

Melania Del Santo

Curriculum Vitae

PERSONAL DATA

Place and date of birth: Napoli, 4 October 1974
Nationality: Italian
Affiliation: Istituto Nazionale di Astrofisica/IASF-Roma,
via del Fosso del Cavaliere, 100, 00133, Roma (Italy)
E-mail: melania.delsanto@iasf-roma.inaf.it

EDUCATION

- **Ph.D.:** *Astrophysics/Astronomy*, Université Paul Sabatier (Toulouse) and “Università degli Studi di Bologna” (Bologna), thesis “in cotutelle” France/Italy. Thesis: “Observations of Black Hole Binaries in the INTEGRAL Era”.
- **Laurea Degree:** *Astronomy*, “Università degli Studi di Bologna”, 16 July 1999, marks: 103/110, Thesis: “Studying imaging performance of PICsIT detector on board INTEGRAL satellite
- **High School degree:** Liceo Scientifico “F. Quercia”, Marcianise (CE), marks: 56/60

EMPLOYMENT HISTORY

- ❖ **Since 28 April 2009**, Permanent Position as researcher at Istituto Nazionale di Astrofisica, IASF-Roma (INAF/IASF-Roma)
- ❖ **3 May 2007 – 27 April 2008**, time-limited contract as scientific researcher (“Articolo 23”) at INAF/IASF-Roma
- ❖ **3 May 2002 – 2 May 2007** time-limited contract as scientific researcher (“Articolo 23”) at INAF/IASF-Roma
- ❖ **1 February 2000 – 30 April 2002:** Research Fellow at IASF-Roma on the IBIS experiment.
- ❖ **1996:** laboratory assistant (150 hours), course on “Laboratory of Astronomy I”, Università degli Studi di Bologna.

EXPERIENCE AT FOREIGN LABORATORIES

- ✓ **Since 2004**, a number of visiting for scientific collaboration at CESR/CNRS (Toulouse)
- ✓ **May 2004 – October 2004**, CESR/CNRS Toulouse (France). Grant: “Progetto Marco Polo” (Università degli Studi di Bologna).

- ✓ **November 2002 – May 2003**, INTEGRAL Science Data Center (ISDC) Geneva (Switzerland). Activity for the INTEGRAL Performance Verification Phase and in-flight calibration.
- ✓ **December 2001 – May 2002**, ESTEC/ESA – Noordwijk (Netherlands), INTEGRAL on-ground calibrations.
- ✓ **November 2001**, LABEN (Milan), IBIS detector calibration

RESEARCH ACTIVITIES

Observations

High energy astrophysics: data analysis (INTEGRAL, RXTE, XMM-Newton, Chandra and SWIFT) and interpretation of high energy emission from X-ray binaries (stellar mass black hole, neutron stars);

In particular:

- Spectral transitions and high energy emission of black-hole candidates: observations and interpretation. Application and testing of new models explaining the high energy emission;
- Very faint X-ray transients, especially systems showing type-I X-ray bursts;
- Study of spectral and temporal behaviour of unknown sources as new INTEGRAL transients, as well as persistent sources in the Galactic Centre, firstly observed at high energy with INTEGRAL.

Contribution to the international high-energy missions

- Member of the NHXM Science Working Group
- Collaboration in WHIM observation simulations with EDGE future mission as member of the EDGE consortium
- INTEGRAL/IBIS on ground and in-flight calibration activity in collaboration with the IBIS calibration team
- Simulations of INTEGRAL/IBIS observations and IBIS performances study

INVITED SEMINARS

1. “XMMU J174716.1-281048: a quasi-persistent very faint X-ray transient?”, 26 June 2007, Astronomical Observatory of Brera/Merate (Milan)
2. “Galactic Black Holes in the INTEGRAL Era”, 7 December 2004, Astronomy Department of the Bologna University, Bologna
3. “1E 1740.7-2942: temporal and spectral evolution from INTEGRAL and RXTE observations”, 22 October 2004, CNRS/CESR (Toulouse)

PUBLICATIONS & PI-PROPOSALS

82 publications, among which 34 in refereed journals

PI of 10 accepted proposals to obtain *INTEGRAL* and *Swift* observations. Co-I in more than 20 proposal with INTEGRAL, Swift and Chandra.

GRANTS

1. **Prin INAF 2009**, local coordinator of IASF-Roma Research Unit (national coord.: Dr. Sidoli)
2. **Grant from the Université Paul Sabatier**: 1 month of visiting at CESR (Toulouse) in 2010
3. **Since 2005, grants for young researchers**, from IASF-Roma, dedicated to scientific collaborations at CESR/CNRS (Toulouse)
4. **October 2003 – Marco Polo Project**, Bologna University. Six month of financial support for PhD students at CESR/CNRS Toulouse (France).
5. **2003-2004**, CNR (Italy), Grant for French language course.

OUTREACH

- Since 2007, lectures and outreach activities during the “Researchers night” in Frascati
- 2004-2010, outreach for secondary schools students: visits at the INTEGRAL/IBIS clean room (IASF-Roma) and IASF-Rome laboratories
- Organization and lectures for secondary school students “L’occhio della scienza sul Sistema Solare e sulle Galassie”, Priverno (LT), manifestation “Apriamo la mente” (18-27 May 2007), supported by Regione Lazio and Italian Minister University and Research.
- “Night under the stars”, 26 July 2005, Cannole (LE)

Foreign Languages

English: very good

French: good

Spanish: little

Rome, 07/07/2010

