

The ATLAS Collaboration

M. Aaboud^{34d}, G. Aad⁹⁹, B. Abbott¹²⁵, D.C. Abbott¹⁰⁰, O. Abidinov^{13,*}, B. Abeloos¹²⁹, D.K. Abhayasinghe⁹¹, S.H. Abidi¹⁶⁴, O.S. AbouZeid³⁹, N.L. Abraham¹⁵³, H. Abramowicz¹⁵⁸, H. Abreu¹⁵⁷, Y. Abulaiti⁶, B.S. Acharya^{64a,64b,p}, S. Adachi¹⁶⁰, L. Adam⁹⁷, L. Adamczyk^{81a}, L. Adamek¹⁶⁴, J. Adelman¹¹⁹, M. Adersberger¹¹², A. Adiguzel^{12c,ai}, T. Adye¹⁴¹, A.A. Affolder¹⁴³, Y. Afik¹⁵⁷, C. Agheorghiesei^{27c}, J.A. Aguilar-Saavedra^{137f,137a,ah}, F. Ahmadov^{77,af}, G. Aielli^{71a,71b}, S. Akatsuka⁸³, T.P.A. Åkesson⁹⁴, E. Akilli⁵², A.V. Akimov¹⁰⁸, G.L. Alberghi^{23b,23a}, J. Albert¹⁷³, P. Albicocco⁴⁹, M.J. Alconada Verzini⁸⁶, S. Alderweireldt¹¹⁷, M. Aleksa³⁵, I.N. Aleksandrov⁷⁷, C. Alexa^{27b}, D. Alexandre¹⁹, T. Alexopoulos¹⁰, M. Alhroob¹²⁵, B. Ali¹³⁹, G. Alimonti^{66a}, J. Alison³⁶, S.P. Alkire¹⁴⁵, C. Allaire¹²⁹, B.M.M. Allbrooke¹⁵³, B.W. Allen¹²⁸, P.P. Allport²¹, A. Aloisio^{67a,67b}, A. Alonso³⁹, F. Alonso⁸⁶, C. Alpigiani¹⁴⁵, A.A. Alshehri⁵⁵, M.I. Alstady⁹⁹, B. Alvarez Gonzalez³⁵, D. Álvarez Piqueras¹⁷¹, M.G. Alviggi^{67a,67b}, B.T. Amadio¹⁸, Y. Amaral Coutinho^{78b}, A. Ambler¹⁰¹, L. Ambroz¹³², C. Amelung²⁶, D. Amidei¹⁰³, S.P. Amor Dos Santos^{137a,137c}, S. Amoroso⁴⁴, C.S. Amrouche⁵², F. An⁷⁶, C. Anastopoulos¹⁴⁶, L.S. Ancu⁵², N. Andari¹⁴², T. Andeen¹¹, C.F. Anders^{59b}, J.K. Anders²⁰, K.J. Anderson³⁶, A. Andreazza^{66a,66b}, V. Andrei^{59a}, C.R. Anelli¹⁷³, S. Angelidakis³⁷, I. Angelozzi¹¹⁸, A. Angerami³⁸, A.V. Anisenkov^{120b,120a}, A. Annovi^{69a}, C. Antel^{59a}, M.T. Anthony¹⁴⁶, M. Antonelli⁴⁹, D.J.A. Antrim¹⁶⁸, F. Anulli^{70a}, M. Aoki⁷⁹, J.A. Aparisi Pozo¹⁷¹, L. Aperio Bella³⁵, G. Arabidze¹⁰⁴, J.P. Araque^{137a}, V. Araujo Ferraz^{78b}, R. Araujo Pereira^{78b}, A.T.H. Arce⁴⁷, R.E. Ardell⁹¹, F.A. Arduh⁸⁶, J-F. Arguin¹⁰⁷, S. Argyropoulos⁷⁵, J.-H. Arling⁴⁴, A.J. Armbruster³⁵, L.J. Armitage⁹⁰, A. Armstrong¹⁶⁸, O. Arnaez¹⁶⁴, H. Arnold¹¹⁸, M. Arratia³¹, O. Arslan²⁴, A. Artamonov^{109,*}, G. Artoni¹³², S. Artz⁹⁷, S. Asai¹⁶⁰, N. Asbah⁵⁷, E.M. Asimakopoulou¹⁶⁹, L. Asquith¹⁵³, K. Assamagan²⁹, R. Astalos^{28a}, R.J. Atkin^{32a}, M. Atkinson¹⁷⁰, N.B. Atlay¹⁴⁸, K. Augsten¹³⁹, G. Avolio³⁵, R. Avramidou^{58a}, M.K. Ayoub^{15a}, A.M. Azoulay^{165b}, G. Azuelos^{107,av}, A.E. Baas^{59a}, M.J. Baca²¹, H. Bachacou¹⁴², K. Bachas^{65a,65b}, M. Backes¹³², P. Bagnaia^{70a,70b}, M. Bahmani⁸², H. Bahrasemani¹⁴⁹, A.J. Bailey¹⁷¹, V.R. Bailey¹⁷⁰, J.T. Baines¹⁴¹, M. Bajic³⁹, C. Bakalis¹⁰, O.K. Baker¹⁸⁰, P.J. Bakker¹¹⁸, D. Bakshi Gupta⁸, S. Balaji¹⁵⁴, E.M. Baldin^{120b,120a}, P. Balek¹⁷⁷, F. Balli¹⁴², W.K. Balunas¹³⁴, J. Balz⁹⁷, E. Banas⁸², A. Bandyopadhyay²⁴, S. Banerjee^{178,1}, A.A.E. Bannoura¹⁷⁹, L. Barak¹⁵⁸, W.M. Barbe³⁷, E.L. Barberio¹⁰², D. Barberis^{53b,53a}, M. Barbero⁹⁹, T. Barillari¹¹³, M-S. Barisits³⁵, J. Barkeloo¹²⁸, T. Barklow¹⁵⁰, R. Barnea¹⁵⁷, S.L. Barnes^{58c}, B.M. Barnett¹⁴¹, R.M. Barnett¹⁸, Z. Barnovska-Blenessy^{58a}, A. Baroncelli^{72a}, G. Barone²⁹, A.J. Barr¹³², L. Barranco Navarro¹⁷¹, F. Barreiro⁹⁶, J. Barreiro Guimarães da Costa^{15a}, R. Bartoldus¹⁵⁰, A.E. Barton⁸⁷, P. Bartos^{28a}, A. Basalae¹³⁵, A. Bassalat¹²⁹, R.L. Bates⁵⁵, S.J. Batista¹⁶⁴, S. Batlamous^{34e}, J.R. Batley³¹, M. Battaglia¹⁴³, M. Bause^{70a,70b}, F. Bauer¹⁴², K.T. Bauer¹⁶⁸, H.S. Bawa¹⁵⁰, J.B. Beacham¹²³, T. Beau¹³³, P.H. Beauchemin¹⁶⁷, P. Bechtel²⁴, H.C. Beck⁵¹, H.P. Beck^{20,s}, K. Becker⁵⁰, M. Becker⁹⁷, C. Becot⁴⁴, A. Beddall^{12d}, A.J. Beddall^{12a}, V.A. Bednyakov⁷⁷, M. Bedognetti¹¹⁸, C.P. Bee¹⁵², T.A. Beermann⁷⁴, M. Begalli^{78b}, M. Begel²⁹, A. Behera¹⁵², J.K. Behr⁴⁴, F. Beisiegel²⁴, A.S. Bell⁹², G. Bella¹⁵⁸, L. Bellagamba^{23b}, A. Bellerive³³, M. Bellomo¹⁵⁷, P. Bellos⁹, K. Belotskiy¹¹⁰, N.L. Belyaev¹¹⁰, O. Benary^{158,*}, D. Benchekroun^{34a}, M. Bender¹¹², N. Benekos¹⁰, Y. Benhammou¹⁵⁸, E. Benhar Noccioli¹⁸⁰, J. Benitez⁷⁵, D.P. Benjamin⁶, M. Benoit⁵², J.R. Bensinger²⁶, S. Bentvelsen¹¹⁸, L. Beresford¹³², M. Beretta⁴⁹, D. Berge⁴⁴,

E. Bergeaas Kuutmann¹⁶⁹, N. Berger⁵, B. Bergmann¹³⁹, L.J. Bergsten²⁶, J. Beringer¹⁸,
 S. Berlendis⁷, N.R. Bernard¹⁰⁰, G. Bernardi¹³³, C. Bernius¹⁵⁰, F.U. Bernlochner²⁴, T. Berry⁹¹,
 P. Berta⁹⁷, C. Bertella^{15a}, G. Bertoli^{43a,43b}, I.A. Bertram⁸⁷, G.J. Besjes³⁹,
 O. Bessidskaia Bylund¹⁷⁹, M. Bessner⁴⁴, N. Besson¹⁴², A. Bethani⁹⁸, S. Bethke¹¹³, A. Betti²⁴,
 A.J. Bevan⁹⁰, J. Beyer¹¹³, R. Bi¹³⁶, R.M. Bianchi¹³⁶, O. Biebel¹¹², D. Biedermann¹⁹, R. Bielski³⁵,
 K. Bierwagen⁹⁷, N.V. Biesuz^{69a,69b}, M. Biglietti^{72a}, T.R.V. Billoud¹⁰⁷, M. Bindi⁵¹, A. Bingul^{12d},
 C. Bini^{70a,70b}, S. Biondi^{23b,23a}, M. Birman¹⁷⁷, T. Bisanz⁵¹, J.P. Biswal¹⁵⁸, C. Bittrich⁴⁶,
 D.M. Bjergaard⁴⁷, J.E. Black¹⁵⁰, K.M. Black²⁵, T. Blazek^{28a}, I. Bloch⁴⁴, C. Blocker²⁶, A. Blue⁵⁵,
 U. Blumenschein⁹⁰, Dr. Blunier^{144a}, G.J. Bobbink¹¹⁸, V.S. Bobrovnikov^{120b,120a}, S.S. Bocchetta⁹⁴,
 A. Bocci⁴⁷, D. Boerner¹⁷⁹, D. Bogavac¹¹², A.G. Bogdanchikov^{120b,120a}, C. Bohm^{43a}, V. Boisvert⁹¹,
 P. Bokan^{51,169}, T. Bold^{81a}, A.S. Boldyrev¹¹¹, A.E. Bolz^{59b}, M. Bomben¹³³, M. Bona⁹⁰,
 J.S. Bonilla¹²⁸, M. Boonekamp¹⁴², H.M. Borecka-Bielska⁸⁸, A. Borisov¹²¹, G. Borissov⁸⁷,
 J. Bortfeldt³⁵, D. Bortoletto¹³², V. Bortolotto^{71a,71b}, D. Boscherini^{23b}, M. Bosman¹⁴,
 J.D. Bossio Sola³⁰, K. Bouaouda^{34a}, J. Boudreau¹³⁶, E.V. Bouhova-Thacker⁸⁷, D. Boumediene³⁷,
 C. Bourdarios¹²⁹, S.K. Boutle⁵⁵, A. Boveia¹²³, J. Boyd³⁵, D. Boye^{32b}, I.R. Boyko⁷⁷, A.J. Bozson⁹¹,
 J. Bracinik²¹, N. Brahimi⁹⁹, A. Brandt⁸, G. Brandt¹⁷⁹, O. Brandt^{59a}, F. Braren⁴⁴, U. Bratzler¹⁶¹,
 B. Brau¹⁰⁰, J.E. Brau¹²⁸, W.D. Breaden Madden⁵⁵, K. Brendlinger⁴⁴, L. Brenner⁴⁴, R. Brenner¹⁶⁹,
 S. Bressler¹⁷⁷, B. Brickwedde⁹⁷, D.L. Briglin²¹, D. Britton⁵⁵, D. Britzger¹¹³, I. Brock²⁴,
 R. Brock¹⁰⁴, G. Brooijmans³⁸, T. Brooks⁹¹, W.K. Brooks^{144b}, E. Brost¹¹⁹, J.H. Broughton²¹,
 P.A. Bruckman de Renstrom⁸², D. Bruncko^{28b}, A. Bruni^{23b}, G. Bruni^{23b}, L.S. Bruni¹¹⁸,
 S. Bruno^{71a,71b}, B.H. Brunt³¹, M. Bruschi^{23b}, N. Bruscinò¹³⁶, P. Bryant³⁶, L. Bryngemark⁹⁴,
 T. Buanes¹⁷, Q. Buat³⁵, P. Buchholz¹⁴⁸, A.G. Buckley⁵⁵, I.A. Budagov⁷⁷, M.K. Bugge¹³¹,
 F. Bühner⁵⁰, O. Bulekov¹¹⁰, D. Bullock⁸, T.J. Burch¹¹⁹, S. Burdin⁸⁸, C.D. Burgard¹¹⁸,
 A.M. Burger⁵, B. Burghgrave¹¹⁹, K. Burka⁸², S. Burke¹⁴¹, I. Burmeister⁴⁵, J.T.P. Burr¹³²,
 V. Büscher⁹⁷, E. Buschmann⁵¹, P. Bussey⁵⁵, J.M. Butler²⁵, C.M. Buttar⁵⁵, J.M. Butterworth⁹²,
 P. Butti³⁵, W. Buttinger³⁵, A. Buzatu¹⁵⁵, A.R. Buzykaev^{120b,120a}, G. Cabras^{23b,23a},
 S. Cabrera Urbán¹⁷¹, D. Caforio¹³⁹, H. Cai¹⁷⁰, V.M.M. Cairo², O. Cakir^{4a}, N. Calace³⁵,
 P. Calafiura¹⁸, A. Calandri⁹⁹, G. Calderini¹³³, P. Calfayan⁶³, G. Callea⁵⁵, L.P. Caloba^{78b},
 S. Calvente Lopez⁹⁶, D. Calvet³⁷, S. Calvet³⁷, T.P. Calvet¹⁵², M. Calvetti^{69a,69b},
 R. Camacho Toro¹³³, S. Camarda³⁵, D. Camarero Munoz⁹⁶, P. Camarri^{71a,71b}, D. Cameron¹³¹,
 R. Caminal Armadans¹⁰⁰, C. Camincher³⁵, S. Campana³⁵, M. Campanelli⁹², A. Camplani³⁹,
 A. Campoverde¹⁴⁸, V. Canale^{67a,67b}, M. Cano Bret^{58c}, J. Cantero¹²⁶, T. Cao¹⁵⁸, Y. Cao¹⁷⁰,
 M.D.M. Capeans Garrido³⁵, I. Caprini^{27b}, M. Caprini^{27b}, M. Capua^{40b,40a}, R.M. Carbone³⁸,
 R. Cardarelli^{71a}, F.C. Cardillo¹⁴⁶, I. Carli¹⁴⁰, T. Carli³⁵, G. Carlino^{67a}, B.T. Carlson¹³⁶,
 L. Carminati^{66a,66b}, R.M.D. Carney^{43a,43b}, S. Caron¹¹⁷, E. Carquin^{144b}, S. Carrá^{66a,66b},
 J.W.S. Carter¹⁶⁴, D. Casadei^{32b}, M.P. Casado^{14,g}, A.F. Casha¹⁶⁴, D.W. Casper¹⁶⁸, R. Castelijns¹¹⁸,
 F.L. Castillo¹⁷¹, V. Castillo Gimenez¹⁷¹, N.F. Castro^{137a,137e}, A. Catinaccio³⁵, J.R. Catmore¹³¹,
 A. Cattai³⁵, J. Caudron²⁴, V. Cavaliere²⁹, E. Cavallaro¹⁴, D. Cavalli^{66a}, M. Cavalli-Sforza¹⁴,
 V. Cavasinni^{69a,69b}, E. Celebi^{12b}, F. Ceradini^{72a,72b}, L. Cerda Alberich¹⁷¹, A.S. Cerqueira^{78a},
 A. Cerri¹⁵³, L. Cerrito^{71a,71b}, F. Cerutti¹⁸, A. Cervelli^{23b,23a}, S.A. Cetin^{12b}, A. Chafaq^{34a},
 D. Chakraborty¹¹⁹, S.K. Chan⁵⁷, W.S. Chan¹¹⁸, W.Y. Chan⁸⁸, J.D. Chapman³¹,
 B. Chargeishvili^{156b}, D.G. Charlton²¹, C.C. Chau³³, C.A. Chavez Barajas¹⁵³, S. Che¹²³,
 A. Chegwidden¹⁰⁴, S. Chekanov⁶, S.V. Chekulaev^{165a}, G.A. Chelkov^{77,au}, M.A. Chelstowska³⁵,

B. Chen⁷⁶, C. Chen^{58a}, C.H. Chen⁷⁶, H. Chen²⁹, J. Chen^{58a}, J. Chen³⁸, S. Chen¹³⁴, S.J. Chen^{15c},
 X. Chen^{15b,at}, Y. Chen⁸⁰, Y-H. Chen⁴⁴, H.C. Cheng^{61a}, H.J. Cheng^{15d}, A. Cheplakov⁷⁷,
 E. Cheremushkina¹²¹, R. Cherkaoui El Moursli^{34e}, E. Cheu⁷, K. Cheung⁶², T.J.A. Chevalérias¹⁴²,
 L. Chevalier¹⁴², V. Chiarella⁴⁹, G. Chiarelli^{69a}, G. Chiodini^{65a}, A.S. Chisholm^{35,21}, A. Chitan^{27b},
 I. Chiu¹⁶⁰, Y.H. Chiu¹⁷³, M.V. Chizhov⁷⁷, K. Choi⁶³, A.R. Chomont¹²⁹, S. Chouridou¹⁵⁹,
 Y.S. Chow¹¹⁸, V. Christodoulou⁹², M.C. Chu^{61a}, J. Chudoba¹³⁸, A.J. Chuinard¹⁰¹,
 J.J. Chwastowski⁸², L. Chytka¹²⁷, D. Cinca⁴⁵, V. Cindro⁸⁹, I.A. Cioară²⁴, A. Ciocio¹⁸,
 F. Cirotto^{67a,67b}, Z.H. Citron¹⁷⁷, M. Citterio^{66a}, A. Clark⁵², M.R. Clark³⁸, P.J. Clark⁴⁸,
 C. Clement^{43a,43b}, Y. Coadou⁹⁹, M. Cobal^{64a,64c}, A. Coccaro^{53b,53a}, J. Cochran⁷⁶, H. Cohen¹⁵⁸,
 A.E.C. Coimbra¹⁷⁷, L. Colasurdo¹¹⁷, B. Cole³⁸, A.P. Colijn¹¹⁸, J. Collot⁵⁶, P. Conde Muño^{137a,i},
 E. Coniavitis⁵⁰, S.H. Connell^{32b}, I.A. Connolly⁹⁸, S. Constantinescu^{27b}, F. Conventi^{67a,aw},
 A.M. Cooper-Sarkar¹³², F. Cormier¹⁷², K.J.R. Cormier¹⁶⁴, L.D. Corpe⁹², M. Corradi^{70a,70b},
 E.E. Corrigan⁹⁴, F. Corriveau^{101,ad}, A. Cortes-Gonzalez³⁵, M.J. Costa¹⁷¹, F. Costanza⁵,
 D. Costanzo¹⁴⁶, G. Cottin³¹, G. Cowan⁹¹, J.W. Cowley³¹, B.E. Cox⁹⁸, J. Crane⁹⁸, K. Cranmer¹²²,
 S.J. Crawley⁵⁵, R.A. Creager¹³⁴, G. Cree³³, S. Crépé-Renaudin⁵⁶, F. Crescioli¹³³,
 M. Cristinziani²⁴, V. Croft¹²², G. Crosetti^{40b,40a}, A. Cueto⁹⁶, T. Cuhadar Donszelmann¹⁴⁶,
 A.R. Cukierman¹⁵⁰, S. Czekierda⁸², P. Czodrowski³⁵, M.J. Da Cunha Sargedas De Sousa^{58b},
 C. Da Via⁹⁸, W. Dabrowski^{81a}, T. Dado^{28a,y}, S. Dahbi^{34e}, T. Dai¹⁰³, F. Dallaire¹⁰⁷,
 C. Dallapiccola¹⁰⁰, M. Dam³⁹, G. D'amen^{23b,23a}, J. Damp⁹⁷, J.R. Dandoy¹³⁴, M.F. Daneri³⁰,
 N.P. Dang^{178,1}, N.D. Dann⁹⁸, M. Danning¹⁷², V. Dao³⁵, G. Darbo^{53b}, S. Darmora⁸, O. Dartsis⁵,
 A. Dattagupta¹²⁸, T. Daubney⁴⁴, S. D'Auria^{66a,66b}, W. Davey²⁴, C. David⁴⁴, T. Davidek¹⁴⁰,
 D.R. Davis⁴⁷, E. Dawe¹⁰², I. Dawson¹⁴⁶, K. De⁸, R. De Asmundis^{67a}, A. De Benedetti¹²⁵,
 M. De Beurs¹¹⁸, S. De Castro^{23b,23a}, S. De Cecco^{70a,70b}, N. De Groot¹¹⁷, P. de Jong¹¹⁸,
 H. De la Torre¹⁰⁴, F. De Lorenzi⁷⁶, A. De Maria^{69a,69b}, D. De Pedis^{70a}, A. De Salvo^{70a},
 U. De Sanctis^{71a,71b}, M. De Santis^{71a,71b}, A. De Santo¹⁵³, K. De Vasconcelos Corga⁹⁹,
 J.B. De Vivie De Regie¹²⁹, C. Debenedetti¹⁴³, D.V. Dedovich⁷⁷, N. Dehghanian³,
 M. Del Gaudio^{40b,40a}, J. Del Peso⁹⁶, Y. Delabat Diaz⁴⁴, D. Delgove¹²⁹, F. Deliot¹⁴²,
 C.M. Delitzsch⁷, M. Della Pietra^{67a,67b}, D. Della Volpe⁵², A. Dell'Acqua³⁵, L. Dell'Asta²⁵,
 M. Delmastro⁵, C. Delporte¹²⁹, P.A. Delsart⁵⁶, D.A. DeMarco¹⁶⁴, S. Demers¹⁸⁰, M. Demichev⁷⁷,
 S.P. Denisov¹²¹, D. Denysiuk¹¹⁸, L. D'Eramo¹³³, D. Derendarz⁸², J.E. Derkaoui^{34d}, F. Derue¹³³,
 P. Dervan⁸⁸, K. Desch²⁴, C. Deterre⁴⁴, K. Dette¹⁶⁴, M.R. Devesa³⁰, P.O. Deviveiros³⁵,
 A. Dewhurst¹⁴¹, S. Dhaliwal²⁶, F.A. Di Bello⁵², A. Di Ciaccio^{71a,71b}, L. Di Ciaccio⁵,
 W.K. Di Clemente¹³⁴, C. Di Donato^{67a,67b}, A. Di Girolamo³⁵, G. Di Gregorio^{69a,69b},
 B. Di Micco^{72a,72b}, R. Di Nardo¹⁰⁰, K.F. Di Petrillo⁵⁷, R. Di Sipio¹⁶⁴, D. Di Valentino³³,
 C. Diaconu⁹⁹, M. Diamond¹⁶⁴, F.A. Dias³⁹, T. Dias Do Vale^{137a}, M.A. Diaz^{144a}, J. Dickinson¹⁸,
 E.B. Diehl¹⁰³, J. Dietrich¹⁹, S. Díez Cornell⁴⁴, A. Dimitrievska¹⁸, J. Dingfelder²⁴, F. Dittus³⁵,
 F. Djama⁹⁹, T. Djobava^{156b}, J.I. Djuvsland¹⁷, M.A.B. Do Vale^{78c}, M. Dobre^{27b}, D. Dodsworth²⁶,
 C. Doglioni⁹⁴, J. Dolejsi¹⁴⁰, Z. Dolezal¹⁴⁰, M. Donadelli^{78d}, J. Donini³⁷, A. D'onofrio⁹⁰,
 M. D'Onofrio⁸⁸, J. Dopke¹⁴¹, A. Doria^{67a}, M.T. Dova⁸⁶, A.T. Doyle⁵⁵, E. Drechsler¹⁴⁹,
 E. Dreyer¹⁴⁹, T. Dreyer⁵¹, Y. Du^{58b}, F. Dubinin¹⁰⁸, M. Dubovsky^{28a}, A. Dubreuil⁵²,
 E. Duchovni¹⁷⁷, G. Duckeck¹¹², A. Ducourthial¹³³, O.A. Ducu^{107,x}, D. Duda¹¹³, A. Dudarev³⁵,
 A.C. Dudder⁹⁷, E.M. Duffield¹⁸, L. Duflot¹²⁹, M. Dührssen³⁵, C. Dülse¹⁷⁹, M. Dumancic¹⁷⁷,
 A.E. Dumitriu^{27b,e}, A.K. Duncan⁵⁵, M. Dunford^{59a}, A. Duperrin⁹⁹, H. Duran Yildiz^{4a},

M. Düren⁵⁴, A. Durglishvili^{156b}, D. Duschinger⁴⁶, B. Dutta⁴⁴, D. Duvnjak¹, M. Dyndal⁴⁴,
S. Dysch⁹⁸, B.S. Dziedzic⁸², K.M. Ecker¹¹³, R.C. Edgar¹⁰³, T. Eifert³⁵, G. Eigen¹⁷,
K. Einsweiler¹⁸, T. Ekelof¹⁶⁹, M. El Kacimi^{34c}, R. El Kosseifi⁹⁹, V. Ellajosyula⁹⁹, M. Ellert¹⁶⁹,
F. Ellinghaus¹⁷⁹, A.A. Elliot⁹⁰, N. Ellis³⁵, J. Elmsheuser²⁹, M. Elsing³⁵, D. Emeliyanov¹⁴¹,
A. Emerman³⁸, Y. Enari¹⁶⁰, J.S. Ennis¹⁷⁵, M.B. Epland⁴⁷, J. Erdmann⁴⁵, A. Ereditato²⁰,
S. Errede¹⁷⁰, M. Escalier¹²⁹, C. Escobar¹⁷¹, O. Estrada Pastor¹⁷¹, A.I. Etienne¹⁴², E. Etzion¹⁵⁸,
H. Evans⁶³, A. Ezhilov¹³⁵, M. Ezzi^{34e}, F. Fabbri⁵⁵, L. Fabbri^{23b,23a}, V. Fabiani¹¹⁷, G. Facini⁹²,
R.M. Faisca Rodrigues Pereira^{137a}, R.M. Fakhrutdinov¹²¹, S. Falciano^{70a}, P.J. Falke⁵, S. Falke⁵,
J. Faltova¹⁴⁰, Y. Fang^{15a}, M. Fanti^{66a,66b}, A. Farbin⁸, A. Farilla^{72a}, E.M. Farina^{68a,68b},
T. Farooque¹⁰⁴, S. Farrell¹⁸, S.M. Farrington¹⁷⁵, P. Farthouat³⁵, F. Fassi^{34e}, P. Fassnacht³⁵,
D. Fassouliotis⁹, M. Faucci Giannelli⁴⁸, W.J. Fawcett³¹, L. Fayard¹²⁹, O.L. Fedin^{135,q},
W. Fedorko¹⁷², M. Feickert⁴¹, S. Feigl¹³¹, L. Feligioni⁹⁹, C. Feng^{58b}, E.J. Feng³⁵, M. Feng⁴⁷,
M.J. Fenton⁵⁵, A.B. Fenyuk¹²¹, J. Ferrando⁴⁴, A. Ferrari¹⁶⁹, P. Ferrari¹¹⁸, R. Ferrari^{68a},
D.E. Ferreira de Lima^{59b}, A. Ferrer¹⁷¹, D. Ferrere⁵², C. Ferretti¹⁰³, F. Fiedler⁹⁷, A. Filipčič⁸⁹,
F. Filthaut¹¹⁷, K.D. Finelli²⁵, M.C.N. Fiolhais^{137a,137c,a}, L. Fiorini¹⁷¹, C. Fischer¹⁴,
W.C. Fisher¹⁰⁴, N. Flaschel⁴⁴, I. Fleck¹⁴⁸, P. Fleischmann¹⁰³, R.R.M. Fletcher¹³⁴, T. Flick¹⁷⁹,
B.M. Flierl¹¹², L.M. Flores¹³⁴, L.R. Flores Castillo^{61a}, F.M. Follega^{73a,73b}, N. Fomin¹⁷,
G.T. Forcolin^{73a,73b}, A. Formica¹⁴², F.A. Förster¹⁴, A.C. Forti⁹⁸, A.G. Foster²¹, D. Fournier¹²⁹,
H. Fox⁸⁷, S. Fracchia¹⁴⁶, P. Francavilla^{69a,69b}, M. Franchini^{23b,23a}, S. Franchino^{59a}, D. Francis³⁵,
L. Franconi¹⁴³, M. Franklin⁵⁷, M. Frate¹⁶⁸, M. Fraternali^{68a,68b}, A.N. Fray⁹⁰, D. Freeborn⁹²,
B. Freund¹⁰⁷, W.S. Freund^{78b}, E.M. Freundlich⁴⁵, D.C. Frizzell¹²⁵, D. Froidevaux³⁵, J.A. Frost¹³²,
C. Fukunaga¹⁶¹, E. Fullana Torregrosa¹⁷¹, E. Fumagalli^{53b,53a}, T. Fusayasu¹¹⁴, J. Fuster¹⁷¹,
O. Gabizon¹⁵⁷, A. Gabrielli^{23b,23a}, A. Gabrielli¹⁸, G.P. Gach^{81a}, S. Gadatsch⁵², P. Gadow¹¹³,
G. Gagliardi^{53b,53a}, L.G. Gagnon¹⁰⁷, C. Galea^{27b}, B. Galhardo^{137a,137c}, E.J. Gallas¹³²,
B.J. Gallop¹⁴¹, P. Gallus¹³⁹, G. Galster³⁹, R. Gamboa Goni⁹⁰, K.K. Gan¹²³, S. Ganguly¹⁷⁷,
J. Gao^{58a}, Y. Gao⁸⁸, Y.S. Gao^{150,n}, C. García¹⁷¹, J.E. García Navarro¹⁷¹, J.A. García Pascual^{15a},
C. Garcia-Argos⁵⁰, M. Garcia-Sciveres¹⁸, R.W. Gardner³⁶, N. Garelli¹⁵⁰, S. Gargiulo⁵⁰,
V. Garonne¹³¹, K. Gasnikova⁴⁴, A. Gaudiello^{53b,53a}, G. Gaudio^{68a}, I.L. Gavrilenko¹⁰⁸,
A. Gavriluk¹⁰⁹, C. Gay¹⁷², G. Gaycken²⁴, E.N. Gazis¹⁰, C.N.P. Gee¹⁴¹, J. Geisen⁵¹, M. Geisen⁹⁷,
M.P. Geisler^{59a}, C. Gemme^{53b}, M.H. Genest⁵⁶, C. Geng¹⁰³, S. Gentile^{70a,70b}, S. George⁹¹,
D. Gerbaudo¹⁴, G. Gessner⁴⁵, S. Ghasemi¹⁴⁸, M. Ghasemi Bostanabad¹⁷³, M. Ghneimat²⁴,
B. Giacobbe^{23b}, S. Giagu^{70a,70b}, N. Giangiacomi^{23b,23a}, P. Giannetti^{69a}, A. Giannini^{67a,67b},
S.M. Gibson⁹¹, M. Gignac¹⁴³, D. Gillberg³³, G. Gilles¹⁷⁹, D.M. Gingrich^{3,av}, M.P. Giordani^{64a,64c},
F.M. Giorgi^{23b}, P.F. Giraud¹⁴², P. Giromini⁵⁷, G. Giugliarelli^{64a,64c}, D. Giugni^{66a}, F. Giuli¹³²,
M. Giuliani^{59b}, S. Gkaitatzis¹⁵⁹, I. Gkialas^{9,k}, E.L. Gkoukousis¹⁴, P. Gkoutoumis¹⁰,
L.K. Gladilin¹¹¹, C. Glasman⁹⁶, J. Glatzer¹⁴, P.C.F. Glaysheer⁴⁴, A. Glazov⁴⁴,
M. Goblirsch-Kolb²⁶, J. Godlewski⁸², S. Goldfarb¹⁰², T. Golling⁵², D. Golubkov¹²¹,
A. Gomes^{137a,137b}, R. Goncalves Gama⁵¹, R. Gonçalves^{137a}, G. Gonella⁵⁰, L. Gonella²¹,
A. Gongadze⁷⁷, F. Gonnella²¹, J.L. Gonski⁵⁷, S. González de la Hoz¹⁷¹, S. Gonzalez-Sevilla⁵²,
L. Goossens³⁵, P.A. Gorbounov¹⁰⁹, H.A. Gordon²⁹, B. Gorini³⁵, E. Gorini^{65a,65b}, A. Gorišek⁸⁹,
A.T. Goshaw⁴⁷, C. Gössling⁴⁵, M.I. Gostkin⁷⁷, C.A. Gottardo²⁴, C.R. Goudet¹²⁹, D. Goudami^{34c},
A.G. Goussiou¹⁴⁵, N. Govender^{32b,c}, C. Goy⁵, E. Gozani¹⁵⁷, I. Grabowska-Bold^{81a},
P.O.J. Gradin¹⁶⁹, E.C. Graham⁸⁸, J. Gramling¹⁶⁸, E. Gramstad¹³¹, S. Grancagnolo¹⁹,

V. Gratchev¹³⁵, P.M. Gravila^{27f}, F.G. Gravili^{65a,65b}, C. Gray⁵⁵, H.M. Gray¹⁸, Z.D. Greenwood^{93,al}, C. Grefe²⁴, K. Gregersen⁹⁴, I.M. Gregor⁴⁴, P. Grenier¹⁵⁰, K. Grevtsov⁴⁴, N.A. Grieser¹²⁵, J. Griffiths⁸, A.A. Grillo¹⁴³, K. Grimm^{150,b}, S. Grinstein^{14,z}, Ph. Gris³⁷, J.-F. Grivaz¹²⁹, S. Groh⁹⁷, E. Gross¹⁷⁷, J. Grosse-Knetter⁵¹, G.C. Grossi⁹³, Z.J. Grout⁹², C. Grud¹⁰³, A. Grummer¹¹⁶, L. Guan¹⁰³, W. Guan¹⁷⁸, J. Guenther³⁵, A. Guerguichon¹²⁹, F. Guescini^{165a}, D. Guest¹⁶⁸, R. Gugel⁵⁰, B. Gui¹²³, T. Guillemin⁵, S. Guindon³⁵, U. Gul⁵⁵, J. Guo^{58c}, W. Guo¹⁰³, Y. Guo^{58a,t}, Z. Guo⁹⁹, R. Gupta⁴⁴, S. Gurbuz^{12c}, G. Gustavino¹²⁵, P. Gutierrez¹²⁵, C. Gutsche⁹², C. Guyot¹⁴², M.P. Guzik^{81a}, C. Gwenlan¹³², C.B. Gwilliam⁸⁸, A. Haas¹²², C. Haber¹⁸, H.K. Hadavand⁸, N. Haddad^{34e}, A. Hadeef^{58a}, S. Hageböck²⁴, M. Hagihara¹⁶⁶, M. Haleem¹⁷⁴, J. Haley¹²⁶, G. Halladjian¹⁰⁴, G.D. Hallewell⁹⁹, K. Hamacher¹⁷⁹, P. Hamal¹²⁷, K. Hamano¹⁷³, A. Hamilton^{32a}, G.N. Hamity¹⁴⁶, K. Han^{58a,ak}, L. Han^{58a}, S. Han^{15d}, K. Hanagaki^{79,v}, M. Hance¹⁴³, D.M. Handl¹¹², B. Haney¹³⁴, R. Hankache¹³³, P. Hanke^{59a}, E. Hansen⁹⁴, J.B. Hansen³⁹, J.D. Hansen³⁹, M.C. Hansen²⁴, P.H. Hansen³⁹, K. Hara¹⁶⁶, A.S. Hard¹⁷⁸, T. Harenberg¹⁷⁹, S. Harkusha¹⁰⁵, P.F. Harrison¹⁷⁵, N.M. Hartmann¹¹², Y. Hasegawa¹⁴⁷, A. Hasib⁴⁸, S. Hassani¹⁴², S. Haug²⁰, R. Hauser¹⁰⁴, L. Hauswald⁴⁶, L.B. Havener³⁸, M. Havranek¹³⁹, C.M. Hawkes²¹, R.J. Hawkings³⁵, D. Hayden¹⁰⁴, C. Hayes¹⁵², C.P. Hays¹³², J.M. Hays⁹⁰, H.S. Hayward⁸⁸, S.J. Haywood¹⁴¹, F. He^{58a}, M.P. Heath⁴⁸, V. Hedberg⁹⁴, L. Heelan⁸, S. Heer²⁴, K.K. Heidegger⁵⁰, J. Heilman³³, S. Heim⁴⁴, T. Heim¹⁸, B. Heinemann^{44,aq}, J.J. Heinrich¹¹², L. Heinrich¹²², C. Heinz⁵⁴, J. Hejbal¹³⁸, L. Helary³⁵, A. Held¹⁷², S. Hellesund¹³¹, C.M. Helling¹⁴³, S. Hellman^{43a,43b}, C. Helsens³⁵, R.C.W. Henderson⁸⁷, Y. Heng¹⁷⁸, S. Henkelmann¹⁷², A.M. Henriques Correia³⁵, G.H. Herbert¹⁹, H. Herde²⁶, V. Herget¹⁷⁴, Y. Hernández Jiménez^{32c}, H. Herr⁹⁷, M.G. Herrmann¹¹², T. Herrmann⁴⁶, G. Herten⁵⁰, R. Hertenberger¹¹², L. Hervas³⁵, T.C. Herwig¹³⁴, G.G. Hesketh⁹², N.P. Hessey^{165a}, A. Higashida¹⁶⁰, S. Higashino⁷⁹, E. Higón-Rodriguez¹⁷¹, K. Hildebrand³⁶, E. Hill¹⁷³, J.C. Hill³¹, K.K. Hill²⁹, K.H. Hiller⁴⁴, S.J. Hillier²¹, M. Hils⁴⁶, I. Hinchliffe¹⁸, F. Hinterkeuser²⁴, M. Hirose¹³⁰, D. Hirschbuehl¹⁷⁹, B. Hiti⁸⁹, O. Hladik¹³⁸, D.R. Hlaluku^{32c}, X. Hoad⁴⁸, J. Hobbs¹⁵², N. Hod^{165a}, M.C. Hodgkinson¹⁴⁶, A. Hoecker³⁵, M.R. Hoefkamp¹¹⁶, F. Hoenig¹¹², D. Hohn⁵⁰, D. Hohov¹²⁹, T.R. Holmes³⁶, M. Holzbock¹¹², M. Homann⁴⁵, B.H. Hommels³¹, S. Honda¹⁶⁶, T. Honda⁷⁹, T.M. Hong¹³⁶, A. Hönle¹¹³, B.H. Hooberman¹⁷⁰, W.H. Hopkins¹²⁸, Y. Horii¹¹⁵, P. Horn⁴⁶, A.J. Horton¹⁴⁹, L.A. Horyn³⁶, J.-Y. Hostachy⁵⁶, A. Hostiuc¹⁴⁵, S. Hou¹⁵⁵, A. Hoummada^{34a}, J. Howarth⁹⁸, J. Hoya⁸⁶, M. Hrabovsky¹²⁷, J. Hrdinka³⁵, I. Hristova¹⁹, J. Hrivnac¹²⁹, A. Hrynevich¹⁰⁶, T. Hryn'ova⁵, P.J. Hsu⁶², S.-C. Hsu¹⁴⁵, Q. Hu²⁹, S. Hu^{58c}, Y. Huang^{15a}, Z. Hubacek¹³⁹, F. Hubaut⁹⁹, M. Huebner²⁴, F. Huegging²⁴, T.B. Huffman¹³², M. Huhtinen³⁵, R.F.H. Hunter³³, P. Huo¹⁵², A.M. Hupe³³, N. Huseynov^{77,af}, J. Huston¹⁰⁴, J. Huth⁵⁷, R. Hyneman¹⁰³, G. Iacobucci⁵², G. Iakovidis²⁹, I. Ibragimov¹⁴⁸, L. Iconomidou-Fayard¹²⁹, Z. Idrissi^{34e}, P. Iengo³⁵, R. Ignazzi³⁹, O. Igonkina^{118,ab}, R. Iguchi¹⁶⁰, T. Iizawa⁵², Y. Ikegami⁷⁹, M. Ikeno⁷⁹, D. Iliadis¹⁵⁹, N. Ilic¹¹⁷, F. Iltzsche⁴⁶, G. Introzzi^{68a,68b}, M. Iodice^{72a}, K. Iordanidou³⁸, V. Ippolito^{70a,70b}, M.F. Isacson¹⁶⁹, N. Ishijima¹³⁰, M. Ishino¹⁶⁰, M. Ishitsuka¹⁶², W. Islam¹²⁶, C. Issever¹³², S. Istin¹⁵⁷, F. Ito¹⁶⁶, J.M. Iturbe Ponce^{61a}, R. Iuppa^{73a,73b}, A. Ivina¹⁷⁷, H. Iwasaki⁷⁹, J.M. Izen⁴², V. Izzo^{67a}, P. Jacka¹³⁸, P. Jackson¹, R.M. Jacobs²⁴, V. Jain², G. Jäkel¹⁷⁹, K.B. Jakobi⁹⁷, K. Jakobs⁵⁰, S. Jakobsen⁷⁴, T. Jakoubek¹³⁸, D.O. Jamin¹²⁶, R. Jansky⁵², J. Janssen²⁴, M. Janus⁵¹, P.A. Janus^{81a}, G. Jarlskog⁹⁴, N. Javadov^{77,af}, T. Javůrek³⁵, M. Javurkova⁵⁰, F. Jeanneau¹⁴², L. Jeanty¹⁸, J. Jejelava^{156a,ag}, A. Jelinskas¹⁷⁵, P. Jenni^{50,d},

J. Jeong⁴⁴, N. Jeong⁴⁴, S. Jézéquel⁵, H. Ji¹⁷⁸, J. Jia¹⁵², H. Jiang⁷⁶, Y. Jiang^{58a}, Z. Jiang^{150,r},
 S. Jiggins⁵⁰, F.A. Jimenez Morales³⁷, J. Jimenez Pena¹⁷¹, S. Jin^{15c}, A. Jinaru^{27b}, O. Jinnouchi¹⁶²,
 H. Jivan^{32c}, P. Johansson¹⁴⁶, K.A. Johns⁷, C.A. Johnson⁶³, K. Jon-And^{43a,43b}, R.W.L. Jones⁸⁷,
 S.D. Jones¹⁵³, S. Jones⁷, T.J. Jones⁸⁸, J. Jongmanns^{59a}, P.M. Jorge^{137a,137b}, J. Jovicevic^{165a},
 X. Ju¹⁸, J.J. Junggeburth¹¹³, A. Juste Rozas^{14,z}, A. Kaczmarska⁸², M. Kado¹²⁹, H. Kagan¹²³,
 M. Kagan¹⁵⁰, T. Kaji¹⁷⁶, E. Kajomovitz¹⁵⁷, C.W. Kalderon⁹⁴, A. Kaluza⁹⁷, S. Kama⁴¹,
 A. Kamenshchikov¹²¹, L. Kanjir⁸⁹, Y. Kano¹⁶⁰, V.A. Kantserov¹¹⁰, J. Kanzaki⁷⁹, L.S. Kaplan¹⁷⁸,
 D. Kar^{32c}, M.J. Kareem^{165b}, E. Karentzos¹⁰, S.N. Karpov⁷⁷, Z.M. Karpova⁷⁷, V. Kartvelishvili⁸⁷,
 A.N. Karyukhin¹²¹, L. Kashif¹⁷⁸, R.D. Kass¹²³, A. Kastanas^{43a,43b}, Y. Kataoka¹⁶⁰, C. Kato^{58d,58c},
 J. Katzy⁴⁴, K. Kawade⁸⁰, K. Kawagoe⁸⁵, T. Kawaguchi¹¹⁵, T. Kawamoto¹⁶⁰, G. Kawamura⁵¹,
 E.F. Kay⁸⁸, V.F. Kazanin^{120b,120a}, R. Keeler¹⁷³, R. Kehoe⁴¹, J.S. Keller³³, E. Kellermann⁹⁴,
 J.J. Kempster²¹, J. Kendrick²¹, O. Kepka¹³⁸, S. Kersten¹⁷⁹, B.P. Kerševan⁸⁹,
 S. Ketabchi Haghighat¹⁶⁴, R.A. Keyes¹⁰¹, M. Khader¹⁷⁰, F. Khalil-Zada¹³, A. Khanov¹²⁶,
 A.G. Kharlamov^{120b,120a}, T. Kharlamova^{120b,120a}, E.E. Khoda¹⁷², A. Khodinov¹⁶³, T.J. Khoo⁵²,
 E. Khramov⁷⁷, J. Khubua^{156b}, S. Kido⁸⁰, M. Kiehn⁵², C.R. Kilby⁹¹, Y.K. Kim³⁶, N. Kimura^{64a,64c},
 O.M. Kind¹⁹, B.T. King⁸⁸, D. Kirchmeier⁴⁶, J. Kirk¹⁴¹, A.E. Kiryunin¹¹³, T. Kishimoto¹⁶⁰,
 D. Kisielewska^{81a}, V. Kitali⁴⁴, O. Kivernyk⁵, E. Kladiva^{28b,*}, T. Klapdor-Kleingrothaus⁵⁰,
 M.H. Klein¹⁰³, M. Klein⁸⁸, U. Klein⁸⁸, K. Kleinknecht⁹⁷, P. Klimek¹¹⁹, A. Klimentov²⁹,
 T. Klingl²⁴, T. Klioutchnikova³⁵, F.F. Klitzner¹¹², P. Kluit¹¹⁸, S. Kluth¹¹³, E. Kneringer⁷⁴,
 E.B.F.G. Knoop⁹⁹, A. Knue⁵⁰, A. Kobayashi¹⁶⁰, D. Kobayashi⁸⁵, T. Kobayashi¹⁶⁰, M. Kobel⁴⁶,
 M. Kocian¹⁵⁰, P. Kodys¹⁴⁰, P.T. Koenig²⁴, T. Koffas³³, E. Koffeman¹¹⁸, N.M. Köhler¹¹³, T. Koi¹⁵⁰,
 M. Kolb^{59b}, I. Koletsou⁵, T. Kondo⁷⁹, N. Kondrashova^{58c}, K. Köneke⁵⁰, A.C. König¹¹⁷, T. Kono⁷⁹,
 R. Konoplich^{122,an}, V. Konstantinides⁹², N. Konstantinidis⁹², B. Konya⁹⁴, R. Kopeliansky⁶³,
 S. Koperny^{81a}, K. Korcyl⁸², K. Kordas¹⁵⁹, G. Koren¹⁵⁸, A. Korn⁹², I. Korolkov¹⁴,
 E.V. Korolkova¹⁴⁶, N. Korotkova¹¹¹, O. Kortner¹¹³, S. Kortner¹¹³, T. Kosek¹⁴⁰,
 V.V. Kostyukhin²⁴, A. Kotwal⁴⁷, A. Koulouris¹⁰, A. Kourkouveli-Charalampidi^{68a,68b},
 C. Kourkouvelis⁹, E. Kourlitis¹⁴⁶, V. Kouskoura²⁹, A.B. Kowalewska⁸², R. Kowalewski¹⁷³,
 T.Z. Kowalski^{81a}, C. Kozakai¹⁶⁰, W. Kozanecki¹⁴², A.S. Kozhin¹²¹, V.A. Kramarenko¹¹¹,
 G. Kramberger⁸⁹, D. Krasnopevtsev^{58a}, M.W. Krasny¹³³, A. Krasznahorkay³⁵, D. Krauss¹¹³,
 J.A. Kremer^{81a}, J. Kretschmar⁸⁸, P. Krieger¹⁶⁴, K. Krizka¹⁸, K. Kroeninger⁴⁵, H. Kroha¹¹³,
 J. Kroll¹³⁸, J. Kroll¹³⁴, J. Krstic¹⁶, U. Kruchonak⁷⁷, H. Krüger²⁴, N. Krumnack⁷⁶, M.C. Kruse⁴⁷,
 T. Kubota¹⁰², S. Kудay^{4b}, J.T. Kuechler¹⁷⁹, S. Kuehn³⁵, A. Kugel^{59a}, T. Kuhl⁴⁴, V. Kukhtin⁷⁷,
 R. Kukla⁹⁹, Y. Kulchitsky^{105,aj}, S. Kuleshov^{144b}, Y.P. Kulinich¹⁷⁰, M. Kuna⁵⁶, T. Kunigo⁸³,
 A. Kupco¹³⁸, T. Kupfer⁴⁵, O. Kuprash¹⁵⁸, H. Kurashige⁸⁰, L.L. Kurchaninov^{165a},
 Y.A. Kurochkin¹⁰⁵, A. Kurova¹¹⁰, M.G. Kurth^{15d}, E.S. Kuwertz³⁵, M. Kuze¹⁶², J. Kvita¹²⁷,
 T. Kwan¹⁰¹, A. La Rosa¹¹³, J.L. La Rosa Navarro^{78d}, L. La Rotonda^{40b,40a}, F. La Ruffa^{40b,40a},
 C. Lacasta¹⁷¹, F. Lacava^{70a,70b}, J. Lacey⁴⁴, D.P.J. Lack⁹⁸, H. Lacker¹⁹, D. Lacour¹³³,
 E. Ladygin⁷⁷, R. Lafaye⁵, B. Laforge¹³³, T. Lagouri^{32c}, S. Lai⁵¹, S. Lammers⁶³, W. Lamp⁷,
 E. Lançon²⁹, U. Landgraf⁵⁰, M.P.J. Landon⁹⁰, M.C. Lanfermann⁵², V.S. Lang⁴⁴, J.C. Lange⁵¹,
 R.J. Langenberg³⁵, A.J. Lankford¹⁶⁸, F. Lanni²⁹, K. Lantzsch²⁴, A. Lanza^{68a}, A. Lapertosa^{53b,53a},
 S. Laplace¹³³, J.F. Laporte¹⁴², T. Lari^{66a}, F. Lasagni Manghi^{23b,23a}, M. Lassnig³⁵, T.S. Lau^{61a},
 A. Laudrain¹²⁹, M. Lavorgna^{67a,67b}, M. Lazzaroni^{66a,66b}, B. Le¹⁰², O. Le Dortz¹³³,
 E. Le Guirriec⁹⁹, E.P. Le Quilleuc¹⁴², M. LeBlanc⁷, T. LeCompte⁶, F. Ledroit-Guillon⁵⁶,

C.A. Lee²⁹, G.R. Lee^{144a}, L. Lee⁵⁷, S.C. Lee¹⁵⁵, B. Lefebvre¹⁰¹, M. Lefebvre¹⁷³, F. Legger¹¹²,
 C. Leggett¹⁸, K. Lehmann¹⁴⁹, N. Lehmann¹⁷⁹, G. Lehmann Miotto³⁵, W.A. Leight⁴⁴,
 A. Leisos^{159,w}, M.A.L. Leite^{78d}, R. Leitner¹⁴⁰, D. Lellouch¹⁷⁷, K.J.C. Leney⁹², T. Lenz²⁴,
 B. Lenzi³⁵, R. Leone⁷, S. Leone^{69a}, C. Leonidopoulos⁴⁸, G. Lerner¹⁵³, C. Leroy¹⁰⁷, R. Les¹⁶⁴,
 A.A.J. Lesage¹⁴², C.G. Lester³¹, M. Levchenko¹³⁵, J. Levêque⁵, D. Levin¹⁰³, L.J. Levinson¹⁷⁷,
 D. Lewis⁹⁰, B. Li^{15b}, B. Li¹⁰³, C-Q. Li^{58a,am}, H. Li^{58a}, H. Li^{58b}, L. Li^{58c}, M. Li^{15a}, Q. Li^{15d},
 Q.Y. Li^{58a}, S. Li^{58d,58c}, X. Li^{58c}, Y. Li¹⁴⁸, Z. Liang^{15a}, B. Liberti^{71a}, A. Liblong¹⁶⁴, K. Lie^{61c},
 S. Liem¹¹⁸, A. Limosani¹⁵⁴, C.Y. Lin³¹, K. Lin¹⁰⁴, T.H. Lin⁹⁷, R.A. Linck⁶³, J.H. Lindon²¹,
 B.E. Lindquist¹⁵², A.L. Lioni⁵², E. Lipeles¹³⁴, A. Lipniacka¹⁷, M. Lisovyi^{59b}, T.M. Liss^{170,as},
 A. Lister¹⁷², A.M. Litke¹⁴³, J.D. Little⁸, B. Liu⁷⁶, B.L. Liu⁶, H.B. Liu²⁹, H. Liu¹⁰³, J.B. Liu^{58a},
 J.K.K. Liu¹³², K. Liu¹³³, M. Liu^{58a}, P. Liu¹⁸, Y. Liu^{15a}, Y.L. Liu^{58a}, Y.W. Liu^{58a}, M. Livan^{68a,68b},
 A. Lleres⁵⁶, J. Llorente Merino^{15a}, S.L. Lloyd⁹⁰, C.Y. Lo^{61b}, F. Lo Sterzo⁴¹, E.M. Lobodzinska⁴⁴,
 P. Loch⁷, T. Lohse¹⁹, K. Lohwasser¹⁴⁶, M. Lokajicek¹³⁸, J.D. Long¹⁷⁰, R.E. Long⁸⁷,
 L. Longo^{65a,65b}, K.A. Looper¹²³, J.A. Lopez^{144b}, I. Lopez Paz⁹⁸, A. Lopez Solis¹⁴⁶, J. Lorenz¹¹²,
 N. Lorenzo Martinez⁵, M. Losada²², P.J. Lösel¹¹², A. Lösle⁵⁰, X. Lou⁴⁴, X. Lou^{15a}, A. Lounis¹²⁹,
 J. Love⁶, P.A. Love⁸⁷, J.J. Lozano Bahilo¹⁷¹, H. Lu^{61a}, M. Lu^{58a}, Y.J. Lu⁶², H.J. Lubatti¹⁴⁵,
 C. Luci^{70a,70b}, A. Lucotte⁵⁶, C. Luedtke⁵⁰, F. Luehring⁶³, I. Luise¹³³, L. Luminari^{70a},
 B. Lund-Jensen¹⁵¹, M.S. Lutz¹⁰⁰, P.M. Luzzi¹³³, D. Lynn²⁹, R. Lysak¹³⁸, E. Lytken⁹⁴, F. Lyu^{15a},
 V. Lyubushkin⁷⁷, T. Lyubushkina⁷⁷, H. Ma²⁹, L.L. Ma^{58b}, Y. Ma^{58b}, G. Maccarrone⁴⁹,
 A. Macchiolo¹¹³, C.M. Macdonald¹⁴⁶, J. Machado Miguens^{134,137b}, D. Madaffari¹⁷¹, R. Madar³⁷,
 W.F. Mader⁴⁶, N. Madysa⁴⁶, J. Maeda⁸⁰, K. Maekawa¹⁶⁰, S. Maeland¹⁷, T. Maeno²⁹,
 M. Maerker⁴⁶, A.S. Maevskiy¹¹¹, V. Magerl⁵⁰, D.J. Mahon³⁸, C. Maidantchik^{78b}, T. Maier¹¹²,
 A. Maio^{137a,137b,137d}, O. Majersky^{28a}, S. Majewski¹²⁸, Y. Makida⁷⁹, N. Makovec¹²⁹,
 B. Malaescu¹³³, Pa. Malecki⁸², V.P. Maleev¹³⁵, F. Malek⁵⁶, U. Mallik⁷⁵, D. Malon⁶, C. Malone³¹,
 S. Maltezos¹⁰, S. Malyukov³⁵, J. Mamuzic¹⁷¹, G. Mancini⁴⁹, I. Mandić⁸⁹, J. Maneira^{137a},
 L. Manhaes de Andrade Filho^{78a}, J. Manjarres Ramos⁴⁶, K.H. Mankinen⁹⁴, A. Mann¹¹²,
 A. Manousos⁷⁴, B. Mansoulie¹⁴², S. Manzoni^{66a,66b}, A. Marantis¹⁵⁹, G. Marceca³⁰, L. March⁵²,
 L. Marchese¹³², G. Marchiori¹³³, M. Marcisovsky¹³⁸, C. Marcon⁹⁴, C.A. Marin Tobon³⁵,
 M. Marjanovic³⁷, F. Marroquin^{78b}, Z. Marshall¹⁸, M.U.F. Martensson¹⁶⁹, S. Marti-Garcia¹⁷¹,
 C.B. Martin¹²³, T.A. Martin¹⁷⁵, V.J. Martin⁴⁸, B. Martin dit Latour¹⁷, M. Martinez^{14,z},
 V.I. Martinez Outschoorn¹⁰⁰, S. Martin-Haugh¹⁴¹, V.S. Martoiu^{27b}, A.C. Martyniuk⁹²,
 A. Marzin³⁵, L. Masetti⁹⁷, T. Mashimo¹⁶⁰, R. Mashinistov¹⁰⁸, J. Masik⁹⁸,
 A.L. Maslennikov^{120b,120a}, L.H. Mason¹⁰², L. Massa^{71a,71b}, P. Massarotti^{67a,67b}, P. Mastrandrea¹⁵²,
 A. Mastroberardino^{40b,40a}, T. Masubuchi¹⁶⁰, P. Mättig²⁴, J. Maurer^{27b}, B. Maček⁸⁹,
 S.J. Maxfield⁸⁸, D.A. Maximov^{120b,120a}, R. Mazini¹⁵⁵, I. Maznas¹⁵⁹, S.M. Mazza¹⁴³,
 S.P. Mc Kee¹⁰³, A. McCarn⁴¹, T.G. McCarthy¹¹³, L.I. McClymont⁹², W.P. McCormack¹⁸,
 E.F. McDonald¹⁰², J.A. Mcfayden³⁵, G. Mchedlidze⁵¹, M.A. McKay⁴¹, K.D. McLean¹⁷³,
 S.J. McMahon¹⁴¹, P.C. McNamara¹⁰², C.J. McNicol¹⁷⁵, R.A. McPherson^{173,ad}, J.E. Mdhului^{32c},
 Z.A. Meadows¹⁰⁰, S. Meehan¹⁴⁵, T.M. Megy⁵⁰, S. Mehlhase¹¹², A. Mehta⁸⁸, T. Meideck⁵⁶,
 B. Meirose⁴², D. Melini^{171,h}, B.R. Mellado Garcia^{32c}, J.D. Mellenthin⁵¹, M. Melo^{28a}, F. Meloni⁴⁴,
 A. Melzer²⁴, S.B. Menary⁹⁸, E.D. Mendes Gouveia^{137a}, L. Meng⁸⁸, X.T. Meng¹⁰³, S. Menke¹¹³,
 E. Meoni^{40b,40a}, S. Mergelmeyer¹⁹, S.A.M. Merkt¹³⁶, C. Merlassino²⁰, P. Mermod⁵²,
 L. Merola^{67a,67b}, C. Meroni^{66a}, F.S. Merritt³⁶, A. Messina^{70a,70b}, J. Metcalfe⁶, A.S. Mete¹⁶⁸,

C. Meyer⁶³, J. Meyer¹⁵⁷, J.-P. Meyer¹⁴², H. Meyer Zu Theenhausen^{59a}, F. Miano¹⁵³,
 R.P. Middleton¹⁴¹, L. Mijović⁴⁸, G. Mikenberg¹⁷⁷, M. Mikestikova¹³⁸, M. Mikuž⁸⁹, M. Milesi¹⁰²,
 A. Milic¹⁶⁴, D.A. Millar⁹⁰, D.W. Miller³⁶, A. Milov¹⁷⁷, D.A. Milstead^{43a,43b}, R.A. Mina^{150,r},
 A.A. Minaenko¹²¹, M. Miñano Moya¹⁷¹, I.A. Minashvili^{156b}, A.I. Mincer¹²², B. Mindur^{81a},
 M. Mineev⁷⁷, Y. Minegishi¹⁶⁰, Y. Ming¹⁷⁸, L.M. Mir¹⁴, A. Mirto^{65a,65b}, K.P. Mistry¹³⁴,
 T. Mitani¹⁷⁶, J. Mitrevski¹¹², V.A. Mitsou¹⁷¹, M. Mittal^{58c}, A. Miucci²⁰, P.S. Miyagawa¹⁴⁶,
 A. Mizukami⁷⁹, J.U. Mjörnmark⁹⁴, T. Mkrtchyan¹⁸¹, M. Mlynarikova¹⁴⁰, T. Moa^{43a,43b},
 K. Mochizuki¹⁰⁷, P. Mogg⁵⁰, S. Mohapatra³⁸, S. Molander^{43a,43b}, R. Moles-Valls²⁴,
 M.C. Mondragon¹⁰⁴, K. Mönig⁴⁴, J. Monk³⁹, E. Monnier⁹⁹, A. Montalbano¹⁴⁹,
 J. Montejo Berlingen³⁵, F. Monticelli⁸⁶, S. Monzani^{66a}, N. Morange¹²⁹, D. Moreno²²,
 M. Moreno Llácer³⁵, P. Morettini^{53b}, M. Morgenstern¹¹⁸, S. Morgenstern⁴⁶, D. Mori¹⁴⁹,
 M. Morii⁵⁷, M. Morinaga¹⁷⁶, V. Morisbak¹³¹, A.K. Morley³⁵, G. Mornacchi³⁵, A.P. Morris⁹²,
 J.D. Morris⁹⁰, L. Morvaj¹⁵², P. Moschovakos¹⁰, M. Mosidze^{156b}, H.J. Moss¹⁴⁶, J. Moss^{150,o},
 K. Motohashi¹⁶², R. Mount¹⁵⁰, E. Mountricha³⁵, E.J.W. Moyse¹⁰⁰, S. Muanza⁹⁹, F. Mueller¹¹³,
 J. Mueller¹³⁶, R.S.P. Mueller¹¹², D. Muenstermann⁸⁷, G.A. Mullier⁹⁴, F.J. Munoz Sanchez⁹⁸,
 P. Murin^{28b}, W.J. Murray^{175,141}, A. Murrone^{66a,66b}, M. Muškinja⁸⁹, C. Mwewa^{32a},
 A.G. Myagkov^{121,ao}, J. Myers¹²⁸, M. Myska¹³⁹, B.P. Nachman¹⁸, O. Nackenhorst⁴⁵, K. Nagai¹³²,
 K. Nagano⁷⁹, Y. Nagasaka⁶⁰, M. Nagel⁵⁰, E. Nagy⁹⁹, A.M. Nairz³⁵, Y. Nakahama¹¹⁵,
 K. Nakamura⁷⁹, T. Nakamura¹⁶⁰, I. Nakano¹²⁴, H. Nanjo¹³⁰, F. Napolitano^{59a},
 R.F. Naranjo Garcia⁴⁴, R. Narayan¹¹, D.I. Narrias Villar^{59a}, I. Naryshkin¹³⁵, T. Naumann⁴⁴,
 G. Navarro²², R. Nayyar⁷, H.A. Neal^{103,*}, P.Y. Nechaeva¹⁰⁸, T.J. Neep¹⁴², A. Negri^{68a,68b},
 M. Negrini^{23b}, S. Nektarijevic¹¹⁷, C. Nellist⁵¹, M.E. Nelson¹³², S. Nemecek¹³⁸, P. Nemethy¹²²,
 M. Nessi^{35,f}, M.S. Neubauer¹⁷⁰, M. Neumann¹⁷⁹, P.R. Newman²¹, T.Y. Ng^{61c}, Y.S. Ng¹⁹,
 Y.W.Y. Ng¹⁶⁸, H.D.N. Nguyen⁹⁹, T. Nguyen Manh¹⁰⁷, E. Nibigira³⁷, R.B. Nickerson¹³²,
 R. Nicolaidou¹⁴², D.S. Nielsen³⁹, J. Nielsen¹⁴³, N. Nikiforou¹¹, V. Nikolaenko^{121,ao},
 I. Nikolic-Audit¹³³, K. Nikolopoulos²¹, P. Nilsson²⁹, H.R. Nindhito⁵², Y. Ninomiya⁷⁹, A. Nisati^{70a},
 N. Nishu^{58c}, R. Nisius¹¹³, I. Nitsche⁴⁵, T. Nitta¹⁷⁶, T. Nobe¹⁶⁰, Y. Noguchi⁸³, M. Nomachi¹³⁰,
 I. Nomidis¹³³, M.A. Nomura²⁹, T. Nooney⁹⁰, M. Nordberg³⁵, N. Norjoharuddeen¹³², T. Novak⁸⁹,
 O. Novgorodova⁴⁶, R. Novotny¹³⁹, L. Nozka¹²⁷, K. Ntekas¹⁶⁸, E. Nurse⁹², F. Nuti¹⁰²,
 F.G. Oakham^{33,av}, H. Oberlack¹¹³, J. Ocariz¹³³, A. Ochi⁸⁰, I. Ochoa³⁸, J.P. Ochoa-Ricoux^{144a},
 K. O'Connor²⁶, S. Oda⁸⁵, S. Odaka⁷⁹, S. Oerdek⁵¹, A. Oh⁹⁸, S.H. Oh⁴⁷, C.C. Ohm¹⁵¹,
 H. Oide^{53b,53a}, M.L. Ojeda¹⁶⁴, H. Okawa¹⁶⁶, Y. Okazaki⁸³, Y. Okumura¹⁶⁰, T. Okuyama⁷⁹,
 A. Olariu^{27b}, L.F. Oleiro Seabra^{137a}, S.A. Olivares Pino^{144a}, D. Oliveira Damazio²⁹, J.L. Oliver¹,
 M.J.R. Olsson³⁶, A. Olszewski⁸², J. Olszowska⁸², D.C. O'Neil¹⁴⁹, A. Onofre^{137a,137e}, K. Onogi¹¹⁵,
 P.U.E. Onyisi¹¹, H. Oppen¹³¹, M.J. Oreglia³⁶, G.E. Orellana⁸⁶, Y. Oren¹⁵⁸, D. Orestano^{72a,72b},
 E.C. Orgill⁹⁸, N. Orlando^{61b}, A.A. O'Rourke⁴⁴, R.S. Orr¹⁶⁴, B. Osculati^{53b,53a,*}, V. O'Shea⁵⁵,
 R. Ospanov^{58a}, G. Otero y Garzon³⁰, H. Otono⁸⁵, M. Ouchrif^{34d}, F. Ould-Saada¹³¹, A. Ouraou¹⁴²,
 Q. Ouyang^{15a}, M. Owen⁵⁵, R.E. Owen²¹, V.E. Ozcan^{12c}, N. Ozturk⁸, J. Pacalt¹²⁷, H.A. Pacey³¹,
 K. Pachal¹⁴⁹, A. Pacheco Pages¹⁴, L. Pacheco Rodriguez¹⁴², C. Padilla Aranda¹⁴,
 S. Pagan Griso¹⁸, M. Paganini¹⁸⁰, G. Palacino⁶³, S. Palazzo⁴⁸, S. Palestini³⁵, M. Palka^{81b},
 D. Pallin³⁷, I. Panagoulas¹⁰, C.E. Pandini³⁵, J.G. Panduro Vazquez⁹¹, P. Pani³⁵,
 G. Panizzo^{64a,64c}, L. Paolozzi⁵², T.D. Papadopoulou¹⁰, K. Papageorgiou^{9,k}, A. Paramonov⁶,
 D. Paredes Hernandez^{61b}, S.R. Paredes Saenz¹³², B. Parida¹⁶³, T.H. Park³³, A.J. Parker⁸⁷,

K.A. Parker⁴⁴, M.A. Parker³¹, F. Parodi^{53b,53a}, J.A. Parsons³⁸, U. Parzefall⁵⁰, V.R. Pascuzzi¹⁶⁴,
 J.M.P. Pasner¹⁴³, E. Pasqualucci^{70a}, S. Passaggio^{53b}, F. Pastore⁹¹, P. Pasuwan^{43a,43b},
 S. Patariaia⁹⁷, J.R. Pater⁹⁸, A. Pathak^{178,1}, T. Pauly³⁵, B. Pearson¹¹³, M. Pedersen¹³¹,
 L. Pedraza Diaz¹¹⁷, R. Pedro^{137a,137b}, S.V. Peleganchuk^{120b,120a}, O. Penc¹³⁸, C. Peng^{61b},
 C. Peng^{15d}, H. Peng^{58a}, B.S. Peralva^{78a}, M.M. Perego¹²⁹, A.P. Pereira Peixoto^{137a},
 L. Pereira Sanchez^{43b}, D.V. Perepelitsa²⁹, F. Peri¹⁹, L. Perini^{66a,66b}, H. Pernegger³⁵,
 S. Perrella^{67a,67b}, V.D. Peshekhonov^{77,*}, K. Peters⁴⁴, R.F.Y. Peters⁹⁸, B.A. Petersen³⁵,
 T.C. Petersen³⁹, E. Petit⁵⁶, A. Petridis¹, C. Petridou¹⁵⁹, P. Petroff¹²⁹, M. Petrov¹³²,
 F. Petrucci^{72a,72b}, M. Pettee¹⁸⁰, N.E. Pettersson¹⁰⁰, A. Peyaud¹⁴², R. Pezoa^{144b}, T. Pham¹⁰²,
 F.H. Phillips¹⁰⁴, P.W. Phillips¹⁴¹, M.W. Phipps¹⁷⁰, G. Piacquadio¹⁵², E. Pianori¹⁸, A. Picazio¹⁰⁰,
 R.H. Pickles⁹⁸, R. Piegai³⁰, J.E. Pilcher³⁶, A.D. Pilkington⁹⁸, M. Pinamonti^{71a,71b}, J.L. Pinfold³,
 M. Pitt¹⁷⁷, L. Pizzimento^{71a,71b}, M.-A. Pleier²⁹, V. Pleskot¹⁴⁰, E. Plotnikova⁷⁷, D. Pluth⁷⁶,
 P. Podberezko^{120b,120a}, R. Poettgen⁹⁴, R. Poggi⁵², L. Poggioli¹²⁹, I. Pogrebnyak¹⁰⁴, D. Pohl²⁴,
 I. Pokharel⁵¹, G. Polesello^{68a}, A. Poley¹⁸, A. Policicchio^{70a,70b}, R. Polifka³⁵, A. Polini^{23b},
 C.S. Pollard⁴⁴, V. Polychronakos²⁹, D. Ponomarenko¹¹⁰, L. Pontecorvo³⁵, G.A. Popeneciu^{27d},
 D.M. Portillo Quintero¹³³, S. Pospisil¹³⁹, K. Potamianos⁴⁴, I.N. Potrap⁷⁷, C.J. Potter³¹,
 H. Potti¹¹, T. Poulsen⁹⁴, J. Poveda³⁵, T.D. Powell¹⁴⁶, M.E. Pozo Astigarraga³⁵, P. Pralavorio⁹⁹,
 S. Prell⁷⁶, D. Price⁹⁸, M. Primavera^{65a}, S. Prince¹⁰¹, M.L. Proffitt¹⁴⁵, N. Proklova¹¹⁰,
 K. Prokofiev^{61c}, F. Prokoshin^{144b}, S. Protopopescu²⁹, J. Proudfoot⁶, M. Przybycien^{81a}, A. Puri¹⁷⁰,
 P. Puzo¹²⁹, J. Qian¹⁰³, Y. Qin⁹⁸, A. Quadt⁵¹, M. Queitsch-Maitland⁴⁴, A. Qureshi¹, P. Rados¹⁰²,
 F. Ragusa^{66a,66b}, G. Rahal⁹⁵, J.A. Raine⁵², S. Rajagopalan²⁹, A. Ramirez Morales⁹⁰, K. Ran^{15a},
 T. Rashid¹²⁹, S. Raspopov⁵, M.G. Ratti^{66a,66b}, D.M. Rauch⁴⁴, F. Rauscher¹¹², S. Rave⁹⁷,
 B. Ravina¹⁴⁶, I. Ravinovich¹⁷⁷, J.H. Rawling⁹⁸, M. Raymond³⁵, A.L. Read¹³¹, N.P. Readioff⁵⁶,
 M. Reale^{65a,65b}, D.M. Rebuzzi^{68a,68b}, A. Redelbach¹⁷⁴, G. Redlinger²⁹, R. Reece¹⁴³, R.G. Reed^{32c},
 K. Reeves⁴², L. Rehnisch¹⁹, J. Reichert¹³⁴, D. Reikher¹⁵⁸, A. Reiss⁹⁷, A. Rej¹⁴⁸, C. Rembser³⁵,
 H. Ren^{15d}, M. Rescigno^{70a}, S. Resconi^{66a}, E.D. Resseguie¹³⁴, S. Rettie¹⁷², E. Reynolds²¹,
 O.L. Rezanova^{120b,120a}, P. Reznicek¹⁴⁰, E. Ricci^{73a,73b}, R. Richter¹¹³, S. Richter⁴⁴,
 E. Richter-Was^{81b}, O. Ricken²⁴, M. Ridel¹³³, P. Rieck¹¹³, C.J. Riegel¹⁷⁹, O. Rifki⁴⁴,
 M. Rijssenbeek¹⁵², A. Rimoldi^{68a,68b}, M. Rimoldi²⁰, L. Rinaldi^{23b}, G. Ripellino¹⁵¹, B. Ristic⁸⁷,
 E. Ritsch³⁵, I. Riu¹⁴, J.C. Rivera Vergara^{144a}, F. Rizatdinova¹²⁶, E. Rizvi⁹⁰, C. Rizzi¹⁴,
 R.T. Roberts⁹⁸, S.H. Robertson^{101,ad}, D. Robinson³¹, J.E.M. Robinson⁴⁴, A. Robson⁵⁵,
 E. Rocco⁹⁷, C. Roda^{69a,69b}, Y. Rodina⁹⁹, S. Rodriguez Bosca¹⁷¹, A. Rodriguez Perez¹⁴,
 D. Rodriguez Rodriguez¹⁷¹, A.M. Rodríguez Vera^{165b}, S. Roe³⁵, C.S. Rogan⁵⁷, O. Röhne¹³¹,
 R. Röhrig¹¹³, C.P.A. Roland⁶³, J. Roloff⁵⁷, A. Romanouk¹¹⁰, M. Romano^{23b,23a}, N. Rompotis⁸⁸,
 M. Ronzani¹²², L. Roos¹³³, S. Rosati^{70a}, K. Rosbach⁵⁰, N.-A. Rosien⁵¹, B.J. Rosser¹³⁴, E. Rossi⁴⁴,
 E. Rossi^{72a,72b}, E. Rossi^{67a,67b}, L.P. Rossi^{53b}, L. Rossini^{66a,66b}, J.H.N. Rosten³¹, R. Rosten¹⁴,
 M. Rotaru^{27b}, J. Rothberg¹⁴⁵, D. Rousseau¹²⁹, D. Roy^{32c}, A. Rozanov⁹⁹, Y. Rozen¹⁵⁷, X. Ruan^{32c},
 F. Rubbo¹⁵⁰, F. Rühr⁵⁰, A. Ruiz-Martinez¹⁷¹, Z. Rurikova⁵⁰, N.A. Rusakovich⁷⁷, H.L. Russell¹⁰¹,
 J.P. Rutherford⁷, E.M. Rüttinger^{44,m}, Y.F. Ryabov¹³⁵, M. Rybar³⁸, G. Rybkin¹²⁹, S. Ryu⁶,
 A. Ryzhov¹²¹, G.F. Rzehorz⁵¹, P. Sabatini⁵¹, G. Sabato¹¹⁸, S. Sacerdoti¹²⁹, H.F.-W. Sadrozinski¹⁴³,
 R. Sadykov⁷⁷, F. Safai Tehrani^{70a}, P. Saha¹¹⁹, M. Sahinsoy^{59a}, A. Sahu¹⁷⁹, M. Saimpert⁴⁴,
 M. Saito¹⁶⁰, T. Saito¹⁶⁰, H. Sakamoto¹⁶⁰, A. Sakharov^{122,an}, D. Salamani⁵², G. Salamanna^{72a,72b},
 J.E. Salazar Loyola^{144b}, P.H. Sales De Bruin¹⁶⁹, D. Salihagic¹¹³, A. Salnikov¹⁵⁰, J. Salt¹⁷¹,

D. Salvatore^{40b,40a}, F. Salvatore¹⁵³, A. Salvucci^{61a,61b,61c}, A. Salzburger³⁵, J. Samarati³⁵,
 D. Sammel⁵⁰, D. Sampsonidis¹⁵⁹, D. Sampsonidou¹⁵⁹, J. Sánchez¹⁷¹, A. Sanchez Pineda^{64a,64c},
 H. Sandaker¹³¹, C.O. Sander⁴⁴, M. Sandhoff¹⁷⁹, C. Sandoval²², D.P.C. Sankey¹⁴¹,
 M. Sannino^{53b,53a}, Y. Sano¹¹⁵, A. Sansoni⁴⁹, C. Santoni³⁷, H. Santos^{137a}, I. Santoyo Castillo¹⁵³,
 A. Santra¹⁷¹, A. Sapronov⁷⁷, J.G. Saraiva^{137a,137d}, O. Sasaki⁷⁹, K. Sato¹⁶⁶, E. Sauvan⁵,
 P. Savard^{164,av}, N. Savic¹¹³, R. Sawada¹⁶⁰, C. Sawyer¹⁴¹, L. Sawyer^{93,al}, C. Sbarra^{23b},
 A. Sbrizzi^{23a}, T. Scanlon⁹², J. Schaarschmidt¹⁴⁵, P. Schacht¹¹³, B.M. Schachtner¹¹², D. Schaefer³⁶,
 L. Schaefer¹³⁴, J. Schaeffer⁹⁷, S. Schaepe³⁵, U. Schäfer⁹⁷, A.C. Schaffer¹²⁹, D. Schaile¹¹²,
 R.D. Schamberger¹⁵², N. Scharmberg⁹⁸, V.A. Schegelsky¹³⁵, D. Scheirich¹⁴⁰, F. Schenck¹⁹,
 M. Schernau¹⁶⁸, C. Schiavi^{53b,53a}, S. Schier¹⁴³, L.K. Schildgen²⁴, Z.M. Schillaci²⁶, E.J. Schioppa³⁵,
 M. Schioppa^{40b,40a}, K.E. Schleicher⁵⁰, S. Schlenker³⁵, K.R. Schmidt-Sommerfeld¹¹³,
 K. Schmieden³⁵, C. Schmitt⁹⁷, S. Schmitt⁴⁴, S. Schmitz⁹⁷, J.C. Schmoeckel⁴⁴, U. Schnoor⁵⁰,
 L. Schoeffel¹⁴², A. Schoening^{59b}, E. Schopf¹³², M. Schott⁹⁷, J.F.P. Schouwenberg¹¹⁷,
 J. Schovancova³⁵, S. Schramm⁵², A. Schulte⁹⁷, H-C. Schultz-Coulon^{59a}, M. Schumacher⁵⁰,
 B.A. Schumm¹⁴³, Ph. Schune¹⁴², A. Schwartzman¹⁵⁰, T.A. Schwarz¹⁰³, Ph. Schwemling¹⁴²,
 R. Schwienhorst¹⁰⁴, A. Sciandra²⁴, G. Sciolla²⁶, M. Scornajenghi^{40b,40a}, F. Scuri^{69a}, F. Scutti¹⁰²,
 L.M. Scyboz¹¹³, C.D. Sebastiani^{70a,70b}, P. Seema¹⁹, S.C. Seidel¹¹⁶, A. Seiden¹⁴³, T. Seiss³⁶,
 J.M. Seixas^{78b}, G. Sekhniaidze^{67a}, K. Sekhon¹⁰³, S.J. Sekula⁴¹, N. Semprini-Cesari^{23b,23a}, S. Sen⁴⁷,
 S. Senkin³⁷, C. Serfon¹³¹, L. Serin¹²⁹, L. Serkin^{64a,64b}, M. Sessa^{58a}, H. Severini¹²⁵, F. Sforza¹⁶⁷,
 A. Sfyrly⁵², E. Shabalina⁵¹, J.D. Shahinian¹⁴³, N.W. Shaikh^{43a,43b}, D. Shaked Renous¹⁷⁷,
 L.Y. Shan^{15a}, R. Shang¹⁷⁰, J.T. Shank²⁵, M. Shapiro¹⁸, A.S. Sharma¹, A. Sharma¹³²,
 P.B. Shatalov¹⁰⁹, K. Shaw¹⁵³, S.M. Shaw⁹⁸, A. Shcherbakova¹³⁵, Y. Shen¹²⁵, N. Sherafati³³,
 A.D. Sherman²⁵, P. Sherwood⁹², L. Shi^{155,ar}, S. Shimizu⁷⁹, C.O. Shimmin¹⁸⁰, Y. Shimogama¹⁷⁶,
 M. Shimojima¹¹⁴, I.P.J. Shipsey¹³², S. Shirabe⁸⁵, M. Shiyakova⁷⁷, J. Shlomi¹⁷⁷, A. Shmeleva¹⁰⁸,
 D. Shoaleh Saadi¹⁰⁷, M.J. Shochet³⁶, S. Shojaii¹⁰², D.R. Shope¹²⁵, S. Shrestha¹²³, E. Shulga¹¹⁰,
 P. Sicho¹³⁸, A.M. Sickles¹⁷⁰, P.E. Sidebo¹⁵¹, E. Sideras Haddad^{32c}, O. Sidiropoulou³⁵,
 A. Sidoti^{23b,23a}, F. Siegert⁴⁶, Dj. Sijacki¹⁶, J. Silva^{137a}, M. Silva Jr.¹⁷⁸, M.V. Silva Oliveira^{78a},
 S.B. Silverstein^{43a}, S. Simion¹²⁹, E. Simioni⁹⁷, M. Simon⁹⁷, R. Simoniello⁹⁷, P. Sinervo¹⁶⁴,
 N.B. Sinev¹²⁸, M. Sioli^{23b,23a}, I. Siral¹⁰³, S.Yu. Sivoklov¹¹¹, J. Sjölin^{43a,43b}, P. Skubic¹²⁵,
 M. Slater²¹, T. Slavicek¹³⁹, M. Slawinska⁸², K. Sliwa¹⁶⁷, R. Slovak¹⁴⁰, V. Smakhtin¹⁷⁷,
 B.H. Smart⁵, J. Smiesko^{28a}, N. Smirnov¹¹⁰, S.Yu. Smirnov¹¹⁰, Y. Smirnov¹¹⁰, L.N. Smirnova¹¹¹,
 O. Smirnova⁹⁴, J.W. Smith⁵¹, M. Smizanska⁸⁷, K. Smolek¹³⁹, A. Smykiewicz⁸², A.A. Snesarev¹⁰⁸,
 I.M. Snyder¹²⁸, S. Snyder²⁹, R. Sobie^{173,ad}, A.M. Soffa¹⁶⁸, A. Soffer¹⁵⁸, A. Sogaard⁴⁸, F. Sohns⁵¹,
 G. Sokhrannyi⁸⁹, C.A. Solans Sanchez³⁵, M. Solar¹³⁹, E.Yu. Soldatov¹¹⁰, U. Soldevila¹⁷¹,
 A.A. Solodkov¹²¹, A. Soloshenko⁷⁷, O.V. Solovyanov¹²¹, V. Solovyev¹³⁵, P. Sommer¹⁴⁶, H. Son¹⁶⁷,
 W. Song¹⁴¹, W.Y. Song^{165b}, A. Sopczak¹³⁹, F. Sopkova^{28b}, C.L. Sotiropoulou^{69a,69b},
 S. Sottocornola^{68a,68b}, R. Soualah^{64a,64c,j}, A.M. Soukharev^{120b,120a}, D. South⁴⁴, S. Spagnolo^{65a,65b},
 M. Spalla¹¹³, M. Spangenberg¹⁷⁵, F. Spanò⁹¹, D. Sperlich¹⁹, T.M. Spieker^{59a}, R. Spighi^{23b},
 G. Spigo³⁵, L.A. Spiller¹⁰², D.P. Spiteri⁵⁵, M. Spusta¹⁴⁰, A. Stabile^{66a,66b}, R. Stamen^{59a},
 S. Stamm¹⁹, E. Stanecka⁸², R.W. Stanek⁶, C. Stanescu^{72a}, B. Stanislaus¹³², M.M. Stanitzki⁴⁴,
 B. Stapf¹¹⁸, S. Stapnes¹³¹, E.A. Starchenko¹²¹, G.H. Stark¹⁴³, J. Stark⁵⁶, S.H. Stark³⁹,
 P. Staroba¹³⁸, P. Starovoitov^{59a}, S. Stärz¹⁰¹, R. Staszewski⁸², M. Stegler⁴⁴, P. Steinberg²⁹,
 B. Stelzer¹⁴⁹, H.J. Stelzer³⁵, O. Stelzer-Chilton^{165a}, H. Stenzel⁵⁴, T.J. Stevenson⁹⁰,

G.A. Stewart³⁵, M.C. Stockton³⁵, G. Stoicea^{27b}, P. Stolte⁵¹, S. Stonjek¹¹³, A. Straessner⁴⁶,
 J. Strandberg¹⁵¹, S. Strandberg^{43a,43b}, M. Strauss¹²⁵, P. Strizenec^{28b}, R. Ströhmer¹⁷⁴,
 D.M. Strom¹²⁸, R. Stroynowski⁴¹, A. Strubig⁴⁸, S.A. Stucci²⁹, B. Stugu¹⁷, J. Stupak¹²⁵,
 N.A. Styles⁴⁴, D. Su¹⁵⁰, J. Su¹³⁶, S. Suchek^{59a}, Y. Sugaya¹³⁰, M. Suk¹³⁹, V.V. Sulin¹⁰⁸,
 M.J. Sullivan⁸⁸, D.M.S. Sultan⁵², S. Sultansoy^{4c}, T. Sumida⁸³, S. Sun¹⁰³, X. Sun³, K. Suruliz¹⁵³,
 C.J.E. Suster¹⁵⁴, M.R. Sutton¹⁵³, S. Suzuki⁷⁹, M. Svatos¹³⁸, M. Swiatlowski³⁶, S.P. Swift²,
 A. Sydorenko⁹⁷, I. Sykora^{28a}, M. Sykora¹⁴⁰, T. Sykora¹⁴⁰, D. Ta⁹⁷, K. Tackmann^{44,aa},
 J. Taenzer¹⁵⁸, A. Taffard¹⁶⁸, R. Tafirot^{165a}, E. Tahirovic⁹⁰, N. Taiblum¹⁵⁸, H. Takai²⁹,
 R. Takashima⁸⁴, E.H. Takasugi¹¹³, K. Takeda⁸⁰, T. Takeshita¹⁴⁷, Y. Takubo⁷⁹, M. Talby⁹⁹,
 A.A. Talyshev^{120b,120a}, J. Tanaka¹⁶⁰, M. Tanaka¹⁶², R. Tanaka¹²⁹, B.B. Tannenwald¹²³,
 S. Tapia Araya^{144b}, S. Tapprogge⁹⁷, A. Tarek Abouelfadl Mohamed¹³³, S. Tarem¹⁵⁷, G. Tarna^{27b,e},
 G.F. Tartarelli^{66a}, P. Tas¹⁴⁰, M. Tasevsky¹³⁸, T. Tashiro⁸³, E. Tassi^{40b,40a},
 A. Tavares Delgado^{137a,137b}, Y. Tayalati^{34e}, A.J. Taylor⁴⁸, G.N. Taylor¹⁰², P.T.E. Taylor¹⁰²,
 W. Taylor^{165b}, A.S. Tee⁸⁷, R. Teixeira De Lima¹⁵⁰, P. Teixeira-Dias⁹¹, H. Ten Kate³⁵,
 J.J. Teoh¹¹⁸, S. Terada⁷⁹, K. Terashi¹⁶⁰, J. Terron⁹⁶, S. Terzo¹⁴, M. Testa⁴⁹, R.J. Teuscher^{164,ad},
 S.J. Thais¹⁸⁰, T. Thevenaux-Pelzer⁴⁴, F. Thiele³⁹, D.W. Thomas⁹¹, J.P. Thomas²¹,
 A.S. Thompson⁵⁵, P.D. Thompson²¹, L.A. Thomsen¹⁸⁰, E. Thomson¹³⁴, Y. Tian³⁸,
 R.E. Ticse Torres⁵¹, V.O. Tikhomirov^{108,ap}, Yu.A. Tikhonov^{120b,120a}, S. Timoshenko¹¹⁰,
 P. Tipton¹⁸⁰, S. Tisserant⁹⁹, K. Todome¹⁶², S. Todorova-Nova⁵, S. Todt⁴⁶, J. Tojo⁸⁵, S. Tokár^{28a},
 K. Tokushuku⁷⁹, E. Tolley¹²³, K.G. Tomiwa^{32c}, M. Tomoto¹¹⁵, L. Tompkins^{150,r}, K. Toms¹¹⁶,
 B. Tong⁵⁷, P. Tornambe⁵⁰, E. Torrence¹²⁸, H. Torres⁴⁶, E. Torró Pastor¹⁴⁵, C. Tosci¹³²,
 J. Toth^{99,ac}, F. Touchard⁹⁹, D.R. Tovey¹⁴⁶, C.J. Treado¹²², T. Trefzger¹⁷⁴, F. Tresoldi¹⁵³,
 A. Tricoli²⁹, I.M. Trigger^{165a}, S. Trincaz-Duvoid¹³³, W. Trischuk¹⁶⁴, B. Trocmé⁵⁶, A. Trofymov¹²⁹,
 C. Troncon^{66a}, M. Trovatelli¹⁷³, F. Trovato¹⁵³, L. Truong^{32b}, M. Trzebinski⁸², A. Trzupek⁸²,
 F. Tsai⁴⁴, J.C.-L. Tseng¹³², P.V. Tsiarehka^{105,aj}, A. Tsirigotis¹⁵⁹, N. Tsirintanis⁹,
 V. Tsiskaridze¹⁵², E.G. Tskhadadze^{156a}, I.I. Tsukerman¹⁰⁹, V. Tsulaia¹⁸, S. Tsuno⁷⁹,
 D. Tsybychev^{152,163}, Y. Tu^{61b}, A. Tudorache^{27b}, V. Tudorache^{27b}, T.T. Tulbure^{27a}, A.N. Tuna⁵⁷,
 S. Turchikhin⁷⁷, D. Turgeman¹⁷⁷, I. Turk Cakir^{4b,u}, R.T. Turra^{66a}, P.M. Tuts³⁸, S. Tzamarias¹⁵⁹,
 E. Tzovara⁹⁷, G. Uccielli⁴⁵, I. Ueda⁷⁹, M. Ughetto^{43a,43b}, F. Ukegawa¹⁶⁶, G. Unal³⁵, A. Undrus²⁹,
 G. Unel¹⁶⁸, F.C. Ungaro¹⁰², Y. Unno⁷⁹, K. Uno¹⁶⁰, J. Urban^{28b}, P. Urquijo¹⁰², G. Usai⁸, J. Usui⁷⁹,
 L. Vacavant⁹⁹, V. Vacek¹³⁹, B. Vachon¹⁰¹, K.O.H. Vadla¹³¹, A. Vaidya⁹², C. Valderanis¹¹²,
 E. Valdes Santurio^{43a,43b}, M. Valente⁵², S. Valentinetti^{23b,23a}, A. Valero¹⁷¹, L. Valéry⁴⁴,
 R.A. Vallance²¹, A. Vallier⁵, J.A. Valls Ferrer¹⁷¹, T.R. Van Daalen¹⁴, H. Van der Graaf¹¹⁸,
 P. Van Gemmeren⁶, I. Van Vulpen¹¹⁸, M. Vanadia^{71a,71b}, W. Vandelli³⁵, A. Vaniachine¹⁶³,
 P. Vankov¹¹⁸, R. Vari^{70a}, E.W. Varnes⁷, C. Varni^{53b,53a}, T. Varol⁴¹, D. Varouchas¹²⁹,
 K.E. Varvell¹⁵⁴, G.A. Vasquez^{144b}, J.G. Vasquez¹⁸⁰, F. Vazeille³⁷, D. Vazquez Furelos¹⁴,
 T. Vazquez Schroeder³⁵, J. Veatch⁵¹, V. Vecchio^{72a,72b}, L.M. Veloce¹⁶⁴, F. Veloso^{137a,137c},
 S. Veneziano^{70a}, A. Ventura^{65a,65b}, N. Venturi³⁵, V. Vercesi^{68a}, M. Verducci^{72a,72b},
 C.M. Vergel Infante⁷⁶, C. Vergis²⁴, W. Verkerke¹¹⁸, A.T. Vermeulen¹¹⁸, J.C. Vermeulen¹¹⁸,
 M.C. Vetterli^{149,av}, N. Viaux Maira^{144b}, M. Vicente Barreto Pinto⁵², I. Vichou^{170,*}, T. Vickey¹⁴⁶,
 O.E. Vickey Boeriu¹⁴⁶, G.H.A. Viehhauser¹³², S. Viel¹⁸, L. Vigani¹³², M. Villa^{23b,23a},
 M. Villaplana Perez^{66a,66b}, E. Vilucchi⁴⁹, M.G. Vincter³³, V.B. Vinogradov⁷⁷, A. Vishwakarma⁴⁴,
 C. Vittori^{23b,23a}, I. Vivarelli¹⁵³, S. Vlachos¹⁰, M. Vogel¹⁷⁹, P. Vokac¹³⁹, G. Volpi¹⁴,

S.E. von Buddenbrock^{32c}, E. Von Toerne²⁴, V. Vorobel¹⁴⁰, K. Vorobev¹¹⁰, M. Vos¹⁷¹, J.H. Vossebeld⁸⁸, N. Vranjes¹⁶, M. Vranjes Milosavljevic¹⁶, V. Vrba¹³⁹, M. Vreeswijk¹¹⁸, T. Šfiligoj⁸⁹, R. Vuillermet³⁵, I. Vukotic³⁶, T. Ženiš^{28a}, L. Živković¹⁶, P. Wagner²⁴, W. Wagner¹⁷⁹, J. Wagner-Kuhr¹¹², H. Wahlberg⁸⁶, S. Wahrmund⁴⁶, K. Wakamiya⁸⁰, V.M. Walbrecht¹¹³, J. Walder⁸⁷, R. Walker¹¹², S.D. Walker⁹¹, W. Walkowiak¹⁴⁸, V. Wallangen^{43a,43b}, A.M. Wang⁵⁷, C. Wang^{58b}, F. Wang¹⁷⁸, H. Wang¹⁸, H. Wang³, J. Wang¹⁵⁴, J. Wang^{59b}, P. Wang⁴¹, Q. Wang¹²⁵, R.-J. Wang¹³³, R. Wang^{58a}, R. Wang⁶, S.M. Wang¹⁵⁵, W.T. Wang^{58a}, W. Wang^{15c,ae}, W.X. Wang^{58a,ae}, Y. Wang^{58a,am}, Z. Wang^{58c}, C. Wanotayaroj⁴⁴, A. Warburton¹⁰¹, C.P. Ward³¹, D.R. Wardrope⁹², A. Washbrook⁴⁸, P.M. Watkins²¹, A.T. Watson²¹, M.F. Watson²¹, G. Watts¹⁴⁵, S. Watts⁹⁸, B.M. Waugh⁹², A.F. Webb¹¹, S. Webb⁹⁷, C. Weber¹⁸⁰, M.S. Weber²⁰, S.A. Weber³³, S.M. Weber^{59a}, A.R. Weidberg¹³², J. Weingarten⁴⁵, M. Weirich⁹⁷, C. Weiser⁵⁰, P.S. Wells³⁵, T. Wenaus²⁹, T. Wengler³⁵, S. Wenig³⁵, N. Wermes²⁴, M.D. Werner⁷⁶, P. Werner³⁵, M. Wessels^{59a}, T.D. Weston²⁰, K. Whalen¹²⁸, N.L. Whallon¹⁴⁵, A.M. Wharton⁸⁷, A.S. White¹⁰³, A. White⁸, M.J. White¹, R. White^{144b}, D. Whiteson¹⁶⁸, B.W. Whitmore⁸⁷, F.J. Wickens¹⁴¹, W. Wiedenmann¹⁷⁸, M. Wielers¹⁴¹, C. Wiglesworth³⁹, L.A.M. Wiik-Fuchs⁵⁰, F. Wilk⁹⁸, H.G. Wilkens³⁵, L.J. Wilkins⁹¹, H.H. Williams¹³⁴, S. Williams³¹, C. Willis¹⁰⁴, S. Willocq¹⁰⁰, J.A. Wilson²¹, I. Wingerter-Seez⁵, E. Winkels¹⁵³, F. Winklmeier¹²⁸, O.J. Winston¹⁵³, B.T. Winter⁵⁰, M. Wittgen¹⁵⁰, M. Wobisch⁹³, A. Wolf⁹⁷, T.M.H. Wolf¹¹⁸, R. Wolff⁹⁹, J. Wollrath⁵⁰, M.W. Wolter⁸², H. Wolters^{137a,137c}, V.W.S. Wong¹⁷², N.L. Woods¹⁴³, S.D. Worm²¹, B.K. Wosiek⁸², K.W. Woźniak⁸², K. Wraight⁵⁵, M. Wu³⁶, S.L. Wu¹⁷⁸, X. Wu⁵², Y. Wu^{58a}, T.R. Wyatt⁹⁸, B.M. Wynne⁴⁸, S. Xella³⁹, Z. Xi¹⁰³, L. Xia¹⁷⁵, D. Xu^{15a}, H. Xu^{58a,e}, L. Xu²⁹, T. Xu¹⁴², W. Xu¹⁰³, Z. Xu¹⁵⁰, B. Yabsley¹⁵⁴, S. Yacoob^{32a}, K. Yajima¹³⁰, D.P. Yallup⁹², D. Yamaguchi¹⁶², Y. Yamaguchi¹⁶², A. Yamamoto⁷⁹, T. Yamanaka¹⁶⁰, F. Yamane⁸⁰, M. Yamatani¹⁶⁰, T. Yamazaki¹⁶⁰, Y. Yamazaki⁸⁰, Z. Yan²⁵, H.J. Yang^{58c,58d}, H.T. Yang¹⁸, S. Yang⁷⁵, Y. Yang¹⁶⁰, Z. Yang¹⁷, W.-M. Yao¹⁸, Y.C. Yap⁴⁴, Y. Yasu⁷⁹, E. Yatsenko^{58c,58d}, J. Ye⁴¹, S. Ye²⁹, I. Yeletsikh⁷⁷, E. Yigitbasi²⁵, E. Yildirim⁹⁷, K. Yorita¹⁷⁶, K. Yoshihara¹³⁴, C.J.S. Young³⁵, C. Young¹⁵⁰, J. Yu⁸, J. Yu⁷⁶, X. Yue^{59a}, S.P.Y. Yuen²⁴, B. Zabinski⁸², G. Zacharis¹⁰, E. Zaffaroni⁵², R. Zaidan¹⁴, A.M. Zaitsev^{121,ao}, T. Zakareishvili^{156b}, N. Zakharchuk³³, S. Zambito⁵⁷, D. Zanzi³⁵, D.R. Zaripovas⁵⁵, S.V. Zeifner⁴⁵, C. Zeitnitz¹⁷⁹, G. Zemaityte¹³², J.C. Zeng¹⁷⁰, Q. Zeng¹⁵⁰, O. Zenin¹²¹, D. Zerwas¹²⁹, M. Zgubič¹³², D.F. Zhang^{58b}, D. Zhang¹⁰³, F. Zhang¹⁷⁸, G. Zhang^{58a}, G. Zhang^{15b}, H. Zhang^{15c}, J. Zhang⁶, L. Zhang^{15c}, L. Zhang^{58a}, M. Zhang¹⁷⁰, P. Zhang^{15c}, R. Zhang^{58a}, R. Zhang²⁴, X. Zhang^{58b}, Y. Zhang^{15d}, Z. Zhang¹²⁹, P. Zhao⁴⁷, Y. Zhao^{58b,129,ak}, Z. Zhao^{58a}, A. Zhemchugov⁷⁷, Z. Zheng¹⁰³, D. Zhong¹⁷⁰, B. Zhou¹⁰³, C. Zhou¹⁷⁸, M.S. Zhou^{15d}, M. Zhou¹⁵², N. Zhou^{58c}, Y. Zhou⁷, C.G. Zhu^{58b}, H.L. Zhu^{58a}, H. Zhu^{15a}, J. Zhu¹⁰³, Y. Zhu^{58a}, X. Zhuang^{15a}, K. Zhukov¹⁰⁸, V. Zhulanov^{120b,120a}, A. Zibell¹⁷⁴, D. Zieminska⁶³, N.I. Zimine⁷⁷, S. Zimmermann⁵⁰, Z. Zinonos¹¹³, M. Ziolkowski¹⁴⁸, G. Zobernig¹⁷⁸, A. Zoccoli^{23b,23a}, K. Zoch⁵¹, T.G. Zorbas¹⁴⁶, R. Zou³⁶, M. Zur Nedden¹⁹, L. Zwalinski³⁵.

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

²Physics Department, SUNY Albany, Albany NY; United States of America.

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

^{4(a)}Department of Physics, Ankara University, Ankara; ^(b)Istanbul Aydin University,

Istanbul;^(c)Division of Physics, TOBB University of Economics and Technology, Ankara; Turkey.

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

⁶High Energy Physics Division, Argonne National Laboratory, Argonne IL; United States of America.

⁷Department of Physics, University of Arizona, Tucson AZ; United States of America.

⁸Department of Physics, University of Texas at Arlington, Arlington TX; United States of America.

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

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

¹¹Department of Physics, University of Texas at Austin, Austin TX; United States of America.

¹²(^a)Bahcesehir University, Faculty of Engineering and Natural Sciences, Istanbul;^(b)Istanbul Bilgi University, Faculty of Engineering and Natural Sciences, Istanbul;^(c)Department of Physics, Bogazici University, Istanbul;^(d)Department of Physics Engineering, Gaziantep University, Gaziantep; Turkey.

¹³Institute of Physics, Azerbaijan Academy of Sciences, Baku; Azerbaijan.

¹⁴Institut 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;^(b)Physics Department, Tsinghua University, Beijing;^(c)Department of Physics, Nanjing University, Nanjing;^(d)University of Chinese Academy of Science (UCAS), Beijing; China.

¹⁶Institute of Physics, University of Belgrade, Belgrade; Serbia.

¹⁷Department for Physics and Technology, University of Bergen, Bergen; Norway.

¹⁸Physics Division, Lawrence Berkeley National Laboratory and University of California, Berkeley CA; United States of America.

¹⁹Institut für Physik, Humboldt Universität zu Berlin, Berlin; Germany.

²⁰Albert Einstein Center for Fundamental Physics and Laboratory for High Energy Physics, University of Bern, Bern; Switzerland.

²¹School of Physics and Astronomy, University of Birmingham, Birmingham; United Kingdom.

²²Centro de Investigaciones, Universidad Antonio Nariño, Bogota; Colombia.

²³(^a)Dipartimento di Fisica e Astronomia, Università di Bologna, Bologna;^(b)INFN Sezione di Bologna; Italy.

²⁴Physikalisches Institut, Universität Bonn, Bonn; Germany.

²⁵Department of Physics, Boston University, Boston MA; United States of America.

²⁶Department of Physics, Brandeis University, Waltham MA; United States of America.

²⁷(^a)Transilvania University of Brasov, Brasov;^(b)Horia Hulubei National Institute of Physics and Nuclear Engineering, Bucharest;^(c)Department of Physics, Alexandru Ioan Cuza University of Iasi, Iasi;^(d)National Institute for Research and Development of Isotopic and Molecular Technologies, Physics Department, Cluj-Napoca;^(e)University Politehnica Bucharest, Bucharest;^(f)West University in Timisoara, Timisoara; Romania.

²⁸(^a)Faculty of Mathematics, Physics and Informatics, Comenius University, Bratislava;^(b)Department of Subnuclear Physics, Institute of Experimental Physics of the Slovak Academy of Sciences, Kosice; Slovak Republic.

²⁹Physics Department, Brookhaven National Laboratory, Upton NY; United States of America.

- ³⁰Departamento de Física, Universidad de Buenos Aires, Buenos Aires; Argentina.
- ³¹Cavendish Laboratory, University of Cambridge, Cambridge; United Kingdom.
- ^{32(a)}Department of Physics, University of Cape Town, Cape Town;^(b)Department of Mechanical Engineering Science, University of Johannesburg, Johannesburg;^(c)School of Physics, University of the Witwatersrand, Johannesburg; South Africa.
- ³³Department of Physics, Carleton University, Ottawa ON; Canada.
- ^{34(a)}Faculté des Sciences Ain Chock, Réseau Universitaire de Physique des Hautes Energies - Université Hassan II, Casablanca;^(b)Centre National de l'Energie des Sciences Techniques Nucleaires (CNESTEN), Rabat;^(c)Faculté des Sciences Semlalia, Université Cadi Ayyad, LPHEA-Marrakech;^(d)Faculté des Sciences, Université Mohamed Premier and LPTPM, Oujda;^(e)Faculté des sciences, Université Mohammed V, Rabat; Morocco.
- ³⁵CERN, Geneva; Switzerland.
- ³⁶Enrico Fermi Institute, University of Chicago, Chicago IL; United States of America.
- ³⁷LPC, Université Clermont Auvergne, CNRS/IN2P3, Clermont-Ferrand; France.
- ³⁸Nevis Laboratory, Columbia University, Irvington NY; United States of America.
- ³⁹Niels Bohr Institute, University of Copenhagen, Copenhagen; Denmark.
- ^{40(a)}Dipartimento di Fisica, Università della Calabria, Rende;^(b)INFN Gruppo Collegato di Cosenza, Laboratori Nazionali di Frascati; Italy.
- ⁴¹Physics Department, Southern Methodist University, Dallas TX; United States of America.
- ⁴²Physics Department, University of Texas at Dallas, Richardson TX; United States of America.
- ^{43(a)}Department of Physics, Stockholm University;^(b)Oskar Klein Centre, Stockholm; Sweden.
- ⁴⁴Deutsches Elektronen-Synchrotron DESY, Hamburg and Zeuthen; Germany.
- ⁴⁵Lehrstuhl für Experimentelle Physik IV, Technische Universität Dortmund, Dortmund; Germany.
- ⁴⁶Institut für Kern- und Teilchenphysik, Technische Universität Dresden, Dresden; Germany.
- ⁴⁷Department of Physics, Duke University, Durham NC; United States of America.
- ⁴⁸SUPA - School of Physics and Astronomy, University of Edinburgh, Edinburgh; United Kingdom.
- ⁴⁹INFN e Laboratori Nazionali di Frascati, Frascati; Italy.
- ⁵⁰Physikalisches Institut, Albert-Ludwigs-Universität Freiburg, Freiburg; Germany.
- ⁵¹II. Physikalisches Institut, Georg-August-Universität Göttingen, Göttingen; Germany.
- ⁵²Département de Physique Nucléaire et Corpusculaire, Université de Genève, Genève; Switzerland.
- ^{53(a)}Dipartimento di Fisica, Università di Genova, Genova;^(b)INFN Sezione di Genova; Italy.
- ⁵⁴II. Physikalisches Institut, Justus-Liebig-Universität Giessen, Giessen; Germany.
- ⁵⁵SUPA - School of Physics and Astronomy, University of Glasgow, Glasgow; United Kingdom.
- ⁵⁶LPSC, Université Grenoble Alpes, CNRS/IN2P3, Grenoble INP, Grenoble; France.
- ⁵⁷Laboratory for Particle Physics and Cosmology, Harvard University, Cambridge MA; United States of America.
- ^{58(a)}Department of Modern Physics and State Key Laboratory of Particle Detection and Electronics, University of Science and Technology of China, Hefei;^(b)Institute of Frontier and Interdisciplinary Science and Key Laboratory of Particle Physics and Particle Irradiation (MOE), Shandong University, Qingdao;^(c)School of Physics and Astronomy, Shanghai Jiao Tong

University, KLPPAC-MoE, SKLPPC, Shanghai;^(d)Tsung-Dao Lee Institute, Shanghai; China.

^{59(a)}Kirchhoff-Institut für Physik, Ruprecht-Karls-Universität Heidelberg, Heidelberg;^(b)Physikalisches Institut, Ruprecht-Karls-Universität Heidelberg, Heidelberg; Germany.

⁶⁰Faculty of Applied Information Science, Hiroshima Institute of Technology, Hiroshima; Japan.

^{61(a)}Department of Physics, Chinese University of Hong Kong, Shatin, N.T., Hong Kong;^(b)Department of Physics, University of Hong Kong, Hong Kong;^(c)Department of Physics and Institute for Advanced Study, Hong Kong University of Science and Technology, Clear Water Bay, Kowloon, Hong Kong; China.

⁶²Department of Physics, National Tsing Hua University, Hsinchu; Taiwan.

⁶³Department of Physics, Indiana University, Bloomington IN; United States of America.

^{64(a)}INFN Gruppo Collegato di Udine, Sezione di Trieste, Udine;^(b)ICTP, Trieste;^(c)Dipartimento di Chimica, Fisica e Ambiente, Università di Udine, Udine; Italy.

^{65(a)}INFN Sezione di Lecce;^(b)Dipartimento di Matematica e Fisica, Università del Salento, Lecce; Italy.

^{66(a)}INFN Sezione di Milano;^(b)Dipartimento di Fisica, Università di Milano, Milano; Italy.

^{67(a)}INFN Sezione di Napoli;^(b)Dipartimento di Fisica, Università di Napoli, Napoli; Italy.

^{68(a)}INFN Sezione di Pavia;^(b)Dipartimento di Fisica, Università di Pavia, Pavia; Italy.

^{69(a)}INFN Sezione di Pisa;^(b)Dipartimento di Fisica E. Fermi, Università di Pisa, Pisa; Italy.

^{70(a)}INFN Sezione di Roma;^(b)Dipartimento di Fisica, Sapienza Università di Roma, Roma; Italy.

^{71(a)}INFN Sezione di Roma Tor Vergata;^(b)Dipartimento di Fisica, Università di Roma Tor Vergata, Roma; Italy.

^{72(a)}INFN Sezione di Roma Tre;^(b)Dipartimento di Matematica e Fisica, Università Roma Tre, Roma; Italy.

^{73(a)}INFN-TIFPA;^(b)Università degli Studi di Trento, Trento; Italy.

⁷⁴Institut für Astro- und Teilchenphysik, Leopold-Franzens-Universität, Innsbruck; Austria.

⁷⁵University of Iowa, Iowa City IA; United States of America.

⁷⁶Department of Physics and Astronomy, Iowa State University, Ames IA; United States of America.

⁷⁷Joint Institute for Nuclear Research, Dubna; Russia.

^{78(a)}Departamento de Engenharia Elétrica, Universidade Federal de Juiz de Fora (UFJF), Juiz de Fora;^(b)Universidade Federal do Rio De Janeiro COPPE/EE/IF, Rio de Janeiro;^(c)Universidade Federal de São João del Rei (UFSJ), São João del Rei;^(d)Instituto de Física, Universidade de São Paulo, São Paulo; Brazil.

⁷⁹KEK, High Energy Accelerator Research Organization, Tsukuba; Japan.

⁸⁰Graduate School of Science, Kobe University, Kobe; Japan.

^{81(a)}AGH University of Science and Technology, Faculty of Physics and Applied Computer Science, Krakow;^(b)Marian Smoluchowski Institute of Physics, Jagiellonian University, Krakow; Poland.

⁸²Institute of Nuclear Physics Polish Academy of Sciences, Krakow; Poland.

⁸³Faculty of Science, Kyoto University, Kyoto; Japan.

⁸⁴Kyoto University of Education, Kyoto; Japan.

⁸⁵Research Center for Advanced Particle Physics and Department of Physics, Kyushu University, Fukuoka ; Japan.

⁸⁶Instituto de Física La Plata, Universidad Nacional de La Plata and CONICET, La Plata;

Argentina.

⁸⁷Physics Department, Lancaster University, Lancaster; United Kingdom.

⁸⁸Oliver Lodge Laboratory, University of Liverpool, Liverpool; United Kingdom.

⁸⁹Department of Experimental Particle Physics, Jožef Stefan Institute and Department of Physics, University of Ljubljana, Ljubljana; Slovenia.

⁹⁰School of Physics and Astronomy, Queen Mary University of London, London; United Kingdom.

⁹¹Department of Physics, Royal Holloway University of London, Egham; United Kingdom.

⁹²Department of Physics and Astronomy, University College London, London; United Kingdom.

⁹³Louisiana Tech University, Ruston LA; United States of America.

⁹⁴Fysiska institutionen, Lunds universitet, Lund; Sweden.

⁹⁵Centre de Calcul de l'Institut National de Physique Nucléaire et de Physique des Particules (IN2P3), Villeurbanne; France.

⁹⁶Departamento de Física Teórica C-15 and CIAFF, Universidad Autónoma de Madrid, Madrid; Spain.

⁹⁷Institut für Physik, Universität Mainz, Mainz; Germany.

⁹⁸School of Physics and Astronomy, University of Manchester, Manchester; United Kingdom.

⁹⁹CPPM, Aix-Marseille Université, CNRS/IN2P3, Marseille; France.

¹⁰⁰Department of Physics, University of Massachusetts, Amherst MA; United States of America.

¹⁰¹Department of Physics, McGill University, Montreal QC; Canada.

¹⁰²School of Physics, University of Melbourne, Victoria; Australia.

¹⁰³Department of Physics, University of Michigan, Ann Arbor MI; United States of America.

¹⁰⁴Department of Physics and Astronomy, Michigan State University, East Lansing MI; United States of America.

¹⁰⁵B.I. Stepanov Institute of Physics, National Academy of Sciences of Belarus, Minsk; Belarus.

¹⁰⁶Research Institute for Nuclear Problems of Byelorussian State University, Minsk; Belarus.

¹⁰⁷Group of Particle Physics, University of Montreal, Montreal QC; Canada.

¹⁰⁸P.N. Lebedev Physical Institute of the Russian Academy of Sciences, Moscow; Russia.

¹⁰⁹Institute for Theoretical and Experimental Physics (ITEP), Moscow; Russia.

¹¹⁰National Research Nuclear University MEPhI, Moscow; Russia.

¹¹¹D.V. Skobeltsyn Institute of Nuclear Physics, M.V. Lomonosov Moscow State University, Moscow; Russia.

¹¹²Fakultät für Physik, Ludwig-Maximilians-Universität München, München; Germany.

¹¹³Max-Planck-Institut für Physik (Werner-Heisenberg-Institut), München; Germany.

¹¹⁴Nagasaki Institute of Applied Science, Nagasaki; Japan.

¹¹⁵Graduate School of Science and Kobayashi-Maskawa Institute, Nagoya University, Nagoya; Japan.

¹¹⁶Department of Physics and Astronomy, University of New Mexico, Albuquerque NM; United States of America.

¹¹⁷Institute for Mathematics, Astrophysics and Particle Physics, Radboud University Nijmegen/Nikhef, Nijmegen; Netherlands.

¹¹⁸Nikhef National Institute for Subatomic Physics and University of Amsterdam, Amsterdam; Netherlands.

¹¹⁹Department of Physics, Northern Illinois University, DeKalb IL; United States of America.

- ^{120(a)}Budker Institute of Nuclear Physics and NSU, SB RAS, Novosibirsk;^(b)Novosibirsk State University Novosibirsk; Russia.
- ¹²¹Institute for High Energy Physics of the National Research Centre Kurchatov Institute, Protvino; Russia.
- ¹²²Department of Physics, New York University, New York NY; United States of America.
- ¹²³Ohio State University, Columbus OH; United States of America.
- ¹²⁴Faculty of Science, Okayama University, Okayama; Japan.
- ¹²⁵Homer L. Dodge Department of Physics and Astronomy, University of Oklahoma, Norman OK; United States of America.
- ¹²⁶Department of Physics, Oklahoma State University, Stillwater OK; United States of America.
- ¹²⁷Palacký University, RCPTM, Joint Laboratory of Optics, Olomouc; Czech Republic.
- ¹²⁸Center for High Energy Physics, University of Oregon, Eugene OR; United States of America.
- ¹²⁹LAL, Université Paris-Sud, CNRS/IN2P3, Université Paris-Saclay, Orsay; France.
- ¹³⁰Graduate School of Science, Osaka University, Osaka; Japan.
- ¹³¹Department of Physics, University of Oslo, Oslo; Norway.
- ¹³²Department of Physics, Oxford University, Oxford; United Kingdom.
- ¹³³LPNHE, Sorbonne Université, Paris Diderot Sorbonne Paris Cité, CNRS/IN2P3, Paris; France.
- ¹³⁴Department of Physics, University of Pennsylvania, Philadelphia PA; United States of America.
- ¹³⁵Konstantinov Nuclear Physics Institute of National Research Centre "Kurchatov Institute", PNPI, St. Petersburg; Russia.
- ¹³⁶Department of Physics and Astronomy, University of Pittsburgh, Pittsburgh PA; United States of America.
- ^{137(a)}Laboratório de Instrumentação e Física Experimental de Partículas - LIP;^(b)Departamento de Física, Faculdade de Ciências, Universidade de Lisboa, Lisboa;^(c)Departamento de Física, Universidade de Coimbra, Coimbra;^(d)Centro de Física Nuclear da Universidade de Lisboa, Lisboa;^(e)Departamento de Física, Universidade do Minho, Braga;^(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.
- ¹³⁸Institute of Physics, Academy of Sciences of the Czech Republic, Prague; Czech Republic.
- ¹³⁹Czech Technical University in Prague, Prague; Czech Republic.
- ¹⁴⁰Charles University, Faculty of Mathematics and Physics, Prague; Czech Republic.
- ¹⁴¹Particle Physics Department, Rutherford Appleton Laboratory, Didcot; United Kingdom.
- ¹⁴²IRFU, CEA, Université Paris-Saclay, Gif-sur-Yvette; France.
- ¹⁴³Santa Cruz Institute for Particle Physics, University of California Santa Cruz, Santa Cruz CA; United States of America.
- ^{144(a)}Departamento de Física, Pontificia Universidad Católica de Chile, Santiago;^(b)Departamento de Física, Universidad Técnica Federico Santa María, Valparaíso; Chile.
- ¹⁴⁵Department of Physics, University of Washington, Seattle WA; United States of America.
- ¹⁴⁶Department of Physics and Astronomy, University of Sheffield, Sheffield; United Kingdom.
- ¹⁴⁷Department of Physics, Shinshu University, Nagano; Japan.
- ¹⁴⁸Department Physik, Universität Siegen, Siegen; Germany.
- ¹⁴⁹Department of Physics, Simon Fraser University, Burnaby BC; Canada.
- ¹⁵⁰SLAC National Accelerator Laboratory, Stanford CA; United States of America.

- ¹⁵¹Physics Department, Royal Institute of Technology, Stockholm; Sweden.
- ¹⁵²Departments of Physics and Astronomy, Stony Brook University, Stony Brook NY; United States of America.
- ¹⁵³Department of Physics and Astronomy, University of Sussex, Brighton; United Kingdom.
- ¹⁵⁴School of Physics, University of Sydney, Sydney; Australia.
- ¹⁵⁵Institute of Physics, Academia Sinica, Taipei; Taiwan.
- ¹⁵⁶(*a*) E. Andronikashvili Institute of Physics, Iv. Javakhishvili Tbilisi State University, Tbilisi; (*b*) High Energy Physics Institute, Tbilisi State University, Tbilisi; Georgia.
- ¹⁵⁷Department of Physics, Technion, Israel Institute of Technology, Haifa; Israel.
- ¹⁵⁸Raymond and Beverly Sackler School of Physics and Astronomy, Tel Aviv University, Tel Aviv; Israel.
- ¹⁵⁹Department of Physics, Aristotle University of Thessaloniki, Thessaloniki; Greece.
- ¹⁶⁰International Center for Elementary Particle Physics and Department of Physics, University of Tokyo, Tokyo; Japan.
- ¹⁶¹Graduate School of Science and Technology, Tokyo Metropolitan University, Tokyo; Japan.
- ¹⁶²Department of Physics, Tokyo Institute of Technology, Tokyo; Japan.
- ¹⁶³Tomsk State University, Tomsk; Russia.
- ¹⁶⁴Department of Physics, University of Toronto, Toronto ON; Canada.
- ¹⁶⁵(*a*) TRIUMF, Vancouver BC; (*b*) Department of Physics and Astronomy, York University, Toronto ON; Canada.
- ¹⁶⁶Division of Physics and Tomonaga Center for the History of the Universe, Faculty of Pure and Applied Sciences, University of Tsukuba, Tsukuba; Japan.
- ¹⁶⁷Department of Physics and Astronomy, Tufts University, Medford MA; United States of America.
- ¹⁶⁸Department of Physics and Astronomy, University of California Irvine, Irvine CA; United States of America.
- ¹⁶⁹Department of Physics and Astronomy, University of Uppsala, Uppsala; Sweden.
- ¹⁷⁰Department of Physics, University of Illinois, Urbana IL; United States of America.
- ¹⁷¹Instituto de Física Corpuscular (IFIC), Centro Mixto Universidad de Valencia - CSIC, Valencia; Spain.
- ¹⁷²Department of Physics, University of British Columbia, Vancouver BC; Canada.
- ¹⁷³Department of Physics and Astronomy, University of Victoria, Victoria BC; Canada.
- ¹⁷⁴Fakultät für Physik und Astronomie, Julius-Maximilians-Universität Würzburg, Würzburg; Germany.
- ¹⁷⁵Department of Physics, University of Warwick, Coventry; United Kingdom.
- ¹⁷⁶Waseda University, Tokyo; Japan.
- ¹⁷⁷Department of Particle Physics, Weizmann Institute of Science, Rehovot; Israel.
- ¹⁷⁸Department of Physics, University of Wisconsin, Madison WI; United States of America.
- ¹⁷⁹Fakultät für Mathematik und Naturwissenschaften, Fachgruppe Physik, Bergische Universität Wuppertal, Wuppertal; Germany.
- ¹⁸⁰Department of Physics, Yale University, New Haven CT; United States of America.
- ¹⁸¹Yerevan Physics Institute, Yerevan; Armenia.
- ^a Also at Borough of Manhattan Community College, City University of New York, NY; United

States of America.

^b Also at California State University, East Bay; United States of America.

^c Also at Centre for High Performance Computing, CSIR Campus, Rosebank, Cape Town; South Africa.

^d Also at CERN, Geneva; Switzerland.

^e Also at CPPM, Aix-Marseille Université, CNRS/IN2P3, Marseille; France.

^f Also at Département de Physique Nucléaire et Corpusculaire, Université de Genève, Genève; Switzerland.

^g Also at Departament de Física de la Universitat Autònoma de Barcelona, Barcelona; Spain.

^h Also at Departamento de Física Teórica y del Cosmos, Universidad de Granada, Granada (Spain); Spain.

ⁱ Also at Departamento de Física, Instituto Superior Técnico, Universidade de Lisboa, Lisboa; Portugal.

^j Also at Department of Applied Physics and Astronomy, University of Sharjah, Sharjah; United Arab Emirates.

^k Also at Department of Financial and Management Engineering, University of the Aegean, Chios; Greece.

^l Also at Department of Physics and Astronomy, University of Louisville, Louisville, KY; United States of America.

^m Also at Department of Physics and Astronomy, University of Sheffield, Sheffield; United Kingdom.

ⁿ Also at Department of Physics, California State University, Fresno CA; United States of America.

^o Also at Department of Physics, California State University, Sacramento CA; United States of America.

^p Also at Department of Physics, King's College London, London; United Kingdom.

^q Also at Department of Physics, St. Petersburg State Polytechnical University, St. Petersburg; Russia.

^r Also at Department of Physics, Stanford University; United States of America.

^s Also at Department of Physics, University of Fribourg, Fribourg; Switzerland.

^t Also at Department of Physics, University of Michigan, Ann Arbor MI; United States of America.

^u Also at Giresun University, Faculty of Engineering, Giresun; Turkey.

^v Also at Graduate School of Science, Osaka University, Osaka; Japan.

^w Also at Hellenic Open University, Patras; Greece.

^x Also at Horia Hulubei National Institute of Physics and Nuclear Engineering, Bucharest; Romania.

^y Also at II. Physikalisches Institut, Georg-August-Universität Göttingen, Göttingen; Germany.

^z Also at Institutio Catalana de Recerca i Estudis Avancats, ICREA, Barcelona; Spain.

^{aa} Also at Institut für Experimentalphysik, Universität Hamburg, Hamburg; Germany.

^{ab} Also at Institute for Mathematics, Astrophysics and Particle Physics, Radboud University Nijmegen/Nikhef, Nijmegen; Netherlands.

^{ac} Also at Institute for Particle and Nuclear Physics, Wigner Research Centre for Physics, Budapest; Hungary.

- ad* Also at Institute of Particle Physics (IPP); Canada.
- ae* Also at Institute of Physics, Academia Sinica, Taipei; Taiwan.
- af* Also at Institute of Physics, Azerbaijan Academy of Sciences, Baku; Azerbaijan.
- ag* Also at Institute of Theoretical Physics, Ilia State University, Tbilisi; Georgia.
- ah* Also at Instituto de Física Teórica de la Universidad Autónoma de Madrid; Spain.
- ai* Also at Istanbul University, Dept. of Physics, Istanbul; Turkey.
- aj* Also at Joint Institute for Nuclear Research, Dubna; Russia.
- ak* Also at LAL, Université Paris-Sud, CNRS/IN2P3, Université Paris-Saclay, Orsay; France.
- al* Also at Louisiana Tech University, Ruston LA; United States of America.
- am* Also at LPNHE, Sorbonne Université, Paris Diderot Sorbonne Paris Cité, CNRS/IN2P3, Paris; France.
- an* Also at Manhattan College, New York NY; United States of America.
- ao* Also at Moscow Institute of Physics and Technology State University, Dolgoprudny; Russia.
- ap* Also at National Research Nuclear University MEPhI, Moscow; Russia.
- aq* Also at Physikalisches Institut, Albert-Ludwigs-Universität Freiburg, Freiburg; Germany.
- ar* Also at School of Physics, Sun Yat-sen University, Guangzhou; China.
- as* Also at The City College of New York, New York NY; United States of America.
- at* Also at The Collaborative Innovation Center of Quantum Matter (CICQM), Beijing; China.
- au* Also at Tomsk State University, Tomsk, and Moscow Institute of Physics and Technology State University, Dolgoprudny; Russia.
- av* Also at TRIUMF, Vancouver BC; Canada.
- aw* Also at Università di Napoli Parthenope, Napoli; Italy.
- * Deceased