



HAL
open science

Measurement of the $W \rightarrow \tau\nu$ production cross section in $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV

B. Abbott, M. Abolins, V. Abramov, B.S. Acharya, D.L. Adams, M. Adams, S. Ahn, V. Akimov, G.A. Alves, N. Amos, et al.

► To cite this version:

B. Abbott, M. Abolins, V. Abramov, B.S. Acharya, D.L. Adams, et al.. Measurement of the $W \rightarrow \tau\nu$ production cross section in $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV. Physical Review Letters, 2000, 84, pp.5710-5715. 10.1103/PhysRevLett.84.5710 . in2p3-00004990

HAL Id: in2p3-00004990

<https://hal.in2p3.fr/in2p3-00004990>

Submitted on 26 Jun 2000

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

B. Abbott,⁴⁷ M. Abolins,⁴⁴ V. Abramov,¹⁹ B.S. Acharya,¹³ D.L. Adams,⁵⁴ M. Adams,³⁰ S. Ahn,²⁹ V. Akimov,¹⁷ G.A. Alves,² N. Amos,⁴³ E.W. Anderson,³⁶ M.M. Baarmand,⁴⁹ V.V. Babintsev,¹⁹ L. Babukhadia,⁴⁹ A. Baden,⁴⁰ B. Baldin,²⁹ S. Banerjee,¹³ J. Bantly,⁵³ E. Barberis,²² P. Baringer,³⁷ J.F. Bartlett,²⁹ U. Bassler,⁹ A. Belyaev,¹⁸ S.B. Beri,¹¹ G. Bernardi,⁹ I. Bertram,²⁰ V.A. Bezzubov,¹⁹ P.C. Bhat,²⁹ V. Bhatnagar,¹¹ M. Bhattacharjee,⁴⁹ G. Blazey,³¹ S. Blessing,²⁷ A. Boehnlein,²⁹ N.I. Bojko,¹⁹ F. Borcharding,²⁹ A. Brandt,⁵⁴ R. Breedon,²³ G. Briskin,⁵³ R. Brock,⁴⁴ G. Brooijmans,²⁹ A. Bross,²⁹ D. Buchholz,³² V. Buescher,⁴⁸ V.S. Burtovoi,¹⁹ J.M. Butler,⁴¹ W. Carvalho,³ D. Casey,⁴⁴ Z. Casilum,⁴⁹ H. Castilla-Valdez,¹⁵ D. Chakraborty,⁴⁹ K.M. Chan,⁴⁸ S.V. Chekulaev,¹⁹ W. Chen,⁴⁹ D.K. Cho,⁴⁸ S. Choi,²⁶ S. Chopra,²⁷ B.C. Choudhary,²⁶ J.H. Christenson,²⁹ M. Chung,³⁰ D. Claes,⁴⁵ A.R. Clark,²² W.G. Cobau,⁴⁰ J. Cochran,²⁶ L. Coney,³⁴ B. Connolly,²⁷ W.E. Cooper,²⁹ D. Coppage,³⁷ D. Cullen-Vidal,⁵³ M.A.C. Cummings,³¹ D. Cutts,⁵³ O.I. Dahl,²² K. Davis,²¹ K. De,⁵⁴ K. Del Signore,⁴³ M. Demarteau,²⁹ D. Denisov,²⁹ S.P. Denisov,¹⁹ H.T. Diehl,²⁹ M. Diesburg,²⁹ G. Di Loreto,⁴⁴ P. Draper,⁵⁴ Y. Ducros,¹⁰ L.V. Dudko,¹⁸ S.R. Dugad,¹³ A. Dyshkant,¹⁹ D. Edmunds,⁴⁴ J. Ellison,²⁶ V.D. Elvira,⁴⁹ R. Engelmann,⁴⁹ S. Eno,⁴⁰ G. Eppley,⁵⁶ P. Ermolov,¹⁸ O.V. Eroshin,¹⁹ J. Estrada,⁴⁸ H. Evans,⁴⁶ V.N. Evdokimov,¹⁹ T. Fahland,²⁵ S. Feher,²⁹ D. Fein,²¹ T. Ferbel,⁴⁸ H.E. Fisk,²⁹ Y. Fisyak,⁵⁰ E. Flattum,²⁹ F. Fleuret,²² M. Fortner,³¹ K.C. Frame,⁴⁴ S. Fuess,²⁹ E. Gallas,²⁹ A.N. Galyaev,¹⁹ P. Gartung,²⁶ V. Gavrilov,¹⁷ R.J. Genik II,²⁰ K. Genser,²⁹ C.E. Gerber,²⁹ Y. Gershtein,⁵³ B. Gibbard,⁵⁰ R. Gilmartin,²⁷ G. Ginther,⁴⁸ B. Gobbi,³² B. Gómez,⁵ G. Gómez,⁴⁰ P.I. Goncharov,¹⁹ J.L. González Solís,¹⁵ H. Gordon,⁵⁰ L.T. Goss,⁵⁵ K. Gounder,²⁶ A. Goussiou,⁴⁹ N. Graf,⁵⁰ P.D. Grannis,⁴⁹ D.R. Green,²⁹ J.A. Green,³⁶ H. Greenlee,²⁹ S. Grinstein,¹ P. Grudberg,²² S. Grünendahl,²⁹ G. Guglielmo,⁵² A. Gupta,¹³ S.N. Gurzhiev,¹⁹ G. Gutierrez,²⁹ P. Gutierrez,⁵² N.J. Hadley,⁴⁰ H. Haggerty,²⁹ S. Hagopian,²⁷ V. Hagopian,²⁷ K.S. Hahn,⁴⁸ R.E. Hall,²⁴ P. Hanlet,⁴² S. Hansen,²⁹ J.M. Hauptman,³⁶ C. Hays,⁴⁶ C. Hebert,³⁷ D. Hedin,³¹ A.P. Heinson,²⁶ U. Heintz,⁴¹ T. Heuring,²⁷ R. Hirosky,³⁰ J.D. Hobbs,⁴⁹ B. Hoeneisen,⁶ J.S. Hoftun,⁵³ F. Hsieh,⁴³ A.S. Ito,²⁹ S.A. Jerger,⁴⁴ R. Jesik,³³ T. Joffe-Minor,³² K. Johns,²¹ M. Johnson,²⁹ A. Jonckheere,²⁹ M. Jones,²⁸ H. Jöstlein,²⁹ S.Y. Jun,³² S. Kahn,⁵⁰ E. Kajfasz,⁸ D. Karmanov,¹⁸ D. Karmgard,³⁴ R. Kehoe,³⁴ S.K. Kim,¹⁴ B. Klima,²⁹ C. Klopfenstein,²³ B. Knuteson,²² W. Ko,²³ J.M. Kohli,¹¹ D. Koltick,³⁵ A.V. Kostitskiy,¹⁹ J. Kotcher,⁵⁰ A.V. Kotwal,⁴⁶ A.V. Kozelov,¹⁹ E.A. Kozlovsky,¹⁹ J. Krane,³⁶ M.R. Krishnaswamy,¹³ S. Krzywdzinski,²⁹ M. Kubantsev,³⁸ S. Kuleshov,¹⁷ Y. Kulik,⁴⁹ S. Kunori,⁴⁰ G. Landsberg,⁵³ A. Leflat,¹⁸ F. Lehner,²⁹ H. Li,⁴⁹ J. Li,⁵⁴ Q.Z. Li,²⁹ J.G.R. Lima,³ D. Lincoln,²⁹ S.L. Linn,²⁷ J. Linnemann,⁴⁴ R. Lipton,²⁹ J.G. Lu,⁴ A. Lucotte,⁴⁹ L. Lueking,²⁹ C. Lundstedt,⁴⁵ A.K.A. Maciel,³¹ R.J. Madaras,²² V. Manankov,¹⁸ S. Mani,²³ H.S. Mao,⁴ R. Markeloff,³¹ T. Marshall,³³ M.I. Martin,²⁹ R.D. Martin,³⁰ K.M. Mauritz,³⁶ B. May,³² A.A. Mayorov,³³ R. McCarthy,⁴⁹ J. McDonald,²⁷ T. McKibben,³⁰ T. McMahon,⁵¹ H.L. Melanson,²⁹ M. Merkin,¹⁸ K.W. Merritt,²⁹ C. Miao,⁵³ H. Miettinen,⁵⁶ A. Mincer,⁴⁷ C.S. Mishra,²⁹ N. Mokhov,²⁹ N.K. Mondal,¹³ H.E. Montgomery,²⁹ M. Mostafa,¹ H. da Motta,² E. Nagy,⁸ F. Nang,²¹ M. Narain,⁴¹ V.S. Narasimham,¹³ H.A. Neal,⁴³ J.P. Negret,⁵ S. Negroni,⁸ D. Norman,⁵⁵ L. Oesch,⁴³ V. Oguri,³ B. Olivier,⁹ N. Oshima,²⁹ D. Owen,⁴⁴ P. Padley,⁵⁶ A. Para,²⁹ N. Parashar,⁴² R. Partridge,⁵³ N. Parua,⁷ M. Paterno,⁴⁸ A. Patwa,⁴⁹ B. Pawlik,¹⁶ J. Perkins,⁵⁴ M. Peters,²⁸ R. Piegaia,¹ H. Piekarczyk,²⁷ Y. Pischalnikov,³⁵ B.G. Pope,⁴⁴ E. Popkov,³⁴ H.B. Prosper,²⁷ S. Protopopescu,⁵⁰ J. Qian,⁴³ P.Z. Quintas,²⁹ R. Raja,²⁹ S. Rajagopalan,⁵⁰ N.W. Reay,³⁸ S. Reucroft,⁴² M. Rijssenbeek,⁴⁹ T. Rockwell,⁴⁴ M. Roco,²⁹ P. Rubinov,³² R. Ruchti,³⁴ J. Rutherford,²¹ A. Santoro,² L. Sawyer,³⁹ R.D. Schamberger,⁴⁹ H. Schellman,³² A. Schwartzman,¹ J. Sculli,⁴⁷ N. Sen,⁵⁶ E. Shabalina,¹⁸ H.C. Shankar,¹³ R.K. Shivpuri,¹² D. Shpakov,⁴⁹ M. Shupe,²¹ R.A. Sidwell,³⁸ H. Singh,²⁶ J.B. Singh,¹¹ V. Sirotenko,³¹ P. Slattey,⁴⁸ E. Smith,⁵² R.P. Smith,²⁹ R. Snihur,³² G.R. Snow,⁴⁵ J. Snow,⁵¹ S. Snyder,⁵⁰ J. Solomon,³⁰ X.F. Song,⁴ V. Sorin,¹ M. Sosebee,⁵⁴ N. Sotnikova,¹⁸ M. Souza,² N.R. Stanton,³⁸ G. Steinbrück,⁴⁶ R.W. Stephens,⁵⁴ M.L. Stevenson,²² F. Stichelbaut,⁵⁰ D. Stoker,²⁵ V. Stolin,¹⁷ D.A. Stoyanova,¹⁹ M. Strauss,⁵² K. Streets,⁴⁷ M. Strovink,²² L. Stutte,²⁹ A. Sznajder,³ J. Tarazi,²⁵ M. Tartaglia,²⁹ T.L.T. Thomas,³² J. Thompson,⁴⁰ D. Toback,⁴⁰ T.G. Trippe,²² A.S. Turcot,⁴³ P.M. Tuts,⁴⁶ P. van Gemmeren,²⁹ V. Vaniev,¹⁹ N. Varelas,³⁰ A.A. Volkov,¹⁹ A.P. Vorobiev,¹⁹ H.D. Wahl,²⁷ J. Warchol,³⁴ G. Watts,⁵⁷ M. Wayne,³⁴ H. Weerts,⁴⁴ A. White,⁵⁴ J.T. White,⁵⁵ J.A. Wightman,³⁶ S. Willis,³¹ S.J. Wimpenny,²⁶ J.V.D. Wirjawan,⁵⁵ J. Womersley,²⁹ D.R. Wood,⁴² R. Yamada,²⁹ P. Yamin,⁵⁰ T. Yasuda,²⁹ K. Yip,²⁹ S. Youssef,²⁷ J. Yu,²⁹ Y. Yu,¹⁴ M. Zanabria,⁵ H. Zheng,³⁴ Z. Zhou,³⁶ Z.H. Zhu,⁴⁸ M. Zielinski,⁴⁸ D. Zieminska,³³ A. Zieminski,³³ V. Zutshi,⁴⁸ E.G. Zverev,¹⁸ and A. Zylberstein¹⁰

(DØ Collaboration)

¹Universidad de Buenos Aires, Buenos Aires, Argentina

²LAFEX, Centro Brasileiro de Pesquisas Físicas, Rio de Janeiro, Brazil

- ³Universidade do Estado do Rio de Janeiro, Rio de Janeiro, Brazil
- ⁴Institute of High Energy Physics, Beijing, People's Republic of China
- ⁵Universidad de los Andes, Bogotá, Colombia
- ⁶Universidad San Francisco de Quito, Quito, Ecuador
- ⁷Institut des Sciences Nucléaires, IN2P3-CNRS, Université de Grenoble 1, Grenoble, France
- ⁸Centre de Physique des Particules de Marseille, IN2P3-CNRS, Marseille, France
- ⁹LPNHE, Universités Paris VI and VII, IN2P3-CNRS, Paris, France
- ¹⁰DAPNIA/Service de Physique des Particules, CEA, Saclay, France
- ¹¹Panjab University, Chandigarh, India
- ¹²Delhi University, Delhi, India
- ¹³Tata Institute of Fundamental Research, Mumbai, India
- ¹⁴Seoul National University, Seoul, Korea
- ¹⁵CINVESTAV, Mexico City, Mexico
- ¹⁶Institute of Nuclear Physics, Kraków, Poland
- ¹⁷Institute for Theoretical and Experimental Physics, Moscow, Russia
- ¹⁸Moscow State University, Moscow, Russia
- ¹⁹Institute for High Energy Physics, Protvino, Russia
- ²⁰Lancaster University, Lancaster, United Kingdom
- ²¹University of Arizona, Tucson, Arizona 85721
- ²²Lawrence Berkeley National Laboratory and University of California, Berkeley, California 94720
- ²³University of California, Davis, California 95616
- ²⁴California State University, Fresno, California 93740
- ²⁵University of California, Irvine, California 92697
- ²⁶University of California, Riverside, California 92521
- ²⁷Florida State University, Tallahassee, Florida 32306
- ²⁸University of Hawaii, Honolulu, Hawaii 96822
- ²⁹Fermi National Accelerator Laboratory, Batavia, Illinois 60510
- ³⁰University of Illinois at Chicago, Chicago, Illinois 60607
- ³¹Northern Illinois University, DeKalb, Illinois 60115
- ³²Northwestern University, Evanston, Illinois 60208
- ³³Indiana University, Bloomington, Indiana 47405
- ³⁴University of Notre Dame, Notre Dame, Indiana 46556
- ³⁵Purdue University, West Lafayette, Indiana 47907
- ³⁶Iowa State University, Ames, Iowa 50011
- ³⁷University of Kansas, Lawrence, Kansas 66045
- ³⁸Kansas State University, Manhattan, Kansas 66506
- ³⁹Louisiana Tech University, Ruston, Louisiana 71272
- ⁴⁰University of Maryland, College Park, Maryland 20742
- ⁴¹Boston University, Boston, Massachusetts 02215
- ⁴²Northeastern University, Boston, Massachusetts 02115
- ⁴³University of Michigan, Ann Arbor, Michigan 48109
- ⁴⁴Michigan State University, East Lansing, Michigan 48824
- ⁴⁵University of Nebraska, Lincoln, Nebraska 68588
- ⁴⁶Columbia University, New York, New York 10027
- ⁴⁷New York University, New York, New York 10003
- ⁴⁸University of Rochester, Rochester, New York 14627
- ⁴⁹State University of New York, Stony Brook, New York 11794
- ⁵⁰Brookhaven National Laboratory, Upton, New York 11973
- ⁵¹Langston University, Langston, Oklahoma 73050
- ⁵²University of Oklahoma, Norman, Oklahoma 73019
- ⁵³Brown University, Providence, Rhode Island 02912
- ⁵⁴University of Texas, Arlington, Texas 76019
- ⁵⁵Texas A&M University, College Station, Texas 77843