

The development of Silicon beam tracker and beam profilometer at the BM@N experiment

Tuesday, 13 October 2020 15:30 (25 minutes)

The BM@N is a fixed target experiment for studies of baryonic matter at the Nuclotron (JINR, Dubna). According to upgrade plans for BM@N, vacuum beam pipe will be added into experimental setup. To determine the coordinates of incident "trigger ion" and to tune the beam, it is necessary to develop three coordinate stations of beam tracker and two coordinate stations of beam profilometer respectively. Each station of beam tracker or beam profilometer will be based on Double-sided Silicon Strip Detector (DSSD) with 175 μm thickness and following number of strips: 128x128 is for tracker and 32x32 –profilometer. Front-end electronics for these Silicon Detectors are based on the multichannel IDEAS (Integrated Detector Electronics AS, Norway) ASICs. Overview of developing system is presented.

Author: Ms IVANOVA, Yulia (Joint Institute for Nuclear Research)

Co-authors: Mr KHABAROV, Sergei (Joint Institute for Nuclear Research); Mr KOPYLOV, Yury (Joint Institute for Nuclear Research); Dr KOVALEV, Yury (Joint Institute for Nuclear Research); Ms STRELETSKAYA, Ekaterina (Joint Institute for Nuclear Research); Mr TARASOV, Oleg (Joint Institute for Nuclear Research); Mr TOPKO, Bogdan (Joint Institute for Nuclear Research); Dr ZAMYATIN, Nikolay (Joint Institute for Nuclear Research); Mr ZUBAREV, Evgeniy (Joint Institute for Nuclear Research)

Presenter: Ms IVANOVA, Yulia (Joint Institute for Nuclear Research)

Session Classification: Section 3. Modern nuclear physics methods and technologies

Track Classification: Section 3. Modern nuclear physics methods and technologies.