



- *Activities and achievements in the past year*
- *Remarks on additional activities*
- *2017 perspectives*

HADRON PHYSICS DEPARTMENT

National Institute for Physics and Nuclear Engineering – IFIN-HH

Highlights of accomplishments in the last year

- Physics

- Multiplicity and directivity dependent p_T distributions for identified charged hadrons in pp collisions at $\sqrt{s} = 7$ TeV
- Charged particle p_T spectra as a function of multiplicity in pp collisions at $\sqrt{s} = 7$ TeV up to 40 GeV/c
- Bjorken energy density estimates for pp collisions at $\sqrt{s} = 7$ TeV
- Detailed comparison of pp ($\sqrt{s} = 7$ TeV), p-Pb ($\sqrt{s_{NN}} = 5.02$ TeV) and Pb-Pb ($\sqrt{s_{NN}} = 2.76$ TeV)
- BGBW fits for Pb-Pb data on different species
- Core-Corona effects in Pb-Pb collisions at 2.76 TeV
- Two particle correlation studies as a function of multiplicity and directivity
- 32 presentations in ALICE meetings
- 2 Internal Notes
- 2 conference presentations
- 9 papers with direct or indirect contributions (co-authors to other 32)
- 8 conferences with direct or indirect contributions
- PC members

- TRD tracking and QA activities

- ALICE upgrade

- Assembling and testing the first OROC (with two stacks OROC1 & OROC3) for PRR

- Computing

- Maintaining NIHAM in a leading position among Tier2s ALICE GRID centres, NAF efficient management

- ALICE shifts

- Participation to detector operation: 90.5 credits (87%) ((Run manager, Shift leader, DCS, ECS operators)

- Teaching & Outreach

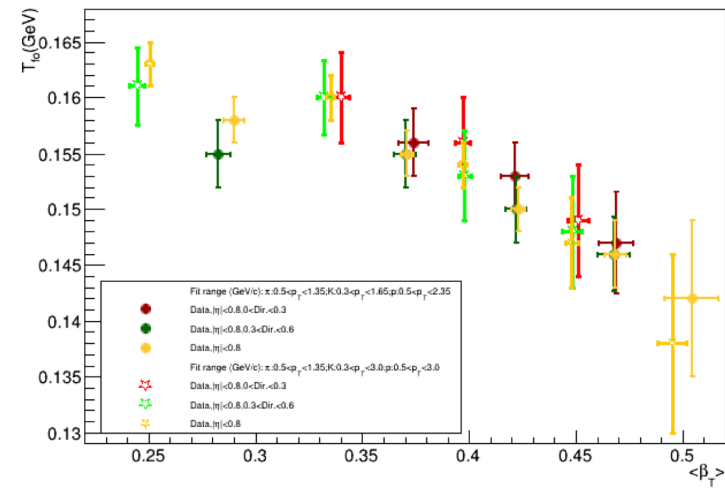
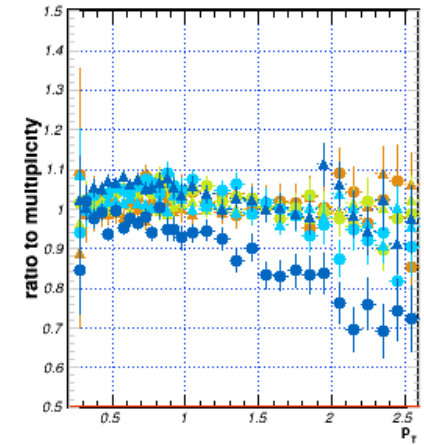
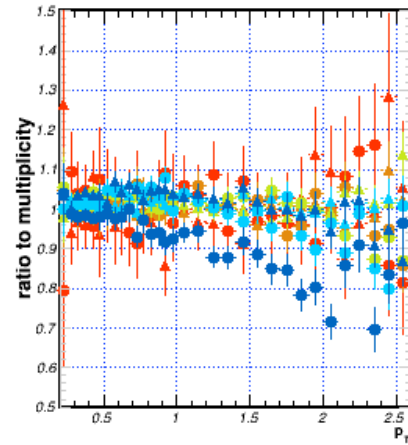
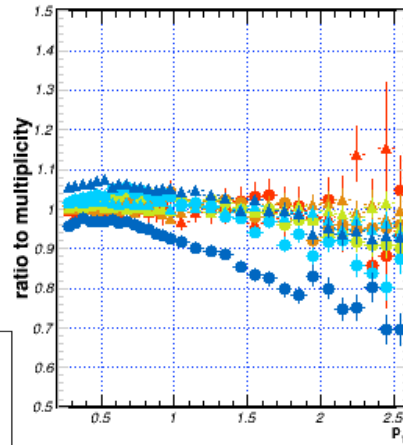
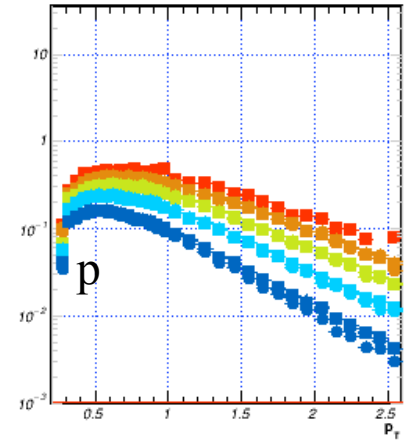
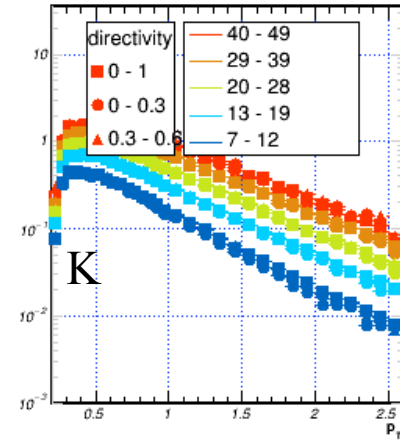
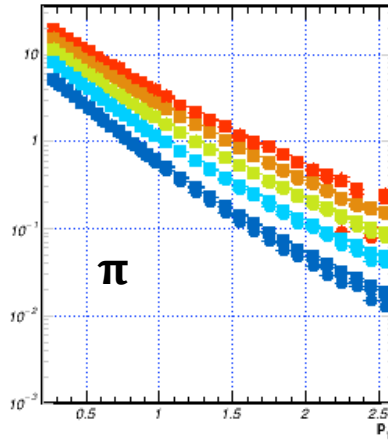
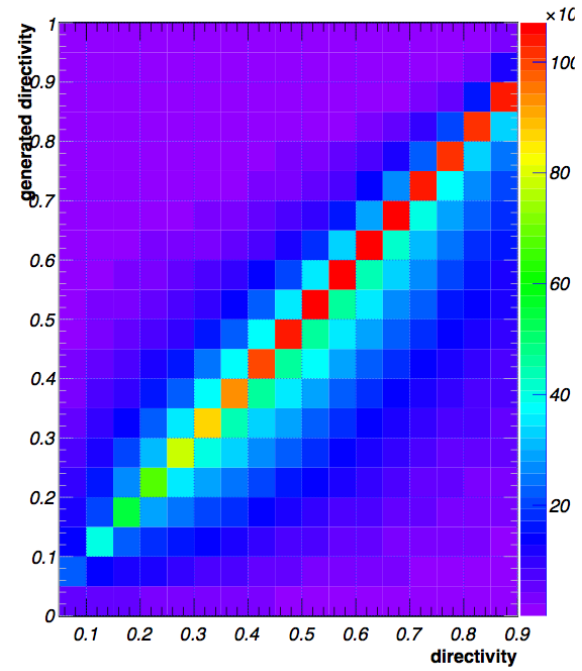
- Summer student program and outreach activities

pp @ 7 TeV – identified charged hadrons
Charged particles multiplicity & event shape

$$D = \frac{|\sum_i p_t^i|}{\sum_i |p_t^i|} \Big|_{\eta > 0},$$

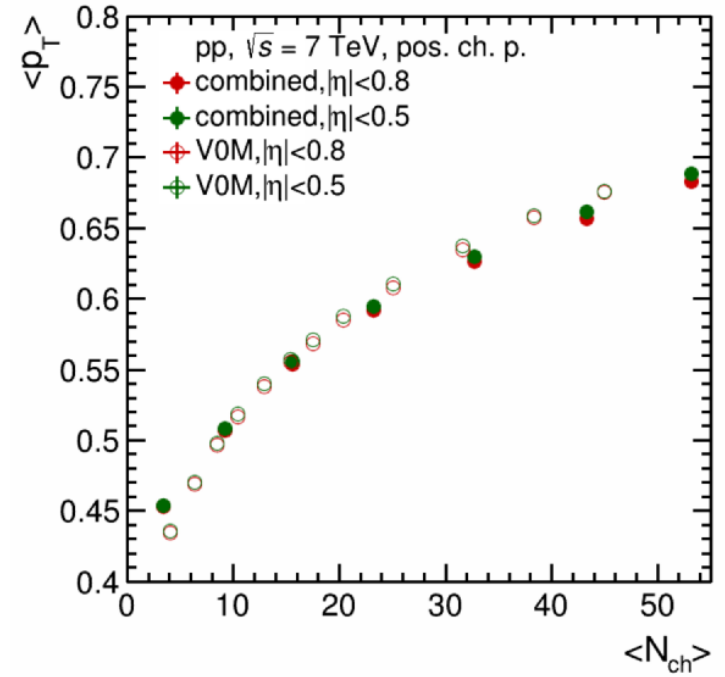
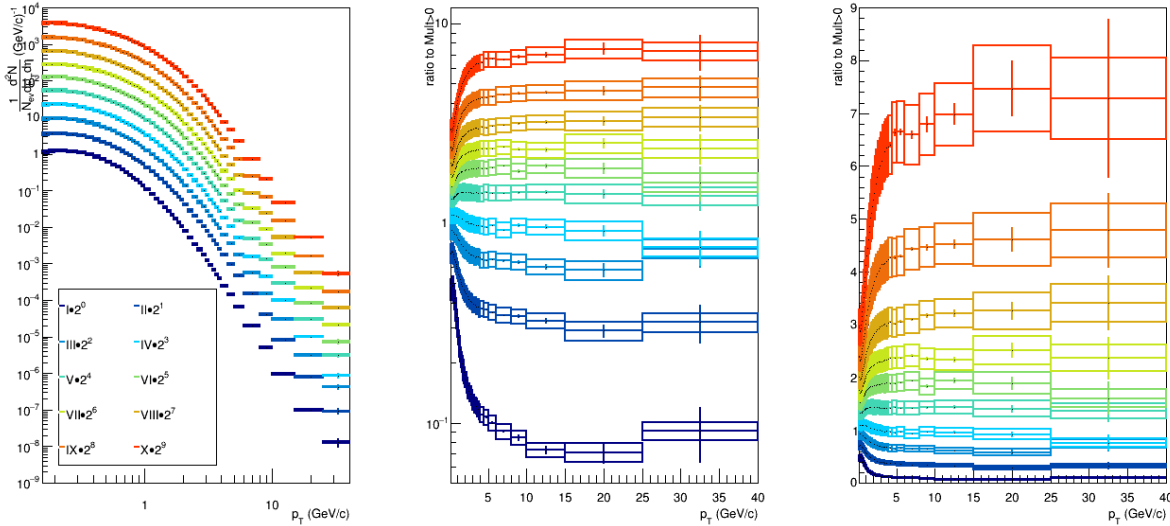
$D \rightarrow 0 \Rightarrow$ isotropic event

$D \rightarrow 1 \Rightarrow$ jetty event

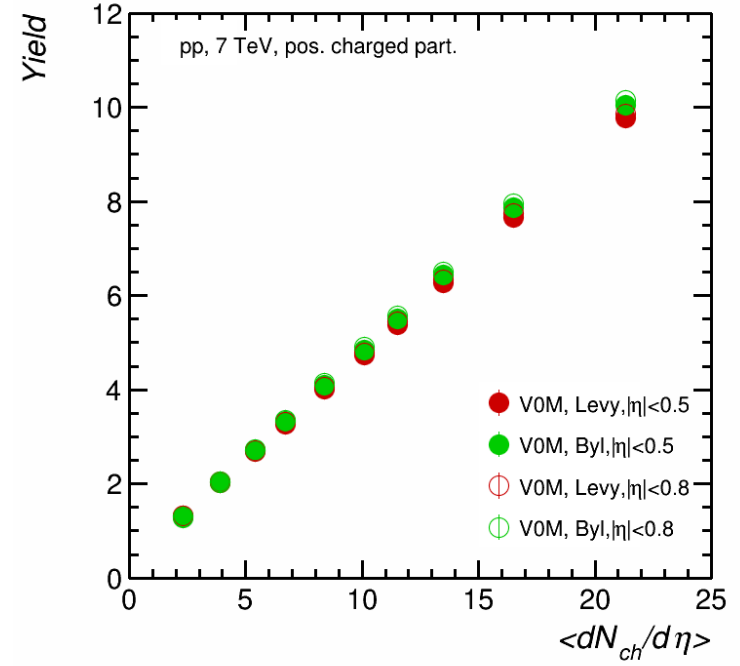
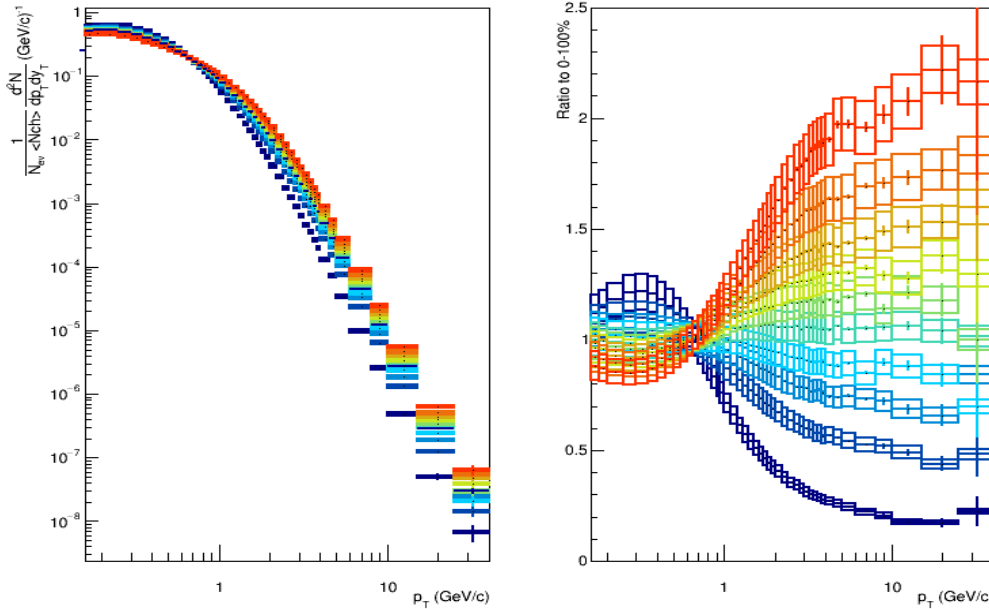


Charged particles p_T spectra & $\langle p_T \rangle$ - multiplicity dependence

$|\eta| < 0.5$



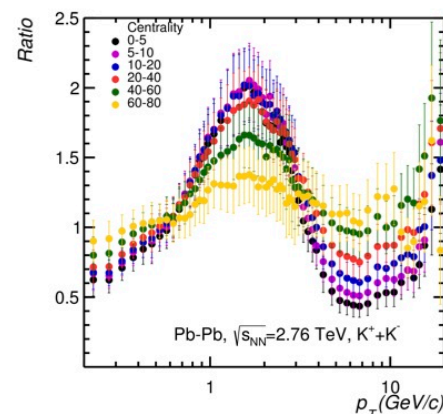
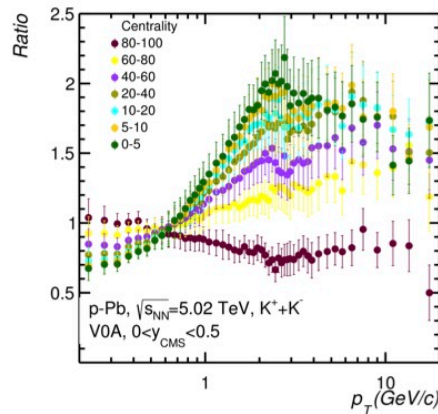
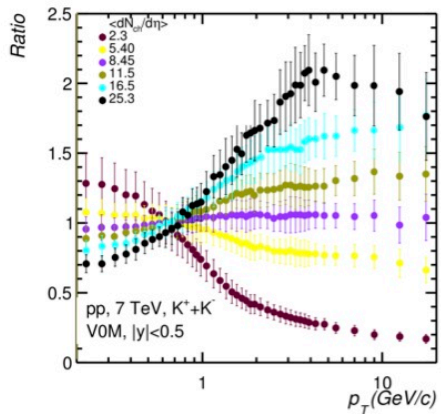
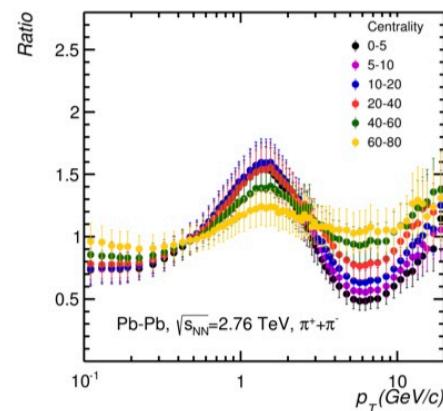
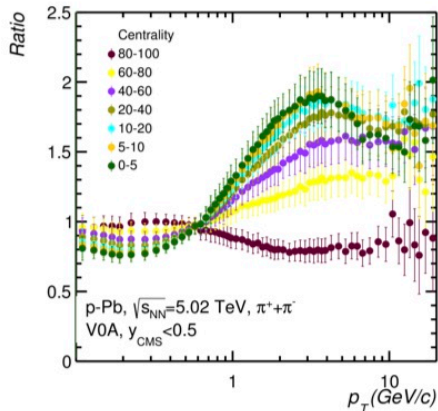
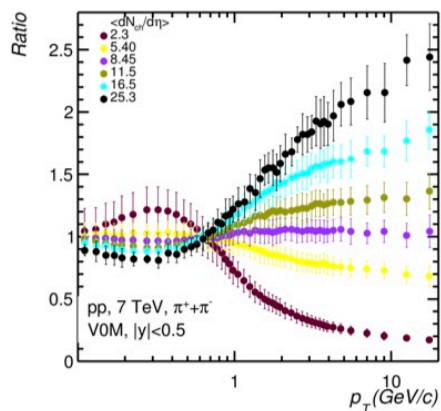
Charged / $\langle N_{ch} \rangle$



*Normalized p_T distributions relative to MB pp
as a function of charged particle multiplicity-centrality for
pp (7 TeV), p-Pb (5.02 TeV) and Pb-Pb (2.76 TeV)*

$$\left[\frac{d^2\sigma}{dydp_T} / \langle dN_{ch}/d\eta \rangle \right]^{(\%bin)}$$

$$\left[\frac{d^2\sigma}{dydp_T} / \langle dN_{ch}/d\eta \rangle \right]^{(p+p)^{MB}}$$

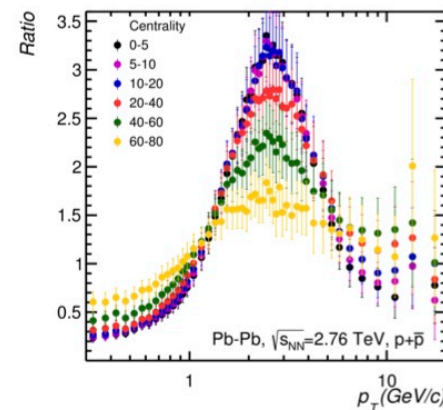
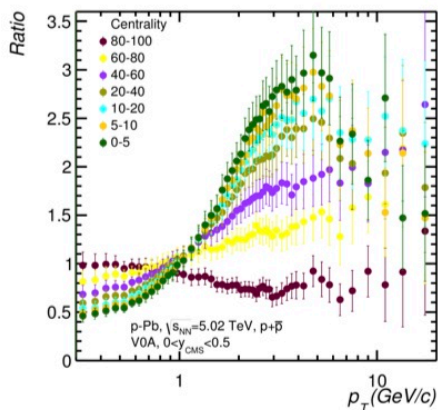
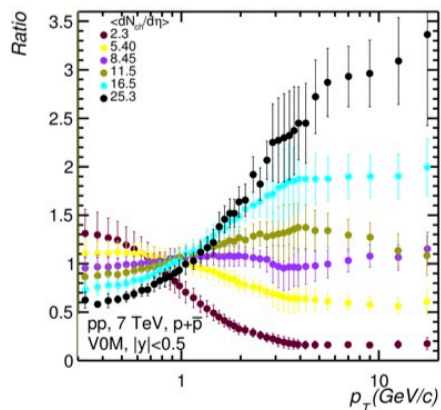


Livio Bianchi for ALICE Collaboration,
Quark Matter 2015 (2015)

V. Vislavicius for ALICE Collaboration,
Quark Matter 2015 (2015)

ALICE Collaboration,
Phys. Lett. B 760, 720–735 (2016).

J. Adam et al., ALICE Collaboration
Phys. Rev. C 93, p. 034913 (2016)



Ratios of normalized charged particles p_T distributions relative to MB pp as a function of charged particle multiplicity-centrality for Au-Au (0.2 TeV), Pb-Pb (2.76 TeV) compared with R_{AA}

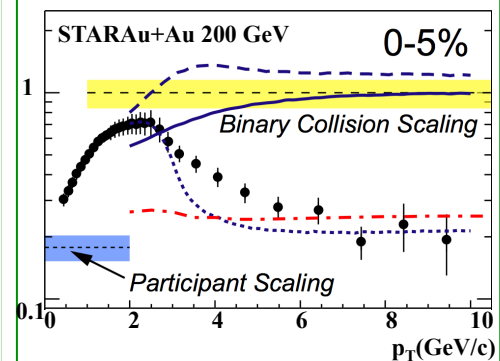
$$\frac{[\frac{d^2\sigma}{dydp_T} / \langle dN_{ch}/d\eta \rangle]^{(\%bin)}}{[\frac{d^2\sigma}{dydp_T} / \langle dN_{ch}/d\eta \rangle]^{(p+p)^{MB}}}$$

- based only on measured observables

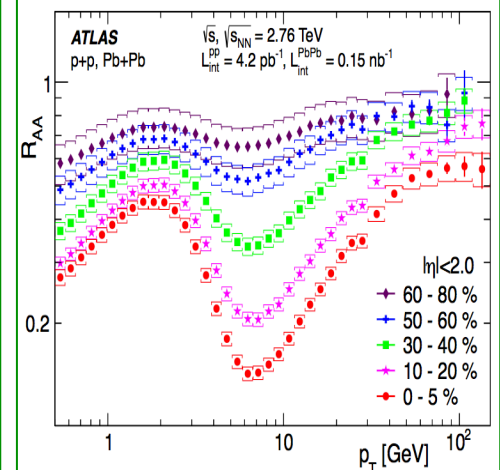
$$R_{AA} = \frac{1}{\langle T_{AA} \rangle} \frac{1/N_{\text{evt}} d^2N_{\text{Pb+Pb}}/d\eta dp_T}{d^2\sigma_{pp}/d\eta dp_T}$$

- based on Glauber approach

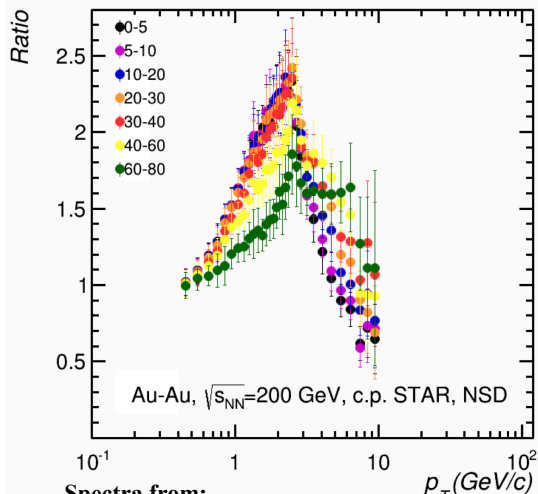
$\langle T_{AA} \rangle$ - the no. of N-N collisions (Glauber approach) over their cross section



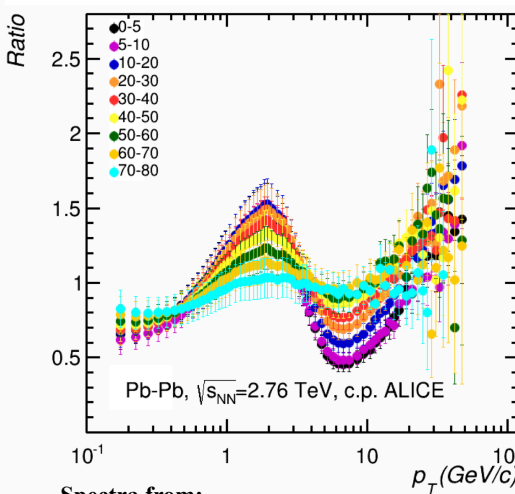
J.L.Klay, UCRL-PROC-207407(2004)



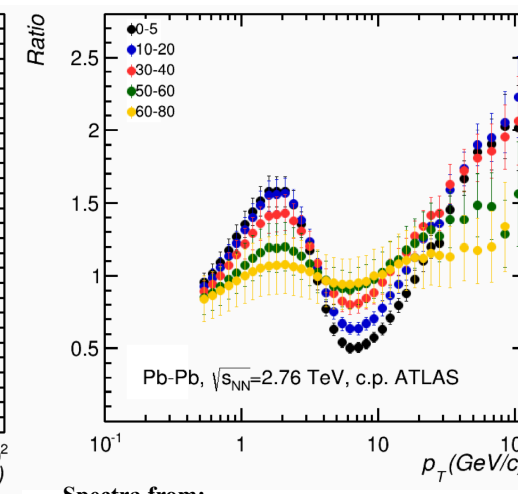
G.Aad et al., ATLAS arXiv:[hep-ex]1504.04337



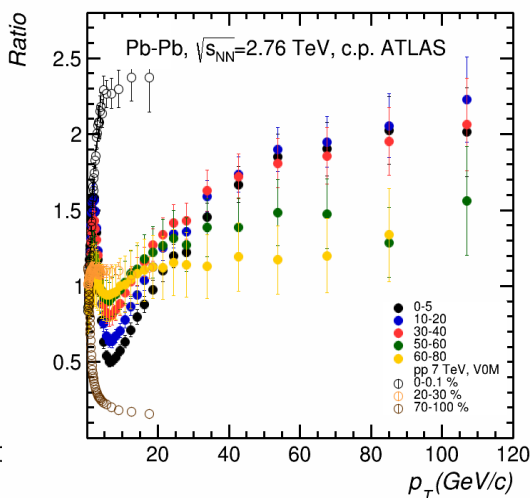
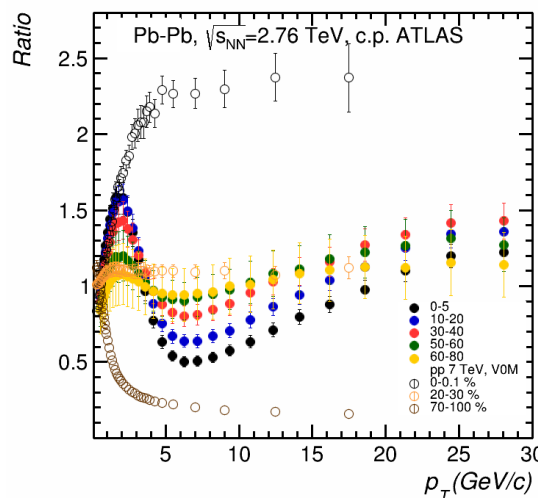
Spectra from: J.Adams et al., STAR arXiv:[nucl-ex]0305015



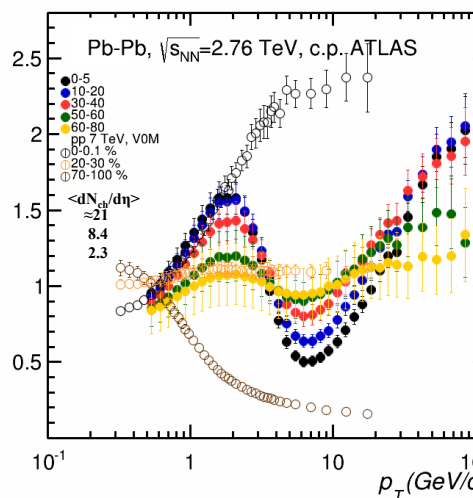
Spectra from: B.Abelev et al., ALICE Phys.Lett.B720(2013)52



Spectra from: G.Aad et al., ATLAS arXiv:[hep-ex]1504.04337



Spectra from: B.Abelev et al., ALICE Phys.Lett. B720(2013)52

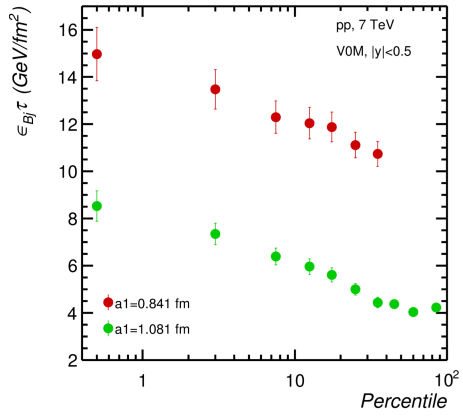


Bjorken energy density - pp at 7 TeV

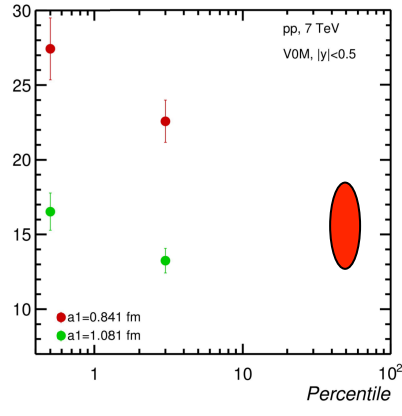
$$\mathcal{E}_{Bj} = \frac{dE_T}{dy} \frac{1}{S_T \tau}$$

$$\frac{dE_T}{dy} \approx \frac{3}{2} \left(\langle m_T \rangle \frac{dN}{dy} \right)_{\pi^\pm} + 2 \left(\langle m_T \rangle \frac{dN}{dy} \right)_{K^\pm, p, \bar{p}} \quad \langle m_T \rangle = \sqrt{\langle p_T \rangle^2 + m_0^2}$$

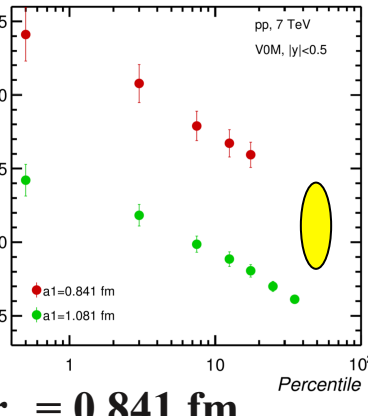
Geometrical overlap for the corresponding r_p



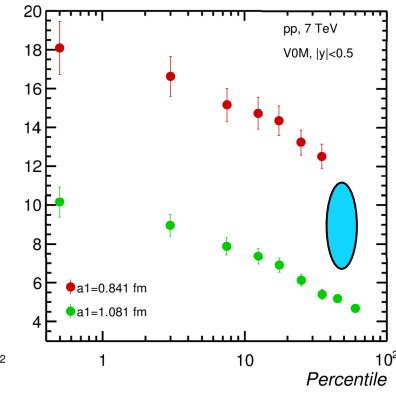
Overlapped zone corresponding $r=0.25$ fm in each of colliding protons



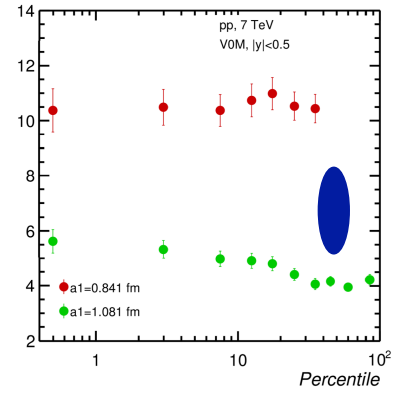
Overlapped zone corresponding to σ_{a_2} complementary to $r=0.25$ fm



Overlapped zone corresponding to σ_{a_1} complementary to σ_{a_2}

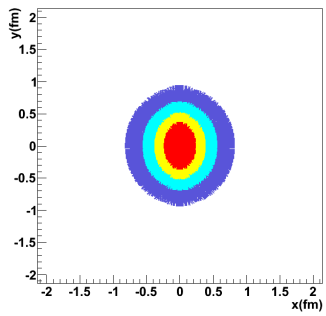


Overlapped zone corresponding to r_p complementary to σ_{a_1}

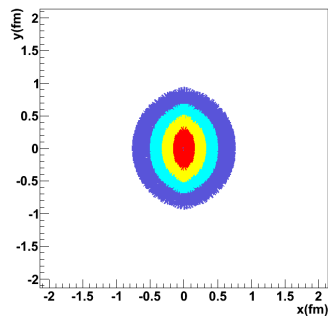


$r_p = 0.841$ fm

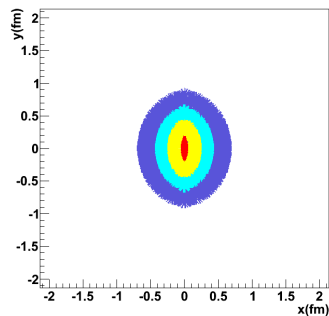
$b=0.185$ fm



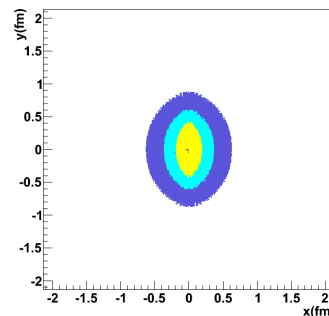
$b=0.303$ fm



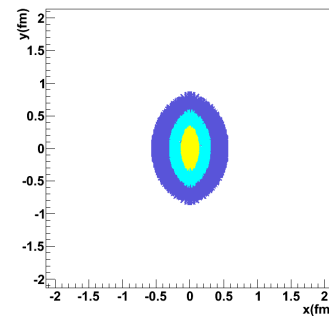
$b=0.450$ fm



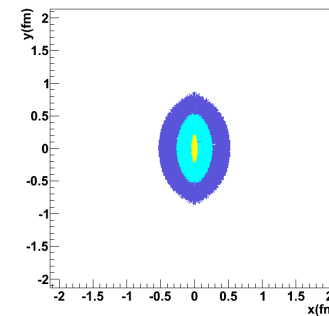
$b=0.582$ fm



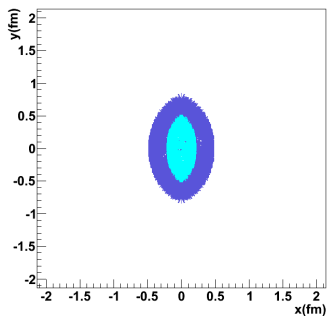
$b=0.695$ fm



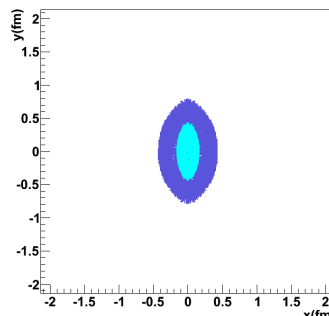
$b=0.788$ fm



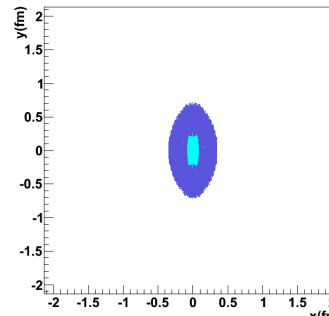
$b=0.866$ fm



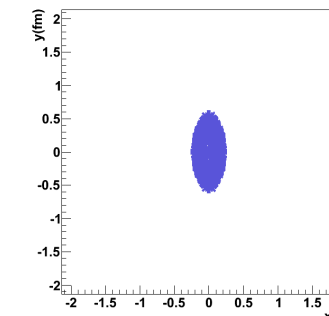
$b=0.978$ fm



$b=1.145$ fm

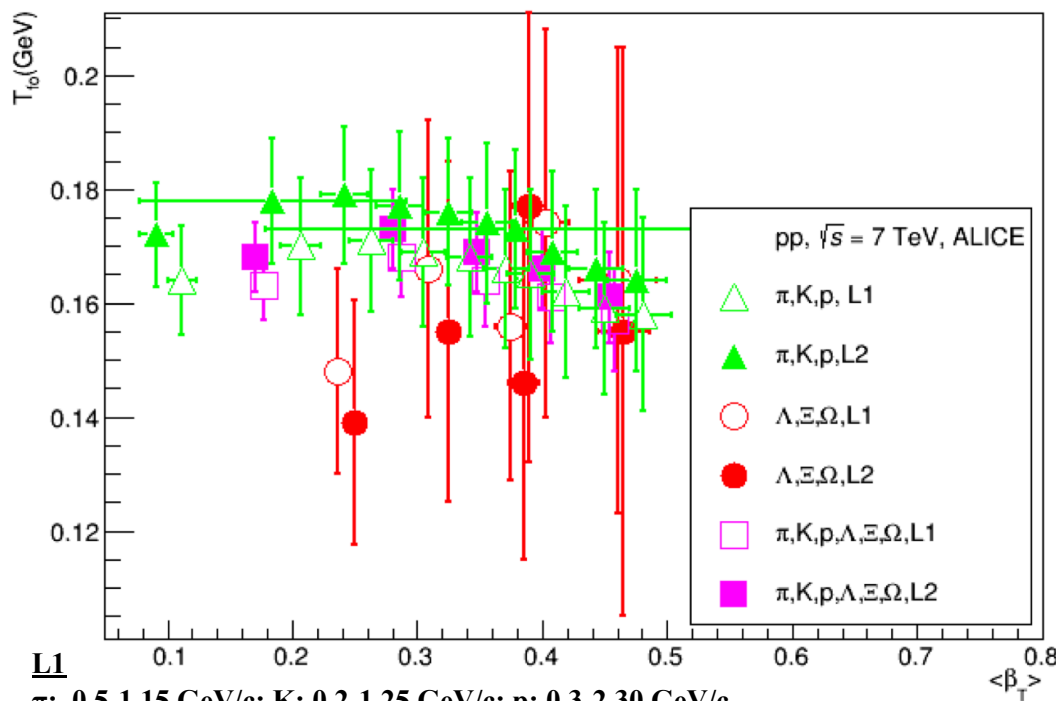


$b=1.326$ fm



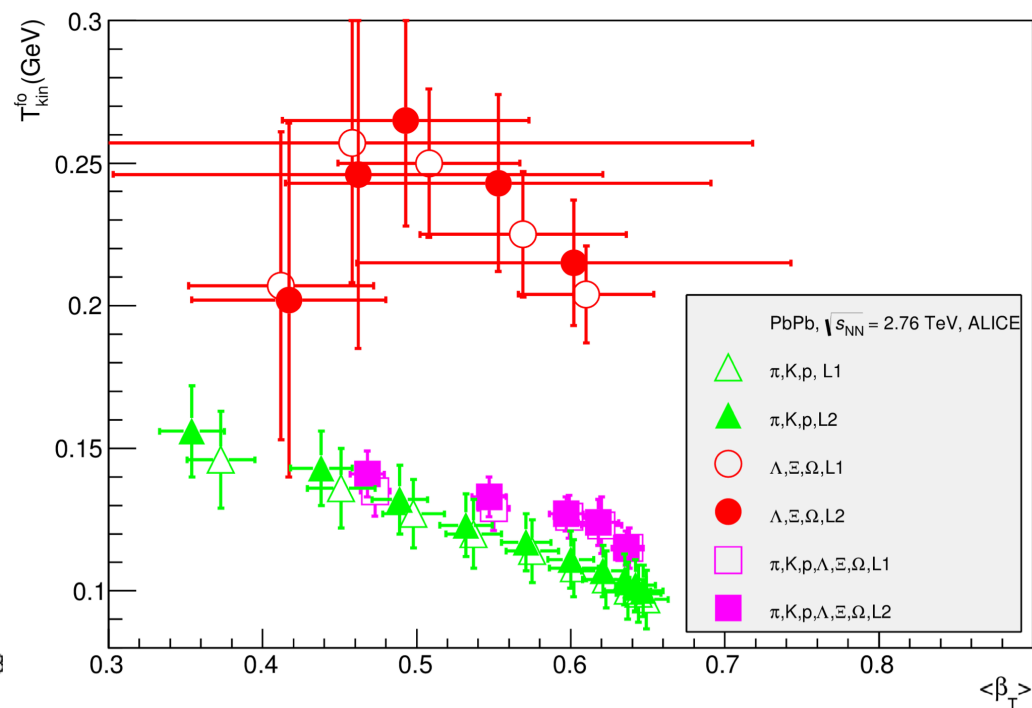
pp 7 TeV

Pb-Pb 2.76 TeV



L1
 π : 0.5-1.15 GeV/c; K: 0.2-1.25 GeV/c; p: 0.3-2.30 GeV/c
 Λ : ≤ 2.75 GeV/c; Ξ : ≤ 3.25 GeV/c; Ω : ≤ 3.0 GeV/c

L2
 π : 0.5-1.35 GeV/c; K: 0.2-1.65 GeV/c; p: 0.3-2.45 GeV/c
 Λ : ≤ 2.50 GeV/c; Ξ : ≤ 2.70 GeV/c; Ω : ≤ 3.40 GeV/c



Core-Corona effect (1st order approximation !)

pp collisions

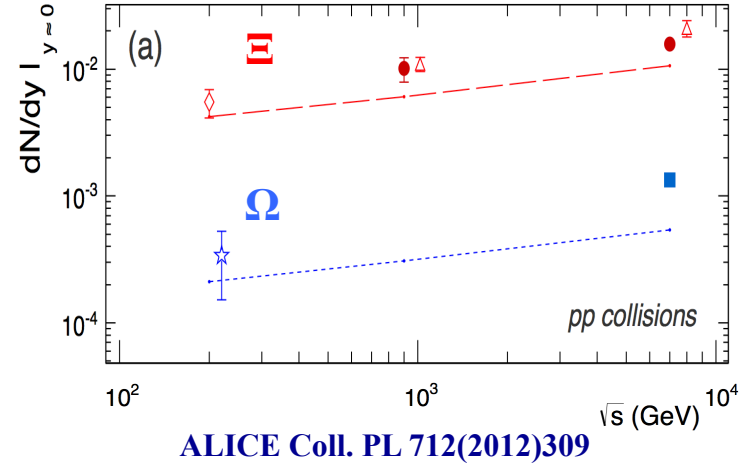
$$M^i(N_{part}) = N_{part} [f(N_{core}) \cdot M^i_{core} + (1 - f(N_{core})) \cdot M^i_{corona}]$$

$$M^i_{corona} = \frac{1}{2} \frac{dn^i}{dy} \Big|_{y=0}^{pp} \quad - \text{taken from } pp \text{ 7 TeV !!!}$$

$$M^i_{core} = \frac{1}{N_{part} \cdot f(N_{core})} \left\{ \frac{dn^i}{dy} \Big|_{60-80\%} - (1 - f(N_{core})) \frac{1}{2} \frac{dn^i}{dy} \Big|_{y=0}^{pp} \right\}$$

$1 - f(N_{core})$ - fraction of nucleons suffering single collisions

N_{part} & $(1 - f(N_{core}))$ estimated by Glauber MC



ALICE Coll. PRL 111(2013)222301

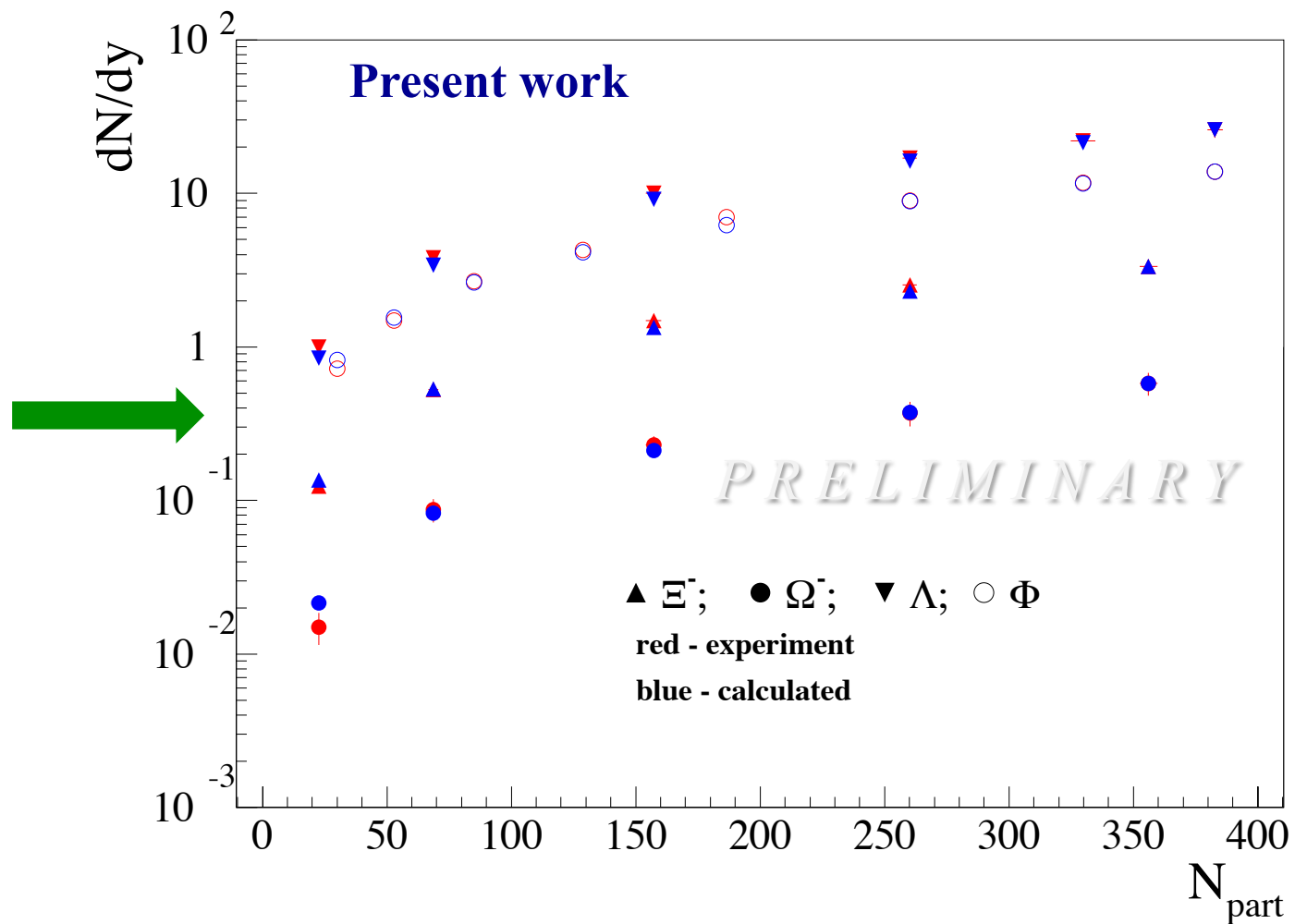
Pb+Pb collision @ 2.76 TeV

	0-5%	5-10%	10-20%	20-40%	40-60%	60-80%	80-90%
Λ dN/dy	26 ± 3	22 ± 2	17 ± 2	10 ± 1	3.8 ± 0.4	1.0 ± 0.1	0.21 ± 0.03
$p_T < 0.6$ GeV/c frac.	10%	11%	12%	14%	18%	24%	32%
K_S^0 dN/dy	110 ± 10	90 ± 6	68 ± 5	39 ± 3	14 ± 1	3.9 ± 0.2	0.85 ± 0.09
$p_T < 0.4$ GeV/c frac.	20%	21%	21%	23%	25%	31%	33%
Ratio dN/dy Λ/K_S^0	0.24 ± 0.02	0.24 ± 0.02	0.25 ± 0.02	0.25 ± 0.02	0.26 ± 0.03	0.25 ± 0.02	0.25 ± 0.02

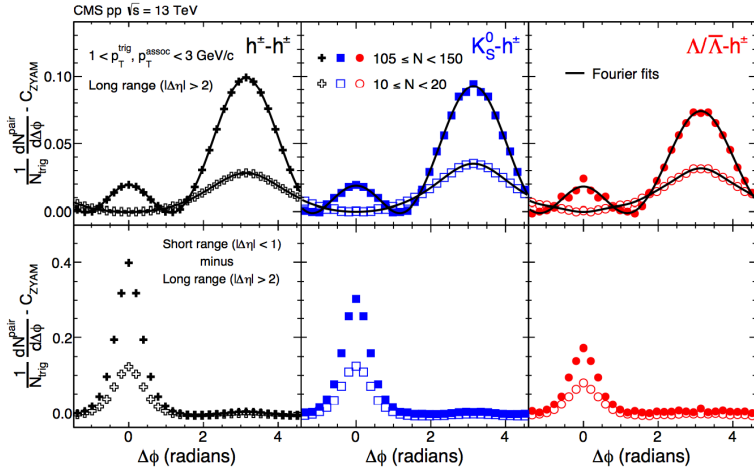
ALICE Coll. PL 728(2014)216

Centrality	0-10%	10-20%	20-40%	40-60%	60-80%
$\langle N_{part} \rangle$	356.1 ± 3.6	260.1 ± 3.9	157.2 ± 3.1	68.6 ± 2.0	22.5 ± 0.8
Ξ^-	$3.34 \pm 0.06 \pm 0.24$	$2.53 \pm 0.04 \pm 0.18$	$1.49 \pm 0.02 \pm 0.11$	$0.53 \pm 0.01 \pm 0.04$	$0.124 \pm 0.003 \pm 0.009$
Ξ^+	$3.28 \pm 0.06 \pm 0.23$	$2.51 \pm 0.05 \pm 0.18$	$1.53 \pm 0.02 \pm 0.11$	$0.54 \pm 0.01 \pm 0.04$	$0.120 \pm 0.003 \pm 0.008$
$\Xi^- + \Xi^+$	$6.67 \pm 0.08 \pm 0.47$	$5.14 \pm 0.06 \pm 0.36$	$3.03 \pm 0.03 \pm 0.22$	$1.07 \pm 0.01 \pm 0.08$	$0.240 \pm 0.006 \pm 0.019$
Ω^-	$0.58 \pm 0.04 \pm 0.09$	$0.37 \pm 0.03 \pm 0.06$	$0.23 \pm 0.01 \pm 0.03$	$0.087 \pm 0.005 \pm 0.014$	$0.015 \pm 0.002 \pm 0.003$
Ω^+	$0.60 \pm 0.05 \pm 0.09$	$0.40 \pm 0.03 \pm 0.06$	$0.25 \pm 0.01 \pm 0.03$	$0.082 \pm 0.005 \pm 0.013$	$0.017 \pm 0.002 \pm 0.003$
$\Omega^- + \Omega^+$	$1.19 \pm 0.06 \pm 0.19$	$0.78 \pm 0.04 \pm 0.15$	$0.48 \pm 0.02 \pm 0.08$	$0.170 \pm 0.007 \pm 0.029$	$0.032 \pm 0.003 \pm 0.005$

Core-Corona effect (1st order approximation !)



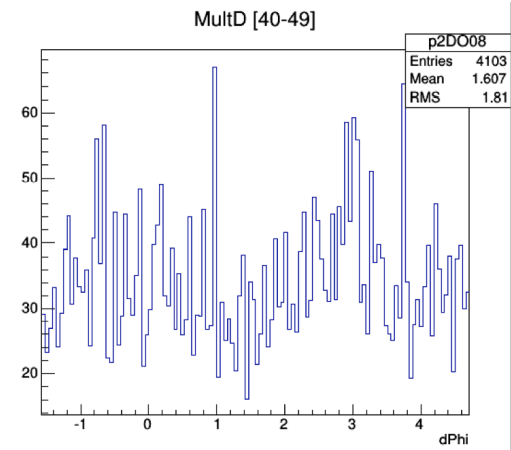
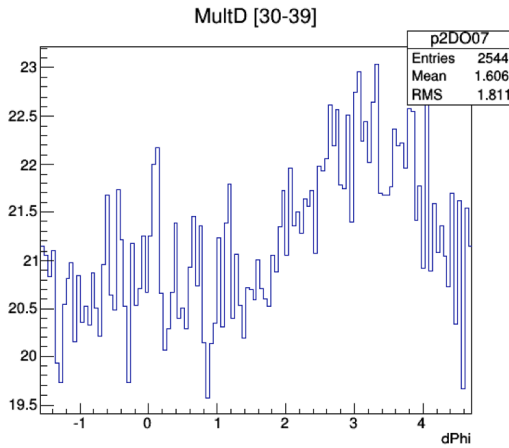
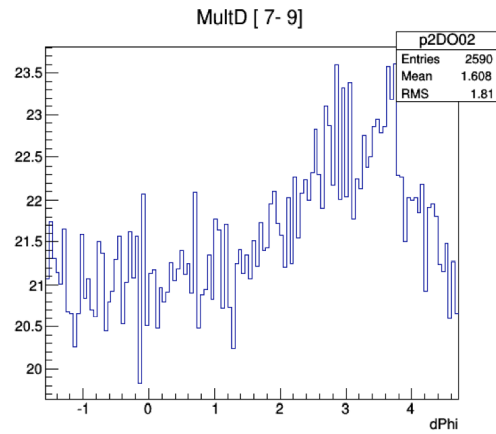
Two particle correlations



CMS Coll, arXiv:[nucl-ex]1606.06198

Preliminary our analysis

$1.25 < |\Delta\eta| < 1.5$ (combined multiplicity)



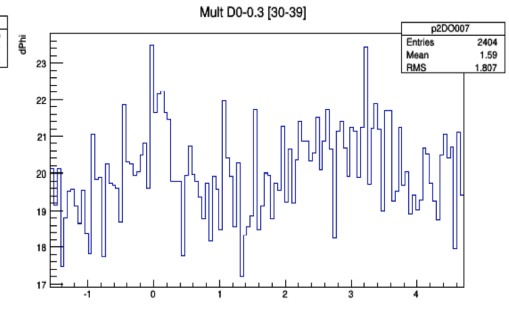
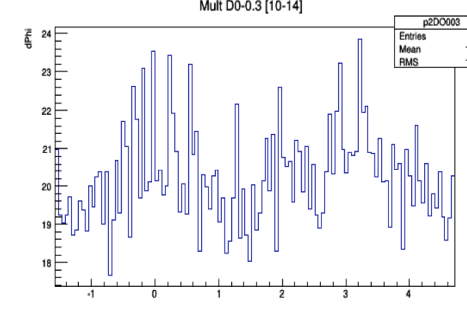
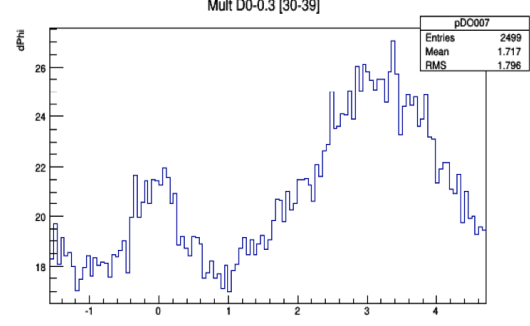
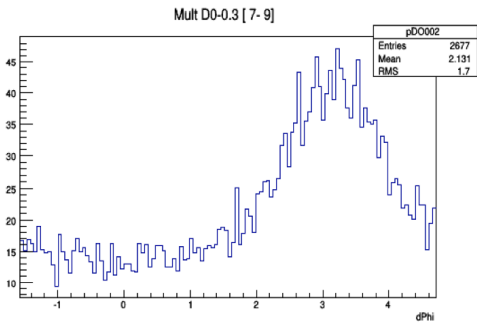
Two particle correlations

Preliminary our analysis

D^+ & D^- <0.3 (combined multiplicity)

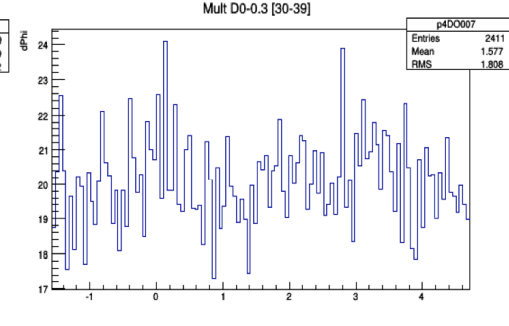
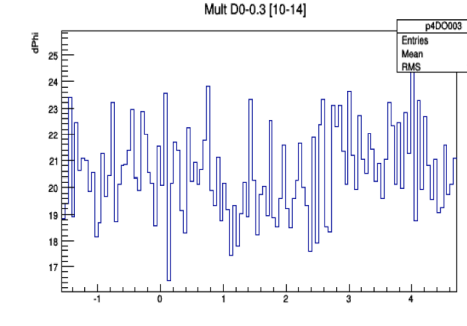
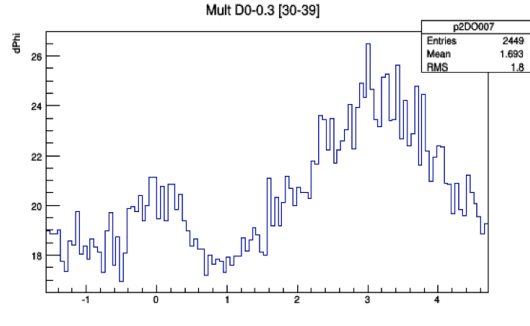
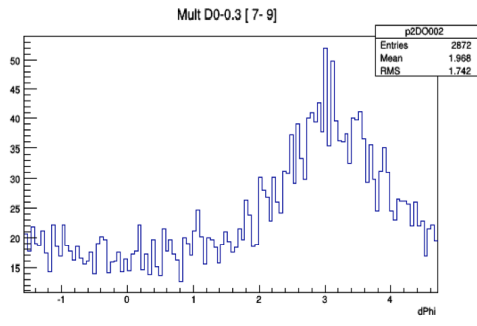
$|\Delta\eta| < 0.25$

$0.75 < |\Delta\eta| < 1.00$



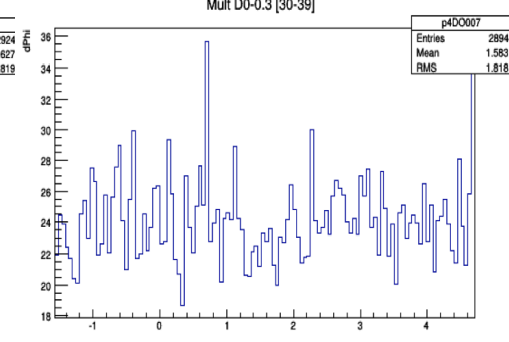
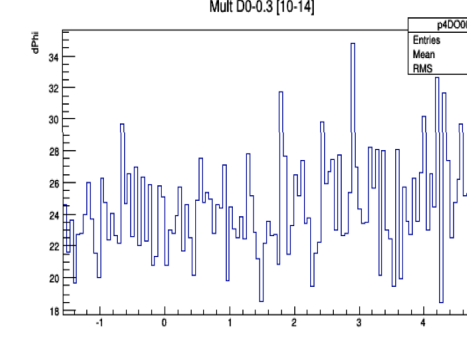
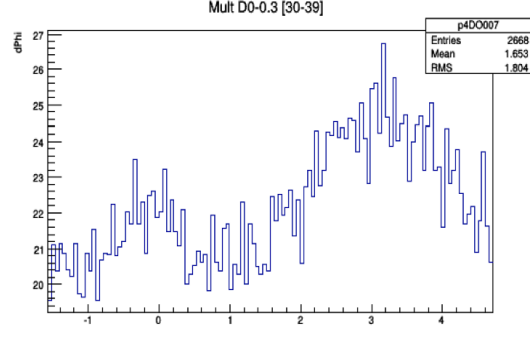
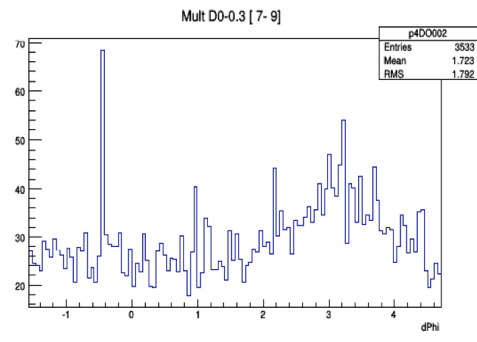
$0.25 < |\Delta\eta| < 0.5$

$1.00 < |\Delta\eta| < 1.25$

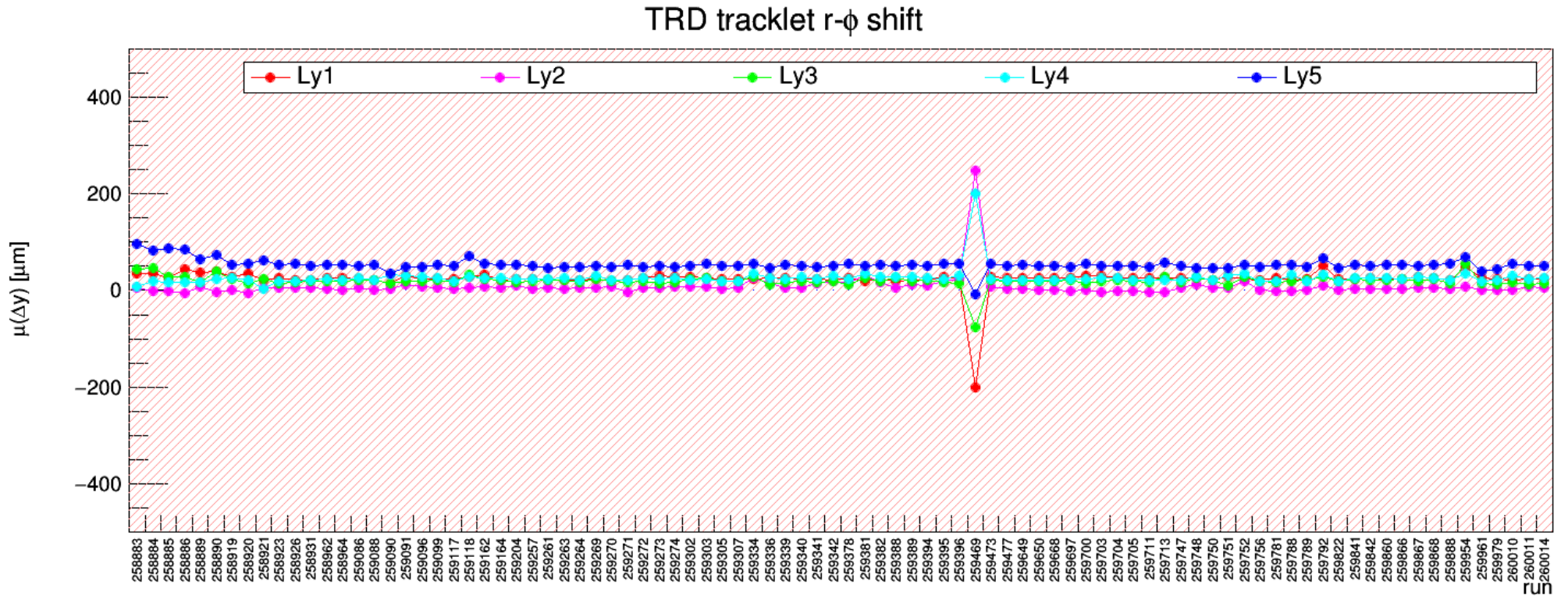


$0.5 < |\Delta\eta| < 0.75$

$1.25 < |\Delta\eta| < 1.50$



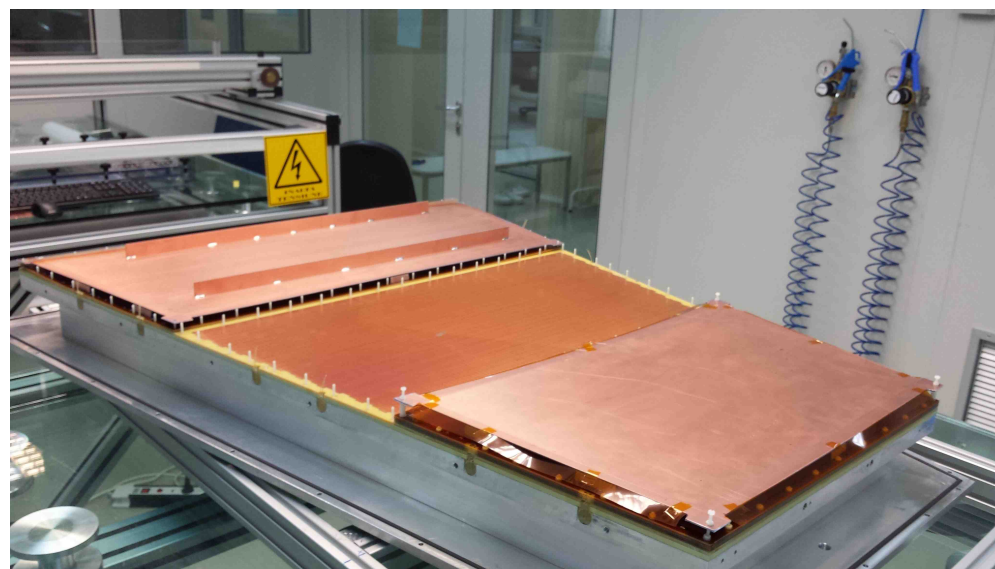
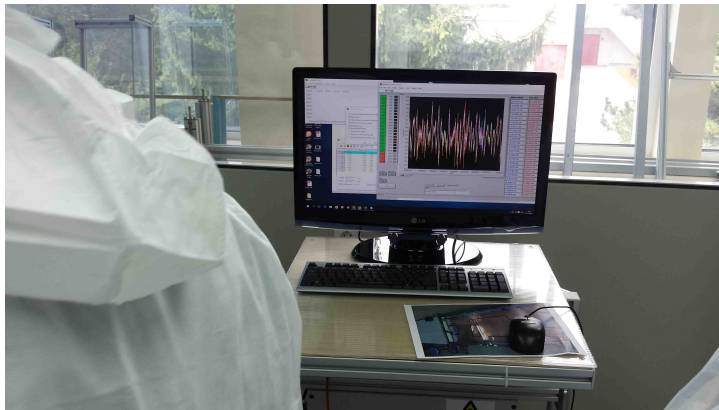
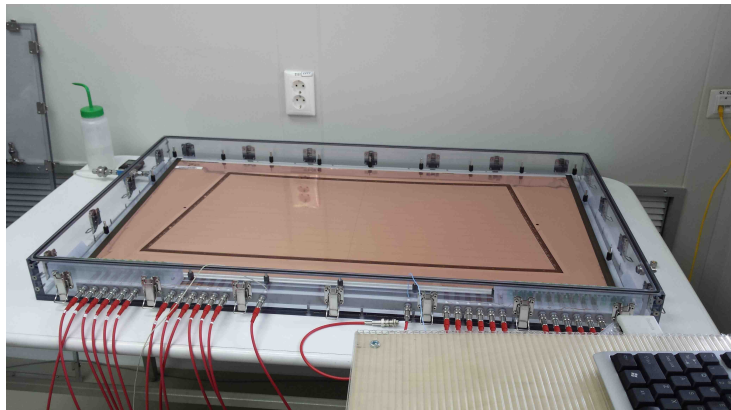
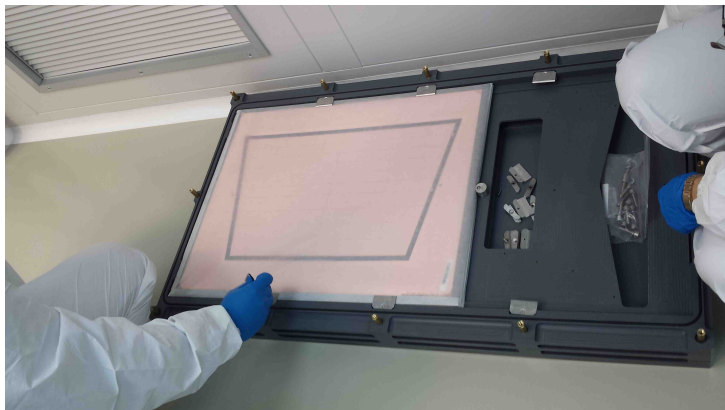
TRD-QA



An overview of the TPC-TRD tracklet to track shift in five layers of the ALICE-TRD

Presentations in 19 TRD weekly meetings

ALICE-TPC Upgrade HPD – October 5-6



October 12

Unsolder the broken resistor
From the spare OROC3 – G1



Solder the resistor from the
“burned” segment of the shorted OROC3-G1

Assembly of OROC3
finalized



Cleaning the test
housing box



Cleaning the inner side
of the OROC with the
Stack 1 & 3 assembled



Test box mounted on OROC

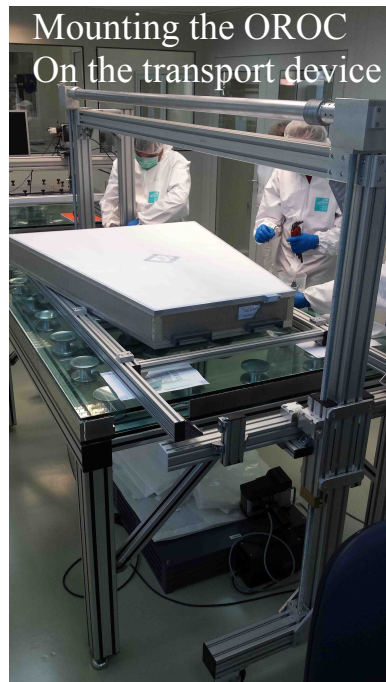


October 13

Cabling the shorts



Mounting the OROC
On the transport device



Transporting the OROC
to the TestLab



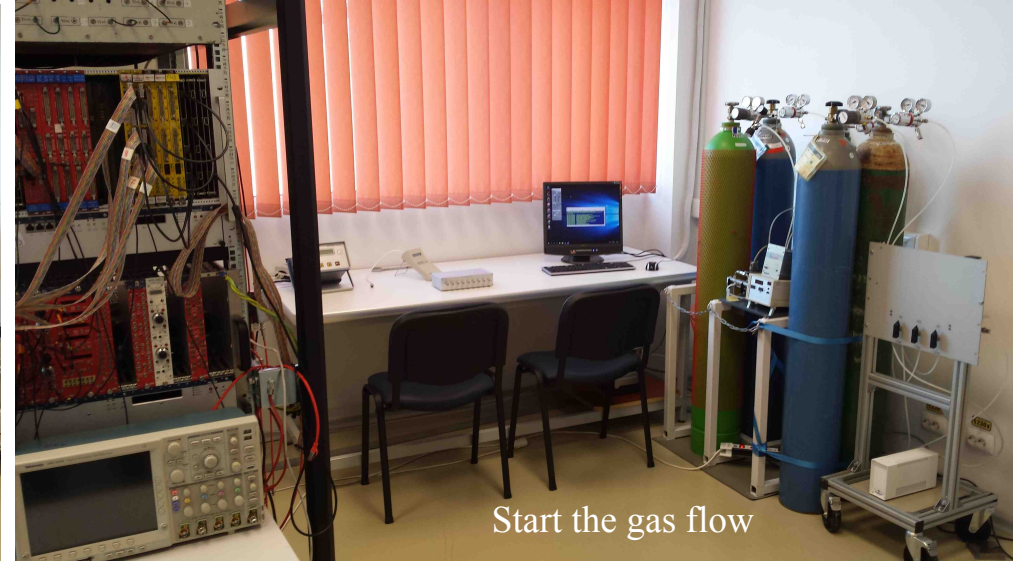
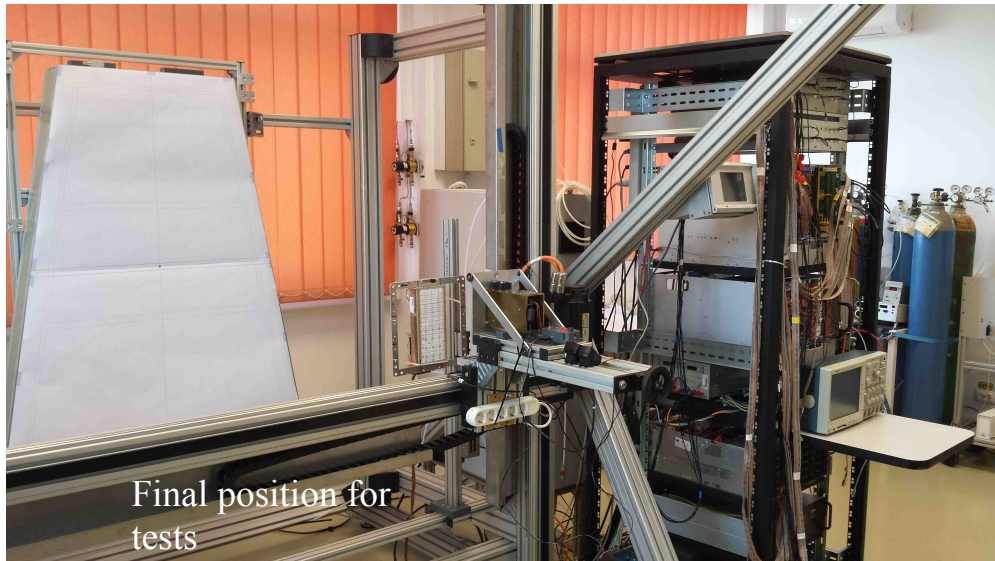
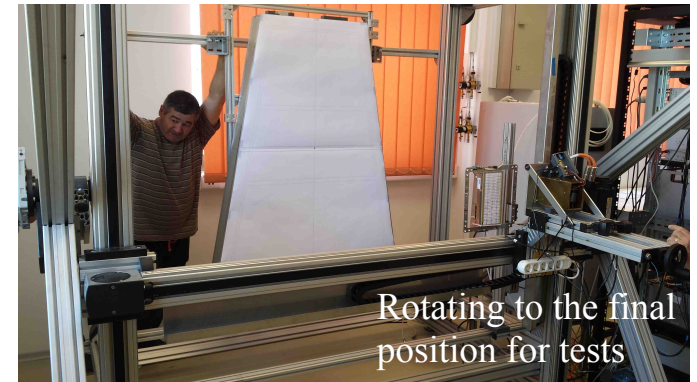
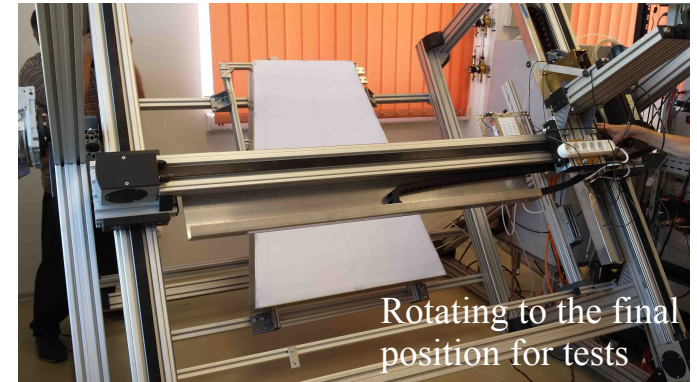
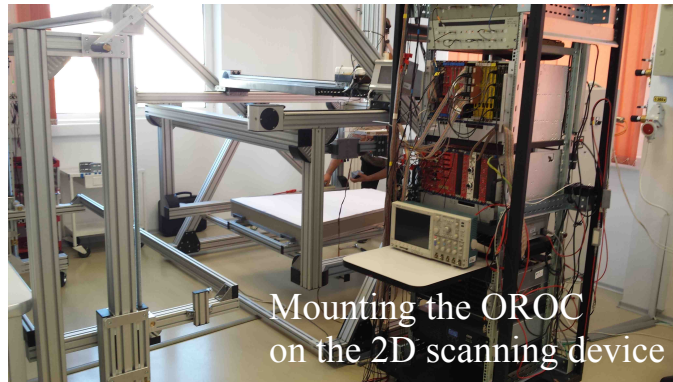
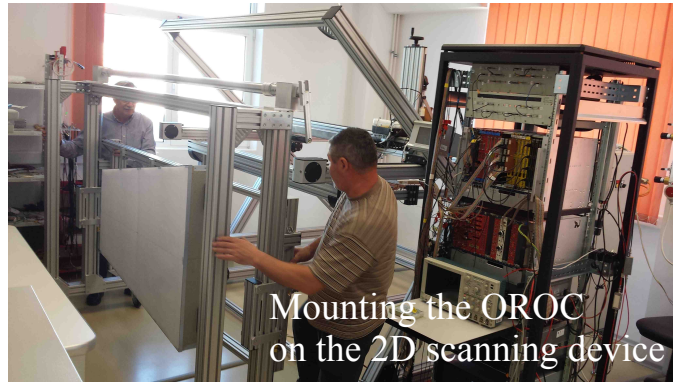
Transporting the OROC
to the TestLab



Transporting the OROC
to the TestLab

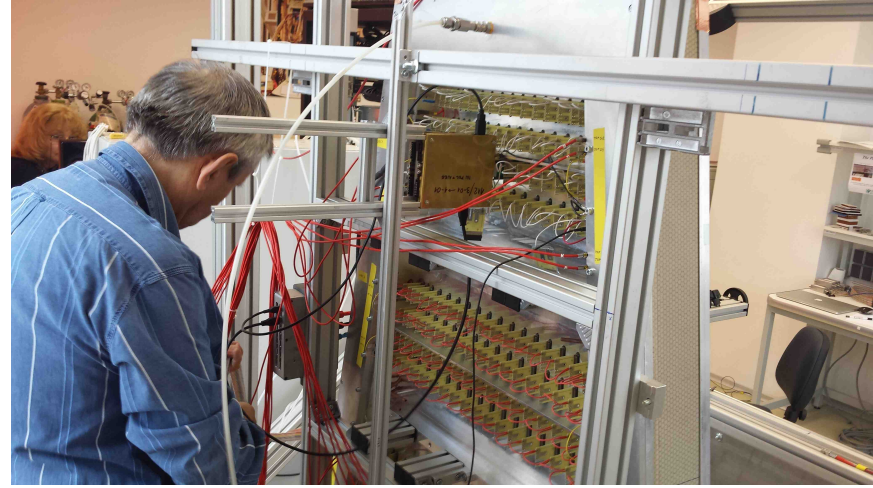


October 13

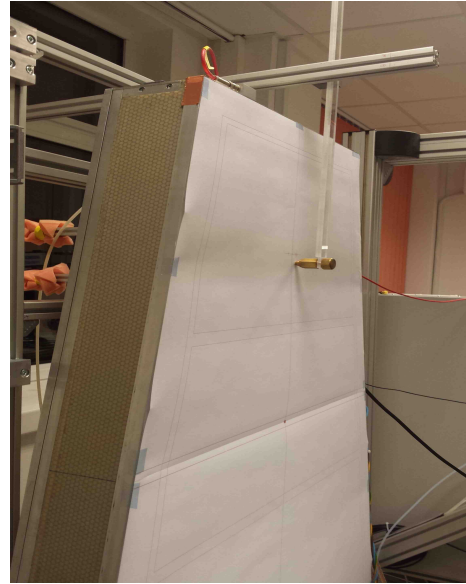


October 17

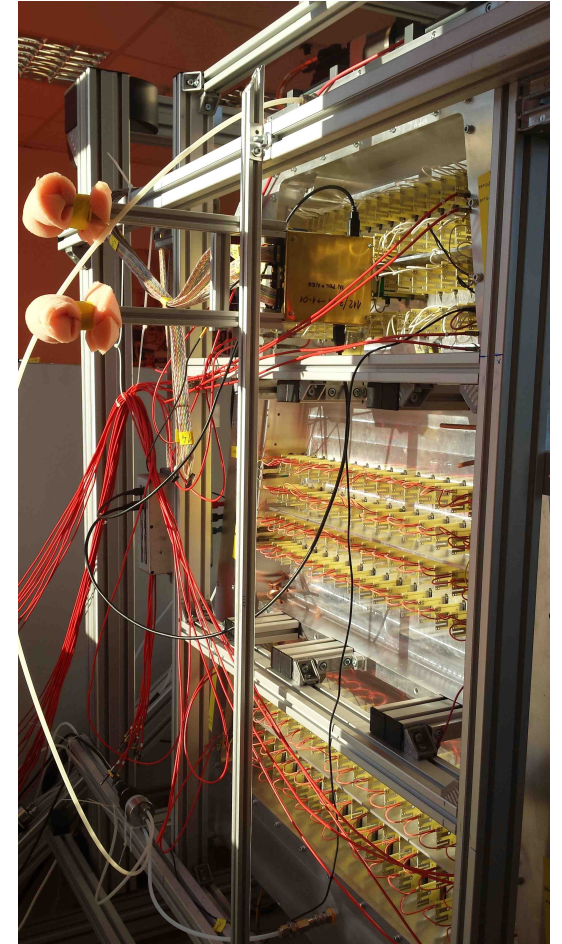
- Finalized HV cabling



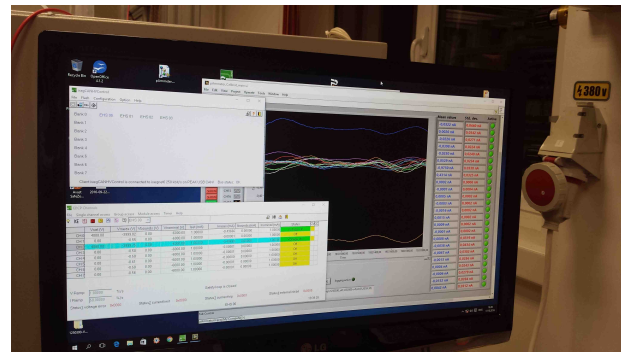
*- Finalized the coupling of FEE - FASP-02
(CBM Annual Report p.82 (2014))*



- Finalized ^{55}Fe holding device

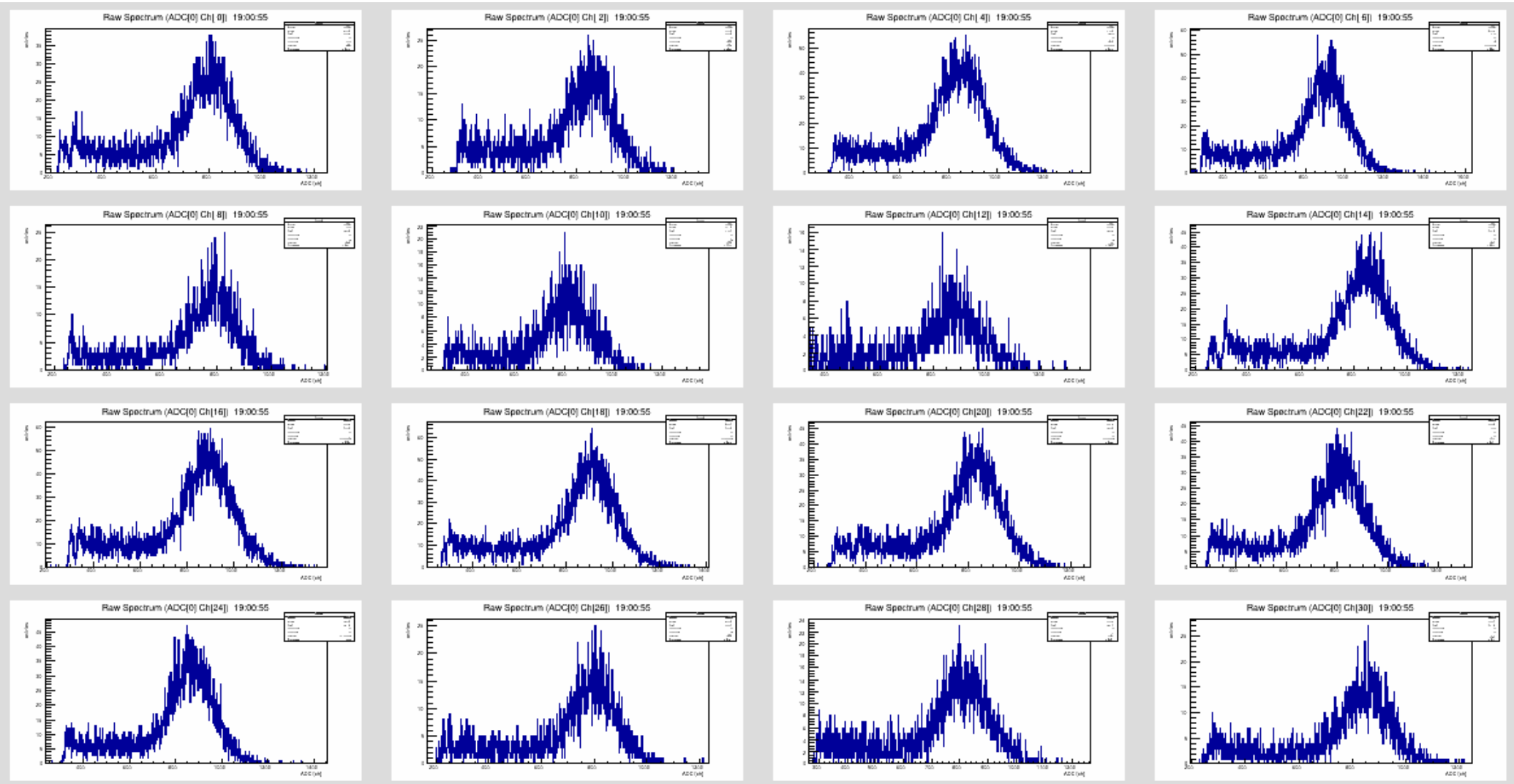


- HV conditioning



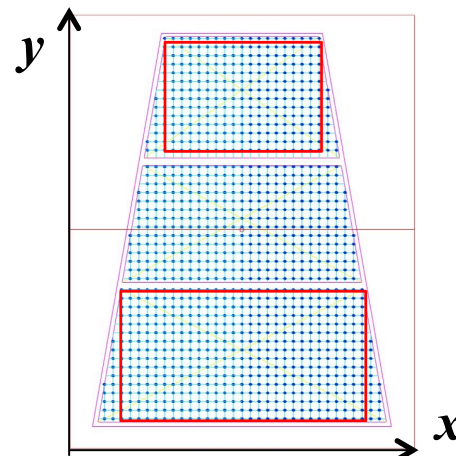
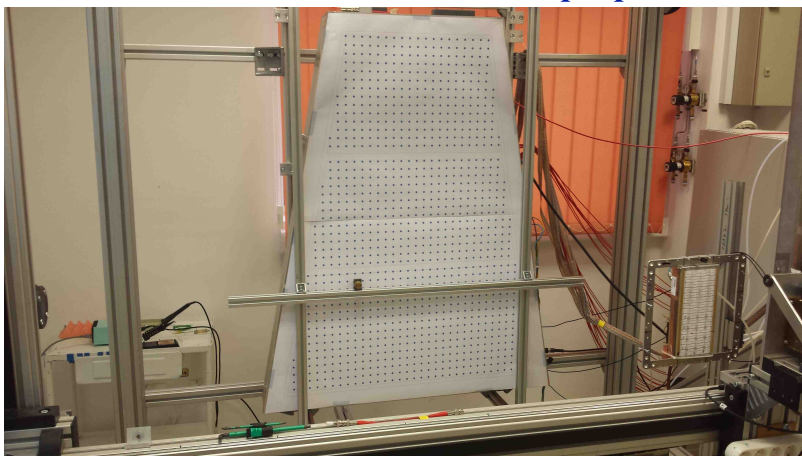
October 18

⁵⁵Fe spectra on 16 OROC3 pads

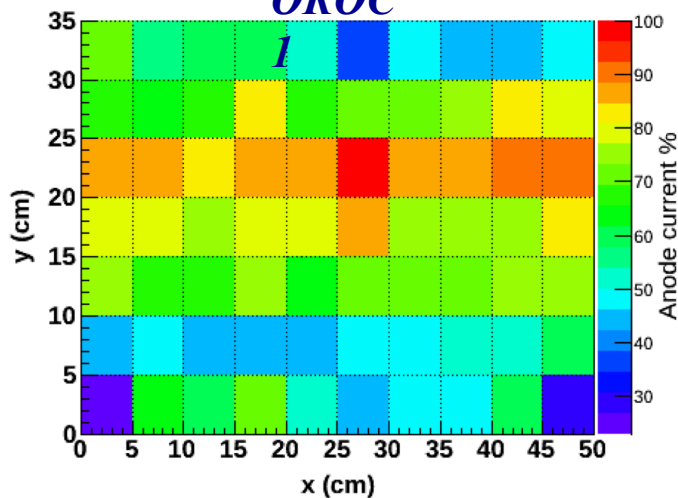


October 19

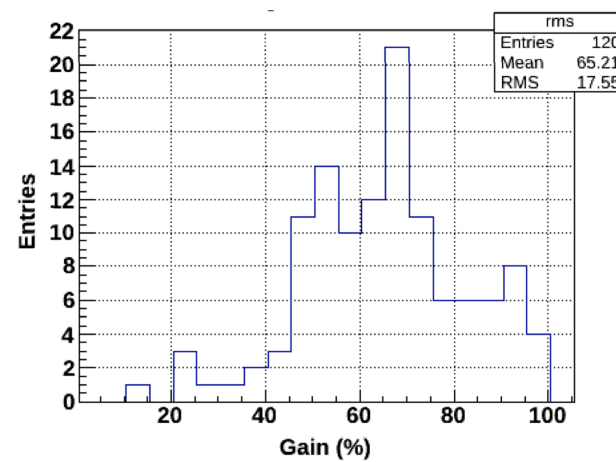
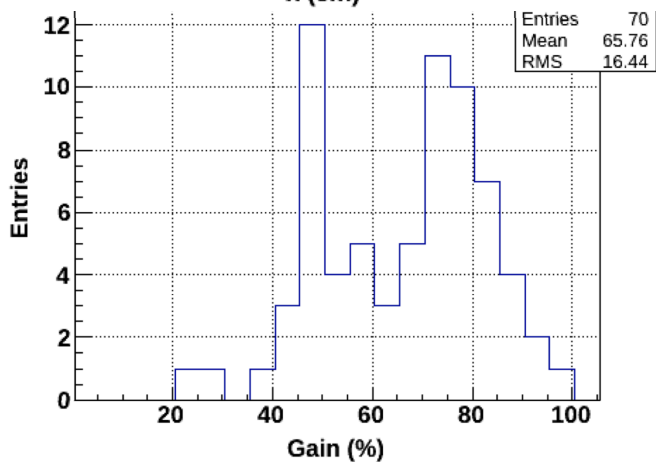
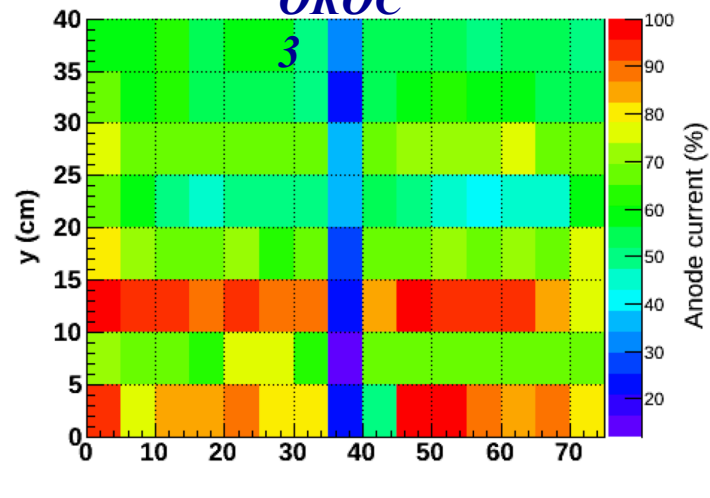
^{55}Fe I_{padplane} mapping 5x5 cm² grid



OROC



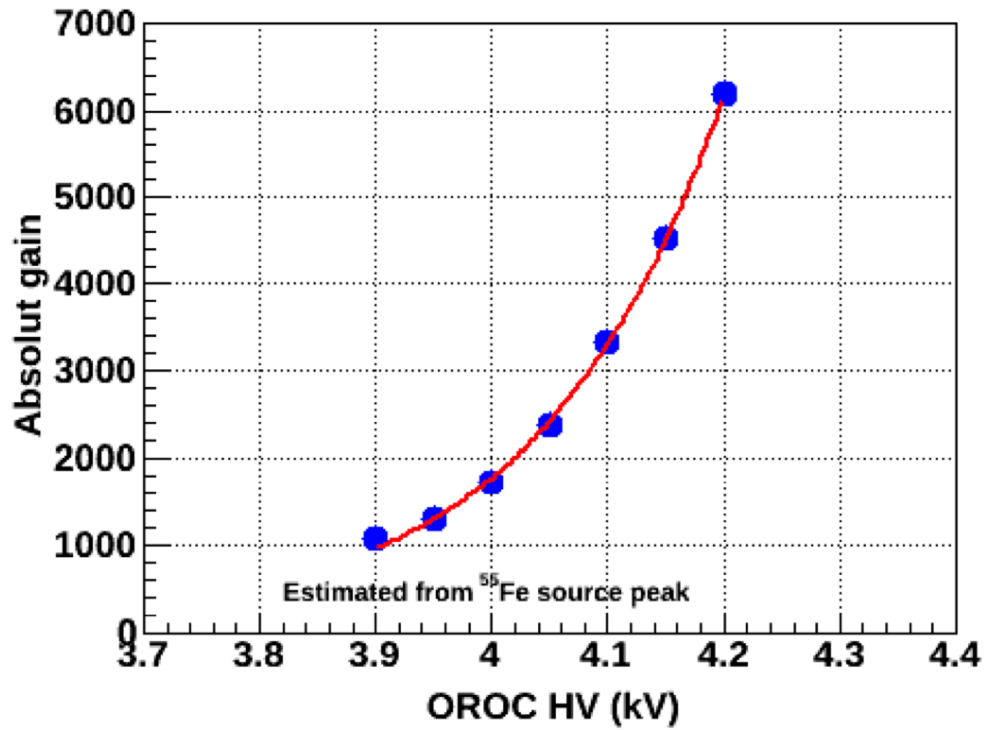
OROC



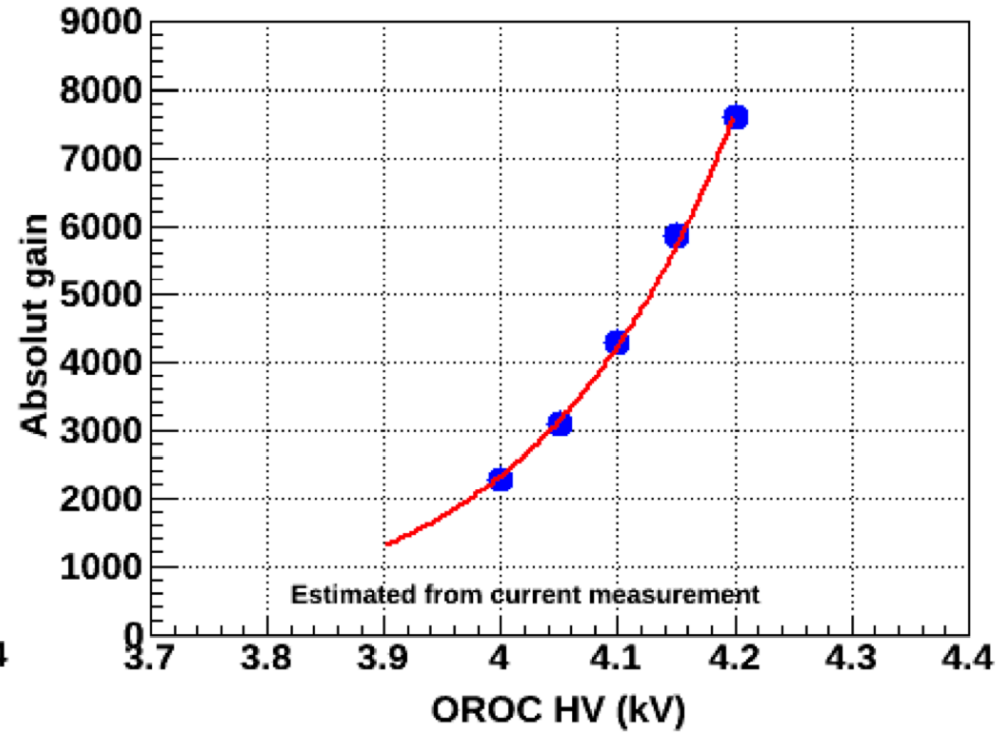
October 19-27

OROC gain scan

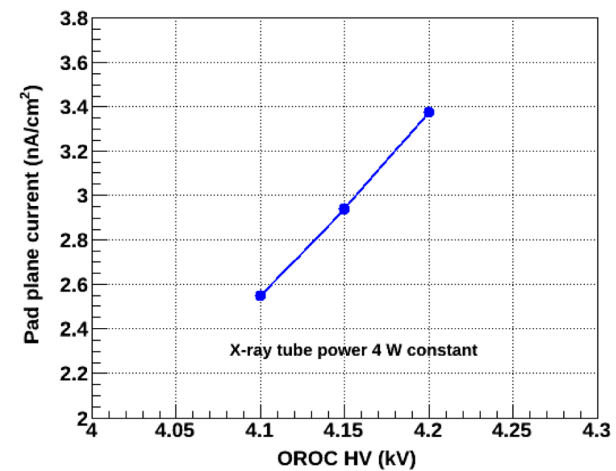
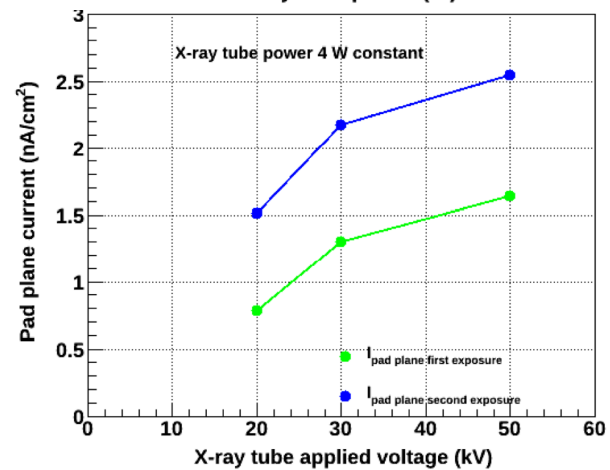
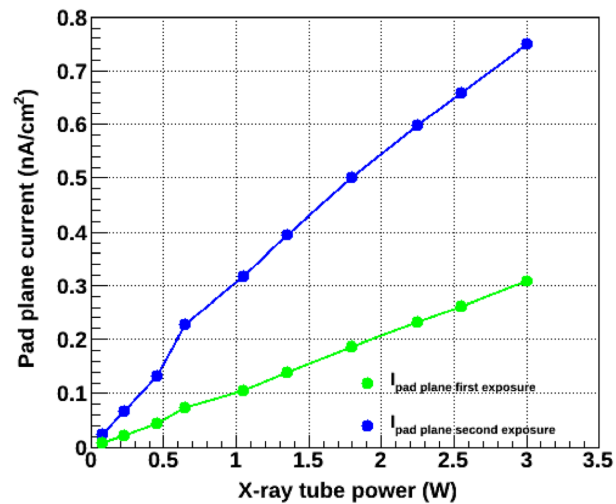
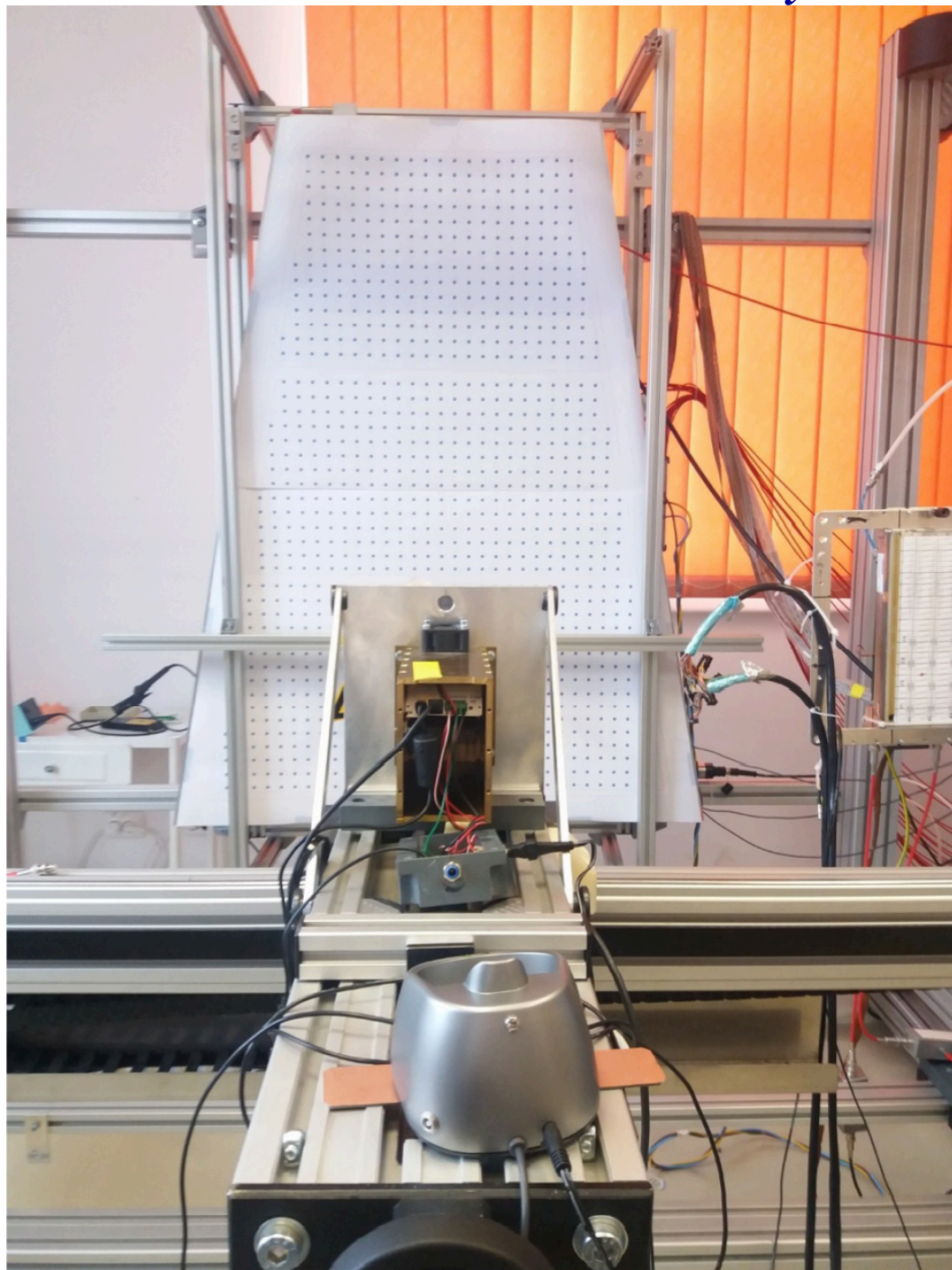
OROC3 gain scan



OROC3 rate gain

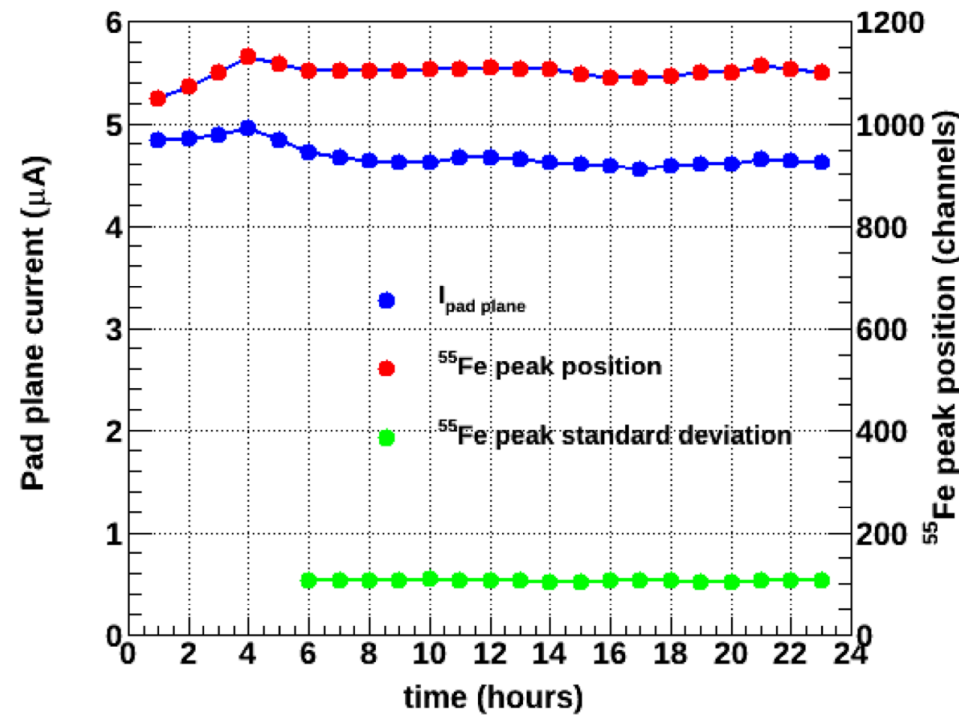
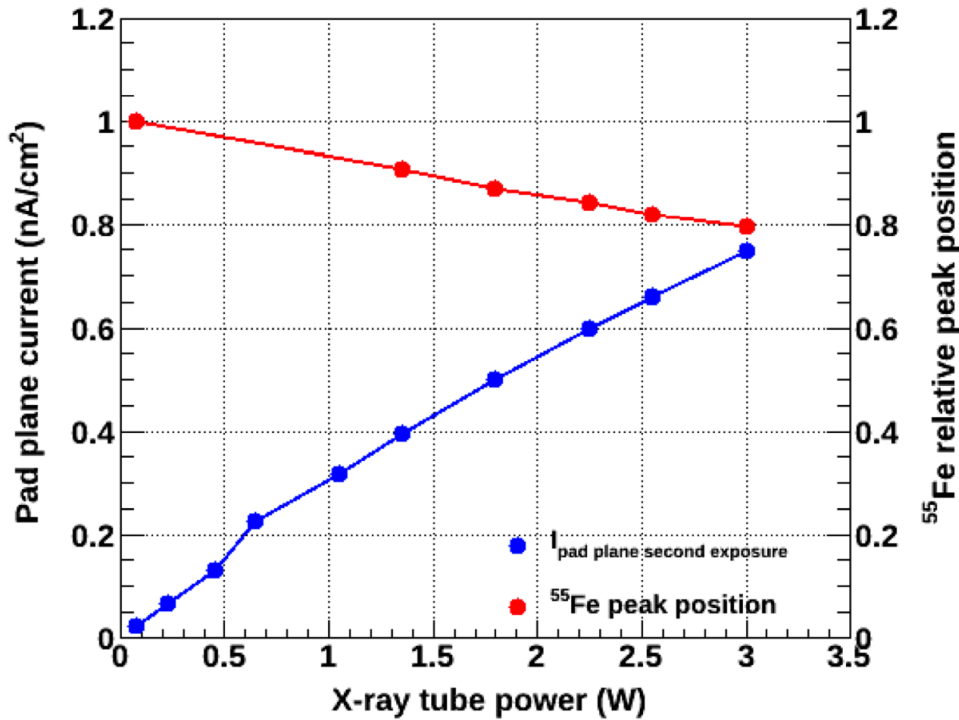


October 19-27
OROC X-ray tube exposure - rate scan

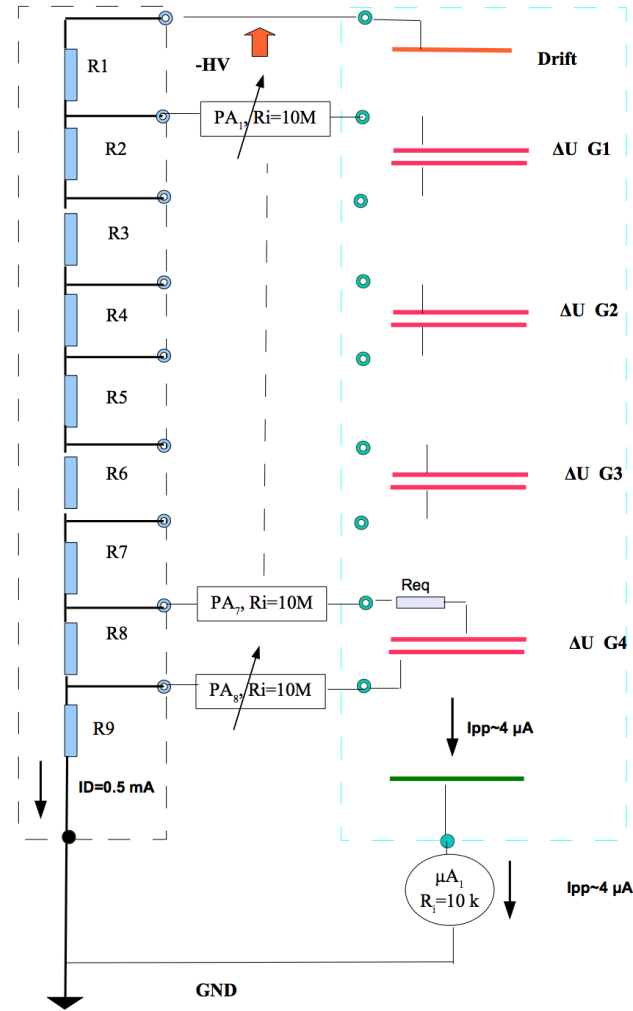


October 19-27

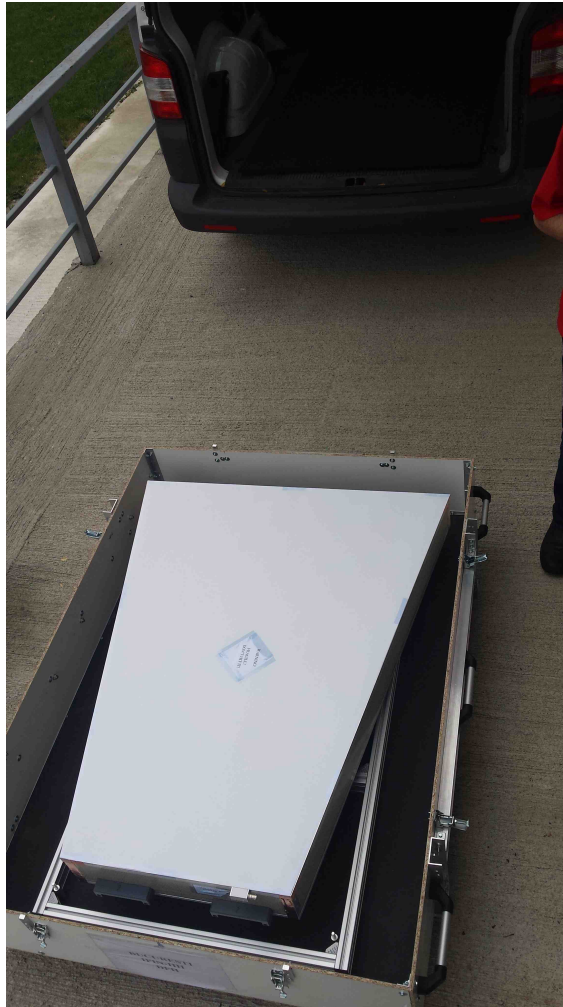
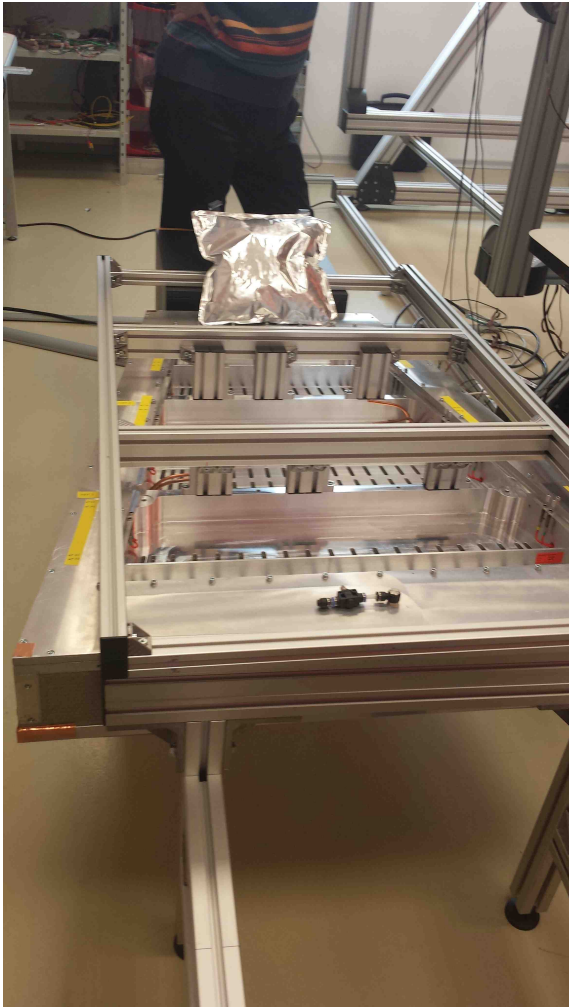
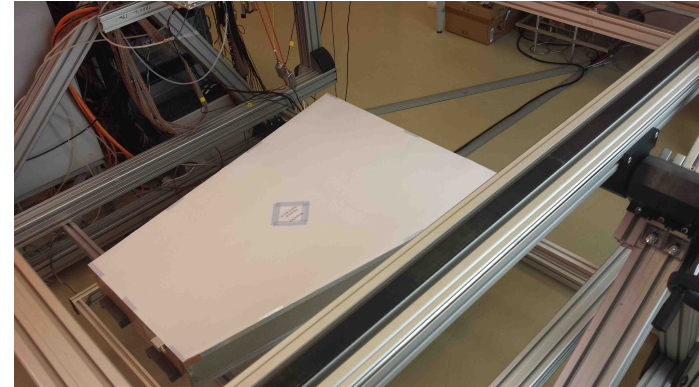
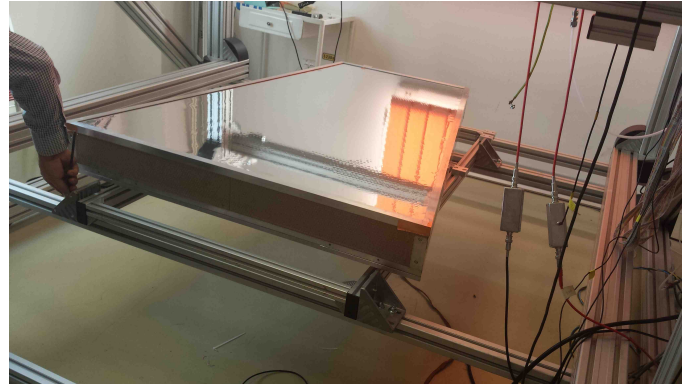
OROC X-ray tube exposure - rate scan



E (V/cm)	D (cm)	ΔU (V)	I (mA)	P (mW)	R (K Ω)	
400	1.1	440	0.5	220	880	R1-Drift
		270	0.5	135	540	R2 - T1
4000	0.2	800	0.5	400	1600	R3
		230	0.5	115	460	R4 - T2
4000	0.2	800	0.5	400	1600	R5
		288	0.5	144	576	R6 - T3
100	0.2	20	0.5	10	40	R7
		359	0.5	179.5	718	R8 - T4
4000	0.2	800	0.5	400	1600	R9- IND



October 28



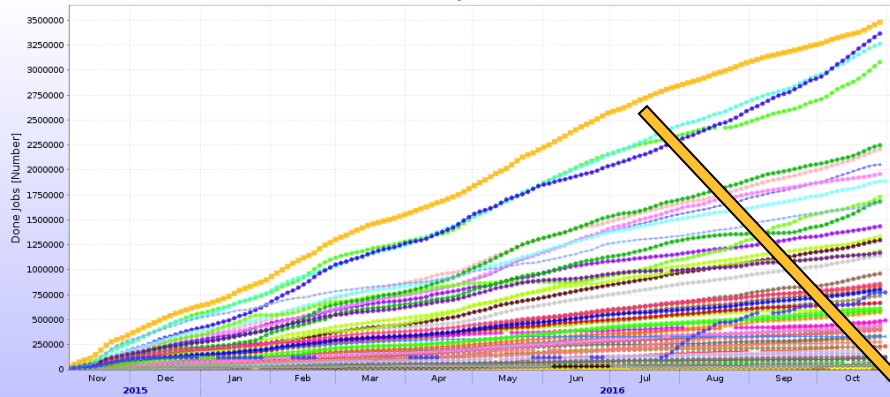
Computing

NIHAM Tier2 component of ALICE GRID

NAF (Niham Analysis Facility)

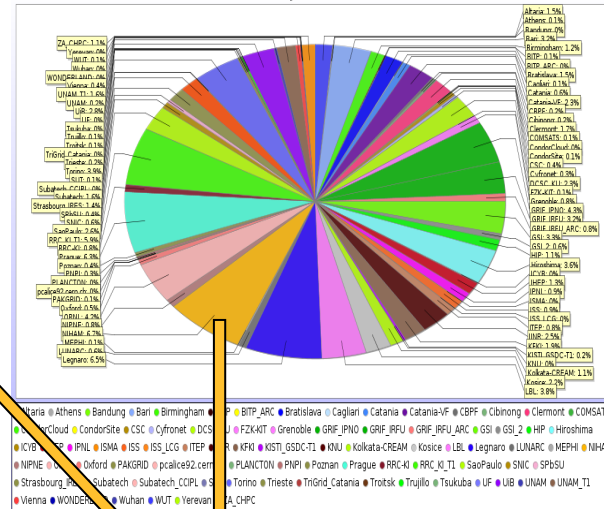


Done Jobs



- Altaria → Athens → Bandung → Bari → Birmingham → BITP → BITP_ARC → Bratislava → Cagliari → Catania → Catania-VF → CBPF → Cibirong → Clermont → COMSATS → CondorCloud → CondorSite → CSC → Cyfronet → DCSC_KU → FZK-KIT → Grenoble → GRIF_IPNO → GRIF_IRFU → GRIF_IRFU_ARC → GSI → GSI_2 → HIP → Hiroshima → ICYB → IHEP → IPNL → ISMA → ISS → ISS_LCG → ITEP → JINR → KFKI → KISTI_GSDC-TI → KNU → Kolkata-CREAM → Kosice → LBL → Legnaro → LUNARC → MEPHI → NIHAM → NIPNE → ORNL → ORNL_Titan → Oxford → PAKGRID → pcalice92.cern.ch → PLANCTON → PNPI → Poznan → Prague → RRC-KI → RRC_KI_T1 → SaoPaulo → SNIC → SPbSU → Strasbourg_IRES → Subatech → Subatech_CCIPL → SUT → Torino → Trieste → TriGrid_Catania → Troitsk → Trujillo → Tsukuba → UF → UIB → UNAM → UNAM_T1 → Vienna → WONDERLAND → Wuhan → WUT → Yerevan → ZA_CHPC

Done jobs statistics



6.7% of Tier2 contributions

Software development for an efficient and flexible local data analysis

Analysis - efficiencies, contaminations multiplicity & event shape - two-particles correlations

Papers and talks in the last year

Papers

- Particle identification in ALICE: a Bayesian approach, ALICE Collaboration, Eur. Phys. J. Plus 131 (2016) 168.
- Multiplicity dependence of charged pion, kaon, and (anti)proton production at large transverse momentum in p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV, ALICE Collaboration, Phys. Lett. B 760 (2016) 720
- Elliptic flow of electrons from heavy-flavour hadron decays at mid-rapidity in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV, ALICE Collaboration, JHEP 09 (2016) 028
- Multiplicity and transverse momentum evolution of charge-dependent correlations in pp, p-Pb, and Pb-Pb collisions at the LHC, ALICE Collaboration, Eur. Phys. J. C 76 (2016) 86
- Pseudorapidity dependence of the anisotropic flow of charged particles in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV, ALICE Collaboration, arXiv: 1605.02035
- Higher harmonic flow coefficients of identified hadrons in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV, ALICE Collaboration, arXiv:1606.06057 ; CERN-EP-2016-159
- Jet-like correlations with neutral pion triggers in pp and central Pb-Pb collisions at 2.76 TeV, ALICE Collaboration, arXiv:1608.07201; CERN-EP-2016-195
- D-meson production in p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV and in pp collisions at $\sqrt{s} = 7$ TeV, ALICE Collaboration, arXiv:1605.07569; CERN-EP-2016-127
- Correlated event-by-event fluctuations of flow harmonics in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV, ALICE Collaboration, arXiv: 1604.07663v1 CERN-EP-2016-102

+ co-authors to 32 ALICE papers

Conferences

- Multiplicity dependence of light flavour hadrons in small systems with the ALICE experiment HQ2016: Hot Quarks 2016 (South Padre Island, TX, USA, 2016-09-12)
- Multiplicity dependence of identified particle production in proton-proton collisions measured with ALICE, XXXVII Encontro Nacional de Física de Partículas e Campos (Natal, Rio Grande do Norte, Brasil, 2016-09-03)
- Multiplicity dependence of light flavor hadron production in proton-proton collisions measured with ALICE, XII Quark Confinement and the Hadron Spectrum (Thessaloniki, Greece, 2016-08-29)
- Strangeness and light flavor production as a function of multiplicity in proton-proton collisions measured with ALICE, 38th International Conference on High Energy Physics (Chicago, USA, 2016-08-03)
- Identified particle production in pp collisions at 7 and 13 TeV measured with ALICE Strangeness in Quark Matter 2016 (UC Berkeley, 2016-06-27)
- Multiplicity dependence of light flavour hadrons in small systems with the ALICE experiment at LHC, XV Edizione di IFAE - Incontri di Fisica delle Alte Energie (Genova, 2016-03-30)
- Multiplicity dependence of identified hadrons production in pp collisions at $\sqrt{s} = 7$ TeV in the ALICE at LHC, The 6th Asian Triangle Heavy-Ion Conference (India International Center, New Delhi, India, 2016-02-15)
- Search for collective phenomena in high multiplicity pp and p-Pb collisions with ALICE, QCD Challenges at the LHC: from pp to AA (Taxco Guerrero Mexico, 2016-01-18)
- From pp to AA ultrarelativistic collisions – invited talk, M. Petrovici, C. Andrei, I. Berceanu, A. Hergelegiu, A. Pop, M. Tarzila CARPATHIAN SUMMER SCHOOL OF PHYSICS 2016 Exotic Nuclei and Nuclear / Particle Astrophysics (VI). Physics with small accelerators, June 26 - July 09, 2016, Sinaia, Romania
- Multiplicity dependence of identified particle production in pp collisions - Search for collective phenomena (presentation including results from ALICE, ATLAS and CMS Collaborations) Cristian Andrei, LHC days in Split 2016, 19-24 September, Split, Croatia

Papers and talks in the last year

ALICE PAGs and PWG

- Charged hadron pT-spectra versus multiplicity pp 7 TeV, Spectra weekly meeting, 18 January 2016, A. Herghelegiu, C. Andrei, I. Berceanu, A. Bercuci, M. Petrovici, A. Pop
- Charged particle spectra 7 TeV pp versus mult, SPECTRA Weekly Meeting, 1 February 2016, A. Herghelegiu, C. Andrei, I. Berceanu, A. Bercuci, M. Petrovici, A. Pop
- Discussion on Spectra Modification, PID Spectra in pp-vs-mult: PC Meeting, 8 February 2016, M.Petrovici, C. Andrei, I. Berceanu, A. Bercuci, A. Herghelegiu, A. Pop
- Update on charged hadron pT-spectra, SPECTRA Weekly Meeting, 22 February 2016, A. Herghelegiu, C. Andrei, I. Berceanu, A. Bercuci, M. Petrovici, A. Pop
- Discussion on Spectra Modification, PID Spectra in pp-vs-mult: PC Meeting, 22 February 2016, M.Petrovici, C. Andrei, I. Berceanu, A. Bercuci, A. Herghelegiu, A. Pop
- Charged hadron pT-spectra versus multiplicity, SPECTRA Weekly Meeting, 29 February 2016, A. Herghelegiu, C. Andrei, I. Berceanu, A. Bercuci, M. Petrovici, A. Pop
- Discussion on Spectral Shapes and Boost-like Features, PID Spectra in pp-vs-mult: PC Meeting, 19 April 2016, M.Petrovici, C. Andrei, I. Berceanu, A. Bercuci, A. Herghelegiu, A. Pop
- Update on the Inclusive Charged Analysis, PID Spectra in pp-vs-mult: PC Meeting, 30 August 2016, A. Herghelegiu, C. Andrei, I. Berceanu, A. Bercuci, M. Petrovici, A. Pop
- Multiplicity dependence of identified particle production in pp collisions (LHC days in Split), ALICE Hard Probes 2016 rehearsals, 16 September 2016, C. Andrei
- Core-corona studies, PID Spectra in pp-vs-mult: PC Meeting, 20 September 2016, M.Petrovici, C. Andrei, I. Berceanu, A. Bercuci, A. Herghelegiu, A. Pop
- The core-corona approach, PWG-LF meeting, 3 October 2016, M.Petrovici, C. Andrei, I. Berceanu, A. Bercuci, A. Herghelegiu, A. Pop
- Analysis update: charged particles pp @ 7 TeV, Spectra weekly meeting, 10 October 2016, A. Herghelegiu, C. Andrei, I. Berceanu, A. Bercuci, M. Petrovici, A. Pop
- Unidentified Analysis Update, PID Spectra in pp-vs-mult: PC Meeting, 21 October 2016, A. Herghelegiu, C. Andrei, I. Berceanu, A. Bercuci, M. Petrovici, A. Pop
- Core-corona studies, PID Spectra in pp-vs-mult: PC Meeting, 21 October 2016, M.Petrovici, C. Andrei, I. Berceanu, A. Bercuci, A. Herghelegiu, A. Pop

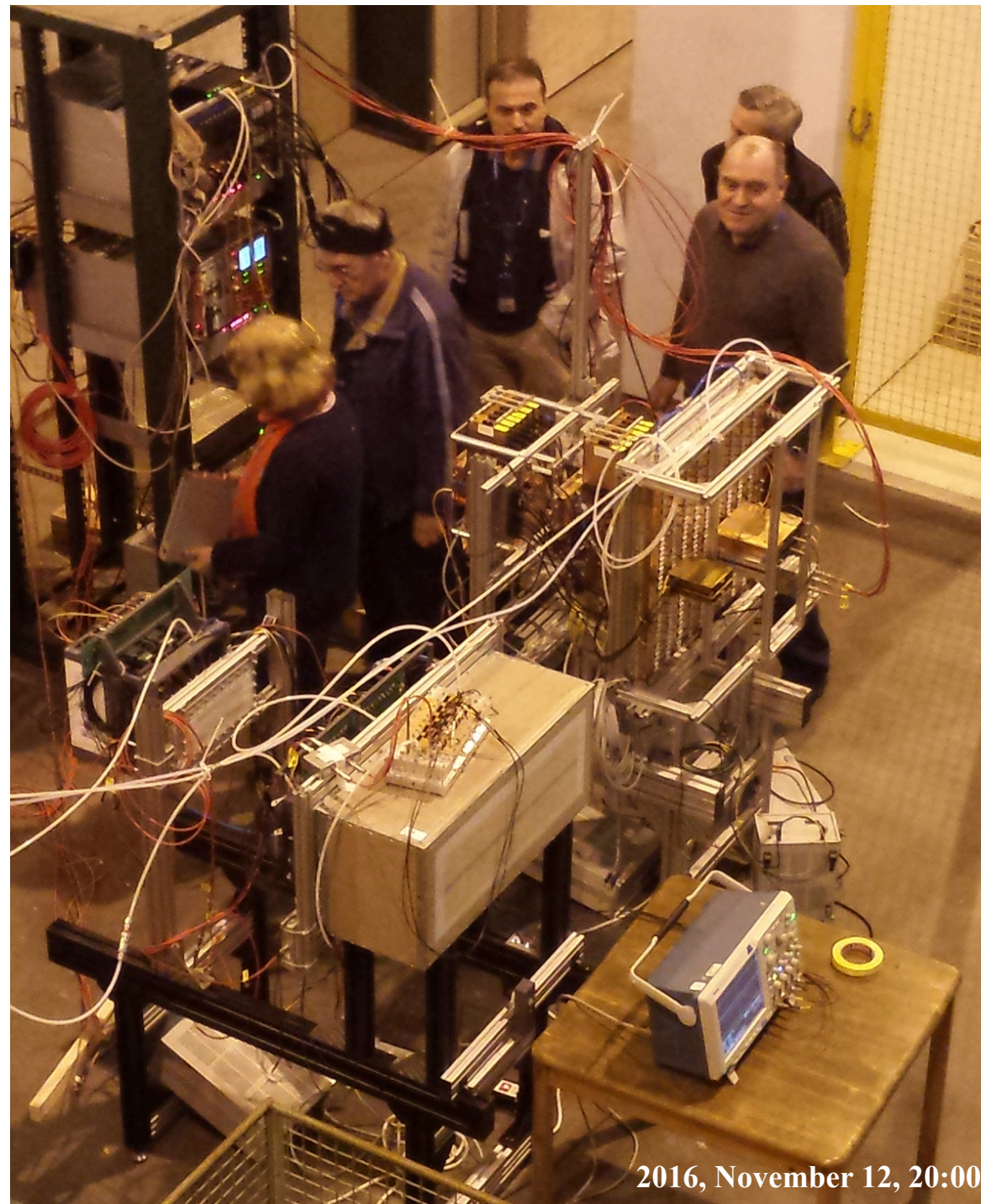
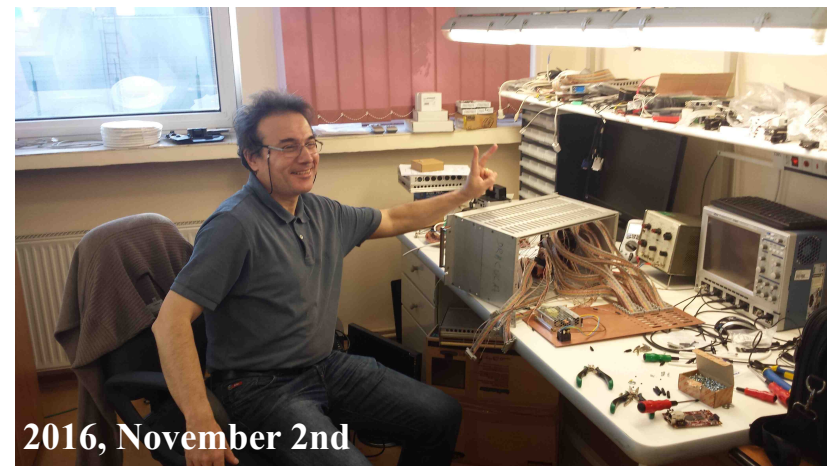
TPC U&P

- Status in Bucharest, TPC Upgrade planning meeting: pre-production, 4 February 2016, M. Petris, M. Petrovici
- Status in Bucharest, TPC Upgrade plenary meeting, 7 June 2016, M. Petrovici
- In the last period regular presentations in the weekly TPCU&P meetings

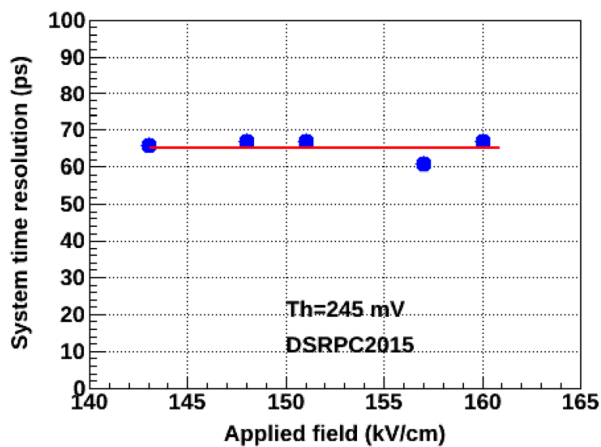
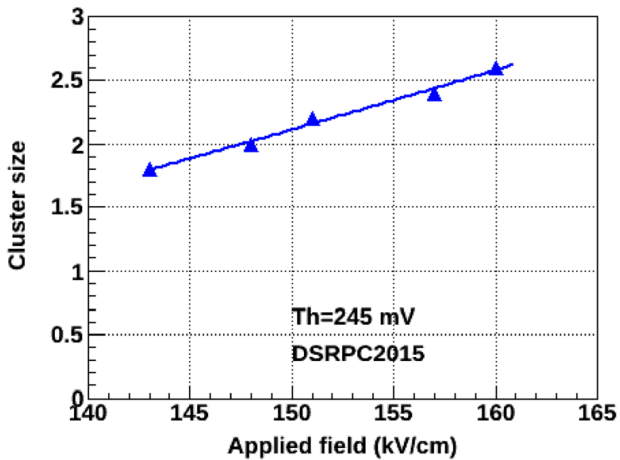
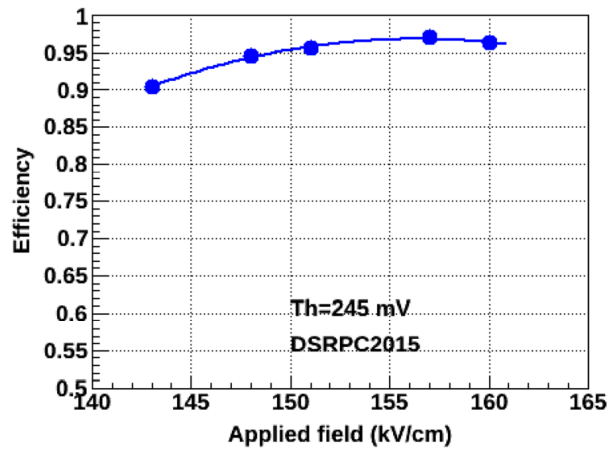
TRD-QA

- QA of latest productions, TRD Weekly Meeting, 18 January 2016, M. Tarzila
- TRD, ALICE QA meeting, 19 January 2016, M. Tarzila
- RM Report, RC weekly meeting, 12 April 2016, M. Tarzila
- TRD, ALICE QA meeting, 26 April 2016, M. Tarzila
- TRD, ALICE QA meeting, 3 May 2016, M. Tarzila
- TRD, ALICE QA meeting, 11 May 2016, M. Tarzila
- TRD, ALICE QA meeting, 17 May 2016, M. Tarzila
- Status Report on TRD QA, TRD Weekly Meeting, 27 May 2016, M. Tarzila
- TRD, ALICE QA meeting, 24 May 2016, M. Tarzila
- TRD, ALICE QA meeting, 8 June 2016, M. Tarzila
- TRD, ALICE QA meeting, 14 June 2016, M. Tarzila
- TRD, ALICE QA meeting, 21 June 2016, M. Tarzila
- TRD, ALICE QA meeting, 28 June 2016, M. Tarzila
- TRD, ALICE QA meeting, 5 July 2016, M. Tarzila
- TRD, ALICE QA meeting, 13 July 2016, M. Tarzila
- TRD, ALICE QA meeting, 27 July 2016, M. Tarzila

Further activities

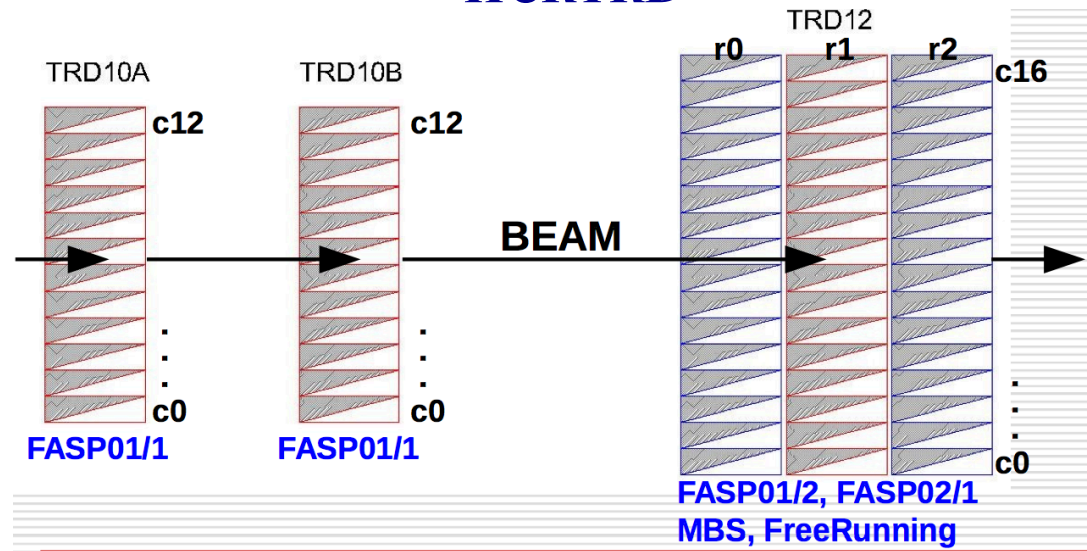


HCRMGMSRPC

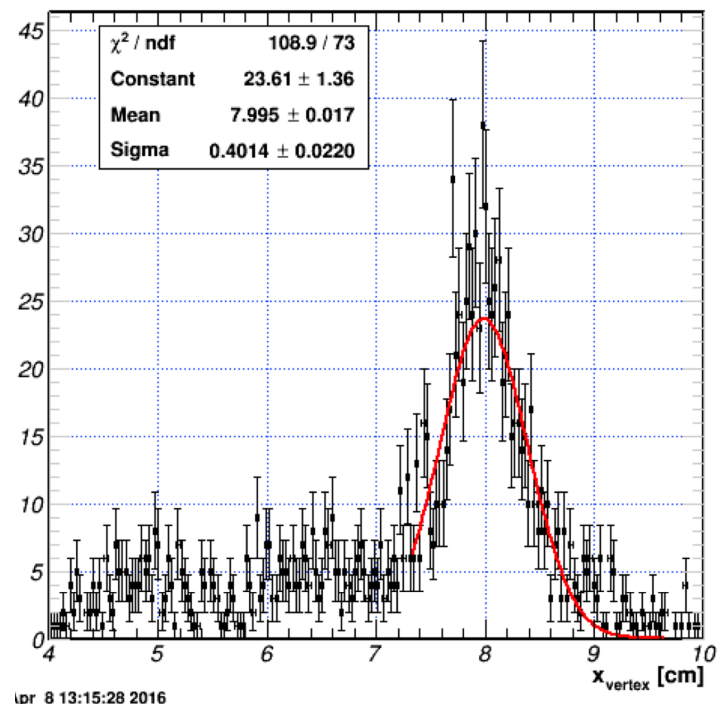


Further activities

HCRTD



Interaction point reconstruction



Outreach

Summer Student Program



Winners of International Physics Olympiad



Outreach

- **“Engineering Excellence in Basic Research”**
M. Petrovici, DHBW Mosbach , February 4, 2016



Ihr Weg zur DHBW Mosbach



Veranstaltungsort:
 Audimax der Dualen Hochschule Baden-Württemberg Mosbach,
 Lohrtalweg 10, 74821 Mosbach (Gebäude E)

Kontakt:
 Jutta Heidecke
 Lohrtalweg 10, 74821 Mosbach
 Tel.: 06261 939-446
 jutta.heidecke@mosbach.dhbw.de
 www.mosbach.dhbw.de

Einladung zum
 Studium Generale



Alle Informationen finden Sie auch unter:
www.mosbach.dhbw.de/events

„Engineering Excellence in Basic Research“
 Referent: Prof. Dr. Mihai Petrovici
 Donnerstag, 04.02.2016, 18 Uhr
 Audimax der Dualen Hochschule, Gebäude E

Campus Mosbach

- **ALICE Matters - 31 August 2016**
- **Numerous visits of Romanian and foreign delegations, gymnasium pupils, students of the Romanian Physics Faculties network**
- **Presentation and Posters on the occasion of Romania becoming full member at CERN**



IFIN-HH Hadron Physics Department



- **Poster at Researchers Night, September 2016**

Scientific objectives for the next year

- **Event shape selection based on different event shape global variables**
- **Detailed studies of the dependence of corrections applied to raw spectra on the event shape global variables and their selection power**
- **Two particle correlation studies as a function of charged particle multiplicity and event shape**
- **Substantial statistics will be generated based on HIJING and EPOS models and comparison with experimental results**
- **Phenomenological estimates of Core-Corona effects in p-p collisions**
- **Contribution to the detector operation in Run2**
- **TPC-OROC assembling and tests**
- **Operating NIHAM data center – component of ALICE GRID at its standard efficiency**
- **Outreach activities**
- **Summer Student Program**

They are the main actors !



Thank you !

Hydrogen Physics Department	
Building A	Building B
Address: 100-101	Address: 100-100
Phone: 0238-201-201	Phone: 0238-201-200
Fax: 0238-201-202	Fax: 0238-201-203
E-mail: hpd@nipne.ro	E-mail: hpd@nipne.ro
Website: www.nipne.ro	Website: www.nipne.ro

<http://niham.nipne.ro>