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Erratum to: Measurement of CP observables in $B_{\pm} \rightarrow DK^{*\pm}$ decays using two- and four-body D final states

Dufour, L.; Mulder, M; Onderwater, C. J. G.; Pellegrino, A.; Tolk, S.; van Veghel, M. ; LHCb Collaboration

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Erratum: Measurement of CP observables in $B^\pm \rightarrow DK^{*\pm}$ decays using two- and four-body D final states



The LHCb collaboration

E-mail: anita.nandi@physics.ox.ac.uk

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ABSTRACT: The measurements of $A_{\pi\pi}$ and R_{KK} in $B^\pm \rightarrow DK^{*\pm}$ decays were incorrectly reported in the paper [1], due to a transposition of the systematic uncertainties. This error was present in the reporting of the individual systematic uncertainties, the correlation matrix, and in the calculation of R_{CP+} . In this erratum, all tables and final values that need correction are reported, with identical numbering and captions to those in the original publication. As the affected systematic uncertainties are substantially smaller than the statistical uncertainties there is no change to the interpretation of these results and the conclusions. The corrected CP observables are

$$\begin{aligned}A_{\pi\pi} &= 0.15 \pm 0.13 \pm 0.01 \\R_{KK} &= 1.22 \pm 0.09 \pm 0.02 \\R_{CP+} &= 1.18 \pm 0.08 \pm 0.02\end{aligned}$$

where the first uncertainty is statistical and the second is systematic.

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	$A_{K\pi}$	A_{KK}	$A_{\pi\pi}$	R_{KK}	$R_{\pi\pi}$	$R_{K\pi}^+$	$R_{K\pi}^-$	$A_{K\pi\pi\pi}$	$A_{\pi\pi\pi\pi}$	$R_{\pi\pi\pi\pi}$	$R_{K\pi\pi\pi}^+$	$R_{K\pi\pi\pi}^-$
Statistical	0.023	0.07	0.13	0.09	0.15	0.006	0.004	0.031	0.11	0.13	0.008	0.007
Branching fractions	–	–	0.001	0.013	0.012	–	–	–	0.0008	0.027	–	–
Selection efficiencies	–	–	–	0.007	0.006	0.0002	–	–	0.0008	0.014	–	–
PID efficiencies	–	–	–	0.002	0.002	–	–	–	–	0.002	–	–
Veto efficiencies	–	–	–	–	–	0.0001	–	–	–	–	–	–
A_{prod}	0.0073	0.007	0.008	–	–	–	–	0.0079	0.0077	–	–	–
A_{det}	0.0034	0.003	0.003	–	–	0.0001	–	0.0034	0.0030	–	0.0001	–
Signal shape	0.0011	0.003	0.003	0.011	0.027	0.0011	0.0013	0.0017	0.0022	0.010	0.0030	0.0038
Combinatorial shape	0.0012	0.003	0.005	0.004	0.009	0.0002	0.0003	0.0001	0.0018	–	0.0012	0.0004
Partially reconstructed shape	0.0007	0.001	0.003	0.001	0.005	–	0.0003	0.0003	0.0005	0.002	0.0008	0.0001
Charmless	0.0008	–	0.003	0.002	0.007	–	0.0003	0.0009	0.0030	0.002	0.0008	0.0001
$A_b^0 \rightarrow A_c^+ K^{*-}$	0.0002	–	–	0.011	0.001	0.0001	–	–	–	–	–	–
$B_s^0 \rightarrow DK^*(1410)^0$	–	–	–	–	–	0.0005	0.0001	–	–	–	–	–
Total systematic	0.0083	0.009	0.012	0.022	0.032	0.0012	0.0014	0.0088	0.0093	0.032	0.0034	0.0038

Table 2. Summary of systematic uncertainties. Uncertainties are not shown if they are more than two orders of magnitude smaller than the statistical uncertainty.

	$A_{K\pi}$	A_{KK}	$A_{\pi\pi}$	R_{KK}	$R_{\pi\pi}$	$R_{K\pi}^+$	$R_{K\pi}^-$	$A_{K\pi\pi\pi}$	$A_{\pi\pi\pi\pi}$	$R_{\pi\pi\pi\pi}$	$R_{K\pi\pi\pi}^+$	$R_{K\pi\pi\pi}^-$
$A_{K\pi}$	1	0.82	0.72	–	–	0.01	–0.02	0.94	0.84	–	–0.01	–
A_{KK}		1	0.65	–0.04	0.02	0.01	–0.02	0.83	0.77	–	–	–
$A_{\pi\pi}$			1	–	–0.03	–	–0.02	0.72	0.68	–	–	0.01
R_{KK}				1	–	0.05	0.03	–0.01	–	–0.01	–0.01	–0.01
$R_{\pi\pi}$					1	0.06	0.08	–0.01	–	–0.01	–0.02	0.01
$R_{K\pi}^+$						1	0.08	–0.01	–	–	–0.01	–0.01
$R_{K\pi}^-$							1	–0.01	–0.01	–0.01	0.01	0.03
$A_{K\pi\pi\pi}$								1	0.84	–	–0.01	–0.02
$A_{\pi\pi\pi\pi}$									1	0.03	0.01	–
$R_{\pi\pi\pi\pi}$										1	0.01	–0.01
$R_{K\pi\pi\pi}^+$											1	0.05
$R_{K\pi\pi\pi}^-$												1

Table 4. Correlation matrix of the systematic uncertainties for the twelve physics observables from the simultaneous fit to data. Only half of the symmetric matrix is shown.

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The LHCb collaboration

R. Aaij⁴⁰, B. Adeva³⁹, M. Adinolfi⁴⁸, Z. Ajaltouni⁵, S. Akar⁵⁹, J. Albrecht¹⁰, F. Alessio⁴⁰, M. Alexander⁵³, A. Alfonso Alberio³⁸, S. Ali⁴³, G. Alkhazov³¹, P. Alvarez Cartelle⁵⁵, A.A. Alves Jr⁵⁹, S. Amato², S. Amerio²³, Y. Amhis⁷, L. An³, L. Anderlini¹⁸, G. Andreassi⁴¹, M. Andreotti^{17,g}, J.E. Andrews⁶⁰, R.B. Appleby⁵⁶, F. Archilli⁴³, P. d'Argent¹², J. Arnau Romeu⁶, A. Artamonov³⁷, M. Artuso⁶¹, E. Aslanides⁶, M. Atzeni⁴², G. Auriemma²⁶, M. Baalouch⁵, I. Babuschkin⁵⁶, S. Bachmann¹², J.J. Back⁵⁰, A. Badalov^{38,m}, C. Baesso⁶², S. Baker⁵⁵, V. Balagura^{7,b}, W. Baldini¹⁷, A. Baranov³⁵, R.J. Barlow⁵⁶, C. Barschel⁴⁰, S. Barsuk⁷, W. Barter⁵⁶, F. Baryshnikov³², V. Batozskaya²⁹, V. Battista⁴¹, A. Bay⁴¹, L. Beaucourt⁴, J. Beddow⁵³, F. Bedeschi²⁴, I. Bediaga¹, A. Beiter⁶¹, L.J. Bel⁴³, N. Bely⁶³, V. Bellec⁴¹, N. Belloli^{21,i}, K. Belous³⁷, I. Belyaev^{32,40}, E. Ben-Haim⁸, G. Bencivenni¹⁹, S. Benson⁴³, S. Beranek⁹, A. Berezhnoy³³, R. Bernet⁴², D. Berninghoff¹², E. Bertholet⁸, A. Bertolin²³, C. Betancourt⁴², F. Betti¹⁵, M.-O. Bettler⁴⁰, M. van Beuzekom⁴³, Ia. Bezshyiko⁴², S. Bifani⁴⁷, P. Billoir⁸, A. Birnkraut¹⁰, A. Bizzeti^{18,u}, M. Bjørn⁵⁷, T. Blake⁵⁰, F. Blanc⁴¹, S. Blusk⁶¹, V. Bocci²⁶, T. Boettcher⁵⁸, A. Bondar^{36,w}, N. Bondar³¹, I. Bordyuzhin³², A. Borgheresi^{21,i}, S. Borghi⁵⁶, M. Borisyak³⁵, M. Borsato³⁹, F. Bossu⁷, M. Boubdir⁹, T.J.V. Bowcock⁵⁴, E. Bowen⁴², C. Bozzi^{17,40}, S. Braun¹², T. Britton⁶¹, J. Brodzicka²⁷, D. Brundu¹⁶, E. Buchanan⁴⁸, C. Burr⁵⁶, A. Bursche^{16,f}, J. Buytaert⁴⁰, W. Byczynski⁴⁰, S. Cadeddu¹⁶, H. Cai⁶⁴, R. Calabrese^{17,g}, R. Calladine⁴⁷, M. Calvi^{21,i}, M. Calvo Gomez^{38,m}, A. Camboni^{38,m}, P. Campana¹⁹, D.H. Campora Perez⁴⁰, L. Capriotti⁵⁶, A. Carbone^{15,e}, G. Carboni^{25,j}, R. Cardinale^{20,h}, A. Cardini¹⁶, P. Carniti^{21,i}, L. Carson⁵², K. Carvalho Akiba², G. Casse⁵⁴, L. Cassina²¹, M. Cattaneo⁴⁰, G. Cavallero^{20,40,h}, R. Cenci^{24,t}, D. Chamont⁷, M.G. Chapman⁴⁸, M. Charles⁸, Ph. Charpentier⁴⁰, G. Chatzikonstantinidis⁴⁷, M. Chefdeville⁴, S. Chen¹⁶, S.F. Cheung⁵⁷, S.-G. Chitic⁴⁰, V. Chobanova^{39,40}, M. Chruszcz^{42,27}, A. Chubykin³¹, P. Ciambrone¹⁹, X. Cid Vidal³⁹, G. Ciezarek⁴³, P.E.L. Clarke⁵², M. Clemencic⁴⁰, H.V. Cliff⁴⁹, J. Closier⁴⁰, J. Cogan⁶, E. Cogneras⁵, V. Cogoni^{16,f}, L. Cojocariu³⁰, P. Collins⁴⁰, T. Colombo⁴⁰, A. Comerma-Montells¹², A. Contu⁴⁰, A. Cook⁴⁸, G. Coombs⁴⁰, S. Coquereau³⁸, G. Corti⁴⁰, M. Corvo^{17,g}, C.M. Costa Sobral⁵⁰, B. Couturier⁴⁰, G.A. Cowan⁵², D.C. Craik⁵⁸, A. Crocombe⁵⁰, M. Cruz Torres¹, R. Currie⁵², C. D'Ambrosio⁴⁰, F. Da Cunha Marinho², E. Dall'Occo⁴³, J. Dalseno⁴⁸, A. Davis³, O. De Aguiar Francisco⁴⁰, S. De Capua⁵⁶, M. De Cian¹², J.M. De Miranda¹, L. De Paula², M. De Serio^{14,d}, P. De Simone¹⁹, C.T. Dean⁵³, D. Decamp⁴, L. Del Buono⁸, H.-P. Dembinski¹¹, M. Demmer¹⁰, A. Dendek²⁸, D. Derkach³⁵, O. Deschamps⁵, F. Dettori⁵⁴, B. Dey⁶⁵, A. Di Canto⁴⁰, P. Di Nezza¹⁹, H. Dijkstra⁴⁰, F. Dordei⁴⁰, M. Dorigo⁴⁰, A. Dosil Suárez³⁹, L. Douglas⁵³, A. Dovbnya⁴⁵, K. Dreimanis⁵⁴, L. Dufour⁴³, G. Dujany⁸, P. Durante⁴⁰, R. Dzhelyadin³⁷, M. Dziewiecki¹², A. Dziurda⁴⁰, A. Dzyuba³¹, S. Easo⁵¹, M. Ebert⁵², U. Egede⁵⁵, V. Egorychev³², S. Eidelman^{36,w}, S. Eisenhardt⁵², U. Eitschberger¹⁰, R. Ekelhof¹⁰, L. Eklund⁵³, S. Ely⁶¹, S. Esen¹², H.M. Evans⁴⁹, T. Evans⁵⁷, A. Falabella¹⁵, N. Farley⁴⁷, S. Farry⁵⁴, D. Fazzini^{21,i}, L. Federici²⁵, D. Ferguson⁵², G. Fernandez³⁸, P. Fernandez Declara⁴⁰, A. Fernandez Prieto³⁹, F. Ferrari¹⁵, F. Ferreira Rodrigues², M. Ferro-Luzzi⁴⁰, S. Filippov³⁴, R.A. Fini¹⁴, M. Fiorini^{17,g}, M. Firlej²⁸, C. Fitzpatrick⁴¹, T. Fiutowski²⁸, F. Fleuret^{7,b}, K. Fohl⁴⁰, M. Fontana^{16,40}, F. Fontanelli^{20,h}, D.C. Forshaw⁶¹, R. Forty⁴⁰, V. Franco Lima⁵⁴, M. Frank⁴⁰, C. Frei⁴⁰, J. Fu^{22,q}, W. Funk⁴⁰, E. Furfaro^{25,j}, C. Färber⁴⁰, E. Gabriel⁵², A. Gallas Torreira³⁹, D. Galli^{15,e}, S. Gallorini²³, S. Gambetta⁵², M. Gandelman², P. Gandini²², Y. Gao³, L.M. Garcia Martin⁷⁰, J. García Pardiñas³⁹, J. Garra Tico⁴⁹, L. Garrido³⁸, P.J. Garsed⁴⁹, D. Gascon³⁸, C. Gaspar⁴⁰, L. Gavardi¹⁰, G. Gazzoni⁵, D. Gerick¹², E. Gersabeck¹², M. Gersabeck⁵⁶, T. Gershon⁵⁰, Ph. Ghez⁴, S. Giani⁴¹, V. Gibson⁴⁹, O.G. Girard⁴¹, L. Giubega³⁰, K. Gizdov⁵², V.V. Gligorov⁸, D. Golubkov³²,

A. Golutvin⁵⁵, A. Gomes^{1,a}, I.V. Gorelov³³, C. Gotti^{21,i}, E. Govorkova⁴³, J.P. Grabowski¹²,
 R. Graciani Diaz³⁸, L.A. Granado Cardoso⁴⁰, E. Graugés³⁸, E. Graverini⁴², G. Graziani¹⁸,
 A. Grecu³⁰, R. Greim⁹, P. Griffith¹⁶, L. Grillo²¹, L. Gruber⁴⁰, B.R. Gruberg Cazon⁵⁷,
 O. Grünberg⁶⁷, E. Gushchin³⁴, Yu. Guz³⁷, T. Gys⁴⁰, C. Göbel⁶², T. Hadavizadeh⁵⁷,
 C. Hadjivasiliou⁵, G. Haefeli⁴¹, C. Haen⁴⁰, S.C. Haines⁴⁹, B. Hamilton⁶⁰, X. Han¹²,
 T.H. Hancock⁵⁷, S. Hansmann-Menzemer¹², N. Harnew⁵⁷, S.T. Harnew⁴⁸, C. Hasse⁴⁰,
 M. Hatch⁴⁰, J. He⁶³, M. Hecker⁵⁵, K. Heinicke¹⁰, A. Heister⁹, K. Hennessy⁵⁴, P. Henrard⁵,
 L. Henry⁷⁰, E. van Herwijnen⁴⁰, M. Heß⁶⁷, A. Hicheur², D. Hill⁵⁷, C. Hombach⁵⁶,
 P.H. Hopchev⁴¹, W. Hu⁶⁵, Z.C. Huard⁵⁹, W. Hulsbergen⁴³, T. Humair⁵⁵, M. Hushchyn³⁵,
 D. Hutchcroft⁵⁴, P. Ibis¹⁰, M. Idzik²⁸, P. Ilten⁵⁸, R. Jacobsson⁴⁰, J. Jalocha⁵⁷, E. Jans⁴³,
 A. Jawahery⁶⁰, F. Jiang³, M. John⁵⁷, D. Johnson⁴⁰, C.R. Jones⁴⁹, C. Joram⁴⁰, B. Jost⁴⁰,
 N. Jurik⁵⁷, S. Kandybei⁴⁵, M. Karacson⁴⁰, J.M. Kariuki⁴⁸, S. Karodia⁵³, N. Kazeev³⁵,
 M. Kecke¹², F. Keizer⁴⁹, M. Kelsey⁶¹, M. Kenzie⁴⁹, T. Ketel⁴⁴, E. Khairullin³⁵, B. Khanji¹²,
 C. Khurewathanakul⁴¹, T. Kirn⁹, S. Klaver⁵⁶, K. Klimaszewski²⁹, T. Klimkovich¹¹, S. Kolliiev⁴⁶,
 M. Kolpin¹², I. Komarov⁴¹, R. Kopecna¹², P. Koppenburg⁴³, A. Kosmyntseva³²,
 S. Kotriakhova³¹, M. Kozeiha⁵, L. Kravchuk³⁴, M. Kreps⁵⁰, F. Kress⁵⁵, P. Krokovny^{36,w},
 F. Kruse¹⁰, W. Krzemien²⁹, W. Kucewicz^{27,l}, M. Kucharczyk²⁷, V. Kudryavtsev^{36,w},
 A.K. Kuonen⁴¹, T. Kvaratskheliya^{32,40}, D. Lacarrere⁴⁰, G. Lafferty⁵⁶, A. Lai¹⁶, G. Lanfranchi¹⁹,
 C. Langenbruch⁹, T. Latham⁵⁰, C. Lazzeroni⁴⁷, R. Le Gac⁶, A. Leflat^{33,40}, J. Lefrançois⁷,
 R. Lefèvre⁵, F. Lemaitre⁴⁰, E. Lemos Cid³⁹, O. Leroy⁶, T. Lesiak²⁷, B. Leverington¹², P.-R. Li⁶³,
 T. Li³, Y. Li⁷, Z. Li⁶¹, T. Likhomanenko⁶⁸, R. Lindner⁴⁰, F. Lionetto⁴², V. Lisovskyi⁷, X. Liu³,
 D. Loh⁵⁰, A. Loi¹⁶, I. Longstaff⁵³, J.H. Lopes², D. Lucchesi^{23,o}, M. Lucio Martinez³⁹, H. Luo⁵²,
 A. Lupato²³, E. Luppi^{17,g}, O. Lupton⁴⁰, A. Lusiani²⁴, X. Lyu⁶³, F. Machefert⁷, F. Maciuc³⁰,
 V. Macko⁴¹, P. Mackowiak¹⁰, S. Maddrell-Mander⁴⁸, O. Maev^{31,40}, K. Maguire⁵⁶,
 D. Maisuzenko³¹, M.W. Majewski²⁸, S. Malde⁵⁷, B. Malecki²⁷, A. Malinin⁶⁸, T. Maltsev^{36,w},
 G. Manca^{16,f}, G. Mancinelli⁶, D. Marangotto^{22,q}, J. Maratas^{5,v}, J.F. Marchand⁴, U. Marconi¹⁵,
 C. Marin Benito³⁸, M. Marinangeli⁴¹, P. Marino⁴¹, J. Marks¹², G. Martellotti²⁶, M. Martin⁶,
 M. Martinelli⁴¹, D. Martinez Santos³⁹, F. Martinez Vidal⁷⁰, D. Martins Tostes²,
 L.M. Massacrier⁷, A. Massafferri¹, R. Matev⁴⁰, A. Mathad⁵⁰, Z. Mathe⁴⁰, C. Matteuzzi²¹,
 A. Mauri⁴², E. Maurice^{7,b}, B. Maurin⁴¹, A. Mazurov⁴⁷, M. McCann^{55,40}, A. McNab⁵⁶,
 R. McNulty¹³, J.V. Mead⁵⁴, B. Meadows⁵⁹, C. Meaux⁶, F. Meier¹⁰, N. Meinert⁶⁷,
 D. Melnychuk²⁹, M. Merk⁴³, A. Merli^{22,40,q}, E. Michielin²³, D.A. Milanes⁶⁶, E. Millard⁵⁰,
 M.-N. Minard⁴, L. Minzoni¹⁷, D.S. Mitzel¹², A. Mogini⁸, J. Molina Rodriguez¹, T. Mombächer¹⁰,
 I.A. Monroy⁶⁶, S. Monteil⁵, M. Morandin²³, M.J. Morello^{24,t}, O. Morgunova⁶⁸, J. Moron²⁸,
 A.B. Morris⁵², R. Mountain⁶¹, F. Muheim⁵², M. Mulder⁴³, D. Müller⁵⁶, J. Müller¹⁰, K. Müller⁴²,
 V. Müller¹⁰, P. Naik⁴⁸, T. Nakada⁴¹, R. Nandakumar⁵¹, A. Nandi⁵⁷, I. Nasteva², M. Needham⁵²,
 N. Neri^{22,40}, S. Neubert¹², N. Neufeld⁴⁰, M. Neuner¹², T.D. Nguyen⁴¹, C. Nguyen-Mau^{41,n},
 S. Nieswand⁹, R. Niet¹⁰, N. Nikitin³³, T. Nikodem¹², A. Nogay⁶⁸, D.P. O’Hanlon⁵⁰,
 A. Oblakowska-Mucha²⁸, V. Obraztsov³⁷, S. Ogilvy¹⁹, R. Oldeman^{16,f}, C.J.G. Onderwater⁷¹,
 A. Ossowska²⁷, J.M. Otalora Goicochea², P. Owen⁴², A. Oyanguren⁷⁰, P.R. Pais⁴¹, A. Palano^{14,d},
 M. Palutan^{19,40}, A. Papanestis⁵¹, M. Pappagallo^{14,d}, L.L. Pappalardo^{17,g}, W. Parker⁶⁰,
 C. Parkes⁵⁶, G. Passaleva^{18,40}, A. Pastore^{14,d}, M. Patel⁵⁵, C. Patrignani^{15,e}, A. Pearce⁴⁰,
 A. Pellegrino⁴³, G. Penso²⁶, M. Pepe Altarelli⁴⁰, S. Perazzini⁴⁰, P. Perret⁵, L. Pescatore⁴¹,
 K. Petridis⁴⁸, A. Petrolini^{20,h}, A. Petrov⁶⁸, M. Petruzzo^{22,q}, E. Picatoste Olloqui³⁸, B. Pietrzyk⁴,
 M. Pikies²⁷, D. Pinci²⁶, F. Pisani⁴⁰, A. Pistone^{20,h}, A. Piucci¹², V. Placinta³⁰, S. Playfer⁵²,
 M. Plo Casasus³⁹, F. Polci⁸, M. Poli Lener¹⁹, A. Poluektov⁵⁰, I. Polyakov⁶¹, E. Polcarpo²,
 G.J. Pomery⁴⁸, S. Ponce⁴⁰, A. Popov³⁷, D. Popov^{11,40}, S. Poslavskii³⁷, C. Potterat², E. Price⁴⁸,
 J. Prisciandaro³⁹, C. Prouve⁴⁸, V. Pugatch⁴⁶, A. Puig Navarro⁴², H. Pullen⁵⁷, G. Punzi^{24,p},

W. Qian⁵⁰, R. Quagliani^{7,48}, B. Quintana⁵, B. Rachwal²⁸, J.H. Rademacker⁴⁸, M. Rama²⁴, M. Ramos Pernas³⁹, M.S. Rangel², I. Raniuk^{45,†}, F. Ratnikov³⁵, G. Raven⁴⁴, M. Ravonel Salzgeber⁴⁰, M. Reboud⁴, F. Redi⁵⁵, S. Reichert¹⁰, A.C. dos Reis¹, C. Remon Alepuz⁷⁰, V. Renaudin⁷, S. Ricciardi⁵¹, S. Richards⁴⁸, M. Rihl⁴⁰, K. Rinnert⁵⁴, V. Rives Molina³⁸, P. Robbe⁷, A. Robert⁸, A.B. Rodrigues¹, E. Rodrigues⁵⁹, J.A. Rodriguez Lopez⁶⁶, A. Rogozhnikov³⁵, S. Roiser⁴⁰, A. Rollings⁵⁷, V. Romanovskiy³⁷, A. Romero Vidal³⁹, J.W. Ronayne¹³, M. Rotondo¹⁹, M.S. Rudolph⁶¹, T. Ruf⁴⁰, P. Ruiz Valls⁷⁰, J. Ruiz Vidal⁷⁰, J.J. Saborido Silva³⁹, E. Sadykhov³², N. Sagidova³¹, B. Saitta^{16,f}, V. Salustino Guimaraes¹, C. Sanchez Mayordomo⁷⁰, B. Sanmartin Sedes³⁹, R. Santacesaria²⁶, C. Santamarina Rios³⁹, M. Santimaria¹⁹, E. Santovetti^{25,j}, G. Sarpis⁵⁶, A. Sarti^{19,k}, C. Satriano^{26,s}, A. Satta²⁵, D.M. Saunders⁴⁸, D. Savrina^{32,33}, S. Schael⁹, M. Schellenberg¹⁰, M. Schiller⁵³, H. Schindler⁴⁰, M. Schmelling¹¹, T. Schmelzer¹⁰, B. Schmidt⁴⁰, O. Schneider⁴¹, A. Schopper⁴⁰, H.F. Schreiner⁵⁹, M. Schubiger⁴¹, M.-H. Schune⁷, R. Schwemmer⁴⁰, B. Sciascia¹⁹, A. Sciubba^{26,k}, A. Semennikov³², E.S. Sepulveda⁸, A. Sergi⁴⁷, N. Serra⁴², J. Serrano⁶, L. Sestini²³, P. Seyfert⁴⁰, M. Shapkin³⁷, I. Shapoval⁴⁵, Y. Shcheglov³¹, T. Shears⁵⁴, L. Shekhtman^{36,w}, V. Shevchenko⁶⁸, B.G. Siddi¹⁷, R. Silva Coutinho⁴², L. Silva de Oliveira², G. Simi^{23,o}, S. Simone^{14,d}, M. Sirendi⁴⁹, N. Skidmore⁴⁸, T. Skwarnicki⁶¹, E. Smith⁵⁵, I.T. Smith⁵², J. Smith⁴⁹, M. Smith⁵⁵, I. Soares Lavra¹, M.D. Sokoloff⁵⁹, F.J.P. Soler⁵³, B. Souza De Paula², B. Spaan¹⁰, P. Spradlin⁵³, S. Sridharan⁴⁰, F. Stagni⁴⁰, M. Stahl¹², S. Stahl⁴⁰, P. Stefko⁴¹, S. Stefkova⁵⁵, O. Steinkamp⁴², S. Stemmler¹², O. Stenyakin³⁷, M. Stepanova³¹, H. Stevens¹⁰, S. Stone⁶¹, B. Storaci⁴², S. Stracka^{24,p}, M.E. Stramaglia⁴¹, M. Straticiu³⁰, U. Straumann⁴², J. Sun³, L. Sun⁶⁴, W. Sutcliffe⁵⁵, K. Swientek²⁸, V. Syropoulos⁴⁴, T. Szumlak²⁸, M. Szymanski⁶³, S. T’Jampens⁴, A. Tayduganov⁶, T. Tekampe¹⁰, G. Tellarini^{17,g}, F. Teubert⁴⁰, E. Thomas⁴⁰, J. van Tilburg⁴³, M.J. Tilley⁵⁵, V. Tisserand⁴, M. Tobin⁴¹, S. Tolk⁴⁹, L. Tomassetti^{17,g}, D. Tonelli²⁴, F. Toriello⁶¹, R. Tourinho Jadallah Aoude¹, E. Tourniefier⁴, M. Traill⁵³, M.T. Tran⁴¹, M. Tresch⁴², A. Trisovic⁴⁰, A. Tsaregorodtsev⁶, P. Tsopelas⁴³, A. Tully⁴⁹, N. Tuning^{43,40}, A. Ukleja²⁹, A. Usachov⁷, A. Ustyuzhanin³⁵, U. Uwer¹², C. Vacca^{16,f}, A. Vagner⁶⁹, V. Vagnoni^{15,40}, A. Valassi⁴⁰, S. Valat⁴⁰, G. Valenti¹⁵, R. Vazquez Gomez⁴⁰, P. Vazquez Regueiro³⁹, S. Vecchi¹⁷, M. van Veghel⁴³, J.J. Velthuis⁴⁸, M. Veltri^{18,r}, G. Veneziano⁵⁷, A. Venkateswaran⁶¹, T.A. Verlage⁹, M. Vernet⁵, M. Vesterinen⁵⁷, J.V. Viana Barbosa⁴⁰, B. Viaud⁷, D. Vieira⁶³, M. Vieites Diaz³⁹, H. Viemann⁶⁷, X. Vilasis-Cardona^{38,m}, M. Vitti⁴⁹, V. Volkov³³, A. Vollhardt⁴², B. Voneki⁴⁰, A. Vorobyev³¹, V. Vorobyev^{36,w}, C. Voß⁹, J.A. de Vries⁴³, C. Vázquez Sierra³⁹, R. Waldi⁶⁷, C. Wallace⁵⁰, R. Wallace¹³, J. Walsh²⁴, J. Wang⁶¹, D.R. Ward⁴⁹, H.M. Wark⁵⁴, N.K. Watson⁴⁷, D. Websdale⁵⁵, A. Weiden⁴², C. Weisser⁵⁸, M. Whitehead⁴⁰, J. Wicht⁵⁰, G. Wilkinson⁵⁷, M. Wilkinson⁶¹, M. Williams⁵⁶, M.P. Williams⁴⁷, M. Williams⁵⁸, T. Williams⁴⁷, F.F. Wilson^{51,40}, J. Wimberley⁶⁰, M. Winn⁷, J. Wishahi¹⁰, W. Wislicki²⁹, M. Witek²⁷, G. Wormser⁷, S.A. Wotton⁴⁹, K. Wraight⁵³, K. Wyllie⁴⁰, Y. Xie⁶⁵, M. Xu⁶⁵, Z. Xu⁴, Z. Yang³, Z. Yang⁶⁰, Y. Yao⁶¹, H. Yin⁶⁵, J. Yu⁶⁵, X. Yuan⁶¹, O. Yushchenko³⁷, K.A. Zarebski⁴⁷, M. Zavertyaev^{11,c}, L. Zhang³, Y. Zhang⁷, A. Zhelezov¹², Y. Zheng⁶³, X. Zhu³, V. Zhukov³³, J.B. Zonneveld⁵² and S. Zucchelli¹⁵

¹ Centro Brasileiro de Pesquisas Físicas (CBPF), Rio de Janeiro, Brazil

² Universidade Federal do Rio de Janeiro (UFRJ), Rio de Janeiro, Brazil

³ Center for High Energy Physics, Tsinghua University, Beijing, China

⁴ LAPP, Université Savoie Mont-Blanc, CNRS/IN2P3, Annecy-Le-Vieux, France

⁵ Clermont Université, Université Blaise Pascal, CNRS/IN2P3, LPC, Clermont-Ferrand, France

⁶ Aix Marseille Univ, CNRS/IN2P3, CPPM, Marseille, France

⁷ LAL, Université Paris-Sud, CNRS/IN2P3, Orsay, France

⁸ LPNHE, Université Pierre et Marie Curie, Université Paris Diderot, CNRS/IN2P3, Paris, France

- ⁹ *I. Physikalisches Institut, RWTH Aachen University, Aachen, Germany*
- ¹⁰ *Fakultät Physik, Technische Universität Dortmund, Dortmund, Germany*
- ¹¹ *Max-Planck-Institut für Kernphysik (MPIK), Heidelberg, Germany*
- ¹² *Physikalisches Institut, Ruprecht-Karls-Universität Heidelberg, Heidelberg, Germany*
- ¹³ *School of Physics, University College Dublin, Dublin, Ireland*
- ¹⁴ *Sezione INFN di Bari, Bari, Italy*
- ¹⁵ *Sezione INFN di Bologna, Bologna, Italy*
- ¹⁶ *Sezione INFN di Cagliari, Cagliari, Italy*
- ¹⁷ *Università e INFN, Ferrara, Ferrara, Italy*
- ¹⁸ *Sezione INFN di Firenze, Firenze, Italy*
- ¹⁹ *Laboratori Nazionali dell'INFN di Frascati, Frascati, Italy*
- ²⁰ *Sezione INFN di Genova, Genova, Italy*
- ²¹ *Università & INFN, Milano-Bicocca, Milano, Italy*
- ²² *Sezione di Milano, Milano, Italy*
- ²³ *Sezione INFN di Padova, Padova, Italy*
- ²⁴ *Sezione INFN di Pisa, Pisa, Italy*
- ²⁵ *Sezione INFN di Roma Tor Vergata, Roma, Italy*
- ²⁶ *Sezione INFN di Roma La Sapienza, Roma, Italy*
- ²⁷ *Henryk Niewodniczanski Institute of Nuclear Physics Polish Academy of Sciences, Kraków, Poland*
- ²⁸ *AGH - University of Science and Technology, Faculty of Physics and Applied Computer Science, Kraków, Poland*
- ²⁹ *National Center for Nuclear Research (NCBJ), Warsaw, Poland*
- ³⁰ *Horia Hulubei National Institute of Physics and Nuclear Engineering, Bucharest-Magurele, Romania*
- ³¹ *Petersburg Nuclear Physics Institute (PNPI), Gatchina, Russia*
- ³² *Institute of Theoretical and Experimental Physics (ITEP), Moscow, Russia*
- ³³ *Institute of Nuclear Physics, Moscow State University (SINP MSU), Moscow, Russia*
- ³⁴ *Institute for Nuclear Research of the Russian Academy of Sciences (INR RAN), Moscow, Russia*
- ³⁵ *Yandex School of Data Analysis, Moscow, Russia*
- ³⁶ *Budker Institute of Nuclear Physics (SB RAS), Novosibirsk, Russia*
- ³⁷ *Institute for High Energy Physics (IHEP), Protvino, Russia*
- ³⁸ *ICCUB, Universitat de Barcelona, Barcelona, Spain*
- ³⁹ *Universidad de Santiago de Compostela, Santiago de Compostela, Spain*
- ⁴⁰ *European Organization for Nuclear Research (CERN), Geneva, Switzerland*
- ⁴¹ *Institute of Physics, Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland*
- ⁴² *Physik-Institut, Universität Zürich, Zürich, Switzerland*
- ⁴³ *Nikhef National Institute for Subatomic Physics, Amsterdam, The Netherlands*
- ⁴⁴ *Nikhef National Institute for Subatomic Physics and VU University Amsterdam, Amsterdam, The Netherlands*
- ⁴⁵ *NSC Kharkiv Institute of Physics and Technology (NSC KIPT), Kharkiv, Ukraine*
- ⁴⁶ *Institute for Nuclear Research of the National Academy of Sciences (KINR), Kyiv, Ukraine*
- ⁴⁷ *University of Birmingham, Birmingham, United Kingdom*
- ⁴⁸ *H.H. Wills Physics Laboratory, University of Bristol, Bristol, United Kingdom*
- ⁴⁹ *Cavendish Laboratory, University of Cambridge, Cambridge, United Kingdom*
- ⁵⁰ *Department of Physics, University of Warwick, Coventry, United Kingdom*
- ⁵¹ *STFC Rutherford Appleton Laboratory, Didcot, United Kingdom*
- ⁵² *School of Physics and Astronomy, University of Edinburgh, Edinburgh, United Kingdom*
- ⁵³ *School of Physics and Astronomy, University of Glasgow, Glasgow, United Kingdom*
- ⁵⁴ *Oliver Lodge Laboratory, University of Liverpool, Liverpool, United Kingdom*
- ⁵⁵ *Imperial College London, London, United Kingdom*
- ⁵⁶ *School of Physics and Astronomy, University of Manchester, Manchester, United Kingdom*
- ⁵⁷ *Department of Physics, University of Oxford, Oxford, United Kingdom*

- ⁵⁸ *Massachusetts Institute of Technology, Cambridge, MA, United States*
- ⁵⁹ *University of Cincinnati, Cincinnati, OH, United States*
- ⁶⁰ *University of Maryland, College Park, MD, United States*
- ⁶¹ *Syracuse University, Syracuse, NY, United States*
- ⁶² *Pontifícia Universidade Católica do Rio de Janeiro (PUC-Rio), Rio de Janeiro, Brazil, associated to ²*
- ⁶³ *University of Chinese Academy of Sciences, Beijing, China, associated to ³*
- ⁶⁴ *School of Physics and Technology, Wuhan University, Wuhan, China, associated to ³*
- ⁶⁵ *Institute of Particle Physics, Central China Normal University, Wuhan, Hubei, China, associated to ³*
- ⁶⁶ *Departamento de Física, Universidad Nacional de Colombia, Bogota, Colombia, associated to ⁸*
- ⁶⁷ *Institut für Physik, Universität Rostock, Rostock, Germany, associated to ¹²*
- ⁶⁸ *National Research Centre Kurchatov Institute, Moscow, Russia, associated to ³²*
- ⁶⁹ *National Research Tomsk Polytechnic University, Tomsk, Russia, associated to ³²*
- ⁷⁰ *Instituto de Física Corpuscular, Centro Mixto Universidad de Valencia - CSIC, Valencia, Spain, associated to ³⁸*
- ⁷¹ *Van Swinderen Institute, University of Groningen, Groningen, The Netherlands, associated to ⁴³*
- ^a *Universidade Federal do Triângulo Mineiro (UFTM), Uberaba-MG, Brazil*
- ^b *Laboratoire Leprince-Ringuet, Palaiseau, France*
- ^c *P.N. Lebedev Physical Institute, Russian Academy of Science (LPI RAS), Moscow, Russia*
- ^d *Università di Bari, Bari, Italy*
- ^e *Università di Bologna, Bologna, Italy*
- ^f *Università di Cagliari, Cagliari, Italy*
- ^g *Università di Ferrara, Ferrara, Italy*
- ^h *Università di Genova, Genova, Italy*
- ⁱ *Università di Milano Bicocca, Milano, Italy*
- ^j *Università di Roma Tor Vergata, Roma, Italy*
- ^k *Università di Roma La Sapienza, Roma, Italy*
- ^l *AGH - University of Science and Technology, Faculty of Computer Science, Electronics and Telecommunications, Kraków, Poland*
- ^m *LIFAELS, La Salle, Universitat Ramon Llull, Barcelona, Spain*
- ⁿ *Hanoi University of Science, Hanoi, Viet Nam*
- ^o *Università di Padova, Padova, Italy*
- ^p *Università di Pisa, Pisa, Italy*
- ^q *Università degli Studi di Milano, Milano, Italy*
- ^r *Università di Urbino, Urbino, Italy*
- ^s *Università della Basilicata, Potenza, Italy*
- ^t *Scuola Normale Superiore, Pisa, Italy*
- ^u *Università di Modena e Reggio Emilia, Modena, Italy*
- ^v *Iligan Institute of Technology (IIT), Iligan, Philippines*
- ^w *Novosibirsk State University, Novosibirsk, Russia*
- [†] *Deceased*