Minutes of the

**Mini-Work Meeting “Towards Large Area Fast STS for the NICA/BM@N setup”**

**22-23 May 2017 VB LHEP JINR**

**Participants:**

GSI: Ulrich Frankenfeld, Johann Heuser

Tübingen: Evgeny Lavrik, Hans Rudolf Schmidt

Dubna: Yuri Murin, Sergey Tututnnikov, Dmitry Dementev, Aleksei Sheremetev, Vladimir Elsha, Oleg Chykalov, Nikolai Zamiatin, Anatasiia Shaforonovskaia, Mikhail Shitenkov, Sergey Bazylev (with members of othe NICA-DAQ team), Konstantin Hertsenberger (for Rogochevsky team), others

Moscow: Michael Merkin

The scope of this 1st meeting was to coordinate efforts for the assembly and integration of large area fast Silicon Tracking Systems (STS) both for the FAIR-CBM and, as a FAIR-Phase 0 activity, for the BM@N experiments. For the BM@N project it is planned to install by 2020 up to four STS stations close to the target.

Johann Heuser (GSI) presented to the strategy and the timelines for the STS project. It was proposed and supported by the participants to have a common tendering and purchasing of sensors via GSI/FAIR. A final technical description has yet to be established.

Anastsiia Shafranovskaya (JINR LHEP) reported on electrical sensor QA at LHEP. Later-on a visit to the JINR QA lab was scheduled. The JINR group is conceived to be ready to perform electrical sensor QA, given a few technical details are settled. It was agreed to exchanged expertise between the GSI, Tübingen and JINR QA groups. A short visit of Anastasiia at Tübingen/GSI is strongly recommended.

Evgeny Lavrik (Tübingen) reported on optical sensor QA at Tübingen. Moscow SU is intending to get into optical QA and proposed a visit of E. Lavrik at MSU to clarify technical details of the corresponding apparatus and software.

Evgeny Lavrik reported on the DataBase development (FAIR-DB) at GSI and the current status of its adaption by the GSI-Tübingen STS groups. It is considered by the JINR STS group to also adopt FAIR-DB as a standard. A “how-to and getting started” manual should be written.

Ulrich Frankenfeld (GSI) reported on the ladder assembly concept at GSI. Reports on the status of module and ladder assembly and concepts at LHEP were given by O. Chykalov, V. Elsha and A. Sheremetev (JINR). At both laboratories concepts are under development which are somewhat different. At the moment, no decision on the final concept should be taken as several technical aspects have to clarified yet. A decision on the final (common) ladder assembly technology should be taken by end 2017.

Dmitri Dementev reported on a successful beam test of sensors at the JIRN Nuclotron. Further test are scheduled for October-November 2017, and the participation of the German STS groups is proposed, which, however, is in conflict with a parallel beam test at CERN.

Further recommendations (from round table discussion):

* A common work package “module testing” should be defined which, besides of the development of the module readout chain (DAQ), includes also the development of the testing infrastructure (test box) and logistics (e.g. storage and shipping container).
* The nomination of a German-side STS-BM@N coordinator was proposed.
* Possibility for the appearance of conflict of interests in work load of the JINR Module Assembly lab between the BM@N and CBM STS projects in case of the delay of production of modules for the BM@N STS beyond the first half of 2018 is especially outlined.