Notes**

1. Last stave is the system test stave.
2. Only 2D measurements made, 3D survey is planned for next week.
3. Started loading the 24/3/2005.
4. Two loaded, one surveyed.
5. Data not available on the Raw PDB and not crosschecked by Vadim's program yet.
6. No complete test made yet. LOAD test on both two, one stave had thermal cycles made in an environmental chamber (Bonn), while the other is waiting the setup ready in Wuppertal. No STAVE test made yet.
7. Four modules loaded.

Some damages have happened on one stave and one sector modules. On stave 4018 (see: [http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes\\_05-03-24\\_aux/Bonn\\_Status\\_050324.rtf](http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes_05-03-24_aux/Bonn_Status_050324.rtf)) a FE chip is not responding. This stave is in Bonn for repair. An accident has happened to module 5 (510768) of sector 9013. This module has been hit by a mishandling of the cooling system tubing while it was loaded on a dummy ring to exercise the disk assembly. A detailed [http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes\\_05-03-24\\_aux/AccidentWithSector\\_9013.rtf](http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes_05-03-24_aux/AccidentWithSector_9013.rtf) and in the referenced file:

[http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes\\_05-03-24\\_aux/Disk\\_testing.ppt](http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes_05-03-24_aux/Disk_testing.ppt).

**Staves ready for half-shell loading.**

Giovanni presented the list of requirements a loaded stave must pass to be considered ready for being used in the half-shell loading. They are:

1. Presence of the following data in the Raw PDB
  - Files of the LOAD test;
  - Files of the STAVE test;
  - 3D survey raw data;
  - Survey result table (output of Vadim's program, see last task force minutes);
  - Spread sheet complete (preferably version 2);
2. and in the PDB.
  - Results from Joern's Multi Module Analysis program for STAVE (/LOAD) test including the additional variables:
    - + SPARE\_R1 -> COND\_WARM = thermal conductivity [W/C] at room temperature
    - + SPARE\_R2 -> COND\_COLD = thermal conductivity [W/C] at -10 C

- + SPARE\_FL1-> SURVEY\_OK = YES/NO according to whether the module survey  
(the variable names should be changed to something more meaningful → Polina)
- 3. Set of passed flag for the stave assembly (this means that the site responsible checked the above 1. and 2.)
- 4. Ranking for b-layer available (Attilio is preparing the java application, but he needs data for at least a stave to test it!)

As today none of the staves loaded passes the requirements. Giovanni reminded that according to the schedule, prepared by Danilo, for half-shell loading the first bi-stave must be put in starting the 4<sup>th</sup> of April. If this cannot happen, a delay of at least 2 weeks will be accumulated, being next possible date the 18<sup>th</sup> of April. The final decision will be taken in the integration phone conference of Thursday 31/3/2005.

### ***Stave Survey and Vadim's Survey Analysis Program***

Vadim shortly reported on the status of his survey analysis program and on its usage by the 3 sites. Last version of the Python program is:

[http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes\\_05-03-24\\_aux/SurveyRes.py](http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes_05-03-24_aux/SurveyRes.py), whit an example of the of the input raw survey data file format:

[http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes\\_05-03-24\\_aux/RawStave.txt](http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes_05-03-24_aux/RawStave.txt).

Vadim reported that all the staves surveyed in Genova, but the first one (pre-production) where the 3D measurements were not available, have been analyzed by the program and result tables are in the SUMMARY directories of Raw PDB. CPPM has contacted him for the usage of the program and he already provided an interface from their excel file with raw survey results and the input of the Python program. CPPM plans to test it next days. Wuppertal has not contact Vadim yet.

### ***Status of the b-layer ranking***

Attilio is planning to have available a test version of the java application to obtain the stave ranking. He needs data from, at least, one stave in the PDB to test it. Jean-Claude will add in the PDB a stave data tomorrow. Giovanni asked Attilio to prepare a table with the ranking variables will go into the ranking and their proposed weights and thresholds.

It was decided (in a specialized meeting for b-layer ranking held in the last December Pixel Week) to use for the b-layer ranking only a flag bit per module coming from the survey. This flag is set if the module is more than 50  $\mu\text{m}$  off from nominal in X, Z and has a bow > 100  $\mu\text{m}$ . The decision to use only this flag and not the full survey results was because it was premature to decide the survey variables to put in the PDB.

Today the survey analysis program extracts 9 parameters for each modules (Z, X, Y, 3-angles, two bow and one twist numbers). It seem reasonable to use such parameterization for the modules. This will be for discussion in one of the next task force meeting.

For the ranking of Disk 1 sectors, Marion presented the list that is available in:

[http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes\\_05-03-24\\_aux/SectorRanking.xls](http://www.ge.infn.it/ATLAS/SQTF/Minutes/Minutes_05-03-24_aux/SectorRanking.xls).

### ***Qualification of sites for production***

Giovanni announced that the document prepared from LBL for qualification to full sector production has obtained the ID: ATL-IP-QA-0025 and has been loaded on EDMS for comments and formal approval: <https://edms.cern.ch/comment/573207/1>. Giovanni also reminded that Genova has already completed the 5 initial production staves and they have to provide as soon as possible a similar document.

### ***New summary spreadsheet***

Giovanni announced that he updated the spreadsheet used to collect the qualification results for the staves. The new version (Vers.2.0) is available for use and for comments: <http://www.ge.infn.it/ATLAS/SQTF/Templates/StaffQualTemplate.v2.0.xls>.

The new version makes faster the introduction of the survey data and of the electrical/thermal measurements. It is formatted such that is possible to cut and paste the tables produced by the Vadim's and Joern's programs directly into the excel file. This reduces the risk of mistyping by manual input of each value.

*Next phone-conference: Thursday 7<sup>th</sup> of April at 17:30.*