

Caito Letizia

Position: Post-doctoral fellowship

Period covered: January 2010 – December 2010



I. Scientific Work

Theoretical analysis of the properties of both the prompt and the late afterglow phase of Gamma Ray Bursts (GRBs) presenting an initial hard, spikelike emission followed by a soft bump. Some crucial examples of this kind of GRBs are GRB 06014 and GRB 071227. This analysis has led to the identification, within the Fireshell scenario, of a possible new class of GRBs whose peculiarities depend on their astrophysical setting.

II. Conferences and educational activities

II a. Conferences and Other External Scientific Works

July 2010: "The Second Galileo-Xu Guangqi Meeting", Ventimiglia (Italy), July 11-16, 2010.

http://www.icranet.org/index.php?option=com_content&task=view&id=508&Itemid=686

Contributed: talk

February 2009: Irap-PhD Lectures, February 14-20, 2010, Nice, France.

http://www.icranet.org/index.php?option=com_content&task=view&id=513

Contributed: lecture

October 2009: "The First Galileo-Xu Guangqi Meeting", Shanghai (China), October 26-30, 2009.

http://www.icranet.org/index.php?option=com_content&task=view&id=399&Itemid=686

Contributed: talk

2010 List of Publications

Publications In Refereed Journals

Letizia Caito, Lorenzo Amati, Maria Grazia Bernardini, Carlo Luciano Bianco, Gustavo De Barros, Luca Izzo, Barbara Patricelli, Remo Ruffini, "GRB071227: an additional case of disguised short burst", *A&A* 521, A80 (2010).

Conference Proceedings

- Barbara Patricelli, Maria Grazia Bernardini, Carlo Luciano Bianco, Letizia Caito, Gustavo De Barros, Luca Izzo, Remo Ruffini, "Black holes in Gamma Ray Bursts", in the Proceedings of "Deciphering the ancient Universe with Gamma-Ray Bursts", in Kyoto, Japan, April 19-23, 2010, ed. N. Kaway and S. Nagataky, *AIP Conf. Proc.*, 1279 (2010) 406-408.
- Luca Izzo, Maria Grazia Bernardini, Carlo Luciano Bianco, Letizia Caito, Barbara Patricelli, Louis Juracy Rangel Lemos, Remo Ruffini, "On GRB 080916C and GRB 090902B observed by the Fermi satellite", in the Proceedings of "Deciphering the ancient Universe with Gamma-Ray Bursts", in Kyoto, Japan, April 19-23, 2010, ed. N. Kaway and S. Nagataky, *AIP Conf. Proc.*, 1279 (2010) 343-345
- Carlo Luciano Bianco, Maria Grazia Bernardini, Letizia Caito, Gustavo De Barros, Luca Izzo, Barbara Patricelli, Remo Ruffini, "Disguised Short Bursts and the Amati relation", in the Proceedings of "Deciphering the ancient Universe with Gamma-Ray Bursts", in Kyoto, Japan, April 19-23, 2010, ed. N. Kaway and S. Nagataky, *AIP Conf. Proc.*, 1279 (2010) 299-301.
- Barbara Patricelli, Maria Grazia Bernardini, Carlo Luciano Bianco, Letizia Caito, Luca Izzo, Remo Ruffini, "A new spectral energy distribution of photons in the fireshell model of GRBs", in the Proceedings of "The Shocking Universe – Gamma Ray Bursts and High energy Shock Phenomena", in

San Servolo (Venice, Italy), September 14-18, 2009, ed. G. Chincarini, P. D'Avanzo, R. Margutti and R. Salvaterra. Conf. Proc. Vol. 102, (2010) 559.

- Luca Izzo, Maria Grazia Bernardini, Carlo Luciano Bianco, Letizia Caito, Barbara Patricelli, Remo Ruffini, "*GRB090423 in the fireshell scenario*", in the Proceedings of "*The Shocking Universe – Gamma Ray Bursts and High energy Shock Phenomena*", in San Servolo (Venice, Italy), September 14-18, 2009, ed. G. Chincarini, P. D'Avanzo, R. Margutti and R. Salvaterra. Conf. Proc. Vol. 102, (2010) 537.
- Maria Grazia Bernardini, Carlo Luciano Bianco, Letizia Caito, Luca Izzo, Barbara Patricelli, Remo Ruffini, "*The end of the prompt emission within the fireshell model*", in the Proceedings of "*The Shocking Universe – Gamma Ray Bursts and High energy Shock Phenomena*", in San Servolo (Venice, Italy), September 14-18, 2009, ed. G. Chincarini, P. D'Avanzo, R. Margutti and R. Salvaterra. Conf. Proc. Vol. 102, (2010) 489.
- Letizia Caito, Maria Grazia Bernardini, Carlo Luciano Bianco, Maria Giovanna Dainotti, Roberto Guida, Remo Ruffini, "*GRB 060614: a preliminary result*", JKPS 56 (2010) 1579-1582.
- Luca Izzo, Maria Grazia Bernardini, Carlo Luciano Bianco, Letizia Caito, Barbara Patricelli, Remo Ruffini, "*GRB 090423 at redshift 8.1: a theoretical interpretation*", JKPS 57 (2010) 551-556.
- Maria Grazia Bernardini, Carlo Luciano Bianco, Letizia Caito, Maria Giovanna Dainotti, Roberto Guida, Remo Ruffini, "*GRB 970228 in the 'canonical GRB' scenario*", JKPS 56 (2010) 1575-1578.
- Maria Giovanna Dainotti, Maria Grazia Bernardini, Carlo Luciano Bianco, Letizia Caito, Maria Roberto Guida, Remo Ruffini, "*The astrophysical tryptic: GRB, SN and URCA can be extended to GRB 060218?*", JKPS 56 (2010) 1588-1593.