

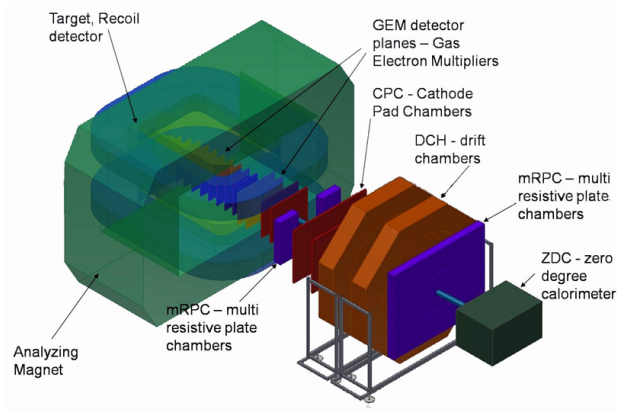
BM@N online monitoring

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Joint Institute for Nuclear Research, Laboratory of High Energy Physics

Dubna, MMCP 2017 July 3-7

The BM@N Experiment



<http://nica.jinr.ru/ru/projects/bman.php>

Implement convenient and reliable monitoring system

- Uniform for all detector subsystems

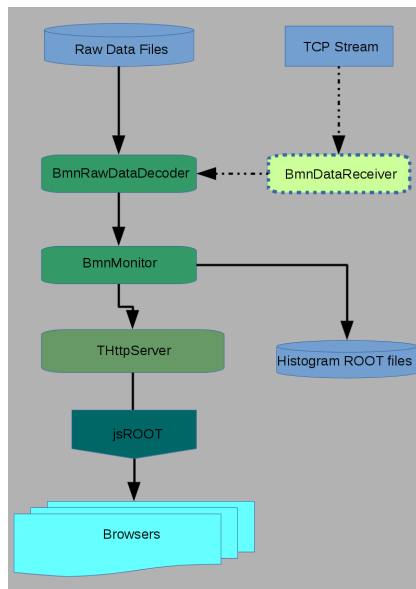
Implement convenient and reliable monitoring system

- Uniform for all detector subsystems
- Flexible

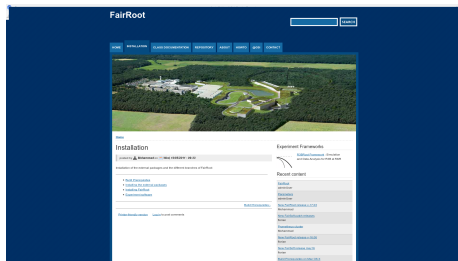
Implement convenient and reliable monitoring system

- Uniform for all detector subsystems
- Flexible
- Platform independent

Monitoring workflow



FairROOT -> BmnROOT

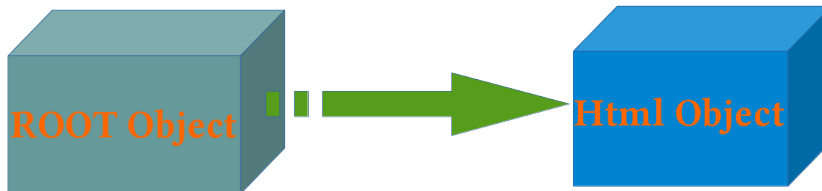


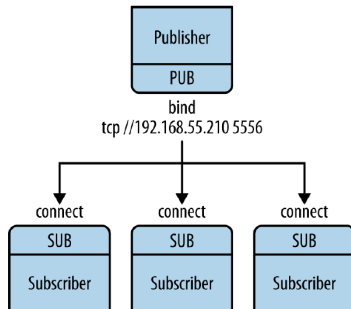
<https://fairroot.gsi.de/>

BmnROOT

<https://git.jinr.ru/nica/bmnroot>

CERN JavascriptROOT

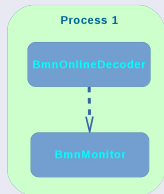




<http://zeromq.org/>

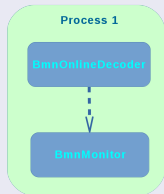
Choose the system architecture

Single process



Choose the system architecture

Single process

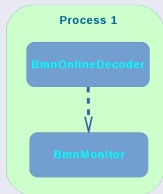


Separated processess



Choose the system architecture

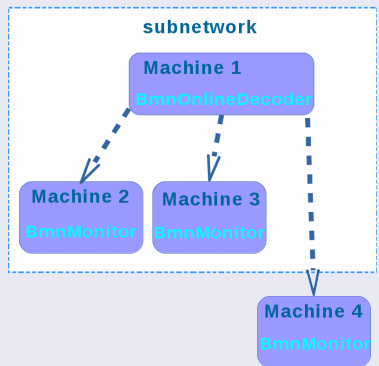
Single process



Separated processess



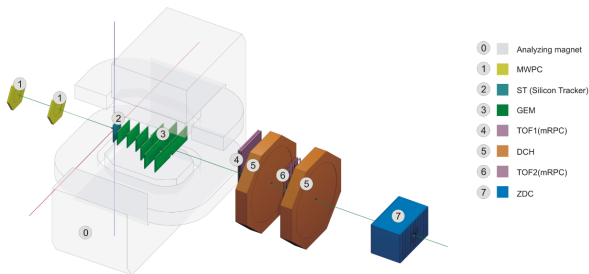
Distributed



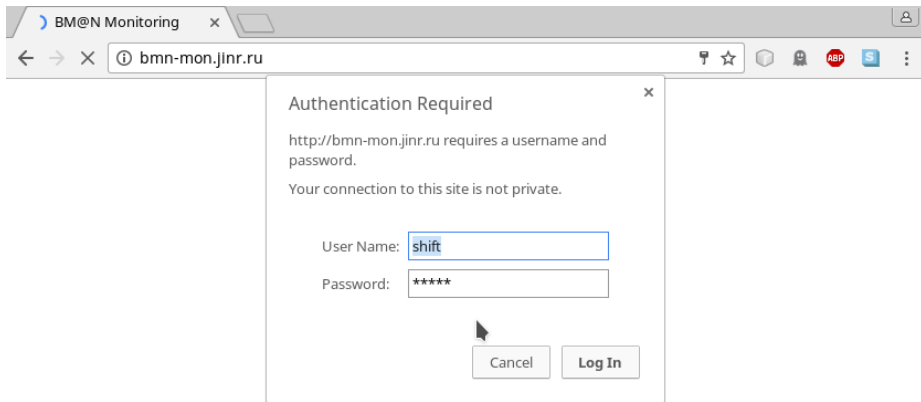
Welcome to the BM@N Experiment

Press **F11** to exit full screen

BM@N: Winter Run in 2016



Транспар GEM Silicon ToF400 ToF700 DCH MWPC ZDC



BM@N Triggers

Run: 1448

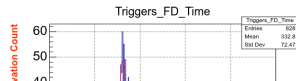
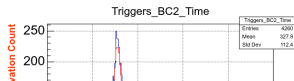
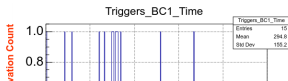
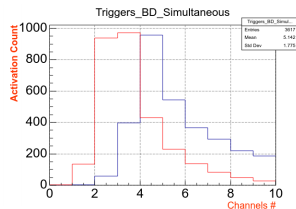
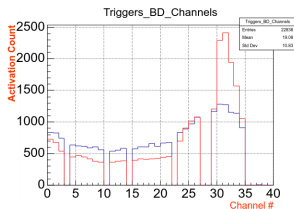
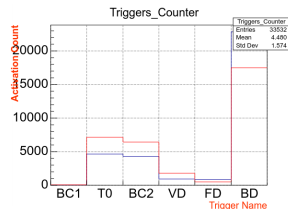
Event: 7307

Run Type: target

Reset

1408

Select Reference Run



Run Type: target

Reset

Plane Index

Strip Index

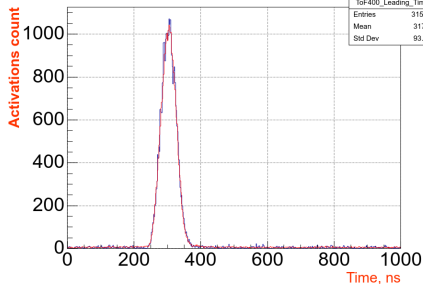
Side Index

Run Index

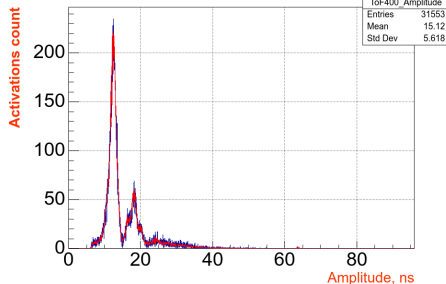
Change Selection (-1 => All)

Select Reference Run

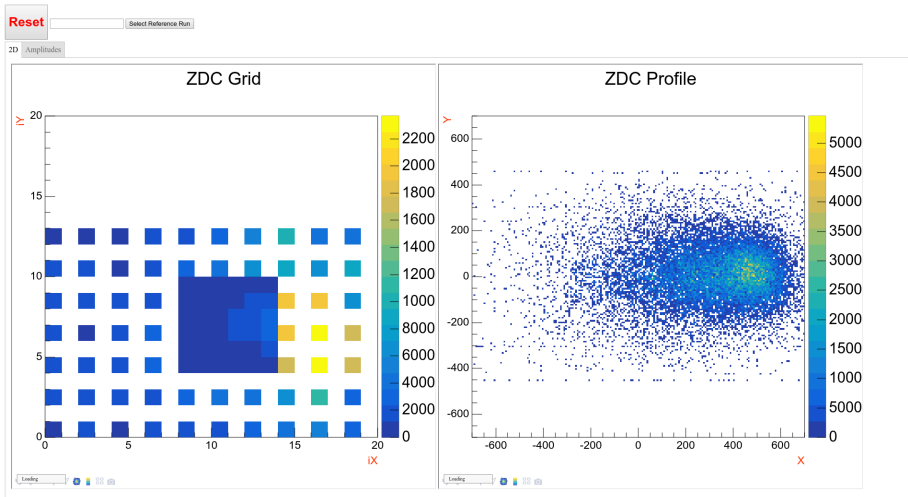
ToF400_Leading_Time



ToF400_Amplitude



System overview



BM@N GEMs

Run: 1506

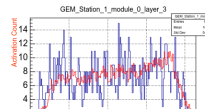
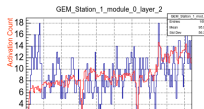
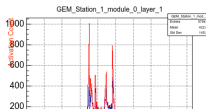
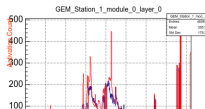
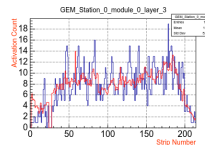
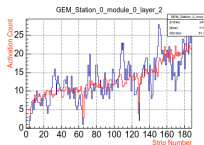
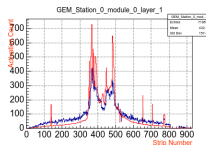
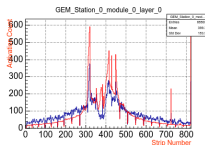
Event: 9329

Run Type: target

Reset

1411

Select Reference Run



Run: 1502

Event: 92733

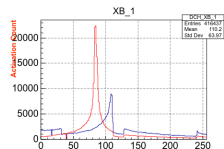
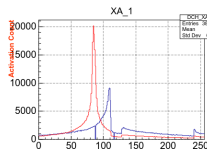
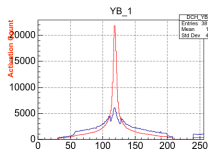
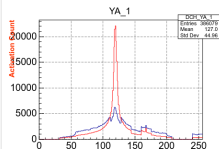
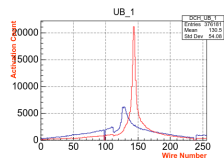
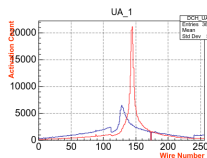
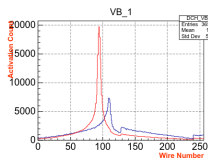
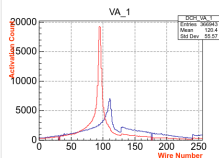
Run Type: target

Reset

1411

Select Reference Run

Wires Times



BM@N MWPCs

Press **F11** to exit full screen

Run: 1975

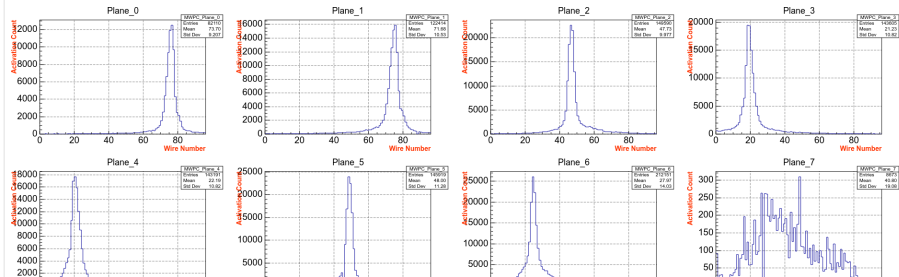
Event: 74338

Run Type: target

Reset

Select Reference Run

2D Profile Wires Times



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- Implement full reconstruction chain including EventMonitor.

Thanks for your attention!