

# THE DØ COLLABORATION

R. Piegaia, A. Tanasijczuk

**Universidad de Buenos Aires, Buenos Aires, Argentina**

G.A. Alves, J. Barreto, H. da Motta, A.K.A. Maciel, M.-E. Pol, M.S. Rangel

**LAFEX, Centro Brasileiro de Pesquisas Físicas, Rio de Janeiro, Brazil**

M. Begalli, W. Carvalho, C. De Oliveira Martins R. Luna, H.B. Malbouisson, L. Mundim, H. Nogima,  
W.L. Prado da Silva R.F. Rodrigues, A. Sznajder

**Universidade do Estado do Rio de Janeiro, Rio de Janeiro, Brazil**

E.M. Gregores

**Universidade Federal do ABC, Santo André, Brazil**

S.M. Lietti, P.G. Mercadante, S.F. Novaes

**Instituto de Física Teórica, Universidade Estadual Paulista, São Paulo, Brazil**

E. Aguilo, S. Beale, K. Chan, Y. Coadou, D. Gillberg, G. Kertzscher, Z. Liu, R.W. Moore, C. Potter,  
W. Taylor, B. Vachon

**University of Alberta, McGill University, Simon Fraser University and York University,  
Canada**

X.B. Bu, L. Han, Y. Liu, H. Yin

**University of Science and Technology of China, Hefei, People's Republic of China**

C. Avila, B. Gómez L. Mendoza, J.P. Negret, R. Ramirez, J.M.R. Roldan

**Universidad de los Andes, Bogotá, Colombia**

V. Hynek, J. Kvita, R. Leitner, K. Soustruznik

**Charles University, Center for Particle Physics, Prague, Czech Republic**

Z. Hubacek, R. Otec, V. Simak, P. Vokac

**Czech Technical University, Prague, Czech Republic**

A. Kupco, M. Lokajicek, V. Vrba

**Institute of Physics, Academy of Sciences, Center for Particle Physics, Prague, Czech  
Republic**

B. Hoeneisen

**Universidad San Francisco de Quito, Quito, Ecuador**

F. Badaud, P. Gay, Ph. Gris, F. Lacroix, F. Tissandier

**LPC, Univ Blaise Pascal, CNRS/IN2P3, Clermont, France**

Y. Arnoud, S. Crépé-Renaudin B. Martin, G. Sajot, J. Stark

**LPSC, Université Joseph Fourier Grenoble 1, CNRS/IN2P3, Institut National Polytechnique de Grenoble, France**

A.-F. Barfuss, B. Calpas, M.-C. Cousinou, A. Duperrin, M. Escalier, W. Geng, D. Jamin, E. Kajfasz, S. Kermiche, E. Nagy

**CPPM, Aix-Marseille Université, CNRS/IN2P3, Marseille, France**

S. Calvet, L. Duflot, J.-F. Grivaz, M. Jaffré C. Ochando, P. Pétrouff

**LAL, Univ Paris-Sud, IN2P3/CNRS, Orsay, France**

G. Bernardi, N. Huske, J. Lellouch, M.P. Sanders, L. Sonnenschein

**LPNHE, Universités Paris VI and VII, IN2P3/CNRS, Paris, France**

M. Arthaud, U. Bassler, M. Besançon S. Chakrabarti, F. Couderc, F. Déliot P. Lutz, C. Royon, V. Shary, M. Titov, B. Tuchming, D. Vilanova

**DAPNIA/Service de Physique des Particules, CEA, Saclay, France**

W. Geist, S. Greder, I. Ripp-Baudot, V. Siccardi

**IPHC, Université Louis Pasteur, CNRS/IN2P3, Strasbourg, France**

G. Grenier, T. Kurča P. Lebrun, G.S. Muanza, P. Verdier

**IPNL, Université Lyon 1, CNRS/IN2P3, Villeurbanne, France and Université de Lyon, Lyon, France**

M. Erdmann, T. Hebbeker, M. Kirsch, A. Meyer

**RWTH Aachen, III. Physikalisches Institut A, Aachen, Germany**

V. Buescher, C. Hensel, M. Hohlfeld, J. Meyer, O. Mundal, S.-J. Park, M.-A. Pleier, A. Quadt

**Universität Bonn, Physikalisches Institut, Bonn, Germany**

R. Bernhard, K. Jakobs, J.-P. Konrath, H. Nilsen, B. Penning, I. Torchiani, A. Wenger

**Universität Freiburg, Physikalisches Institut, Freiburg, Germany**

F. Fiedler, T. Kuhl, S. Tapprogge, G. Weber

**Universität Mainz, Institut für Physik, Mainz, Germany**

O. Biebel, P. Calfayan, A. Grohsjean, P. Haefner, T. Nunnemann, D. Schaile, R. Ströhmer B. Tiller

**Ludwig-Maximilians-Universität München, München, Germany**

P. Mättig Y. Peters, T. Schliephake, D. Wicke, C. Zeitnitz

**Fachbereich Physik, University of Wuppertal, Wuppertal, Germany**

S.B. Beri, V. Bhatnagar, S. Dutt, J.M. Kohli

**Panjab University, Chandigarh, India**

B. Choudhary, A. Dubey, K. Ranjan, R.K. Shivpuri  
**Delhi University, Delhi, India**

B.S. Acharya, P. Banerjee, S. Banerjee, S.R. Dugad, N.K. Mondal  
**Tata Institute of Fundamental Research, Mumbai, India**

M. Ówiok M.W. Grünewald  
**University College Dublin, Dublin, Ireland**

S.H. Ahn, S.J. Hong, T.J. Kim, K.S. Lee, J.K. Lim, S.K. Park  
**Korea Detector Laboratory, Korea University, Seoul, Korea**

S. Choi  
**SungKyunKwan University, Suwon, Korea**

M.A. Carrasco-Lizarraga, H. Castilla-Valdez, G.A. García-Guerra J.J. Hernández-Orduña  
P.L.M. Podesta-Lerma, A. Sánchez-Hernández  
**CINVESTAV, Mexico City, Mexico**

J.G. Hegeman, P. Houben, P.J. van den Berg, W.M. van Leeuwen  
**FOM-Institute NIKHEF and University of Amsterdam/NIKHEF, Amsterdam, The Netherlands**

L.S. Ancu, S.J. de Jong, F. Filthaut, C.F. Galea, N.A. Naumann, M.M. Meijer  
**Radboud University Nijmegen/NIKHEF, Nijmegen, The Netherlands**

V.M. Abazov, G.D. Alexeev, G. Golovanov, Y.M. Khazdhev, E.V. Komissarov, D. Korablev,  
V.L. Malyshev, Y.P. Merekov, G. Panov, S.Y. Porokhovoi, V. Rodionov, A. Rozhdestvenski,  
N.A. Russakovich, N.B. Skachkov, V.V. Tokmenin, L.S. Vertogradov, Y. Vertogradova, Y.A. Yatsunenko  
**Joint Institute for Nuclear Research, Dubna, Russia**

V. Gavrilov, P. Polozov, G. Safronov, V. Stolin, V.I. Turtikov  
**Institute for Theoretical and Experimental Physics, Moscow, Russia**

E.E. Boos, V. Bunichev, L.V. Dudko, P. Ermolov, D. Karmanov, V.A. Kuzmin, A. Leflat, M. Merkin,  
M. Perfilov, A. Uzbyakova, E.G. Zverev  
**Moscow State University, Moscow, Russia**

V.A. Bezzubov, S.P. Denisov, V.N. Evdokimov, V.I. Koreshev, S. Koshkarev, M. Kostin, A.V. Kozelov,  
E.A. Kozlovsky, S. Kulikov, V.V. Lipaev, L. Mikhalev, A.V. Popov, N. Prokopenko, A.A. Shchukin,  
D.A. Stoyanova, I.A. Vasilyev, S.A. Zvyagintsev  
**Institute for High Energy Physics, Protvino, Russia**

G. Alkhalzov, S. Evstyukhin, V. Kim, A. Lobodenko, P. Neustroev, G. Obrant, V. Oreshkin, S. Oganessian,  
Y. Scheglov, L. Uvarov, S. Uvarov

**Petersburg Nuclear Physics Institute, St. Petersburg, Russia**

B. Åsman C. Belanger-Champagne, T. Ekelöf S. Strandberg

**Lund University, Royal Institute of Technology, Stockholm University and Uppsala  
University, Sweden**

I. Bertram, G. Borissov, S. Burdin, H. Fox, K. Holubyev, P. Love, A. Rakitine, P.N. Ratoff, A. Sopczak,  
M. Williams, J. Walder

**Lancaster University, Lancaster, United Kingdom**

D. Bauer, R. Beuselinck, C.P. Buszello, T. Christoudias, G. Davies, J.F. Hassard, J. Hays, R. Jesik,  
P. Jonsson, N. Osman, S. Robinson, T. Scanlon, P. Vint

**Imperial College, London, United Kingdom**

K. Harder, R.K. Mommsen, M. Owen, K. Peters, P. Rich, C. Schwanenberger, S. Söldner-Rembold  
M. Takahashi, M. Vesterinen, T.R. Wyatt, W. Yang

**University of Manchester, Manchester, United Kingdom**

E. Cheu, A. Das, K. Johns, M. Shupe, E.W. Varnes

**University of Arizona, Tucson, Arizona 85721, USA**

R.J. Madaras, M. Strovink

**Lawrence Berkeley National Laboratory and University of California, Berkeley, California  
94720, USA**

R.E. Hall

**California State University, Fresno, California 93740, USA**

A. Chandra, R. Clare, J. Ellison, A.P. Heinson, L. Li, M. Padilla, S.J. Wimpenny

**University of California, Riverside, California 92521, USA**

T. Adams, A. Askew, O. Atramentov, S. Blessing, N.J. Buchanan, E. Carrera, D. Duggan, Y. Gershtein,  
S. Hagopian, T. Hoang, J. Sekaric, S. Sumowidagdo, H.D. Wahl

**Florida State University, Tallahassee, Florida 32306, USA**

M. Aoki, L. Bagby, B. Baldin, J.F. Bartlett, L. Bellantoni, A. Bellavance, P.C. Bhat, A. Boehnlein,  
A. Bross, B.C.K. Casey, S. Cihangir, W.E. Cooper, M. Demarteau, D. Denisov, S. Desai, H.T. Diehl,  
M. Diesburg, V.D. Elvira, W. Fisher, H.E. Fisk, S. Fu, S. Fuess, H. Greenlee, S. Grünendahl G. Gutierrez,  
R. Illingworth, A.S. Ito, M. Johnson, A. Jonckheere, A. Juste, P.A. Kasper, N. Khalatyan, B. Klima,  
W.M. Lee, Q.Z. Li, D. Lincoln, R. Lipton, A.L. Lyon, K.W. Merritt, H.E. Montgomery, M. Naimuddin,  
N. Oshima, G.J. Otero y Garzón V.M. Podstavkov, P. Rubinov, B. Sanghi, G. Savage, V. Sirotenko,  
L. Stutte, M. Verzocchi, M.H.L.S. Wang, M. Weber, R. Yamada, T. Yasuda, Z. Ye, M. Zanabria

**Fermi National Accelerator Laboratory, Batavia, Illinois 60510, USA**

M. Adams, C.E. Gerber, E. Shabalina, N. Varelas  
**University of Illinois at Chicago, Chicago, Illinois 60607, USA**

G. Blazey, D. Chakraborty, A. Dyshkant, M. Fortner, D. Hedin, J. Kozminski, D. Menezes, S. Uzunyan,  
V. Zutshi

**Northern Illinois University, DeKalb, Illinois 60115, USA**

T. Andeen, M.S. Anzels, D. Buchholz, M.H. Kirby, H. Schellman, D. Strom, S. Yacoob, S.W. Youn  
**Northwestern University, Evanston, Illinois 60208, USA**

R. Abrams, H. Evans, N. Parua, J. Rieger, R. Van Kooten, L. Welty-Rieger, D. Zieminska  
**Indiana University, Bloomington, Indiana 47405, USA**

K.M. Chan, M.D. Hildreth, D. Karmgard, D. Lam, J. Osta, Y. Pogorelov, R. Ruchti, D. Smirnov,  
P. Svoisky, J. Warchol, M. Wayne  
**University of Notre Dame, Notre Dame, Indiana 46556, USA**

N. Parashar  
**Purdue University Calumet, Hammond, Indiana 46323, USA**

J.M. Hauptman, S.W. Lee  
**Iowa State University, Ames, Iowa 50011, USA**

P. Baringer, A. Bean, J. Clutter, C.L. McGivern, T. Moulik, G.W. Wilson  
**University of Kansas, Lawrence, Kansas 66045, USA**

M. Ahsan, D.V. Bandurin, T.A. Bolton, V. Cuplov, A.V. Ferapontov, Y. Maravin, D. Onoprienko,  
M. Shamim, E. Von Toerne  
**Kansas State University, Manhattan, Kansas 66506, USA**

M. Arov, Z.D. Greenwood, L. Sawyer, M. Wobisch  
**Louisiana Tech University, Ruston, Louisiana 71272, USA**

S. Eno, N.J. Hadley, C. Jarvis, M. Wetstein  
**University of Maryland, College Park, Maryland 20742, USA**

D. Boline, D.K. Cho, U. Heintz, S. Jabeen, V. Parihar  
**Boston University, Boston, Massachusetts 02215, USA**

G. Alverson, E. Barberis, G. Cerminara, G. Facini, G. Hesketh, D.R. Wood  
**Northeastern University, Boston, Massachusetts 02115, USA**

A. Alton, E. De La Cruz-Burelo, A. Magerkurth, H.A. Neal, J. Qian, J. Strandberg, C. Xu, B. Zhou  
**University of Michigan, Ann Arbor, Michigan 48109, USA**

M. Abolins, J.A. Benitez, R. Brock, D. Edmunds, W. Geng, I. Hall, J. Kraus, J. Linnemann, J. Piper,  
R. Schwienhorst, R. Unalan, H. Weerts

**Michigan State University, East Lansing, Michigan 48824, USA**

A. Melnitchouk, B. Quinn

**University of Mississippi, University, Mississippi 38677, USA**

K. Bloom, D. Claes, K. DeVaughan, A. Dominguez, M. Eads, D. Johnston, S. Malik, G.R. Snow,  
M. Voutilainen

**University of Nebraska, Lincoln, Nebraska 68588, USA**

D. Gerbaudo, J. Haley, C. Tully, R. Wagner

**Princeton University, Princeton, New Jersey 08544, USA**

I. Iashvili, A. Kharchilava, A. Kumar, M.A. Strang

**State University of New York, Buffalo, New York 14260, USA**

G. Brooijmans, T. Gadfort, A. Haas, C. Johnson, I. Katsanos, D. Khatidze, S. Lammers, J. Mitrevski,  
M. Mulhearn, J. Parsons, P.M. Tuts, L. Zivkovic

**Columbia University, New York, New York 10027, USA**

J. Cammin, R. Demina, T. Ferbel, G. Ginther, A. Harel, P. Slattery, M. Zielinski

**University of Rochester, Rochester, New York 14627, USA**

P.D. Grannis, F. Guo, J. Guo, K. Herner, J.D. Hobbs, Y. Hu, R. McCarthy, M. Rijssenbeek,  
R.D. Schamberger, E. Strauss, D. Tsybychev, J. Zhu

**State University of New York, Stony Brook, New York 11794, USA**

M. Begel, A. Evdokimov, A. Patwa, S. Protopopescu, S. Snyder, K. Yip

**Brookhaven National Laboratory, Upton, New York 11973, USA**

J. Snow

**Langston University, Langston, Oklahoma 73050, USA**

B. Abbott, P. Gutierrez, S. Hossain, S. Jain, M. Rominsky, H. Severini, P. Skubic, M. Strauss

**University of Oklahoma, Norman, Oklahoma 73019, USA**

A. Khanov, F. Rizatdinova

**Oklahoma State University, Stillwater, Oklahoma 74078, USA**

T. Bose, D. Cutts, Y. Enari, G. Landsberg, M. Narain, M. Pangilinan, R. Partridge, Y. Xie, H.D. Yoo

**Brown University, Providence, Rhode Island 02912, USA**

A. Brandt, K. De, V. Kaushik, J. Li, M. Sosebee, B. Spurlock, A. White, J. Yu

**University of Texas, Arlington, Texas 76019, USA**

R. Kehoe, P. Renkel

**Southern Methodist University, Dallas, Texas 75275, USA**

P. Bargassa, M. Cooke, M. Corcoran, D. Mackin, P. Padley, G. Pawloski, M. Prewitt

**Rice University, Houston, Texas 77005, USA**

D. Brown, M. Buehler, C. Dukes, R. Hirosky, A. Norman, S. Zelitch

**University of Virginia, Charlottesville, Virginia 22901, USA**

J. BackusMayes, T.H. Burnett, T. Dorland, A. Garcia-Bellido, A. Goussiou, H.J. Lubatti, P.K. Mal,  
S. Schlobohm, G. Watts, T. Zhao

**University of Washington, Seattle, Washington 98195, USA**