

List of Publications

Publication in Peer Reviewed Journals

Total Number of Publications as of 25th Oct'2012 : 92

Publications as Primary Author

- (i) Search for Higgs Boson Production in Oppositely Charged Dilepton and Missing Energy Events in $p\bar{p}$ Collisions at $\sqrt{s} = 1.96$ TeV
Published 20th Aug'2012: **Phys. Rev. D** **86**, 032010 (2012), arXiv:1207.1041
Corresponding to DØNote 6288
Primary Authors: Alexandre Fauré, M. Hohlfeld, Zdenek Hubacek, Aurelio Juste, **Ruchika Nayyar**, Konstantinos A. Petridis, Boris Tuchming, J. Weichert
Submitted by : Ruchika Nayyar on behalf of D0 coloboration
(Used in the Thesis work)
- (ii) Search for the standard model Higgs boson in the $ZH \rightarrow bb$ channel in $9.5fb^{-1}$ of $p\bar{p}$ collisions at $\sqrt{s} = 1.96$ TeV
Published 9th Sept2012: **Phys. Lett. B** **716**, 285 (2012), arXiv:1207.5689
Corresponding to DØNote 6336
Primary Authors: Abhinav Dubey, Arnaud Duperrin, Gabriel Facini, Jean-Francois Grivaz, Thibault Guillemin, Joe Haley, Xiaowen Lei, Arthur Maciel, **Ruchika Nayyar**, Nicolas Osman, Murilo Rangel, Tim Scanlon, Erich Varnes, Ren-Jie Wang

International conferences

Oral Presentations

- SUSY 2011, FermiLab, Batavia, IL USA, September 2011, 'High Mass Higgs Boson Searches at the DØ and CDF Experiments'.
- 43rd Rencontres de Moriond, La Thuile, Italy, March 2011, Young Scientist talk on 'High Mass Higgs Boson Searches at the DØ Experiment'.
- American Physics Society, Denver, CO, USA, April 2009, 'Search for Higgs at DØ Decaying to $H \rightarrow WW \rightarrow \mu \tau_{had}$ '.

Poster Presentations

- Lepton Photon 2011, Mumbai, India, August 2011, Poster Presentation on the 'High Mass SM Higgs Boson Searches at the DØ Experiment'.
- Lepton Photon 2009, Hamburg, Germany, August 2009, Poster Presentation on the 'Searches for $H \rightarrow WW \rightarrow \ell\ell$ with $5.4fb^{-1}$ of data'.

- User’s Meeting, FermiLab, USA, June 2009, Poster Presentation on the ‘Search for $H \rightarrow WW \rightarrow \mu\tau$ at DØ’.

Proceedings

- ‘Search for $H \rightarrow WW \rightarrow \ell\ell$ at DØ’, R. Nayyar, published in the proceedings of the Lepton-Photon 2009 Conference.
DOI:10.3204/DESY-PROC-2010-04/P24
- ‘Search for Higgs at DØ Decaying to $H \rightarrow WW \rightarrow \ell\ell$ ’, R. Nayyar, published in the proceedings of the 46th Recontres de Moriond 2011.
- ‘Search for $H \rightarrow WW \rightarrow \ell\ell$ at DØ’, R. Nayyar, K. Ranjan, to be published in the **Pramana journal**.

Internal DØ notes (Total: 13)

- (i) Search for Higgs production in dilepton plus missing energy final states with 9.7 fb^{-1} of $p\bar{p}$ collisions at $\sqrt{s} = 1.96 \text{ TeV}$, **DØ Conf. Note 6343**.
E. Chapon, A. Fauré, Z. Hubacek, M. Hohlfeld, A. Juste, **R. Nayyar**, A. Patwa, K. Petridis, B. Tuchming, J. Weichert
- (ii) Search for the standard model Higgs boson in the $ZH \rightarrow v\bar{v}bb$ channel in 9.5 fb^{-1} of $p\bar{p}$ collisions at $\sqrt{s} = 1.96 \text{ TeV}$. **DØ Conf. Note 6340**.
Abhinav Dubey, Arnaud Duperrin, Gabriel Facini, Jean-Francois Grivaz, Thibault Guillemin, Joe Haley, Xiaowen Lei, Arthur Maciel, **Ruchika Nayyar**, Nicolas Osman, Murilo Rangel, Tim Scanlon, Erich Varnes, Ren-Jie Wang
- (iii) Search for the standard model Higgs boson in the $ZH \rightarrow v\bar{v}bb$ channel in 9.5 fb^{-1} of $p\bar{p}$ collisions at $\sqrt{s} = 1.96 \text{ TeV}$. **DØ Note 6336**.
Abhinav Dubey, Arnaud Duperrin, Gabriel Facini, Jean-Francois Grivaz, Thibault Guillemin, Joe Haley, Xiaowen Lei, Arthur Maciel, **Ruchika Nayyar**, Nicolas Osman, Murilo Rangel, Tim Scanlon, Erich Varnes, Ren-Jie Wang
- (iv) Search for Higgs production in di-electrons plus missing energy final states with 9.7 fb^{-1} of $p\bar{p}$ collisions at $\sqrt{s} = 1.96 \text{ TeV}$, **DØ Conf. Note 6330**.
Emilien Chapon, Aurelio Juste, **Ruchika Nayyar**, Konstantinos A. Petridis
- (v) Search for Higgs production in dilepton plus missing energy final states with $(8.6-9.7) \text{ fb}^{-1}$ of $p\bar{p}$ collisions at $\sqrt{s} = 1.96 \text{ TeV}$, **DØ Conf. Note 6302**.
E. Chapon, A. Faure, Z. Hubacek, M. Hohlfeld, A. Juste, **R. Nayyar**, K. Petridis, B. Tuchming, J. Weichert
- (vi) Search for Higgs production with Same Flavor and Opposite Charge Dileptons plus missing energy final states with 8.6 fb^{-1} of $p\bar{p}$ collisions at $\sqrt{s} = 1.96 \text{ TeV}$, **DØ Note 6288**.
A. Faure Z. Hubacek, A. Juste, **R. Nayyar**, K. Petridis, B. Tuchming

- (vii) Search for Higgs production in dilepton plus missing energy final states including a fourth generation interpretation for the Summer 2011 conferences with 8.1 fb^{-1} of $p\bar{p}$ collisions at $\sqrt{s} = 1.96 \text{ TeV}$, **DØ Conf. Note 6219**.
X. Bu, M. Eads, W. Fisher, D. Gerbaudo, M. Hohlfeld, Z. Hubacek, A. Juste, M. Mulhearn, **R. Nayyar**, K. Petridis, B. Tuchming, J. Weichert
- (viii) Search for Standard Model Higgs Boson with Opposite Charge Dileptons and Missing Transverse Energy using Boosted Decision Trees for 8.1 fb^{-1} of $p\bar{p}$ Collisions . **DØ Conf. Note 6182**.
Alexandre Fauré, M. Hohlfeld, Zdenek Hubacek, Aurelio Juste, **Ruchika Nayyar**, Konstantinos A. Petridis, Boris Tuchming, J. Weichert
- (ix) Search for Standard Model Higgs Boson with Same Flavor and Opposite Charge Dileptons and Missing Transverse Energy using Boosted Decision Trees for 8.1 fb^{-1} of $p\bar{p}$ Collisions **DØ Note 6175**.
Xuebing Bu, Michael Eads, Davide Gerbaudo, Zdenek Hubacek, Aurelio Juste , Michael Mulhearn, **Ruchika Nayyar**, Konstantinos Petridis, Boris Tuchming
- (x) Search for Standard Model Higgs Boson with Opposite Charge Dileptons and Missing Transverse Energy using Boosted Decision Trees for 6.7 fb^{-1} of $p\bar{p}$ Collisions **DØ Conf. Note 6082**.
R. Bernhard, M. Eads, D. Gerbaudo, M. Kirby, K. Petridis, **R. Nayyar**, J. Weichert
- (xi) Search for Standard Model Higgs Boson with Opposite Charge Dileptons and Missing Transverse Energy using Boosted Decision Trees for 6.7 fb^{-1} of $p\bar{p}$ Collisions. **DØ Note 6076**.
Ralf Bernhard, Scott Braithwaite, Michael Eads, Davide Gerbaudo, Marc Hohlfeld, Aurelio Juste, Michael Kirby, **Ruchika Nayyar**, Konstantinos Petridis, Boris Tuchming, Jonas Weichert, SungWoo Youn
- (xii) Search for the Higgs boson with a muon, a hadronically decaying tau and missing energy in the final state using Neural Networks with v15 Data,**DØ Note 6018**.
Ruchika Nayyar, Bjoern Penning, Kirti Ranjan
- (xiii) Correction of the Measurement of the Energy Deposition in the D0 Calorimeter, **DØ Note 5494**.
Norm Buchanan, Betty Calpas, Walter Geist, **Ruchika Nayyar**, Dean Schamberger