

Free Full Text from Publisher [Look Up Full Text](#) [Find PDF](#) [Full Text Options](#) [Export...](#) [Add to Marked List](#)

## Search for the chiral magnetic effect at the LHC with the CMS experiment

By: [Tu, ZDM](#) (Tu, Zhoudunming)<sup>[1]</sup>; [Sirunyan, AM](#) (Sirunyan, A. M.)<sup>[2]</sup>; [Tumasyan, A](#) (Tumasyan, A.)<sup>[2]</sup>; [Adam, W](#) (Adam, W.)<sup>[3]</sup>; [Ambrogio, F](#) (Ambrogio, F.)<sup>[3]</sup>; [Asilar, E](#) (Asilar, E.)<sup>[3]</sup>; [Bergauer, T](#) (Bergauer, T.)<sup>[3]</sup>; [Brandstetter, J](#) (Brandstetter, J.)<sup>[3]</sup>; [Dragicevic, M](#) (Dragicevic, M.)<sup>[3]</sup>; [Ero J](#) (Ero, J.)<sup>[3]</sup> ...More

Group Author(s): [CMS Collaboration](#)  
[View Web of Science ResearcherID and ORCID](#)

NUCLEAR PHYSICS A  
 Volume: 982 Pages: 527-530  
 DOI: 10.1016/j.nuclphysa.2018.08.032  
 Published: FEB 2019  
 Document Type: Article  
[View Journal Impact](#)

### Abstract

Searches for the chiral magnetic effect (CME) using charge-dependent azimuthal correlations with respect to event planes are presented in PbPb collisions at 5.02 TeV and pPb collisions at 5.02 and 8.16 TeV, with the CMS experiment at the LHC. The azimuthal correlations with respect to the second- and third-order event planes are explored as a function of pseudorapidity, transverse momentum, and event multiplicity, which provides new insights into the underlying background correlations. By employing an event-shape engineering technique, a linear dependence of charge-dependent correlations on the second-order anisotropy flow ( $\nu_2$ ) is observed, and the upper limits on the  $\nu_2$ -independent fraction, which is directly related to the CME signal, are obtained at 95% confidence level for both pPb and PbPb collisions. These results provide strong constraints on the search for the chiral magnetic effect at LHC energies, and establish new guidelines for searches in future experiments.

### Keywords

Author Keywords: [CME](#); [Small Systems](#); [Particle Correlation](#); [Event Shape Engineering](#)  
 KeyWords Plus: [COLLISIONS](#); [FIELD](#)

### Author Information

Reprint Address: Tu, ZDM (reprint author)

+ Rice Univ, Dept Phys & Astron, Houston, TX 77002 USA.

### Addresses:

- + [ 1 ] Rice Univ, Dept Phys & Astron, Houston, TX 77002 USA
- + [ 2 ] Yerevan Phys Inst, Yerevan, Armenia
- + [ 3 ] Inst Hochenergiephys, Vienna, Austria
- + [ 4 ] Inst Nucl Problems, Minsk, BELARUS
- + [ 5 ] Univ Antwerp, Antwerp, Belgium
- + [ 6 ] Vrije Univ Brussel, Brussels, Belgium
- + [ 7 ] Univ Libre Bruxelles, Brussels, Belgium
- + [ 8 ] Univ Ghent, Ghent, Belgium
- + [ 9 ] Catholic Univ Louvain, Louvain Le Neuve, Belgium
- + [ 10 ] Ctr Brasileiro Pesquisas Fis, Rio De Janeiro, Brazil
- + [ 11 ] Univ Estado Rio de Janeiro, Rio De Janeiro, Brazil
- + [ 12 ] Univ Estadual Paulista, Sao Paulo, Brazil
- + [ 13 ] Univ Fed ABC, Sao Paulo, Brazil
- + [ 14 ] Bulgarian Acad Sci, Inst Nucl Res & Nucl Energy, Sofia, Bulgaria
- + [ 15 ] Univ Sofia, Sofia, Bulgaria
- + [ 16 ] Beihang Univ, Beijing, Peoples R China
- + [ 17 ] Inst High Energy Phys, Beijing, Peoples R China
- + [ 18 ] Peking Univ, State Key Lab Nucl Phys & Technol, Beijing, Peoples R China
- + [ 19 ] Tsinghua Univ, Beijing, Peoples R China
- + [ 20 ] Univ Los Andes, Bogota, Colombia
- + [ 21 ] Univ Split, Fac Elect Engn Mech Engn & Naval Architecture, Split, Croatia
- + [ 22 ] Univ Split, Fac Sci, Split, Croatia
- + [ 23 ] Inst Rudjer Boskovic, Zagreb, Croatia
- + [ 24 ] Univ Cyprus, Nicosia, Cyprus

### Citation Network

In Web of Science Core Collection

1

Times Cited

[Create Citation Alert](#)

### All Times Cited Counts

1 in All Databases

[See more counts](#)

20

Cited References

[View Related Records](#)

### Most recently cited by:

Inghirami, Gabriele; Hillmann, Paula; Tomasik, Boris; et al.  
[Temperatures and chemical potentials at kinetic freeze-out in relativistic heavy ion collisions from coarse grained transport simulations.](#)  
 JOURNAL OF PHYSICS G-NUCLEAR AND PARTICLE PHYSICS (2020)

[View All](#)

### Use in Web of Science

Web of Science Usage Count

5

14

Last 180 Days

Since 2013

[Learn more](#)

### This record is from:

Web of Science Core Collection  
 - Science Citation Index Expanded

### Suggest a correction

If you would like to improve the quality of the data in this record, please [suggest a correction](#).

- + [ 25 ] Charles Univ Prague, Prague, Czech Republic
- + [ 26 ] Escuela Politec Nacl, Quito, Ecuador
- [ 27 ] Univ San Francisco Quito, Quito, Ecuador
- + [ 28 ] Acad Sci Res & Technol Arab Republ Egypt, Egyptian Network High Energy Phys, Cairo, Egypt
- + [ 29 ] NICPB, Tallinn, Estonia
- + [ 30 ] Univ Helsinki, Dept Phys, Helsinki, Finland
- + [ 31 ] Helsinki Inst Phys, Helsinki, Finland
- + [ 32 ] Lappeenranta Univ Technol, Lappeenranta, Finland
- + [ 33 ] Univ Paris Saclay, CEA, IRFU, Gif Sur Yvette, France
- + [ 34 ] Univ Paris Saclay, CNRS, Ecole Polytech, Lab Leprince Ringuet,IN2P3, Palaiseau, France
- + [ 35 ] Univ Strasbourg, CNRS, IPHC, UMR 7178, Strasbourg, France
- + [ 36 ] CNRS, Inst Natl Phys Nucl & Phys Particules, IN2P3, Ctr Calcul, Villeurbanne, France
- + [ 37 ] Univ Claude Bernard Lyon 1, Univ Lyon, CNRS, Inst Phys Nucl Lyon,IN2P3, Villeurbanne, France
- + [ 38 ] Georgian Tech Univ, Tbilisi, Georgia
- + [ 39 ] Tbilisi State Univ, Tbilisi, Georgia
- + [ 40 ] Rhein Westfal TH Aachen, Phys Inst 1, Aachen, Germany
- + [ 41 ] Rhein Westfal TH Aachen, Phys Inst A 3, Aachen, Germany
- + [ 42 ] Rhein Westfal TH Aachen, Phys Inst B 3, Aachen, Germany
- + [ 43 ] DESY, Hamburg, Germany
- + [ 44 ] Univ Hamburg, Hamburg, Germany
- + [ 45 ] Karlsruher Inst Technol, Karlsruhe, Germany
- + [ 46 ] NCSR Demokritos, INPP, Aghia Paraskevi, Greece
- + [ 47 ] Univ Athens, Athens, Greece
- + [ 48 ] Natl Tech Univ Athens, Athens, Greece
- + [ 49 ] Univ Ioannina, Ioannina, Greece
- + [ 50 ] Eotvos Lorand Univ, MTA ELTE Lendulet CMS Particle & Nucl Phys Grp, Budapest, Hungary
- [ 51 ] Wigner Res Ctr Phys, Budapest, Hungary
- [ 52 ] Inst Nucl Res ATOMKI, Debrecen, Hungary
- + [ 53 ] Univ Debrecen, Inst Phys, Debrecen, Hungary
- + [ 54 ] Indian Inst Sci IISc, Bangalore, Karnataka, India
- + [ 55 ] HBNI, Natl Inst Sci Educ & Res, Bhubaneswar, India
- + [ 56 ] Panjab Univ, Chandigarh, India
- + [ 57 ] Univ Delhi, Delhi, India
- + [ 58 ] HBNI, Saha Inst Nucl Phys, Kolkata, India
- + [ 59 ] Indian Inst Technol Madras, Madras, Tamil Nadu, India
- + [ 60 ] Bhabha Atom Res Ctr, Mumbai, India
- + [ 61 ] Tata Inst Fundamental Res A, Mumbai, India
- + [ 62 ] Tata Inst Fundamental Res B, Mumbai, India
- + [ 63 ] IISER, Pune, Maharashtra, India
- [ 64 ] Inst Res Fundamental Sci IPM, Tehran, Iran
- + [ 65 ] Univ Coll Dublin, Dublin, Ireland
- + [ 66 ] INFN, Sez Bari, Bari, Italy
- + [ 67 ] Univ Bari, Bari, Italy
- + [ 68 ] Politecn Bari, Bari, Italy
- + [ 69 ] INFN, Sez Bologna, Bologna, Italy
- + [ 70 ] Univ Bologna, Bologna, Italy
- + [ 71 ] INFN, Sez Catania, Catania, Italy
- + [ 72 ] Univ Catania, Catania, Italy
- + [ 73 ] INFN, Sez Firenze, Florence, Italy
- + [ 74 ] Univ Firenze, Florence, Italy
- + [ 75 ] INFN, Lab Nazl Frascati, Frascati, Italy
- + [ 76 ] INFN, Sez Genova, Genoa, Italy
- + [ 77 ] Univ Genoa, Genoa, Italy
- + [ 78 ] INFN, Sez Milano Bicocca, Milan, Italy
- + [ 79 ] Univ Milano Bicocca, Milan, Italy
- + [ 80 ] INFN, Sez Napoli, Naples, Italy
- + [ 81 ] Univ Napoli Federico II, Naples, Italy

- + [ 82 ] Univ Basilicata, Potenza, Italy
- + [ 83 ] Univ G Marconi, Rome, Italy
- + [ 84 ] INFN, Sez Padova, Padua, Italy
- + [ 85 ] Univ Padua, Padua, Italy
- + [ 86 ] Univ Trento, Trento, Italy
- + [ 87 ] INFN, Sez Pavia, Pavia, Italy
- + [ 88 ] Univ Pavia, Pavia, Italy
- + [ 89 ] INFN, Sez Perugia, Perugia, Italy
- + [ 90 ] Univ Perugia, Perugia, Italy
- + [ 91 ] INFN, Sez Pisa, Pisa, Italy
- + [ 92 ] Univ Pisa, Pisa, Italy
- + [ 93 ] Scuola Normale Super Pisa, Pisa, Italy
- + [ 94 ] INFN, Sez Roma, Rome, Italy
- + [ 95 ] Sapienza Univ Roma, Rome, Italy
- + [ 96 ] INFN, Sez Torino, Turin, Italy
- + [ 97 ] Univ Torino, Turin, Italy
- + [ 98 ] Univ Piemonte Orientale, Novara, Italy
- + [ 99 ] INFN, Sez Trieste, Trieste, Italy
- + [ 100 ] Univ Trieste, Trieste, Italy
- + [ 101 ] Kyungpook Natl Univ, Daegu, South Korea
- + [ 102 ] Chonnam Natl Univ, Inst Universe & Elementary Particles, Kwangju, South Korea
- + [ 103 ] Hanyang Univ, Seoul, South Korea
- + [ 104 ] Korea Univ, Seoul, South Korea
- + [ 105 ] Sejong Univ, Seoul, South Korea
- + [ 106 ] Seoul Natl Univ, Seoul, South Korea
- + [ 107 ] Univ Seoul, Seoul, South Korea
- + [ 108 ] Sungkyunkwan Univ, Suwon, South Korea
- + [ 109 ] Vilnius Univ, Vilnius, Lithuania
- + [ 110 ] Univ Malaya, Natl Ctr Particle Phys, Kuala Lumpur, Malaysia
- + [ 111 ] Univ Sonora UNISON, Hermosillo, Sonora, Mexico
- + [ 112 ] IPN, Ctr Invest & Estudios Avanzados, Mexico City, DF, Mexico
- [ 113 ] Univ Iberoamer, Mexico City, DF, Mexico
- + [ 114 ] Benemerita Univ Autonoma Puebla, Puebla, Mexico
- + [ 115 ] Univ Autonoma San Luis Potosi, San Luis Potosi, Mexico
- + [ 116 ] Univ Auckland, Auckland, New Zealand
- + [ 117 ] Univ Canterbury, Christchurch, New Zealand
- + [ 118 ] Quaid I Azam Univ, Natl Ctr Phys, Islamabad, Pakistan
- + [ 119 ] Natl Ctr Nucl Res, Otwock, Poland
- + [ 120 ] Univ Warsaw, Fac Phys, Inst Expt Phys, Warsaw, Poland
- + [ 121 ] Lab Instrumentacao & Fis Expt Particulas, Lisbon, Portugal
- + [ 122 ] Joint Inst Nucl Res, Dubna, Russia
- + [ 123 ] Petersburg Nucl Phys Inst, Gatchina, St Petersburg, Russia
- + [ 124 ] Inst Nucl Res, Moscow, Russia
- + [ 125 ] Inst Theoret & Expt Phys, Moscow, Russia
- + [ 126 ] Moscow Inst Phys & Technol, Moscow, Russia
- + [ 127 ] Natl Res Nucl Univ, Moscow Engr Phys Inst MEPhI, Moscow, Russia
- + [ 128 ] PN Lebedev Phys Inst, Moscow, Russia
- + [ 129 ] Lomonosov Moscow State Univ, Skobeltsyn Inst Nucl Phys, Moscow, Russia
- + [ 130 ] NSU, Novosibirsk, Russia
- + [ 131 ] Kurchatov Inst, Inst High Energy Phys NRC, State Res Ctr Russian Federat, Protvino, Russia
- + [ 132 ] Natl Res Tomsk Polytech Univ, Tomsk, Russia
- + [ 133 ] Univ Belgrade, Fac Phys, Belgrade, Serbia
- + [ 134 ] Vinca Inst Nucl Sci, Belgrade, Serbia
- [ 135 ] Ctr Invest Energet Medioambientales & Tecnol CIEM, Madrid, Spain
- + [ 136 ] Univ Autonoma Madrid, Madrid, Spain
- + [ 137 ] Univ Oviedo, Oviedo, Spain

- + [ 138 ] Univ Cantabria, CSIC, Inst Fis Cantabria IFCA, Santander, Spain
- + [ 139 ] CERN, European Org Nucl Res, Geneva, Switzerland
- + [ 140 ] Paul Scherrer Inst, Villigen, Switzerland
- + [ 141 ] Swiss Fed Inst Technol, Inst Particle Phys & Astrophys IPA, Zurich, Switzerland
- + [ 142 ] Univ Zurich, Zurich, Switzerland
- + [ 143 ] Natl Cent Univ, Chungli, Taiwan
- + [ 144 ] NTU, Taipei, Taiwan
- + [ 145 ] Chulalongkorn Univ, Fac Sci, Dept Phys, Bangkok, Thailand
- + [ 146 ] Cukurova Univ, Phys Dept, Sci & Art Fac, Adana, Turkey
- + [ 147 ] Middle East Tech Univ, Phys Dept, Ankara, Turkey
- + [ 148 ] Bogazici Univ, Istanbul, Turkey
- + [ 149 ] Istanbul Tech Univ, Istanbul, Turkey
- + [ 150 ] Natl Acad Sci Ukraine, Inst Scintillat Mat, Kharkov, Ukraine
- + [ 151 ] Kharkov Inst Phys & Technol, Natl Sci Ctr, Kharkov, Ukraine
- + [ 152 ] Univ Bristol, Bristol, Avon, England
- + [ 153 ] Rutherford Appleton Lab, Didcot, Oxon, England
- + [ 154 ] Imperial Coll, London, England
- + [ 155 ] Brunel Univ, Uxbridge, Middx, England
- + [ 156 ] Baylor Univ, Waco, TX 76798 USA
- + [ 157 ] Catholic Univ Amer, Washington, DC 20064 USA
- + [ 158 ] Univ Alabama, Tuscaloosa, AL USA
- + [ 159 ] Boston Univ, Boston, MA 02215 USA
- + [ 160 ] Brown Univ, Providence, RI 02912 USA
- + [ 161 ] Univ Calif Davis, Davis, CA 95616 USA
- + [ 162 ] Univ Calif Los Angeles, Los Angeles, CA USA
- + [ 163 ] Univ Calif Riverside, Riverside, CA 92521 USA
- + [ 164 ] Univ Calif San Diego, La Jolla, CA 92093 USA
- + [ 165 ] Univ Calif Santa Barbara, Dept Phys, Santa Barbara, CA 93106 USA
- + [ 166 ] CALTECH, Pasadena, CA 91125 USA
- + [ 167 ] Carnegie Mellon Univ, Pittsburgh, PA 15213 USA
- + [ 168 ] Univ Colorado, Boulder, CO 80309 USA
- + [ 169 ] Cornell Univ, Ithaca, NY USA
- + [ 170 ] Fermilab Natl Accelerator Lab, POB 500, Batavia, IL 60510 USA
- + [ 171 ] Univ Florida, Gainesville, FL USA
- + [ 172 ] Florida Int Univ, Miami, FL 33199 USA
- + [ 173 ] Florida State Univ, Tallahassee, FL 32306 USA
- + [ 174 ] Florida Inst Technol, Melbourne, FL 32901 USA
- + [ 175 ] UIC, Chicago, IL USA
- + [ 176 ] Univ Iowa, Iowa City, IA USA
- + [ 177 ] Johns Hopkins Univ, Baltimore, MD USA
- + [ 178 ] Univ Kansas, Lawrence, KS 66045 USA
- + [ 179 ] Kansas State Univ, Manhattan, KS 66506 USA
- + [ 180 ] Lawrence Livermore Natl Lab, Livermore, CA USA
- + [ 181 ] Univ Maryland, College Pk, MD 20742 USA
- + [ 182 ] MIT, 77 Massachusetts Ave, Cambridge, MA 02139 USA
- + [ 183 ] Univ Minnesota, Minneapolis, MN USA
- + [ 184 ] Univ Mississippi, Oxford, MS USA
- + [ 185 ] Univ Nebraska, Lincoln, NE USA
- + [ 186 ] SUNY Buffalo, Buffalo, NY USA
- + [ 187 ] Northeastern Univ, Boston, MA 02115 USA
- + [ 188 ] Northwestern Univ, Evanston, IL USA
- + [ 189 ] Univ Notre Dame, Notre Dame, IN 46556 USA
- + [ 190 ] Ohio State Univ, Columbus, OH 43210 USA
- + [ 191 ] Princeton Univ, Princeton, NJ 08544 USA
- + [ 192 ] Univ Puerto Rico, Mayaguez, PR USA
- + [ 193 ] Purdue Univ, W Lafayette, IN 47907 USA
- + [ 194 ] Purdue Univ Northwest, Hammond, LA USA

- + [ 195 ] Rice Univ, Houston, TX USA
- + [ 196 ] Univ Rochester, Rochester, NY USA
- + [ 197 ] Rutgers State Univ, Piscataway, NJ USA
- + [ 198 ] Univ Tennessee, Knoxville, TN USA
- + [ 199 ] Texas A&M Univ, College Stn, TX USA
- + [ 200 ] Texas Tech Univ, Lubbock, TX 79409 USA
- + [ 201 ] Vanderbilt Univ, 221 Kirkland Hall, Nashville, TN 37235 USA
- + [ 202 ] Univ Virginia, Charlottesville, VA USA
- + [ 203 ] Wayne State Univ, Detroit, MI USA
- + [ 204 ] Univ Wisconsin, Madison, WI USA
- + [ 205 ] Vienna Univ Technol, Vienna, Austria
- + [ 206 ] Univ Estadual Campinas, Campinas, Brazil
- + [ 207 ] Univ Fed Rio Grande do Sul, Porto Alegre, RS, Brazil
- + [ 208 ] Univ Chinese Acad Sci, Beijing, Peoples R China
- + [ 209 ] Cairo Univ, Cairo, Egypt
- + [ 210 ] Fayoum Univ, Al Fayyum, Egypt
- + [ 211 ] British Univ Egypt, Cairo, Egypt
- + [ 212 ] King Abdulaziz Univ, Dept Phys, Jeddah, Saudi Arabia
- + [ 213 ] Univ Haute Alsace, Mulhouse, France
- + [ 214 ] Brandenburg Tech Univ Cottbus, Cottbus, Germany
- + [ 215 ] Indian Inst Technol Bhubaneswar, Bhubaneswar, India
- + [ 216 ] Inst Phys, Bhubaneswar, India
- + [ 217 ] Shoolini Univ, Solan, India
- + [ 218 ] Univ Visva Bharati, Santini Ketan, W Bengal, India
- + [ 219 ] Isfahan Univ Technol, Esfahan, Iran
- + [ 220 ] Islamic Azad Univ, Sci & Res Branch, Plasma Phys Res Ctr, Tehran, Iran
- + [ 221 ] Univ Siena, Siena, Italy
- + [ 222 ] Kyung Hee Univ, Seoul, South Korea
- + [ 223 ] Int Islamic Univ Malaysia, Kuala Lumpur, Malaysia
- + [ 224 ] MOSTI, Malaysian Nucl Agcy, Kajang, Malaysia
- [ 225 ] Consejo Nacl Ciencia & Technol, Mexico City, DF, Mexico
- + [ 226 ] Warsaw Univ Technol, Inst Elect Syst, Warsaw, Poland
- + [ 227 ] Uzbek Acad Sci, Inst Nucl Phys, Tashkent, Uzbekistan
- + [ 228 ] St Petersburg State Polytech Univ, St Petersburg, Russia
- + [ 229 ] Univ Trento Trento, Padua, Italy
- + [ 230 ] Budker Inst Nucl Phys, Novosibirsk, Russia
- + [ 231 ] Scuola Normale & Sez INFN, Pisa, Italy
- + [ 232 ] Riga Tech Univ, Riga, Latvia
- [ 233 ] Stefan Meyer Inst Subat Phys SMI, Vienna, Austria
- + [ 234 ] Gaziosmanpasa Univ, Tokat, Turkey
- + [ 235 ] Istanbul Aydin Univ, Istanbul, Turkey
- + [ 236 ] Mersin Univ, Mersin, Turkey
- + [ 237 ] Piri Reis Univ, Istanbul, Turkey
- + [ 238 ] Adiyaman Univ, Adiyaman, Turkey
- + [ 239 ] Ozyegin Univ, Istanbul, Turkey
- + [ 240 ] Izmir Inst Technol, Izmir, Turkey
- + [ 241 ] Marmara Univ, Istanbul, Turkey
- + [ 242 ] Kafkas Univ, Kars, Turkey
- + [ 243 ] Istanbul Univ, Fac Sci, Istanbul, Turkey
- + [ 244 ] Istanbul Bilgi Univ, Istanbul, Turkey
- + [ 245 ] Hacettepe Univ, Ankara, Turkey
- + [ 246 ] Univ Southampton, Sch Phys & Astron, Southampton, Hants, England
- + [ 247 ] Monash Univ, Fac Sci, Clayton, Vic, Australia
- [ 248 ] Bethel Univ, St Paul, MN USA
- + [ 249 ] Karamanoglu Mehmetbey Univ, Karaman, Turkey
- + [ 250 ] Utah Valley Univ, Orem, UT USA

- + [ 251 ] Beykent Univ, Istanbul, Turkey
- + [ 252 ] Bingol Univ, Bingol, Turkey
- + [ 253 ] Sinop Univ, Sinop, Turkey
- + [ 254 ] Mimar Sinan Univ, Istanbul, Turkey
- + [ 255 ] Texas A&M Univ Qatar, Doha, Qatar

#### Publisher

ELSEVIER, RADARWEG 29, 1043 NX AMSTERDAM, NETHERLANDS

#### Journal Information

Impact Factor: [Journal Citation Reports](#)

#### Categories / Classification

Research Areas: Physics

Web of Science Categories: Physics, Nuclear

#### See more data fields

◀ 1 of 1 ▶

## Cited References: 20

Showing 20 of 20 [View All in Cited References page](#)

(from Web of Science Core Collection)

1. [Measurement of event-plane correlations in root s\(NN\)=2.76 TeV lead-lead collisions with the ATLAS detector](#) Times Cited: 112  
By: Aad, G.; Abbott, B.; Abdallah, J.; et al.  
Group Author(s): ATLAS Collaboration  
PHYSICAL REVIEW C Volume: 90 Issue: 2 Article Number: 024905 Published: AUG 12 2014
2. [Charge separation relative to the reaction plane in Pb-Pb collisions at root s\(NN\)=2.76 TeV](#) Times Cited: 154  
By: Abelev, B.; Adam, J.; Adamova, D.; et al.  
Group Author(s): ALICE Collaboration  
PHYSICAL REVIEW LETTERS Volume: 110 Issue: 1 Article Number: 012301 Published: JAN 2 2013
3. [Azimuthal Charged-Particle Correlations and Possible Local Strong Parity Violation](#) Times Cited: 338  
By: Abelev, B. I.; Aggarwal, M. M.; Ahmed, Z.; et al.  
Group Author(s): STAR Collaboration  
PHYSICAL REVIEW LETTERS Volume: 103 Issue: 25 Article Number: 251601 Published: DEC 18 2009
4. [Constraining the magnitude of the chiral magnetic effect with event shape engineering in Pb-Pb collisions at &RADIC;sNN=2.76 TeV](#) Times Cited: 2  
By: Acharya, S.  
arXiv:1709.04723[nucl-ex]
5. [Fluctuations of charge separation perpendicular to the event plane and local parity violation in root S-NN=200 GeV Au + Au collisions at the BNL Relativistic Heavy Ion Collider](#) Times Cited: 58  
By: Adamczyk, L.; Adkins, J. K.; Agakishiev, G.; et al.  
Group Author(s): STAR Collaboration  
PHYSICAL REVIEW C Volume: 88 Issue: 6 Article Number: 064911 Published: DEC 26 2013
6. [Beam-Energy Dependence of Charge Separation along the Magnetic Field in Au plus Au Collisions at RHIC](#) Times Cited: 113  
By: Adamczyk, L.; Adkins, J. K.; Agakishiev, G.; et al.  
Group Author(s): STAR Collaboration  
PHYSICAL REVIEW LETTERS Volume: 113 Issue: 5 Article Number: 052302 Published: JUL 30 2014
7. [Charge-dependent correlations in relativistic heavy ion collisions and the chiral magnetic effect](#) Times Cited: 63  
By: Bzdak, A.; Koch, V.; Liao, J.  
Lect. Notes Phys. Volume: 871 Pages: 503-536 Published: 2013  
URL: [http://dx.doi.org.ezproxy.um.edu.my/10.1007/978-3-642-37305-3\\_19](http://dx.doi.org.ezproxy.um.edu.my/10.1007/978-3-642-37305-3_19)
8. [Azimuthal correlations from transverse momentum conservation and possible local parity violation](#) Times Cited: 81  
By: Bzdak, Adam; Koch, Volker; Liao, Jinfeng  
PHYSICAL REVIEW C Volume: 83 Issue: 1 Article Number: 014905 Published: JAN 18 2011
9. [The CMS experiment at the CERN LHC](#) Times Cited: 2,866  
By: Chatrchyan, S.; Hmayakyan, G.; Khachatryan, V.; et al.  
Group Author(s): CMS Collaboration  
JOURNAL OF INSTRUMENTATION Volume: 3 Article Number: S08004 Published: AUG 2008

10. **Observation of Charge-Dependent Azimuthal Correlations in p-Pb Collisions and Its Implication for the Search for the Chiral Magnetic Effect** Times Cited: 48  
By: Khachatryan, V.; Sirunyan, A. M.; Tumasyan, A.; et al.  
Group Author(s): CMS Collaboration  
PHYSICAL REVIEW LETTERS Volume: 118 Issue: 12 Article Number: 122301 Published: MAR 24 2017
  
11. **Possibility of spontaneous parity violation in hot QCD** Times Cited: 237  
By: Kharzeev, D; Pisarski, RD; Tytgat, MHG  
PHYSICAL REVIEW LETTERS Volume: 81 Issue: 3 Pages: 512-515 Published: JUL 20 1998
  
12. **Chiral magnetic and vortical effects in high-energy nuclear collisions-A status report** Times Cited: 264  
By: Kharzeev, D. E.; Liao, J.; Voloshin, S. A.; et al.  
PROGRESS IN PARTICLE AND NUCLEAR PHYSICS Volume: 88 Pages: 1-28 Published: MAY 2016
  
13. **VACUUM STABILITY AND VACUUM EXCITATION IN A SPIN-0 FIELD-THEORY** Times Cited: 753  
By: LEE, TD; WICK, GC  
PHYSICAL REVIEW D Volume: 9 Issue: 8 Pages: 2291-2316 Published: 1974
  
14. **THEORY OF SPONTANEOUS T VIOLATION** Times Cited: 908  
By: LEE, TD  
PHYSICAL REVIEW D Volume: 8 Issue: 4 Pages: 1226-1239 Published: 1973
  
15. **Strong P, CP, T violations in heavy-ion collisions** Times Cited: 46  
By: Morley, P.D.; Schmidt, I.A.  
Zeitschrift für Physik C (Particles and Fields) Volume: 26 Issue: 4 Pages: 627-8 Published: 1985
  
16. **Charge conservation at energies available at the BNL Relativistic Heavy Ion Collider and contributions to local parity violation observables** Times Cited: 112  
By: Schlichting, Soeren; Pratt, Scott  
PHYSICAL REVIEW C Volume: 83 Issue: 1 Article Number: 014913 Published: JAN 31 2011
  
17. **Constraints on the chiral magnetic effect using charge-dependent azimuthal correlations in pPb and PbPb collisions at the LHC** Times Cited: 2  
By: Sirunyan, A. M.  
arXiv:1708.01602
  
18. **Challenges in flow background removal in search for the chiral magnetic effect** Times Cited: 22  
By: Wang, Fuqiang; Zhao, Jie  
PHYSICAL REVIEW C Volume: 95 Issue: 5 Article Number: 051901 Published: MAY 11 2017
  
19. **Effects of cluster particle correlations on local parity violation observables** Times Cited: 87  
By: Wang, Fuqiang  
PHYSICAL REVIEW C Volume: 81 Issue: 6 Article Number: 064902 Published: JUN 7 2010
  
20. **Procedure for removing flow backgrounds from the charge-separation observable perpendicular to the reaction plane in heavy-ion collisions** Times Cited: 5  
By: Wen, F.; Wen, L.; Wang, G.  
arXiv:1608.03205

Showing 20 of 20 [View All in Cited References page](#)

