

Bernardini Maria Grazia



Position: Postdoctoral Research Fellow (Assegnista di Ricerca)

Period covered: April 2007 – present

I Scientific Work

Study of the association between Gamma-Ray Bursts and Type Ib/c Supernovae, with particular interest toward the induced gravitational collapse phenomenon as a possible explanation for this association.

II Conferences and educational activities

Conferences:

- D.1) Probing Stellar Populations out to the Distant Universe, Cefalù (Italy), September 14-19, 2008.
- D.2) 3rd Stueckelberg Workshop on Relativistic Field Theories, Pescara (Italy), July 8-18, 2008.
- D.3) 2008 Nanjing GRB Conference, Nanjing (China), June 23-27, 2008.
- D.4) 2nd Kolkata Conference on the Observational Evidence for Black Holes in the Universe, Kolkata (India), February 10-17, 2008.

Work With Postdocs

- Collaboration with the Swift Italian Team (Merate, Italy): statistical analysis of the properties of X-ray flares in the *Swift* catalog

III Services Activities

Member of the Scientific Organizing Committee and Local Organizing Committee for the ICRA Weekly Seminars organized by the Physics Department of the University of Rome “La Sapienza

IV 2007-2008 List of Publications

The Amati relation in the fireshell model, Roberto Guida, Maria Grazia Bernardini, Carlo Luciano Bianco, Letizia Caito, Maria Giovanna Dainotti, Remo Ruffini, *A&A Lett* 487 (2008) 37-40.

GRB970228 and a class of GRBs with an initial spikelike emission, Maria Grazia Bernardini, Carlo Luciano Bianco, Letizia Caito, Maria Giovanna Dainotti, Roberto Guida, Remo Ruffini, *A&A Lett.* 474 (2007) 13-17.

GRB060218 and GRBs associated with Supernovae Ib/c, Maria Giovanna Dainotti, Maria Grazia Bernardini, Carlo Luciano Bianco, Letizia Caito, Roberto Guida, Remo Ruffini, *A&A Lett.* 471 (2007) 29-32.

Maria Grazia Bernardini was born in San Benedetto del Tronto (AP) in 1979. She got her Diploma in the Scientific High School "B. Rosetti" in San Benedetto del Tronto (AP) in 1998. She got her Master Degree with the grade 110/110 cum laude in the Physics Department of the University of Rome "La Sapienza" in 2003. In the same year she was admitted to the International Relativistic Astrophysics Ph.D. Program (IRAP PhD) granted with a fellowship by the six participating institutions: ETH Zurich, Freie Universität Berlin, Observatoire de la Côte d'Azur, Université de Nice - Sophia Antipolis, Università di Roma "La Sapienza", Université de Savoie. She got the PhD degree in 2007.

Currently she is a Post-doctoral Research Fellow (Assegnista di Ricerca) in the Physics Department of the University of Rome "La Sapienza". Her activity is devoted mainly to the study of the association between Gamma-Ray Bursts and Type Ib/c Supernovae, with particular interest toward the induced gravitational collapse phenomenon as a possible explanation for this association.

During this period she also spent a few months in the Osservatorio Astronomico di Brera, Merate (LC) as a visitor of the Italian *Swift* team, performing a statistical analysis of the properties of X-ray flares in the *Swift* catalogue.

She attended to several international meetings concerning Gamma-Ray Bursts, High Energy Astrophysics and Cosmology, where she presented contributed talks and posters, and published Proceedings. She published as well in several research papers in international reviewed journals. She is member of the Scientific Organizing Committee and Local Organizing Committee for the ICRA Weekly Seminars organized by the Physics Department of the University of Rome "La Sapienza". She was also member of the Local Organizing Committee for the "4th Italian-Sino Workshop on Relativistic Astrophysics" held in Pescara (Italy) on July 20-30, 2007.

She is member of the American Physical Society (APS) and of the Italian Physical Society (Società Italiana di Fisica (SIF)).