

UC Berkeley

UC Berkeley Previously Published Works

Title

Erratum to: Higgs boson production cross-section measurements and their EFT interpretation in the 4ℓ decay channel at $s=13$ TeV with the ATLAS detector

Permalink

<https://escholarship.org/uc/item/08t706tc>

Journal

European Physical Journal C, 81(1)

ISSN

1434-6044

Authors

Aad, G
Abbott, B
Abbott, DC
[et al.](#)

Publication Date

2021

DOI

10.1140/epjc/s10052-020-08644-x

Peer reviewed



Erratum to: Higgs boson production cross-section measurements and their EFT interpretation in the 4ℓ decay channel at $\sqrt{s} = 13$ TeV with the ATLAS detector

ATLAS Collaboration*

CERN, 1211 Geneva 23, Switzerland

Published online: 15 January 2021

© CERN for the benefit of the ATLAS collaboration 2021

Erratum to: Eur. Phys. J. C

<https://doi.org/10.1140/epjc/s10052-020-8227-9>

In the published HTML version of this article, the affiliations of the authors of the National Research Nuclear University MEPhI, Moscow, Russia were unfortunately marked incorrectly.

Please see below the list of authors with the correct affiliation:

K. Belotskiy¹, N. L. Belyaev¹, O. Bulekov¹, A. Kurova¹, D. Ponomarenko¹, N. Proklova¹, D. Pyatiizbyantseva¹, A. Romaniouk¹, N. Smirnov¹, S. Yu. Smirnov¹, Y. Smirnov¹, E. Yu. Soldatov¹, S. Timoshenko¹, K. Vorobev¹

¹National Research Nuclear University MEPhI, Moscow, Russia

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

Funded by SCOAP³.

The original article can be found online at <https://doi.org/10.1140/epjc/s10052-020-8227-9>.

* e-mail: atlas.publications@cern.ch

ATLAS Collaboration

G. Aad¹⁰², B. Abbott¹²⁸, D. C. Abbott¹⁰³, A. Abed Abud³⁶, K. Abeling⁵³, D. K. Abhayasinghe⁹⁴, S. H. Abidi¹⁶⁶, O. S. AbouZeid⁴⁰, N. L. Abraham¹⁵⁵, H. Abramowicz¹⁶⁰, H. Abreu¹⁵⁹, Y. Abulaiti⁶, B. S. Acharya^{67a,67b,n}, B. Achkar⁵³, L. Adam¹⁰⁰, C. Adam Bourdarios⁵, L. Adamczyk^{84a}, L. Adamek¹⁶⁶, J. Adelman¹²¹, M. Adersberger¹¹⁴, A. Adiguzel^{12c}, S. Adorni⁵⁴, T. Adye¹⁴³, A. A. Affolder¹⁴⁵, Y. Afik¹⁵⁹, C. Agapopoulou⁶⁵, M. N. Agaras³⁸, A. Aggarwal¹¹⁹, C. Agheorghiesei^{27c}, J. A. Aguilar-Saavedra^{139f,139a,ad}, A. Ahmad³⁶, F. Ahmadov⁸⁰, W. S. Ahmed¹⁰⁴, X. Ai¹⁸, G. Aielli^{74a,74b}, S. Akatsuka⁸⁶, T. P. A. Åkesson⁹⁷, E. Akilli⁵⁴, A. V. Akimov¹¹¹, K. Al Khoury⁶⁵, G. L. Alberghi^{23a,23b}, J. Albert¹⁷⁵, M. J. Alconada Verzini¹⁶⁰, S. Alderweireldt³⁶, M. Aleksa³⁶, I. N. Aleksandrov⁸⁰, C. Alexa^{27b}, T. Alexopoulos¹⁰, A. Alfonsi¹²⁰, F. Alfonsi^{23a,23b}, M. Alhroob¹²⁸, B. Ali¹⁴¹, S. Ali¹⁵⁷, M. Aliev¹⁶⁵, G. Alimonti^{69a}, C. Allaire³⁶, B. M. M. Allbrooke¹⁵⁵, B. W. Allen¹³¹, P. P. Allport²¹, A. Aloisio^{70a,70b}, F. Alonso⁸⁹, C. Alpigiani¹⁴⁷, E. Alunno Camelia^{74a,74b}, M. Alvarez Estevez⁹⁹, M. G. Alvigi^{70a,70b}, Y. Amaral Coutinho^{81b}, A. Ambler¹⁰⁴, L. Ambroz¹³⁴, C. Amelung²⁶, D. Amidei¹⁰⁶, S. P. Amor Dos Santos^{139a}, S. Amoroso⁴⁶, C. S. Amrouche⁵⁴, F. An⁷⁹, C. Anastopoulos¹⁴⁸, N. Andari¹⁴⁴, T. Andeen¹¹, J. K. Anders²⁰, S. Y. Andreev^{45a,45b}, A. Andreatta^{69a,69b}, V. Andrei^{61a}, C. R. Anelli¹⁷⁵, S. Angelidakis⁹, A. Angerami³⁹, A. V. Anisenkov^{122a,122b}, A. Annovi^{72a}, C. Antel⁵⁴, M. T. Anthony¹⁴⁸, E. Antipov¹²⁹, M. Antonelli⁵¹, D. J. A. Antrim¹⁷⁰, F. Anulli^{73a}, M. Aoki⁸², J. A. Aparisi Pozo¹⁷³, M. A. Aparo¹⁵⁵, L. Aperio Bella⁴⁶, N. Aranzabal Barrio³⁶, V. Araujo Ferraz^{81a}, R. Araujo Pereira^{81b}, C. Arcangeletti⁵¹, A. T. H. Arce⁴⁹, F. A. Arduh⁸⁹, J-F. Arguin¹¹⁰, S. Argyropoulos⁵², J.-H. Arling⁴⁶, A. J. Armbruster³⁶, A. Armstrong¹⁷⁰, O. Arnaez¹⁶⁶, H. Arnold¹²⁰, Z. P. Arrubarrena Tame¹¹⁴, G. Artoni¹³⁴, K. Asai¹²⁶, S. Asai¹⁶², T. Asawatavonvanich¹⁶⁴, N. Asbah⁵⁹, E. M. Asimakopoulou¹⁷¹, L. Asquith¹⁵⁵, J. Assahsah^{35d}, K. Assamagan²⁹, R. Astalos^{28a}, R. J. Atkin^{33a}, M. Atkinson¹⁷², N. B. Atlay¹⁹, H. Atmani⁶⁵, K. Augsten¹⁴¹, V. A. Austrup¹⁸¹, G. Avolio³⁶, M. K. Ayoub^{15a}, G. Azeleos^{110,al}, H. Bachacou¹⁴⁴, K. Bachas¹⁶¹, M. Backes¹³⁴, F. Backman^{45a,45b}, P. Bagnaia^{73a,73b}, M. Bahmani⁸⁵, H. Bahrasemani¹⁵¹, A. J. Bailey¹⁷³, V. R. Bailey¹⁷², J. T. Baines¹⁴³, C. Bakalis¹⁰, O. K. Baker¹⁸², P. J. Bakker¹²⁰, E. Bakos¹⁶, D. Bakshi Gupta⁸, S. Balaji¹⁵⁶, E. M. Baldin^{122a,122b}, P. Balek¹⁷⁹, F. Balli¹⁴⁴, W. K. Balunas¹³⁴, J. Balz¹⁰⁰, E. Banas⁸⁵, M. Bandieramonte¹³⁸, A. Bandyopadhyay²⁴, Sw. Banerjee^{180,i}, L. Barak¹⁶⁰, W. M. Barbe³⁸, E. L. Barberio¹⁰⁵, D. Barberis^{55a,55b}, M. Barbero¹⁰², G. Barbour⁹⁵, T. Barillari¹¹⁵, M.-S. Barisits³⁶, J. Barkeloo¹³¹, T. Barklow¹⁵², R. Barnea¹⁵⁹, B. M. Barnett¹⁴³, R. M. Barnett¹⁸, Z. Barnovska-Blenessy^{60a}, A. Baroncelli^{60a}, G. Barone²⁹, A. J. Barr¹³⁴, L. Barranco Navarro^{45a,45b}, F. Barreiro⁹⁹, J. Barreiro Guimarães da Costa^{15a}, U. Barron¹⁶⁰, S. Barsov¹³⁷, F. Bartels^{61a}, R. Bartoldus¹⁵², G. Bartolini¹⁰², A. E. Barton⁹⁰, P. Bartos^{28a}, A. Basalae⁴⁶, A. Basan¹⁰⁰, A. Bassalat^{65,ai}, M. J. Basso¹⁶⁶, R. L. Bates⁵⁷, S. Batlamous^{35e}, J. R. Batley³², B. Batool¹⁵⁰, M. Battaglia¹⁴⁵, M. Baucé^{73a,73b}, F. Bauer¹⁴⁴, K. T. Bauer¹⁷⁰, H. S. Bawa³¹, A. Bayirli^{12c}, J. B. Beacham⁴⁹, T. Beau¹³⁵, P. H. Beauchemin¹⁶⁹, F. Becherer⁵², P. Bechtel²⁴, H. C. Beck⁵³, H. P. Beck^{20,p}, K. Becker¹⁷⁷, C. Becot⁴⁶, A. Beddall^{12d}, A. J. Beddall^{12a}, V. A. Bednyakov⁸⁰, M. Bedognetti¹²⁰, C. P. Bee¹⁵⁴, T. A. Beermann¹⁸¹, M. Begalli^{81b}, M. Beger²⁹, A. Behera¹⁵⁴, J. K. Behr⁴⁶, F. Beisiegel²⁴, M. Belfkir⁵, A. S. Bell⁹⁵, G. Bella¹⁶⁰, L. Bellagamba^{23b}, A. Bellerive³⁴, P. Bellos⁹, K. Beloborodov^{122a,122b}, K. Belotskiy¹¹², N. L. Belyaev¹¹², D. Benchechroun^{35a}, N. Benekos¹⁰, Y. Benhamou¹⁶⁰, D. P. Benjamin⁶, M. Benoit⁵⁴, J. R. Bensinger²⁶, S. Bentvelsen¹²⁰, L. Beresford¹³⁴, M. Beretta⁵¹, D. Berge¹⁹, E. Bergeas Kuutmann¹⁷¹, N. Berger⁵, B. Bergmann¹⁴¹, L. J. Bergsten²⁶, J. Beringer¹⁸, S. Berlendis⁷, G. Bernardi¹³⁵, C. Bernius¹⁵², F. U. Bernlochner²⁴, T. Berry⁹⁴, P. Berta¹⁰⁰, C. Bertella^{15a}, A. Berthold⁴⁸, I. A. Bertram⁹⁰, O. Bessidskaia Bylund¹⁸¹, N. Besson¹⁴⁴, A. Bethani¹⁰¹, S. Bethke¹¹⁵, A. Betti⁴², A. J. Bevan⁹³, J. Beyer¹¹⁵, D. S. Bhattacharya¹⁷⁶, P. Bhattarai²⁶, V. S. Bhopatkar⁶, R. Bi¹³⁸, R. M. Bianchi¹³⁸, O. Biebel¹¹⁴, D. Biedermann¹⁹, R. Bielski³⁶, K. Bierwagen¹⁰⁰, N. V. Biesuz^{72a,72b}, M. Biglietti^{75a}, T. R. V. Billoud¹¹⁰, M. Bindi⁵³, A. Bingul^{12d}, C. Bini^{73a,73b}, S. Biondi^{23a,23b}, C. J. Birch-sykes¹⁰¹, M. Birman¹⁷⁹, T. Bisanz⁵³, J. P. Biswal³, D. Biswas^{180,i}, A. Bitadze¹⁰¹, C. Bittrich⁴⁸, K. Bjørke¹³³, T. Blazek^{28a}, I. Bloch⁴⁶, C. Blocker²⁶, A. Blue⁵⁷, U. Blumenschein⁹³, G. J. Bobbink¹²⁰, V. S. Bobrovnikov^{122a,122b}, S. S. Bocchetta⁹⁷, D. Boerner⁴⁶, D. Bogavac¹⁴, A. G. Bogdanchikov^{122a,122b}, C. Böhm^{45a}, V. Boisvert⁹⁴, P. Bokan^{53,171}, T. Bold^{84a}, A. E. Bolz^{61b}, M. Bomben¹³⁵, M. Bona⁹³, J. S. Bonilla¹³¹, M. Boonekamp¹⁴⁴, C. D. Booth⁹⁴, H. M. Borecka-Bielska⁹¹, L. S. Borgna⁹⁵, A. Borisov¹²³, G. Borissov⁹⁰, J. Bortfeldt³⁶, D. Bortoletto¹³⁴, D. Boscherini^{23b}, M. Bosman¹⁴, J. D. Bossio Sola¹⁰⁴, K. Bouaouda^{35a}, J. Boudreau¹³⁸, E. V. Bouhova-Thacker⁹⁰, D. Boumediene³⁸, S. K. Boutle⁵⁷, A. Boveia¹²⁷, J. Boyd³⁶, D. Boye^{33c}

I. R. Boyko⁸⁰ , A. J. Bozson⁹⁴ , J. Bracinek²¹ , N. Brahimi^{60d} , G. Brandt¹⁸¹, O. Brandt³² , F. Braren⁴⁶,
B. Brau¹⁰³ , J. E. Brau¹³¹ , W. D. Breaden Madden⁵⁷, K. Brendlinger⁴⁶ , L. Brenner³⁶ , R. Brenner¹⁷¹ ,
S. Bressler¹⁷⁹ , B. Brickwedde¹⁰⁰ , D. L. Briglin²¹ , D. Britton⁵⁷ , D. Britzger¹¹⁵ , I. Brock²⁴ , R. Brock¹⁰⁷ ,
G. Brooijmans³⁹ , W. K. Brooks^{146d} , E. Brost²⁹ , P. A. Bruckman de Renstrom⁸⁵ , B. Brüers⁴⁶ , D. Bruncko^{28b} ,
A. Bruni^{23b} , G. Bruni^{23b} , L. S. Bruni¹²⁰ , S. Bruno^{74a,74b} , M. Bruschi^{23b} , N. Bruscinò^{73a,73b} ,
L. Bryngemark¹⁵² , T. Buanes¹⁷ , Q. Buat³⁶ , P. Buchholz¹⁵⁰ , A. G. Buckley⁵⁷ , I. A. Budagov⁸⁰ ,
M. K. Bugge¹³³ , F. Bühner⁵² , O. Bulekov¹¹² , B. A. Bullard⁵⁹ , T. J. Burch¹²¹ , S. Burdin⁹¹ , C. D. Burgard¹²⁰ ,
A. M. Burger¹²⁹ , B. Burghgrave⁸ , J. T. P. Burr⁴⁶ , C. D. Burton¹¹ , J. C. Burzynski¹⁰³ , V. Büscher¹⁰⁰ ,
E. Buschmann⁵³ , P. J. Bussey⁵⁷ , J. M. Butler²⁵ , C. M. Buttar⁵⁷ , J. M. Butterworth⁹⁵ , P. Butti³⁶ , W. Buttinger³⁶ ,
C. J. Buxo Vazquez¹⁰⁷ , A. Buzatu¹⁵⁷ , A. R. Buzykaev^{122a,122b} , G. Cabras^{23a,23b} , S. Cabrera Urbán¹⁷³ ,
D. Caforio⁵⁶ , H. Cai¹³⁸ , V. M. M. Cairo¹⁵² , O. Cakir^{4a} , N. Calace³⁶ , P. Calafiura¹⁸ , G. Calderini¹³⁵ ,
P. Calfayan⁶⁶ , G. Callea⁵⁷ , L. P. Caloba^{81b} , A. Caltabiano^{74a,74b} , S. Calvente Lopez⁹⁹ , D. Calvet³⁸ ,
S. Calvet³⁸ , T. P. Calvet¹⁰² , M. Calvetti^{72a,72b} , R. Camacho Toro¹³⁵ , S. Camarda³⁶ , D. Camarero Munoz⁹⁹ ,
P. Camarri^{74a,74b} , M. T. Camerlingo^{75a,75b} , D. Cameron¹³³ , C. Camincher³⁶ , S. Campana³⁶ , M. Campanelli⁹⁵ ,
A. Camplani⁴⁰ , V. Canale^{70a,70b} , A. Canesse¹⁰⁴ , M. Cano Bret⁷⁸ , J. Cantero¹²⁹ , T. Cao¹⁶⁰ , Y. Cao¹⁷² ,
M. D. M. Capeans Garrido³⁶ , M. Capua^{41a,41b} , R. Cardarelli^{74a} , F. Cardillo¹⁴⁸ , G. Carducci^{41a,41b} ,
I. Carli¹⁴² , T. Carli³⁶ , G. Carlino^{70a} , B. T. Carlson¹³⁸ , E. M. Carlson^{175,167a} , L. Carminati^{69a,69b} ,
R. M. D. Carney¹⁵² , S. Caron¹¹⁹ , E. Carquin^{146d} , S. Carrá⁴⁶ , G. Carratta^{23a,23b} , J. W. S. Carter¹⁶⁶ ,
T. M. Carter⁵⁰ , M. P. Casado^{14,f} , A. F. Casha¹⁶⁶ , F. L. Castillo¹⁷³ , L. Castillo Garcia¹⁴ , V. Castillo Gimenez¹⁷³ ,
N. F. Castro^{139a,139e} , A. Catinaccio³⁶ , J. R. Catmore¹³³ , A. Cattai³⁶ , V. Cavaliere²⁹ , V. Cavasinni^{72a,72b} ,
E. Celebi^{12b} , F. Celli¹³⁴ , K. Cerny¹³⁰ , A. S. Cerqueira^{81a} , A. Cerri¹⁵⁵ , L. Cerrito^{74a,74b} , F. Cerutti¹⁸ ,
A. Cervelli^{23a,23b} , S. A. Cetin^{12b} , Z. Chadi^{35a} , D. Chakraborty¹²¹ , J. Chan¹⁸⁰ , W. S. Chan¹²⁰ , W. Y. Chan⁹¹ ,
J. D. Chapman³² , B. Chargeishvili^{158b} , D. G. Charlton²¹ , T. P. Charman⁹³ , C. C. Chau³⁴ , S. Che¹²⁷ ,
S. Chekanov⁶ , S. V. Chekulaev^{167a} , G. A. Chelkov^{80,ag} , B. Chen⁷⁹ , C. Chen^{60a} , C. H. Chen⁷⁹ , H. Chen²⁹ ,
J. Chen^{60a} , J. Chen³⁹ , J. Chen²⁶ , S. Chen¹³⁶ , S. J. Chen^{15c} , X. Chen^{15b} , Y. Chen^{60a} , Y-H. Chen⁴⁶ ,
H. C. Cheng^{63a} , H. J. Cheng^{15a} , A. Cheplakov⁸⁰ , E. Cheremushkina¹²³ , R. Cherkaoui El Moursli^{35e} , E. Cheu⁷ ,
K. Cheung⁶⁴ , T. J. A. Chevalérias¹⁴⁴ , L. Chevalier¹⁴⁴ , V. Chiarella⁵¹ , G. Chiarelli^{72a} , G. Chiodini^{68a} ,
A. S. Chisholm²¹ , A. Chitan^{27b} , I. Chiu¹⁶² , Y. H. Chiu¹⁷⁵ , M. V. Chizhov⁸⁰ , K. Choi¹¹ , A. R. Chomont^{73a,73b} ,
Y. S. Chow¹²⁰ , L. D. Christopher^{33e} , M. C. Chu^{63a} , X. Chu^{15a,15d} , J. Chudoba¹⁴⁰ , J. J. Chwastowski⁸⁵ ,
L. Chytka¹³⁰ , D. Cieri¹¹⁵ , K. M. Ciesla⁸⁵ , D. Cinca⁴⁷ , V. Cindro⁹² , I. A. Cioara^{27b} , A. Ciochio¹⁸ ,
F. Ciotto^{70a,70b} , Z. H. Citron^{179,j} , M. Citterio^{69a} , D. A. Ciubotaru^{27b} , B. M. Ciungu¹⁶⁶ , A. Clark⁵⁴ ,
M. R. Clark³⁹ , P. J. Clark⁵⁰ , S. E. Clawson¹⁰¹ , C. Clement^{45a,45b} , Y. Coadou¹⁰² , M. Cobal^{67a,67c} ,
A. Coccaro^{55b} , J. Cochran⁷⁹ , R. Coelho Lopes De Sa¹⁰³ , H. Cohen¹⁶⁰ , A. E. C. Coimbra³⁶ , B. Cole³⁹ ,
A. P. Colijn¹²⁰ , J. Collot⁵⁸ , P. Conde Muñoa^{139a,139b} , S. H. Connell^{33c} , I. A. Connelly⁵⁷ , S. Constantinescu^{27b} ,
F. Conventi^{70a,am} , A. M. Cooper-Sarkar¹³⁴ , F. Cormier¹⁷⁴ , K. J. R. Cormier¹⁶⁶ , L. D. Corpe⁹⁵ , M. Corradi^{73a,73b} ,
E. E. Corrigan⁹⁷ , F. Corriveau^{104,ab} , M. J. Costa¹⁷³ , F. Costanza⁵ , D. Costanzo¹⁴⁸ , G. Cowan⁹⁴ ,
J. W. Cowley³² , J. Crane¹⁰¹ , K. Cranmer¹²⁵ , R. A. Creager¹³⁶ , S. Crépe-Renaudin⁵⁸ , F. Crescioli¹³⁵ ,
M. Cristinziani²⁴ , V. Croft¹⁶⁹ , G. Crosetti^{41a,41b} , A. Cueto⁵ , T. Cuhadar Donszelmann¹⁷⁰ , H. Cui^{15a,15d} ,
A. R. Cukierman¹⁵² , W. R. Cunningham⁵⁷ , S. Czekiarda⁸⁵ , P. Czodrowski³⁶ , M. M. Czurylo^{61b} ,
M. J. Da Cunha Sargedas De Sousa^{60b} , J. V. Da Fonseca Pinto^{81b} , C. Da Via¹⁰¹ , W. Dabrowski^{84a} , F. Dachs³⁶ ,
T. Dado⁴⁷ , S. Dahbi^{33e} , T. Dai¹⁰⁶ , C. Dallapiccola¹⁰³ , M. Dam⁴⁰ , G. D'amen²⁹ , V. D'Amico^{75a,75b} ,
J. Damp¹⁰⁰ , J. R. Dandoy¹³⁶ , M. F. Daneri³⁰ , M. Danninger¹⁵¹ , V. Dao³⁶ , G. Darbo^{55b} , O. Dartsis⁵ ,
A. Dattagupta¹³¹ , T. Daubney⁴⁶ , S. D'Auria^{69a,69b} , C. David^{167b} , T. Davidek¹⁴² , D. R. Davis⁴⁹ , I. Dawson¹⁴⁸ ,
K. De⁸ , R. De Asmundis^{70a} , M. De Beurs¹²⁰ , S. De Castro^{23a,23b} , N. De Groot¹¹⁹ , P. de Jong¹²⁰ ,
H. De la Torre¹⁰⁷ , A. De Maria^{15c} , D. De Pedis^{73a} , A. De Salvo^{73a} , U. De Sanctis^{74a,74b} , M. De Santis^{74a,74b} ,
A. De Santo¹⁵⁵ , J. B. De Vivie De Regie⁶⁵

F. G. Diaz Capriles²⁴ , J. Dickinson¹⁸ , M. Didenko¹⁶⁵ , E. B. Diehl¹⁰⁶ , J. Dietrich¹⁹ , S. Díez Cornell⁴⁶ , A. Dimitrievska¹⁸ , W. Ding^{15b} , J. Dingfelder²⁴ , S. J. Dittmeier^{61b} , F. Dittus³⁶ , F. Djama¹⁰² , T. Djobava^{158b} , J. I. Djuvslund¹⁷ , M. A. B. Do Vale^{81c} , M. Dobre^{27b} , D. Dodsworth²⁶ , C. Doglioni⁹⁷ , J. Dolejsi¹⁴² , Z. Dolezal¹⁴² , M. Donadelli^{81d} , B. Dong^{60c} , J. Donini³⁸ , A. D'onofrio^{15c} , M. D'Onofrio⁹¹ , J. Dopke¹⁴³ , A. Doria^{70a} , M. T. Dova⁸⁹ , A. T. Doyle⁵⁷ , E. Drechsler¹⁵¹ , E. Dreyer¹⁵¹ , T. Dreyer⁵³ , A. S. Drobac¹⁶⁹ , D. Du^{60b} , T. A. du Pree¹²⁰ , Y. Duan^{60d} , F. Dubinin¹¹¹ , M. Dubovsky^{28a} , A. Dubreuil⁵⁴ , E. Duchovni¹⁷⁹ , G. Duckeck¹¹⁴ , O. A. Ducu³⁶ , D. Duda¹¹⁵ , A. Dudarev³⁶ , A. C. Dudder¹⁰⁰ , E. M. Duffield¹⁸ , M. D'uffizi¹⁰¹ , L. Dufflot⁶⁵ , M. Dührssen³⁶ , C. Dülsen¹⁸¹ , M. Dumancic¹⁷⁹ , A. E. Dumitriu^{27b} , M. Dunford^{61a} , A. Duperrin¹⁰² , H. Duran Yildiz^{4a} , M. Düren⁵⁶ , A. Durglishvili^{158b} , D. Duschinger⁴⁸ , B. Dutta⁴⁶ , D. Duvnjak¹ , G. I. Dyckes¹³⁶ , M. Dyndal³⁶ , S. Dysch¹⁰¹ , B. S. Dziedzic⁸⁵ , M. G. Eggleston⁴⁹ , T. Eifert⁸ , G. Eigen¹⁷ , K. Einsweiler¹⁸ , T. Ekelof¹⁷¹ , H. El Jarrari^{35e} , V. Ellajosyula¹⁷¹ , M. Ellert¹⁷¹ , F. Ellinghaus¹⁸¹ , A. A. Elliot⁹³ , N. Ellis³⁶ , J. Elmsheuser²⁹ , M. Elsing³⁶ , D. Emeliyanov¹⁴³ , A. Emerman³⁹ , Y. Enari¹⁶² , M. B. Epland⁴⁹ , J. Erdmann⁴⁷ , A. Ereditato²⁰ , P. A. Erland⁸⁵ , M. Errenst³⁶ , M. Escalier⁶⁵ , C. Escobar¹⁷³ , O. Estrada Pastor¹⁷³ , E. Etzion¹⁶⁰ , H. Evans⁶⁶ , M. O. Evans¹⁵⁵ , A. Ezhilov¹³⁷ , F. Fabbri⁵⁷ , L. Fabbri^{23a,23b} , V. Fabiani¹¹⁹ , G. Facini¹⁷⁷ , R. M. Faisca Rodrigues Pereira^{139a} , R. M. Fakhruddinov¹²³ , S. Falciano^{73a} , P. J. Falke²⁴ , S. Falke³⁶ , J. Faltova¹⁴² , Y. Fang^{15a} , Y. Fang^{15a} , G. Fanourakis⁴⁴ , M. Fanti^{69a,69b} , M. Faraj^{67a,67c,q} , A. Farbin⁸ , A. Farilla^{75a} , E. M. Farina^{71a,71b} , T. Farooque¹⁰⁷ , S. M. Farrington⁵⁰ , P. Farthouat³⁶ , F. Fassi^{35e} , P. Fassnacht³⁶ , D. Fassoulotis⁹ , M. Faucci Giannelli⁵⁰ , W. J. Fawcett³² , L. Fayard⁶⁵ , O. L. Fedin^{137,o} , W. Fedorko¹⁷⁴ , A. Fehr²⁰ , M. Feickert¹⁷² , L. Feligioni¹⁰² , A. Fell¹⁴⁸ , C. Feng^{60b} , M. Feng⁴⁹ , M. J. Fenton¹⁷⁰ , A. B. Fenyuk¹²³ , S. W. Ferguson⁴³ , J. Ferrando⁴⁶ , A. Ferrante¹⁷² , A. Ferrari¹⁷¹ , P. Ferrari¹²⁰ , R. Ferrari^{71a} , D. E. Ferreira de Lima^{61b} , A. Ferrer¹⁷³ , D. Ferrere⁵⁴ , C. Ferretti¹⁰⁶ , F. Fiedler¹⁰⁰ , A. Filipčić⁹² , F. Filthaut¹¹⁹ , K. D. Finelli²⁵ , M. C. N. Fiolhais^{139a,139c,a} , L. Fiorini¹⁷³ , F. Fischer¹¹⁴ , J. Fischer¹⁰⁰ , W. C. Fisher¹⁰⁷ , T. Fitschen²¹ , I. Fleck¹⁵⁰ , P. Fleischmann¹⁰⁶ , T. Flick¹⁸¹ , B. M. Flierl¹¹⁴ , L. Flores¹³⁶ , L. R. Flores Castillo^{63a} , F. M. Follega^{76a,76b} , N. Fomin¹⁷ , J. H. Foo¹⁶⁶ , G. T. Forcolin^{76a,76b} , B. C. Forland⁶⁶ , A. Formica¹⁴⁴ , F. A. Förster¹⁴ , A. C. Forti¹⁰¹ , E. Fortin¹⁰² , M. G. Foti¹³⁴ , D. Fournier⁶⁵ , H. Fox⁹⁰ , P. Francavilla^{72a,72b} , S. Francescato^{73a,73b} , M. Franchini^{23a,23b} , S. Franchino^{61a} , D. Francis³⁶ , L. Franco⁵ , L. Franconi²⁰ , M. Franklin⁵⁹ , G. Frattari^{73a,73b} , A. N. Fray⁹³ , P. M. Freeman²¹ , B. Freund¹¹⁰ , W. S. Freund^{81b} , E. M. Freundlich⁴⁷ , D. C. Frizzell¹²⁸ , D. Froidevaux³⁶ , J. A. Frost¹³⁴ , M. Fujimoto¹²⁶ , C. Fukunaga¹⁶³ , E. Fullana Torregrosa¹⁷³ , T. Fusayasu¹¹⁶ , J. Fuster¹⁷³ , A. Gabrielli^{23a,23b} , A. Gabrielli³⁶ , S. Gadatsch⁵⁴ , P. Gadow¹¹⁵ , G. Gagliardi^{55a,55b} , L. G. Gagnon¹¹⁰ , G. E. Gallardo¹³⁴ , E. J. Gallas¹³⁴ , B. J. Gallop¹⁴³ , G. Galster⁴⁰ , R. Gamboa Goni⁹³ , K. K. Gan¹²⁷ , S. Ganguly¹⁷⁹ , J. Gao^{60a} , Y. Gao⁵⁰ , Y. S. Gao^{31.1} , F. M. Garay Walls^{146a} , C. García¹⁷³ , J. E. García Navarro¹⁷³ , J. A. García Pascual^{15a} , C. Garcia-Argos⁵² , M. Garcia-Sciveres¹⁸ , R. W. Gardner³⁷ , N. Garelli¹⁵² , S. Gargiulo⁵² , C. A. Garner¹⁶⁶ , V. Garonne¹³³ , S. J. Gasiorowski¹⁴⁷ , P. Gaspar^{81b} , A. Gaudiello^{55a,55b} , G. Gaudio^{71a} , I. L. Gavrilenko¹¹¹ , A. Gavrilyuk¹²⁴ , C. Gay¹⁷⁴ , G. Gaycken⁴⁶ , E. N. Gazis¹⁰ , A. A. Geanta^{27b} , C. M. Gee¹⁴⁵ , C. N. P. Gee¹⁴³ , J. Geisen⁹⁷ , M. Geisen¹⁰⁰ , C. Gemme^{55b} , M. H. Genest⁵⁸ , C. Geng¹⁰⁶ , S. Gentile^{73a,73b} , S. George⁹⁴ , T. Geralis⁴⁴ , L. O. Gerlach⁵³ , P. Gessinger-Befurt¹⁰⁰ , G. Gessner⁴⁷ , S. Ghasemi¹⁵⁰ , M. Ghasemi Bostanabad¹⁷⁵ , M. Ghneimat¹⁵⁰ , A. Ghosh⁶⁵ , A. Ghosh⁷⁸ , B. Giacobbe^{23b} , S. Giagu^{73a,73b} , N. Giangiacomi^{23a,23b} , P. Giannetti^{72a} , A. Giannini^{70a,70b} , G. Giannini¹⁴ , S. M. Gibson⁹⁴ , M. Gignac¹⁴⁵ , D. T. Gil^{84b} , D. Gillberg³⁴ , G. Gilles¹⁸¹ , D. M. Gingrich^{3.al} , M. P. Giordani^{67a,67c} , P. F. Giraud¹⁴⁴ , G. Giugliarelli^{67a,67c} , D. Giugni^{69a} , F. Giuli^{74a,74b} , S. Gkaitatzis¹⁶¹ , I. Gkialas^{9.g} , E. L. Gkougkousis¹⁴ , P. Gkoutoumis¹⁰ , L. K. Gladilin¹¹³ , C. Glasman⁹⁹ , J. Glatzer¹⁴ , P. C. F. Glaysher⁴⁶ , A. Glazov⁴⁶ , G. R. Gledhill¹³¹ , I. Gnesi^{41b,b} , M. Goblirsch-Kolb²⁶ , D. Godin¹¹⁰ , S. Goldfarb¹⁰⁵ , T. Golling⁵⁴ , D. Golubkov¹²³ , A. Gomes^{139a,139b} , R. Goncalves Gama⁵³ , R. Gonçalves^{139a,139c} , G. Gonella¹³¹ , L. Gonella²¹ , A. Gongadze⁸⁰ , F. Gonnella²¹ , J. L. Gonski³⁹ , S. González de la Hoz¹⁷³

C. Gubbels¹⁷⁴, J. Guenther³⁶, A. Guerguichon⁶⁵, J. G. R. Guerrero Rojas¹⁷³, F. Guescini¹¹⁵, D. Guest¹⁷⁰, R. Gugel¹⁰⁰, T. Guillemain⁵, S. Guindon³⁶, U. Gul⁵⁷, J. Guo^{60c}, W. Guo¹⁰⁶, Y. Guo^{60a}, Z. Guo¹⁰², R. Gupta⁴⁶, S. Gurbuz^{12c}, G. Gustavino¹²⁸, M. Guth⁵², P. Gutierrez¹²⁸, C. Gutschow⁹⁵, C. Guyot¹⁴⁴, C. Gwenlan¹³⁴, C. B. Gwilliam⁹¹, E. S. Haaland¹³³, A. Haas¹²⁵, C. Haber¹⁸, H. K. Hadavand⁸, A. Hader^{60a}, M. Haleem¹⁷⁶, J. Haley¹²⁹, J. J. Hall¹⁴⁸, G. Halladjian¹⁰⁷, G. D. Hallowell¹⁰², K. Hamano¹⁷⁵, H. Hamdaoui^{35e}, M. Hamer²⁴, G. N. Hamity⁵⁰, K. Han^{60a,v}, L. Han^{60a}, S. Han¹⁸, Y. F. Han¹⁶⁶, K. Hanagaki^{82,t}, M. Hance¹⁴⁵, D. M. Handl¹¹⁴, M. D. Hank³⁷, R. Hankache¹³⁵, E. Hansen⁹⁷, J. B. Hansen⁴⁰, J. D. Hansen⁴⁰, M. C. Hansen²⁴, P. H. Hansen⁴⁰, E. C. Hanson¹⁰¹, K. Hara¹⁶⁸, T. Harenberg¹⁸¹, S. Harkusha¹⁰⁸, P. F. Harrison¹⁷⁷, N. M. Hartman¹⁵², N. M. Hartmann¹¹⁴, Y. Hasegawa¹⁴⁹, A. Hasib⁵⁰, S. Hassani¹⁴⁴, S. Haug²⁰, R. Hauser¹⁰⁷, L. B. Havener³⁹, M. Havranek¹⁴¹, C. M. Hawkes²¹, R. J. Hawkins³⁶, S. Hayashida¹¹⁷, D. Hayden¹⁰⁷, C. Hayes¹⁰⁶, R. L. Hayes¹⁷⁴, C. P. Hays¹³⁴, J. M. Hays⁹³, H. S. Hayward⁹¹, S. J. Haywood¹⁴³, F. He^{60a}, Y. He¹⁶⁴, M. P. Heath⁵⁰, V. Hedberg⁹⁷, S. Heer²⁴, A. L. Heggelund¹³³, C. Heidegger⁵², K. K. Heidegger⁵², W. D. Heidorn⁷⁹, J. Heilman³⁴, S. Heim⁴⁶, T. Heim¹⁸, B. Heinemann^{46,aj}, J. J. Heinrich¹³¹, L. Heinrich³⁶, J. Hejbal¹⁴⁰, L. Helary⁴⁶, A. Held¹²⁵, S. Hellesund¹³³, C. M. Helling¹⁴⁵, S. Hellman^{45a,45b}, C. Helsen³⁶, R. C. W. Henderson⁹⁰, Y. Heng¹⁸⁰, L. Henkelmann³², A. M. Henriques Correia³⁶, H. Herde²⁶, Y. Hernández Jiménez^{33e}, H. Herr¹⁰⁰, M. G. Herrmann¹¹⁴, T. Herrmann⁴⁸, G. Herten⁵², R. Hertenberger¹¹⁴, L. Hervas³⁶, T. C. Herwig¹³⁶, G. G. Hesketh⁹⁵, N. P. Hessey^{167a}, H. Hibi⁸³, A. Higashida¹⁶², S. Higashino⁸², E. Higón-Rodríguez¹⁷³, K. Hildebrand³⁷, J. C. Hill³², K. K. Hill²⁹, K. H. Hiller⁴⁶, S. J. Hillier²¹, M. Hils⁴⁸, I. Hinchliffe¹⁸, F. Hinterkeuser²⁴, M. Hirose¹³², S. Hirose⁵², D. Hirschbuehl¹⁸¹, B. Hiti⁹², O. Hladik¹⁴⁰, D. R. Hlaluku^{33e}, J. Hobbs¹⁵⁴, N. Hod¹⁷⁹, M. C. Hodgkinson¹⁴⁸, A. Hoecker³⁶, D. Hohn⁵², D. Hohov⁶⁵, T. Holm²⁴, T. R. Holmes³⁷, M. Holzbock¹¹⁴, L. B. A. H. Hommels³², T. M. Hong¹³⁸, J. C. Honig⁵², A. Hönle¹¹⁵, B. H. Hooberman¹⁷², W. H. Hopkins⁶, Y. Horii¹¹⁷, P. Horn⁴⁸, L. A. Horyn³⁷, S. Hou¹⁵⁷, A. Hoummada^{35a}, J. Howarth⁵⁷, J. Hoya⁸⁹, M. Hrabovsky¹³⁰, J. Hrdinka⁷⁷, J. Hrivnac⁶⁵, A. Hrynevich¹⁰⁹, T. Hryn'ova⁵, P. J. Hsu⁶⁴, S.-C. Hsu¹⁴⁷, Q. Hu²⁹, S. Hu^{60c}, Y. F. Hu^{15a,15d,an}, D. P. Huang⁹⁵, Y. Huang^{60a}, Y. Huang^{15a}, Z. Hubacek¹⁴¹, F. Hubaut¹⁰², M. Huebner²⁴, F. Huegging²⁴, T. B. Huffman¹³⁴, M. Huhtinen³⁶, R. Hulsken⁵⁸, R. F. H. Hunter³⁴, P. Huo¹⁵⁴, N. Huseynov^{80,ac}, J. Huston¹⁰⁷, J. Huth⁵⁹, R. Hyneman¹⁰⁶, S. Hyrych^{28a}, G. Iacobucci⁵⁴, G. Iakovidis²⁹, I. Ibragimov¹⁵⁰, L. Iconomidou-Fayard⁶⁵, P. Iengo³⁶, R. Ignazzi⁴⁰, O. Igonkina^{120,y,*}, R. Iguchi¹⁶², T. Iizawa⁵⁴, Y. Ikegami⁸², M. Ikeno⁸², D. Iliadis¹⁶¹, N. Ilic^{119,166,ab}, F. Iltzsche⁴⁸, H. Imam^{35a}, G. Introzzi^{71a,71b}, M. Iodice^{75a}, K. Iordanidou^{167a}, V. Ippolito^{73a,73b}, M. F. Isacson¹⁷¹, M. Ishino¹⁶², W. Islam¹²⁹, C. Issever^{19,46}, S. Istin¹⁵⁹, F. Ito¹⁶⁸, J. M. Iturbe Ponce^{63a}, R. Iuppa^{76a,76b}, A. Ivina¹⁷⁹, H. Iwasaki⁸², J. M. Izen⁴³, V. Izzo^{70a}, P. Jacka¹⁴⁰, P. Jackson¹, R. M. Jacobs⁴⁶, B. P. Jaeger¹⁵¹, V. Jain², G. Jäkel¹⁸¹, K. B. Jakobi¹⁰⁰, K. Jakobs⁵², T. Jakoubek¹⁷⁹, J. Jamieson⁵⁷, K. W. Janas^{84a}, R. Jansky⁵⁴, M. Janus⁵³, P. A. Janus^{84a}, G. Jarlskog⁹⁷, A. E. Jaspán⁹¹, N. Javadov^{80,ac}, T. Javůrek³⁶, M. Javurkova¹⁰³, F. Jeanneau¹⁴⁴, L. Jeanty¹³¹, J. Jejelava^{158a}, P. Jenni^{52,c}, N. Jeong⁴⁶, S. Jézéquel⁵, H. Ji¹⁸⁰, J. Jia¹⁵⁴, H. Jiang⁷⁹, Y. Jiang^{60a}, Z. Jiang¹⁵², S. Jiggins⁵², F. A. Jimenez Morales³⁸, J. Jimenez Pena¹¹⁵, S. Jin^{15c}, A. Jinaru^{27b}, O. Jinnouchi¹⁶⁴, H. Jivan^{33e}, P. Johansson¹⁴⁸, K. A. Johns⁷, C. A. Johnson⁶⁶, R. W. L. Jones⁹⁰, S. D. Jones¹⁵⁵, T. J. Jones⁹¹, J. Jongmanns^{61a}, J. Jovicevic³⁶, X. Ju¹⁸, J. J. Junggeburth¹¹⁵, A. Juste Rozas^{14,w}, A. Kaczmarska⁸⁵, M. Kado^{73a,73b}, H. Kagan¹²⁷, M. Kagan¹⁵², A. Kahn³⁹, C. Kahra¹⁰⁰, T. Kaji¹⁷⁸, E. Kajomovitz¹⁵⁹, C. W. Kalderon²⁹, A. Kaluza¹⁰⁰, A. Kamenshchikov¹²³, M. Kaneda¹⁶², N. J. Kang¹⁴⁵, S. Kang⁷⁹, Y. Kano¹¹⁷, J. Kanzaki⁸², L. S. Kaplan¹⁸⁰, D. Kar^{33c}, K. Karava¹³⁴, M. J. Kareem^{167b}, I. Karkanas¹⁶¹, S. N. Karpov⁸⁰, Z. M. Karpova⁸⁰, V. Kartvelishvili⁹⁰, A. N. Karyukhin¹²³, A. Kastanas^{45a,45b}, C. Kato^{60d,60c}, J. Katzy⁴⁶, K. Kawade¹⁴⁹, K. Kawagoe⁸⁸, T. Kawaguchi¹¹⁷, T. Kawamoto¹⁴⁴, G. Kawamura⁵³, E. F. Kay¹⁷⁵, S. Kazakov¹⁴, V. F. Kazanin^{122a,122b}, R. Keeler¹⁷⁵, R. Kehoe⁴², J. S. Keller³⁴, E. Kellermann⁹⁷, D. Kelsey¹⁵⁵, J. J. Kempster²¹, J. Kendrick²¹, K. E. Kennedy³⁹, O. Kepka¹⁴⁰, S. Kersten¹⁸¹, B. P. Kerševan⁹², S. Ketabchi Haghghat¹⁶⁶, M. Khader¹⁷², F. Khalil-Zada¹³, M. Khandoga¹⁴⁴, A. Khanov¹²⁹, A. G. Kharlamov^{122a,122b}, T. Kharlamova^{122a,122b}, E. E. Khoda¹⁷⁴, A. Khodinov¹⁶⁵, T. J. Khoo⁵⁴, G. Khoraiuli¹⁷⁶, E. Khramov⁸⁰, J. Khubua^{158b}, S. Kido⁸³, M. Kiehn⁵⁴, C. R. Kilby⁹⁴, E. Kim¹⁶⁴, Y. K. Kim³⁷, N. Kimura⁹⁵, B. T. King^{91,*}, A. Kirchhoff⁵³, D. Kirchmeier⁴⁸, J. Kirk¹⁴³, A. E. Kiryunin¹¹⁵, T. Kishimoto¹⁶², D. P. Kisliuk¹⁶⁶, V. Kitali⁴⁶, C. Kitsaki¹⁰, O. Kivernyk²⁴, T. Klapdor-Kleingrothaus⁵², M. Klassen^{61a}, C. Klein³⁴, M. H. Klein¹⁰⁶, M. Klein⁹¹, U. Klein⁹¹, K. Kleinknecht¹⁰⁰, P. Klimek¹²¹, A. Klimentov²⁹, T. Klingl²⁴, T. Kliuchnikova³⁶, F. F. Klitzner¹¹⁴, P. Kluit¹²⁰, S. Kluth¹¹⁵, E. Kneringer⁷⁷, E. B. F. G. Knoops¹⁰², A. Knue⁵², D. Kobayashi⁸⁸, T. Kobayashi¹⁶², M. Kobel⁴⁸, M. Kocian¹⁵², T. Kodama¹⁶², P. Kodys¹⁴², D. M. Koeck¹⁵⁵, P. T. Koenig²⁴

T. Koffas³⁴, N. M. Köhler³⁶, M. Kolb¹⁴⁴, I. Koletsou⁵, T. Komarek¹³⁰, T. Kondo⁸², K. Köneke⁵², A. X. Y. Kong¹, A. C. König¹¹⁹, T. Kono¹²⁶, V. Konstantinides⁹⁵, N. Konstantinidis⁹⁵, B. Konya⁹⁷, R. Kopeliansky⁶⁶, S. Koperny^{84a}, K. Korcyl⁸⁵, K. Kordas¹⁶¹, G. Koren¹⁶⁰, A. Korn⁹⁵, I. Korolkov¹⁴, E. V. Korolkova¹⁴⁸, N. Korotkova¹¹³, O. Kortner¹¹⁵, S. Kortner¹¹⁵, V. V. Kostyukhin^{148,165}, A. Kotskechagia⁶⁵, A. Kotwal⁴⁹, A. Koulouris¹⁰, A. Kourkumeli-Charalampidi^{71a,71b}, C. Kourkumelis⁹, E. Kourlitis⁶, V. Kouskoura²⁹, R. Kowalewski¹⁷⁵, W. Kozanecki¹⁰¹, A. S. Kozhin¹²³, V. A. Kramarenko¹¹³, G. Kramberger⁹², D. Krasnopetsev^{60a}, M. W. Krasny¹³⁵, A. Krasznahorkay³⁶, D. Krauss¹¹⁵, J. A. Kremer¹⁰⁰, J. Kretschmar⁹¹, P. Krieger¹⁶⁶, F. Krieter¹¹⁴, A. Krishnan^{61b}, K. Krizka¹⁸, K. Kroeninger⁴⁷, H. Kroha¹¹⁵, J. Kroll¹⁴⁰, J. Kroll¹³⁶, K. S. Krowpman¹⁰⁷, U. Kruchonak⁸⁰, H. Krüger²⁴, N. Krumnack⁷⁹, M. C. Kruse⁴⁹, J. A. Krzysiak⁸⁵, O. Kuchinskaia¹⁶⁵, S. Kuday^{4b}, J. T. Kuechler⁴⁶, S. Kuehn³⁶, T. Kuhl⁴⁶, V. Kukhtin⁸⁰, Y. Kulchitsky^{108,ae}, S. Kuleshov^{146b}, Y. P. Kulinich¹⁷², M. Kuna⁵⁸, T. Kunigo⁸⁶, A. Kupco¹⁴⁰, T. Kupfer⁴⁷, O. Kuprash⁵², H. Kurashige⁸³, L. L. Kurchaninov^{167a}, Y. A. Kurochkin¹⁰⁸, A. Kurova¹¹², M. G. Kurth^{15a,15d}, E. S. Kuwertz³⁶, M. Kuze¹⁶⁴, A. K. Kvam¹⁴⁷, J. Kvita¹³⁰, T. Kwan¹⁰⁴, F. La Ruffa^{41a,41b}, C. Lacasta¹⁷³, F. Lacava^{73a,73b}, D. P. J. Lack¹⁰¹, H. Lacker¹⁹, D. Lacour¹³⁵, E. Ladygin⁸⁰, R. Lafaye⁵, B. Laforge¹³⁵, T. Lagouri^{146b}, S. Lai⁵³, I. K. Lakomic^{84a}, J. E. Lambert¹²⁸, S. Lammers⁶⁶, W. Lampl⁷, C. Lampoudis¹⁶¹, E. Lançon²⁹, U. Landgraf⁵², M. P. J. Landon⁹³, M. C. Lanfermann⁵⁴, V. S. Lang⁵², J. C. Lange⁵³, R. J. Langenberg¹⁰³, A. J. Lankford¹⁷⁰, F. Lanni²⁹, K. Lantzsch²⁴, A. Lanza^{71a}, A. Lapertosa^{55a,55b}, S. Laplace¹³⁵, J. F. Laporte¹⁴⁴, T. Lari^{69a}, F. Lasagni Manghi^{23a,23b}, M. Lassnig³⁶, T. S. Lau^{63a}, A. Laudrain⁶⁵, A. Laurier³⁴, M. Lavorgna^{70a,70b}, S. D. Lawlor⁹⁴, M. Lazzaroni^{69a,69b}, B. Le¹⁰¹, E. Le Guirriec¹⁰², A. Lebedev⁷⁹, M. LeBlanc⁷, T. LeCompte⁶, F. Ledroit-Guillon⁵⁸, A. C. A. Lee⁹⁵, C. A. Lee²⁹, G. R. Lee¹⁷, L. Lee⁵⁹, S. C. Lee¹⁵⁷, S. Lee⁷⁹, B. Lefebvre^{167a}, H. P. Lefebvre⁹⁴, M. Lefebvre¹⁷⁵, C. Leggett¹⁸, K. Lehmann¹⁵¹, N. Lehmann²⁰, G. Lehmann Miotto³⁶, W. A. Leight⁴⁶, A. Leisos^{161,u}, M. A. L. Leite^{81d}, C. E. Leitgeb¹¹⁴, R. Leitner¹⁴², D. Lellouch^{179,*}, K. J. C. Leney⁴², T. Lenz²⁴, S. Leone^{72a}, C. Leonidopoulos⁵⁰, A. Leopold¹³⁵, C. Leroy¹¹⁰, R. Les¹⁰⁷, C. G. Lester³², M. Levchenko¹³⁷, J. Levêque⁵, D. Levin¹⁰⁶, L. J. Levinson¹⁷⁹, D. J. Lewis²¹, B. Li^{15b}, B. Li¹⁰⁶, C. Q. Li^{60a}, F. Li^{60c}, H. Li^{60a}, H. Li^{60b}, J. Li^{60c}, K. Li¹⁴⁷, L. Li^{60c}, M. Li^{15a,15d}, Q. Li^{15a,15d}, Q. Y. Li^{60a}, S. Li^{60d,60c}, X. Li⁴⁶, Y. Li⁴⁶, Z. Li^{60b}, Z. Li¹³⁴, Z. Li¹⁰⁴, Z. Liang^{15a}, M. Liberatore⁴⁶, B. Liberti^{74a}, A. Liblong¹⁶⁶, K. Lie^{63c}, S. Lim²⁹, C. Y. Lin³², K. Lin¹⁰⁷, R. A. Linck⁶⁶, R. E. Lindley⁷, J. H. Lindon²¹, A. Linss⁴⁶, A. L. Lioni⁵⁴, E. Lipeles¹³⁶, A. Lipniacka¹⁷, T. M. Liss^{172,ak}, A. Lister¹⁷⁴, J. D. Little⁸, B. Liu⁷⁹, B. L. Liu⁶, H. B. Liu²⁹, J. B. Liu^{60a}, J. K. K. Liu³⁷, K. Liu^{60d}, M. Liu^{60a}, P. Liu^{15a}, Y. Liu⁴⁶, Y. Liu^{15a,15d}, Y. L. Liu¹⁰⁶, Y. W. Liu^{60a}, M. Livan^{71a,71b}, A. Lleres⁵⁸, J. Llorente Merino¹⁵¹, S. L. Lloyd⁹³, C. Y. Lo^{63b}, E. M. Lobodzinska⁴⁶, P. Loch⁷, S. Loffredo^{74a,74b}, T. Lohse¹⁹, K. Lohwasser¹⁴⁸, M. Lokajicek¹⁴⁰, J. D. Long¹⁷², R. E. Long⁹⁰, I. Longarini^{73a,73b}, L. Longo³⁶, K. A. Looper¹²⁷, I. Lopez Paz¹⁰¹, A. Lopez Solis¹⁴⁸, J. Lorenz¹¹⁴, N. Lorenzo Martinez⁵, A. M. Lory¹¹⁴, P. J. Lösel¹¹⁴, A. Lösle⁵², X. Lou⁴⁶, X. Lou^{15a}, A. Lounis⁶⁵, J. Love⁶, P. A. Love⁹⁰, J. J. Lozano Bahilo¹⁷³, M. Lu^{60a}, Y. J. Lu⁶⁴, H. J. Lubatti¹⁴⁷, C. Luci^{73a,73b}, F. L. Lucio Alves^{15c}, A. Lucotte⁵⁸, F. Luehring⁶⁶, I. Luise¹³⁵, L. Luminari^{73a}, B. Lund-Jensen¹⁵³, M. S. Lutz¹⁶⁰, D. Lynn²⁹, H. Lyons⁹¹, R. Lysak¹⁴⁰, E. Lytken⁹⁷, F. Lyu^{15a}, V. Lyubushkin⁸⁰, T. Lyubushkina⁸⁰, H. Ma²⁹, L. L. Ma^{60b}, Y. Ma⁹⁵, D. M. Mac Donell¹⁷⁵, G. Maccarrone⁵¹, A. Macchiolo¹¹⁵, C. M. Macdonald¹⁴⁸, J. C. Macdonald¹⁴⁸, J. Machado Miguens¹³⁶, D. Madaffari¹⁷³, R. Madar³⁸, W. F. Mader⁴⁸, M. Madugoda Ralalage Don¹²⁹, N. Madysa⁴⁸, J. Maeda⁸³, T. Maeno²⁹, M. Maerker⁴⁸, V. Magerl⁵², N. Magini⁷⁹, J. Magro^{67a,67c,q}, D. J. Mahon³⁹, C. Maidantchik^{81b}, T. Maier¹¹⁴, A. Maio^{139a,139b,139d}, K. Maj^{84a}, O. Majersky^{28a}, S. Majewski¹³¹, Y. Makida⁸², N. Makovec⁶⁵, B. Malaescu¹³⁵, Pa. Malecki⁸⁵, V. P. Maleev¹³⁷, F. Malek⁵⁸, D. Malito^{41a,41b}, U. Mallik⁷⁸, D. Malon⁶, C. Malone³², S. Maltezos¹⁰, S. Malyukov⁸⁰, J. Mamuzic¹⁷³, G. Mancini^{70a,70b}, I. Mandić⁹², L. Manhaes de Andrade Filho^{81a}, I. M. Maniatis¹⁶¹, J. Manjarres Ramos⁴⁸, K. H. Mankinen⁹⁷, A. Mann¹¹⁴, A. Manousos⁷⁷, B. Mansoulie¹⁴⁴, I. Manthos¹⁶¹, S. Manzoni¹²⁰, A. Marantis¹⁶¹, G. Marceca³⁰, L. Marchese¹³⁴, G. Marchiori¹³⁵, M. Marcisovsky¹⁴⁰, L. Marcoccia^{74a,74b}, C. Marcon⁹⁷, C. A. Marin Tobon³⁶, M. Marjanovic¹²⁸, Z. Marshall¹⁸, M. U. F. Martensson¹⁷¹, S. Marti-Garcia¹⁷³, C. B. Martin¹²⁷, T. A. Martin¹⁷⁷, V. J. Martin⁵⁰, B. Martin dit Latour¹⁷, L. Martinelli^{75a,75b}, M. Martinez^{14,w}, P. Martinez Agullo¹⁷³, V. I. Martinez Outschoorn¹⁰³, S. Martin-Haugh¹⁴³, V. S. Martouiu^{27b}, A. C. Martyniuk⁹⁵, A. Marzin³⁶, S. R. Maschek¹¹⁵, L. Masetti¹⁰⁰, T. Mashimo¹⁶², R. Mashinistov¹¹¹, J. Masik¹⁰¹, A. L. Maslennikov^{122a,122b}, L. Massa^{23a,23b}, P. Massarotti^{70a,70b}, P. Mastrandrea^{72a,72b}, A. Mastroberardino^{41a,41b}, T. Masubuchi¹⁶², D. Matakias²⁹, A. Matic¹¹⁴, N. Matsuzawa¹⁶²,

P. Mättig²⁴, J. Maurer^{27b}, B. Maček⁹², D. A. Maximov^{122a,122b}, R. Mazini¹⁵⁷, I. Maznas¹⁶¹, S. M. Mazza¹⁴⁵, J. P. Mc Gowan¹⁰⁴, S. P. Mc Kee¹⁰⁶, T. G. McCarthy¹¹⁵, W. P. McCormack¹⁸, E. F. McDonald¹⁰⁵, J. A. Mcfayden³⁶, G. Mchedlidze^{158b}, M. A. McKay⁴², K. D. McLean¹⁷⁵, S. J. McMahon¹⁴³, P. C. McNamara¹⁰⁵, C. J. McNicol¹⁷⁷, R. A. McPherson^{175.ab}, J. E. Mdhluli^{33c}, Z. A. Meadows¹⁰³, S. Meehan³⁶, T. Megy³⁸, S. Mehlhase¹¹⁴, A. Mehta⁹¹, B. Meirose⁴³, D. Melini¹⁵⁹, B. R. Mellado Garcia^{33c}, J. D. Mellenthin⁵³, M. Melo^{28a}, F. Meloni⁴⁶, A. Melzer²⁴, E. D. Mendes Gouveia^{139a,139e}, L. Meng³⁶, X. T. Meng¹⁰⁶, S. Menke¹¹⁵, E. Meoni^{41a,41b}, S. Mergelmeyer¹⁹, S. A. M. Merkt¹³⁸, C. Merlassino¹³⁴, P. Mermod⁵⁴, L. Merola^{70a,70b}, C. Meroni^{69a}, G. Merz¹⁰⁶, O. Meshkov^{113,111}, J. K. R. Meshreki¹⁵⁰, J. Metcalfe⁶, A. S. Mete⁶, C. Meyer⁶⁶, J.-P. Meyer¹⁴⁴, M. Michetti¹⁹, R. P. Middleton¹⁴³, L. Mijovic⁵⁰, G. Mikenberg¹⁷⁹, M. Mikestikova¹⁴⁰, M. Mikuz⁹², H. Mildner¹⁴⁸, A. Milic¹⁶⁶, C. D. Milke⁴², D. W. Miller³⁷, A. Milov¹⁷⁹, D. A. Milstead^{45a,45b}, R. A. Mina¹⁵², A. A. Minaenko¹²³, I. A. Minashvili^{158b}, A. I. Mincer¹²⁵, B. Mindur^{84a}, M. Mineev⁸⁰, Y. Minegishi¹⁶², L. M. Mir¹⁴, M. Mironova¹³⁴, A. Mirto^{68a,68b}, K. P. Mistry¹³⁶, T. Mitani¹⁷⁸, J. Mitrevski¹¹⁴, V. A. Mitsou¹⁷³, M. Mittal^{60c}, O. Miu¹⁶⁶, A. Miucci²⁰, P. S. Miyagawa⁹³, A. Mizukami⁸², J. U. Mjörnmark⁹⁷, T. Mkrtchyan^{61a}, M. Mlynarikova¹⁴², T. Moa^{45a,45b}, S. Mobius⁵³, K. Mochizuki¹¹⁰, P. Mogg¹¹⁴, S. Mohapatra³⁹, R. Moles-Valls²⁴, K. Mönig⁴⁶, E. Monnier¹⁰², A. Montalbano¹⁵¹, J. Montejo Berlingen³⁶, M. Montella⁹⁵, F. Monticelli⁸⁹, S. Monzani^{69a}, N. Morange⁶⁵, D. Moreno^{22a}, M. Moreno Llácer¹⁷³, C. Moreno Martinez¹⁴, P. Moretti^{55b}, M. Morgenstern¹⁵⁹, S. Morgenstern⁴⁸, D. Mori¹⁵¹, M. Morii⁵⁹, M. Morinaga¹⁷⁸, V. Morisbak¹³³, A. K. Morley³⁶, G. Mornacchi³⁶, A. P. Morris⁹⁵, L. Morvaj¹⁵⁴, P. Moschovakos³⁶, B. Moser¹²⁰, M. Mosidze^{158b}, T. Moskalets¹⁴⁴, H. J. Moss¹⁴⁸, J. Moss^{31,m}, E. J. W. Moyse¹⁰³, S. Muanza¹⁰², J. Mueller¹³⁸, R. S. P. Mueller¹¹⁴, D. Muenstermann⁹⁰, G. A. Mullier⁹⁷, D. P. Mungo^{69a,69b}, J. L. Munoz Martinez¹⁴, F. J. Munoz Sanchez¹⁰¹, P. Murin^{28b}, W. J. Murray^{177,143}, A. Murrone^{69a,69b}, J. M. Muse¹²⁸, M. Muškinja¹⁸, C. Mwewa^{33a}, A. G. Myagkov^{123.ag}, A. A. Myers¹³⁸, J. Myers¹³¹, M. Myska¹⁴¹, B. P. Nachman¹⁸, O. Nackenhorst⁴⁷, A. Nag Nag⁴⁸, K. Nagai¹³⁴, K. Nagano⁸², Y. Nagasaka⁶², J. L. Nagle²⁹, E. Nagy¹⁰², A. M. Nairz³⁶, Y. Nakahama¹¹⁷, K. Nakamura⁸², T. Nakamura¹⁶², H. Nanjo¹³², F. Napolitano^{61a}, R. F. Naranjo Garcia⁴⁶, R. Narayan⁴², I. Naryshkin¹³⁷, T. Naumann⁴⁶, G. Navarro^{22a}, P. Y. Nechaeva¹¹¹, F. Nechansky⁴⁶, T. J. Neep²¹, A. Negri^{71a,71b}, M. Negrini^{23b}, C. Nellist¹¹⁹, C. Nelson¹⁰⁴, M. E. Nelson^{45a,45b}, S. Nemecek¹⁴⁰, M. Nessi^{36.e}, M. S. Neubauer¹⁷², F. Neuhaus¹⁰⁰, M. Neumann¹⁸¹, R. Newhouse¹⁷⁴, P. R. Newman²¹, C. W. Ng¹³⁸, Y. S. Ng¹⁹, Y. W. Y. Ng¹⁷⁰, B. Ngair^{35e}, H. D. N. Nguyen¹⁰², T. Nguyen Manh¹¹⁰, E. Nibigira³⁸, R. B. Nickerson¹³⁴, R. Nicolaidou¹⁴⁴, D. S. Nielsen⁴⁰, J. Nielsen¹⁴⁵, M. Niemeyer⁵³, N. Nikiforou¹¹, V. Nikolaenko^{123.ag}, I. Nikolic-Audit¹³⁵, K. Nikolopoulos²¹, P. Nilsson²⁹, H. R. Nindhito⁵⁴, Y. Ninomiya⁸², A. Nisati^{73a}, N. Nishu^{60c}, R. Nisius¹¹⁵, I. Nitsche⁴⁷, T. Nitta¹⁷⁸, T. Nobe¹⁶², D. L. Noel³², Y. Noguchi⁸⁶, I. Nomidis¹³⁵, M. A. Nomura²⁹, M. Nordberg³⁶, J. Novak⁹², T. Novak⁹², O. Novgorodova⁴⁸, R. Novotny¹⁴¹, L. Nozka¹³⁰, K. Ntekas¹⁷⁰, E. Nurse⁹⁵, F. G. Oakham^{34.al}, H. Oberlack¹¹⁵, J. Ocariz¹³⁵, A. Ochi⁸³, I. Ochoa³⁹, J. P. Ochoa-Ricoux^{146a}, K. O'Connor²⁶, S. Oda⁸⁸, S. Odaka⁸², S. Oerdek⁵³, A. Ogrodnik^{84a}, A. Oh¹⁰¹, S. H. Oh⁴⁹, C. C. Ohm¹⁵³, H. Oide¹⁶⁴, M. L. Ojeda¹⁶⁶, H. Okawa¹⁶⁸, Y. Okazaki⁸⁶, M. W. O'Keefe⁹¹, Y. Okumura¹⁶², T. Okuyama⁸², A. Olariu^{27b}, L. F. Oleiro Seabra^{139a}, S. A. Olivares Pino^{146a}, D. Oliveira Damazio²⁹, J. L. Oliver¹, M. J. R. Olsson¹⁷⁰, A. Olszewski⁸⁵, J. Olszowska⁸⁵, Ö.O. Öncel²⁴, D. C. O'Neil¹⁵¹, A. P. O'Neill¹³⁴, A. Onofre^{139a,139e}, P. U. E. Onyisi¹¹, H. Oppen¹³³, R. G. Oreamuno Madriz¹²¹, M. J. Oreglia³⁷, G. E. Orellana⁸⁹, D. Orestano^{75a,75b}, N. Orlando¹⁴, R. S. Orr¹⁶⁶, V. O'Shea⁵⁷, R. Ospanov^{60a}, G. Otero y Garzon³⁰, H. Otono⁸⁸, P. S. Ott^{61a}, G. J. Ottino¹⁸, M. Ouchrif^{35d}, J. Ouellette²⁹, F. Ould-Saada¹³³, A. Ouraou¹⁴⁴, Q. Ouyang^{15a}, M. Owen⁵⁷, R. E. Owen¹⁴³, V. E. Ozcan^{12c}, N. Ozturk⁸, J. Pacalt¹³⁰, H. A. Pacey³², K. Pachal⁴⁹, A. Pacheco Pages¹⁴, C. Padilla Aranda¹⁴, S. Pagan Griso¹⁸, G. Palacino⁶⁶, S. Palazzo⁵⁰, S. Palestini³⁶, M. Palka^{84b}, P. Palni^{84a}, C. E. Pandini⁵⁴, J. G. Panduro Vazquez⁹⁴, P. Pani⁴⁶, G. Panizzo^{67a,67c}, L. Paolozzi⁵⁴, C. Papadatos¹¹⁰, K. Papageorgiou^{9.g}, S. Parajuli⁴², A. Paramonov⁶, C. Paraskevopoulos¹⁰, D. Paredes Hernandez^{63b}, S. R. Paredes Saenz¹³⁴, B. Parida¹⁷⁹, T. H. Park¹⁶⁶, A. J. Parker³¹, M. A. Parker³², F. Parodi^{55a,55b}, E. W. Parrish¹²¹, J. A. Parsons³⁹, U. Parzefall⁵², L. Pascual Dominguez¹³⁵, V. R. Pascuzzi¹⁸, J. M. P. Pasner¹⁴⁵, F. Pasquali¹²⁰, E. Pasqualucci^{73a}, S. Passaggio^{55b}, F. Pastore⁹⁴, P. Pasuan^{45a,45b}, S. Pataria¹⁰⁰, J. R. Pater¹⁰¹, A. Pathak^{180.i}, J. Patton⁹¹, T. Pauly³⁶, J. Pearkes¹⁵², B. Pearson¹¹⁵, M. Pedersen¹³³, L. Pedraza Diaz¹¹⁹, R. Pedro^{139a}, T. Peiffer⁵³, S. V. Peleganchuk^{122a,122b}, O. Penc¹⁴⁰, H. Peng^{60a}, B. S. Peralva^{81a}, M. M. Perego⁶⁵, A. P. Pereira Peixoto^{139a}, L. Pereira Sanchez^{45a,45b}, D. V. Perepelitsa²⁹, E. Perez Codina^{167a}, F. Peri¹⁹, L. Perini^{69a,69b}, H. Pernegger³⁶, S. Perrella³⁶, A. Perrevoort¹²⁰, K. Peters⁴⁶, R. F. Y. Peters¹⁰¹

B. A. Petersen³⁶, T. C. Petersen⁴⁰, E. Petit¹⁰², V. Petousis¹⁴¹, A. Petridis¹, C. Petridou¹⁶¹, P. Petroff⁶⁵, F. Petrucci^{75a,75b}, M. Pettee¹⁸², N. E. Pettersson¹⁰³, K. Petukhova¹⁴², A. Peyaud¹⁴⁴, R. Pezoa^{146d}, L. Pezzotti^{71a,71b}, T. Pham¹⁰⁵, F. H. Phillips¹⁰⁷, P. W. Phillips¹⁴³, M. W. Phipps¹⁷², G. Piacquadio¹⁵⁴, E. Pianori¹⁸, A. Picazio¹⁰³, R. H. Pickles¹⁰¹, R. Piegai³⁰, D. Pietreanu^{27b}, J. E. Pilcher³⁷, A. D. Pilkington¹⁰¹, M. Pinamonti^{67a,67c}, J. L. Pinfeld³, C. Pitman Donaldson⁹⁵, M. Pitt¹⁶⁰, L. Pizzimento^{74a,74b}, M.-A. Pleier²⁹, V. Pleskot¹⁴², E. Plotnikova⁸⁰, P. Podberezko^{122a,122b}, R. Poettgen⁹⁷, R. Poggi⁵⁴, L. Poggioli¹³⁵, I. Pogrebnyak¹⁰⁷, D. Pohl²⁴, I. Pokharel⁵³, G. Polesello^{71a}, A. Poley^{151,167a}, A. Policicchio^{73a,73b}, R. Polifka¹⁴², A. Polini^{23b}, C. S. Pollard⁴⁶, V. Polychronakos²⁹, D. Ponomarenko¹¹², L. Pontecorvo³⁶, S. Popa^{27a}, G. A. Popeneciu^{27d}, L. Portales⁵, D. M. Portillo Quintero⁵⁸, S. Pospisil¹⁴¹, K. Potamianos⁴⁶, I. N. Potrap⁸⁰, C. J. Potter³², H. Potti¹¹, T. Poulsen⁹⁷, J. Poveda¹⁷³, T. D. Powell¹⁴⁸, G. Pownall⁴⁶, M. E. Pozo Astigarraga³⁶, P. Pralavorio¹⁰², S. Prell⁷⁹, D. Price¹⁰¹, M. Primavera^{68a}, M. L. Proffitt¹⁴⁷, N. Proklova¹¹², K. Prokofiev^{63c}, F. Prokoshin⁸⁰, S. Protopopescu²⁹, J. Proudfoot⁶, M. Przybycien^{84a}, D. Pudzha¹³⁷, A. Puri¹⁷², P. Puzo⁶⁵, D. Pyatizbyantseva¹¹², J. Qian¹⁰⁶, Y. Qin¹⁰¹, A. Quadt⁵³, M. Queitsch-Maitland³⁶, A. Qureshi¹, M. Racko^{28a}, F. Ragusa^{69a,69b}, G. Rahal⁹⁸, J. A. Raine⁵⁴, S. Rajagopalan²⁹, A. Ramirez Morales⁹³, K. Ran^{15a,15d}, D. M. Rauch⁴⁶, F. Rauscher¹¹⁴, S. Rave¹⁰⁰, B. Ravina¹⁴⁸, I. Ravinovich¹⁷⁹, J. H. Rawling¹⁰¹, M. Raymond³⁶, A. L. Read¹³³, N. P. Readoff⁵⁸, M. Reale^{68a,68b}, D. M. Rebuffi^{71a,71b}, G. Redlinger²⁹, K. Reeves⁴³, J. Reichert¹³⁶, D. Reikher¹⁶⁰, A. Reiss¹⁰⁰, A. Rej¹⁵⁰, C. Rembser³⁶, A. Renardi⁴⁶, M. Renda^{27b}, M. B. Rendel¹¹⁵, S. Resconi^{69a}, E. D. Resseguie¹⁸, S. Rettie⁹⁵, B. Reynolds¹²⁷, E. Reynolds²¹, O. L. Rezanova^{122a,122b}, P. Reznicek¹⁴², E. Ricci^{76a,76b}, R. Richter¹¹⁵, S. Richter⁴⁶, E. Richter-Was^{84b}, M. Ridel¹³⁵, P. Rieck¹¹⁵, O. Rifki⁴⁶, M. Rijssenbeek¹⁵⁴, A. Rimoldi^{71a,71b}, M. Rimoldi⁴⁶, L. Rinaldi^{23b}, T. T. Rinn¹⁷², G. Ripellino¹⁵³, I. Riu¹⁴, P. Rivadeneira⁴⁶, J. C. Rivera Vergara¹⁷⁵, F. Rizatdinova¹²⁹, E. Rizvi⁹³, C. Rizzi³⁶, S. H. Robertson^{104,ab}, M. Robin⁴⁶, D. Robinson³², C. M. Robles Gajardo^{146d}, M. Robles Manzano¹⁰⁰, A. Robson⁵⁷, A. Rocchi^{74a,74b}, E. Rocco¹⁰⁰, C. Roda^{72a,72b}, S. Rodriguez Bosca¹⁷³, A. M. Rodríguez Vera^{167b}, S. Roe³⁶, J. Roggel¹⁸¹, O. Röhne¹³³, R. Röhrig¹¹⁵, R. A. Rojas^{146d}, B. Roland⁵², C. P. A. Roland⁶⁶, J. Roloff²⁹, A. Romaniouk¹¹², M. Romano^{23a,23b}, N. Rompotis⁹¹, M. Ronzani¹²⁵, L. Roos¹³⁵, S. Rosati^{73a}, G. Rosin¹⁰³, B. J. Rosser¹³⁶, E. Rossi⁴⁶, E. Rossi^{75a,75b}, E. Rossi^{70a,70b}, L. P. Rossi^{55b}, L. Rossini^{69a,69b}, R. Rosten¹⁴, M. Rotaru^{27b}, B. Rottler⁵², D. Rousseau⁶⁵, G. Rovelli^{71a,71b}, A. Roy¹¹, D. Roy^{33e}, A. Rozanov¹⁰², Y. Rozen¹⁵⁹, X. Ruan^{33e}, F. Rühr⁵², A. Ruiz-Martinez¹⁷³, A. Rummler³⁶, Z. Rurikova⁵², N. A. Rusakovich⁸⁰, H. L. Russell¹⁰⁴, L. Rustige^{38,47}, J. P. Rutherford⁷, E. M. Rüttinger¹⁴⁸, M. Rybar³⁹, G. Rybkin⁶⁵, E. B. Rye¹³³, A. Ryzhov¹²³, J. A. Sabater Iglesias⁴⁶, P. Sabatini⁵³, L. Sabetta^{73a,73b}, S. Sacerdoti⁶⁵, H.F.-W. Sadrozinski¹⁴⁵, R. Sadykov⁸⁰, F. Safai Tehrani^{73a}, B. Safarzadeh Samani¹⁵⁵, M. Safdari¹⁵², P. Saha¹²¹, S. Saha¹⁰⁴, M. Sahinsoy¹¹⁵, A. Sahu¹⁸¹, M. Saimpert³⁶, M. Saito¹⁶², T. Saito¹⁶², H. Sakamoto¹⁶², D. Salamani⁵⁴, G. Salamanna^{75a,75b}, A. Salnikov¹⁵², J. Salt¹⁷³, A. Salvador Salas¹⁴, D. Salvatore^{41a,41b}, F. Salvatore¹⁵⁵, A. Salvucci^{63a,63b,63c}, A. Salzburger³⁶, J. Samarati³⁶, D. Sammel⁵², D. Sampsonidis¹⁶¹, D. Sampsonidou¹⁶¹, J. Sánchez¹⁷³, A. Sanchez Pineda^{67a,36,67c}, H. Sandaker¹³³, C. O. Sander⁴⁶, I. G. Sanderswood⁹⁰, M. Sandhoff¹⁸¹, C. Sandoval^{22a}, D. P. C. Sankey¹⁴³, M. Sannino^{55a,55b}, Y. Sano¹¹⁷, A. Sansoni⁵¹, C. Santoni³⁸, H. Santos^{139a,139b}, S. N. Santpur¹⁸, A. Santra¹⁷³, K. A. Saoucha¹⁴⁸, A. Saponov⁸⁰, J. G. Saraiva^{139a,139d}, O. Sasaki⁸², K. Sato¹⁶⁸, F. Sauerburger⁵², E. Sauvan⁵, P. Savard^{166,al}, R. Sawada¹⁶², C. Sawyer¹⁴³, L. Sawyer^{96,af}, I. Sayago Galvan¹⁷³, C. Sbarra^{23b}, A. Sbrizzi^{67a,67c}, T. Scanlon⁹⁵, J. Schaarschmidt¹⁴⁷, P. Schacht¹¹⁵, D. Schaefer³⁷, L. Schaefer¹³⁶, S. Schaepe³⁶, U. Schäfer¹⁰⁰, A. C. Schaffer⁶⁵, D. Schaile¹¹⁴, R. D. Schamberger¹⁵⁴, E. Schanet¹¹⁴, N. Scharmberg¹⁰¹, V. A. Schegelsky¹³⁷, D. Scheirich¹⁴², F. Schenck¹⁹, M. Schernau¹⁷⁰, C. Schiavi^{55a,55b}, L. K. Schildgen²⁴, Z. M. Schillaci²⁶, E. J. Schioppa^{68a,68b}, M. Schioppa^{41a,41b}, K. E. Schleicher⁵², S. Schlenker³⁶, K. R. Schmidt-Sommerfeld¹¹⁵, K. Schmieden³⁶, C. Schmitt¹⁰⁰, S. Schmitt⁴⁶, J. C. Schmoedel⁴⁶, L. Schoeffel¹⁴⁴, A. Schoening^{61b}, P. G. Scholer⁵², E. Schopf¹³⁴, M. Schott¹⁰⁰, J. F. P. Schouwenberg¹¹⁹, J. Schovancova³⁶, S. Schramm⁵⁴, F. Schroeder¹⁸¹, A. Schulte¹⁰⁰, H.-C. Schultz-Coulon^{61a}, M. Schumacher⁵², B. A. Schumm¹⁴⁵, Ph. Schune¹⁴⁴, A. Schwartzman¹⁵², T. A. Schwarz¹⁰⁶, Ph. Schwemling¹⁴⁴, R. Schwienhorst¹⁰⁷, A. Sciandra¹⁴⁵, G. Sciolla²⁶, M. Scornajenghi^{41a,41b}, F. Scuri^{72a}, F. Scutti¹⁰⁵, L. M. Scyboz¹¹⁵, C. D. Sebastiani⁹¹, P. Seema¹⁹, S. C. Seidel¹¹⁸, A. Seiden¹⁴⁵, B. D. Seidlitz²⁹, T. Seiss³⁷, C. Seitz⁴⁶, J. M. Seixas^{81b}, G. Sekhniaidze^{70a}, S. J. Sekula⁴², N. Semprini-Cesari^{23a,23b}, S. Sen⁴⁹, C. Serfon²⁹, L. Serin⁶⁵, L. Serkin^{67a,67b}, M. Sessa^{60a}, H. Severini¹²⁸, S. Sevova¹⁵², F. Sforza^{55a,55b}, A. Sfyrla⁵⁴, E. Shabalina⁵³, J. D. Shahinian¹⁴⁵, N. W. Shaikh^{45a,45b}, D. Shaked Renous¹⁷⁹, L. Y. Shan^{15a}, M. Shapiro¹⁸, A. Sharma¹³⁴, A. S. Sharma¹

P. B. Shatalov¹²⁴, K. Shaw¹⁵⁵, S. M. Shaw¹⁰¹, M. Shehade¹⁷⁹, Y. Shen¹²⁸, A. D. Sherman²⁵, P. Sherwood⁹⁵, L. Shi⁹⁵, S. Shimizu⁸², C. O. Shimmin¹⁸², Y. Shimogama¹⁷⁸, M. Shimojima¹¹⁶, I. P. J. Shipsey¹³⁴, S. Shirabe¹⁶⁴, M. Shiyakova^{80,z}, J. Shlomi¹⁷⁹, A. Shmeleva¹¹¹, M. J. Shochet³⁷, J. Shojaii¹⁰⁵, D. R. Shope¹²⁸, S. Shrestha¹²⁷, E. M. Shrif^{33e}, E. Shulga¹⁷⁹, P. Sicho¹⁴⁰, A. M. Sickles¹⁷², E. Sideras Haddad^{33c}, O. Sidiropoulou³⁶, A. Sidoti^{23a,23b}, F. Siegert⁴⁸, Dj. Sijacki¹⁶, M. Jr. Silva¹⁸⁰, M. V. Silva Oliveira³⁶, S. B. Silverstein^{45a}, S. Simion⁶⁵, R. Simoniello¹⁰⁰, C. J. Simpson-allsoy²¹, S. Simsek^{12b}, P. Sinervo¹⁶⁶, V. Sinetckii¹¹³, S. Singh¹⁵¹, M. Sioli^{23a,23b}, I. Siral¹³¹, S. Yu. Sivoklov¹¹³, J. Sjölin^{45a,45b}, A. Skaf⁵³, E. Skorda⁹⁷, P. Skubic¹²⁸, M. Slawinska⁸⁵, K. Sliwa¹⁶⁹, R. Slovak¹⁴², V. Smakhtin¹⁷⁹, B. H. Smart¹⁴³, J. Smiesko^{28b}, N. Smirnov¹¹², S. Yu. Smirnov¹¹², Y. Smirnov¹¹², L. N. Smirnova^{113,r}, O. Smirnova⁹⁷, H. A. Smith¹³⁴, M. Smizanska⁹⁰, K. Smolek¹⁴¹, A. Smykiewicz⁸⁵, A. A. Snesarev¹¹¹, H. L. Snoek¹²⁰, I. M. Snyder¹³¹, S. Snyder²⁹, R. Sobie^{175,ab}, A. Soffer¹⁶⁰, A. Søgaard⁵⁰, F. Sohns⁵³, C. A. Solans Sanchez³⁶, E. Yu. Soldatov¹¹², U. Soldevila¹⁷³, A. A. Solodkov¹²³, A. Soloshenko⁸⁰, O. V. Solovyanov¹²³, V. Solovyev¹³⁷, P. Sommer¹⁴⁸, H. Son¹⁶⁹, W. Song¹⁴³, W. Y. Song^{167b}, A. Sopczak¹⁴¹, A. L. Sopio⁹⁵, F. Sopkova^{28b}, S. Sottocornola^{71a,71b}, R. Soualah^{67a,67c}, A. M. Soukharev^{122a,122b}, D. South⁴⁶, S. Spagnolo^{68a,68b}, M. Spalla¹¹⁵, M. Spangenberg¹⁷⁷, F. Spanò⁹⁴, D. Sperlich⁵², T. M. Spieker^{61a}, G. Spigo³⁶, M. Spina¹⁵⁵, D. P. Spiteri⁵⁷, M. Spousta¹⁴², A. Stabile^{69a,69b}, B. L. Stamas¹²¹, R. Stamen^{61a}, M. Stamenkovic¹²⁰, E. Stanecka⁸⁵, B. Stanislaus¹³⁴, M. M. Stanitzki⁴⁶, M. Stankaityte¹³⁴, B. Stapf¹²⁰, E. A. Starchenko¹²³, G. H. Stark¹⁴⁵, J. Stark⁵⁸, P. Staroba¹⁴⁰, P. Starovoitov^{61a}, S. Stärz¹⁰⁴, R. Staszewski⁸⁵, G. Stavropoulos⁴⁴, M. Stegler⁴⁶, P. Steinberg²⁹, A. L. Steinhebel¹³¹, B. Stelzer¹⁵¹, H. J. Stelzer¹³⁸, O. Stelzer-Chilton^{167a}, H. Stenzel⁵⁶, T. J. Stevenson¹⁵⁵, G. A. Stewart³⁶, M. C. Stockton³⁶, G. Stoicea^{27b}, M. Stolarski^{139a}, S. Stonjek¹¹⁵, A. Straessner⁴⁸, J. Strandberg¹⁵³, S. Strandberg^{45a,45b}, M. Strauss¹²⁸, T. Strebler¹⁰², P. Strizenec^{28b}, R. Ströhmer¹⁷⁶, D. M. Strom¹³¹, R. Stroynowski⁴², A. Strubig⁵⁰, S. A. Stucci²⁹, B. Stugu¹⁷, J. Stupak¹²⁸, N. A. Styles⁴⁶, D. Su¹⁵², W. Su^{60c,147}, S. Suchek^{61a}, V. V. Sulin¹¹¹, M. J. Sullivan⁹¹, D. M. S. Sultan⁵⁴, S. Sultansoy^{4c}, T. Sumida⁸⁶, S. Sun¹⁰⁶, X. Sun¹⁰¹, K. Suruliz¹⁵⁵, C. J. E. Suster¹⁵⁶, M. R. Sutton¹⁵⁵, S. Suzuki⁸², M. Svatos¹⁴⁰, M. Swiatlowski^{167a}, S. P. Swift², T. Swirski¹⁷⁶, A. Sydorenko¹⁰⁰, I. Sykora^{28a}, M. Sykora¹⁴², T. Sykora¹⁴², D. Ta¹⁰⁰, K. Tackmann^{46,x}, J. Taenzer¹⁶⁰, A. Taffard¹⁷⁰, R. Tafirout^{167a}, R. Takashima⁸⁷, K. Takeda⁸³, T. Takeshita¹⁴⁹, E. P. Takeva⁵⁰, Y. Takubo⁸², M. Talby¹⁰², A. A. Talyshev^{122a,122b}, K. C. Tam^{63b}, N. M. Tamir¹⁶⁰, J. Tanaka¹⁶², R. Tanaka⁶⁵, S. Tapia Araya¹⁷², S. Tapprogge¹⁰⁰, A. Tarek Abouelfadl Mohamed¹⁰⁷, S. Tarem¹⁵⁹, K. Tariq^{60b}, G. Tarna^{27b,d}, G. F. Tartarelli^{69a}, P. Tas¹⁴², M. Tasevsky¹⁴⁰, T. Tashiro⁸⁶, E. Tassi^{41a,41b}, A. Tavares Delgado^{139a}, Y. Tayalati^{35e}, A. J. Taylor⁵⁰, G. N. Taylor¹⁰⁵, W. Taylor^{167b}, H. Teagle⁹¹, A. S. Tee⁹⁰, R. Teixeira De Lima¹⁵², P. Teixeira-Dias⁹⁴, H. Ten Kate³⁶, J. J. Teoh¹²⁰, S. Terada⁸², K. Terashi¹⁶², J. Terron⁹⁹, S. Terzo¹⁴, M. Testa⁵¹, R. J. Teuscher^{166,ab}, S. J. Thais¹⁸², N. Themistokleous⁵⁰, T. Theveneaux-Pelzer⁴⁶, F. Thiele⁴⁰, D. W. Thomas⁹⁴, J. O. Thomas⁴², J. P. Thomas²¹, E. A. Thompson⁴⁶, P. D. Thompson²¹, E. Thomson¹³⁶, E. J. Thorpe⁹³, R. E. Ticse Torres⁵³, V. O. Tikhomirov^{111,ah}, Yu. A. Tikhonov^{122a,122b}, S. Timoshenko¹¹², P. Tipton¹⁸², S. Tisserant¹⁰², K. Todome^{23a,23b}, S. Todorova-Nova¹⁴², S. Todt⁴⁸, J. Tojo⁸⁸, S. Tokár^{28a}, K. Tokushuku⁸², E. Tolley¹²⁷, R. Tombs³², K. G. Tomiwa^{33e}, M. Tomoto¹¹⁷, L. Tompkins¹⁵², P. Tornambe¹⁰³, E. Torrence¹³¹, H. Torres⁴⁸, E. Torró Pastor¹⁴⁷, C. Toscirì¹³⁴, J. Toth^{102,aa}, D. R. Tovey¹⁴⁸, A. Traet¹⁷, C. J. Treado¹²⁵, T. Trefzger¹⁷⁶, F. Tresoldi¹⁵⁵, A. Tricoli²⁹, I. M. Trigger^{167a}, S. Trincz-Duvoid¹³⁵, D. A. Trischuk¹⁷⁴, W. Trischuk¹⁶⁶, B. Trocmé⁵⁸, A. Trofymov⁶⁵, C. Troncon^{69a}, F. Trovato¹⁵⁵, L. Truong^{33c}, M. Trzebinski⁸⁵, A. Trzupek⁸⁵, F. Tsai⁴⁶, J.C.-L. Tseng¹³⁴, P. V. Tsiarehshka^{108,ae}, A. Tsirigotis^{161,u}, V. Tsiskaridze¹⁵⁴, E. G. Tskhadadze^{158a}, M. Tsopoulou¹⁶¹, I. I. Tsukerman¹²⁴, V. Tsulaia¹⁸, S. Tsuno⁸², D. Tsybychev¹⁵⁴, Y. Tu^{63b}, A. Tudorache^{27b}, V. Tudorache^{27b}, T. T. Tulbure^{27a}, A. N. Tuna⁵⁹, S. Turchikhin⁸⁰, D. Turgeman¹⁷⁹, I. Turk Cakir^{4b,s}, R. J. Turner²¹, R. Turra^{69a}, P. M. Tuts³⁹, S. Tzamarias¹⁶¹, E. Tzovara¹⁰⁰, K. Uchida¹⁶², F. Ukegawa¹⁶⁸, G. Unal³⁶, M. Unal¹¹, A. Undrus²⁹, G. Unel¹⁷⁰, F. C. Ungaro¹⁰⁵, Y. Unno⁸², K. Uno¹⁶², J. Urban^{28b}, P. Urquijo¹⁰⁵, G. Usai⁸, Z. Uysal^{12d}, V. Vacek¹⁴¹, B. Vachon¹⁰⁴, K. O. H. Vadla¹³³, T. Vafeiadis³⁶, A. Vaidya⁹⁵, C. Valderanis¹¹⁴, E. Valdes Santurio^{45a,45b}, M. Valente⁵⁴, S. Valentinetti^{23a,23b}, A. Valero¹⁷³, L. Valéry⁴⁶, R. A. Vallance²¹, A. Vallier³⁶, J. A. Valls Ferrer¹⁷³, T. R. Van Daalen¹⁴, P. Van Gemmeren⁶, I. Van Vulpen¹²⁰, M. Vanadia^{74a,74b}, W. Vandelli³⁶, M. Vandenbroucke¹⁴⁴, E. R. Vandewall¹²⁹, A. Vaniachine¹⁶⁵, D. Vannicola^{73a,73b}, R. Vari^{73a}, E. W. Varnes⁷, C. Varni^{55a,55b}, T. Varol¹⁵⁷, D. Varouchas⁶⁵, K. E. Varvell¹⁵⁶, M. E. Vasile^{27b}, G. A. Vasquez¹⁷⁵, F. Vazeille³⁸, D. Vazquez Furelos¹⁴, T. Vazquez Schroeder³⁶, J. Veatch⁵³, V. Vecchio¹⁰¹, M. J. Veen¹²⁰, L. M. Veloce¹⁶⁶, F. Veloso^{139a,139c}, S. Veneziano^{73a}, A. Ventura^{68a,68b}, A. Verbytskyi¹¹⁵, V. Vercesi^{71a}, M. Verducci^{72a,72b}

C. M. Vergel Infante⁷⁹, C. Vergis²⁴, W. Verkerke¹²⁰, A. T. Vermeulen¹²⁰, J. C. Vermeulen¹²⁰, C. Vernieri¹⁵², M. C. Vetterli^{151,al}, N. Viaux Maira^{146d}, T. Vickey¹⁴⁸, O. E. Vickey Boeriu¹⁴⁸, G. H. A. Viehhauser¹³⁴, L. Vigani^{61b}, M. Villa^{23a,23b}, M. Villaplana Perez³, E. M. Villhauer⁵⁰, E. Vilucchi⁵¹, M. G. Vinceter³⁴, G. S. Virdee²¹, A. Vishwakarma⁵⁰, C. Vittori^{23a,23b}, I. Vivarelli¹⁵⁵, M. Vogel¹⁸¹, P. Vokac¹⁴¹, S. E. von Buddenbrock^{33e}, E. Von Toerne²⁴, V. Vorobel¹⁴², K. Vorobev¹¹², M. Vos¹⁷³, J. H. Vosseveld⁹¹, M. Vozak¹⁰¹, N. Vranjes¹⁶, M. Vranjes Milosavljevic¹⁶, V. Vrba¹⁴¹, M. Vreeswijk¹²⁰, R. Vuillermet³⁶, I. Vukotic³⁷, S. Wada¹⁶⁸, P. Wagner²⁴, W. Wagner¹⁸¹, J. Wagner-Kuhr¹¹⁴, S. Wahdan¹⁸¹, H. Wahlberg⁸⁹, R. Wakasa¹⁶⁸, V. M. Walbrecht¹¹⁵, J. Walder⁹⁰, R. Walker¹¹⁴, S. D. Walker⁹⁴, W. Walkowiak¹⁵⁰, V. Wallangen^{45a,45b}, A. M. Wang⁵⁹, A. Z. Wang¹⁸⁰, C. Wang^{60a}, C. Wang^{60c}, F. Wang¹⁸⁰, H. Wang¹⁸, H. Wang³, J. Wang^{63a}, P. Wang⁴², Q. Wang¹²⁸, R.-J. Wang¹⁰⁰, R. Wang^{60a}, R. Wang⁶, S. M. Wang¹⁵⁷, W. T. Wang^{60a}, W. Wang^{15c}, W. X. Wang^{60a}, Y. Wang^{60a}, Z. Wang¹⁰⁶, C. Wanotayaroj⁴⁶, A. Warburton¹⁰⁴, C. P. Ward³², D. R. Wardrope⁹⁵, N. Warrack⁵⁷, A. T. Watson²¹, M. F. Watson²¹, G. Watts¹⁴⁷, B. M. Waugh⁹⁵, A. F. Webb¹¹, C. Weber²⁹, M. S. Weber²⁰, S. A. Weber³⁴, S. M. Weber^{61a}, A. R. Weidberg¹³⁴, J. Weingarten⁴⁷, M. Weirich¹⁰⁰, C. Weiser⁵², P. S. Wells³⁶, T. Wenaus²⁹, B. Wendland⁴⁷, T. Wengler³⁶, S. Wenig³⁶, N. Wermes²⁴, M. Wessels^{61a}, T. D. Weston²⁰, K. Whalen¹³¹, N. L. Whallon¹⁴⁷, A. M. Wharton⁹⁰, A. S. White¹⁰⁶, A. White⁸, M. J. White¹, D. Whiteson¹⁷⁰, B. W. Whitmore⁹⁰, W. Wiedenmann¹⁸⁰, C. Wiel⁴⁸, M. Wielers¹⁴³, N. Wieseotte¹⁰⁰, C. Wiglesworth⁴⁰, L. A. M. Wiik-Fuchs⁵², H. G. Wilkens³⁶, L. J. Wilkins⁹⁴, H. H. Williams¹³⁶, S. Williams³², S. Willocq¹⁰³, P. J. Windischhofer¹³⁴, I. Wingerter-Seez⁵, E. Winkels¹⁵⁵, F. Winklmeier¹³¹, B. T. Winter⁵², M. Wittgen¹⁵², M. Wobisch⁹⁶, A. Wolf¹⁰⁰, R. Wölker¹³⁴, J. Wollrath⁵², M. W. Wolter⁸⁵, H. Wolters^{139a,139c}, V. W. S. Wong¹⁷⁴, N. L. Woods¹⁴⁵, S. D. Worm⁴⁶, B. K. Wosiek⁸⁵, K. W. Woźniak⁸⁵, K. Wraight⁵⁷, S. L. Wu¹⁸⁰, X. Wu⁵⁴, Y. Wu^{60a}, J. Wuerzinger¹³⁴, T. R. Wyatt¹⁰¹, B. M. Wynne⁵⁰, S. Xella⁴⁰, L. Xia¹⁷⁷, J. Xiang^{63c}, X. Xiao¹⁰⁶, X. Xie^{60a}, I. Xiotidis¹⁵⁵, D. Xu^{15a}, H. Xu^{60a}, H. Xu^{60a}, L. Xu²⁹, T. Xu¹⁴⁴, W. Xu¹⁰⁶, Z. Xu^{60b}, Z. Xu¹⁵², B. Yabsley¹⁵⁶, S. Yacoub^{33a}, K. Yajima¹³², D. P. Yallup⁹⁵, N. Yamaguchi⁸⁸, Y. Yamaguchi¹⁶⁴, A. Yamamoto⁸², M. Yamatani¹⁶², T. Yamazaki¹⁶², Y. Yamazaki⁸³, J. Yan^{60c}, Z. Yan²⁵, H. J. Yang^{60c,60d}, H. T. Yang¹⁸, S. Yang^{60a}, T. Yang^{63c}, X. Yang^{60b,58}, Y. Yang¹⁶², Z. Yang^{60a}, W.-M. Yao¹⁸, Y. C. Yap⁴⁶, Y. Yasu⁸², E. Yatsenko^{60c}, H. Ye^{15c}, J. Ye⁴², S. Ye²⁹, I. Yeletsikh⁸⁰, M. R. Yexley⁹⁰, E. Yigitbasi²⁵, P. Yin³⁹, K. Yorita¹⁷⁸, K. Yoshihara⁷⁹, C. J. S. Young³⁶, C. Young¹⁵², J. Yu⁷⁹, R. Yuan^{60b,h}, X. Yue^{61a}, M. Zaazoua^{35e}, B. Zabinski⁸⁵, G. Zacharis¹⁰, E. Zaffaroni⁵⁴, J. Zahreddine¹³⁵, A. M. Zaitsev^{123,ag}, T. Zakareishvili^{158b}, N. Zakharchuk³⁴, S. Zambito³⁶, D. Zanzi³⁶, D. R. Zariповas⁵⁷, S. V. Zeißner⁴⁷, C. Zeitnitz¹⁸¹, G. Zemaityte¹³⁴, J. C. Zeng¹⁷², O. Zenin¹²³, T. Ženiš^{28a}, D. Zerwas⁶⁵, M. Zgubic¹³⁴, B. Zhang^{15c}, D. F. Zhang^{15b}, G. Zhang^{15b}, J. Zhang⁶, Kaili. Zhang^{15a}, L. Zhang^{15c}, L. Zhang^{60a}, M. Zhang¹⁷², R. Zhang¹⁸⁰, S. Zhang¹⁰⁶, X. Zhang^{60c}, X. Zhang^{60b}, Y. Zhang^{15a,15d}, Z. Zhang^{63a}, Z. Zhang⁶⁵, P. Zhao⁴⁹, Z. Zhao^{60a}, A. Zhemchugov⁸⁰, Z. Zheng¹⁰⁶, D. Zhong¹⁷², B. Zhou¹⁰⁶, C. Zhou¹⁸⁰, H. Zhou⁷, M. S. Zhou^{15a,15d}, M. Zhou¹⁵⁴, N. Zhou^{60c}, Y. Zhou⁷, C. G. Zhu^{60b}, C. Zhu^{15a,15d}, H. L. Zhu^{60a}, H. Zhu^{15a}, J. Zhu¹⁰⁶, Y. Zhu^{60a}, X. Zhuang^{15a}, K. Zhukov¹¹¹, V. Zhulanov^{122a,122b}, D. Ziemska⁶⁶, N. I. Zimine⁸⁰, S. Zimmermann⁵², Z. Zinonos¹¹⁵, M. Ziolkowski¹⁵⁰, L. Živković¹⁶, G. Zobernig¹⁸⁰, A. Zoccoli^{23a,23b}, K. Zoch⁵³, T. G. Zorbas¹⁴⁸, R. Zou³⁷, L. Zwalinski³⁶

¹ Department of Physics, University of Adelaide, Adelaide, Australia

² Physics Department, SUNY Albany, Albany, NY, USA

³ Department of Physics, University of Alberta, Edmonton, AB, Canada

⁴ (a) Department of Physics, Ankara University, Ankara, Turkey; (b) Application and Research Center for Advanced Studies, Istanbul Aydin University, Istanbul, Turkey; (c) Division of Physics, TOBB University of Economics and Technology, Ankara, Turkey

⁵ LAPP, Université Grenoble Alpes, Université Savoie Mont Blanc, CNRS/IN2P3, Annecy, France

⁶ High Energy Physics Division, Argonne National Laboratory, Argonne, IL, USA

⁷ Department of Physics, University of Arizona, Tucson, AZ, USA

⁸ Department of Physics, University of Texas at Arlington, Arlington, TX, USA

⁹ Physics Department, National and Kapodistrian University of Athens, Athens, Greece

¹⁰ Physics Department, National Technical University of Athens, Zografou, Greece

¹¹ Department of Physics, University of Texas at Austin, Austin, TX, USA

- 12 (a) Faculty of Engineering and Natural Sciences, Bahcesehir University, Istanbul, Turkey; (b) Faculty of Engineering and Natural Sciences, Istanbul Bilgi University, Istanbul, Turkey; (c) Department of Physics, Bogazici University, Istanbul, Turkey; (d) Department of Physics Engineering, Gaziantep University, Gaziantep, Turkey
- 13 Institute of Physics, Azerbaijan Academy of Sciences, Baku, Azerbaijan
- 14 Institut de Física d'Altes Energies (IFAE), Barcelona Institute of Science and Technology, Barcelona, Spain
- 15 (a) Institute of High Energy Physics, Chinese Academy of Sciences, Beijing, China; (b) Physics Department, Tsinghua University, Beijing, China; (c) Department of Physics, Nanjing University, Nanjing, China; (d) University of Chinese Academy of Science (UCAS), Beijing, China
- 16 Institute of Physics, University of Belgrade, Belgrade, Serbia
- 17 Department for Physics and Technology, University of Bergen, Bergen, Norway
- 18 Physics Division, Lawrence Berkeley National Laboratory and University of California, Berkeley, CA, USA
- 19 Institut für Physik, Humboldt Universität zu Berlin, Berlin, Germany
- 20 Albert Einstein Center for Fundamental Physics and Laboratory for High Energy Physics, University of Bern, Bern, Switzerland
- 21 School of Physics and Astronomy, University of Birmingham, Birmingham, UK
- 22 (a) Facultad de Ciencias y Centro de Investigaciones, Universidad Antonio Nariño, Bogotá, Colombia; (b) Departamento de Física, Universidad Nacional de Colombia, Bogotá, Colombia, Colombia
- 23 (a) Dipartimento di Fisica, INFN Bologna and Università di Bologna, Bologna, Italy; (b) INFN Sezione di Bologna, Bologna, Italy
- 24 Physikalisches Institut, Universität Bonn, Bonn, Germany
- 25 Department of Physics, Boston University, Boston, MA, USA
- 26 Department of Physics, Brandeis University, Waltham, MA, USA
- 27 (a) Transilvania University of Brasov, Brasov, Romania; (b) Horia Hulubei National Institute of Physics and Nuclear Engineering, Bucharest, Romania; (c) Department of Physics, Alexandru Ioan Cuza University of Iasi, Iasi, Romania; (d) Physics Department, National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania; (e) University Politehnica Bucharest, Bucharest, Romania; (f) West University in Timisoara, Timisoara, Romania
- 28 (a) Faculty of Mathematics, Physics and Informatics, Comenius University, Bratislava, Slovak Republic; (b) Department of Subnuclear Physics, Institute of Experimental Physics of the Slovak Academy of Sciences, Kosice, Slovak Republic
- 29 Physics Department, Brookhaven National Laboratory, Upton, NY, USA
- 30 Departamento de Física, Universidad de Buenos Aires, Buenos Aires, Argentina
- 31 California State University, CA, USA
- 32 Cavendish Laboratory, University of Cambridge, Cambridge, UK
- 33 (a) Department of Physics, University of Cape Town, Cape Town, South Africa; (b) iThemba Labs, Western Cape, South Africa; (c) Department of Mechanical Engineering Science, University of Johannesburg, Johannesburg, South Africa; (d) Department of Physics, University of South Africa, Pretoria, South Africa; (e) School of Physics, University of the Witwatersrand, Johannesburg, South Africa
- 34 Department of Physics, Carleton University, Ottawa, ON, Canada
- 35 (a) Faculté des Sciences Ain Chock, Réseau Universitaire de Physique des Hautes Energies - Université Hassan II, Casablanca, Morocco; (b) Faculté des Sciences, Université Ibn-Tofail, Kénitra, Morocco; (c) Faculté des Sciences Semlalia, Université Cadi Ayyad, LPHEA, Marrakech, Morocco; (d) Faculté des Sciences, Université Mohamed Premier and LPTPM, Oujda, Morocco; (e) Faculté des sciences, Université Mohammed V, Rabat, Morocco
- 36 CERN, Geneva, Switzerland
- 37 Enrico Fermi Institute, University of Chicago, Chicago, IL, USA
- 38 LPC, Université Clermont Auvergne, CNRS/IN2P3, Clermont-Ferrand, France
- 39 Nevis Laboratory, Columbia University, Irvington, NY, USA
- 40 Niels Bohr Institute, University of Copenhagen, Copenhagen, Denmark
- 41 (a) Dipartimento di Fisica, Università della Calabria, Rende, Italy; (b) INFN Gruppo Collegato di Cosenza, Laboratori Nazionali di Frascati, Italy
- 42 Physics Department, Southern Methodist University, Dallas, TX, USA
- 43 Physics Department, University of Texas at Dallas, Richardson, TX, USA
- 44 National Centre for Scientific Research "Demokritos", Agia Paraskevi, Greece
- 45 (a) Department of Physics, Stockholm University, Stockholm, Sweden; (b) Oskar Klein Centre, Stockholm, Sweden

- ⁴⁶ Deutsches Elektronen-Synchrotron DESY, Hamburg and Zeuthen, Germany
- ⁴⁷ Lehrstuhl für Experimentelle Physik IV, Technische Universität Dortmund, Dortmund, Germany
- ⁴⁸ Institut für Kern- und Teilchenphysik, Technische Universität Dresden, Dresden, Germany
- ⁴⁹ Department of Physics, Duke University, Durham, NC, USA
- ⁵⁰ SUPA - School of Physics and Astronomy, University of Edinburgh, Edinburgh, UK
- ⁵¹ INFN e Laboratori Nazionali di Frascati, Frascati, Italy
- ⁵² Physikalisches Institut, Albert-Ludwigs-Universität Freiburg, Freiburg, Germany
- ⁵³ II. Physikalisches Institut, Georg-August-Universität Göttingen, Göttingen, Germany
- ⁵⁴ Département de Physique Nucléaire et Corpusculaire, Université de Genève, Genève, Switzerland
- ⁵⁵ ^(a)Dipartimento di Fisica, Università di Genova, Genova, Italy; ^(b)INFN Sezione di Genova, Genova, Italy
- ⁵⁶ II. Physikalisches Institut, Justus-Liebig-Universität Giessen, Giessen, Germany
- ⁵⁷ SUPA - School of Physics and Astronomy, University of Glasgow, Glasgow, UK
- ⁵⁸ LPSC, Université Grenoble Alpes, CNRS/IN2P3, Grenoble INP, Grenoble, France
- ⁵⁹ Laboratory for Particle Physics and Cosmology, Harvard University, Cambridge, MA, USA
- ⁶⁰ ^(a)Department of Modern Physics and State Key Laboratory of Particle Detection and Electronics, University of Science and Technology of China, Hefei, China; ^(b)Institute of Frontier and Interdisciplinary Science and Key Laboratory of Particle Physics and Particle Irradiation (MOE), Shandong University, Qingdao, China; ^(c)School of Physics and Astronomy, Shanghai Jiao Tong University, KLPPAC-MoE, SKLPPC, Shanghai, China; ^(d)Tsung-Dao Lee Institute, Shanghai, China
- ⁶¹ ^(a)Kirchhoff-Institut für Physik, Ruprecht-Karls-Universität Heidelberg, Heidelberg, Germany; ^(b)Physikalisches Institut, Ruprecht-Karls-Universität Heidelberg, Heidelberg, Germany
- ⁶² Faculty of Applied Information Science, Hiroshima Institute of Technology, Hiroshima, Japan
- ⁶³ ^(a)Department of Physics, Chinese University of Hong Kong, Shatin, N.T., Hong Kong, China; ^(b)Department of Physics, University of Hong Kong, Hong Kong, China; ^(c)Department of Physics and Institute for Advanced Study, Hong Kong University of Science and Technology, Clear Water Bay, Kowloon, Hong Kong, China
- ⁶⁴ Department of Physics, National Tsing Hua University, Hsinchu, Taiwan
- ⁶⁵ IJCLab, Université Paris-Saclay, CNRS/IN2P3, 91405, Orsay, France
- ⁶⁶ Department of Physics, Indiana University, Bloomington, IN, USA
- ⁶⁷ ^(a)INFN Gruppo Collegato di Udine, Sezione di Trieste, Udine, Italy; ^(b)ICTP, Trieste, Italy; ^(c)Dipartimento Politecnico di Ingegneria e Architettura, Università di Udine, Udine, Italy
- ⁶⁸ ^(a)INFN Sezione di Lecce, Lecce, Italy; ^(b)Dipartimento di Matematica e Fisica, Università del Salento, Lecce, Italy
- ⁶⁹ ^(a)INFN Sezione di Milano, Milano, Italy; ^(b)Dipartimento di Fisica, Università di Milano, Milano, Italy
- ⁷⁰ ^(a)INFN Sezione di Napoli, Napoli, Italy; ^(b)Dipartimento di Fisica, Università di Napoli, Napoli, Italy
- ⁷¹ ^(a)INFN Sezione di Pavia, Pavia, Italy; ^(b)Dipartimento di Fisica, Università di Pavia, Pavia, Italy
- ⁷² ^(a)INFN Sezione di Pisa, Pisa, Italy; ^(b)Dipartimento di Fisica E. Fermi, Università di Pisa, Pisa, Italy
- ⁷³ ^(a)INFN Sezione di Roma, Roma, Italy; ^(b)Dipartimento di Fisica, Sapienza Università di Roma, Roma, Italy
- ⁷⁴ ^(a)INFN Sezione di Roma Tor Vergata, Roma, Italy; ^(b)Dipartimento di Fisica, Università di Roma Tor Vergata, Roma, Italy
- ⁷⁵ ^(a)INFN Sezione di Roma Tre, Roma, Italy; ^(b)Dipartimento di Matematica e Fisica, Università Roma Tre, Roma, Italy
- ⁷⁶ ^(a)INFN-TIFPA, Trento, Italy; ^(b)Università degli Studi di Trento, Trento, Italy
- ⁷⁷ Institut für Astro- und Teilchenphysik, Leopold-Franzens-Universität, Innsbruck, Austria
- ⁷⁸ University of Iowa, Iowa City, IA, USA
- ⁷⁹ Department of Physics and Astronomy, Iowa State University, Ames, IA, USA
- ⁸⁰ Joint Institute for Nuclear Research, Dubna, Russia
- ⁸¹ ^(a)Departamento de Engenharia Elétrica, Universidade Federal de Juiz de Fora (UFJF), Juiz de Fora, São Paulo, Brazil; ^(b)Universidade Federal do Rio De Janeiro COPPE/EE/IF, Rio de Janeiro, São Paulo, Brazil; ^(c)Universidade Federal de São João del Rei (UFSJ), São João del Rei, São Paulo, Brazil; ^(d)Instituto de Física, Universidade de São Paulo, São Paulo, Brazil
- ⁸² KEK, High Energy Accelerator Research Organization, Tsukuba, Japan
- ⁸³ Graduate School of Science, Kobe University, Kobe, Japan
- ⁸⁴ ^(a)Faculty of Physics and Applied Computer Science, AGH University of Science and Technology, Krakow, Poland; ^(b)Marian Smoluchowski Institute of Physics, Jagiellonian University, Krakow, Poland
- ⁸⁵ Institute of Nuclear Physics Polish Academy of Sciences, Krakow, Poland

- ⁸⁶ Faculty of Science, Kyoto University, Kyoto, Japan
- ⁸⁷ Kyoto University of Education, Kyoto, Japan
- ⁸⁸ Research Center for Advanced Particle Physics and Department of Physics, Kyushu University, Fukuoka, Japan
- ⁸⁹ Instituto de Física La Plata, Universidad Nacional de La Plata and CONICET, La Plata, Argentina
- ⁹⁰ Physics Department, Lancaster University, Lancaster, UK
- ⁹¹ Oliver Lodge Laboratory, University of Liverpool, Liverpool, UK
- ⁹² Department of Experimental Particle Physics, Jožef Stefan Institute and Department of Physics, University of Ljubljana, Ljubljana, Slovenia
- ⁹³ School of Physics and Astronomy, Queen Mary University of London, London, UK
- ⁹⁴ Department of Physics, Royal Holloway University of London, Egham, UK
- ⁹⁵ Department of Physics and Astronomy, University College London, London, UK
- ⁹⁶ Louisiana Tech University, Ruston, LA, USA
- ⁹⁷ Fysiska institutionen, Lunds universitet, Lund, Sweden
- ⁹⁸ Centre de Calcul de l'Institut National de Physique Nucléaire et de Physique des Particules (IN2P3), Villeurbanne, France
- ⁹⁹ Departamento de Física Teórica C-15 and CIAFF, Universidad Autónoma de Madrid, Madrid, Spain
- ¹⁰⁰ Institut für Physik, Universität Mainz, Mainz, Germany
- ¹⁰¹ School of Physics and Astronomy, University of Manchester, Manchester, UK
- ¹⁰² CPPM, Aix-Marseille Université, CNRS/IN2P3, Marseille, France
- ¹⁰³ Department of Physics, University of Massachusetts, Amherst, MA, USA
- ¹⁰⁴ Department of Physics, McGill University, Montreal, QC, Canada
- ¹⁰⁵ School of Physics, University of Melbourne, Victoria, Australia
- ¹⁰⁶ Department of Physics, University of Michigan, Ann Arbor, MI, USA
- ¹⁰⁷ Department of Physics and Astronomy, Michigan State University, East Lansing, MI, USA
- ¹⁰⁸ B.I. Stepanov Institute of Physics, National Academy of Sciences of Belarus, Minsk, Belarus
- ¹⁰⁹ Research Institute for Nuclear Problems of Byelorussian State University, Minsk, Belarus
- ¹¹⁰ Group of Particle Physics, University of Montreal, Montreal, QC, Canada
- ¹¹¹ P.N. Lebedev Physical Institute of the Russian Academy of Sciences, Moscow, Russia
- ¹¹² National Research Nuclear University MEPhI, Moscow, Russia
- ¹¹³ D.V. Skobeltsyn Institute of Nuclear Physics, M.V. Lomonosov Moscow State University, Moscow, Russia
- ¹¹⁴ Fakultät für Physik, Ludwig-Maximilians-Universität München, München, Germany
- ¹¹⁵ Max-Planck-Institut für Physik (Werner-Heisenberg-Institut), München, Germany
- ¹¹⁶ Nagasaki Institute of Applied Science, Nagasaki, Japan
- ¹¹⁷ Graduate School of Science and Kobayashi-Maskawa Institute, Nagoya University, Nagoya, Japan
- ¹¹⁸ Department of Physics and Astronomy, University of New Mexico, Albuquerque, NM, USA
- ¹¹⁹ Institute for Mathematics, Astrophysics and Particle Physics, Radboud University Nijmegen/Nikhef, Nijmegen, The Netherlands
- ¹²⁰ Nikhef National Institute for Subatomic Physics and University of Amsterdam, Amsterdam, The Netherlands
- ¹²¹ Department of Physics, Northern Illinois University, DeKalb, IL, USA
- ¹²² ^(a)Budker Institute of Nuclear Physics and NSU, SB RAS, Novosibirsk, Russia; ^(b)Novosibirsk State University, Novosibirsk, Russia
- ¹²³ Institute for High Energy Physics of the National Research Centre Kurchatov Institute, Protvino, Russia
- ¹²⁴ Institute for Theoretical and Experimental Physics named by A.I. Alikhanov of National Research Centre "Kurchatov Institute", Moscow, Russia
- ¹²⁵ Department of Physics, New York University, New York, NY, USA
- ¹²⁶ Ochanomizu University, Otsuka, Bunkyo-ku, Tokyo, Japan
- ¹²⁷ Ohio State University, Columbus, OH, USA
- ¹²⁸ Homer L. Dodge Department of Physics and Astronomy, University of Oklahoma, Norman, OK, USA
- ¹²⁹ Department of Physics, Oklahoma State University, Stillwater, OK, USA
- ¹³⁰ Palacký University, RCPTM, Joint Laboratory of Optics, Olomouc, Czech Republic
- ¹³¹ Institute for Fundamental Science, University of Oregon, Eugene, OR, USA
- ¹³² Graduate School of Science, Osaka University, Osaka, Japan
- ¹³³ Department of Physics, University of Oslo, Oslo, Norway

- 134 Department of Physics, Oxford University, Oxford, UK
- 135 LPNHE, Sorbonne Université, Université de Paris, CNRS/IN2P3, Paris, France
- 136 Department of Physics, University of Pennsylvania, Philadelphia, PA, USA
- 137 Konstantinov Nuclear Physics Institute of National Research Centre “Kurchatov Institute”, PNPI, St. Petersburg, Russia
- 138 Department of Physics and Astronomy, University of Pittsburgh, Pittsburgh, PA, USA
- 139 (a) Laboratório de Instrumentação e Física Experimental de Partículas - LIP, Lisboa, Portugal; (b) Departamento de Física, Faculdade de Ciências, Universidade de Lisboa, Lisboa, Portugal; (c) Departamento de Física, Universidade de Coimbra, Coimbra, Portugal; (d) Centro de Física Nuclear da Universidade de Lisboa, Lisboa, Portugal; (e) Departamento de Física, Universidade do Minho, Braga, Portugal; (f) Departamento de Física Teórica y del Cosmos, Universidad de Granada, Granada, Spain; (g) Dep Física and CEFITEC of Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, Caparica, Portugal; (h) Instituto Superior Técnico, Universidade de Lisboa, Lisboa, Portugal
- 140 Institute of Physics of the Czech Academy of Sciences, Prague, Czech Republic
- 141 Czech Technical University in Prague, Prague, Czech Republic
- 142 Charles University, Faculty of Mathematics and Physics, Prague, Czech Republic
- 143 Particle Physics Department, Rutherford Appleton Laboratory, Didcot, UK
- 144 IRFU, CEA, Université Paris-Saclay, Gif-sur-Yvette, France
- 145 Santa Cruz Institute for Particle Physics, University of California Santa Cruz, Santa Cruz, CA, USA
- 146 (a) Departamento de Física, Pontificia Universidad Católica de Chile, Santiago, Chile; (b) Department of Physics, Universidad Andres Bello, Santiago, Chile; (c) Instituto de Alta Investigación, Universidad de Tarapacá, Santiago, Chile; (d) Departamento de Física, Universidad Técnica Federico Santa María, Valparaíso, Chile
- 147 Department of Physics, University of Washington, Seattle, WA, USA
- 148 Department of Physics and Astronomy, University of Sheffield, Sheffield, UK
- 149 Department of Physics, Shinshu University, Nagano, Japan
- 150 Department Physik, Universität Siegen, Siegen, Germany
- 151 Department of Physics, Simon Fraser University, Burnaby, BC, Canada
- 152 SLAC National Accelerator Laboratory, Stanford, CA, USA
- 153 Physics Department, Royal Institute of Technology, Stockholm, Sweden
- 154 Departments of Physics and Astronomy, Stony Brook University, Stony Brook, NY, USA
- 155 Department of Physics and Astronomy, University of Sussex, Brighton, UK
- 156 School of Physics, University of Sydney, Sydney, Australia
- 157 Institute of Physics, Academia Sinica, Taipei, Taiwan
- 158 (a) E. Andronikashvili Institute of Physics, Iv. Javakhishvili Tbilisi State University, Tbilisi, Georgia; (b) High Energy Physics Institute, Tbilisi State University, Tbilisi, Georgia
- 159 Department of Physics, Technion, Israel Institute of Technology, Haifa, Israel
- 160 Raymond and Beverly Sackler School of Physics and Astronomy, Tel Aviv University, Tel Aviv, Israel
- 161 Department of Physics, Aristotle University of Thessaloniki, Thessaloniki, Greece
- 162 International Center for Elementary Particle Physics and Department of Physics, University of Tokyo, Tokyo, Japan
- 163 Graduate School of Science and Technology, Tokyo Metropolitan University, Tokyo, Japan
- 164 Department of Physics, Tokyo Institute of Technology, Tokyo, Japan
- 165 Tomsk State University, Tomsk, Russia
- 166 Department of Physics, University of Toronto, Toronto, ON, Canada
- 167 (a) TRIUMF, Vancouver, BC, Canada; (b) Department of Physics and Astronomy, York University, Toronto, ON, Canada
- 168 Division of Physics and Tomonaga Center for the History of the Universe, Faculty of Pure and Applied Sciences, University of Tsukuba, Tsukuba, Japan
- 169 Department of Physics and Astronomy, Tufts University, Medford, MA, USA
- 170 Department of Physics and Astronomy, University of California Irvine, Irvine, CA, USA
- 171 Department of Physics and Astronomy, University of Uppsala, Uppsala, Sweden
- 172 Department of Physics, University of Illinois, Urbana, IL, USA
- 173 Instituto de Física Corpuscular (IFIC), Centro Mixto Universidad de Valencia - CSIC, Valencia, Spain
- 174 Department of Physics, University of British Columbia, Vancouver, BC, Canada
- 175 Department of Physics and Astronomy, University of Victoria, Victoria, BC, Canada
- 176 Fakultät für Physik und Astronomie, Julius-Maximilians-Universität Würzburg, Würzburg, Germany
- 177 Department of Physics, University of Warwick, Coventry, UK

- 178 Waseda University, Tokyo, Japan
- 179 Department of Particle Physics, Weizmann Institute of Science, Rehovot, Israel
- 180 Department of Physics, University of Wisconsin, Madison, WI, USA
- 181 Fakultät für Mathematik und Naturwissenschaften, Fachgruppe Physik, Bergische Universität Wuppertal, Wuppertal, Germany
- 182 Department of Physics, Yale University, New Haven, CT, USA
- ^a Also at Borough of Manhattan Community College, City University of New York, New York NY, USA
- ^b Also at Centro Studi e Ricerche Enrico Fermi, Italy
- ^c Also at CERN, Geneva, Switzerland
- ^d Also at CPPM, Aix-Marseille Université, CNRS/IN2P3, Marseille, France
- ^e Also at Département de Physique Nucléaire et Corpusculaire, Université de Genève, Genève, Switzerland
- ^f Also at Departament de Física de la Universitat Autònoma de Barcelona, Barcelona, Spain
- ^g Also at Department of Financial and Management Engineering, University of the Aegean, Chios, Greece
- ^h Also at Department of Physics and Astronomy, Michigan State University, East Lansing MI, USA
- ⁱ Also at Department of Physics and Astronomy, University of Louisville, Louisville, KY, USA
- ^j Also at Department of Physics, Ben Gurion University of the Negev, Beer Sheva, Israel
- ^k Also at Department of Physics, California State University, East Bay, USA
- ^l Also at Department of Physics, California State University, Fresno, USA
- ^m Also at Department of Physics, California State University, Sacramento, USA
- ⁿ Also at Department of Physics, King's College London, London, UK
- ^o Also at Department of Physics, St. Petersburg State Polytechnical University, St. Petersburg, Russia
- ^p Also at Department of Physics, University of Fribourg, Fribourg, Switzerland
- ^q Also at Dipartimento di Matematica, Informatica e Fisica, Università di Udine, Udine, Italy
- ^r Also at Faculty of Physics, M.V. Lomonosov Moscow State University, Moscow, Russia
- ^s Also at Giresun University, Faculty of Engineering, Giresun, Turkey
- ^t Also at Graduate School of Science, Osaka University, Osaka, Japan
- ^u Also at Hellenic Open University, Patras, Greece
- ^v Also at IJCLab, Université Paris-Saclay, CNRS/IN2P3, 91405, Orsay, France
- ^w Also at Institució Catalana de Recerca i Estudis Avançats, ICREA, Barcelona, Spain
- ^x Also at Institut für Experimentalphysik, Universität Hamburg, Hamburg, Germany
- ^y Also at Institute for Mathematics, Astrophysics and Particle Physics, Radboud University Nijmegen/Nikhef, Nijmegen, Netherlands
- ^{aa} Also at Institute for Nuclear Research and Nuclear Energy (INRNE) of the Bulgarian Academy of Sciences, Sofia, Bulgaria
- ^{ab} Also at Institute for Particle and Nuclear Physics, Wigner Research Centre for Physics, Budapest, Hungary.
- ^{ac} Also at Institute of Particle Physics (IPP), Vancouver, Canada
- ^{ad} Also at Institute of Physics, Azerbaijan Academy of Sciences, Baku, Azerbaijan
- ^{ae} Also at Instituto de Física Teórica, IFT-UAM/CSIC, Madrid, Spain
- ^{af} Also at Joint Institute for Nuclear Research, Dubna, Russia
- ^{ag} Also at Louisiana Tech University, Ruston LA, USA
- ^{ah} Also at Moscow Institute of Physics and Technology State University, Dolgoprudny, Russia
- ^{ai} Also at National Research Nuclear University MEPhI, Moscow, Russia
- ^{aj} Also at Physics Department, An-Najah National University, Nablus, Palestine
- ^{ak} Also at Physikalisches Institut, Albert-Ludwigs-Universität Freiburg, Freiburg, Germany
- ^{al} Also at The City College of New York, New York NY, USA
- ^{am} Also at TRIUMF, Vancouver BC, Canada.
- ^{an} Also at Università di Napoli Parthenope, Napoli, Italy
- ^{ao} Also at University of Chinese Academy of Sciences (UCAS), Beijing, China.
- *Deceased