

Xue She-Sheng

Position: Staff

Period covered: 2006 – present



I Scientific Work

“On the gravitational and electrodynamic stability of nuclear matter core”, submitted to Phys. Rev. Lett. (2008),

“Electron-positron production in non-uniform electric fields”, Phys. Rev. D 78 (2008) 02501

“Dyadosphere formed in gravitational collapse”, Review article, AIP Conf. Proc. 1059 (2008) 72.

“Pair-production in inhomogeneous electric field”, AIP Conf. Proc. 966 (2007) 213

“On the electrodynamic properties of nuclear matter in bulk”, AIP Conf. Proc. 966 (2007) 147

“Electron-positron oscillation in a weak electric field under critical value”, Phys. Lett. A 371 (2007) 399

“Electron-positron pairs in physics and astrophysics”, Phys. Rep. (2008)

“The phase structure of Einstein-Cartan theory”, Phys. Lett. B665 (2008) 54

“Electron-positron pair production in a macroscopic object Q/M ”, submitted to Phys. Lett. B

“Neutral nuclear core vs super charged one”, Proceedings MGXI Marcel Grossmann meeting (MG11), Berlin, World scientific (2007).

“The Blackhole energy and the canonical Gamma-Ray Burst”, AIP Conf. Proc. 910 (2007) 55-217,

“Theoretical interpretation of luminosity and spectral properties of GRB 031203”, Marcel Grossmann meeting (MG11), Berlin, World scientific (2007),

“The Blackhole energy and the canonical Gamma-Ray Burst”, AIP Conf. Proc. 910 (2007) 55-217

“Electrodynamics for Nuclear Matter in Bulk”, Int. Journ. Mod. Phys. D 16 (2006) 1-9

“ The role of GRB 031203 in clarifying the astrophysical GRB scenario ”, the proceedings of "The 6th INTEGRAL Workshop - The Obscured Universe", Moscow, 2006, ESA Special Publication, SP-622,

“ GRB 050315: A step in the proof of the uniqueness of the overall GRB structure”, AIP Conf.Proc. 836 (2006) 103-108

“ Equations of motion, initial and boundary conditions for GRB”, J.Korean Phys.Soc. 49 (2006) 722-731

“ Theoretical predictions of spectral evolution of short GRBs”, the Proceedings of the "Swift and GRBs: Unveiling the Relativistic Universe", in Venice (Italy), June 5-9, 2006 (IL NUOVO CIMENTO)

“GRB 050315: A step toward the uniqueness of the overall GRB structure”, Astrophys. J. 645 (2006) L109-L112

“ GRB970228 as a prototype for short GRBs with afterglow”, Nuovo Cim. 121B (2006) 1439-1440

II Conferences and educational activities

Conferences and Other External Scientific Work

Presenting talks and posters in international ICRA Net meetings:

MGXI Marcel Grossmann meeting (Berlin)

1st Cesare Lattes meeting (Brazile)

10th Italian-korean and 4th Italian-Chinese meetings (Pescara)

2nd and 3rd Stuekelberg Workshops (Pescara)

4th and 5th Italian-Chinese Workshops on Relativistic Astrophysics (Pescara and Taiwan)

APS April meeting, April 12-15, 2008, Saint Louis , USA

XIIth Brazilli Scholl of Cosmology and Gravitation (Brazile)

And international Conferences:

"Century of Cosmology", in Venice (Italy), August 27-31, 2007

"Swift and GRBs: Unveiling the Relativistic Universe", in Venice (Italy), June 5-9, 2006

Work With Students

B. Patricelli, M. Rotondo, Noemi., G. De Barros, Jorge Rueda, Juracy Luis, L.J. Rangel Lemos,, and the research group of Gamma Ray Bursts :

Maria Grazia Bernardini, Carlo Luciano Bianco, Letizia Caito, Maria Giovanna Dainotti, Roberto Guida,

G. Vereshchagin

Diploma thesis supervision

IRAP PhD. Faculty, thesis supervision and reading and examination

M. Rotondo, G. Vereshchagin

Work With Postdocs

C.L. Bianco, L. Vitagliano , F. Fraschetti

Work With the Director R. Ruffini and External Professors

V.S. Popov, H. Kleinert, Hoang Ngoc Long, [Pascal Chardonnet](#),

III Service activities

Within ICRANet

Participating organization of ICRANet meetings: the 10th Italian-Korean meeting and 4th and 5th Italian-Chinese meeting and Stuekelberg Workshops on Cosmology and Relativistic Astrophysics

Editor of two conference proceedings “4th and 5th Italian-Chinese meeting on Cosmology and Relativistic Astrophysics”, published by American Institute of Physics

Participating organization of 1st Galileo - Xu Guangqi Meeting, October 26-30, 2009
Shanghai - CHINA

Participating organization of ICRANet Seminars

Outside ICRANet

External Professor of Chinese Academy and University.

IV 2007-2008 List of Publications

European Phys. Lett. 81 (2008) 57001, "Photon production in Semiconductors by Onset of Magnetic field"

Phys. Lett. B665 (2008) 54, "The phase structure of Einstein-Cartan theory"

Plenary and parallel talks in the 11th MG meeting "Thomas-Fermi approach to electrodynamics of Neutron stars"

Int. Jour. of Mod. Phys. D 16 (2007) 1 "Electrodynamics for Nuclear Matter in Bulk"

AIP Conf. Proc. 966 (2007) 147 "On the electrodynamics properties of nuclear matter in bulk"

Phys. Lett. B (2008) "Electron-positron pair production in the electric potential of macroscopic cores" (to be submitted)

Phys. Rev. D (2008) "Electrodynamics of Neutron star cores with different proton distributions" (in preparation)

Marcel Grossmann meeting (MG11), Berlin, World scientific (2007), "Neutral nuclear core vs super charged one",

Phys. Rev. Lett. (2008), "On the gravitational and electrodynamic stability of nuclear matter core" (submitted)

AIP Conf. Proc. 910 (2007) 55-217 "The Blackhole energy and the canonical Gamma-Ray Burst"

the proceedings of "The 6th INTEGRAL Workshop - The Obscured Universe", Moscow, 2006, ESA Special Publication, SP-622, "The role of GRB 031203 in clarifying the astrophysical GRB scenario", (in press).

Phys. Lett. A 371 (2007) 399 "Electron-positron oscillation in a weak electric field under critical value"

AIP Conference Proceedings 966 (2007) 207, "Vacuum polarization and electron-positron plasma oscillations"

Phys. Rep. (2008) "Electron-positron pairs in physics and astrophysics"

AIP Conference Proceedings 966 (2007) 213, "Pair-production in inhomogeneous electric field"

Phys. Rev. D 78 (2008) 02501 "Electron-positron production in non-uniform electric fields"

AIP Conference Proceedings 1059 (2008) 72, Review article "Dyadosphere formed in gravitational collapse"