

Erratum: Measurement of $e^+e^- \rightarrow \omega\pi^+\pi^-$ cross section at $\sqrt{s} = 2.000$ to 3.080 GeV



The BESIII collaboration

E-mail: besiii-publications@ihep.ac.cn

ERRATUM TO: [JHEP01\(2023\)111](#)

ARXIV EPRINT: [2208.04507](#)

The original article was published in Jan. 2023 ([JHEP 01 \(2023\) 111](#)), which the value of $a_{\mu}^{\omega\pi\pi} = (2.213 \pm 0.106 \pm 0.149) \times 10^{-10}$ is not correct. It should be $a_{\mu}^{\omega\pi\pi} = (0.135 \pm 0.007 \pm 0.009) \times 10^{-10}$. The other parts of the paper are correct other than the $a_{\mu}^{\omega\pi\pi}$ value to be modified. The corresponding preprint is [arXiv:2208.04507v3](#).

Open Access. This article is distributed under the terms of the Creative Commons Attribution License ([CC-BY 4.0](#)), which permits any use, distribution and reproduction in any medium, provided the original author(s) and source are credited. SCOAP³ supports the goals of the International Year of Basic Sciences for Sustainable Development.

The BESIII collaboration

M. Ablikim¹, M.N. Achasov^{10,b}, P. Adlarson⁶⁸, S. Ahmed¹⁴, M. Albrecht⁴, R. Aliberti²⁸,
A. Amoroso^{67A,67C}, M.R. An³², Q. An^{64,50}, X.H. Bai⁵⁸, Y. Bai⁴⁹, O. Bakina²⁹,
R. Baldini Ferroli^{23A}, I. Balossino^{24A}, Y. Ban^{39,h}, V. Batozskaya^{1,37}, D. Becker²⁸, K. Begzsuren²⁶,
N. Berger²⁸, M. Bertani^{23A}, D. Bettoni^{24A}, F. Bianchi^{67A,67C}, J. Bloms⁶¹, A. Bortone^{67A,67C},
I. Boyko²⁹, R.A. Briere⁵, A. Brueggemann⁶¹, H. Cai⁶⁹, X. Cai^{1,50}, A. Calcaterra^{23A}, G.F. Cao^{1,55},
N. Cao^{1,55}, S.A. Cetin^{54A}, J.F. Chang^{1,50}, W.L. Chang^{1,55}, G. Chelkov^{29,a}, C. Chen³⁶, G. Chen¹,
H.S. Chen^{1,55}, M.L. Chen^{1,50}, S.J. Chen³⁵, T. Chen¹, X.R. Chen²⁵, X.T. Chen¹, Y.B. Chen^{1,50},
Z.J. Chen^{20,i}, W.S. Cheng^{67C}, G. Cibinetto^{24A}, F. Cossio^{67C}, J.J. Cui⁴², H.L. Dai^{1,50}, J.P. Dai⁷¹,
X.C. Dai^{1,55}, A. Dbeyssi¹⁴, R.E. de Boer⁴, D. Dedovich²⁹, Z.Y. Deng¹, A. Denig²⁸,
I. Denysenko²⁹, M. Destefanis^{67A,67C}, F. De Mori^{67A,67C}, Y. Ding³³, J. Dong^{1,50}, L.Y. Dong^{1,55},
M.Y. Dong^{1,50,55}, X. Dong⁶⁹, S.X. Du⁷³, P. Egorov^{29,a}, Y.L. Fan⁶⁹, J. Fang^{1,50}, S.S. Fang^{1,55},
Y. Fang¹, R. Farinelli^{24A}, L. Fava^{67B,67C}, F. Feldbauer⁴, G. Felici^{23A}, C.Q. Feng^{64,50}, J.H. Feng⁵¹,
K. Fischer⁶², M. Fritsch⁴, C.D. Fu¹, Y.N. Gao^{39,h}, Yang Gao^{64,50}, I. Garzia^{24A,24B}, P.T. Ge⁶⁹,
C. Geng⁵¹, E.M. Gersabeck⁵⁹, A. Gilman⁶², K. Goetzen¹¹, L. Gong³³, W.X. Gong^{1,50},
W. Gradl²⁸, M. Greco^{67A,67C}, M.H. Gu^{1,50}, C.Y. Guan^{1,55}, A.Q. Guo²², A.Q. Guo²⁵, L.B. Guo³⁴,
R.P. Guo⁴¹, Y.P. Guo^{9,g}, A. Guskov^{29,a}, T.T. Han⁴², W.Y. Han³², X.Q. Hao¹⁵, F.A. Harris⁵⁷,
K.K. He⁴⁷, K.L. He^{1,55}, F.H. Heinsius⁴, C.H. Heinz²⁸, Y.K. Heng^{1,50,55}, C. Herold⁵²,
M. Himmelreich^{11,e}, T. Holtmann⁴, G.Y. Hou^{1,55}, Y.R. Hou⁵⁵, Z.L. Hou¹, H.M. Hu^{1,55},
J.F. Hu^{48,j}, T. Hu^{1,50,55}, Y. Hu¹, G.S. Huang^{64,50}, K.X. Huang⁵¹, L.Q. Huang⁶⁵, X.T. Huang⁴²,
Y.P. Huang¹, Z. Huang^{39,h}, T. Hussain⁶⁶, N. Hüsken^{22,28}, W. Imoehl²², M. Irshad^{64,50}, S. Jaeger⁴,
S. Janchiv²⁶, Q. Ji¹, Q.P. Ji¹⁵, X.B. Ji^{1,55}, X.L. Ji^{1,50}, Y.Y. Ji⁴², H.B. Jiang⁴², S.S. Jiang³²,
X.S. Jiang^{1,50,55}, J.B. Jiao⁴², Z. Jiao¹⁸, S. Jin³⁵, Y. Jin⁵⁸, M.Q. Jing^{1,55}, T. Johansson⁶⁸,
N. Kalantar-Nayestanaki⁵⁶, X.S. Kang³³, R. Kappert⁵⁶, M. Kavatsyuk⁵⁶, B.C. Ke⁷³, I.K. Keshk⁴,
A. Khokkaz⁶¹, P. Kiese²⁸, R. Kiuchi¹, R. Kliemt¹¹, L. Koch³⁰, O.B. Kolcu^{54A}, B. Kopf⁴,
M. Kuemmel⁴, M. Kuessner⁴, A. Kupsc^{37,68}, M.G. Kurth^{1,55}, W. Kühn³⁰, J.J. Lane⁵⁹,
J.S. Lange³⁰, P. Larin¹⁴, A. Lavania²¹, L. Lavezzi^{67A,67C}, Z.H. Lei^{64,50}, H. Leithoff²⁸,
M. Lellmann²⁸, T. Lenz²⁸, C. Li⁴⁰, C. Li³⁶, C.H. Li³², Cheng Li^{64,50}, D.M. Li⁷³, F. Li^{1,50}, G. Li¹,
H. Li^{64,50}, H. Li⁴⁴, H.B. Li^{1,55}, H.J. Li¹⁵, H.N. Li^{48,j}, J.L. Li⁴², J.Q. Li⁴, J.S. Li⁵¹, Ke Li¹,
L.J. Li¹, L.K. Li¹, Lei Li³, M.H. Li³⁶, P.R. Li^{31,k,l}, S.X. Li⁹, S.Y. Li⁵³, T. Li⁴², W.D. Li^{1,55},
W.G. Li¹, X.H. Li^{64,50}, X.L. Li⁴², Xiaoyu Li^{1,55}, Z.Y. Li⁵¹, H. Liang²⁷, H. Liang^{1,55}, H. Liang^{64,50},
Y.F. Liang⁴⁶, Y.T. Liang²⁵, G.R. Liao¹², L.Z. Liao^{1,55}, J. Libby²¹, A. Limphirat⁵², C.X. Lin⁵¹,
D.X. Lin²⁵, T. Lin¹, B.J. Liu¹, C.X. Liu¹, D. Liu^{14,64}, F.H. Liu⁴⁵, Fang Liu¹, Feng Liu⁶,
G.M. Liu^{48,j}, H.M. Liu^{1,55}, Huanhuan Liu¹, Huihui Liu¹⁶, J.B. Liu^{64,50}, J.L. Liu⁶⁵, J.Y. Liu^{1,55},
K. Liu¹, K.Y. Liu³³, Ke Liu¹⁷, L. Liu^{64,50}, M.H. Liu^{9,g}, P.L. Liu¹, Q. Liu⁵⁵, S.B. Liu^{64,50},
T. Liu^{9,g}, T. Liu^{1,55}, W.M. Liu^{64,50}, X. Liu^{31,k,l}, Y. Liu^{31,k,l}, Y.B. Liu³⁶, Z.A. Liu^{1,50,55},
Z.Q. Liu⁴², X.C. Lou^{1,50,55}, F.X. Lu⁵¹, H.J. Lu¹⁸, J.D. Lu^{1,55}, J.G. Lu^{1,50}, X.L. Lu¹, Y. Lu¹,
Y.P. Lu^{1,50}, Z.H. Lu¹, C.L. Luo³⁴, M.X. Luo⁷², T. Luo^{9,g}, X.L. Luo^{1,50}, X.R. Lyu⁵⁵, Y.F. Lyu³⁶,
F.C. Ma³³, H.L. Ma¹, L.L. Ma⁴², M.M. Ma^{1,55}, Q.M. Ma¹, R.Q. Ma^{1,55}, R.T. Ma⁵⁵, X.X. Ma^{1,55},
X.Y. Ma^{1,50}, Y. Ma^{39,h}, F.E. Maas¹⁴, M. Maggiora^{67A,67C}, S. Maldaner⁴, S. Malde⁶²,
Q.A. Malik⁶⁶, A. Mangoni^{23B}, Y.J. Mao^{39,h}, Z.P. Mao¹, S. Marcello^{67A,67C}, Z.X. Meng⁵⁸,
J.G. Messchendorp^{56,d}, G. Mezzadri^{24A}, H. Miao¹, T.J. Min³⁵, R.E. Mitchell²², X.H. Mo^{1,50,55},
N. Yu. Muchnoi^{10,b}, H. Muramatsu⁶⁰, S. Nakhoul^{11,e}, Y. Nefedov²⁹, F. Nerling^{11,e},
I.B. Nikolaev^{10,b}, Z. Ning^{1,50}, S. Nisar^{8,m}, S.L. Olsen⁵⁵, Q. Ouyang^{1,50,55}, S. Pacetti^{23B,23C},
X. Pan^{9,g}, Y. Pan⁵⁹, A. Pathak¹, A. Pathak²⁷, M. Pelizaeus⁴, H.P. Peng^{64,50}, K. Peters^{11,e},
J. Pettersson⁶⁸, J.L. Ping³⁴, R.G. Ping^{1,55}, S. Plura²⁸, S. Pogodin²⁹, R. Poling⁶⁰, V. Prasad^{64,50},
H. Qi^{64,50}, H.R. Qi⁵³, M. Qi³⁵, T.Y. Qi^{9,g}, S. Qian^{1,50}, W.B. Qian⁵⁵, Z. Qian⁵¹, C.F. Qiao⁵⁵,

J.J. Qin⁶⁵, L.Q. Qin¹², X.P. Qin^{9,g}, X.S. Qin⁴², Z.H. Qin^{1,50}, J.F. Qiu¹, S.Q. Qu³⁶, S.Q. Qu⁵³, K.H. Rashid⁶⁶, K. Ravindran²¹, C.F. Redmer²⁸, K.J. Ren³², A. Rivetti^{67C}, V. Rodin⁵⁶, M. Rolo^{67C}, G. Rong^{1,55}, Ch. Rosner¹⁴, M. Rump⁶¹, H.S. Sang⁶⁴, A. Sarantsev^{29,c}, Y. Schelhaas²⁸, C. Schnier⁴, K. Schoenning⁶⁸, M. Scodreggio^{24A,24B}, K.Y. Shan^{9,g}, W. Shan¹⁹, X.Y. Shan^{64,50}, J.F. Shangguan⁴⁷, L.G. Shao^{1,55}, M. Shao^{64,50}, C.P. Shen^{9,g}, H.F. Shen^{1,55}, X.Y. Shen^{1,55}, B.-A. Shi⁵⁵, H.C. Shi^{64,50}, R.S. Shi^{1,55}, X. Shi^{1,50}, X.D. Shi^{64,50}, J.J. Song¹⁵, W.M. Song^{27,1}, Y.X. Song^{39,h}, S. Sosio^{67A,67C}, S. Spataro^{67A,67C}, F. Stieler²⁸, K.X. Su⁶⁹, P.P. Su⁴⁷, Y.-J. Su⁵⁵, G.X. Sun¹, H.K. Sun¹, J.F. Sun¹⁵, L. Sun⁶⁹, S.S. Sun^{1,55}, T. Sun^{1,55}, W.Y. Sun²⁷, X. Sun^{20,i}, Y.J. Sun^{64,50}, Y.Z. Sun¹, Z.T. Sun⁴², Y.H. Tan⁶⁹, Y.X. Tan^{64,50}, C.J. Tang⁴⁶, G.Y. Tang¹, J. Tang⁵¹, L.Y. Tao⁶⁵, Q.T. Tao^{20,i}, J.X. Teng^{64,50}, V. Thoren⁶⁸, W.H. Tian⁴⁴, Y.T. Tian²⁵, I. Uman^{54B}, B. Wang¹, D.Y. Wang^{39,h}, F. Wang⁶⁵, H.J. Wang^{31,k,l}, H.P. Wang^{1,55}, K. Wang^{1,50}, L.L. Wang¹, M. Wang⁴², M.Z. Wang^{39,h}, Meng Wang^{1,55}, S. Wang^{9,g}, T.J. Wang³⁶, W. Wang⁵¹, W.H. Wang⁶⁹, W.P. Wang^{64,50}, X. Wang^{39,h}, X.F. Wang^{31,k,l}, X.L. Wang^{9,g}, Y.D. Wang³⁸, Y.F. Wang^{1,50,55}, Y.Q. Wang¹, Y.Y. Wang^{31,k,l}, Ying Wang⁵¹, Z. Wang^{1,50}, Z.Y. Wang¹, Ziyi Wang⁵⁵, Zongyuan Wang^{1,55}, D.H. Wei¹², F. Weidner⁶¹, S.P. Wen¹, D.J. White⁵⁹, U. Wiedner⁴, G. Wilkinson⁶², M. Wolke⁶⁸, L. Wollenberg⁴, J.F. Wu^{1,55}, L.H. Wu¹, L.J. Wu^{1,55}, X. Wu^{9,g}, X.H. Wu²⁷, Y. Wu⁶⁴, Z. Wu^{1,50}, L. Xia^{64,50}, T. Xiang^{39,h}, H. Xiao^{9,g}, S.Y. Xiao¹, Y.L. Xiao^{9,g}, Z.J. Xiao³⁴, X.H. Xie^{39,h}, Y.G. Xie^{1,50}, Y.H. Xie⁶, Z.P. Xie^{64,50}, T.Y. Xing^{1,55}, C.F. Xu¹, C.J. Xu⁵¹, G.F. Xu¹, Q.J. Xu¹³, S.Y. Xu⁶³, W. Xu^{1,55}, X.P. Xu⁴⁷, Y.C. Xu⁵⁵, F. Yan^{9,g}, L. Yan^{9,g}, W.B. Yan^{64,50}, W.C. Yan⁷³, H.J. Yang^{43,f}, H.X. Yang¹, L. Yang⁴⁴, S.L. Yang⁵⁵, Y.X. Yang^{1,55}, Yifan Yang^{1,55}, Zhi Yang²⁵, M. Ye^{1,50}, M.H. Ye⁷, J.H. Yin¹, Z.Y. You⁵¹, B.X. Yu^{1,50,55}, C.X. Yu³⁶, G. Yu^{1,55}, J.S. Yu^{20,i}, T. Yu⁶⁵, C.Z. Yuan^{1,55}, L. Yuan², S.C. Yuan¹, X.Q. Yuan¹, Y. Yuan¹, Z.Y. Yuan⁵¹, C.X. Yue³², A.A. Zafar⁶⁶, X. Zeng⁶, Y. Zeng^{20,i}, Y.H. Zhan⁵¹, A.Q. Zhang¹, B.L. Zhang¹, B.X. Zhang¹, G.Y. Zhang¹⁵, H. Zhang⁶⁴, H.H. Zhang²⁷, H.H. Zhang⁵¹, H.Y. Zhang^{1,50}, J.L. Zhang⁷⁰, J.Q. Zhang³⁴, J.W. Zhang^{1,50,55}, J.Y. Zhang¹, J.Z. Zhang^{1,55}, Jianyu Zhang^{1,55}, Jiawei Zhang^{1,55}, L.M. Zhang⁵³, L.Q. Zhang⁵¹, Lei Zhang³⁵, P. Zhang¹, Shulei Zhang^{20,i}, X.D. Zhang³⁸, X.M. Zhang¹, X.Y. Zhang⁴², X.Y. Zhang⁴⁷, Y. Zhang⁶², Y.T. Zhang⁷³, Y.H. Zhang^{1,50}, Yan Zhang^{64,50}, Yao Zhang¹, Z.H. Zhang¹, Z.Y. Zhang³⁶, Z.Y. Zhang⁶⁹, G. Zhao¹, J. Zhao³², J.Y. Zhao^{1,55}, J.Z. Zhao^{1,50}, Lei Zhao^{64,50}, Ling Zhao¹, M.G. Zhao³⁶, Q. Zhao¹, S.J. Zhao⁷³, Y.B. Zhao^{1,50}, Y.X. Zhao²⁵, Z.G. Zhao^{64,50}, A. Zhemchugov^{29,a}, B. Zheng⁶⁵, J.P. Zheng^{1,50}, Y.H. Zheng⁵⁵, B. Zhong³⁴, C. Zhong⁶⁵, X. Zhong⁵¹, L.P. Zhou^{1,55}, Q. Zhou^{1,55}, X. Zhou⁶⁹, X.K. Zhou⁵⁵, X.R. Zhou^{64,50}, X.Y. Zhou³², Y.Z. Zhou^{9,g}, A.N. Zhu^{1,55}, J. Zhu³⁶, K. Zhu¹, K.J. Zhu^{1,50,55}, S.H. Zhu⁶³, T.J. Zhu⁷⁰, W.J. Zhu^{9,g}, W.J. Zhu³⁶, Y.C. Zhu^{64,50}, Z.A. Zhu^{1,55}, B.S. Zou¹, J.H. Zou¹

¹ Institute of High Energy Physics, Beijing 100049, People's Republic of China

² Beihang University, Beijing 100191, People's Republic of China

³ Beijing Institute of Petrochemical Technology, Beijing 102617, People's Republic of China

⁴ Bochum Ruhr-University, D-44780 Bochum, Germany

⁵ Carnegie Mellon University, Pittsburgh, Pennsylvania 15213, U.S.A.

⁶ Central China Normal University, Wuhan 430079, People's Republic of China

⁷ China Center of Advanced Science and Technology, Beijing 100190, People's Republic of China

⁸ COMSATS University Islamabad, Lahore Campus, Defence Road, Off Raiwind Road, 54000 Lahore, Pakistan

⁹ Fudan University, Shanghai 200433, People's Republic of China

¹⁰ G.I. Budker Institute of Nuclear Physics SB RAS (BINP), Novosibirsk 630090, Russia

¹¹ GSI Helmholtzcentre for Heavy Ion Research GmbH, D-64291 Darmstadt, Germany

¹² Guangxi Normal University, Guilin 541004, People's Republic of China

- 13 Hangzhou Normal University, Hangzhou 310036, People's Republic of China
- 14 Helmholtz Institute Mainz, Staudinger Weg 18, D-55099 Mainz, Germany
- 15 Henan Normal University, Xinxiang 453007, People's Republic of China
- 16 Henan University of Science and Technology, Luoyang 471003, People's Republic of China
- 17 Henan University of Technology, Zhengzhou 450001, People's Republic of China
- 18 Huangshan College, Huangshan 245000, People's Republic of China
- 19 Hunan Normal University, Changsha 410081, People's Republic of China
- 20 Hunan University, Changsha 410082, People's Republic of China
- 21 Indian Institute of Technology Madras, Chennai 600036, India
- 22 Indiana University, Bloomington, Indiana 47405, U.S.A.
- 23 INFN Laboratori Nazionali di Frascati, (A)INFN Laboratori Nazionali di Frascati, I-00044, Frascati, Italy; (B)INFN Sezione di Perugia, I-06100, Perugia, Italy; (C)University of Perugia, I-06100, Perugia, Italy
- 24 INFN Sezione di Ferrara, (A)INFN Sezione di Ferrara, I-44122, Ferrara, Italy; (B)University of Ferrara, I-44122, Ferrara, Italy
- 25 Institute of Modern Physics, Lanzhou 730000, People's Republic of China
- 26 Institute of Physics and Technology, Peace Ave. 54B, Ulaanbaatar 13330, Mongolia
- 27 Jilin University, Changchun 130012, People's Republic of China
- 28 Johannes Gutenberg University of Mainz, Johann-Joachim-Becher-Weg 45, D-55099 Mainz, Germany
- 29 Joint Institute for Nuclear Research, 141980 Dubna, Moscow region, Russia
- 30 Justus-Liebig-Universitaet Giessen, II. Physikalisches Institut, Heinrich-Buff-Ring 16, D-35392 Giessen, Germany
- 31 Lanzhou University, Lanzhou 730000, People's Republic of China
- 32 Liaoning Normal University, Dalian 116029, People's Republic of China
- 33 Liaoning University, Shenyang 110036, People's Republic of China
- 34 Nanjing Normal University, Nanjing 210023, People's Republic of China
- 35 Nanjing University, Nanjing 210093, People's Republic of China
- 36 Nankai University, Tianjin 300071, People's Republic of China
- 37 National Centre for Nuclear Research, Warsaw 02-093, Poland
- 38 North China Electric Power University, Beijing 102206, People's Republic of China
- 39 Peking University, Beijing 100871, People's Republic of China
- 40 Qufu Normal University, Qufu 273165, People's Republic of China
- 41 Shandong Normal University, Jinan 250014, People's Republic of China
- 42 Shandong University, Jinan 250100, People's Republic of China
- 43 Shanghai Jiao Tong University, Shanghai 200240, People's Republic of China
- 44 Shanxi Normal University, Linfen 041004, People's Republic of China
- 45 Shanxi University, Taiyuan 030006, People's Republic of China
- 46 Sichuan University, Chengdu 610064, People's Republic of China
- 47 Soochow University, Suzhou 215006, People's Republic of China
- 48 South China Normal University, Guangzhou 510006, People's Republic of China
- 49 Southeast University, Nanjing 211100, People's Republic of China
- 50 State Key Laboratory of Particle Detection and Electronics, Beijing 100049, Hefei 230026, People's Republic of China
- 51 Sun Yat-Sen University, Guangzhou 510275, People's Republic of China
- 52 Suranaree University of Technology, University Avenue 111, Nakhon Ratchasima 30000, Thailand
- 53 Tsinghua University, Beijing 100084, People's Republic of China
- 54 Turkish Accelerator Center Particle Factory Group, (A)Istinye University, 34010, Istanbul, Turkey; (B)Near East University, Nicosia, North Cyprus, Mersin 10, Turkey
- 55 University of Chinese Academy of Sciences, Beijing 100049, People's Republic of China
- 56 University of Groningen, NL-9747 AA Groningen, The Netherlands
- 57 University of Hawaii, Honolulu, Hawaii 96822, U.S.A.

- ⁵⁸ *University of Jinan, Jinan 250022, People’s Republic of China*
- ⁵⁹ *University of Manchester, Oxford Road, Manchester, M13 9PL, United Kingdom*
- ⁶⁰ *University of Minnesota, Minneapolis, Minnesota 55455, U.S.A.*
- ⁶¹ *University of Muenster, Wilhelm-Klemm-Str. 9, 48149 Muenster, Germany*
- ⁶² *University of Oxford, Keble Rd, Oxford, U.K. OX13RH*
- ⁶³ *University of Science and Technology Liaoning, Anshan 114051, People’s Republic of China*
- ⁶⁴ *University of Science and Technology of China, Hefei 230026, People’s Republic of China*
- ⁶⁵ *University of South China, Hengyang 421001, People’s Republic of China*
- ⁶⁶ *University of the Punjab, Lahore-54590, Pakistan*
- ⁶⁷ *University of Turin and INFN, (A)University of Turin, I-10125, Turin, Italy; (B)University of Eastern Piedmont, I-15121, Alessandria, Italy; (C)INFN, I-10125, Turin, Italy*
- ⁶⁸ *Uppsala University, Box 516, SE-75120 Uppsala, Sweden*
- ⁶⁹ *Wuhan University, Wuhan 430072, People’s Republic of China*
- ⁷⁰ *Xinyang Normal University, Xinyang 464000, People’s Republic of China*
- ⁷¹ *Yunnan University, Kunming 650500, People’s Republic of China*
- ⁷² *Zhejiang University, Hangzhou 310027, People’s Republic of China*
- ⁷³ *Zhengzhou University, Zhengzhou 450001, People’s Republic of China*
- ^a *Also at the Moscow Institute of Physics and Technology, Moscow 141700, Russia*
- ^b *Also at the Novosibirsk State University, Novosibirsk, 630090, Russia*
- ^c *Also at the NRC “Kurchatov Institute”, PNPI, 188300, Gatchina, Russia*
- ^d *Currently at Istanbul Arel University, 34295 Istanbul, Turkey*
- ^e *Also at Goethe University Frankfurt, 60323 Frankfurt am Main, Germany*
- ^f *Also at Key Laboratory for Particle Physics, Astrophysics and Cosmology, Ministry of Education; Shanghai Key Laboratory for Particle Physics and Cosmology; Institute of Nuclear and Particle Physics, Shanghai 200240, People’s Republic of China*
- ^g *Also at Key Laboratory of Nuclear Physics and Ion-beam Application (MOE) and Institute of Modern Physics, Fudan University, Shanghai 200443, People’s Republic of China*
- ^h *Also at State Key Laboratory of Nuclear Physics and Technology, Peking University, Beijing 100871, People’s Republic of China*
- ⁱ *Also at School of Physics and Electronics, Hunan University, Changsha 410082, China*
- ^j *Also at Guangdong Provincial Key Laboratory of Nuclear Science, Institute of Quantum Matter, South China Normal University, Guangzhou 510006, China*
- ^k *Also at Frontiers Science Center for Rare Isotopes, Lanzhou University, Lanzhou 730000, People’s Republic of China*
- ^l *Also at Lanzhou Center for Theoretical Physics, Lanzhou University, Lanzhou 730000, People’s Republic of China*
- ^m *Also at the Department of Mathematical Sciences, IBA, Karachi, Pakistan*