

CURRICULUM VITAE
Matías M. Reynoso
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Personal data

Full name: Matías Miguel Reynoso
Nationality: Argentinian, Italian (second nationality)
Birth place: Necochea, Argentina
Birth day: 13/8/1978
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Current position

- Member of CONICET: Assistant Researcher at Instituto de Investigaciones en Física de Mar del Plata (CONICET, Argentina) and Departamento de Física, FCEyN (Universidad Nacional de Mar del Plata, Argentina)
- Internal Teaching Assistant in Physics at the FCEyN (Univ. Nac. de Mar del Plata)
- Member of G.A.R.R.A. (Group of Relativistic Astrophysics and RadioAstronomy of the La Plata University)

Education

- Primary Education: Escuela Nro. 7 "J.B. Alberdi", Necochea, Argentina, 1985-1991
- Secondary Education: *Computer Technician*, E.E.T 3, Necochea, Argentina, 1992-1997
- M.Sc. in Physics, Universidad Nacional de Mar del Plata, Argentina, 1998-2003
- PhD in Physics, Universidad Nacional de Mar del Plata, 2005-2009
Thesis title: "*Astrophysics of very high energy neutrinos*"
Thesis supervisors: Dr. Oscar A. Sampayo and Dr. Gustavo E. Romero
Mark: 10/10 (Sobresaliente)

Idioms

- First Certificate in English, University of Cambridge, Grade: B, Dec. 1997
- Computer Based TOEFL, Score: 263 (623 in the Paper Based scale), Mar. 2004

Teaching experience

- Volunteer Student Teaching Assistant, Departamento de Física, Univ. de Mar del Plata, 2002
- Internal Teaching Assistant, Departamento de Física, Univ. de Mar del Plata, Sep. 2003- Sep. 2004
- Volunteer Teaching Assistant, Departamento de Física, Univ. de Mar del Plata, Aug. 2006- Dec. 2006
- Internal Teaching Assistant, Departamento de Física, Univ. de Mar del Plata, Oct. 2007- present

Fellowships

- Scholarship for undergraduate studies, PNB, Ministry of Education of Argentina, 2002
- Internal PhD Fellowship, CONICET, Argentina, 2005-2009
- Postdoctoral Fellowship, CONICET, Argentina, 4/2009-3/2010
- Bernardo Houssay postdoctoral fellowship, MinCyT-French Embassy, Argentina, obtained for 4/2011-6/2011

Workshops, schools and conferences

1. VIII Argentinian Symposium on Theoretical Physics of Particles and Fields, Bariloche, Argentina, Jan. 2003.
2. Sixth J.J. Giambiagi Winter School – Particle Physics. Buenos Aires, Argentina, Jul. 2004
3. Latin America Workshop on Fundamental Interactions, Buenos Aires, Argentina, Jul. 2004.
Contributed talk: "*Neutrino absorption tomography of the Earth*"
M.M. Reynoso (speaker), O.A. Sampayo.
4. 48th Meeting of the Argentine Association of Astronomy, La Plata, Argentina, Sep. 2005.
Contributed talk: "*Accretion disk precession in GRBs*"
M.M. Reynoso (speaker), G.E. Romero, O.A. Sampayo.
5. 49th Meeting of the Argentine Association of Astronomy, Capilla del Monte, Argentina, Sep. 2006. Contributed talk: "*High energy neutrinos from the microquasar SS433*"
M.M. Reynoso (speaker), G.E. Romero, O.A. Sampayo, H.R. Christiansen.
6. Lepton Photon 07, Daegu, Korea, Aug. 2007.
Contributed work: "*Gamma-ray absorption in the microquasar SS433*"
H.R. Christiansen (speaker), M.M. Reynoso, G.E. Romero

7. 50th Meeting of the Argentine Association of Astronomy, Malargue, Sep. 2007.
Contributed talk: "*Study of the absorption of gamma-ray absorption in the binary system SS433*"
M.M. Reynoso (speaker), G.E. Romero, H.R. Christiansen.
8. 1st La Plata International School on Astronomy and Geophysics, La Plata, Argentina, Mar. 2008.
Contributed talk: "*Gamma-ray absorption in the precessing microquasar SS433*" M.M. Reynoso (speaker), G.E. Romero, H.R. Christiansen.
9. 3rd School on Cosmic Rays and Astrophysics, Arequipa, Perú, Aug. 2008.
Contributed poster: "*On neutrino production in magnetized jets*"
M.M. Reynoso, G.E. Romero, G.E. Vila.
10. Workshop on Gravitational Waves and High Energy Neutrinos, París, May 2009.
Contributed talk: "*SS433 as a natural laboratory for astrophysical neutrinos*"
M.M. Reynoso (speaker), G.E. Romero, H.R. Christiansen.
11. High Energy Phenomena in Relativistic Outflows II, Buenos Aires, October 2009.
Contributed poster: "*Outline of a model for the high energy emission from Cen A*"
M.M. Reynoso, M.C. Medina, G.E. Romero.
12. Workshop on Acceleration and Emission Processes in AGN, Paris, 1/2010.
Contributed talk: "*Prediction of a neutrino flux from Cen A*"
M.M. Reynoso (speaker), M.C. Medina, G.E. Romero.
13. IAU Symposium 275 "Jets at all Scales", September 2010.
Contributed poster: "*A lepto-hadronic model for the high-energy emission from the jets of FR I radiogalaxies*"
M.M. Reynoso, M.C. Medina, G.E. Romero.
14. Texas Symposium on Relativistic Astrophysics, December 2010.
Contributed poster: "*Gravitational radiation from precessing GRBs*"
G.E. Romero, M.M. Reynoso, H.R. Christiansen
15. Texas Symposium on Relativistic Astrophysics, December 2010.
Contributed poster: "*A lepto-hadronic model for the multiwavelength emission from the jets of radiogalaxies*"
M.C. Medina, M.M. Reynoso, G.E. Romero

Organization of scientific meetings

- Member of the Local Organizing Committee of the 275 IAU Symposium "Jets at all Scales", Buenos Aires, 13-17 September 2010

Research stays

- Universidade Estadual do Ceará, Departamento de Física, Brasil (10/8/08 – 22/8/08)
- Universidade Estadual do Ceará, Departamento de Física, Brasil (5/4/09 – 20/4/09)
- Observatoire de París, Meudon, France (15/5/09 – 15/6/09)
- Observatoire de París, Meudon, France (26/1/10 – 31/1/10)
- IRFU, CEA-Saclay, France (Bernardo Houssay program for 01/04/2011 – 30/06/2011)

Publications

1. "*On neutrino absorption tomography of the Earth*"
M.M. Reynoso, O.A. Sampayo, *Astropart. Phys.* (2004).
2. "*Accretion disk precession in GRB engines*"
M.M. Reynoso, G.E. Romero, O.A. Sampayo, *Boletín de la Asociación Argentina de Astronomía*, 48, 358 (2005).
3. "*Precession of neutrino-cooled accretion disks in gamma-ray bursts inner engines*"
M.M. Reynoso, G.E. Romero, O.A. Sampayo, *Astron. Astrophysics* (2006).
4. "*High energy neutrinos from the microquasar SS433*"
M.M. Reynoso, G.E. Romero, H.R. Christiansen, O.A. Sampayo, *Boletín de la Asociación Argentina de Astronomía*, 49, 334 (2006).
5. "*New Physics with IceCube*"
M.M. Reynoso, O.A. Sampayo, *Phys. Rev. D* 76, 033003 (2007).
6. "*Gamma-ray absorption in the microquasar SS433*"
M.M. Reynoso, H.R. Christiansen, G.E. Romero, *Astropart. Phys.* 28, 565 (2008).
7. "*Production of gamma rays and neutrinos in the dark jets of the microquasar SS433*"
M.M. Reynoso, G.E. Romero, H.R. Christiansen, *Mon. Not. Roy. Ac. Soc.*, 387, 1745 (2008)
8. "*Testing neutrino interactions with IceCube*"
O.A. Sampayo, M.M. Reynoso, *Act. Phys. Pol. B*, 39, 599 (2008)
9. "*Magnetic field effects on neutrino production in microquasars*"
M.M. Reynoso, G.E. Romero, *A&A*, 493, 1 (2009)

10. "*High energy cosmic ray interactions*" (proceeding)
R. Engel, M. Orellana, M.M. Reynoso, G.S. Vila, AIP Conf. Proc., 1123, 65 (2009)
11. "*Model for the high energy emission from Cen A*" (proceeding)
M.M. Reynoso, M.C. Medina, G.E. Romero, A. Zech, C. Boisson, H. Sol, J.-P. Lenain, Proceedings of HEPRO II 2009, Int. J. Mod. Phys. D, 19, 949 (2010)
12. "*Gravitational radiation from precessing accretion disks in gamma-ray bursts*"
G.E. Romero, M.M. Reynoso, H.R. Christiansen, A&A, 524, A4 (2010).
13. "*A lepto-hadronic model for the high energy emission from the jets of FR I radiogalaxies*" (proceeding)
M.M. Reynoso, M.C. Medina, G.E. Romero. Jets at all Scales, Proc. Int. Astron. Un., IAU Symp. Vol. 275, 168:169 (2011)
13. "*A lepto-hadronic model for the multiwavelength emission from the jets of radiogalaxies*" (proceeding)
M.C. Medina, M.M. Reynoso, G.E. Romero. Proceedings of Science, 25th Texas Symposium on Relativistic Astrophysics, in press (2011)
14. "*Gravitational waves from precessing engines in GRBs*" (proceeding)
G.E. Romero, M.M. Reynoso, H.R. Christiansen. Proceedings of Science, 25th Texas Symposium on Relativistic Astrophysics, in press (2011)

- Papers submitted:

"*A lepto-hadronic model for the high-energy emission from FR-I radiogalaxies*"

M.M. Reynoso, M.C. Medina, G.E. Romero; arXiv:1005.3025v1 [astro-ph.HE], submitted to A&A