

PROF. ARSHAD AHMAD

Sr. Assistant Professor
Department of Physics
GDC Boys Anantnag

Mobile: 9622723629

Email: arshedmasoodi@gmail.com

PROFESSIONAL PROFILE

Dedicated academic professional serving as Sr. Assistant Professor in the Department of Physics at GDC Boys Anantnag. Possesses an M.Phil. in Physics from Aligarh Muslim University and an M.Sc. in Physics from the University of Kashmir. Committed to excellence in teaching, academic development, research, and student mentoring.

EDUCATIONAL QUALIFICATIONS

S. No.	Qualification	University / Board	Year
1	M.Phil.	Aligarh Muslim University	2008
2	M.Sc.	University of Kashmir	2005
3	B.Sc.	University of Kashmir	2002
4	12th	J&K Board of School Education (JKBOSE)	1998

$K^*(892)0$ and $\Phi\sqrt{s_{NN}}=2.76$ TeV /
ALICE Collaboration

The yields of the $K^*(892)0$ and $\Phi\sqrt{s_{NN}}=2.76$ TeV through their hadronic decays using the ALICE detector. The measurements are performed in multiple centrality intervals at mid-rapidity ($|y|<0.5$) in the transverse-momentum ranges $0.3 < p_T < 5$ GeV/c for the

$K^*(892)0$ and $0.5 < p_T < 5$ GeV/c for
 the Φ [...]

[arXiv:1404.0495](#); [CERN-PH-EP-2014-060](#);
[CERN-PH-EP-2014-060](#).- Geneva : CERN,
 2015-02-17 - 26 p. - Published in : *Phys. Rev.*
C 91 (2015) 024609 **APS Open Access**
article: PDF; **Fulltext:** [arXiv:1404.0495](#) - **P**
DF; [arXiv1404.0495](#) - **PDF**; **External**
link: Preprint
[Detailed record](#)

3. Measurement of quarkonium production at forward rapidity in pp collisions at $\sqrt{s} = 7$ TeV / [Abelev, Betty](#)

[Bezverkhny](#) (LLNL, Livermore) ; [Abramyan, Armenuhi](#) (Yerevan Phys. Inst.) ; [Adam, Jaroslav](#) (Prague, Tech. U.) ; [Adamova, Dagmar](#) (Rez, Nucl. Phys. Inst.) ; [Aggarwal, Madan Mohan](#) (Panjab U.) ; [Agnello, Michelangelo](#) (INFN, Turin ; Turin Polytechnic) ; [Agostinelli, Andrea](#) (INFN, Bologna ; Bologna U.) ; [Agrawal, Neelima](#) (Indian Inst. Tech., Mumbai) ; [Ahammed, Zubayer](#) (Calcutta, VECC) ; [Ahmad, Nazeer](#) (Aligarh Muslim U.) *et al.* /ALICE

The inclusive production cross sections at forward rapidity of $J/\psi\psi\psi\psi\sqrt{s} = 7$ TeV with the ALICE detector at the LHC. The analysis is based on a data sample corresponding to an integrated luminosity of 1.35 pb^{-1} [...]

[arXiv:1403.3648](#); [CERN-PH-EP-2014-042](#); [CERN-PH-EP-2014-042](#).- Geneva : CERN, 2014-08-13 - 21 p. - Published in : *Eur. Phys. J. C 74 (2014) 2974* **Article from SCOAP3: [scoap3-fulltext](#) - PDF; [scoap](#) - PDF; Draft (restricted): PDF; Fulltext: [CERN-PH-EP-2014-042](#) - PDF; [arXiv:1403.3648](#) - PDF; [arXiv1403.3648](#) - PDF; Springer Open Access article: PDF**;
[Detailed record](#)

4. Performance of the ALICE Experiment at the CERN LHC / ALICE Collaboration

ALICE is the heavy-ion experiment at the CERN Large Hadron Collider. The experiment continuously took data during the first physics campaign of the machine from fall 2009 until early 2013, using proton and lead-ion beams. [...]

[arXiv:1402.4476](#); [CERN-PH-EP-2014-031](#); [CERN-PH-EP-2014-031](#).- Geneva : CERN, 2014 - 120 p. - Published in : *Int. J. Mod. Phys. A 29 (2014) 1430044* **Draft (restricted): PDF; Fulltext: [CERN-PH-EP-2014-031](#) - PDF; [arXiv:1402.4476](#) - PDF; [arXiv1402.4476](#) - PDF**;
World Scientific Open Access article: PDF; **External link: Preprint**
[Detailed record](#)

5. Production of charged pions, kaons and protons at large transverse momenta in pp and Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV / ALICE Collaboration

Transverse momentum spectra of $\pi^\pm$, $K^\pm$ and $p(\bar{p})$ up to $p_T = 20$ GeV/c at mid-rapidity, $|y| \leq 0.8$, in pp and Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV have been measured using the ALICE detector at the LHC. At intermediate p_T (2-8 GeV/c) an enhancement of the proton-to-proton ratio, $(p + \bar{p})/(\pi^+ + \pi^-)$ [...]

arXiv:1401.1250; CERN-PH-EP-2013-230; CERN-PH-EP-2013-230.- Geneva : CERN, 2014-07-07 - 11 p. - Published in : *Phys. Lett. B* 736 (2014) 196-207 **Article from**

SCOAP3: [PDF](#); Elsevier Open Access

article: [PDF](#); Fulltext: arXiv:1401.1250 - [PDF](#); CERN-PH-EP-2013-230 - [PDF](#); arXiv1401.1250 - [PDF](#);

[Detailed record](#)

6. Centrality, rapidity and transverse momentum dependence of the J/ψ suppression in Pb-Pb collisions at $\sqrt{s_{NN}}$ / ALICE Collaboration

The inclusive J/ψ nuclear modification factor

$(R_{AA}\sqrt{s_{NN}}e^+e^-)$ decay channel at mid-rapidity $|y| < 0.8$ and as a function of centrality, transverse momentum and rapidity in the $\mu^+\mu^-$ decay channel at forward-rapidity $2.5 < y < 4$. The J/ψ yields measured in Pb-Pb are suppressed compared to those in pp collisions scaled by the number of binary collisions. The R_{AA} integrated over a centrality range corresponding to 90% of the inelastic Pb-Pb cross section is 0.72 ± 0.06 (stat.) ± 0.10 (syst.) at mid-rapidity and 0.57 ± 0.01 (stat.) ± 0.09 (syst.) at forward-rapidity. At low transverse momentum, significantly larger values of R_{AA} are measured at forward-rapidity compared to measurements at lower energy. These features suggest that a contribution to the J/ψ yield originates from charm quarks (re)combination in the deconfined partonic medium..

arXiv:1311.0214; CERN-PH-EP-2013-203; CERN-PH-EP-2013-203.- Geneva : CERN, 2014-06-27 - 14 p. - Published in : *Phys. Lett. B* 743 (2014) 314-327 **Article from**

SCOAP3: [PDF](#); Elsevier Open Access

article: [PDF](#); Fulltext: arXiv:1311.0214 - [PDF](#); arXiv1311.0214 - [PDF](#);

[Detailed record](#)

7. Two- and three-pion quantum statistics correlations in Pb-Pb collisions at $\sqrt{s_{NN}}$ / ALICE Collaboration

Correlations induced by quantum statistics are sensitive to the spatio-temporal extent as well as dynamics of particle emitting sources in heavy-ion collisions. In addition, such correlations can be used to search for the presence of a coherent component of pion production. [...]

arXiv:1310.7808; CERN-PH-EP-2013-201; CERN-PH-EP-2013-201.- Geneva : CERN, 2014-02-26 - 19 p. - Published in : *Phys. Rev. C* 89 (2014) 024911 **APS Open Access**

article: [PDF](#); Fulltext: [arXiv:1310.7808](#) - [PDF](#); [arXiv1310.7808](#) - [PDF](#); External link: [Preprint](#)

[Detailed record](#)

8. J/ψ production and nuclear effects in p-Pb collisions

at $\sqrt{s_{NN}}$ / ALICE Collaboration

Inclusive J/ψ production has been studied with the ALICE detector in p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV at the CERN LHC, in the rapidity domains $2.03 < y_{CMS} < 3.53$ and $-4.46 < y_{CMS} < -2.96$, down to zero transverse momentum. The J/ψ measurement is performed in the Muon Spectrometer through the $\mu^+ \mu^-$ decay mode. [...]

[arXiv:1308.6726](#); [CERN-PH-EP-2013-163](#); [ALICE-PUBLIC-2013-002](#); [CERN-PH-EP-2013-163](#).- Geneva : CERN, 2014 - 26 p. - Published in : [JHEP 02 \(2014\) 073](#) Article from SCOAP3: [PDF](#); Draft (restricted): [PDF](#); Fulltext: [CERN-PH-EP-2013-](#)

[163](#) - [PDF](#); [arXiv:1308.6726](#) - [PDF](#); [arXiv1308.6726](#) - [PDF](#); S pringer Open Access article: [PDF](#);

[Detailed record](#)

9. Multiplicity Dependence of Pion, Kaon, Proton and Lambda Production in p-Pb Collisions at $\sqrt{s_{NN}} = 5.02$ TeV / ALICE Collaboration

In this Letter, comprehensive results on $\pi^\pm$, $K^\pm$, $K_S^0 p(\bar{p})$ and $\Lambda(\bar{\Lambda})$ production at mid-rapidity ($0 < y_{CMS} < 0.5$) in p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV, measured by the ALICE detector at the LHC, are reported. The transverse momentum distributions exhibit a hardening as a function of event multiplicity, which is stronger for heavier particles. [...]

[arXiv:1307.6796](#); [CERN-PH-EP-2013-135](#); [CERN-PH-EP-2013-135](#).- Geneva : CERN, 2014-01-20 - 14 p. - Published in : [Phys. Lett. B 728 \(2014\) 25-38](#) Article from SCOAP3: [PDF](#); Elsevier Open Access article: [PDF](#); Fulltext: [arXiv1307.6796](#) - [PDF](#); [arXiv:1307.6796](#) - [PDF](#); External link: [Rivet analyses reference](#)

[Detailed record](#)

10. Multi-strange baryon production at mid-rapidity in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV / ALICE Collaboration

We correct an error affecting the plotting of Fig. 5 in Phys. [...]

[arXiv:1307.5543](#); [CERN-PH-EP-2013-134](#); [CERN-PH-EP-2013-134](#).- Geneva : CERN, 2014-01-20 - 12 p.

Article from SCOAP3: [PDF](#); Corrigendum: [PDF](#); Elsevier Open Access

article: [PDF](#); Fulltext: [arXiv1307.5543](#) - [PDF](#); [arXiv:1307.5543](#) - [PDF](#); [S0370269313009544](#) - [XML](#); External link: [Rivet analyses reference](#)

[Detailed record](#)

11. **K_S^0 and Λ production in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV / ALICE Collaboration**

The ALICE measurement of K_S^0 and Λ production at mid-rapidity in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV is presented. The transverse momentum (p_T range from 0.4 GeV/c (0.6 GeV/c for Λ [...])

[arXiv:1307.5530](#); [CERN-PH-EP-2013-132](#); [CERN-PH-EP-2013-132](#).- Geneva : CERN, 2013-11-25 - 10 p. - Published in : *Phys. Rev. Lett.* **111** (2013) 222301 **APS Open Access article**: [PDF](#); **Fulltext**: [arXiv:1307.5530](#) - [PDF](#); [arXiv:1307.5530](#) - [PDF](#); **External link**: [Preprint](#)

[Detailed record](#)

12. **Multiplicity dependence of two-particle azimuthal correlations in pp collisions at the LHC / ALICE Collaboration**

Collaboration

We present the measurements of particle pair yields per trigger particle obtained from di-hadron azimuthal correlations in pp collisions at $\sqrt{s}$ [...]

[arXiv:1307.1249](#); [CERN-PH-EP-2013-107](#); [CERN-PH-EP-2013-107](#).- Geneva : CERN, 2013 - 42 p. - Published in : *JHEP* **09** (2013) 049 **Fulltext**: [CERN-PH-EP-2013-107](#) - [PDF](#); [arXiv:1307.1249](#) - [PDF](#); [arXiv:1307.1249](#) - [PDF](#); **Springer Open Access article**: [PDF](#); **External link**: [Preprint](#)

[Detailed record](#)

13. **Multiplicity dependence of the average transverse momentum in pp, p-Pb, and Pb-Pb collisions at the LHC / ALICE Collaboration**

The average transverse momentum $\langle p_T N_{ch} \rangle$ was measured in p-Pb collisions at a collision energy per nucleon-nucleon pair $\sqrt{s_{NN}} = 5.02$ TeV and in pp collisions at collision energies of $\sqrt{s} = 0.9, 2.76$, and 7 TeV in the kinematic range $0.15 < p_T < 10.0$ GeV/c and $|\eta| \sqrt{s_{NN}} = 2.76$ TeV at similar charged-particle multiplicities. [...]

[arXiv:1307.1094](#); [CERN-PH-EP-2013-111](#); [CERN-PH-EP-2013-111](#).- Geneva : CERN, 2013 - 10 p. - Published in : *Phys. Lett. B* **727** (2013) 371-380 **Elsevier Open Access article**: [PDF](#); **Fulltext**: [CERN-PH-EP-2013-111](#) - [PDF](#); [arXiv:1307.1094](#) - [PDF](#); [arXiv:1307.1094](#) - [PDF](#); **External link**: [Preprint](#)

[Detailed record](#)

14. **Energy Dependence of the Transverse Momentum Distributions of Charged Particles in pp Collisions Measured by ALICE / ALICE Collaboration**

Differential cross sections of charged particles in inelastic pp collisions as a function of p_T have been measured at $\sqrt{s} = 0.9, 2.76$ and 7 TeV at the LHC. The p_T spectra are compared to NLO-pQCD calculations. [...]

[arXiv:1307.1093](#); [CERN-PH-EP-2013-109](#); [CERN-PH-EP-2013-109](#).- Geneva : CERN, 2013-12-06 - 18

p. - Published in : [Eur. Phys. J. C 73 \(2013\) 2662](#) Fulltext: [arXiv:1307.1093](#) - [PDF](#); [arXiv1307.1093](#) - [PDF](#) ; Springer Open Access article: [PDF](#); External link: [Preprint](#)
[Detailed record](#)

15. **Long-range angular correlations of π , K and p in p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV / ALICE Collaboration**
Angular correlations between unidentified charged trigger particles and various species of charged associated particles (unidentified particles, pions, kaons, protons and antiprotons) are measured by the ALICE detector in p-Pb collisions at a nucleon-nucleon centre-of-mass energy of 5.02 TeV in the transverse-momentum range $0.3 < p_T < 4$ GeV/c. The correlations expressed as associated yield per trigger particle are obtained in the pseudorapidity range $|\eta_{lab}| \dots$
[arXiv:1307.3237](#); [CERN-PH-EP-2013-115](#); [CERN-PH-EP-2013-115](#).- Geneva : CERN, 2013-10-07 - 14 p. - Published in : [Phys. Lett. B 726 \(2013\) 164-177](#) Elsevier Open Access article: [PDF](#); Fulltext: [arXiv:1307.3237](#) - [PDF](#); [arXiv1307.3237](#) - [PDF](#); External link: [Preprint](#)
[Detailed record](#)
16. **Directed flow of charged particles at mid-rapidity relative to the spectator plane in Pb-Pb collisions at $\sqrt{s_{NN}}$ / ALICE Collaboration**
The directed flow of charged particles at midrapidity is measured in Pb-Pb collisions at $\sqrt{s_{NN}} v_1^{odd} v_1^{even} \dots$
[arXiv:1306.4145](#); [CERN-PH-EP-2013-100](#); [CERN-PH-EP-2013-100](#).- Geneva : CERN, 2013-12-06 - 11 p. - Published in : [Phys. Rev. Lett. 111 \(2013\) 232302](#) APS Open Access article: [PDF](#); Draft (restricted): [PDF](#); Fulltext: [CERN-PH-EP-2013-100](#) - [PDF](#); [arXiv:1306.4145](#) - [PDF](#);
[Detailed record](#)
17. **Centrality dependence of the pseudorapidity density distribution for charged particles in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV / ALICE Collaboration**
We present the first wide-range measurement of the charged-particle pseudorapidity density distribution, for different centralities (the 0-5%, 5-10%, 10-20%, and 20-30% most central events) in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV at the LHC. The measurement is performed using the full coverage of the ALICE detectors, $-5.0 < \eta < 5.5$, and employing a special analysis technique based on collisions arising from LHC 'satellite' bunches. [...]
[arXiv:1304.0347](#); [CERN-PH-EP-2013-045](#); [CERN-PH-EP-2013-045](#).- Geneva : CERN, 2013-11-04 - 13 p. - Published in : [Phys. Lett. B 726 \(2013\) 610-622](#) Draft (restricted): [PDF](#); Elsevier Open Access article: [PDF](#); Fulltext: [CERN-PH-EP-2013-045](#) - [PDF](#); [arXiv:1304.0347](#) - [PDF](#); External link: [Rivet analyses reference](#)
[Detailed record](#)

18. **J/ψ Elliptic Flow in Pb-Pb Collisions at $\sqrt{s_{NN}}$ / ALICE Collaboration**
 We report on the first measurement of inclusive J/ψ elliptic flow, $v_2\sqrt{s_{NN}}=2.76$ TeV in the rapidity range $2.5 < y < 4.0$. [...] [arXiv:1303.5880](#); [CERN-PH-EP-2013-042](#); [CERN-PH-EP-2013-042](#).- Geneva : CERN, 2013-10-17 - 11 p. - Published in : [Phys. Rev. Lett. 111 \(2013\) 162301](#) **APS Open Access article**: [PDF](#); **Draft (restricted)**: [PDF](#); **Fulltext**: [CERN-PH-EP-2013-042 - PDF](#); [arXiv:1303.5880 - PDF](#); **External link**: [Preprint](#)
[Detailed record](#)
19. **Centrality dependence of $\pi\sqrt{s_{NN}}=2.76$ TeV / ALICE Collaboration**
 In this paper measurements are presented of $\pi^\pm, K^\pm \bar{p}$ production at mid-rapidity ($|y| < 0.5$), in Pb–Pb collisions at $\sqrt{s_{NN}}=2.76$ TeV as a function of centrality. The measurement covers the transverse momentum ($p_T\pi$ [...]) [arXiv:1303.0737](#); [CERN-PH-EP-2013-019](#); [CERN-PH-EP-2013-019](#).- Geneva : CERN, 2013-10-15 - 23 p. - Published in : [Phys. Rev. C 88 \(2013\) 044910](#) **APS Open Access article**: [PDF](#); **Draft (restricted)**: [PDF](#); **Fulltext**: [CERN-PH-EP-2013-019 - PDF](#); [arXiv:1303.0737 - PDF](#); **External link**: [Preprint](#)
[Detailed record](#)
20. **Charge correlations using the balance function in Pb-Pb collisions at $\sqrt{s_{NN}}=2.76$ TeV / ALICE Collaboration**
 In high–energy heavy–ion collisions, the correlations between the emitted particles can be used as a probe to gain insight into the charge creation mechanisms. In this article, we report the first results of such studies using the electric charge balance function in the relative pseudorapidity ($\Delta\eta$) and azimuthal angle ($\Delta\phi$) in Pb–Pb collisions at $\sqrt{s_{NN}}=2.76$ TeV with the ALICE detector at the Large Hadron Collider. [...] [arXiv:1301.3756](#); [CERN-PH-EP-2012-371](#); [CERN-PH-EP-2012-371](#).- Geneva : CERN, 2013-06-25 - 37 p. - Published in : [Phys. Lett. B 723 \(2013\) 267-279](#) **Draft (restricted)**: [PDF](#); **Elsevier Open Access article**: [PDF](#); **Fulltext**: [CERN-PH-EP-2012-371 - PDF](#); [arXiv:1301.3756 - PDF](#); **External link**: [Preprint](#)
[Detailed record](#)
21. **Centrality determination of Pb-Pb collisions at $\sqrt{s_{NN}}=2.76$ TeV with ALICE / ALICE Collaboration**
 This publication describes the methods used to measure the centrality of inelastic Pb–Pb collisions at a center-of-mass energy of 2.76 TeV per colliding nucleon pair with ALICE. The centrality is a key parameter in the study of the properties of QCD matter at extreme temperature and energy density, because it is directly related to the initial overlap region of the colliding nuclei. [...]

[arXiv:1301.4361](#); [CERN-PH-EP-2012-368](#); [CERN-PH-EP-2012-368](#).- Geneva : CERN, 2013-10-15 - 22 p. - Published in : [Phys. Rev. C 88 \(2013\) 044909](#) **APS Open Access article**: [PDF](#); **Draft (restricted)**: [PDF](#); **Fulltext**: [CERN-PH-EP-2012-368 - PDF](#); [arXiv:1301.4361 - PDF](#); **External link**: [Preprint](#)

[Detailed record](#)

22. Long-range angular correlations on the near and away side in p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV / ALICE Collaboration

Angular correlations between charged trigger and associated particles are measured by the ALICE detector in p-Pb collisions at a nucleon-nucleon centre-of-mass energy of 5.02 TeV for transverse momentum ranges within $0.5 < p_{T,assoc} < p_{T,trig} < 4$ GeV/c. The correlations are measured over two units of pseudorapidity and full azimuthal angle in different intervals of event multiplicity, and expressed as associated yield per trigger particle. [...]

[arXiv:1212.2001](#); [CERN-PH-EP-2012-359](#); [CERN-PH-EP-2012-359](#).- Geneva : CERN, 2013-02-12 - 22 p. - Published in : [Phys. Lett. B 719 \(2013\) 29-41](#) **Draft (restricted)**: [PDF](#); **Elsevier Open Access article**: [PDF](#); **Fulltext**: [CERN-PH-EP-2012-359 - PDF](#); [arXiv:1212.2001 - PDF](#); **External link**: [DURHAM](#)

[Detailed record](#)

23. Pseudorapidity density of charged particles p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV / ALICE Collaboration

The charged-particle pseudorapidity density measured over 4 units of pseudorapidity in non-single-diffractive (NSD) p-Pb collisions at a centre-of-mass energy per nucleon pair $\sqrt{s_{NN}} = 5.02$ TeV is presented. The average value at midrapidity is measured to be 16.81 ± 0.71 (syst.), which corresponds to 2.14 ± 0.17 (syst.) per participating nucleon. [...]

[arXiv:1210.3615](#); [CERN-PH-EP-2012-307](#); [CERN-PH-EP-2012-307](#).- Geneva : CERN, 2013-01-18 - 10 p. - Published in : [Phys. Rev. Lett. 110 \(2013\) 032301](#) **APS Open Access article**: [PDF](#); **Draft (restricted)**: [PDF](#); **Fulltext**: [arXiv:1210.3615 - PDF](#); [CERN-PH-EP-2012-307 - PDF](#); **External link**: [DURHAM](#)

[Detailed record](#)

24. Transverse Momentum Distribution and Nuclear Modification Factor of Charged Particles in p-Pb Collisions at $\sqrt{s_{NN}} = 5.02$ TeV / ALICE Collaboration

The transverse momentum (p_T) $\sqrt{s_{NN}} = 5.02$ TeV with the ALICE detector at the LHC. The p_T spectra measured near central rapidity in the range $0.5 < p_T < 20$ GeV/c exhibit a weak pseudorapidity dependence. [...]

[arXiv:1210.4520](#); [CERN-PH-EP-2012-306](#); [CERN-PH-EP-2012-306](#).- Geneva : CERN, 2013-02-21 - 11 p. - Published in : [Phys. Rev. Lett. 110 \(2013\) 082302](#) **APS Open Access article**: [PDF](#); **Draft**

(restricted): [PDF](#); Fulltext: [arXiv:1210.4520](#) - [PDF](#); CERN-PH-EP-2012-306 - [PDF](#); External link: [DURHAM](#)

[Detailed record](#)

25. Coherent J/Ψ photoproduction in ultra-peripheral Pb-Pb collisions at $\sqrt{s_{NN}}=2.76$ TeV / ALICE Collaboration

The ALICE collaboration has made the first measurement at the LHC of J/Ψ photoproduction in ultra-peripheral Pb-Pb collisions at $\sqrt{s_{NN}}=2.76$ TeV. The J/Ψ is identified via its dimuon decay in the forward rapidity region with the muon spectrometer for events where the hadronic activity is required to be minimal. [...]

[arXiv:1209.3715](#); CERN-PH-EP-2012-270; CERN-PH-EP-2012-270.- Geneva : CERN, 2013-01-29 - 19 p. - Published in : *Phys. Lett. B* 718 (2013) 1273-1283 [Draft](#)

(restricted): [PDF](#); Elsevier Open Access

article: [PDF](#); Fulltext: [PDF](#); External link: [Preprint](#)

[Detailed record](#)

26. Measurement of inelastic, single- and double-diffraction cross sections in proton-proton collisions at the LHC with ALICE / ALICE Collaboration

Measurements of cross sections of inelastic and diffractive processes in proton-proton collisions at LHC energies were carried out with the ALICE detector. The fractions of diffractive processes in inelastic collisions were determined from a study of gaps in charged particle pseudorapidity distributions: for single diffraction (diffractive mass $M_X < 200 \text{ GeV}/c^2$) $\sigma_{SD}/\sigma_{INEL} = 0.21 \pm 0.03$, $0.20^{+0.07}_{-0.08}$, $0.20^{+0.04}_{-0.07}$ $\sqrt{s} = 0.9, 2.76, \Delta\eta > 3$ $\sigma_{DD}/\sigma_{INEL} = 0.11 \pm 0.03$, 0.12 ± 0.05 , $0.12^{+0.05}_{-0.04}$ $\sqrt{s} = 0.9, 2.76$ [...]

[arXiv:1208.4968](#); CERN-PH-EP-2012-238; CERN-PH-EP-2012-238.- Geneva : CERN, 2013-06-08 - 27 p. - Published in : *Eur. Phys. J. C* 73 (2013) 2456 CERN-PH-EP-2012-238: [PDF](#); [Draft \(restricted\): PDF](#); Fulltext: [PDF](#); Springer Open Access article: [PDF](#); External link: [Rivet analyses reference](#)

[Detailed record](#)

27. Measurement of electrons from beauty hadron decays in pp collisions at $\sqrt{s}=7$ TeV / ALICE Collaboration

The production cross section of electrons from semileptonic decays of beauty hadrons was measured at mid-rapidity ($|y| < 0.8$) in the transverse momentum range $1 < p_t < 8 \text{ GeV}/c$ with the ALICE experiment at the CERN LHC in pp collisions at a center of mass energy $\sqrt{s}=7$ TeV using an integrated luminosity of 2.2 nb^{-1} [...]

[arXiv:1208.1902](#); CERN-PH-EP-2012-229.- 2013-04-10 - 15 p.

Article from SCOAP3: [PDF](#); Corrigendum: [PDF](#); Elsevier

Open Access article: [PDF](#); Fulltext: [PDF](#); External link: [Preprint](#)

[Detailed record](#)

28. **Centrality Dependence of Charged Particle Production at Large Transverse Momentum in Pb–Pb Collisions**

at $\sqrt{s_{NN}} = 2.76 \text{ TeV}$ / ALICE Collaboration

The inclusive transverse momentum (pT) distributions of primary charged particles are measured in the pseudo-rapidity range $|\eta|$ at $\sqrt{s_{NN}} = 2.76 \text{ TeV}$ with ALICE at the LHC. The data are presented in the transverse momentum range $0.15 < p_T < 50 \text{ GeV}/c$ for nine centrality intervals from 70–80% to 0–5%. [...]

[arXiv:1208.2711](#); [CERN-PH-EP-2012-233](#); [CERN-PH-EP-2012-233](#).- Geneva : CERN, 2013-03-13 - 18 p. - Published in : *Phys. Lett. B* **720** (2013) 52-62 **Draft**

(restricted): [PDF](#); Elsevier Open Access

article: [PDF](#); Fulltext: [PDF](#); External link: [Rivet analyses reference](#)

[Detailed record](#)

29. **Pion, Kaon, and Proton Production in Central Pb–Pb Collisions at $\sqrt{s_{NN}} = 2.76 \text{ TeV}$ / ALICE Collaboration**

In this Letter we report the first results on $\pi^\pm$ at $\sqrt{s_{NN}} = 2.76 \text{ TeV}$, measured by the ALICE experiment at the LHC. The pT distributions and yields are compared to previous results at $\sqrt{s_{NN}} = 200 \text{ GeV}$ and expectations from hydrodynamic and thermal models. [...]

[arXiv:1208.1974](#); [CERN-PH-EP-2012-230](#); [CERN-PH-EP-2012-230](#).- Geneva : CERN, 2012 - 15 p. - Published in : *Phys. Rev. Lett.* **109** (2012) 252301 **APS Open Access**

article: [PDF](#); **Draft**

(restricted): [PDF](#); Fulltext: [arXiv:1208.1974](#) - [PDF](#); [CERN-PH-EP-2012-230](#) - [PDF](#); External link: [Rivet analyses reference](#)

[Detailed record](#)

30. **DS_+ meson production at central rapidity in proton-proton collisions at $\sqrt{s} = 7 \text{ TeV}$ / ALICE Collaboration**

The pt-differential inclusive production cross section of the prompt charm-strange meson DS_+ in the rapidity range $|y| < 0.5$ was measured in proton-proton collisions at $\sqrt{s} = 7 \text{ TeV}$ events collected with a minimum-bias trigger. [...]

[arXiv:1208.1948](#); [CERN-PH-EP-2012-227](#); [CERN-PH-EP-2012-227](#).- Geneva : CERN, 2012-12-05 - 27 p. - Published in : *Phys. Lett. B* **718** (2012) 279-294 **Draft**

(restricted): [PDF](#); Elsevier Open Access

article: [PDF](#); Fulltext: [CERN-PH-EP-2012-227](#) - [PDF](#); [arXiv:1208.1948](#) - [PDF](#); External link: [Preprint](#)

[Detailed record](#)

31. **Production of $K^*(892)^0$ and $\phi\sqrt{s}=7$ TeV / ALICE Collaboration**
 The production of $K^*(892)^0$ and $\phi\sqrt{s}d^2N/dydp_T$ at midrapidity $|y|<0.5$ in the range $0 < p_T < 6$ GeV/c for $K^*(892)^0$ and $0.4 < p_T < 6$ GeV/c for ϕ [...]
[arXiv:1208.5717](#); [CERN-PH-EP-2012-221](#); [CERN-PH-EP-2012-221](#).- Geneva : CERN, 2012-10-30 - 27 p. - Published in : *Eur. Phys. J. C* **72** (2012) 2183 **Draft**
(restricted): [PDF](#); **Fulltext:** [arXiv:1208.5717](#) - [PDF](#); [CERN-PH-EP-2012-221](#) - [PDF](#); **Springer Open Access article:** [PDF](#); **External link:** [DURHAM](#)
[Detailed record](#)
32. **Net-Charge Fluctuations in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV / ALICE Collaboration**
 We report the first measurement of the net-charge fluctuations in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV, measured with the ALICE detector at the CERN Large Hadron Collider. The dynamical fluctuations per unit entropy are observed to decrease when going from peripheral to central collisions. [...]
[arXiv:1207.6068](#); [CERN-PH-EP-2012-212](#); [CERN-PH-EP-2012-212](#).- Geneva : CERN, 2013-04-10 - 11 p. - Published in : *Phys. Rev. Lett.* **110** (2013) 152301 **APS Open Access article:** [PDF](#); **Draft (restricted):** [PDF](#); **Fulltext:** [CERN-PH-EP-2012-212](#) - [PDF](#); [arXiv:1207.6068](#) - [PDF](#); **External link:** [Preprint](#)
[Detailed record](#)
33. **Charge separation relative to the reaction plane in Pb-Pb collisions at $\sqrt{s_{NN}}$ / ALICE Collaboration**
 Measurements of charge dependent azimuthal correlations with the ALICE detector at the LHC are reported for Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV. Two- and three-particle charge-dependent azimuthal correlations in the pseudo-rapidity range $|\eta| < 0.8$ are presented as a function of the collision centrality, particle separation in pseudo-rapidity, and transverse momentum. [...]
[arXiv:1207.0900](#); [CERN-PH-EP-2012-183](#); [CERN-PH-EP-2012-183](#).- Geneva : CERN, 2013-01-02 - 11 p. - Published in : *Phys. Rev. Lett.* **110** (2013) 012301 **APS Open Access article:** [PDF](#); **Fulltext:** [CERN-PH-EP-DRAFT-ALICE-2012-015](#) - [PDF](#); [arXiv:1207.0900](#) - [PDF](#); **External link:** [Preprint](#)
[Detailed record](#)
34. **$K_S^0 - K_S^0$ correlations in pp collisions at $\sqrt{s} = 7$ TeV from the LHC ALICE experiment / ALICE Collaboration**
 Identical neutral kaon pair correlations are measured in $\sqrt{s}S_0$ correlation functions in terms of the invariant momentum difference of kaon pairs are formed in two multiplicity and two transverse momentum ranges. [...]
[arXiv:1206.2056](#); [CERN-PH-EP-2012-160](#); [CERN-PH-EP-2012-160](#).- Geneva : CERN, 2013-07-16 - 11 p. - Published in

: *Phys. Lett. B* 717 (2012) 151-161 **Draft**
 (restricted): [PDF](#); Elsevier **Open Access**
 article: [PDF](#); Fulltext: *CERN-PH-EP-2012-160* - [PDF](#); *arXiv:1206.2056* - [PDF](#); External link: [Preprint](#)
[Detailed record](#)

35. Production of muons from heavy flavour decays at forward rapidity in pp and Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV / ALICE Collaboration

The ALICE Collaboration has measured the inclusive production of muons from heavy flavour decays at forward rapidity, $2.5 < y < 4$, in pp and Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV. The pt-differential inclusive cross section of muons from heavy flavour decays in pp collisions is compared to perturbative QCD calculations. [...]

arXiv:1205.6443; *CERN-PH-EP-2012-155*; *CERN-PH-EP-2012-155*.- Geneva : CERN, 2012 - 16 p. - Published in : *Phys. Rev. Lett.* 109 (2012) 112301 **APS Open Access**
 article: [PDF](#); Fulltext: *arXiv:1205.6443* - [PDF](#); *CERN-PH-EP-DRAFT-ALICE-2012-013* - [PDF](#); External link: [DURHAM](#)

[Detailed record](#)

36. Anisotropic flow of charged hadrons, pions and (anti-)protons measured at high transverse momentum in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV / ALICE Collaboration

The elliptic, $v_2 v_3 v_4 \sqrt{s_{NN}} = 2.76$ TeV with the ALICE detector at the Large Hadron Collider. Results obtained with the event plane and four-particle cumulant methods are reported for the pseudo-rapidity range $|\eta| p_T p_T [...]$

arXiv:1205.5761; *CERN-PH-EP-2012-142*; *ALICE-PUBLIC-2015-003*; *CERN-PH-EP-2012-142*.- Geneva : CERN, 2013-02-12 - 11 p. - Published in : *Phys. Lett. B* 719 (2013) 18-28 **Draft**
 (restricted): [PDF](#); Fulltext: *arXiv:1205.5761* - [PDF](#); *plb.719-18* - [PDF](#); Supplemental figure: [PDF](#);

[Detailed record](#)

37. Transverse sphericity of primary charged particles in minimum bias proton-proton collisions at $\sqrt{s} = 0.9$ TeV / ALICE Collaboration

Measurements of the sphericity of primary charged particles in minimum bias proton-proton collisions at $\sqrt{s} p_T \geq 0.5 \text{ GeV}/c$ in $|\eta| \leq 0.8 [...]$

arXiv:1205.3963; *CERN-PH-EP-2012-136*; *CERN-PH-EP-2012-136*.- Geneva : CERN, 2012-09-18 - 21 p. - Published in : *Eur. Phys. J. C* 72 (2012) 2124 **Draft**
 (restricted): [PDF](#); Fulltext: *CERN-PH-EP-2012-136* - [PDF](#); *arXiv:1205.3963* - [PDF](#); Springer **Open Access**
 article: [PDF](#); External link: [DURHAM](#)

[Detailed record](#)

38. Measurement of charm production at central rapidity in proton-proton collisions at $\sqrt{s}=2.76$ TeV / ALICE Collaboration

The pt-differential production cross sections of the prompt (B feed-down subtracted) charmed mesons D0, D+, and D*+ in the rapidity range $|y| < 0.5$, and for transverse momentum $1 < p_t < 12$ GeV/c, were measured in proton-proton collisions at $\sqrt{s}=2.76$ TeV with the ALICE detector at the Large Hadron Collider. The analysis exploited the hadronic decays $D0 \rightarrow K^- \pi^+$, $D^+ \rightarrow K^- \pi^+ \pi^+$, $D^{*+} \rightarrow D0 \pi^+$, and their charge conjugates, and was performed on a $L_{int} = 1.1 \text{ nb}^{-1}$ event sample collected in 2011 with a minimum-bias trigger. [...]

[arXiv:1205.4007](#); [CERN-PH-EP-2012-133](#); [CERN-PH-EP-2012-133](#).- Geneva : CERN, 2012 - 21 p. - Published in : [JHEP 07 \(2012\) 191](#) **Draft**

(restricted): [PDF](#); **Fulltext:** [CERN-PH-EP-2012-133 - PDF](#); [arXiv:1205.4007 - PDF](#); **Springer Open Access article:** [PDF](#); **External link:** [Preprint](#)

[Detailed record](#)

39. Measurement of prompt J/ ψ and beauty hadron production cross sections at mid-rapidity in pp collisions at $\sqrt{s}=7$ TeV / ALICE Collaboration

The ALICE experiment at the LHC has studied J/ ψ production at mid-rapidity in pp collisions at $\sqrt{s}L_{int} = 5.6 \text{ nb}^{-1}$. ψ from the decay of long-lived beauty hadrons was determined for J/ ψ candidates with transverse momentum $p_t > 1.3$ GeV/c and rapidity $|y| < 0.9$. [...]

[arXiv:1205.5880](#); [CERN-PH-EP-2012-132](#); [CERN-PH-EP-2012-132](#).- Geneva : CERN, 2012 - 24 p. - Published in : [JHEP 11 \(2012\) 065](#) **Draft**

(restricted): [PDF](#); **Fulltext:** [CERN-PH-EP-2012-132 - PDF](#); [arXiv:1205.5880 - PDF](#); **Springer Open Access article:** [PDF](#); **External link:** [DURHAM](#)

[Detailed record](#)

40. Measurement of electrons from semileptonic heavy-flavour hadron decays in pp collisions at $\sqrt{s}=7$ TeV / ALICE Collaboration

The differential production cross section of electrons from semileptonic heavy-flavour hadron decays has been measured at mid-rapidity ($|y| < 0.5$) in proton-proton collisions at $\sqrt{s}p_t < 8$ GeV/c. [...]

[arXiv:1205.5423](#); [CERN-PH-EP-2012-131](#); [CERN-PH-EP-2012-131](#).- Geneva : CERN, 2012 - 34 p. - Published in : [Phys. Rev. D 86 \(2012\) 112007](#) **APS Open Access**

article: [PDF](#); **Draft (restricted):** [PDF](#); **Fulltext:** [CERN-PH-EP-2012-131 - PDF](#); [arXiv:1205.5423 - PDF](#); **External link:** [DURHAM](#)

[Detailed record](#)

41. **Multi-strange baryon production in pp collisions at $\sqrt{s}=7$ TeV with ALICE / ALICE Collaboration**
 A measurement of the multi-strange Xi- and Omega- baryons and their antiparticles by the ALICE experiment at the CERN Large Hadron Collider (LHC) is presented for proton-proton collisions at centre of mass energy of 7 TeV. The transverse momentum (pt) distributions were studied at mid-rapidity ($|y| < 0.5$) in the range of $0.6 < p_t < 8.5$ GeV/c for Xi- and Xi+ baryons, and in the range of $0.8 < p_t < 5$ GeV/c for Omega- and Omega+. [...]
[arXiv:1204.0282](#); [CERN-PH-EP-2012-080](#); [CERN-PH-EP-2012-080](#).- Geneva : CERN, 2013-07-16 - 10 p. - Published in : *Phys. Lett. B* 712 (2012) 309-318 **Draft**
(restricted): [PDF](#); **Elsevier Open Access article:** [PDF](#); **Fulltext:** *CERN-PH-EP-2012-080* - [PDF](#); *arXiv:1204.0282* - [PDF](#); **External link:** [Preprint](#)
[Detailed record](#)
42. **Suppression of high transverse momentum D mesons in central Pb--Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV / ALICE Collaboration**
 The production of the prompt charm mesons $D^0 D^+ D^{*+}$ $\sqrt{s_{NN}} = 2.76$ TeV per nucleon--nucleon collision. The $p_t^2 < p_t < 16$ GeV/c at central rapidity, $|y| < 0.5 R_{AA}$ with respect to a proton-proton reference obtained from the cross section measured at $\sqrt{s} = 7$ TeV and scaled to $\sqrt{s} = 2.76$ TeV. [...]
[arXiv:1203.2160](#); [CERN-PH-EP-2012-069](#); [CERN-PH-EP-2012-069](#).- Geneva : CERN, 2012 - 29 p. - Published in : *JHEP* 09 (2012) 112 **Draft**
(restricted): [PDF](#); **Fulltext:** [PDF](#); **Springer Open Access article :** [PDF](#); **External link:** [DURHAM](#)
[Detailed record](#)
43. **Measurement of the Cross Section for Electromagnetic Dissociation with Neutron Emission in Pb-Pb Collisions at $\sqrt{s_{NN}} = 2.76$ TeV / ALICE Collaboration**
 The first measurement of neutron emission in electromagnetic dissociation of 208Pb nuclei at the LHC is presented. The measurement is performed using the neutron Zero Degree Calorimeters of the ALICE experiment, which detect neutral particles close to beam rapidity. [...]
[arXiv:1203.2436](#); [CERN-PH-EP-2012-065](#); [CERN-PH-EP-2012-065](#).- Geneva : CERN, 2012 - 16 p. - Published in : *Phys. Rev. Lett.* 109 (2012) 252302 **APS Open Access article:** [PDF](#); **Draft (restricted):** [PDF](#); **Fulltext:** *CERN-PH-EP-2012-065* - [PDF](#); *arXiv:1203.2436* - [PDF](#); **External link:** [Preprint](#)
[Detailed record](#)
44. **Heavy flavour decay muon production at forward rapidity in proton-proton collisions at $\sqrt{s}=7$ TeV / ALICE Collaboration**

The production of muons from heavy flavour decays is measured at forward rapidity in proton--proton collisions at $\sqrt{s}=7$ TeV collected with the ALICE experiment at the LHC. The analysis is carried out on a data sample corresponding to an integrated luminosity $L_{int}=16.5$

nb $\times$ 1 [...]

[arXiv:1201.3791](#); [CERN-PH-EP-2011-215](#); [CERN-PH-EP-2011-215](#).- 2013-07-16 - 11 p. - Published in : *Phys. Lett. B* 708 (2012) 265-275 Elsevier [Open Access](#)
article: [PDF](#); **Fulltext:** [PDF](#); **External link:** [DURHAM](#)
[Detailed record](#)

45. J/ψ suppression at forward rapidity in Pb-Pb collisions

at $\sqrt{s_{NN}}=2.76$ TeV / ALICE Collaboration

The ALICE experiment has measured the inclusive J/ψ production in Pb-Pb collisions at $\sqrt{s_{NN}}=2.76$ TeV down to $p_t=0$ in the rapidity range $2.5 < y < 4$. A suppression of the inclusive J/ψ yield in Pb-Pb is observed with respect to the one measured in pp collisions scaled by the number of binary nucleon-nucleon collisions. [...]

[arXiv:1202.1383](#); [CERN-PH-EP-2012-012](#); [CERN-PH-EP-2012-012](#).- Geneva : CERN, 2012 - 16 p. - Published in : *Phys. Rev. Lett.* 109 (2012) 072301 APS [Open Access](#)
article: [PDF](#); **Draft**
(restricted): [PDF](#); **Fulltext:** [PDF](#); **External link:** [DURHAM](#)
[Detailed record](#)

46. Measurement of Event Background Fluctuations for Charged Particle Jet Reconstruction in Pb-Pb collisions

at $\sqrt{s_{NN}}=2.76$ TeV / ALICE Collaboration

The effect of event background fluctuations on charged particle jet reconstruction in Pb-Pb collisions at $\sqrt{s_{NN}}=2.76$ TeV has been measured with the ALICE experiment. The main sources of non-statistical fluctuations are characterized based purely on experimental data with an unbiased method, as well as by using single high p_t particles and simulated jets embedded into real Pb-Pb events and reconstructed with the anti-kt jet finder. [...]

[arXiv:1201.2423](#); [CERN-PH-EP-2012-002](#); [CERN-PH-EP-2012-002](#).- 2012 - 21 p. - Published in : *JHEP* 03 (2012) 053 [Fulltext:](#) [PDF](#); [Springer Open Access](#)
article: [PDF](#); **External link:** [DURHAM](#)
[Detailed record](#)

47. Underlying Event measurements in pp collisions at $\sqrt{s}=0.9$ and 7 TeV with the ALICE experiment at the LHC / ALICE collaboration

We present measurements of Underlying Event observables in pp collisions at $\sqrt{s}=0.9$ and 7 TeV. The analysis is performed as a function of the highest charged-particle transverse momentum $p_{T,LT}$ in the event. [...]

[arXiv:1112.2082](#); [CERN-PH-EP-2011-204](#); [CERN-PH-EP-](#)

2011-204.- Geneva : CERN, 2012 - 37 p. - Published in
: *JHEP* 07 (2012) 116 **Draft**
(restricted): [PDF](#); Fulltext: [PDF](#); Springer Open Access
article: [PDF](#); External link: [Preprint](#)
[Detailed record](#)

48. **J/ ψ polarization in pp collisions at $\sqrt{s}$ / ALICE Collaboration**
The ALICE Collaboration has studied J/psi production in pp
collisions at $\sqrt{s}$ J/psi polarization parameters lambda_theta and
lambda_phi were obtained. [...]
[arXiv:1111.1630](#); CERN-PH-EP-2011-182; CERN-PH-EP-
2011-182.- 2012 - 15 p. - Published in : *Phys. Rev. Lett.* 108
(2012) 082001 **APS Open Access**
article: [PDF](#); Fulltext: [PDF](#); External link: [Preprint](#)