



Contribution ID: 158

Type: **Sectional**

## Front-End Electronics for BM@N STS, characterization and quality assurance

*Tuesday 1 October 2019 17:15 (15 minutes)*

Data acquisition system (DAQ) for the Silicon Tracking System (STS) of BM@N (Dubna, Russia) experiment is described. The system will be based on double-sided microstrip silicon sensors of CBM type and will be commissioned in 2022.

DAQ system of BM@N STS will operate in a data-driven mode with a high throughput bandwidth (up to 300 Gb/s) in radiation hard environment and will transmit data from more than 600 000 channels.

Results of the characterisation of the Front-end electronics are presented. The key component of the Front-end board (FEB) is STS/MUCH-XYTER ASIC. Test results of the analog and digital part of the ASIC are presented. Also results of the in-beam tests of the front-end electronics are presented.

Assembly of the first STS modules was already started at Joint Institute for Nuclear Research (JINR). STS modules consist of double-sided microstrip sensor, set of aluminum signal micro-cables and FEBs. Quality assurance system for the bonding quality control during the assembly was developed.

**Primary authors:** Mr DEMENTYEV, Dmitry (JINR); Mr SHITENKOV, Mikhail (JINR)

**Co-author:** Dr MURIN, Yurii (JINR)

**Presenter:** Mr SHITENKOV, Mikhail (JINR)

**Session Classification:** Detector & Nuclear Electronics

**Track Classification:** Detector & Nuclear Electronics