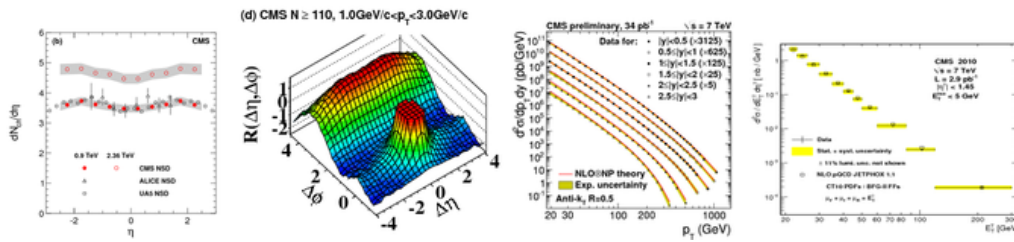


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CMS QCD Physics Results



Highlights NEW

Results



















The listing contains papers and public results (PAS), with links to arXiv, CERN preprint, and the final paper, if available.

In case of papers the plots are provided through dedicated twiki pages (best quality), and the arXiv source .




For public results (PAS) plots are given via CDS . Data files are mostly from Hepdata .













Hadrons

| Analysis | Reports | Publication | Plots | Data | Comment |
|---|--|------------------------------------|-------|------|-------------------------------|
| Transverse momentum and pseudorapidity distributions of charged hadrons in pp collisions at $\sqrt{s} = 0.9$ and 2.36 TeV | CMS-QCD-09-010 arXiv:1002.0621 CERN-PH-EP-2010-00 | J. High Energy Phys. 02 (2010) 041 | | | in Rivet |
| Transverse-momentum and pseudorapidity distributions of charged hadrons in pp collisions at $\sqrt{s} = 7$ TeV | CMS-QCD-10-006 arXiv:1005.3299 CERN-PH-EP-2010-009 | Phys. Rev. Lett. 105 (2010) 022002 | | | in Rivet |
| Charged particle transverse momentum spectra in pp collisions at $\sqrt{s} = 0.9$ and 7 TeV | CMS-QCD-10-008 arXiv:1104.3547 CERN-PH-EP-2011-049 | J. High Energy Phys. 08 (2011) 086 | | | |
| <i>Jet-triggered charged particle transverse momentum spectra in pp collisions at 7 TeV</i> | CMS-PAS-QCD-10-008 | | | | <i>superseded by previous</i> |
| Charged particle multiplicities in pp interactions at $\sqrt{s} = 0.9, 2.36,$ and 7.0 TeV | CMS-QCD-10-004 arXiv:1011.5531 CERN-PH-EP-2010-048 | J. High Energy Phys. 01 (2011) 079 | | | in Rivet |
| | CMS-PAS-QCD-10-004 | | | | <i>superseded by previous</i> |
| Pseudorapidity distributions of charged particles in pp collisions at $\sqrt{s} = 7$ TeV with at least one central charged particle | CMS-PAS-QCD-10-024 | | | | |
| Strange particle production in pp collisions at $\sqrt{s} = 0.9$ and 7 TeV | CMS-QCD-10-007 arXiv:1102.4282 CERN-PH-EP-2010-094 | J. High Energy Phys. 05 (2011) 064 | | | in Rivet |
| | CMS-PAS-QCD-10-007 | | | | <i>superseded by previous</i> |





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|---|--|--|---|---|-------------------------------|
| Observation of Long-Range, Near-Side Angular Correlations in Proton-Proton Collisions at the LHC | CMS-QCD-10-002 arXiv:1009.4122 ↗ CERN-PH-EP-2010-031 ↗ | J. High Energy Phys. 09 (2010) 091 ↗ |   ↗ |  ↗ | |
| <i>Two-Particle Angular Correlations and Cluster Properties in pp Collisions at sqrt(s) = 0.9, 2.36 and 7 TeV</i> | CMS-PAS-QCD-10-002 ↗ | |  ↗ | | <i>superseded by previous</i> |
| First measurement of Bose Einstein correlations in proton-proton collisions at sqrt(s) = 0.9 and 2.36 TeV at the LHC | CMS-QCD-10-003 arXiv:1005.3294 ↗ CERN-PH-EP-2010-010 ↗ | Phys. Rev. Lett. 105 (2010) 032001 ↗ |   ↗ | | |
| <i>Measurement of Bose Einstein correlations with first CMS data</i> | CMS-PAS-QCD-10-003 ↗ | |  ↗ | | <i>superseded by previous</i> |
| Measurement of Bose Einstein Correlations in pp Collisions at sqrt(s) = 0.9 and 7 TeV at the LHC | CMS-QCD-10-023 arXiv:1101.3518 ↗ CERN-PH-EP-2010-091 ↗ | J. High Energy Phys. 05 (2011) 029 ↗ |   ↗ | | |
| First measurement of the underlying event activity at the LHC with sqrt(s) = 0.9 TeV | CMS-QCD-10-001 arXiv:1006.2083 ↗ CERN-PH-EP-2010-014 ↗ | Eur. Phys. J. C 70 (2010) 555 ↗ |  ↗ |  ↗ | |
| <i>Measurement of the underlying event activity in proton-proton Collisions at 900 GeV</i> | CMS-PAS-QCD-10-001 ↗ | |  ↗ | | <i>superseded by previous</i> |
| Measurement of the underlying event activity at the LHC with sqrt(s) = 7 TeV and comparison with sqrt(s) = 0.9 TeV | CMS-QCD-10-010 arXiv:1107.0330 ↗ CERN-PH-EP-2011-059 ↗ | J. High Energy Phys 09 (2011) 109 ↗ |  ↗ |  ↗ | |
| | CMS-PAS-QCD-10-010 ↗ | |  ↗ | | <i>superseded by previous</i> |
| Measurement of the underlying event activity with the jet area/median approach at 0.9 TeV | CMS-PAS-QCD-10-005 ↗ | |  ↗ | | |
| Measurement of the Underlying Event Activity in the Drell-Yan process in proton-proton collisions at sqrt(s) = 7 TeV | | |  ↗ | | |
| <i>Measurement of the Underlying Event Activity in the Drell-Yan process in proton-proton collisions at sqrt(s) = 7 TeV</i> | CMS-PAS-QCD-10-040 ↗ | |  ↗ | | <i>superseded by previous</i> |

Jets

| Analysis | Reports | Publication | Plots | Data | Comment |
|---|--|--|---|------|---|
| Measurement of the Inclusive Jet Cross Section in pp Collisions at 7 TeV | CMS-QCD-10-011 arXiv:1106.0208 ↗ CERN-PH-EP-2011-053 ↗ | Phys. Rev. Lett. 107 (2011) 132001 ↗ |  ↗ | | 34 pb ⁻¹ |
| | CMS-PAS-QCD-10-011 ↗ | |  ↗ | | <i>60 nb⁻¹, superseded by previous</i> |
| Measurement of the 3-jet to 2-jet Cross Section Ratio in pp Collisions at 7 TeV | CMS-QCD-10-012 arXiv:1106.0647 ↗ CERN-PH-EP-2011-044 ↗ | Phys. Lett. B 702 (2011) 336 ↗ | | | 36 pb ⁻¹ |
| | CMS-PAS-QCD-10-012 ↗ | |  ↗ | | |

| | | | | | |
|---|--|--|---|---|---|
| | | | | | 76 nb ⁻¹ , superseded by previous |
| First Measurement of Hadronic Event Shapes in pp Collisions at sqrt(s) = 7 TeV | CMS-QCD-10-013 arXiv:1102.0068 ↗ CERN-PH-EP-2010-072 ↗ | Phys. Lett. B 699 (2011) 48 ↗ |   ↗ | | 3.2 pb ⁻¹ |
| <i>Hadronic Event Shapes in pp Collisions at 7 TeV</i> | <i>CMS-PAS-QCD-10-013</i> ↗ | |  ↗ | | 78 nb ⁻¹ , superseded by previous |
| Jet Transverse Structure and Momentum Distribution in pp Collisions at 7 TeV | CMS-PAS-QCD-10-014 ↗ | |  ↗ | | 10-78 nb ⁻¹ |
| Measurement of the differential dijet mass cross section in proton-proton collisions at sqrt(s) = 7 TeV | CMS-QCD-10-025 CERN-PH-EP-2011-042 ↗ arXiv:1104.1693 ↗ | Phys. Lett. B 700 (2011) 187 ↗ |  ↗ | | 36 pb ⁻¹ |
| Dijet Azimuthal Decorrelations in pp Collisions at sqrt(s) = 7 TeV | CMS-QCD-10-026 arXiv:1101.5029 ↗ CERN-PH-EP-2010-086 ↗ | Phys. Rev. Lett. 106 (2011) 122003 ↗ |   ↗ |  ↗ | 2.9 pb ⁻¹ |
| Measurement of Dijet Angular Distributions and Search for Quark Compositeness in pp Collisions at sqrt(s) = 7 TeV | CMS-QCD-10-016 arXiv:1102.2020 ↗ CERN-PH-EP-2010-092 ↗ | Phys. Rev. Lett. 106 (2011) 201804 ↗ |   ↗ |  ↗ | 36 pb ⁻¹ , in Rivet |
| <i>Dijet Azimuthal Decorrelations and Angular Distributions in pp Collisions at 7 TeV</i> | <i>CMS-PAS-QCD-10-015</i> ↗ | |  ↗ | | 72 nb ⁻¹ , superseded by previous two |
| Comparison of Inclusive Jet and Dijet Mass Cross Sections at sqrt(s) = 7 TeV with Predictions of perturbative QCD | CMS-NOTE-2011-004 ↗ | | | | |

Photons

| Analysis | Reports | Publication | Plots | Data | Comment |
|---|--|--|---|---|-----------------------|
| Measurement of the isolated prompt photon production cross section in pp collisions at sqrt(s) = 7 TeV | CMS-QCD-10-019 arXiv:1012.0799 ↗ CERN-PH-EP-2010-053 ↗ | Phys. Rev. Lett. 106 (2011) 082001 ↗ |  ↗ |  ↗ | 2.9 pb ⁻¹ |
| Measurement of the Differential Isolated Prompt Photon Production Cross Section in pp Collisions at sqrt(s) = 7 TeV | CMS-QCD-10-037 arXiv:1108.2044 ↗ CERN-PH-EP-2011-128 ↗ | Phys. Rev. D 84 (2011) 052011 ↗ |  | | 35.9 pb ⁻¹ |
| Measurement of the Production Cross Section of Pairs of Isolated Photons in pp collisions at sqrt(s) = 7 TeV | CMS-QCD-10-035 arXiv:1110.6461 ↗ CERN-PH-EP-2011-171 ↗ | JHEP 01 (2012) 133 ↗ |  | | 36 pb ⁻¹ |

Lists, contacts

- QCD Papers [↗](#)
- QCD Physics Analysis Summaries [↗](#) with collision data
- QCD Physics Analysis Summaries [↗](#) from MC studies

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-- FerencSikler - 15-Jun-2010

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Topic revision: r59 - 2012-04-04 - JeffreyBerryhill



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