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