

# Ericson Daniel López Izurieta

## Observatorio Astronomico de Quito

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## ACADEMIC TITLES:

- Physics degree in Theoretical Physics ,(Summa Cum Laude), Escuela Politécnica Nacional,(Summa Cum Laude), Quito, Ecuador, 1991.
- Ph.D. in Sciences, Physics and Mathematics, Specialty in Theoretical Astrophysics, Central Astronomical Observatory of the Russian Academy of Science, St. Petersburg, Russia, 1996.
- Professor , Escuela Politecnica Nacional, 2013

## PROFESSIONAL EXPERIENCE

- 1996 – present: Full Professor, Escuela Politécnica Nacional, Quito Ecuador
- 1996 – present: Director, Quito Astronomical Observatory, Quito, Ecuador
- 1998 – 1998: Professor, Universidad San Francisco de Quito, Ecuador
- 2001 – 2003: Post-Doctoral Research Position, Astronomical Institute, Sao Paulo University, Sao Paulo, Brazil
- 2003 – present : Adjunct Professor, Astronomy Department, High Energy Group, Sao Paulo University, Sao Paulo, Brazil
- 2012 – 2013: Visiting Scientist, Smithsonian center for astrophysics of Harvard University,Cambridge, USA
- 2012 – present: Scientific collaborator, HEA Team, Smithsonian Center for astrophysics of Harvard University,Cambridge, USA

- 2012 – 2013: Post-Doctoral Research Position, Space Science Telescope Intitute Baltimore, USA

**HONORS AND FELLOWSHIPS:**

- Russian Academy of Science Fellowship at Pulkova Observatory, 1991-1996
- Ecuadorian Fellowship Selection for Scientific training and Research, 2008, Ecuador.
- Escuela Politecnica Nacional Prize for the Best Scientific Publication during 2000-2009 period.

**SERVICE:**

- SPOC IYA 2009, Ecuador National Coordinator for 2009 International Year of Astronomy
- National Coordinator for Ecuador of International Space Weather Initiative, UNESCO/ NASA/ ESA/ JAXA (2010).

**RESEARCH INTERESTS:**

- Compact Objects
- Accretion Disks
- Active Galaxies
- Astrophysical Plasmas
- Relativity
- Data Processing
- Radio Astronomy
- Interferometry

**LANGUAGES:**

- Spanish: fluent
- Russian: fluent
- English: fluent
- Portuguese: fluent

## MEMBERSHIPS:

- International Astronomical Union (IAU)
- Stenberg Astronomical Society.
- Brazilian Astronomical Society
- American Astronomical Society (AAS).

## REFEREED SCIENTIFIC PAPERS:

- Gnedin Yu.N., López Ericson., Angular displacement of radiation, passing through magnetoactive plasma-Magnetic Refraction.// 3rd. International Workshop on Positional Astronomy and Celestial Mechanics, May 17-21, 1994, Observatorio Astronomico, Universitat de Valencia, Valencia, Spain, 1996.
- Lopez E. Gnedin Yu. N., Angular displacement of radiation in radio frequency, passing through a magnetoactive plasma. XXVI Conference of Radioastronomy, September 18-22, 1995, St.Petersburg, 1995.
- Gnedin Yu.N., López E.D., Magnetic Polarimetric Refraction in the Solar Corona.//Solar Physics, 164:97-102, 1996.
- E. D. Lopez, Relativistic outflows and radiation processes, The Origins of Galactic Magnetic Fields, 24th meeting of the IAU, Joint Discussion 14, August 2000, Manchester, England, 2000IAUJD..14E..27L,2000
- E. Lopez, Dispersion of electromagnetic waves in active moving plasma, Astronomical and Astrophysical Transactions, vol. 14, pp. 79-85, 1997.
- E. D. Lopez, Dispersion relations in relativistic astrophysical outflows, JPP, 70, 53, 2004
- E.D. Lopez, Pulsar Radio Emission Cutoffs, in Magnetic Fields In The Universe: From Laboratory and Stars to Primordial Structures. AIP Conference Proceedings, Volume 784, pp. 697-704 (2005).
- E.D. Lopez, The Faraday Rotation Effect in Quasar Jets, ApJ, 641,710, 2006
- E.D. Lopez and E. G. Dalpino, Relativistic dispersion effects on SS433 jets, Astrophysics and Space Science, Volume 314, Issue 1-3, pp. 129-136, 2008.
- E. D. Lopez, Are GRBs the most violent events in the Universe?. 2010, submitted to AJ

## **OTHER PUBLICATIONS**

- Ericson Lopez, Ionospheric Models For Wave Propagation, Undergraduate Thesis, Escuela Politecnica Nacional, 1991.
- Ericson López, Electromagnetic Waves Propagation in A Moving Isotropic And Anisotropic Plasmas. Classical And Relativistic Treatment. Ed. Glagol, St. Petersburg, Russia, 1996 ( in Russian).
- Ericson López, Dispersion Properties In A Moving Anisotropic Plasmas, ed. Glagol, St. Petersburg, Russia, 1996 (in Russian).
- Ericson López, Romel Lucero, Daniel Arboleda, Introducción a la Física Moderna, EPN, Quito, Ecuador, 1991.
- Ericson López, Romel Lucero, Problemas de Teoría Electromagnética, EPN, Quito, Ecuador, 1992.
- Ericson Lopez, Refraction Theory for Cosmic Moving Plasma, Main Astronomical Observatory of Russian Academy of Sciences, Ph.D. Thesis, 1996
- 132 años de Historia del Observatorio Astronómico de Quito, Ed. Ericson López I., Editorial Nina Comunicaciones, 2005.

## **TEACHING EXPERIENCE:**

I have taught the following courses of astronomy, physics and mathematics at both the graduate and undergraduate levels:

### **Undergraduate Courses:**

Astronomy and Astrophysics for non-science students, General Astronomy, Astrometry, General Astrophysics, Stellar Atmospheres, General Cosmology.

### **Physics:**

Classical mechanics, Electrodynamics, Modern Physics.

Quantum Mechanics, Special Relativity, General Relativity.

Statistical Physics, Thermodynamics, Solid State .

Physics Education Courses for undergraduate students.

### **Mathematics:**

Tensor and Variational Calculus, Functional Analysis.

## TALKS AT CONFERENCES AND WORKSHOPS:

- 3rd. International Workshop on Positional Astronomy and Celestial Mechanics, May 17-21, 1994, Observatorio Astronómico, Universitat de Valencia, Valencia, Spain, 1996.
- The International Conference Structure and Evolution of Stellar Systems, august 13-17, 1995, Petrozavodsk, 1995.
- International Workshop on Plasma Physics, Nizhni Novgorod, August 1995.
- International Workshop on Solar Polarization, St. Petersburg, Russia, May 1995.
- International VII Latin American Workshop in Plasma Physics, 20-31 de January, Caracas, Venezuela, 1997.
- Las estrellas relativistas, Universidad San Francisco de Quito, October 21, 1995.
- 24th General Assembly of International Astronomical Union, JD14 and SPS, Manchester, UK, August, 2000.
- First International workshop "Nova Física no Espaço", Campos do Jordao, Brasil, November 2001.
- Reuniao annual da Sociedade Astronomica Brasileira, Florianopolis, Brasil, Agosto 2002.
- Intenacional Scola avanzada de astrofísica, Campos do Jordao Brasil, September 2002.
- Second nternational workshop, "Nova Física no Espaço", Campos do Jordao, Brasil , Febrero 2003.
- Magnetic Fields in the Universe: from Laboratory and Stars to Primordial Structures, Angra dos Reis, Brazil, November 28 - December 3, 2004.
- Los Eventos mas violentos del Universo, XI encuentro de Física, Facultad de Ciencias, Escuela Politécnica Nacional, Noviembre 2007.
- First Results on IYH2007, Sozopol, Bulgaria, Junio 2008.
- IAU Symposium 260: "The Rôle of Astronomy in Society and Culture". UNESCO, 19–23 January 2009, Paris, France.
- XXVII General Assembly. August 03 - 14, 2009. Rio de Janeiro - Brazil.
- XI Encuentro De Física, del 16 al 20 de Noviembre del 2009, Quito, Ecuador.
- The 5th IHY-UNBSS /ESA/NASA Workshop on Basic Space Science on IHY, 21-25 September 2009, Daejeon, Korea.
- 1st Latin American FMT Workshop, 22-26 November, 2010, Ica Peru.