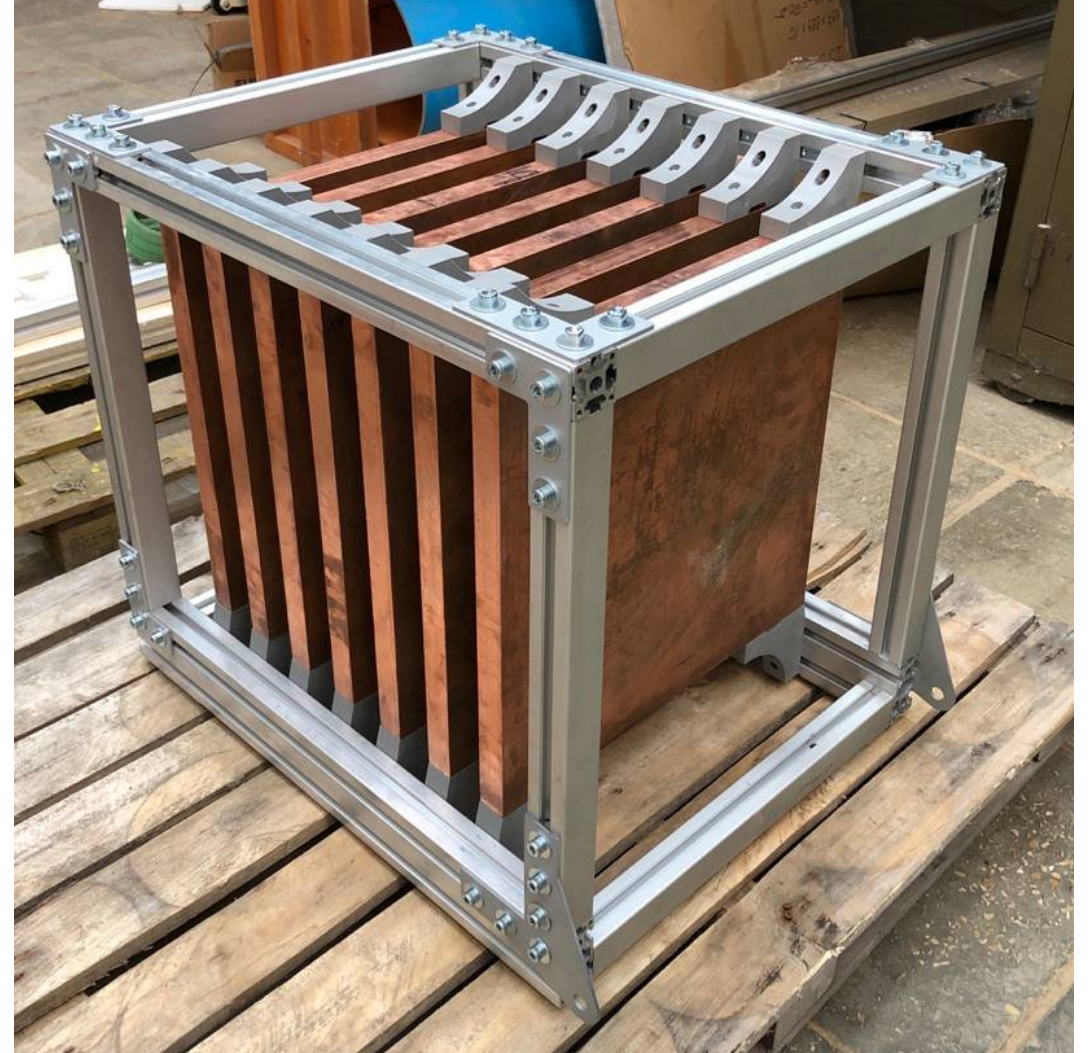
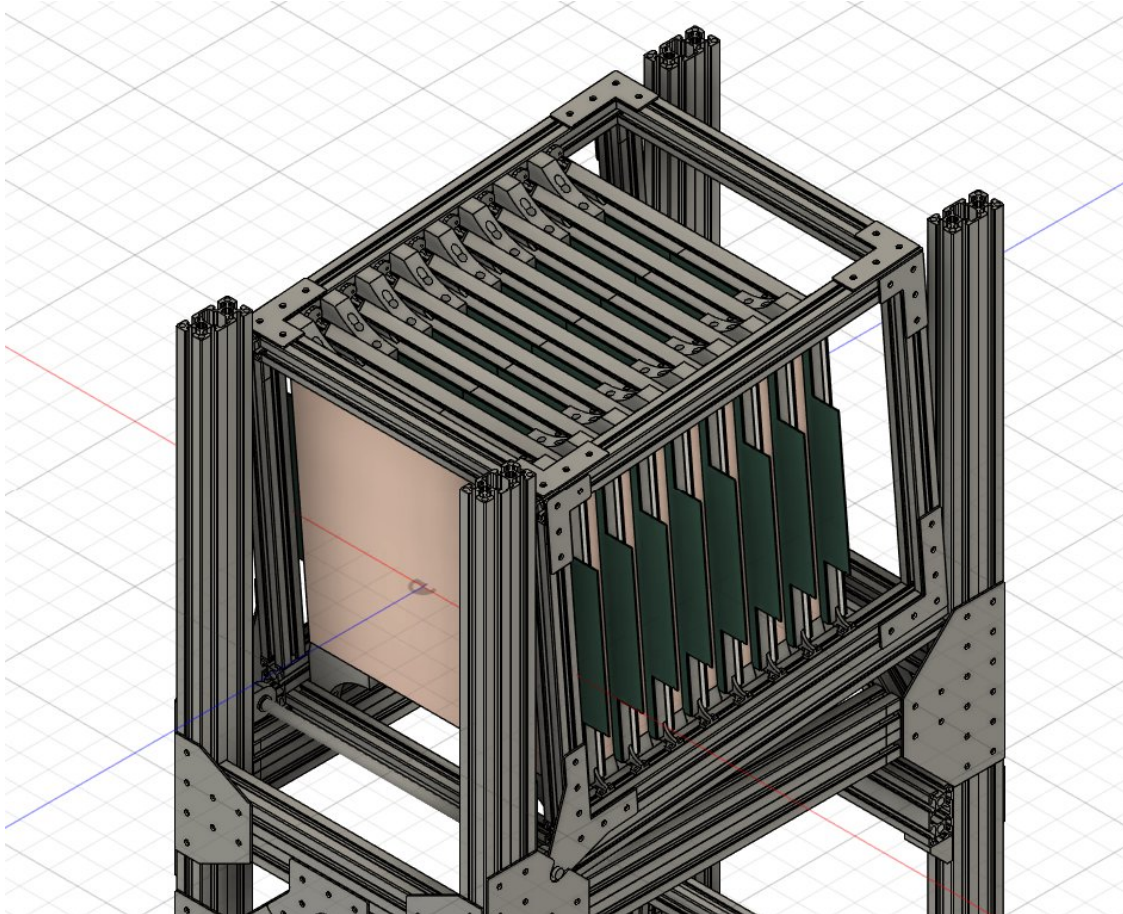


Status of the HGND mechanics assembly and tests of the full scale HGND scintillation layer

Makhnev A. on behalf of INR of RAS HGND group
Institute for Nuclear Research of RAS
14th Collaboration Meeting of the BM@N Experiment at NICA
05.2025

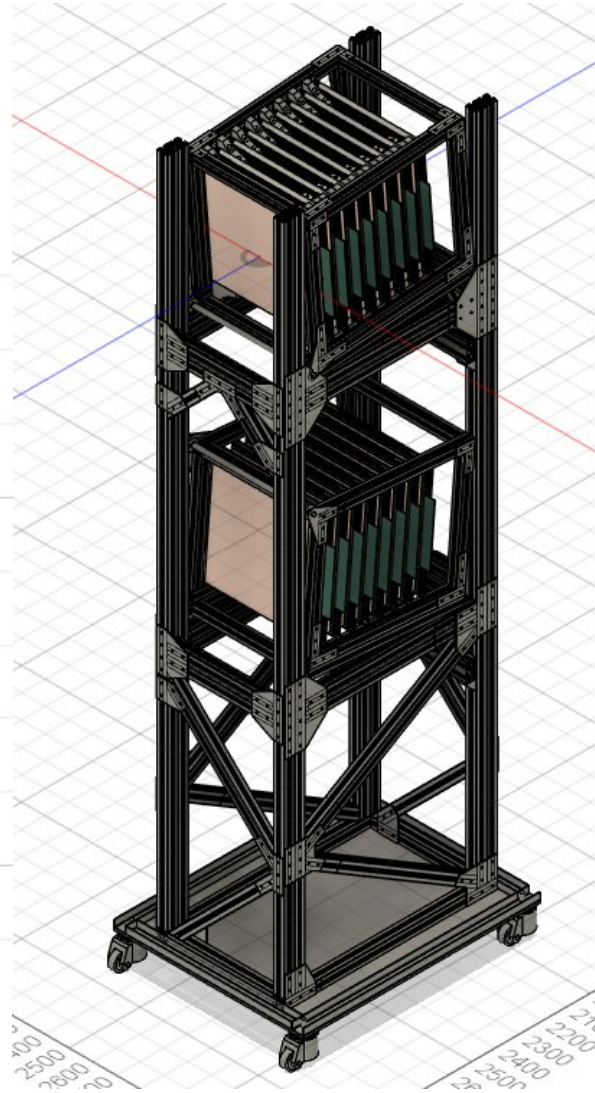
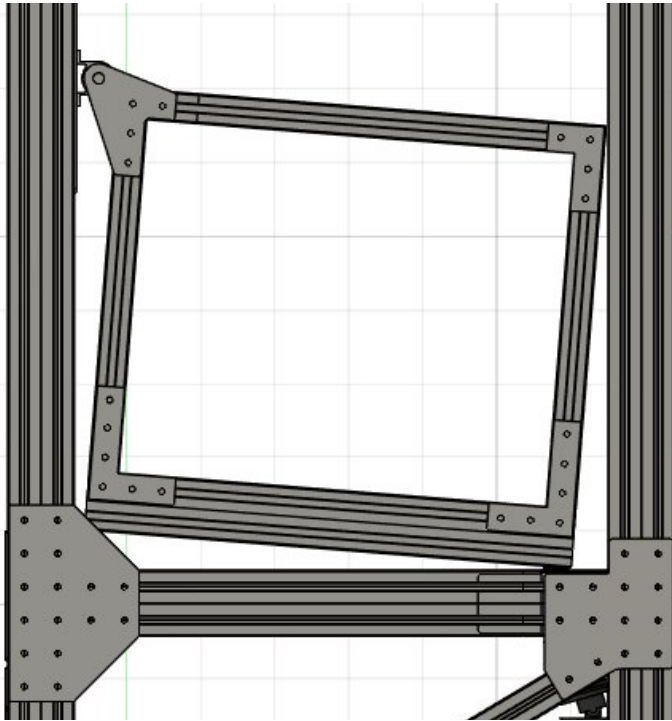
Mechanical structure - Modules

100% completed



Mechanical structure - Support

100% completed
Delivered to the BM@N





Pre-Production tests: Active layer

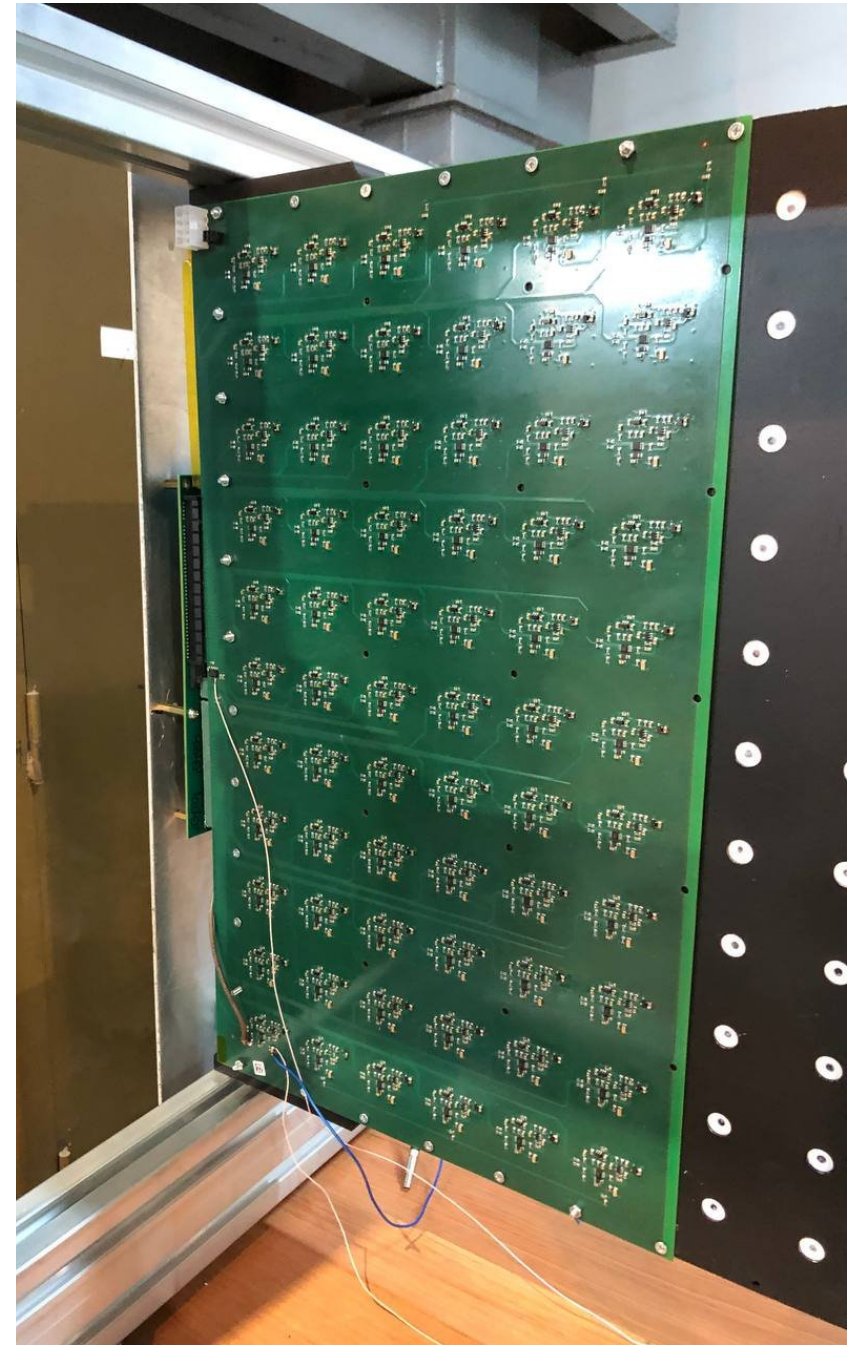
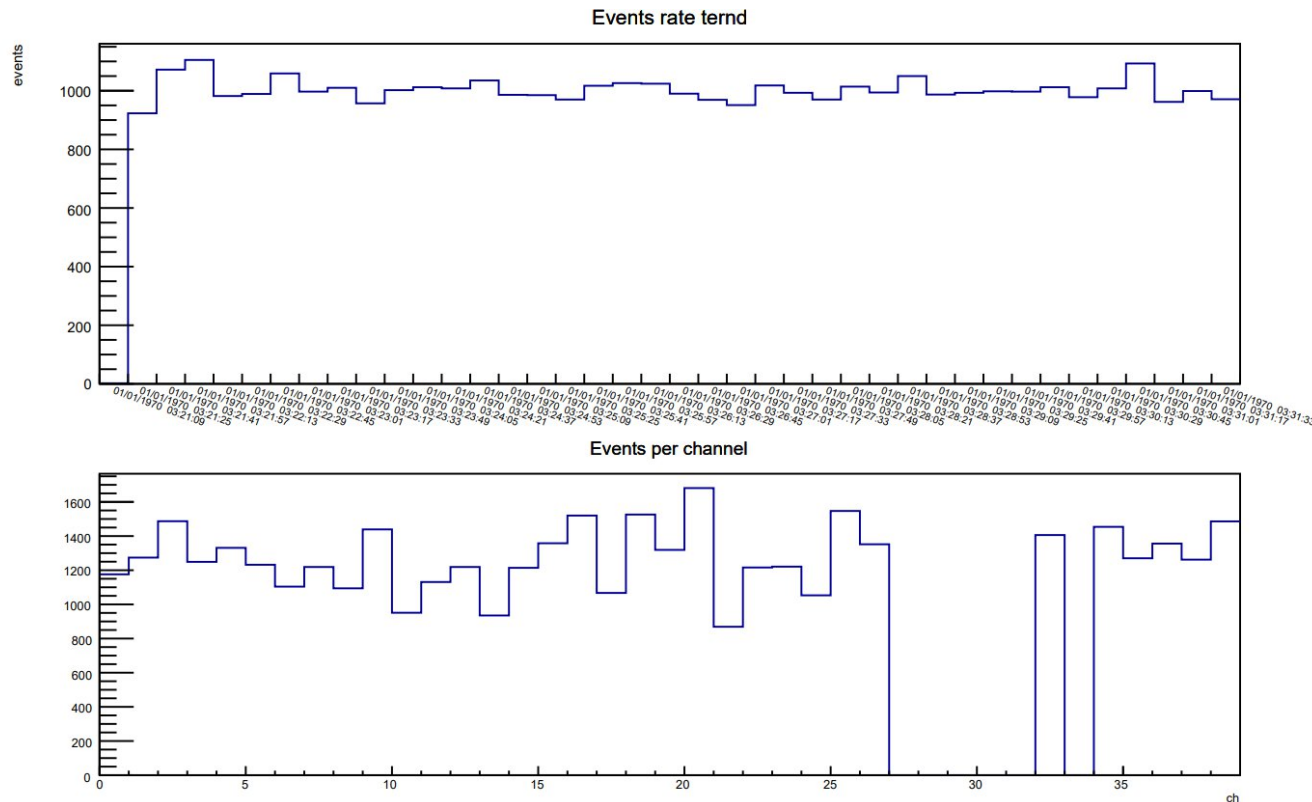
Light protection test – Done

Cosmic ray test – Done

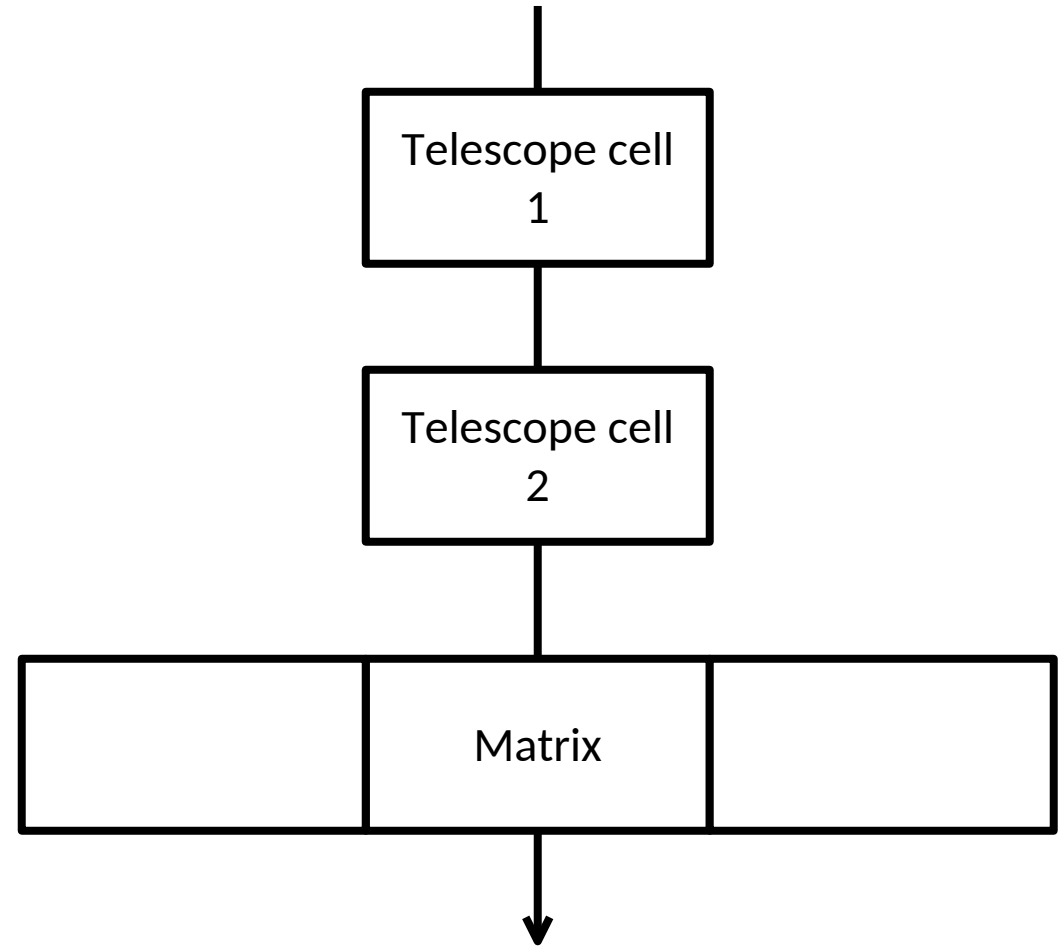
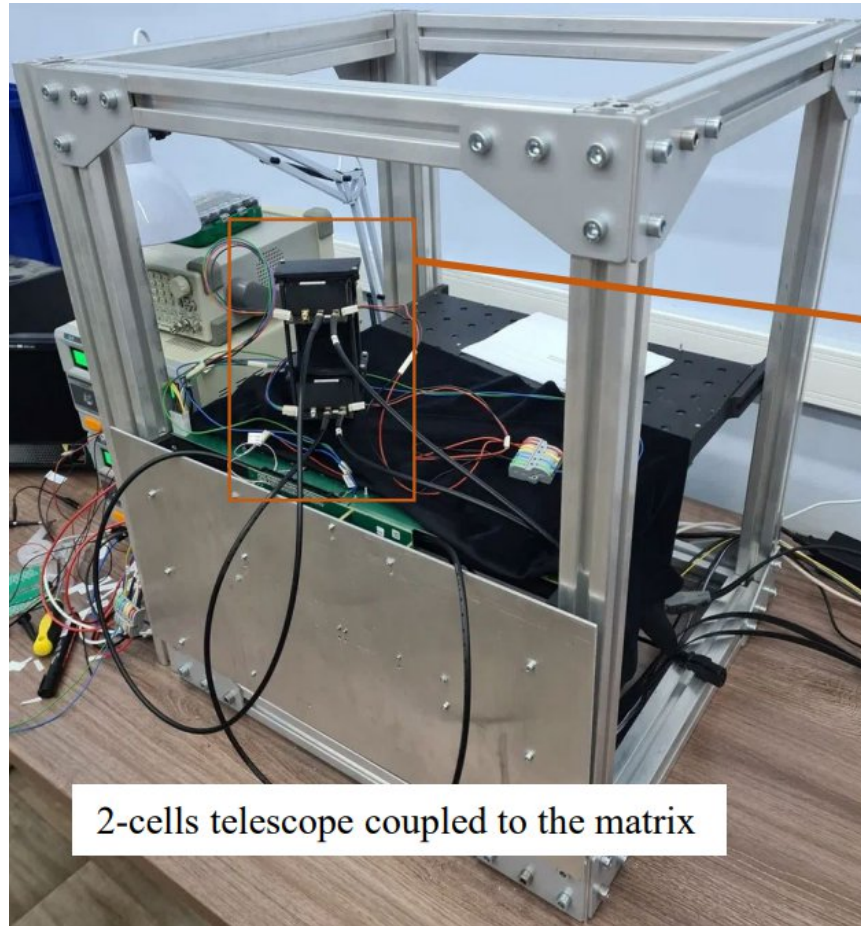
LED calibration test – In progress

Possible test at an electron beam

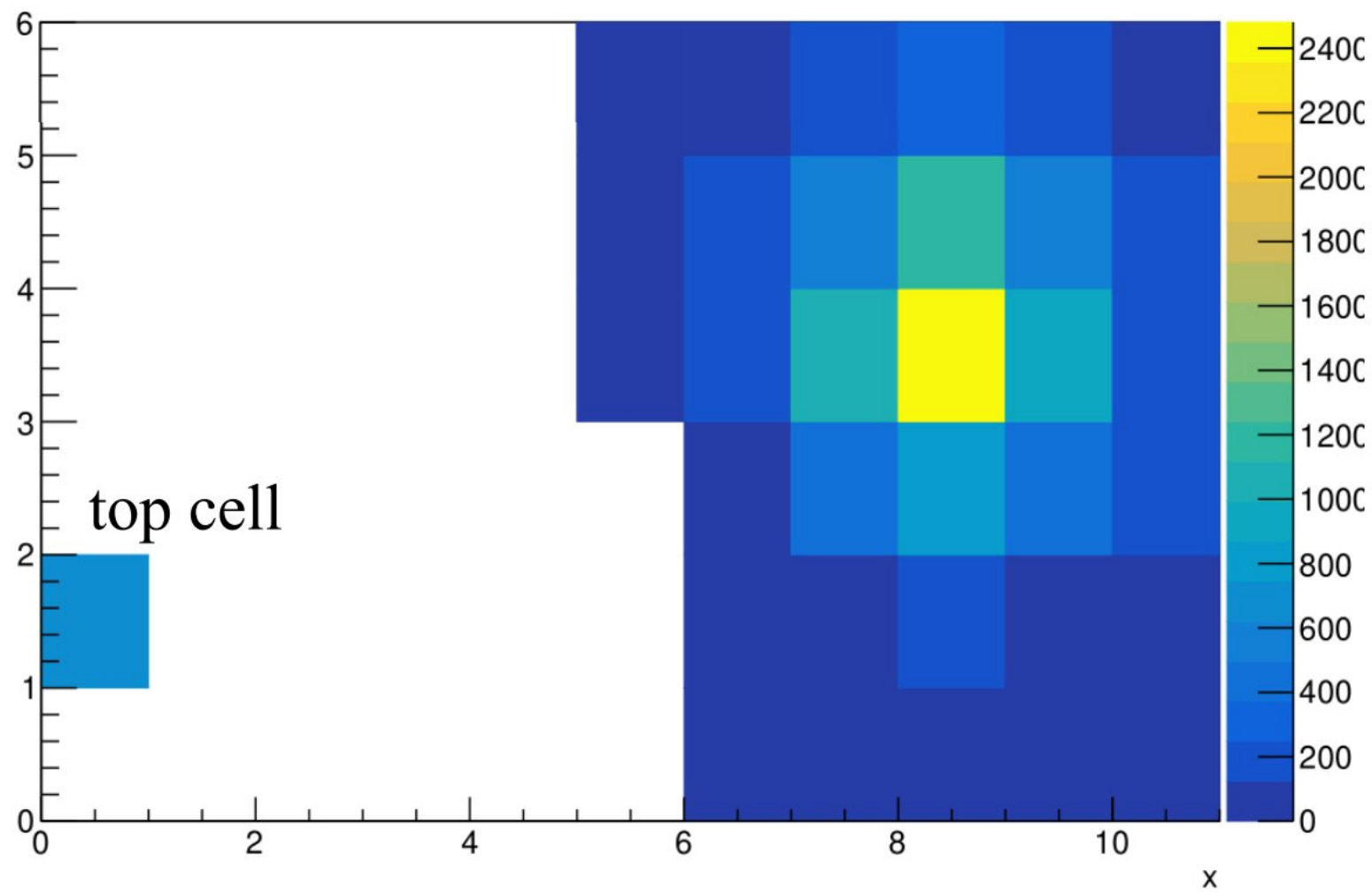
Readout integration test – To be done



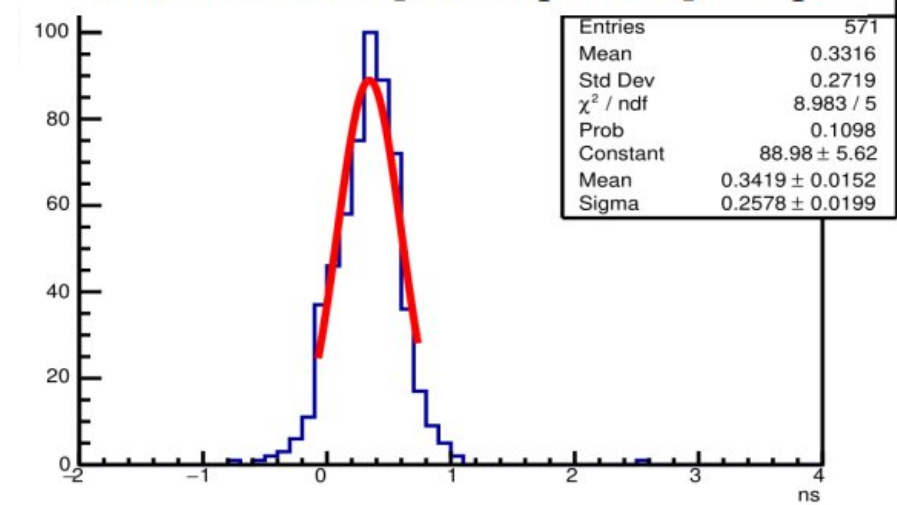
Cosmic test setup



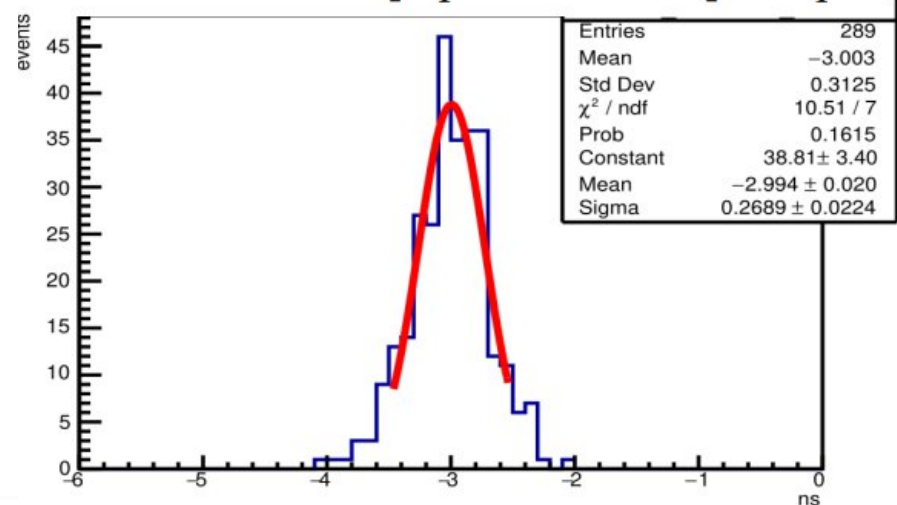
The time correlated events: bottom cell – matrix



Time resolution [telescope cells]: 182ps



Time resolution [top cell - matrix]: 190ps

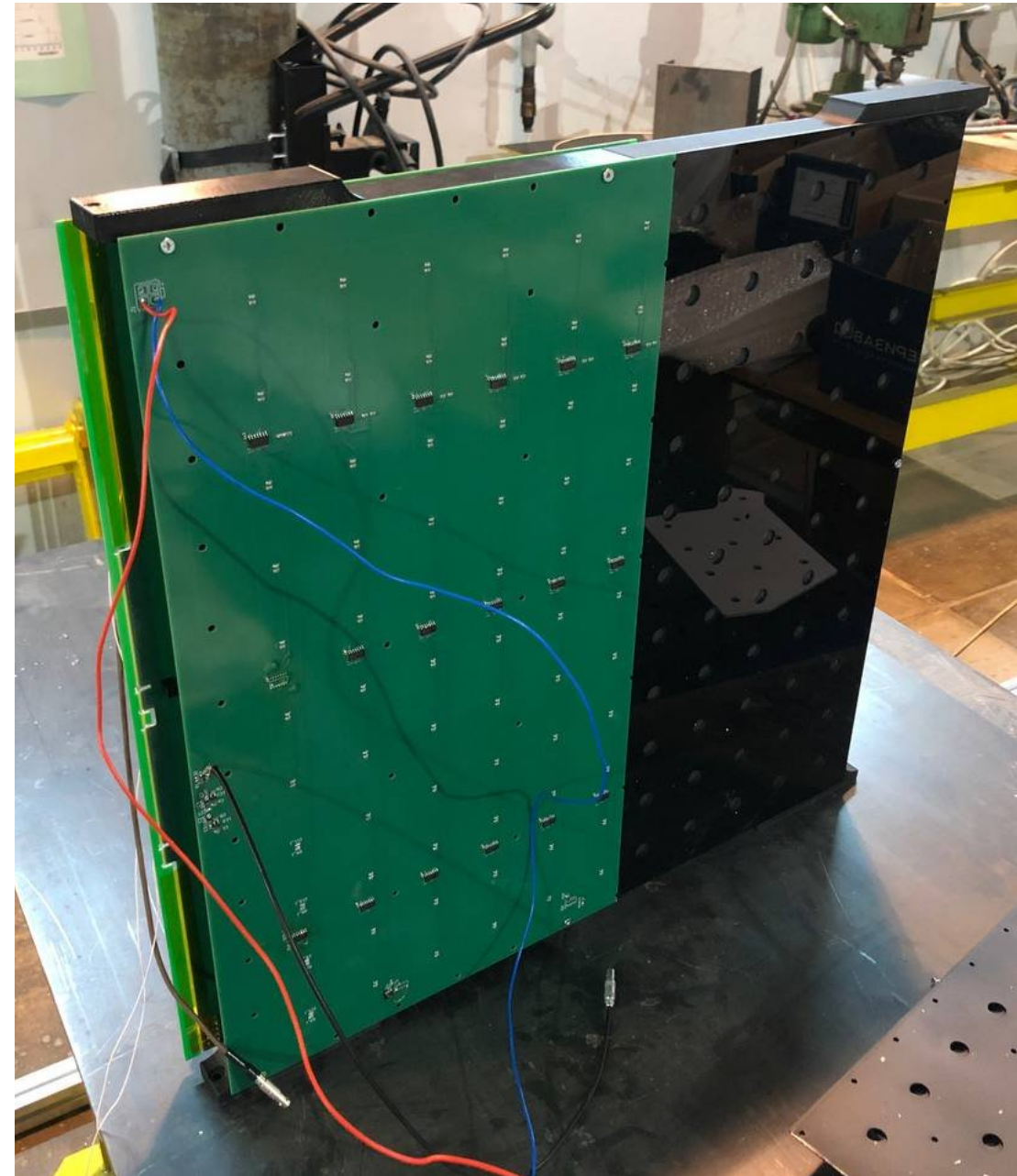


Pre-Production tests: LED pulser

Light protection test – Done

Signal integrity test - Done

Charge production test – In progress



Pre-Production: Design project

PCB production-ready design – Done

Module production-ready design- Done

LED and MPPC boards to be sent to production after the tests completion

