

Authors

B. Abi,¹²⁴ R. Acciarri,⁵³ M. A. Acero,⁸ M. Adamowski,⁵³ C. Adams,⁶¹ D. Adams,¹⁵ P. Adamson,⁵³ M. Adinolfi,¹⁴
 Z. Ahmad,¹⁶⁴ C. H. Albright,⁵³ L. Aliaga Soplin,⁵³ T. Alion,¹⁵¹ S. Alonso Monsalve,¹⁹ M. Alrashed,⁸⁸ C. Alt,⁴⁶
 J. Anderson,⁵ K. Anderson,⁵³ C. Andreopoulos,⁹⁸ M. P. Andrews,⁵³ R. A. Andrews,⁵³ A. Ankowski,¹³⁹
 J. Anthony,²⁶ M. Antonello,⁵⁷ M. Antonova,⁶⁷ S. Antusch,¹⁰ A. Aranda Fernandez,³³ A. Ariga,¹¹ T. Ariga,¹¹
 D. Aristizabal Sierra,¹⁵³ E. Arrieta Diaz,¹⁴⁹ J. Asaadi,¹⁵⁶ M. Ascencio,¹³⁴ D. Asner,¹⁵ M. S. Athar,¹ M. Auger,¹¹
 A. Aurisano,³¹ V. Aushev,⁹³ D. Autiero,⁷⁸ F. Azfar,¹²⁴ A. Back,⁸¹ H. Back,¹²⁵ J. Back,¹⁶⁹ C. Backhouse,⁹⁹
 P. Baesso,¹⁴ L. Bagby,⁵³ X. Bai,¹⁴⁶ M. Baird,¹⁶⁶ B. Balantekin,¹⁷² S. Balasubramanian,¹⁷⁴ B. Baller,⁵³ P. Ballett,⁴⁵
 L. Balleyguier,⁷⁸ B. Bambah,⁶⁵ H. Band,¹⁷⁴ M. Bansal,¹²⁸ S. Bansal,¹²⁸ G. Barenboim,⁶⁷ G. J. Barker,¹⁶⁹
 C. Barnes,¹⁰⁷ G. Barr,¹²⁴ J. Barranco Monarca,⁵⁹ N. Barros,¹³¹ J. Barrow,¹⁵⁴ A. Bashyal,¹²² M. Bass,¹⁵ F. Bay,¹⁵⁹
 K. Bays,²⁵ J. L. Bazo,¹³⁴ J. F. Beacom,¹²¹ E. Bechetoille,⁷⁸ B. R. Behera,¹²⁸ L. Bellantoni,⁵³ G. Bellettini,¹³²
 V. Bellini,²⁷ O. Beltramello,¹⁹ D. Belver,²⁰ N. Benekos,¹⁹ P. A. Benetti,¹²⁹ A. Bercellie,¹³⁸ E. Berman,⁵³
 P. Bernardini,¹⁶³ R. Berner,¹¹ H.-G. Berns,²² R. H. Bernstein,⁵³ S. Bertolucci,⁷³ M. Betancourt,⁵³ V. Bhatnagar,¹²⁸
 M. Bhattacharjee,⁷⁰ B. Bhuyan,⁷⁰ S. Biagi,⁹⁵ J. Bian,²³ K. Biery,⁵³ B. Bilki,⁸⁰ M. Bishai,¹⁵ A. Bitadze,¹⁰⁴
 T. Blackburn,¹⁵¹ A. Blake,⁹⁶ B. Blanco Siffert,⁵⁰ F. Blaszczyk,¹³ E. Blaufuss,¹⁰⁵ G. C. Blazey,¹¹² M. Blennow,⁸⁷
 E. Blucher,²⁹ V. Bocean,⁵³ F. Boffelli,¹²⁹ J. Boissevain,¹⁰⁰ S. Bolognesi,¹⁸ T. Bolton,⁸⁸ M. Bonesini,⁷² T. Boone,³⁵
 A. Booth,¹⁵¹ C. Booth,¹⁴² S. Bordini,¹⁹ A. Borkum,¹⁵¹ T. Boschi,⁴⁵ P. Bour,³⁸ B. Bourguille,⁶⁶ S. B. Boyd,¹⁶⁹
 D. Boyden,¹¹² J. Bracinik,¹² D. Brailsford,⁹⁶ A. Brandt,¹⁵⁶ J. Bremer,¹⁹ S. J. Brice,⁵³ C. Bromberg,¹⁰⁸
 G. Brooijmans,³⁶ J. Brooke,¹⁴ G. Brown,¹⁵⁶ N. Buchanan,³⁵ H. Budd,¹³⁸ P. C. de Holanda,⁴⁸ T. Cai,¹³⁸ D. Caiulo,⁷⁸
 P. Calafiura,⁹⁷ A. Calatayud,¹³⁴ J. Calcutt,¹⁰⁸ C. Callahan,¹³¹ E. Calligarich,¹²⁹ E. Calvo,²⁰ L. Camilleri,³⁶
 A. Caminata,⁵⁵ M. Campanelli,⁹⁹ G. Cancelo,⁵³ K. Cankocak,⁸⁰ C. Cantini,⁴⁶ D. Caratelli,⁵³ B. Carlus,⁷⁸
 M. Carneiro,¹²² I. Caro Terrazas,³⁵ T. J. Carroll,¹⁵⁷ M. Cascella,⁹⁹ C. Castromonte,¹¹³ E. Catano-Mur,⁸¹
 M. Cavalli-Sforza,⁶⁶ F. Cavanna,⁵³ E. Cazzato,¹⁰ S. Centro,¹²⁷ G. Cerati,⁵³ A. Cervelli,⁷³ A. Cervera Villanueva,⁶⁷
 T. Cervi,¹²⁹ M. Chalifour,¹⁹ A. Chappuis,⁹⁴ A. Chatterjee,¹⁵⁶ S. Chattopadhyay,⁵³ S. Chattopadhyay,¹⁶⁴
 J. Chaves,¹³¹ H. Chen,¹⁵ M.-C. Chen,²³ S. Chen,¹⁵⁸ D. Cherdack,³⁵ C.-Y. Chi,³⁶ S. Childress,⁵³ K. Cho,⁹¹
 S. Choubey,⁶⁰ B. C. Choudhary,⁴² A. Christensen,³⁵ D. Christian,⁵³ G. Christodoulou,⁹⁸ C.-A. Christofferson,¹⁴⁶
 E. Church,¹²⁵ P. Clarke,⁴⁷ T. E. Coan,¹⁴⁹ A. Cocco,¹¹⁴ G. H. Collin,¹⁰⁶ E. Conley,⁴⁴ J. M. Conrad,¹⁰⁶
 M. Convery,¹³⁹ R. Corey,¹⁴⁶ L. Corwin,¹⁴⁶ P. Cotte,¹⁸ L. Cremonesi,⁹⁹ J. I. Crespo-Anadón,³⁶ J. Creus Prats,¹⁹
 E. Cristaldo,¹⁶² P. Crivelli,⁴⁶ D. Cronin-Hennessy,¹¹¹ C. Crowley,⁵³ C. Cuesta,²⁰ A. Curioni,⁷² D. Cussans,¹⁴
 M. Dabrowski,¹⁵ D. Dale,⁷⁵ H. Da Motta,¹⁷ T. Davenne,¹⁴⁰ E. Davenport,¹⁵⁶ G. S. Davies,⁷⁷ J. Davies,¹⁵¹
 S. Davini,⁵⁵ J. Dawson,⁴ K. De,¹⁵⁶ M. P. Decowski,¹¹⁸ P. Dedin Neto,⁴⁸ I. de Icaza Astiz,¹⁵¹ A. Delbart,¹⁸
 D. Delepine,⁵⁹ M. Delgado,³ A. Dell,¹⁹ J. de Mello Neto,⁵⁰ D. DeMuth,¹⁶⁵ Z. Deng,¹⁵⁸ S. Dennis,⁹⁸ C. Densham,¹⁴⁰
 I. De Bonis,⁹⁴ A. De Gouvêa,¹¹⁹ P. De Jong,¹¹⁸ P. De Lurgio,⁵ S. De Rijck,¹⁵⁷ A. De Roeck,¹⁹ J. J. de Vries,²⁶
 R. Dharmapalan,⁵ N. Dhingra,¹²⁸ M. Diamantopoulou,⁷ F. Diaz,¹³⁴ J. S. Díaz,⁷⁷ G. Diaz Bautista,¹³⁸ P. Ding,⁵³
 C. Distefano,⁹⁵ M. Diwan,¹⁵ S. Di Domizio,⁵⁵ L. Di Giulio,¹⁹ S. Di Luise,⁶⁶ Z. Djurcic,⁵ F. Doizon,⁷⁸ N. Dokania,¹⁵⁰
 M. J. Dolinski,⁴³ R. Dong,⁸⁰ J. dos Anjos,¹⁷ D. Douglas,¹⁰⁸ G. Drake,⁵ D. Duchesneau,⁹⁴ K. Duffy,⁵³ B. Dung,¹⁵⁷
 D. Dutta,⁶⁰ M. Duvernois,¹⁷² H. Duyang,¹⁴⁴ O. Dvornikov,⁶² D. A. Dwyer,⁹⁷ S. Dye,⁶² A. S. Dyshkant,¹¹²
 S. Dytman,¹³³ M. Eads,¹¹² B. Eberly,¹³⁹ D. Edmunds,¹⁰⁸ J. Eisch,⁸¹ A. Elagin,²⁹ S. Elliott,¹⁰⁰ W. Ellsworth,⁶³
 M. Elnimr,²³ S. Emery,¹⁸ S. Eno,¹⁰⁵ A. Ereditato,¹¹ C. O. Escobar,⁵³ L. Escudero Sanchez,²⁶ J. J. Evans,¹⁰⁴
 A. Ezeribe,¹⁴² K. Fahey,⁵³ A. Falcone,¹⁵⁶ L. Falk,¹⁵¹ A. Farbin,¹⁵⁶ C. Farnese,¹²⁷ Y. Farzan,⁷⁴ M. Fasoli,⁷²
 A. Fava,⁵³ J. Felix,⁵⁹ E. Fernandez-Martinez,¹⁰³ P. Fernandez Menendez,⁶⁷ F. Ferraro,⁵⁵ F. Feyzi,⁵³ L. Fields,⁵³
 A. Filkins,¹⁷¹ F. Filthaut,¹¹⁸ A. Finch,⁹⁶ O. Fischer,¹⁰ M. Fitton,¹⁴⁰ R. Fitzpatrick,¹⁰⁷ W. Flanagan,⁴⁰
 B. T. Fleming,¹⁷⁴ R. Flight,¹³⁸ T. Forest,⁷⁵ J. Fowler,⁴⁴ W. Fox,⁷⁷ J. Franc,³⁸ P. Franchini,¹⁶⁹ D. Franco,¹⁷⁴
 J. Freeman,⁵³ J. Freestone,¹⁰⁴ J. Fried,¹⁵ A. Friedland,¹³⁹ S. Fuess,⁵³ I. Furic,⁵⁴ A. Furmanski,¹⁰⁴ A. M. Gago,¹³⁴
 H. Gallagher,¹⁶⁰ A. Gallego-Ros,²⁰ V. Galymov,⁷⁸ E. Gamberini,¹⁹ S. Gambetta,¹⁹ T. Gamble,¹⁴² R. Gandhi,⁶⁰
 R. Gandrajula,¹⁰⁸ S. Gao,¹⁵ D. Garcia-Gamez,¹⁰⁴ S. Gardiner,²² D. Gastler,¹³ J. Gehrlein,¹⁰³ B. Gelli,⁴⁸
 A. Gendotti,⁴⁶ Z. Ghorbani-Moghaddam,²² A. Ghosh,¹⁵³ D. Gibin,¹²⁷ I. Gil-Botella,²⁰ C. Girerd,⁷⁸ A. K. Giri,⁷¹
 S. Glavin,¹³¹ D. Goeldi,¹¹ O. Gogota,⁹³ M. Gold,¹¹⁶ S. Gollapinni,¹⁵⁴ K. Gollwitzer,⁵³ R. A. Gomes,⁵⁶ L. Gomez,¹⁴¹
 L. V. Gomez Bermeo,¹⁴¹ J. J. Gomez Cadenas,⁶⁷ H. Gong,¹⁵⁸ F. Gonnella,¹² J. A. Gonzalez-Cuevas,¹⁶²
 M. Goodman,⁵ O. Goodwin,¹⁰⁴ D. Gorbunov,⁷⁹ S. Goswami,¹²⁶ E. Goudzowski,¹² C. Grace,⁹⁷ N. Graf,¹³³
 N. Graf,¹³⁹ M. Graham,¹³⁹ E. Gramellini,¹⁷⁴ R. Gran,¹¹⁰ A. Grant,⁴¹ C. Grant,¹³ N. Grant,¹⁶⁹ V. Greco,²⁷
 S. Green,²⁶ H. Greenlee,⁵³ L. Greenler,¹⁷² M. Greenwood,¹²² J. Greer,¹⁴ W. C. Griffith,¹⁵¹ M. Groh,⁷⁷
 J. Grudzinski,⁵ K. Grzelak,¹⁶⁷ G. Guanghua,¹⁵⁸ E. Guardincerri,¹⁰⁰ V. Guarino,⁵ G. P. Guedes,⁵² R. Guenette,⁶¹

A. Guglielmi,¹²⁷ B. Guo,¹⁴⁴ S. Gupta,⁸³ V. Gupta,⁷⁰ K. K. Guthikonda,⁹⁰ R. Gutierrez,³ P. Guzowski,¹⁰⁴
 M. M. Guzzo,⁴⁸ A. Habig,¹¹⁰ R. W. Hackenburg,¹⁵ A. Hackenburg,¹⁷⁴ B. Hackett,⁶² H. Hadavand,¹⁵⁶ R. Haenni,¹¹
 A. Hahn,⁵³ J. Haigh,¹⁶⁹ T. Haines,¹⁰⁰ J. Haiston,¹⁴⁶ T. Hamernik,⁵³ P. Hamilton,¹⁵² J. Han,¹³³ T. Handler,¹⁵⁴
 S. Hans,¹⁵ D. A. Harris,⁵³ J. Hartnell,¹⁵¹ T. Hasegawa,⁸⁶ R. Hatcher,⁵³ A. Hatzikoutelis,¹⁵⁴ S. Hays,⁵³ E. Hazen,¹³
 M. Headley,¹⁴⁷ A. Heavey,⁵³ K. Heegerv,¹⁷⁴ J. Heise,¹⁴⁷ K. Hennessy,⁹⁸ S. Henry,¹³⁸ A. Hernandez,³
 J. Hernandez-Garcia,¹⁰³ K. Herner,⁵³ J. Hewes,³¹ J. Hignight,¹⁰⁸ A. Higuera,⁶³ T. Hill,⁷⁵ S. Hillier,¹² A. Himmel,⁵³
 C. Hohl,¹⁰ A. Holin,⁹⁹ E. Hoppe,¹²⁵ S. Horikawa,⁴⁶ G. Horton-Smith,⁸⁸ M. Hostert,⁴⁵ A. Hourlier,¹⁰⁶ B. Howard,⁷⁷
 R. Howell,¹³⁸ J. Huang,¹⁵⁷ J. Hugon,¹⁰¹ P. Hurh,⁵³ J. Hysten,⁵³ R. Illingworth,⁵³ J. Insler,⁴³ G. Introzzi,¹²⁹
 A. Ioannisian,¹⁷⁵ A. Izmaylov,⁶⁷ D. E. Jaffe,¹⁵ C. James,⁵³ E. James,⁵³ C.-H. Jang,³⁰ F. Jediny,³⁸ Y. S. Jeong,⁶
 A. Jhingan,¹²⁸ W. Ji,¹⁵ S. Jiménez,²⁰ C. Johnson,³⁵ M. Johnson,⁵³ R. Johnson,³¹ J. Johnstone,⁵³ B. Jones,¹⁵⁶
 S. Jones,⁹⁹ J. Joshi,¹⁵ H. Jostlein,⁵³ C. K. Jung,¹⁵⁰ T. Junk,⁵³ A. Kaboth,¹⁴⁰ I. Kadenko,⁹³ F. Kamiya,⁵¹
 Y. Kamyshkov,¹⁵⁴ G. Karagiorgi,³⁶ D. Karasavvas,⁷ Y. Karyotakis,⁹⁴ S. Kasai,⁹² S. Kasetti,¹⁰¹ K. Kaur,¹²⁸
 B. Kayser,⁵³ N. Kazaryan,¹⁷⁵ E. Kearns,¹³ P. Keener,¹³¹ E. Kemp,⁴⁸ C. Kendziora,⁵³ W. Ketchum,⁵³ S. H. Kettell,¹⁵
 M. Khabibullin,⁷⁹ A. Khotjantsev,⁷⁹ D. Kim,¹⁹ B. Kirby,¹⁵ M. Kirby,⁵³ J. Klein,¹³¹ Y.-J. Ko,³⁰ T. Kobilarcik,⁵³
 B. Kocaman,¹⁵⁹ L. W. Koerner,⁶³ S. Kohn,²¹ G. Koizumi,⁵³ P. Koller,¹¹ A. Kopylov,⁷⁹ M. Kordosky,¹⁷¹
 L. Kormos,⁹⁶ T. Kosc,⁷⁸ U. Kose,¹⁹ V. A. Kosteck,⁷⁷ K. Kothekar,¹⁴ M. Kramer,²¹ F. Krennrich,⁸¹ I. Kreslo,¹¹
 K. Kriesel,¹⁷² W. Kropp,²³ Y. Kudenko,⁷⁹ V. A. Kudryavtsev,¹⁴² S. Kulagin,⁷⁹ J. Kumar,⁶² L. Kumar,¹²⁸
 A. Kumar,¹²⁸ S. Kumbhare,¹⁵⁶ C. Kuruppu,¹⁴⁴ V. Kus,³⁸ T. Kutter,¹⁰¹ R. LaZur,³⁵ K. Lande,¹³¹ C. Lane,⁴³
 K. Lang,¹⁵⁷ T. Langford,¹⁷⁴ F. Lanni,¹⁵ P. Lasorak,¹⁵¹ D. Last,¹³¹ C. Lastoria,²⁰ A. Laundrie,¹⁷² T. Le,¹⁶⁰
 J. Learned,⁶² P. Lebrun,⁵³ D. Lee,¹⁰⁰ G. Lehmann Miotto,¹⁹ M. A. Leigui de Oliveira,⁵¹ Q. Li,⁵³ S. Li,¹⁵ S. W. Li,¹³⁹
 X. Li,¹⁵⁰ Y. Li,¹⁵ Z. Li,⁴⁴ H.-Y. Liao,⁸⁸ S.-K. Lin,³⁵ C.-J. S. Lin,⁹⁷ R. Linehan,¹³⁹ V. Linhart,³⁸ J. Link,¹⁶⁶
 Z. Liptak,³⁴ D. Lissauer,¹⁵ L. Littenberg,¹⁵ B. Littlejohn,⁶⁸ J. Liu,¹⁴⁵ T. Liu,¹⁴⁹ L. LoMonaco,²⁷ J. M. LoSecco,¹²⁰
 S. Lockwitz,⁵³ N. Lockyer,⁵³ T. Loew,⁹⁷ M. Lokajicek,¹⁶ K. Long,⁷⁶ K. Loo,⁸⁵ J. P. Lopez,³⁴ D. Lorca,¹¹
 T. Lord,¹⁶⁹ M. Losada,³ W. C. Louis,¹⁰⁰ M. Luethi,¹¹ K.-B. Luk,²¹ T. Lundin,⁵³ X. Luo,¹⁷⁴ N. Lurkin,¹²
 T. Lux,⁶⁶ V. P. Luzio,⁵¹ J. Lykken,⁵³ J. Maalampi,⁸⁵ R. MacLellan,¹⁴⁵ A. A. Machado,⁵¹ P. Machado,⁵³
 C. T. Macias,⁷⁷ J. Macier,⁵³ P. Madigan,²¹ S. Magill,⁵ G. Mahler,¹⁵ K. Mahn,¹⁰⁸ M. Malek,¹⁴² J. A. Maloney,³⁹
 F. Mammoliti,⁶¹ S. K. Mandal,⁴² G. Mandrioli,⁷³ L. Manenti,⁹⁹ S. Manly,¹³⁸ A. Mann,¹⁶⁰ A. Marchionni,⁵³
 W. Marciano,¹⁵ S. Marcocci,⁵³ D. Marfatia,⁶² C. Mariani,¹⁶⁶ M. Maria Paulina,¹⁵⁰ J. Maricic,⁶² F. Marinho,¹⁶¹
 A. D. Marino,³⁴ M. Marshak,¹¹¹ C. Marshall,⁹⁷ J. Marshall,²⁶ J. Marteau,⁷⁸ J. Martin-Albo,¹²⁴ D. Martinez,⁶⁸
 N. Martinez,¹³⁶ H. Martinez,¹⁴¹ K. Mason,¹⁶⁰ A. Mastbaum,²⁹ M. Masud,⁶⁷ H. Mathez,⁷⁸ S. Matsuno,⁶²
 J. Matthews,¹⁰¹ C. Mauger,¹³¹ N. Mauri,⁷³ K. Mavrokoridis,⁹⁸ R. Mazza,⁷² A. Mazzacane,⁵³ E. Mazzucato,¹⁸
 N. McCauley,⁹⁸ E. McCluskey,⁵³ N. McConkey,¹⁴² K. McDonald,¹³⁵ K. S. McFarland,¹³⁸ C. McGivern,⁵³
 A. McGowan,¹³⁸ C. McGrew,¹⁵⁰ R. McKeown,¹⁷¹ A. McNab,¹⁰⁴ D. McNulty,⁷⁵ R. McTaggart,¹⁴⁸ V. Meddage,⁸⁸
 A. Mefodiev,⁷⁹ P. Mehta,⁸⁴ D. Mei,¹⁴⁵ O. Mena,⁶⁷ S. Menary,¹⁷⁶ H. Mendez,¹³⁶ D. P. Mendez,¹⁵¹ A. Menegolli,¹²⁹
 G. Meng,¹²⁷ M. Messier,⁷⁷ W. Metcalf,¹⁰¹ M. Mewes,⁷⁷ H. Meyer,¹⁷⁰ T. Miao,⁵³ J. Migenda,¹⁴² R. Milincic,⁶²
 J. Miller,¹⁵³ W. Miller,¹¹¹ J. Mills,¹⁶⁰ C. Milne,⁷⁵ O. Mineev,⁷⁹ O. Miranda,³² C. S. Mishra,⁵³ S. R. Mishra,¹⁴⁴
 A. Mislivec,¹¹¹ B. Mitrica,⁶⁴ D. Mladenov,¹⁹ I. Mocioiu,¹³⁰ K. Moffat,⁴⁵ N. Moggi,⁷³ R. Mohanta,⁶⁵ N. Mokhov,⁵³
 J. Molina,¹⁶² L. Molina Bueno,⁴⁶ A. Montanari,⁷³ C. Montanari,¹²⁹ D. Montanari,⁵³ L. Montano Zetina,³²
 J. Moon,¹⁰⁶ M. Mooney,³⁵ C. Moore,⁵³ D. Moreno,³ B. Morgan,¹⁶⁹ G. F. Moroni,⁵³ C. Morris,⁶³ W. Morse,¹⁵
 C. Mossey,⁵³ C. A. Moura,⁵¹ J. Mousseau,¹⁰⁷ L. Muallem,²⁵ M. Muether,¹⁷⁰ S. Mufson,⁷⁷ F. Muheim,⁴⁷
 H. Muramatsu,¹¹¹ S. Murphy,⁴⁶ J. Musser,⁷⁷ J. Nachtman,⁸⁰ M. Nalbandyan,¹⁷⁵ R. Nandakumar,¹⁴⁰ D. Naples,¹³³
 S. Narita,⁸² G. Navarro,³ J. Navarro,⁸ D. Navas-Nicols,²⁰ N. Nayak,²³ M. Nebot-Guinot,⁴⁷ M. Needham,⁴⁷
 K. Negishi,⁸² J. Nelson,¹⁷¹ M. Nessi,¹⁹ D. Newbold,¹⁴ M. Newcomer,¹³¹ R. Nichol,⁹⁹ T. C. Nicholls,¹⁴⁰ E. Niner,⁵³
 A. Norman,⁵³ B. Norris,⁵³ J. Norris,⁷⁵ P. Novella,⁶⁷ E. Nowak,¹⁹ J. Nowak,⁹⁶ M. S. Nunes,⁴⁸ H. O’Keeffe,⁹⁶
 M. Oberling,⁵ A. Olivares Del Campo,⁴⁵ A. Olivier,¹³⁸ Y. Onel,⁸⁰ Y. Onishchuk,⁹³ T. Ovsjannikova,⁷⁹ S. Ozturk,¹⁹
 L. Pagani,²² S. Pakvasa,⁶² O. Palamara,⁵³ J. Paley,⁵³ M. Pallavicini,⁵⁵ C. Palomares,²⁰ J. Palomino,¹⁵⁰ E. Pantic,²²
 A. Paolo,⁶³ V. Paolone,¹³³ V. Papadimitriou,⁵³ R. Papaleo,⁹⁵ S. Paramesvaran,¹⁴ J. Park,¹⁶⁶ S. Parke,⁵³
 Z. Parsa,¹⁵ S. Pascoli,⁴⁵ J. Pasternak,⁷⁶ J. Pater,¹⁰⁴ L. Patrizii,⁷³ R. B. Patterson,²⁵ S. J. Patton,⁹⁷ T. Patzak,⁴
 A. Paudel,⁸⁸ B. Paulos,¹⁷² L. Paulucci,⁵¹ Z. Pavlovic,⁵³ G. Pawloski,¹¹¹ P. Payam,⁷⁴ D. Payne,⁹⁸ V. Pec,¹⁴²
 S. J. M. Peeters,¹⁵¹ E. Pennacchio,⁷⁸ A. Penzo,⁸⁰ G. N. Perdue,⁵³ O. I. G. Peres,⁴⁸ L. Periale,⁴⁶ K. Petridis,¹⁴
 G. Petrillo,¹³⁹ R. Petti,¹⁴⁴ P. Picchi,¹²⁹ L. Pickering,¹⁰⁸ F. Pietropaolo,¹²⁷ J. Pillow,¹⁶⁹ P. Plonski,¹⁶⁸ R. Plunkett,⁵³
 R. Poling,¹¹¹ X. Pons,¹⁹ N. Poonthottathil,⁸¹ M. Popovic,⁵³ R. Pordes,⁵³ S. Pordes,⁵³ M. Potekhin,¹⁵ R. Potenza,²⁷
 B. Potukuchi,⁸³ S. Poudel,⁶³ J. Pozimski,⁷⁶ M. Pozzato,⁷³ T. Prakasj,⁹⁷ R. Preece,¹⁴⁰ O. Prokofiev,⁵³ N. Pruthi,¹²⁸

P. Przewlocki,¹¹⁵ F. Psihas,⁷⁷ D. Pugnre,⁷⁸ D. Pushka,⁵³ K. Qi,¹⁵⁰ X. Qian,¹⁵ J. L. Raaf,⁵³ R. Raboanary,² V. Radeka,¹⁵ J. Rademacker,¹⁴ V. Radescu,¹⁹ B. Radics,⁴⁶ A. Radovic,¹⁷¹ A. Rafique,⁸⁸ M. Rajaoalisoa,² I. Rakhno,⁵³ H. T. Rakotondramanana,² L. Rakotondravohitra,² Y. A. Ramachers,¹⁶⁹ R. A. Rameika,⁵³ M. A. Ramirez Delgado,⁵⁹ J. Ramsey,¹⁰⁰ B. J. Ramson,⁵³ A. Rappoldi,¹²⁹ G. L. Raselli,¹²⁹ P. Ratoff,⁹⁶ S. Ravat,¹⁹ O. Ravenez,¹¹³ H. Razafinime,² B. Rebel,⁵³ D. Redondo,²⁰ C. Regenfus,⁴⁶ M. Reggiani-Guzzo,⁴⁸ T. Rehak,⁴³ J. Reichenbacher,¹⁴⁶ D. Reitzner,⁵³ M. H. Reno,⁸⁰ A. Renshaw,⁶³ S. Rescia,¹⁵ F. Resnati,¹⁹ A. Reynolds,¹²⁴ G. Riccobene,⁹⁵ L. C. J. Rice,¹¹² K. Rielage,¹⁰⁰ K. Riesselmann,⁵³ Y. - A. Rigaut,⁴⁶ D. Rivera,¹³¹ L. Rochester,¹³⁹ M. Roda,⁹⁸ P. Rodrigues,¹²⁴ M. J. Rodriguez Alonso,¹⁹ B. Roe,¹⁰⁷ A. J. Roeth,⁴⁴ R. M. Roser,⁵³ M. Ross-Lonergan,⁴⁵ M. Rossella,¹²⁹ J. Rout,⁸⁴ S. Roy,⁶⁰ A. Rubbia,⁴⁶ C. Rubbia,⁵⁸ R. Rucinski,⁵³ B. Russell,¹⁷⁴ J. Russell,¹³⁹ D. Ruterbories,¹³⁸ M. R. Vagins,⁸⁹ R. Saakyan,⁹⁹ N. Sahu,⁷¹ P. Sala,¹⁰⁹ G. Salukvadze,¹⁹ N. Samios,¹⁵ F. Sanchez,⁶⁶ M. C. Sanchez,⁸¹ C. Sandoval,³ B. Sands,¹³⁵ S. U. Sankar,⁶⁹ S. Santana,¹³⁶ L. M. Santos,⁴⁸ G. Santucci,¹⁵⁰ N. Saoulidou,⁷ P. Sapienza,⁹⁵ C. Sarasty,³¹ I. Sarcevic,⁶ G. Savage,⁵³ A. Scaramelli,¹²⁹ A. Scarpelli,⁴ T. Schaffer,¹¹⁰ H. Schellman,¹²² P. Schlabach,⁵³ C. M. Schloesser,⁴⁶ D. Schmitz,²⁹ J. Schneps,¹⁶⁰ K. Scholberg,⁴⁴ A. Schukraft,⁵³ E. Segreto,⁴⁸ S. Sehrawat,⁶⁰ J. Sensenig,¹³¹ I. Seong,²³ J. A. Sepulveda-Quiroz,⁸¹ A. Sergi,¹² F. Sergiampietri,⁴⁶ D. Sessumes,¹⁵⁶ K. Sexton,¹⁵ L. Sexton-Kennedy,⁵³ D. Sgalaberna,¹⁹ M. H. Shaevitz,³⁶ S. Shafaq,⁸⁴ J. S. Shahi,¹²⁸ S. Shahsavarani,¹⁵⁶ P. Shanahan,⁵³ H. R. Sharma,⁸³ R. Sharma,¹⁵ R. K. Sharma,¹³⁷ T. Shaw,⁵³ S. Shin,²⁹ I. Shoemaker,¹⁴⁵ D. Shoultz,¹⁰⁸ R. Shrock,¹⁵⁰ N. Simos,¹⁵ J. Sinclair,¹¹ G. Sinev,⁴⁴ V. Singh,⁹ J. Singh,¹⁰² J. Singh,¹⁰² I. Singh,¹²⁸ J. Singh,¹²⁸ R. Sipos,¹⁹ F. W. Sippach,³⁶ G. Sirri,⁷³ K. Siyeon,³⁰ D. Smargianaki,¹⁹ A. Smith,²⁶ A. Smith,⁴⁴ E. Smith,⁷⁷ P. Smith,⁷⁷ J. Smolik,³⁸ M. Smy,²³ E. L. Snider,⁵³ P. Snopok,⁶⁸ J. Sobczyk,¹⁷³ H. Sobel,²³ M. Soderberg,¹⁵² C. J. Solano Salinas,¹¹³ N. Solomey,¹⁷⁰ W. Sontheim,¹⁰⁰ M. Sorel,⁶⁷ J. A. Soto-Oton,²⁰ A. Sousa,³¹ K. Soustruznik,²⁸ F. Spagliardi,¹²⁴ M. Spanu,¹²⁹ J. Spitz,¹⁰⁷ N. J. C. Spooner,¹⁴² R. Staley,¹² M. Stancari,⁵³ L. Stanco,¹²⁷ A. Stefanik,⁵³ H. M. Steiner,⁹⁷ J. Stewart,¹⁵ J. Stock,¹⁴⁶ F. Stocker,¹⁹ S. Stoica,⁶⁴ J. Stone,¹³ J. Strait,⁵³ M. Strait,¹¹¹ T. Strauss,⁵³ S. Striganov,⁵³ A. Stuart,³³ G. Sullivan,¹⁰⁵ M. Sultana,¹³⁸ Y. Sun,⁶² A. Surdo,¹⁶³ V. Susic,¹⁰ L. Suter,⁵³ C. M. Suter,²⁷ R. Svoboda,²² B. Szczerbinska,¹⁵⁵ A. M. Szelc,¹⁰⁴ S. Söldner-Rembold,¹⁰⁴ N. Tagg,¹²³ R. Talaga,⁵ H. Tanaka,¹³⁹ B. Tapia Oregui,¹⁵⁷ S. Tariq,⁵³ E. Tatar,⁷⁵ R. Tayloe,⁷⁷ M. Tenti,⁷³ K. Terao,¹³⁹ C. Ternes,⁶⁷ F. Terranova,⁷² G. Testera,⁵⁵ A. Thea,¹⁴⁰ L. F. Thompson,¹⁴² J. Thompson,¹⁴² C. Thorn,¹⁵ A. Timilsina,¹⁵ S. C. Timm,⁵³ J. Todd,³¹ A. Tonazzo,⁴ T. Tope,⁵³ D. Torbunov,¹¹¹ M. Torti,¹²⁹ M. Tortola,⁶⁷ F. Tortorici,²⁷ M. Touns,⁵³ C. Touramanis,⁹⁸ J. Trevor,²⁵ M. Tripathi,²² W. Tromeur,⁷⁸ I. Tropin,⁵³ W. H. Trzaska,⁸⁵ Y.-T. Tsai,¹³⁹ K. V. Tsang,¹³⁹ A. Tsaris,⁵³ S. Tufanli,¹⁷⁴ C. Tull,⁹⁷ J. Turner,⁴⁵ M. Tzanov,¹⁰¹ E. Tziaferi,⁷ Y. Uchida,⁷⁶ J. Urheim,⁷⁷ T. Usher,¹³⁹ G. A. Valdivieso,⁴⁹ E. Valencia,¹⁷¹ L. Valerio,⁵³ Z. Vallari,¹⁵⁰ J. Valle,⁶⁷ R. Van Berg,¹³¹ R. Van de Water,¹⁰⁰ F. Varanini,¹²⁷ G. Varner,⁶² J. Vasel,⁷⁷ G. Vasseur,¹⁸ K. Vaziri,⁵³ G. Velev,⁵³ S. Ventura,¹²⁷ A. Verdugo,²⁰ M. Vermeulen,¹¹⁸ E. Vernon,¹⁵ M. Verzocchi,⁵³ T. Viant,⁴⁶ C. Vignoli,⁵⁷ S. Vihonen,⁸⁵ C. Vilela,¹⁵⁰ B. Viren,¹⁵ P. Vokac,³⁸ T. Vrba,³⁸ T. Wachala,¹¹⁷ D. Wahl,¹⁷² M. Wallbank,³¹ H. Wang,²⁴ J. Wang,²² T.-C. Wang,⁴⁵ B. Wang,¹⁴⁹ Y. Wang,¹⁵⁰ Z. Wang,¹⁵⁸ K. Warburton,⁸¹ D. Warner,³⁵ M. O. Wascko,⁷⁶ D. Waters,⁹⁹ A. Watson,¹² A. Weber,¹⁴⁰ M. Weber,¹¹ H. Wei,¹⁵ W. Wei,¹⁴⁵ A. Weinstein,⁸¹ D. Wenman,¹⁷² M. Wetstein,⁸¹ M. While,¹⁴⁶ A. White,¹⁵⁶ L. Whitehead,¹⁹ D. Whittington,¹⁵² K. Wierman,¹²⁵ M. Wilking,¹⁵⁰ C. Wilkinson,¹¹ J. Willhite,⁵³ Z. Williams,¹⁵⁶ R. J. Wilson,³⁵ P. Wilson,⁵³ P. Wittich,³⁷ J. Wolcott,¹⁶⁰ T. Wongjirad,¹⁶⁰ K. Wood,¹⁵⁰ L. Wood,¹²⁵ E. Worcester,¹⁵ M. Worcester,¹⁵ S. Wu,⁴⁶ W. Wu,⁵³ W. Xu,¹⁴⁵ C. Yanagisawa,¹⁵⁰ S. Yang,³¹ T. Yang,⁵³ G. Yang,¹⁵⁰ J. Ye,¹⁴⁹ M. Yeh,¹⁵ N. Yershov,⁷⁹ K. Yonehara,⁵³ L. Yoshimura,¹⁶² B. Yu,¹⁵ J. Yu,¹⁵⁶ J. Zalesak,¹⁶ L. Zambelli,⁹⁴ B. Zamorano,¹⁵¹ A. Zani,¹⁹ K. Zarembo,¹⁶⁸ L. Zazueta,¹⁷¹ G. P. Zeller,⁵³ J. Zennaro,⁵³ C. Zhang,¹⁵ C. Zhang,¹⁴⁵ M. Zhao,¹⁵ Y.-L. Zhou,⁴⁵ G. Zhu,¹²¹ E. D. Zimmerman,³⁴ M. Zito,¹⁸ S. Zucchelli,⁷³ J. Zuklin,¹⁶ V. Zutshi,¹¹² and R. Zwaska⁵³

(The DUNE Collaboration)

¹Aligarh Muslim University, Department of Physics, Aligarh-202002, India

²University of Antananarivo, BP 566, Antananarivo 101, Madagascar

³Universidad Antonio Nariño, Cra 3 Este No 47A-15, Bogota, Colombia

⁴APC, AstroParticule et Cosmologie, Universit Paris Diderot, CNRS/IN2P3, CEA/Irfu, Observatoire de Paris, Sorbonne Paris Cit, 10, rue Alice Domon et Lonie Duquet, 75205 Paris Cedex 13, France

⁵Argonne National Laboratory, Argonne, IL 60439, USA

⁶University of Arizona, 1118 E. Fourth Street Tucson, AZ 85721, USA

⁷University of Athens, University Campus, Zografou GR 157 84, Greece

⁸Universidad del Atlantico, Carrera 30 Nmero 8- 49 Puerto Colombia - Atlntico, Colombia

⁹Banaras Hindu University, Department of Physics, Varanasi - 221 005, India

¹⁰University of Basel, Klingelbergstrasse 82, CH-4056 Basel, Switzerland

- ¹¹University of Bern, Sidlerstrasse 5, CH-3012 Bern, Switzerland
- ¹²University of Birmingham, Edgbaston, Birmingham B15 2TT, United Kingdom
- ¹³Boston University, Boston, MA 02215, USA
- ¹⁴University of Bristol, H. H. Wills Physics Laboratory, Tyndall Avenue Bristol BS8 1TL, United Kingdom
- ¹⁵Brookhaven National Laboratory, Upton, NY 11973, USA
- ¹⁶Institute of Physics, Czech Academy of Sciences, Na Slovance 2, 182 21 Praha 8, Czech Republic
- ¹⁷Centro Brasileiro de Pesquisas Físicas, Rio de Janeiro, RJ 22290-180, Brazil
- ¹⁸CEA/Saclay, IRFU (Institut de Recherche sur les Lois Fondamentales de l'Univers), F-91191 Gif-sur-Yvette CEDEX, France
- ¹⁹CERN, European Organization for Nuclear Research 1211 Geneve 23, Switzerland, CERN
- ²⁰CIEMAT, Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas, Av. Complutense, 40, E-28040 Madrid, Spain
- ²¹University of California (Berkeley), Berkeley, CA 94720, USA
- ²²University of California (Davis), Davis, CA 95616, USA
- ²³University of California (Irvine), Irvine, CA 92697, USA
- ²⁴University of California (Los Angeles), Los Angeles, CA 90095, USA
- ²⁵California Institute of Technology, Pasadena, CA 91125, USA
- ²⁶University of Cambridge, JJ Thomson Avenue, Cambridge CB3 0HE, United Kingdom
- ²⁷University of Catania, INFN Sezione di Catania, Via Santa Sofia 64, I-95123 Catania, Italy
- ²⁸Institute of Particle and Nuclear Physics of the Faculty of Mathematics and Physics of the Charles University in Prague, V Holešovičkách 747/2, 180 00 Praha 8-Libeň, Czech Republic
- ²⁹University of Chicago, Chicago, IL 60637, USA
- ³⁰Chung-Ang University, Dongjak-Gu, Seoul 06974, South Korea
- ³¹University of Cincinnati, Cincinnati, OH 45221, USA
- ³²Cinvestav, Apdo. Postal 14-740, 07000 Ciudad de Mexico, Mexico
- ³³Universidad de Colima, 340 Colonia Villa San Sebastian Colima, Colima, Mexico
- ³⁴University of Colorado (Boulder), Boulder, CO 80309, USA
- ³⁵Colorado State University, Fort Collins, CO 80523, USA
- ³⁶Columbia University, New York, NY 10027, USA
- ³⁷Cornell University, Ithaca, NY 14853, USA
- ³⁸Czech Technical University in Prague, Břehová 78/7, 115 19 Prague 1, Czech Republic
- ³⁹Dakota State University, Madison, SD 57042, USA
- ⁴⁰University of Dallas, Irving, TX 75062-4736, USA
- ⁴¹Daresbury Laboratory, Daresbury Warrington, Cheshire WA4 4AD, United Kingdom
- ⁴²University of Delhi, Department of Physics and Astrophysics, Delhi 110007, India
- ⁴³Drexel University, Philadelphia, PA 19104, USA
- ⁴⁴Duke University, Durham, NC 27708, USA
- ⁴⁵University of Durham, South Road, Durham DH1 3LE, United Kingdom
- ⁴⁶ETH Zurich, Institute for Particle Physics, Zurich, Switzerland
- ⁴⁷University of Edinburgh, Edinburgh EH8 9YL, UK, United Kingdom
- ⁴⁸Universidade Estadual de Campinas, Campinas - SP, 13083-970, Brazil
- ⁴⁹Universidade Federal de Alenas, Poos de Caldas - MG, 37715-400, Brazil
- ⁵⁰Universidade Federal do Rio de Janeiro, Rio de Janeiro - RJ, 21941-901, Brazil
- ⁵¹Universidade Federal do ABC, Santo Andr, SP 09210-580, Brazil
- ⁵²UEFS/DFIS - State University of Feira de Santana, Feira de Santana - BA, 44036-900, Brazil
- ⁵³Fermi National Accelerator Laboratory, Batavia, IL 60510, USA
- ⁵⁴University of Florida, PO Box 118440 Gainesville, FL 32611-8440, USA
- ⁵⁵University of Genova, 16126 Genova GE, Italy
- ⁵⁶Universidade Federal de Goias, Goiania, GO 74690-900, Brazil
- ⁵⁷Laboratori Nazionali del Gran Sasso, I-67010 Assergi, AQ, Italy
- ⁵⁸Gran Sasso Science Institute, Viale Francesco Crispi 7, L'Aquila, Italy
- ⁵⁹Universidad de Guanajuato, Gto., C.P. 37000, Mexico
- ⁶⁰Harish-Chandra Research Institute, Jhansi, Allahabad 211 019, India
- ⁶¹Harvard University, 17 Oxford St. Cambridge, MA 02138, USA
- ⁶²University of Hawaii, Honolulu, HI 96822, USA
- ⁶³University of Houston, Houston, TX 77204, USA
- ⁶⁴Horia Hulubei National Institute of Physics and Nuclear Engineering, Strada Reactorului 30, Măgurele, Romania
- ⁶⁵University of Hyderabad, Gachibowli, Hyderabad - 500 046, India
- ⁶⁶Institut de Física d'Altes Energies (IFAE), Campus UAB, Facultat Ciències Nord, 08193 Bellaterra, Barcelona, Spain
- ⁶⁷Instituto de Física Corpuscular, Catedrático Jose Beltrán, 2 E-46980 Paterna (Valencia), Spain
- ⁶⁸Illinois Institute of Technology, Chicago, IL 60616, USA
- ⁶⁹Indian Institute of Technology Bombay, Department of Physics Mumbai 400 076, India
- ⁷⁰Indian Institute of Technology Guwahati, Guwahati, 781 039, India
- ⁷¹Indian Institute of Technology Hyderabad, Hyderabad, 502285, India
- ⁷²Sezione INFN Milano Bicocca and University of Milano Bicocca, Milano, Italy

- ⁷³INFN Universit degli Studi di Bologna, 40127 Bologna BO, Italy
- ⁷⁴Institute for Research in Fundamental Sciences (IPM), Farmanieh St. Tehran, 19538-33511, Iran
- ⁷⁵Idaho State University, Department of Physics, Pocatello, ID 83209, USA
- ⁷⁶Imperial College of Science Technology & Medicine, Blackett Laboratory Prince Consort Road, London SW7 2BZ, United Kingdom
- ⁷⁷Indiana University, Bloomington, IN 47405, USA
- ⁷⁸Institut de Physique Nucleaire de Lyon (IPNL), Rue E. Fermi 4 69622 Villeurbanne, France
- ⁷⁹Institute for Nuclear Research of the Russian Academy of Sciences (INR RAS), 60th October Anniversary Prosp. 7a Moscow, 117312, Russia
- ⁸⁰University of Iowa, Department of Physics and Astronomy 203 Van Allen Hall Iowa City, IA 52242, USA
- ⁸¹Iowa State University, Ames, Iowa 50011, USA
- ⁸²Iwate University, Morioka, Iwate 020-8551, Japan
- ⁸³University of Jammu, Physics Department, JAMMU-180006, India
- ⁸⁴Jawaharlal Nehru University, Jawaharlal Nehru University, New Delhi 110067, India
- ⁸⁵University of Jyväskylä, P.O. Box 35, FI-40014, Finland
- ⁸⁶High Energy Accelerator Research Organization (KEK), Ibaraki, 305-0801, Japan
- ⁸⁷KTH Royal Institute of Technology, Roslagstullsbacken 21, SE-106 91 Stockholm, Sweden
- ⁸⁸Kansas State University, Manhattan, KS 66506, USA
- ⁸⁹Kavli Institute for the Physics and Mathematics of the Universe (WPI), Kashiwa, Chiba 277-8583, Japan
- ⁹⁰Department of Physics, K L E F, Green Fields, Guntur - 522 502, AP, India
- ⁹¹Korea Institute for Science and Technology Information, Daejeon, 34141, South Korea
- ⁹²National Institute of Technology, Kure College, Hiroshima, 737-8506, Japan
- ⁹³Kyiv National University, 64, 01601 Kyiv, Ukraine
- ⁹⁴Laboratoire d'Annecy-le-Vieux de Physique des Particules, CNRS/IN2P3 and Université Savoie Mont Blanc, 74941 Annecy-le-Vieux, France
- ⁹⁵INFN - Laboratori Nazionali del Sud (LNS), Via S. Sofia 62, 95123 Catania, Italy
- ⁹⁶Lancaster University, Bailrigg, Lancaster LA1 4YB, United Kingdom
- ⁹⁷Lawrence Berkeley National Laboratory, Berkeley, CA 94720, USA
- ⁹⁸University of Liverpool, L69 7ZE, Liverpool, United Kingdom
- ⁹⁹University College London, London, WC1E 6BT, United Kingdom
- ¹⁰⁰Los Alamos National Laboratory, Los Alamos, NM 87545, USA
- ¹⁰¹Louisiana State University, Baton Rouge, LA 70803, USA
- ¹⁰²University of Lucknow, Lucknow 226007, Uttar Pradesh, India
- ¹⁰³Madrid Autonoma University, Ciudad Universitaria de Cantoblanco 28049 Madrid, Spain
- ¹⁰⁴University of Manchester, Oxford Road, Manchester M13 9PL, United Kingdom
- ¹⁰⁵University of Maryland, College Park, MD 20742, USA
- ¹⁰⁶Massachusetts Institute of Technology, Cambridge, MA 02139, USA
- ¹⁰⁷University of Michigan, Ann Arbor, MI 48109, USA
- ¹⁰⁸Michigan State University, East Lansing, MI 48824, USA
- ¹⁰⁹INFN Milano, INFN Sezione di Milano, I-20133 Milano, Italy
- ¹¹⁰University of Minnesota (Duluth), Duluth, MN 55812, USA
- ¹¹¹University of Minnesota (Twin Cities), Minneapolis, MN 55455, USA
- ¹¹²Northern Illinois University, Department of Physics, DeKalb, Illinois 60115, USA
- ¹¹³Universidad Nacional de Ingeniería, Av. Tupac Amaru 210, Lima 25, Peru
- ¹¹⁴Istituto Nazionale di Fisica Nucleare - Sezione di Napoli, Complesso Universitario di Monte S. Angelo, I-80126 Napoli, Italy
- ¹¹⁵National Centre for Nuclear Research, A. Soltana 7, 05 400 Otwock, Poland
- ¹¹⁶University of New Mexico, 1919 Lomas Blvd. N.E. Albuquerque, NM 87131, USA
- ¹¹⁷H. Niewodniczanski Institute of Nuclear Physics, Polish Academy of Sciences, Cracow, Poland
- ¹¹⁸Nikhef National Institute of Subatomic Physics, Science Park, Amsterdam, Netherlands
- ¹¹⁹Northwestern University, Evanston, IL 60208, USA
- ¹²⁰University of Notre Dame, Notre Dame, IN 46556, USA
- ¹²¹Ohio State University, 191 W. Woodruff Ave. Columbus, OH 43210, USA
- ¹²²Oregon State University, Corvallis, OR 97331, USA
- ¹²³Otterbein University, One South Grove Street Westerville, OH 43081, USA
- ¹²⁴University of Oxford, Oxford, OX1 3RH, United Kingdom
- ¹²⁵Pacific Northwest National Laboratory, Richland, WA 99352, USA
- ¹²⁶Physical Research Laboratory, Ahmedabad 380 009, India
- ¹²⁷University of Padova, Dip. Fisica e Astronomia G. Galilei and INFN Sezione di Padova, I-35131 Padova, Italy
- ¹²⁸Panjab University, Chandigarh, 160014 U.T., India
- ¹²⁹University of Pavia, INFN Sezione di Pavia, I-27100 Pavia, Italy
- ¹³⁰Pennsylvania State University, University Park, PA 16802, USA
- ¹³¹University of Pennsylvania, Philadelphia, PA 19104, USA
- ¹³²University di Pisa, Theor. Division; Largo B. Pontecorvo 3, Ed. B-C, I-56127 Pisa, Italy
- ¹³³University of Pittsburgh, Pittsburgh, PA 15260, USA

- ¹³⁴Pontificia Universidad Católica del Perú, Apartado 1761, Lima, Peru
¹³⁵Princeton University, Princeton, New Jersey 08544, USA
¹³⁶University of Puerto Rico, Mayaguez, 00681, USA
¹³⁷Punjab Agricultural University, Department of Math. Stat. & Physics, Ludhiana 141004, India
¹³⁸University of Rochester, Rochester, NY 14627, USA
¹³⁹SLAC National Acceleratory Laboratory, Menlo Park, CA 94025, USA
¹⁴⁰STFC Rutherford Appleton Laboratory, OX11 0QX Harwell Campus, Didcot, United Kingdom
¹⁴¹University Sergio Arboleda, Cll 74 -14 -14, 11022 Bogotá, Colombia
¹⁴²University of Sheffield, Department of Physics and Astronomy, Sheffield S3 7RH, United Kingdom
¹⁴³University of Sofia, 5 James Bourchier Blvd., Sofia, Bulgaria
¹⁴⁴University of South Carolina, Columbia, SC 29208, USA
¹⁴⁵University of South Dakota, Vermillion, SD 57069, USA
¹⁴⁶South Dakota School of Mines and Technology, Rapid City, SD 57701, USA
¹⁴⁷South Dakota Science And Technology Authority, Lead, SD 57754, USA
¹⁴⁸South Dakota State University, Brookings, SD 57007, USA
¹⁴⁹Southern Methodist University, Dallas, TX 75275, USA
¹⁵⁰Stony Brook University, Stony Brook, New York 11794, USA
¹⁵¹University of Sussex, Brighton, BN1 9RH, United Kingdom
¹⁵²Syracuse University, Syracuse, NY 13244, USA
¹⁵³Universidad Tecnica Federico Santa Maria, Department de Fisica, Casino 110-V, Valparaiso, Chile
¹⁵⁴University of Tennessee at Knoxville, TN, 37996, USA
¹⁵⁵Texas A&M University (Corpus Christi), Corpus Christi, TX 78412, USA
¹⁵⁶University of Texas (Arlington), Arlington, TX 76019, USA
¹⁵⁷University of Texas (Austin), Austin, TX 78712, USA
¹⁵⁸Tsinghua University, Haidian District, Beijing 100084, China
¹⁵⁹TUBITAK Space Technologies Research Institute, TR-06800, Ankara, Turkey
¹⁶⁰Tufts University, Medford, MA 02155, USA
¹⁶¹Universidade Federal de So Carlos, Araras - SP, 13604-900, Brazil
¹⁶²Universidade Nacional de Asuncion, 585540/2 Interno 1068 CC: 910, Asunción, Paraguay
¹⁶³Università del Salento - INFN, Via Provinciale per Arnesano, 73100 - Lecce , Italy
¹⁶⁴Variable Energy Cyclotron Centre, 1/AF, Bidhannagar Kolkata - 700 064 West Bengal, India
¹⁶⁵Valley City State University, Valley City, ND 58072, USA
¹⁶⁶Virginia Tech, Blacksburg, VA 24060, USA
¹⁶⁷University of Warsaw, Faculty of Physics ul. Pasteura 5 02-093 Warsaw, Poland
¹⁶⁸Warsaw University of Technology, Nowowiejska 15/19, 00-665 Warszawa Poland, Poland
¹⁶⁹University of Warwick, Coventry CV4 7AL, United Kingdom
¹⁷⁰Wichita State University, Physics Division, Wichita, KS 67260, USA
¹⁷¹William and Mary, Williamsburg, VA 23187, USA
¹⁷²University of Wisconsin (Madison), Madison, WI 53706, USA
¹⁷³Wroclaw University, Plac Maza Bornia 9, 50-204 Wroclaw, Poland
¹⁷⁴Yale University, New Haven, CT 06520, USA
¹⁷⁵Yerevan Institute for Theoretical Physics and Modeling, Halabian Str. 34, Yerevan 0036, Armenia
¹⁷⁶York University, Physics and Astronomy Department, 4700 Keele St. Toronto M3J 1P3, Canada

PACS numbers: