

Publications on International Journals

Evidence for the direct decay of the 125 GeV Higgs boson to fermions

CMS Collaboration, Published in **Nature Phys.** **10** (2014) 557-560

Nicola De Filippis, Giuseppe Iaselli, Gabriella Pugliese, Giorgio Maggi, Salvatore My, Donato Creanza, (*Politecnico di Bari & INFN Bari*), Ludwik Dobrzynski, Philippe Mine' (*Ecole Polytechnique, Paris*), Yasser Assran (*Cairo, Acad. Sci. Res. Tech. & Suez Canal U.*), Sherif Elgammal (*Cairo, Acad. Sci. Res. Tech. & British U. in Egypt*), Ali Ellithi Kamel (*Cairo, Acad. Sci. Res. Tech. & Cairo U.*), Ayman Mahrous (*Cairo, Acad. Sci. Res. Tech. & Helwan U.*), Amr Radi (*Cairo, Acad. Sci. Res. Tech. & British U. in Egypt & Ain Shams U., Cairo*) *et al.*

Evidence for the 125 GeV Higgs boson decaying to a pair of τ leptons

CMS Collaboration, Published in **JHEP** **1405** (2014) 104

Nicola De Filippis, Giuseppe Iaselli, Gabriella Pugliese, Giorgio Maggi, Salvatore My, Donato Creanza, (*Politecnico di Bari & INFN Bari*), Ludwik Dobrzynski, Philippe Mine' (*Ecole Polytechnique, Paris*), Yasser Assran (*Cairo, Acad. Sci. Res. Tech. & Suez Canal U.*), Sherif Elgammal (*Cairo, Acad. Sci. Res. Tech. & British U. in Egypt*), Ali Ellithi Kamel (*Cairo, Acad. Sci. Res. Tech. & Cairo U.*), Ayman Mahrous (*Cairo, Acad. Sci. Res. Tech. & Helwan U.*), Amr Radi (*Cairo, Acad. Sci. Res. Tech. & British U. in Egypt & Ain Shams U., Cairo*) *et al.*

Measurement of the properties of a Higgs boson in the four-lepton final state

CMS Collaboration, Published in **Phys.Rev.** **D89** (2014) 092007

Nicola De Filippis, Giuseppe Iaselli, Gabriella Pugliese, Giorgio Maggi, Salvatore My, Donato Creanza, (*Politecnico di Bari & INFN Bari*), Ludwik Dobrzynski, Philippe Mine' (*Ecole Polytechnique, Paris*), Ahmed Ali Abdelalim (*Helwan U. and CFP, Zewail City of Science and Tech, Cairo*), Yasser Assran (*Cairo, Acad. Sci. Res. Tech. & Suez Canal U.*), Sherif Elgammal (*Cairo, Acad. Sci. Res. Tech. & British U. in Egypt*), Ali Ellithi Kamel (*Cairo, Acad. Sci. Res. Tech. & Cairo U.*), Ayman Mahrous (*Cairo, Acad. Sci. Res. Tech. & Helwan U.*), Amr Radi (*Cairo, Acad. Sci. Res. Tech. & British U. in Egypt & Ain Shams U., Cairo*) *et al.*

Measurement of Higgs boson production and properties in the WW decay channel with leptonic final states

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Nicola De Filippis, Giuseppe Iaselli, Gabriella Pugliese, Giorgio Maggi, Salvatore My, Donato Creanza, (*Politecnico di Bari & INFN Bari*), Ludwik Dobrzynski, Philippe Mine' (*Ecole Polytechnique, Paris*), Ahmed Ali Abdelalim (*Helwan U. and CFP, Zewail City of Science and Tech, Cairo*), Yasser Assran (*Cairo, Acad. Sci. Res. Tech. & Suez Canal U.*), Sherif Elgammal (*Cairo, Acad. Sci. Res. Tech. & British U. in Egypt*), Ali Ellithi Kamel (*Cairo, Acad. Sci. Res. Tech. & Cairo U.*), Ayman Mahrous (*Cairo, Acad. Sci. Res. Tech. & Helwan U.*), Amr Radi (*Cairo, Acad. Sci. Res. Tech. & British U. in Egypt & Ain Shams U., Cairo*) *et al.*

Search for a Higgs boson decaying into a Z and a photon in pp collisions at $\sqrt{s} = 7$ and 8 TeV

CMS Collaboration, Published in **Phys.Lett.** **B726** (2013) 587-609

Nicola De Filippis, Giuseppe Iaselli, Gabriella Pugliese, Giorgio Maggi, Salvatore My, Donato Creanza, (*Politecnico di Bari & INFN Bari*), Ludwik Dobrzynski, Philippe Mine' (*Ecole Polytechnique, Paris*), Ahmed Ali Abdelalim (*Helwan U. and CFP, Zewail City of Science and Tech, Cairo*), Yasser Assran (*Cairo, Acad. Sci. Res. Tech. & Suez Canal U.*), Sherif Elgammal (*Cairo, Acad. Sci. Res. Tech. & British U. in Egypt*), Ali Ellithi Kamel (*Cairo, Acad. Sci. Res. Tech. & Cairo U.*), Ayman Mahrous (*Cairo, Acad. Sci. Res. Tech. & Helwan U.*), Amr Radi (*Cairo, Acad. Sci. Res. Tech. & British U. in Egypt & Ain Shams U., Cairo*) *et al.*

Search for a standard-model-like Higgs boson with a mass in the range 145 to 1000 GeV at the LHC

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Nicola De Filippis, Giuseppe Iaselli, Gabriella Pugliese, Giorgio Maggi, Salvatore My, Donato Creanza, (*Politecnico di Bari & INFN Bari*), Ludwik Dobrzynski, Philippe Mine' (*Ecole Polytechnique, Paris*), Yasser Assran (*Cairo, Acad. Sci. Res. Tech. & Suez Canal U.*), Ali Ellithi Kamel (*Cairo, Acad. Sci. Res. Tech. & Cairo U.*), Ayman Mahrous (*Cairo, Acad. Sci. Res. Tech. & Helwan U.*), Amr Radi (*Cairo, Acad. Sci. Res. Tech. & British U. in Egypt & Ain Shams U., Cairo*) *et al.*

Observation of a new boson with mass near 125 GeV in pp collisions at $\sqrt{s} = 7$ and 8 TeV

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Nicola De Filippis, Giuseppe Iaselli, Gabriella Pugliese, Giorgio Maggi, Salvatore My, Donato Creanza, (*Politecnico di Bari & INFN Bari*), Ludwik Dobrzynski, Philippe Mine' (*Ecole Polytechnique, Paris*), Yasser Assran (*Cairo, Acad. Sci. Res. Tech. & Suez Canal U.*), Ali Ellithi Kamel (*Cairo, Acad. Sci. Res. Tech. & Cairo U.*), Ayman Mahrous (*Cairo, Acad. Sci. Res. Tech. & Helwan U.*), Amr Radi (*Cairo, Acad. Sci. Res. Tech. & British U. in Egypt & Ain Shams U., Cairo*) *et al.*

Search for Z' resonances decaying to $t\bar{t}$ in dilepton+jets final states in pp collisions at $\sqrt{s}=7$ TeV

CMS Collaboration, Published in **Phys.Rev. D87 (2013) 072002**

Nicola De Filippis, Giuseppe Iaselli, Gabriella Pugliese, Giorgio Maggi, Salvatore My, Donato Creanza, (*Politecnico di Bari & INFN Bari*), Ludwik Dobrzynski, Philippe Mine' (*Ecole Polytechnique, Paris*), Yasser Assran (*Cairo. Acad. Sci. Res. Tech. & Suez Canal U.*), Sherif Elgammal (*Zewail City Sci. Technol., Giza & Cairo, Acad. Sci. Res. Tech.*), Ali Ellithi Kamel (*Cairo. Acad. Sci. Res. Tech. & Cairo U.*), Amr Radi (*Cairo. Acad. Sci. Res. Tech. & British U. in Egypt & Ain Shams U., Cairo*) et al.

Upgrade of the CMS muon system with triple-GEM detectors

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A.A. Abdelalim (*Helwan U. and CFP, Zewail City of Science and Tech, Cairo*), W. Ahmed (*British U. in Egypt*), W. Ahmed (*Quaid-i-Azam U.*), R. Aly (*British U. in Egypt*), A. Ashfaq (*Quaid-i-Azam U.*) et al.

Performance of the gas gain monitoring system of the CMS RPC muon detector

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L. Benussi^a, S. Bianco^a, L. Passamonti^a, D. Piccolo^a, D. Pierluigi^a, G. Raffone^a, A. Russo^a, G. Saviano^a, Y. Ban^b, J. Cai^b, Q. Li^b, S. Liu^b, S. Qian^b, D. Wang^b, Z. Xu^b, F. Zhang^b, Y. Choi^c, D. Kim^c, S. Choi^d, B. Hong^d, J.W. Kang^d, M. Kang^d, J.H. Kwon^d, K.S. Lee^d, S.K. Park^d, L. Pante^e, V.B.J. Singh^f, A.M.R. Kumar^f, S. Chand^f, A. Singh^f, V.K. Bhandari^f, A. Cimmino^g, A. Ocampo^g, F. Thyssens^g, M. Tytgat^g, W. Van Doninck^h, A. Ahmadⁱ, S. Muhammadⁱ, M. Shoaibⁱ, H. Hooraniⁱ, I. Awaniⁱ, I. Aliⁱ, W. Ahmedⁱ, M.I. Asgharⁱ, H. Shahzadⁱ, A. Sayedⁱ, A. Ibrahimⁱ, Y. Assranⁱ, R. Alyⁱ, A. Radiⁱ, T. Elkafrawiⁱ, A. Sharma^k, S. Colafranceschi^m, M. Abbresciaⁿ, P. Verwilligenⁿ, S. Meolaⁿ, N. Cavalloⁿ, A. Braghieriⁿ, P. Montagnaⁿ, C. Riccardiⁿ, P. Salviniⁿ, P. Vituloⁿ, A. Dimitrovⁿ, R. Hadjiiskaⁿ, L. Litovⁿ, B. Pavlovⁿ, P. Petkovⁿ, A. Aleksandrovⁿ, V. Genchevⁿ, P. Iaydjievⁿ, M. Rodozovⁿ, G. Sultanovⁿ, M. Vutovaⁿ, S. Stoykovaⁿ, H.S. Ibarraⁿ, M.I. Pedraza Moralesⁿ, S. Carpitneyⁿ, I. Bagaturiaⁿ, Z. Tsamalaidzeⁿ, C. Avilaⁿ, A. Cabreraⁿ, L. Chaparroⁿ, J.P. Gomezⁿ, B. Gomezⁿ, J.C. Sanabriaⁿ, S.K. Leeⁿ, A.K. Mohantyⁿ, R.G. Thomasⁿ, R. Sehgalⁿ, R. Chudasamaⁿ and S.T. Sehgalⁿ

^l Academy of Scientific Research and Technology of the Arab Republic of Egypt, 101 Sharia Kasr El-Ain, Cairo, Egypt

ⁿ Università e Politecnico di Bari, INFN Bari, Bari, Italy

CMS RPC muon detector performance with 2010-2012 LHC data

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G. Pugliese^l, Y. Ban^a, J. Cai^a, Q. Li^a, S. Liu^a, S. Qian^a, D. Wang^a, Z. Xu^a, F. Zhang^a, Y. Choi^b, D. Kim^b, J. Goh^b, S. Choi^c, B. Hong^c, J.W. Kang^c, M. Kang^c, J.H. Kwon^c, K.S. Lee^c, S.K. Lee^c, S.K. Park^c, L.M. Pant^d, A.K. Mohanty^d, R. Chudasama^d, J.B. Singh^e, V. Bhatnagar^e, A. Mehta^e, R. Kumar^e, S. Cauwenbergh^f, S. Costantini^f, A. Cimmino^f, S. Crucy^f, A. Fagot^f, G. Garcia^f, A. Ocampo^f, D. Poyraz^f, S. Salva^f, F. Thyssen^f, M. Tytgat^f, N. Zaganidis^f, W. V. Doninck^g, A. Cabrera^h, L. Chaparro^h, J.P. Gomez^h, B. Gomez^h, J.C. Sanabria^h, C. Avila^h, A. Ahmadⁱ, S. Muhammadⁱ, M. Shoaibⁱ, H. Hooraniⁱ, I. Awaniⁱ, I. Aliⁱ, W. Ahmedⁱ, M.I. Asgharⁱ, H. Shahzadⁱ, A. Sayedⁱ, A. Ibrahimⁱ, S. Alyⁱ, Y. Assranⁱ, A. Radiⁱ, T. Elkafrawiⁱ, A. Sharma^k, S. Colafranceschi^m, M. Abbresciaⁿ, C. Calabriaⁿ, A. Colaleoⁿ, G. Iaselliⁿ, F. Lodoⁿ, M. Maggiⁿ, S. Nuzzoⁿ, R. Radognaⁿ, R. Vendittiⁿ, P. Verwilligenⁿ, L. Benussi^m, S. Bianco^m, D. Piccolo^m, P. Paolucciⁿ, S. Buontempoⁿ, N. Cavalloⁿ, M. Merolaⁿ, F. Fabozziⁿ, O.M. Iorioⁿ, A. Braghieriⁿ, P. Montagnaⁿ, C. Riccardiⁿ, P. Salviniⁿ, P. Vituloⁿ, I. Vaiⁿ, A. Magnaniⁿ, A. Dimitrovⁿ, L. Litovⁿ, B. Pavlovⁿ, P. Petkovⁿ, A. Aleksandrovⁿ, V. Genchevⁿ, P. Iaydjievⁿ, M. Rodozovⁿ, G. Sultanovⁿ, M. Vutovaⁿ, S. Stoykovaⁿ, R. Hadjiiskaⁿ, H.S. Ibarraⁿ, M.I. P. Moralesⁿ, S.C. Bernardinoⁿ, I. Bagaturiaⁿ, Z. Tsamalaidzeⁿ, I. Crottyⁿ and M.S. Kimⁿ

^l Academy of Scientific Research and Technology of the Arab Republic of Egypt, 101 Sharia Kasr El-Ain, Cairo, Egypt

ⁿ Università e Politecnico di Bari, INFN Bari, Bari, Italy

CMS RPC commissioning of the existing detector during the long shutdown

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A. Cimmino^f, Y. Ban^a, J. Cai^a, Q. Li^a, S. Liu^a, S. Qian^a, D. Wang^a, Z. Xu^a, F. Zhang^a, Y. Choi^b, D. Kim^b, J. Goh^b, S. Choi^c, B. Hong^c, J.W. Kang^c, M. Kang^c, J.H. Kwon^c, K.S. Lee^c, S.K. Lee^c, S.K. Park^c, L.M. Pant^d, A.K. Mohanty^d, R. Chudasama^d, J.B. Singh^e, V. Bhatnagar^e, A. Mehta^e, R. Kumar^e, S. Cauwenbergh^f, S. Costantini^f, S. Crucy^f, A. Fagot^f, G. Garcia^f, A. Ocampo^f, D. Poyraz^f, S. Salva^f, F. Thyssen^f, M. Tytgat^f, N. Zaganidis^f, W.V. Doninck^g, A. Cabrera^h, L. Chaparro^h, J.P. Gomez^h, B. Gomez^h, J.C. Sanabria^h, C. Avila^h, A. Ahmadⁱ, S. Muhammadⁱ, M. Shoaibⁱ, H. Hooraniⁱ, I. Awaniⁱ, I. Aliⁱ, W. Ahmedⁱ, M.I. Asgharⁱ, H. Shahzadⁱ, A. Sayedⁱ, A. Ibrahimⁱ, S. Alyⁱ, Y. Assranⁱ, A. Radiⁱ, T. Elkafrawiⁱ, A. Sharma^k, S. Colafranceschi^m, M. Abbresciaⁿ, C. Calabriaⁿ, A. Colaleoⁿ, G. Iaselliⁿ, F. Lodoⁿ, M. Maggiⁿ, S. Nuzzoⁿ, G. Pugliese^l, R. Radognaⁿ, R. Vendittiⁿ, P. Verwilligenⁿ, L. Benussi^m, S. Bianco^m, D. Piccolo^m, P. Paolucciⁿ, S. Buontempoⁿ, N. Cavalloⁿ, M. Merolaⁿ, F. Fabozziⁿ, O.M. Iorioⁿ, A. Braghieriⁿ, P. Montagnaⁿ, C. Riccardiⁿ, P. Salviniⁿ, P. Vituloⁿ, I. Vaiⁿ, A. Magnaniⁿ, A. Dimitrovⁿ, L. Litovⁿ, B. Pavlovⁿ, P. Petkovⁿ, A. Aleksandrovⁿ, V. Genchevⁿ, P. Iaydjievⁿ, M. Rodozovⁿ, G. Sultanovⁿ, M. Vutovaⁿ, S. Stoykovaⁿ, R. Hadjiiskaⁿ, H.S. Ibarraⁿ, M.I.P. Moralesⁿ, S.C. Bernardinoⁿ, I. Bagaturiaⁿ, Z. Tsamalaidzeⁿ, I. Crottyⁿ and M.S. Kimⁿ

^l Academy of Scientific Research and Technology of the Arab Republic of Egypt, 101 Sharia Kasr El-Ain, Cairo, Egypt

ⁿ Università e Politecnico di Bari, INFN Bari, Bari, Italy

Resistive plate chambers for 2013-2014 muon upgrade in CMS at LHC

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S. Colafranceschi^b, R. Chudasama^a, L.M. Pant^a, A.K. Mohanty^a, R. Sehgal^a, S.T. Sehgal^a, R.G. Thomas^a, A. Sharma^b, V. Bhandari^c, S. Chand^c, A. Kumar^c, S. Kumar^c, A. Singh^c, V. Singh^c, S. Aly^{d,e}, R. Aly^{d,e}, T. Elkafrawy^e, A. Ibrahim^e, A. Radic^e, A. Sayed^e, S. Cauwenbergh^f, A. Cimmino^f, S. Crucy^f, A. Fagot^f, G. Garcia^f, D. Poyraz^f, S. Salva^f, F. Thyssen^f, M. Tytgat^f, N. Zaganidis^f, M. Abbrescia^g, M. Franco^g, P. Iaselli^g, N. Lacalamita^g, F. Loddo^g, M. Maggi^g, G. Pugliese^g, P. Verwillingen^g, S. Buontempo^h, F. Cassese^h, N. Cavallo^h, S. Energico^h, F. Fienga^h, F. Fabozzi^h, O. Iorio^h, L. Lista^h, G. Passeggio^h, P. Paolucci^h, A. Braghieriⁱ, A. Freddiⁱ, S. Guelfo Gigliⁱ, P. Montagnaⁱ, C. Riccardiⁱ, P. Salviniⁱ, F. Vercellatiⁱ, P. Vituloⁱ, A. Aleksandrov^j, V. Genchev^j, P. Iaydjiev^j, M. Rodozov^j, S. Stoykova^j, G. Sultanov^j, M. Vutova^j, Y. Choi^k, D. Kim^k, L. Benussi^l, S. Bianco^l, L. Passamonti^l, D. Piccolo^l, D. Pierluigi^l, G. Raffone^l, A. Russo^l, G. Saviano^l, A. Ahmad^m, W. Ahmed^m, I. Ali^m, M. Asghar^m, I. Awan^m, H. Hoorani^m, S. Muhammad^m, H. Shahzad^m, M. Shoaib^m, Y. Banⁿ, J. Caiⁿ, Q. Liⁿ, S. Liuⁿ, S. Qianⁿ, D. Wangⁿ, Z. Xuⁿ, F. Zhangⁿ, S. Bernardino^o, H. Ibaguen^o, I. Pedraza^o, I. Bagaturia^p, Z. Tsamalaidze^p, A. Cabrera^q, L. Chaparro^q, J.P. Gomez^q, B. Gomez^q, J.C. Sanabria^q, C. Avila^q, A. Dimitrov^r, R. Hadjiiska^r, L. Litov^r, B. Pavlov^r, P. Petkov^r, W. van Doninck^s and I. Crotty^t

^l *Academy of Scientific Research and Technology of the Arab Republic of Egypt, 101 Sharia Kasr El-Ain, Cairo, Egypt*

ⁿ *Università e Politecnico di Bari, INFN Bari, Bari, Italy*

Web-based monitoring tools for Resistive Plate Chambers in the CMS experiment at CERN

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M.S. Kim^u, Y. Ban^a, J. Cai^a, Q. Li^a, S. Liu^a, S. Qian^a, D. Wang^a, Z. Xu^a, F. Zhang^a, Y. Choi^b, D. Kim^b, J. Goh^b, S. Choi^c, B. Hong^c, J.W. Kang^c, M. Kang^c, J.H. Kwon^c, K.S. Lee^c, S.K. Lee^c, S.K. Park^c, L.M. Pant^d, A.K. Mohanty^d, R. Chudasama^d, J.B. Singh^e, V. Bhatnagar^e, A. Mehta^e, R. Kumar^e, S. Cauwenbergh^f, S. Costantini^f, A. Cimmino^f, S. Crucy^f, A. Fagot^f, G. Garcia^f, A. Ocampo^f, D. Poyraz^f, S. Salva^f, F. Thyssen^f, M. Tytgat^f, N. Zaganidis^f, W.V. Doninck^g, A. Cabrera^h, L. Chaparro^h, J.P. Gomez^h, B. Gomez^h, J.C. Sanabria^h, C. Avila^h, A. Ahmadⁱ, S. Muhammadⁱ, M. Shoaibⁱ, H. Hooraniⁱ, I. Awanⁱ, I. Aliⁱ, W. Ahmedⁱ, M.I. Asgharⁱ, H. Shahzadⁱ, A. Sayediⁱ, A. Ibrahimⁱ, S. Aly^j, Y. Assrani^j, A. Radic^j, T. Elkafrawy^j, A. Sharma^k, S. Colafranceschi^k, M. Abbrescia^l, C. Calabria^l, A. Colaleo^l, G. Iaselli^l, F. Loddo^l, M. Maggi^l, S. Nuzzo^l, G. Pugliese^l, R. Radogna^l, R. Venditti^l, P. Verwillingen^l, L. Benussi^m, S. Bianco^m, D. Piccolo^m, P. Paolucciⁿ, S. Buontempoⁿ, N. Cavalloⁿ, M. Merolaⁿ, F. Fabozziⁿ, O.M. Iorioⁿ, A. Braghieri^o, P. Montagna^o, C. Riccardi^o, P. Salvini^o, P. Vitulo^o, I. Vai^o, A. Magnani^o, A. Dimitrov^p, L. Litov^p, B. Pavlov^p, P. Petkov^p, A. Aleksandrov^q, V. Genchev^q, P. Iaydjiev^q, M. Rodozov^q, G. Sultanov^q, M. Vutova^q, S. Stoykova^q, R. Hadjiiska^q, H.S. Ibaguen^r, M.I.P. Morales^r, S.C. Bernardino^r, I. Bagaturia^s, Z. Tsamalaidze^s and I. Crotty^t

^l *Academy of Scientific Research and Technology of the Arab Republic of Egypt, 101 Sharia Kasr El-Ain, Cairo, Egypt*

ⁿ *Università e Politecnico di Bari, INFN Bari, Bari, Italy*

CMS RPC tracker muon reconstruction

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J. Goh^b, M.S. Kim^u, Y. Ban^a, J. Cai^a, Q. Li^a, S. Liu^a, S. Qian^a, D. Wang^a, Z. Xu^a, F. Zhang^a, Y. Choi^b, D. Kim^b, S. Choi^c, B. Hong^c, J.W. Kang^c, M. Kang^c, J.H. Kwon^c, K.S. Lee^c, S.K. Lee^c, S.K. Park^c, L.M. Pant^d, A.K. Mohanty^d, R. Chudasama^d, J.B. Singh^e, V. Bhatnagar^e, A. Mehta^e, R. Kumar^e, S. Cauwenbergh^f, S. Costantini^f, A. Cimmino^f, S. Crucy^f, A. Fagot^f, G. Garcia^f, A. Ocampo^f, D. Poyraz^f, S. Salva^f, F. Thyssen^f, M. Tytgat^f, N. Zaganidis^f, W.V. Doninck^g, A. Cabrera^h, L. Chaparro^h, J.P. Gomez^h, B. Gomez^h, J.C. Sanabria^h, C. Avila^h, A. Ahmadⁱ, S. Muhammadⁱ, M. Shoaibⁱ, H. Hooraniⁱ, I. Awanⁱ, I. Aliⁱ, W. Ahmedⁱ, M.I. Asgharⁱ, H. Shahzadⁱ, A. Sayediⁱ, A. Ibrahimⁱ, S. Aly^j, R. Ali^j, A. Radic^j, T. Elkafrawy^j, A. Sharma^k, S. Colafranceschi^k, M. Abbrescia^l, C. Calabria^l, A. Colaleo^l, G. Iaselli^l, F. Loddo^l, M. Maggi^l, S. Nuzzo^l, G. Pugliese^l, R. Radogna^l, R. Venditti^l, P. Verwillingen^l, L. Benussi^m, S. Bianco^m, D. Piccolo^m, P. Paolucciⁿ, S. Buontempoⁿ, N. Cavalloⁿ, M. Merolaⁿ, F. Fabozziⁿ, O.M. Iorioⁿ, A. Braghieri^o, P. Montagna^o, C. Riccardi^o, P. Salvini^o, P. Vitulo^o, I. Vai^o, A. Magnani^o, A. Dimitrov^p, L. Litov^p, B. Pavlov^p, P. Petkov^p, A. Aleksandrov^q, V. Genchev^q, P. Iaydjiev^q, M. Rodozov^q, G. Sultanov^q, M. Vutova^q, S. Stoykova^q, R. Hadjiiska^q, H.S. Ibaguen^r, M.I.P. Morales^r, S.C. Bernardino^r, I. Bagaturia^s, Z. Tsamalaidze^s and I. Crotty^t

^l *Academy of Scientific Research and Technology of the Arab Republic of Egypt, 101 Sharia Kasr El-Ain, Cairo, Egypt*

ⁿ *Università e Politecnico di Bari, INFN Bari, Bari, Italy*

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Giuseppe Iaselli¹, Donato Creanza¹, Nicola De Filippis¹, Giorgio Maggi¹, Salvatore My¹, Gabriella Pugliese¹, Ahmed Ali Abdelalim², Shereen Aly², Ahmed Ibrahim², Asmaa Hassan², Reham Aly², Hamed Kamel³, Ahmed Fouad Qamesh³, Ashraf Kasem⁴, Mohamed Elshamy⁴, Ahmed Sayed⁴

¹ *Dipartimento Interateneo di Fisica and Sezione INFN, Bari (Italy)*

² *Dipartimento Interateneo di Fisica, Bari (Italy) and Helwan University, Cairo (Egypt)*

³ *Dipartimento Interateneo di Fisica, Bari (Italy) and Cairo University, Cairo (Egypt)*

⁴ *Dipartimento Interateneo di Fisica, Bari (Italy) and Ain Shams University, Cairo (Egypt)*

CMS Notes

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N. De Filippis, Reham Aly et al, *Search for a Standard Model-like Higgs boson in the $H > ZZ^* > 4l$ decay*, CMS Analysis Note 2014, Archive Id 243288

Talks

Sh. Elgammal, *Angular distribution study for high mass events in e^-e^+ channel & Saturation study using MVA techniques*, invited talk on 20 September 2013, at LLR labo - École Polytechnique, 91128 Palaiseau Cedex, France

G. Pugliese, *CMS RPC muon detector performance with 2012-2012 LHC data*: invited talk at the 12th Workshop on Resistive Plate Chamber, Beijing (China) 23-28 February 2014

G. Iaselli, *Europe Egypt Network for Particle Physics (EENP2)*: invited talk at the 1st SCORE@POLIBA Workshop, Bari (Italy), 03-05 December 2014,

N. De Filippis, *The discovery of the Higgs boson with the CMS*, invited talk at the 1st SCORE@POLIBA Workshop, Bari (Italy), 03-05 December 2014

G. Pugliese, *The CMS RPC muon system for LHC and HL-LHC*, invited talk at the 1st SCORE@POLIBA Workshop, Bari (Italy), 03-05 December 2014

A. Abdelalim, Talk on the ICTP international conference “*Higgs and Beyond the Standard Model Physics at LHC*” international conference scientific”, 24th – 28th June 2013, Miramare, Trieste, Italy.
<http://indico.ictp.it/event/a12189/session/53/contribution/40/material/0/0.pdf>

A. Abdelalim, Talk on the ICTP external scientific meeting SMR2619: “*Advanced Workshop on LHC Physics and Cosmology*”, 3rd – 14th February 2014, Cairo, Egypt.
http://wlcapp.net/confs/ICTP_2014_SMR2619/ScientificProgram.html

A. Abdelalim, Talk on the 1st Workshop on Applications of Physics in Life and Industry, 22nd October 2014, Physics Department, Faculty of Science, Benha University (Egypt)

Reham Aly, “*Higgs analysis in 4 muon channel with CMS detector*”, EENHEP annual collaboration meeting: session WP1, January 22-23, 2014, Cairo, Egypt.

Reham Aly, “*Higgs analysis in 4 muon channel with CMS detector*”, Student session, ICTP SMR2619: Advanced workshop on LHC physics and cosmology, February 3-14, 2014, Cairo, Egypt.

Reham Aly, *Phenomenology study on $H \rightarrow ZZ^* \rightarrow 4\mu$ at $\sqrt{s} = 14$* , EENHEP annual collaboration meeting: session WP1, November 13, 2014, Cairo, Egypt.