

Bianco Carlo Luciano

Position: ICRANet Faculty staff
Member of ICRANet Scientific Committee
Member of IRAP-PhD Faculty



Period covered: 2005 – present

I Scientific Work

Research on: Gamma-Ray Bursts, Relativistic astrophysics, Cosmology.

II Conferences and educational activities

Conferences and Other External Scientific Work

Gave the following invited lectures:

- C.L. Bianco, M.G. Bernardini, P. Chardonnet, F. Fraschetti, R. Ruffini, S.-S. Xue; Our model for Gamma-Ray Bursts; *1st Bego scientific rencontre*, Université de Nice Sophia-Antipolis, Nice, France, 14 February 2006.
- C.L. Bianco; Equations of motion and beaming in Gamma – Ray Bursts; *1st Cesare Lattes Meeting*, Mangaratiba (RJ), Brazil, 1 March 2007.
- C.L. Bianco, M.G. Bernardini, L. Caito, M.G. Dainotti, R. Guida, R. Ruffini; Theoretical interpretation of GRB060614; *2007 April Meeting of the American Physical Society*; Jacksonville, Florida (USA), 14 April 2007.
- C.L. Bianco; The fireshell model and the canonical GRB scenario; *Scuola Nazionale di Astrofisica (National School of Astrophysics)* (II course, IX cycle); Venice (Italy), 18 September 2007.
- C.L. Bianco, M.G. Bernardini, L. Caito, M.G. Dainotti, R. Guida, R. Ruffini, G. Vereshchagin, S.-S. Xue; Equations of motion of the fireshell; *3rd Stueckelberg Workshop*; Pescara (Italia), 10 July 2008.

Work With Students

- Students of the IRAP-PhD program at University “La Sapienza”, Rome, Italy: Maria Grazia Bernardini, Letizia Caito, Maria Giovanna Dainotti, Roberto Guida, Barbara Patricelli.

- Students of the First three years degree Thesis (“Tesi di Laurea triennale”) in Physics at University “La Sapienza”, Rome, Italy: Eliana La Francesca, Francesco Alessandro Massucci.
- Students of the Final Degree Thesis (“Tesi di Laurea Vecchio Ordinamento”) in Physics at University “La Sapienza”, Rome, Italy: Letizia Caito, Walter Ferrara.

Diploma thesis supervision

- 2005. External supervisor of the First three years degree thesis (“Tesi di laurea triennale”) in Physics by Francesco Alessandro Massucci at University “La Sapienza”, Rome, Italy.
- 2006. External supervisor of the Degree thesis in Physics by Letizia Caito at University “La Sapienza”, Rome, Italy.
- 2007. Thesis advisor of the IRAP-PhD Degree Thesis by Maria Grazia Bernardini at University “La Sapienza”, Rome, Italy.
- 2008. External supervisor of the First three years degree thesis (“Tesi di laurea triennale”) in Physics by Eliana La Francesca at University “La Sapienza”, Rome, Italy.
- 2008. Thesis advisor of the IRAP-PhD Degree Thesis by Roberto Guida at University “La Sapienza”, Rome, Italy.

Other Teaching Duties

- Assistant teacher in the course of “Laboratory of Electromagnetism and Circuits” by Prof. Giulio D’Agostini at Physics Department of the University “La Sapienza”, Rome, Italy, academical year 2005/2006.
- Assistant teacher in the course of “Laboratory of Systems and Signals” by Prof. Mario Mattioli at Physics Department of the University “La Sapienza”, Rome, Italy, academical year 2007/2008.
- Assistant teacher in the course of “Laboratory of Systems and Signals” by Prof. Mario Mattioli at Physics Department of the University “La Sapienza”, Rome, Italy, academical year 2008/2009.

III 2007-2008 List of Publications

R. RUFFINI, M.G. BERNARDINI, C.L. BIANCO, L. CAITO, P. CHARDONNET, M.G. DAINOTTI, F. FRASCHETTI, R. GUIDA, G. VERESHCHAGIN, S.-S. XUE; The role of GRB 031203 in clarifying the astrophysical GRB scenario; *ESA Special Publication*, **SP-622**, 561 (2007).

R. RUFFINI, M.G. BERNARDINI, C.L. BIANCO, L. CAITO, P. CHARDONNET, M.G. DAINOTTI, F. FRASCHETTI, R. GUIDA, M. ROTONDO, G. VERESHCHAGIN, L. VITAGLIANO, S.-S. XUE; The Blackholic energy and

the canonical Gamma-Ray Burst; in *Proceedings of the XIIth Brazilian School on Cosmology and Gravitation*, Mangaratiba, Rio de Janeiro (Brazil), September 2006, M. Novello, S.E. Perez Bergliaffa, Editors; *AIP Conference Proceedings*, **910**, 55 (2007).

M.G. BERNARDINI, C.L. BIANCO, L. CAITO, M.G. DAINOTTI, R. GUIDA, R. RUFFINI; GRB970228 and the class of GRBs with an initial spikelike emission: do they follow the Amati relation?; in *Relativistic Astrophysics – Proceedings of the 4th Italian-Sino Workshop*, Pescara (Italy), July 2007, C.L. Bianco, S.-S. Xue, Editors; *AIP Conference Proceedings*, **966**, 7 (2008).

C.L. BIANCO, M.G. BERNARDINI, L. CAITO, M.G. DAINOTTI, R. GUIDA, R. RUFFINI; The “Fireshell” Model and the “Canonical” GRB Scenario; in *Relativistic Astrophysics – Proceedings of the 4th Italian-Sino Workshop*, Pescara (Italy), July 2007, C.L. Bianco, S.-S. Xue, Editors; *AIP Conference Proceedings*, **966**, 12 (2008).

L. CAITO, M.G. BERNARDINI, C.L. BIANCO, M.G. DAINOTTI, R. GUIDA, R. RUFFINI; GRB 060614: A Progress Report; in *Relativistic Astrophysics – Proceedings of the 4th Italian-Sino Workshop*, Pescara (Italy), July 2007, C.L. Bianco, S.-S. Xue, Editors; *AIP Conference Proceedings*, **966**, 16 (2008).

M.G. DAINOTTI, M.G. BERNARDINI, C.L. BIANCO, L. CAITO, R. GUIDA, R. RUFFINI; GRB 060218 and the Binaries as Progenitors of GRB-SN Systems; in *Relativistic Astrophysics – Proceedings of the 4th Italian-Sino Workshop*, Pescara (Italy), July 2007, C.L. Bianco, S.-S. Xue, Editors; *AIP Conference Proceedings*, **966**, 25 (2008).

R. GUIDA, M.G. BERNARDINI, C.L. BIANCO, L. CAITO, M.G. DAINOTTI, R. RUFFINI; The Amati Relation within the Fireshell Model; in *Relativistic Astrophysics – Proceedings of the 4th Italian-Sino Workshop*, Pescara (Italy), July 2007, C.L. Bianco, S.-S. Xue, Editors; *AIP Conference Proceedings*, **966**, 46 (2008).

R. GUIDA, M.G. BERNARDINI, C.L. BIANCO, L. CAITO, M.G. DAINOTTI, R. RUFFINI; Theoretical interpretation of the Amati relation within the fireshell model; in *GAMMA-RAY BURSTS 2007: Proceedings of the Santa Fe Conference*, Santa Fe (NM, USA), November 2007, M. Galassi, D. Palmer, E. Fenimore, Editors; *AIP Conference Proceedings*, **1000**, 60 (2008).

L. CAITO, M.G. BERNARDINI, C.L. BIANCO, M.G. DAINOTTI, R. GUIDA, R. RUFFINI; GRB 060614: a Fake Short Gamma-Ray Burst; in *GAMMA-RAY BURSTS 2007: Proceedings of the Santa Fe Conference*, Santa Fe (NM, USA), November 2007, M. Galassi, D. Palmer, E. Fenimore, Editors; *AIP Conference Proceedings*, **1000**, 301 (2008).

C.L. BIANCO, M.G. BERNARDINI, L. CAITO, M.G. DAINOTTI, R. GUIDA, R. RUFFINI; Short and canonical GRBs; in *GAMMA-RAY BURSTS 2007: Proceedings of the Santa Fe Conference*, Santa Fe (NM, USA), November 2007, M. Galassi, D. Palmer, E. Fenimore, Editors; *AIP Conference Proceedings*, **1000**, 305 (2008).

A.G. AKSENOV, C.L. BIANCO, R. RUFFINI, G.V. VERESHCHAGIN; GRBs and the thermalization process of electron-positron plasmas; in *GAMMA-RAY BURSTS 2007: Proceedings of the Santa Fe Conference*, Santa Fe (NM, USA), November 2007, M. Galassi, D. Palmer, E. Fenimore, Editors; *AIP Conference Proceedings*, **1000**, 309 (2008).

C.L. BIANCO, M.G. BERNARDINI, L. CAITO, M.G. DAINOTTI, R. GUIDA, R. RUFFINI, G. VERESHCHAGIN, S.-S. XUE; The Equations of motion of the “fireshell”; in *OBSERVATIONAL EVIDENCE FOR BLACK HOLES IN THE UNIVERSE: Proceedings of the 2nd Kolkata Conference*, Kolkata (India), February 2008, S.K. Chakrabarti, A.S. Majumdar, Editors; *AIP Conference Proceedings*, **1053**, 259 (2008).

M.G. BERNARDINI, C.L. BIANCO, L. CAITO, M.G. DAINOTTI, R. GUIDA, R. RUFFINI; The “Canonical” GRBs within the fireshell model; in *OBSERVATIONAL EVIDENCE FOR BLACK HOLES IN THE UNIVERSE: Proceedings of the 2nd Kolkata Conference*, Kolkata (India), February 2008, S.K. Chakrabarti, A.S. Majumdar, Editors; *AIP Conference Proceedings*, **1053**, 267 (2008).

M.G. DAINOTTI, M.G. BERNARDINI, C.L. BIANCO, L. CAITO, R. GUIDA, R. RUFFINI; GRB 060218: the density mask and its peculiarity compared to the other sources; in *OBSERVATIONAL EVIDENCE FOR BLACK HOLES IN THE UNIVERSE: Proceedings of the 2nd Kolkata Conference*, Kolkata (India), February 2008, S.K. Chakrabarti, A.S. Majumdar, Editors; *AIP Conference Proceedings*, **1053**, 283 (2008).

L. CAITO, M.G. BERNARDINI, C.L. BIANCO, M.G. DAINOTTI, R. GUIDA, R. RUFFINI; GRB 060614 in the canonical fireshell model; in *OBSERVATIONAL EVIDENCE FOR BLACK HOLES IN THE UNIVERSE: Proceedings of the 2nd Kolkata Conference*, Kolkata (India), February 2008, S.K. Chakrabarti, A.S. Majumdar, Editors; *AIP Conference Proceedings*, **1053**, 291 (2008).

C.L. BIANCO, S.-S. XUE (EDITORS); Relativistic Astrophysics – Proceedings of the 4th Italian-Sino Workshop; *AIP Conference Proceedings*, **966**, American Institute of Physics (2007).