

Dainotti Maria Giovanna

Position: PhD student

Period covered: 2005-present



I Scientific Work

PUBLICATIONS IN REFEREED JOURNALS\bf:

- 1) Bernardini M. G., Bianco C. L., Caito L., Chardonnet P., Corsi A., Dainotti M. G., Frascchetti F., Guida R., Ruffini R., Xue S. S., ``GRB970228 as a prototype for short GRBs with afterglow'', *Nuovo Cimento*, 121B, 1439-140, 2006.
- 2) Dainotti M. G., Bernardini M. G., Bianco C. L., Caito L., Guida R., Ruffini R., ``GRB060218 and GRBs associated to Supernovae Ib/c'', *Astron. \& Astrophys.*, 471, L29-L32, 2007. This is enclosed as one of three publication record and it is topic of my dissertation.
- 3) Bernardini M. G., Bianco C. L., Caito L., Dainotti M. G., Guida R., Ruffini R., ``GRB970228 and a class of GRBs with an initial spikelike emission'', *Astron. \& Astrophys.* 474, L13-L16 , 2007. It is topic of my dissertation.
- 4) Guida R., Bernardini M. G., Bianco C. L., Caito L., Dainotti M. G., Ruffini R. `` The Amati relation in the fireshell model'' *Astron. \& Astrophys*, 487, L37-L40 (2008). It is enclosed as one of the three publication record and it is topic of my dissertation.
- 5) Dainotti M. G., Bernardini M. G., Bianco C. L., Caito L., Guida R., Ruffini R., ``The astrophysical tryptic: GRB, SN and URCA can be extended to GRB060218?'', to appear on *Journal of the Korean Physical Society*. It is topic of my dissertation
- 6) Caito L., Bernardini M. G., Bianco C. L., Dainotti M. G. Guida R., Ruffini R., ``GRB 060614: a progress report'', to appear on *Journal of the Korean Physical Society*. It is topic of my dissertation
- 7) Bernardini M. G., Bianco C. L., Caito L., Dainotti M. G., Guida R., Ruffini R., ``GRB 970228 in the canonical GRB scenario'' to appear on *Journal of the Korean Physical Society*. It is topic of my dissertation
- 8) Dainotti M. G., Cardone V.F. and Capozziello S. ``A time luminosity correlation for GRBs in the X-rays'', to appear on *Monthly Notice Astron. Physical Society*. This is enclosed as one of three publications record together with the acceptance letter of MNRAS.

PUBLICATIONS SUBMITTED AND IN PREPARATIONS\bf:

9) Caito L., Bernardini M. G., Bianco C. L., Dainotti M. G., Guida R., Ruffini R., "GRB060614 analysis within the "fireshell" model" submitted to Astron. \& Astrophys.

10) Dainotti M. G., Bernardini M. G., Bianco C. L., Caito L., Guida R., Ruffini R., "GRB 060418: flares and spectral lag" (in preparation)\

11) Dainotti M. G. et al. "Further evidence for the L-Ta correlation for GRBs in the X-ray afterglow"(in preparation)\.

PROCEEDINGS\bf:

1) Ruffini R., Bernardini M. G., Bianco C. L., Caito L., Chardonnet P., Dainotti M. G., Frascchetti F., Guida R., Rotondo M., Vereshchagin G., Vitagliano L., Xue S. S., "The role of GRB031203 in clarifying the astrophysical GRB scenario", in the Proceedings of "6th INTEGRAL Workshop – The obscured universe" in Moscow, Russia, July 2-8, 2006, ed. S. Grebenev, R. Sunyaev and C. Winkler, ESA Special Publication 622 (2007) 561-568. It is topic of my dissertation.

2) Dainotti M. G., Bernardini M. G., Bianco C. L., Caito L., Guida R., Ruffini R., "On GRB 060218 and the GRBs related to Supernovae Ib/c", in the Proceedings of "XI Marcel Grossmann meeting on General Relativity" in Berlin, Germany, July 23-29, 2006, World Scientific Singapore 2008, in press.

3) Guida R., Bernardini M. G., Bianco C. L., Caito L., Chardonnet P., Dainotti M. G., Frascchetti F., Ruffini R., Xue S. S., "Theoretical interpretation of GRB060124", in the Proceedings of "XI Marcel Grossmann meeting on General Relativity" in Berlin, Germany, July 23-29, 2006, World Scientific Singapore 2008, in press.

4) Bernardini M. G., Bianco C. L., Caito L., Chardonnet P., Corsi A., Dainotti M. G., Frascchetti F., Guida R., Ruffini R., Xue S. S., "GRB970228 as a prototype for the class of GRBs with an initial spikelike emission ", in the Proceedings of "XI Marcel Grossmann meeting on General Relativity" in Berlin, Germany, July 23-29, 2006, World Scientific Singapore 2008, in press.

5) Bernardini M. G., Bianco C. L., Caito L., Chardonnet P., Corsi A., Dainotti M. G., Frascchetti F., Guida R., Ruffini R., Xue S. S., "GRB980425 and puzzling URCA 1 emission", in the Proceedings of "XI Marcel Grossmann meeting on General Relativity" in Berlin, Germany, July 23-29, 2006, World Scientific Singapore 2008, in press. This is topic of my dissertation.

6) Caito L., Bernardini M. G., Bianco C. L., Dainotti M. G., Guida R., Ruffini R., "Theoretical interpretation of GRB011121", in the Proceedings of "XI Marcel Grossmann meeting on General Relativity" in Berlin, Germany, July 23-29, 2006, World Scientific Singapore 2008, in press. This is topic of my dissertation.

7) Ruffini R., Bernardini M. G., Bianco C. L., Caito L., Chardonnet P., Dainotti M. G., Frascchetti F., Guida R., Rotondo M., Vereshchagin G., Vitagliano L., Xue S. S., "Gamma Ray Bursts" in the Proceedings of "XI Marcel Grossmann meeting on General Relativity" in Berlin, Germany, July 23-29, 2006, World Scientific, Singapore 2008, in press.

- 8) Bianco C. L., Bernardini M. G., Caito L., Chardonnet, P., Dainotti M. G., Frascchetti, F., Guida R., Ruffini R. and She Sheng, X. "Theoretical interpretation of short and long GRBs" in the Proceedings of "XI Marcel Grossmann meeting on General Relativity" in Berlin, Germany, July 23-29, 2006, World Scientific, Singapore, 2008. This is topic of my dissertation.
- 9) Ruffini R., Bernardini M. G., Bianco C. L., Caito L., Chardonnet P., Dainotti M. G., Frascchetti F., Guida R., Rotondo M., Vereshchagin G., Vitagliano L., Xue S. S., "The Blackholic energy and the canonical Gamma-Ray Burst", in the Proceedings of "XII Brazilian School of Cosmology and Gravitation" in Mangaratiba, Brazil, September 10-23, 2006, AIP Conference Proceedings, 910, 55-217, 2007.
- 10) Bianco C. L., Bernardini M. G., Caito L., Dainotti M. G., Guida R., Ruffini R., "The fireshell model and the GRB scenario" in the Proceedings of "4th Italian-Sino Workshop on Relativistic Astrophysics" in Pescara, Italy, July 20-30, 2007, AIP Conf. Proc. 966, (2008), 12-15. This is topic of my dissertation.
- 11) Bernardini M. G., Bianco C. L., Caito L., Dainotti M. G., Guida R., Ruffini R., Xue S. S., "GRB 970228 and the class of GRBs with initial spikelike emission: do they follow the Amati relation?", in the Proceedings of "4th Italian-Sino Workshop on Relativistic Astrophysics" in Pescara, Italy, July 20-30, 2007, AIP Conf. Proc.966, (2008), 7-11.
- 12) Dainotti M. G., Bernardini M. G., Bianco C. L., Caito L., Guida R., Ruffini R., "On GRB 060218 and binaries as progenitors of GRB-SN systems ", in the Proceedings of "4th Italian-Sino Workshop on Relativistic Astrophysics" in Pescara, Italy, July 20-30, 2007 AIP Conf. Proc. 966, (2008), 25-30. This is topic of my dissertation.
- 13) Guida R., Bernardini M. G., Bianco C. L., Caito L., Dainotti M. G., Ruffini R., "The Amati relation within the fireshell model" in the Proceedings of "4th Italian-Sino Workshop on Relativistic Astrophysics" in Pescara, Italy, July 20-30, 2007 AIP Conf. Proc.966, (2008), 46-51.
- 14) Guida R., Bernardini M. G., Bianco C. L., Caito L., Dainotti M. G., Ruffini R. "Theoretical interpretation of the Amati relation within the fireshell model", in the Proceedings of the Conference "Gamma-Ray Bursts 2007" in Santa Fe, New Mexico (USA), November 5-9, 2007, ed. M. Galassi, D. Palmer, E.E. Fenimore, AIP Conf. Proc., 1000 (2008) 60-63.
- 15) Caito L., Bernardini M. G., Bianco C. L., Dainotti M. G., Guida R., Ruffini R. "GRB060614: a fake short Gamma-Ray Burst", in the Proceedings of the Conference "Gamma-Ray Bursts 2007" in Santa Fe, New Mexico (USA), November 5-9, 2007, ed. M. Galassi, D. Palmer, E.E. Fenimore, AIP Conf. Proc., 1000 (2008) 301-304.
- 16) Bianco C. L., Bernardini M. G., , Caito L., Dainotti M. G., Guida R., Ruffini R. "Short and Canonical GRBs", in the Proceedings of the Conference "Gamma-Ray Bursts 2007" in Santa Fe, New Mexico (USA), November 5-9, 2007, ed. M. Galassi, D. Palmer, E.E. Fenimore, AIP Conf. Proc., 1000 (2008) 305-308.

- 17) Dainotti M. G., Bernardini M. G., Bianco C. L., Caito L., Guida R., Ruffini R., "GRB 060218: the density mask and its peculiarity compared to the other sources", in the Proceedings of the ``Second Kolkata Conference on experimental evidence for Black holes in the Universe'', February 10- 17, 2008, AIP Conf. Proc. 1053 (2008), 283-289. This is topic of my dissertation.
- 18) Bernardini M. G., Bianco C. L., Caito L., Dainotti M. G., Guida R., Ruffini R., " The "Canonical" GRBs within the fireshell model" in the Proceeding of ``Second Kolkata Conference on experimental evidence for Black holes in the Universe'', February 10- 17, 2008, AIP Conf. Proc. 1053 (2008), 267-273.
- 19) Bianco C. L., Bernardini M. G., , Caito L., Dainotti M. G., Guida R., Ruffini R., Xue, S. S., Vereshchagin, G, "The Equations of motion of the "fireshell" ", in the Proceedings of the ``Second Kolkata Conference on experimental evidence for Black holes in the Universe'', February 10- 17, 2008, AIP Conf. Proc. 1053 (2008), 259-265. This is topic of my dissertation.
- 20) Caito L., Bernardini M. G., Bianco C. L., Dainotti M. G., Guida R., Ruffini R., "GRB 060614 in the canonical fireshell model" to appear on the Proceedings of the ``Second Kolkata Conference on experimental evidence for Black holes in the Universe'', February 10- 17, 2008, AIP Conf. Proc. 1053 (2008), 291-298.
- 21) R. Ruffini, A. G. Aksenov, M. G. Bernardini, C. L. Bianco, L. Caito, M.G. Dainotti, G. De Barros, R. Guida, G. V. Vereshchagin, and S.-S. Xue 'The Canonical Gamma-Ray Bursts and Their "Precursors"' in the Proceedings of the Conference of Nanjing, June 23-27, 2008, AIP Conf. Proc. 1065 (2008), 219-222.
- 22) Bianco C. L., Bernardini M. G., Caito L., Dainotti M. G., Guida R., Ruffini R. 'The "Fireshell" Model and the "Canonical GRB" Scenario' in the Proceedings of the Conference of Nanjing, June 23-27 2008, AIP Conf. Proc. 1065 (2008), 223-226.
- 23) M. G. Bernardini, C. L. Bianco, L. Caito, M. G. Dainotti, R. Guida, and R. Ruffini 'Preliminary analysis of GRB060607A within the fireshell model' in the Proceedings of the Conference of Nanjing, June 23-27, AIP Conf. Proc. 1065 (2008), 227-230.
- 24) G. de Barros, M. G. Bernardini, C. L. Bianco, L. Caito, M. G. Dainotti, R. Guida, and R. Ruffini 'Is GRB 050509b a "Genuine" Short GRB?' in the Proceedings of the Conference of Nanjing, June 23- 27, AIP Conf. Proc. 1065 (2008), pag. 231-233.

II Conferences and educational activities

Conferences and Other External Scientific Work

Ph.D. SCHOOL ATTENDED:

September 2007 "Scuola Nazionale di Astrofisica IX ciclo", Venezia (Italy), September 16-22, 2007, <http://www.merate.mi.astro.it/scuolasanservolo2007> September 2006 "XII Brazilian School of Gravitation and Cosmology", Mangaratiba (Brazil), September 10-23, 2006, [Http://www.cbpf.br/\\$\sim\\\$\cosmogra/bscgxxii.htm](Http://www.cbpf.br/$\sim\$\cosmogra/bscgxxii.htm).

July 2006 "Astrofisica Gamma e Multifrequenza: Analisi Dati e Problematiche Astroparticellari", Perugia (Italy), July 3-7, 2006, <http://glastweb.pg.infn.it/school2006/index.htm>.

February 2006 "1st Bego Scientific Rencontre", Nice (France), February, 6-17, 2006. <http://www.icra.it/IRAPPhD/Bego/First/Welcome.htm>.

January 2006 "Mathematical Problems in General Relativity", at ETH in Zurich (Switzerland) by Prof. Christodoulou on January, 8-31, 2006.

February -April 2007 "From classical to quantum gravity", at "La Sapienza" in Rome (Italy) by Dr Montani.

April -June 2006 " Geometrodynamics and matter fields " at "La Sapienza" in Rome (Italy) by Dr Montani.

November 2005-June 2006 "Theoretical physic: general relativity, cosmology, gravitational collapse" at "La Sapienza" in Rome (Italy) by Prof. Ruffini.

November 2006-June 2007 "Gravitational physic and relativistic linear theory of elettrodinamic" at "La Sapienza" in Rome (Italy) by Prof. Ruffini.

2005 - Present Weekly seminars on high energy astrophysics, cosmology and general relativity held at University of Rome "La Sapienza".

MEETINGS AND WORKSHOPS ATTENDED:

September 2007 "The II Stueckelberg Workshop on Relativistic Field Theories", Pescara (Italy), September 3-7, 2007.

July 2007 : "4th Italian-Sino Workshop on Relativistic Astrophysics", Pescara (Italy), July 20-30, 2007. http://www.icra.it/Italian-Sino_Workshop/fourth/english/welcome.htm

July 2007 : "Astrofisica Gamma dallo Spazio: AGILE e GLAST", Frascati (Italy), July 2-3, 2007. http://glast.pi.infn.it/ASI_Workshop/index.htm

June 2007 "10th Italian-Korean Symposium on Relativistic Astrophysics", Pescara, (Italy), June 25-30, 2007, . <http://www.icra.it/ITKO/10/welcome.htm>.

April 2007 "The April Meeting 2007 of the American Physical Society", Jacksonville (Florida), April 14-17, 2007 <http://www.aps.org/meetings/april/index.cfm>.

February 2007 "I Cesare Lattes meeting on Gamma-Ray Bursts, Black Holes and Supernovae", Mangaratiba (Brazil), February 25 - March 3, 2007, http://www.icra.it/ICRA_Networkshops/lattes_meeting/first/welcome.htm.

November 2006 'Swift Birthday 2006', Merate (Italy), November 30-1 December, 2007. <http://www.merate.mi.astro.it/swiftbirthday06>.

May 2006 'ENEA per la tecnologia e il territorio' , Rome (Italy), 17 May, 2006.

<http://www.enea.it>

July 2006 "XI Marcel Grossmann Meeting on General Relativity", Berlin (Germany), July 23-29,

<http://www.icra.it/mg/mg11/welcome.htm>.

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

<http://www.merate.mi.astro.it/docM/OAB/Research/SWIFT/sanservolo2006/index.html>.

Contributed talks:

July 2007 "GRB 060218 and the binaries as progenitors of GRB-SN system", presented at the "4th Italian-Sino Workshop on Relativistic Astrophysics", Pescara (Italy), July 20-30, 2007,

http://www.icra.it/Italian-Sino_Workshop/fourth/english/welcome.htm.

June 2007 "GRB 060218 and the the comparison with the other GRBs ", presented at the "10th Italian- Korean Symposium on Relativistic Astrophysics, Pescara (Italy), June 25-30, 2007.

<http://www.icra.it/ITKO/10/welcome.htm>.

April 2007 "GRB060218: a good example of GRB-SN connection", presented at the "The April Meeting 2007 of the American Physical Society", Jacksonville (Florida), April 14-17, 2007,

<http://www.aps.org/meetings/april/index.cfm>.

February 2007 "GRB 060218 within the theoretical framework of the fireshell", presented at the "Cesare Lattes meeting on Gamma-Ray Bursts, Black Holes and Supernovae", Mangaratiba (Brazil), February 25 - March 3, 2007,

http://www.icra.it/ICRA_Networkshops/lattes_meeting/first/welcome.htm

September 2006 "On GRBs 060218: one of the most peculiar source", presented at "XII Brazilian School of Gravitation and Cosmology", Mangaratiba (Brazil), September 10-23, 2006,

[http://www.cbpf.br/~sim\\$cosmogra/arquivos/princbscg.htm](http://www.cbpf.br/~sim$cosmogra/arquivos/princbscg.htm).

July 2006 "On GRB 060218 and the GRBs related to Supernovae Ib', ', presented at "XI Marcel Grossmann Meeting on General Relativity", Berlin (Germany), July 23-29, 2006,

<http://www.icra.it/mg/mg11/welcome.htm>.

Poster:

June 2006 : "Theoretical interpretation of GRB970228" in the conference

"Swift and GRBs: Unveiling the Relativistic Universe", Venezia (Italy), June 5-10, 2006.

November 2007 : "Short and canonical GRBs";

"Gamma-Ray Bursts 2007", Santa Fe, New Mexico (USA), November 5-9, 2007.

November 2007 "Theoretical interpretation of the Amati relation within the "Fireshell" model";

"Gamma-Ray Bursts 2007", Santa Fe, New Mexico (USA), November 5-9, 2007.

November 2007 "GRB060614: a progress report" "Gamma-Ray Bursts 2007", Santa Fe, New Mexico (USA), November

5-9, 2007.