

Curriculum di Adalberto Sciubba

Dal 2005 Professore I fascia presso la Facoltà di Ingegneria Civile e Industriale dell'Università degli studi di Roma "La Sapienza".

Dal 1975 associato all'Istituto Nazionale di Fisica Nucleare (INFN).

Dal 2015 associato al Museo storico e Centro studi e ricerche Enrico Fermi.

Principali attività in corso:

Didattica:

- Fisica II (Ingegneria Clinica)
- Laboratorio di Fisica Sperimentale (Ingegneria Meccanica)
- Membro del collegio di dottorato in Modelli matematici per l'Ingegneria, Elettromagnetismo e Nanoscienze

Incarichi didattico-organizzativi:

- Referente AQ di Ingegneria Clinica e Biomedica
- Membro della Commissione manifesti per i CdS di Ingegneria Clinica e Ingegneria Biomedica
- Responsabile della gestione del Laboratorio Didattico di Fisica delle Facoltà di Ingegneria
- Vicedirettore del Dipartimento di Scienze di Base e Applicate per l'Ingegneria con delega alla firma
- Membro della Giunta del Dipartimento di Scienze di Base e Applicate per l'Ingegneria

Ricerca:

- FOOT (FragmentatiOn Of Target) misure presso acceleratori per ioni terapeutici
- LHC (Large Hadron Collider) CERN - Ginevra: esperimento LHCb
- INSIDE2 – rivelatore di protoni secondari presso il Centro Nazionale di Adroterapia Oncologica
- MONDO – rivelatore di neutroni in trattamenti adroterapici

Curriculum scientifico

L'attività scientifica relativa alla fisica e alle tecnologie delle particelle elementari è stata svolta nell'ambito delle problematiche esplorabili con:

- collisori elettrone-positrone nei Laboratori di Frascati con l'apparato MEA in ADONE nel 75-78 e l'apparato KLOE in DAFNE 94-10
- fasci di adroni su bersagli fissi nei Laboratori del CERN presso il PS dal 78 all'82 per lo studio di sistemi adronici e con esperimenti all'SPS per lo studio del beauty dall'83 all'86 e dall'87 all'89
- reattori nucleari a Grenoble nell'82 per lo studio di oscillazioni neutrone-antineutrone
- palloni sonda: esperimento MASS nell'86 per lo studio dell'antimateria nei raggi cosmici primari
- osservatorio sotterraneo MACRO nei Laboratori del Gran Sasso dall'84 al 2000 per la ricerca di monopoli magnetici, collapsi gravitazionali, oscillazioni del neutrino e studi di raggi cosmici
- collisori protone-protone a 7+7 TeV nei Laboratori del CERN (presso LHC) per lo studio delle violazioni di CP e del modello standard in LHCb (a partire dal 2000)
- acceleratori per terapia con ioni (dal 2010): protoni e carboni da 80 MeV/u (Catania); carboni da 400 MeV/u al GSI (Darmstadt); protoni e carboni al CNAO (Pavia); eli, carboni, ossigeni a HIT (Heidelberg) al fine di studiare l'emissione di particelle secondarie prodotte nei trattamenti terapeutici.

Le applicazioni delle tecnologie della fisica delle particelle alla cura dei tumori mediante radioterapia con ioni sono attualmente il principale tema di ricerca.

Nei diversi esperimenti ha spesso svolto ruoli di coordinamento, in particolare dei gruppi che hanno progettato, realizzato, installato e utilizzato rivelatori di particelle e i dispositivi elettronici necessari per il loro funzionamento.

È inoltre co-inventore di un brevetto: (29/01/2013, richiesta RM2013A000050) "Beta radiation probe for the intra-operative identification of tumour residuals"

Settembre 2018

Curriculum vitae et studiorum

Fabio Ambrosino

Curriculum studiorum

Dottorato di ricerca in Fisica XII ciclo, conseguito nell'anno 2000 presso Università degli Studi di Napoli Federico II

Laurea in Fisica conseguita *cum laude* nel luglio 1996 presso l'Università degli Studi di Napoli Federico II

Attività lavorativa

-Professore Ordinario, SC 02/A1 (SSD FIS/01) Fisica sperimentale delle interazioni fondamentali presso il Dipartimento di Fisica "Ettore Pancini" dell'Università degli Studi di Napoli Federico II, dal febbraio 2018

- Professore Associato, SC 02/A1 (SSD FIS/01) Fisica sperimentale delle interazioni fondamentali presso il Dipartimento di Fisica "Ettore Pancini" dell'Università degli Studi di Napoli Federico II, dal dicembre 2011

-Ricercatore, SSD FIS/01 –Fisica Sperimentale presso il Dipartimento di Fisica dell'Università degli Studi di Napoli Federico II, dall'aprile 2000

Responsabilità scientifiche

L'attività scientifica di Fabio Ambrosino (FA) si svolge a partire dal 1995 nel campo della fisica sperimentale delle particelle elementari e delle sue applicazioni, e presenta i seguenti filoni principali di interesse:

- Esperimento KLOE a DAFNE (1995 – 2012)
- Attività di ricerca e sviluppo su rivelatori a GEM (2003-2005)
- Esperimento NA62 al CERN (2005 - oggi)
- Radiografia muonica (2008 – oggi)

I principali contributi individuali forniti e i ruoli di responsabilità assunti da FA nelle diverse linee di attività sono:

- Responsabile nazionale per l'esperimento NA62 per l'INFN (dal 2017)
- Responsabile rivelatore CHANTI per l'esperimento NA62 al CERN (dal 2009). Attività realizzata anche nel contesto di un PRIN 2008.

- Expert coordinator (coordinatore degli esperti del rivelatore) per il rivelatore CHANTI di NA62 (2016)
- Coordinatore dell'articolo sul rivelatore CHANTI (2016)
- Responsabile per l'INFN del gruppo di Napoli per la linea di ricerca P326/NA62 (dal 2005)
- Responsabile locale di un PRIN 2010-2011 per lo studio degli sviluppi futuri dell'esperimento NA62
- Chapter editor del Technical Design Report di NA62 (2010) e del "Detector Paper" di NA62 (2016)
- Membro dello steering committee dell'esperimento NA62 al CERN (dal 2005).
- Membro del Selection Committee dell'esperimento NA62 per l'elezione di Spokesperson, Physics Coordinator ed Editorial Board chair (2018)
- Responsabile del sistema di calibrazione e monitoraggio dei veti a grande angolo (LAV) per l'esperimento NA62 al CERN (dal 2005). Attività realizzata nel contesto di un PRIN 2006
- Membro della collaborazione MuRay/MURAVES per l'applicazione della tecnica della radiografia muonica allo studio dei vulcani (dal 2008).
- Responsabile di un progetto sulla radiografia muonica finanziato dalla Regione Campania nell'ambito della Legge Regionale 5/02 (Bando 2008).
- Membro del gruppo di studio della Roadmap INFN per il futuro dei Laboratori Nazionali di Frascati (2006)
- Activity leader per INFN-NA del progetto PrimeNet; Hadron Physics 2 (FP7 Contract 227431) WP5-: Meson Physics in Low-Energy QCD (2009-2011)
- Convener del Working Group sui decadimenti della Phi per l'esperimento KLOE a DAFNE (2000-2004)
- Run coordinator (a rotazione) per l'esperimento KLOE a DAFNE (2001-2006)
- Offline expert (a rotazione) per l'esperimento KLOE a DAFNE(2000-2006)
- Membro dell'executive board dell'esperimento KLOE a DAFNE (dal 2000 al 2012)
- Corresponding author di 4 analisi di fisica pubblicate dall'esperimento KLOE fra il 2002 e il 2010
- Partecipante al progetto che ha portato alla realizzazione della prima TPG (2003-2005)

Conferenze e Workshop

FA ha partecipato come relatore a oltre 25 conferenze e workshop nazionali e internazionali sulla fisica adronica, la fisica dei K e la radiografia muonica. Fra i più recenti si ricordano:

"Rare kaon decays" invited review talk at XXXVI Physics in Collision conference (Quy Nhon, Vietnam, settembre 2016).

Muografia: una nuova possibilità per "guardare attraverso". Relazione su invito, Accademia di Scienze, Lettere e Arti (Modena, marzo 2017)

"Physics at the CERN kaon factory: recent results and prospects for the future" –invited talk at DISCRETE 2018 (Vienna, novembre 2018)

Pubblicazioni

FA è autore di oltre 180 pubblicazioni e proceedings di conferenze, e, complessivamente, di 200 documenti registrati su ArXiv (fonte SPIRES).

Con riferimento al catalogo SPIRES, comunemente in uso nella comunità di fisica subnucleare i parametri bibliometrici relativi alla produzione scientifica di FA sono:

SPIRES: totale articoli registrati 200; h-factor= 40, totale citazioni > 5500 ;

L'elenco di documenti presenti su SPIRES può essere consultato all'URL:

<https://tinyurl.com/ycc8eick>

Attività istituzionale

FA ha ricoperto incarichi istituzionali a livello di Dipartimento, di Ateneo e a livello nazionale. Fra questi si ricordano:

- Membro della commissione di abilitazione scientifica nazionale (ASN) per il biennio 2018-2020 (da ottobre 2018) per il settore concorsuale 02/A1
- Membro della Giunta del Dipartimento di Fisica "Ettore Pancini" eletto per il triennio 2019-2021 (da marzo 2019)
- Membro del Gruppo di lavoro e referente tecnico del Dipartimento per la stesura del progetto "Dipartimenti di Eccellenza"
- Membro del Gruppo di Lavoro nominato dal Rettore per l'elaborazione della Sezione Ricerca del sito Web di Ateneo (dal 2015). Il GdL ha successivamente ricevuto mandato dal Rettore per elaborare una proposta di organizzazione di un Ufficio Ricerca di Ateneo, istituito a fine 2018.
- Membro del gruppo di lavoro di Ateneo per la VQR 2011-2014 (2015) e referente SUA-RD per il Dipartimento di Fisica "Ettore Pancini"
- Membro del Collegio dei Docenti del Dottorato in Fisica (cicli XXIX-XXX-XXXI-XXXII-XXXIII)
- Responsabile del Gruppo di Lavoro sulla Valutazione (GLV) del Dipartimento di Fisica "Ettore Pancini".
- Membro della Giunta del Dipartimento di Fisica per il triennio 2013-2015
- Membro della Giunta del CCL in Fisica per il periodo 2004-2008

Terza missione

FA è attivo nel campo della terza missione dell'Università.

- Ha tenuto corsi di programmazione a oggetti e linguaggi avanzati nell'ambito di accordi con la Regione Campania per corsi ICT di base.

- Dal 2005 collabora all'attività di divulgazione della fisica delle particelle presso le scuole superiori (progetto MasterClass- Hands On Particle Physics), tenendo seminari e/o guidando gli studenti a realizzare l'analisi dati di un esperimento di fisica delle particelle in laboratorio.
- Nel 2015 ha tenuto un seminario pubblico, dal titolo "La frontiera dell'infinitamente piccolo e le particelle elementari" a Piazza del Plebiscito, (Napoli) nell'ambito della manifestazione/evento Futuro Remoto.
- Dal 2018 collabora con Città della Scienza per tenendo seminari per le scuole superiori di introduzione ad argomenti di fisica moderna.
- Ha collaborato saltuariamente con i quotidiani "Il Mattino" e "Repubblica" per commentare e divulgare scoperte e ricerche di interesse in fisica delle particelle

Napoli, 31 dicembre 2018

Fabio Ambrosino

A handwritten signature in black ink, appearing to read 'Fabio Ambrosino', written in a cursive style.

Curriculum Vitae (short form) of Dr. A. Incicchitti

INFN research director at INFN Roma (Italy) division, local responsible of DAMA experiment at I.N.F.N. Roma division and coordinator in INFN CSN2 (INFN National Scientific Committee for astroparticle physics) for INFN Roma division.

Her experimental research activity has been performed mainly in the field of Nuclear and Subnuclear Physics, being involved in developments of detectors, in the project and the realization of the apparatus, in the data taking and in some aspects of their analysis. Such activities have been performed at LADON photon beam, L.N.F., Frascati, Italy (photonuclear reactions), at INFN Roma Tor Vergata division (XELIDON and DAMA experiments), at INFN Laboratori Nazionali del Gran Sasso, Italy (DAMA experiment), at CEA/DAPNIA-DPhN beam of Saclay, France (CTNAS experiment) and for some tests on detectors at CERN. In particular, at the end of 80's she was among physicists who opened activities in the field of Astroparticle Physics, now in a wide expansion.

Since 1988 she has accomplished many didactic tasks at the Physics Department of Università "La Sapienza", Roma, as tutor of students too. Over time she was involved in scientific training and divulgation.

She is co-author of more than 200 publications on international reviews, of more than 100 papers on Proceedings volumes and of some didactic materials.

ResearcherID: H-1885-2012 (<http://www.researcherid.com/rid/H-1885-2012>)

Orcid: <http://orcid.org/0000-0002-5157-4923>

h-index: 63 (Google Scholar) on December 20, 2018.

Curriculum Vitae

- Born in Roma on 24th March 1960, Italian citizen.
- Education at Università di Roma "La Sapienza", Subnuclear Physics.
- On 1985 laurea in Physics (rank 110/110 cum laude).
- From 25/9/1985 to 15/11/1985 collaborator of the Dipartimento di Fisica at Università di Roma "La Sapienza".
- On December 1985 eligible for an INFN researcher position for Nuclear Physics, at Sanità division, Roma.
- In the A.Y. 1985 – 1986 specialization course in Particle Physics.
- From 1/7/1986 to 31/3/1988 I.N.F.N. fellow of INFN Roma division.
- In 1987 INFN specialization course at Advanced School in Nuclear and Subnuclear Physics.
- From 1/4/1988 to 28/02/2002 INFN researcher at INFN Roma division.
- In 1989 course at Leybold, Milano, about vacuum techniques.
- From 1/3/2002 to 31/12/2006 INFN senior researcher at INFN Roma division.
- Since 1/1/2007 INFN research director at INFN Roma division.

Coordination activities and responsibilities

- From 1998 to 27/6/2010 GLIMOS (Group Leader In Matter Of Safety) of DAMA experiment at LNGS.
- Since 1/7/2011 coordinator in INFN CSN2 (INFN National Scientific Committee for astroparticle physics) for INFN Roma division.
- Since 1/1/2009 local responsible of DAMA experiment at INFN Roma division.
- From 2/12/2009 to 2/12/2011 chair of the committee assigning Post-Doctoral Fellows at INFN Roma division.

- In 2018, chair in a committee for a PhD thesis defense in Astroparticle Physics at GSSI, Italy.

Editorial activities

- In November 1995, editor with Prof. Bernabei, of the international workshop *The Dark Side of the Universe: experimental efforts and theoretical framework II* at INFN Roma Tor Vergata, World Scientific, pag.1-265.
- In March 2018, Guest Editor of the Special Issue on Results and Developments in the Investigation of Rare Nuclear Decays and Processes, *Int. J. of Mod. Phys.* Vol. 33, 341 pages.

Reviewer

- Since 2011, referee in INFN CSN2 of the experiments (over time): GERDA, JUNO, MICRA, SUPREMO, MARE-RD, HOLMES, TRISTAN.
- In 2012, referee for Agence nationale de la recherche (ANR France - Young Researchers programme).
- In 2015, referee for Università degli Studi dell'Insubria - Italy (postdoctoral grant).
- Since 2015 in the REPRISE panel (Register Expert Peer Reviewers for Italian Scientific Evaluation).
- Since 2015 in the panel of peer reviewers for Qatar National Research Fund (QNRF).
- In 2016, referee for a PhD Thesis of IIT Kharagpur (India).
- Referee for international reviews (over time e.g. for Astroparticle Physics, Nuclear Inst. and Methods in Physics Research A, Advances in High Energy Physics).

Teaching activities

Teaching activities at Faculty of S.M.F.N., Università di Roma "La Sapienza":

In **A.Y. 1992/93, 1994/95, 1996/97, 1998/99, 2000/2001, 2002/2003** adjunct professor (course of Physics and Dosimetry of Radiation I) for the Specializing School of Health Physics.

In **A.Y. 1987/88, 1988/89, 1989/90, 1990/91, 1991/92, 1993/94, 1995/96, 1997/98, 1999/2000, 2001/2002, 2003/2004** a cycle of seminars in the course of Physics and Dosimetry of Radiation I, for the Specializing School of Health Physics.

In **A.Y. from 1986/87 to 1997/98** assistant for the course of Institutions of Nuclear Physics, Laurea degree course in Physics, Department of Physics.

In **A.Y. 1989/90, 1990/91** assistant for the course of General Physics, Laurea degree course in Physics, Department of Physics.

In **A.Y. 1992/93** assistant for the course of General Physics, Department of Informatics;

In **A.Y. 1994/95, 1996/97, 1999/2000** assistant for the course of Institutions of Nuclear and Subnuclear Physics, Department of Physics.

In **A.Y. from 2004/2005 to 2007/2008** assistant for the course of Modern Physics, Department of Physics.

In **A.Y. 2008/2009, 2009/2010, 2010/2011, 2011/2012, 2012/2013, 2013/2014, 2014/2015** collaboration and lectures in the course of Nuclear Physics, Department of Physics.

In **A.Y. 2014/2015, 2015/2016, 2016/2017 and 2017/2018** reviews on dark matter and astroparticle physics in the Astroparticle Physics course and Nuclear and Subnuclear Physics course.

Over time she has been invited to present seminars for students and PhD students in some Italian and foreigner Universities.

In **A.Y. 2007/2008** and **2013/2014**, cycle of lectures in the framework of *Progetto Alta Formazione* for fellowships PO FSE Abruzzo (Italy) 2000-2006 and 2007-2013.

Invited seminars and workshop contributions

Over time she has presented many contributions to international conferences and she has been invited to present seminars at Italian and foreigner Institution.

Main experimental activities:

Dr. Incicchitti's experimental research activity has been performed mainly in the field of Nuclear and Subnuclear Physics, being involved in developments of detectors, in the project and the realization of the apparatus, in the data taking and in some aspects of their analysis.

- From **1984** to **1989**: research activities in nuclear physics at the photon Ladon beam at INFN Laboratori Nazionali di Frascati (photonuclear reactions on light nuclei: ^2H , ^3He , ^4He).
- In **1989-1990** research activity at CERN for some tests on detectors.
- From **1989** to **1992** research activity in the experiment CTNAS (heavy ions physics), at the CEA/DAPNIA-DPhN beam of Saclay. She performed her work in the part of the apparatus devoted to photon detection, participating to data taking and to some phases of the analysis to study the reaction $^{35}\text{Cl} + ^{64}\text{Ni}$ at 7.7 A MeV.
- From **1988** to **1992**, she was promoter of a technological activity to develop liquid Xenon detectors (XELIDON experiment, INFN CSN5 - Committee for Technological and interdisciplinary research), contributing to the study, the realization and to the tests on some purification set-ups and different typologies of detectors, located at INFN Roma Tor Vergata and at LNGS. Later the research has been focused on Xenon used as pure scintillator and applied to dark matter and rare processes' investigation.
- In **1995** in the framework of the investigation on detectors able to detect rare events, she participated to some test measurements on GaAs detectors (MBE technique) at Università di Roma "Tor Vergata", EPIGAAS experiment (INFN CSN5).
- From **1989 up to now**. She is one of the proponents of the DAMA project, for which she has been working until now. DAMA (Roma Tor Vergata, Roma, LNGS, IHEP-Beijing) is an observatory to investigate a dark matter particle component in the galactic halo (exploiting the model independent annual modulation signature) and rare processes, such as solar axions, superdense nuclear states, tests on Pauli principle, charge conservation, double beta decay processes, rare nuclear decays etc. Many measurements on double beta decay and rare processes have been performed in the framework of INR(Kiev) – DAMA collaboration. With these research activities very highly radiopure scintillators have been developed and set on measurement at LNGS. Dr. Incicchitti has contributed to the R&D developments, to the choice of the best measurement and protocol strategies and to the development, choice and realization of all the detectors, data taking and to some aspects of the data analysis. In the framework of the investigation on dark matter signatures, Dr. Incicchitti studied also the possibility to point out a "directionality" (expected only for candidates inducing nuclear recoils), i.e. a correlation between the recoil target-nucleus direction and the direction of Earth's galactic motion. She was one of the promoters to consider anisotropic scintillators with such an aim. She has also contributed to the diffusion of the scientific results presenting contributions to international conferences and seminars.

The main experimental apparatus realised are: DAMA/NaI, DAMA/LXe, DAMA/R&D, DAMA/LIBRA-phase1 and phase2, DAMA/Ge, DAMA/ARMONIA, DAMA/CRYS. In particular, DAMA/NaI, DAMA/LIBRA-phase1 and phase2 model independent results, on the basis of the exploited signature, have given evidence at 12.9σ C.L. for the presence of dark matter particles in the galactic halo.

Papers

She is co-author of more than 200 publications on international reviews, of more than 100 papers on Proceedings volumes and of some didactic materials.

List of the main papers on international reviews:

1. R. Bernabei, A. Incicchitti, M. Mattioli, P. Picozza, D. Prosperi, L. Casano, S. d'Angelo, M. P. De Pascale, C. Schaerf, G. Giordano, G. Matone, S. Frullani e B. Girolami: "Deuteron photodisintegration total cross section between 15 and 75 MeV", *Phys. Rev. Lett.* **57** (1986) 1542-1545.
2. M. Preger, B. Spataro, D. Babusci, R. Bernabei, L. Casano, S. d' Angelo, M. P. De Pascale, S. Frullani, G. Giordano, B. Girolami, A. Incicchitti, G. Matone, M. Mattioli, P. Picozza, D. Prosperi e C. Schaerf: "Monochromatic and Polarized gamma ray beams for the study of the three body system", *Lecture Notes in Physics* **260** (1986) 462-471 (Springer Verlag ed.).
3. D. Babusci, P. Belli, R. Bernabei, L. Casano, S. d'Angelo, M. P. De Pascale, G. Giordano, B. Girolami, A. Incicchitti, M. Mattioli, P. Picozza, D. Prosperi e C. Schaerf: "Photodisintegration of light nuclei with the LADON photon beam", *Few-Body Systems, Suppl.* **1** (1986) 383-391.
4. D. Babusci, P. Belli, R. Bernabei, L. Casano, S. d'Angelo, M. P. De Pascale, G. Giordano, B. Girolami, A. Incicchitti, G. Matone, M. Mattioli, P. Picozza, M. Preger, P. Prosperi, C. Schaerf e B. Spataro: "Monochromatic and polarized gamma ray beams for the study of few body interactions", *Few-Body Systems, Suppl.* **1** (1986) 586-594.
5. R. Bernabei, S. d'Angelo, M.P. De Pascale, P. Picozza, P. Belli, A. Incicchitti, D. Prosperi e B. Girolami: "The response of a small liquid scintillation counter for low energy (γ ,p) experiments", *Nucl. Instr. & Meth.* **A269** (1988) 167-170.
6. P. Belli, R. Bernabei, L. Casano, A. Chisholm, S. d'Angelo, M. P. De Pascale, B. Girolami, A. Incicchitti, P. Picozza, D. Prosperi e C. Schaerf: "Measurement of the $^4\text{He}(\gamma, p)^3\text{H}$ total cross section and charge symmetry", *Phys. Rev.* **C38** (1988) 1990-1995.
7. P. Belli e A. Incicchitti: "Performance of a detector for high precision monitoring of a low energy γ -ray beam", *Nucl. Instr. & Meth.* **A276** (1989) 656-658.
8. D. Babusci, R. Bernabei, L. Casano, S. d'Angelo, M. P. De Pascale, B. Girolami, A. Incicchitti, P. Picozza, D. Prosperi, M. Scafì e C. Schaerf: "Measurement of the $^3\text{He}(\gamma, p)d$ total cross section at 48.6 MeV", *Il Nuovo Cimento* **A102** (1989) 949-952.
9. M. De Sanctis, A. Incicchitti, D. Prosperi, P. Belli, R. Bernabei, S. d'Angelo, M.P. De Pascale, P. Picozza, M. Scafì: "Relativistic corrections to ^3He photodisintegration sum rules", *Il Nuovo Cimento* **A103** (1990) 461-464.
10. P. Belli, R. Bernabei, S. d'Angelo, M. P. De Pascale, M. De Sanctis, A. Incicchitti, P. Picozza, D. Prosperi, M. Scafì: "Low energy ^3He photonuclear reactions", *Il Nuovo Cimento* **A103** (1990) 721-729.
11. A. Incicchitti, P. Belli e M. Scafì: "Liquid Xenon as a detector medium", *Nucl. Instr. & Meth.* **A289** (1990) 236-242.
12. P. Belli, R. Bernabei, S. d'Angelo, A. Incicchitti, D. Prosperi: "Detecting dark matter using a liquid Xenon scintillation detector", *Il Nuovo Cimento* **A103** (1990) 767-771.

13. P. Belli, R. Bernabei, S. d'Angelo, L. Andreanelli, F. Bronzini, A. Buccheri, A. Incicchitti, D. Prospero: "Liquid Xenon detectors and their applications", *Nucl. Instr. & Meth.* **A299** (1990) 191-194.
14. P. Belli, R. Bernabei, A. Incicchitti, D. Prospero, "On neutron/ γ discrimination in NaI(Tl)", *Nucl. Instr. & Meth.* **A294** (1990) 391-392.
15. P. Belli, R. Bernabei, S. d'Angelo, A. Incicchitti, D. Prospero: "Liquid Xenon scintillators", *Nucl. Instr. & Meth.* **A310** (1991) 150-153.
16. P. Belli, R. Bernabei, C. Bacci, A. Incicchitti, R. Marcovaldi, D. Prospero: "Liquid Xenon detectors for dark matter experiments", *Nucl. Instr. & Meth.* **A316** (1992) 55-57.
17. C. Bacci, P. Belli, R. Bernabei, Dai Changjiang, E. Gaillard, G. Gerbier, Kuang Houhuai, A. Incicchitti, Ma Jimao, He Jingtang, J. Mallet, R. Marcovaldi, L. Mosca, D. Prospero, Charling Tao: "Direct detection of dark matter with NaI crystals", *Nucl. Phys.* **B28A** (Proc. Sup.) (1992) 302-305.
18. C. Bacci, A. Incicchitti, D. Prospero, P. Belli, R. Bernabei: "Identifying a dark matter signal by non isotropic scintillation detector", *Il Nuovo Cimento* **C15** (1992) 475-479.
19. C. Bacci, P. Belli, R. Bernabei, Dai Changjiang, Ding Linkai, E. Gaillard, G. Gerbier, Kuang Houhuai, A. Incicchitti, J. Mallet, R. Marcovaldi, L. Mosca, D. Prospero, Charling Tao and Xie Yigang: "WIMPs search with low activity NaI crystals. Preliminary results", *Phys. Lett.* **B293** (1992) 460-464.
20. A. Bottino, V. de Alfaro, N. Fornengo, G. Mignola, S. Scopel, C. Bacci, P. Belli, R. Bernabei, Dai Changjiang, Ding Linkai, E. Gaillard, G. Gerbier, Kuang Houhuai, A. Incicchitti, J. Mallet, R. Marcovaldi, L. Mosca, D. Prospero, Charling Tao and Xie Yigang: "Search for neutralino dark matter with NaI detectors", *Phys. Lett.* **B295** (1992) 330-336.
21. C. Bacci, P. Belli, R. Bernabei, A. Incicchitti, D. Prospero: "Underground physics with liquid Xenon detectors", *Nucl. Instr. & Meth.* **A327** (1993) 207-208.
22. P. Belli, R. Bernabei, C. Dai, A. Incicchitti, D. Prospero, C. Bacci: "Liquid Xenon detector for dark matter search at Gran Sasso", *Nucl. Instr. & Meth.* **A336** (1993) 336-342.
23. M. Bocciolini,... A. Incicchitti, D. Prospero,...: "Silicon calorimeter for Cosmic Antimatter search", *Nucl. Phys.* **B32** (Proc. Sup.) (1993) 77-82.
24. M. Bocciolini,... A. Incicchitti, D. Prospero,...: "A silicon imaging calorimeter prototype for antimatter search in space: experimental results", *Nucl. Instr. & Meth.* **A333** (1993) 560-566.
25. P. Belli, R. Bernabei, C. Dai, A. Incicchitti, D. Prospero, C. Bacci: "A first result on axial coupling WIMPs with Xenon target at Gran Sasso", *Nucl. Phys.* **B35** (Proc. Sup.) (1994) 165-168.
26. C. Bacci, P. Belli, R. Bernabei, Dai Changjiang, Ding Linkai, W. Di Nicolantonio, E. Gaillard-Lecanu, Y. Giraud-Heraud, G. Gerbier, Kuang Houhuai, A. Incicchitti, J. Mallet, L. Mosca, D. Prospero, C. Tao and Lion group: "Status report on dark matter search with low activity scintillators", *Nucl. Phys.* **B35** (Proc. Sup.) (1994) 159-161.
27. C. Bacci, P. Belli, R. Bernabei, C.J. Dai, W. Di Nicolantonio, L.K. Ding, E. Gaillard, G. Gerbier, Y. Giraud-Heraud, H.H. Kuang, A. Incicchitti, J. Mallet, L. Mosca, D. Prospero, C. Tao, B. Chambon, V. Chazal, M. De Jesus, D. Drain, Y. Messous, C. Pastor: "Dark matter search with Calcium fluoride crystals", *Astroparticle Phys.* **2** (1994) 117-125.
28. C. Bacci, P. Belli, R. Bernabei, Dai Changjiang, Ding Linkai, W. Di Nicolantonio, E. Gaillard, G. Gerbier, Kuang Houhuai, A. Incicchitti, J. Mallet, L. Mosca, D. Prospero, Charling Tao: "A

search for strongly interacting massive particles with NaI scintillators”, *Astroparticle Phys.* **2** (1994) 13-19.

29. C. Bacci, P. Belli, R. Bernabei, C.J. Dai, W. Di Nicolantonio, L.K. Ding, E. Gaillard, G. Gerbier, Y. Giraud-Heraud, H.H. Kuang, A. Incicchitti, J. Mallet, L. Mosca, D. Prospero, C. Tao, B. Chambon, V. Chazal, M. De Jesus, D. Drain, Y. Messous, C. Pastor: “Particle Dark Matter search with low activity scintillators”, *Nucl. Phys.* **B43** (Proc. Sup.) (1995) 161-164.
30. La Campajola, A. De Rosa, A. D’Onofrio, L. Gialanella, G. Inghima, M. La Commara, A. Ordine, D. Pierroustakou, V. Roca, M. Romano, M. Romoli, M. Sandoli, F. Terrasi, G. Cardella, M. Papa, G. Pappalardo, F. Rizzo, A. Incicchitti, D. Prospero, R. Bernabei, G. De Angelis, E. Fioretto, N. Alamanos, F. Auger, A. Gilbert: “Pre-equilibrium gamma-ray emission in dissipative heavy ion collisions”, *Zeitschrift fur Physik* **A352** (1995) 421-425.
31. C. Arpesella, P. Belli, R. Bernabei, C.J. Dai, W. Di Nicolantonio, L.K. Ding, V. Landoni, H.H. Kuang, A. Incicchitti, D. Prospero: “A multiton low activity NaI(Tl) detector for underground physics”, *Astroparticle Phys.* **4** (1995) 45-54.
32. C. Bacci, P. Belli, R. Bernabei, C.J. Dai, W. Di Nicolantonio, L.K. Ding, E. Gaillard, G. Gerbier, Y. Giraud-Heraud, H.H. Kuang, A. Incicchitti, V. Landoni, J. Mallet, L. Mosca, D. Prospero, C. Tao: “Improved limits on strongly interacting massive particles with NaI(Tl) scintillators”, *Astroparticle Phys.* **4** (1996) 195-198.
33. C. Bacci, P. Belli, R. Bernabei, C.J. Dai, W. Di Nicolantonio, L.K. Ding, G. Gerbier, Y. Giraud-Heraud, H.H. Kuang, A. Incicchitti, V. Landoni, J. Mallet, L. Mosca, D. Prospero, C. Tao, B. Chambon, V. Chazal, M. De Jesus, D. Drain, Y. Messous, C. Pastor: “WIMP search with low activity scintillators: status report”, *Nucl. Phys.* **B48** (Proc. Suppl.) (1996) 60-61.
34. C. Bacci, P. Belli, R. Bernabei, C.J. Dai, W. Di Nicolantonio, A. Incicchitti, V. Landoni, D. Prospero: “WIMP search with enriched Xenon”, *Nucl. Phys.* **B48** (Proc. Suppl.) (1996) 62-63.
35. I.R. Barabanov et al.: “On the possibility to measure neutrino magnetic moment down to 10^{-11} μB ”, *Astroparticle Phys.* **5** (1996) 159-166.
36. C. Bacci, P. Belli, R. Bernabei, C.J. Dai, W. Di Nicolantonio, A. Incicchitti, V. Landoni, D. Prospero: “Charge conservation and electron lifetime: limits from a liquid Xenon scintillator”, *Astroparticle Phys.* **5** (1996) 217-219.
37. C. Bacci, P. Belli, O. Besida, R. Bernabei, C.J. Dai, W. Di Nicolantonio, A. Incicchitti, V. Landoni, F. Montecchia, D. Prospero: “Search for Wimps with enriched Xenon at Gran Sasso”, *Il Nuovo Cim.* **C19** (1996) 537-544.
38. P. Belli, R. Bernabei, V. Landoni, F. Montecchia, W. Di Nicolantonio, A. Incicchitti, D. Prospero, C. Bacci, C.J. Dai: “Limits on WIMP- ^{129}Xe inelastic scattering”, *Phys. Lett.* **B387** (1996) 222-226 e **B389** (1996) 783.
39. R. Bernabei, P. Belli, V. Landoni, F. Montecchia, W. Di Nicolantonio, A. Incicchitti, D. Prospero, C. Bacci, C.J. Dai, L.K. Ding, H.H. Kuang, J.M. Ma, M. Angelone, P. Batistoni, M. Pillon: “New limits on WIMP search with large-mass low-radioactivity NaI(Tl) set-up at Gran Sasso”, *Phys. Lett.* **B389** (1996) 757-766.
40. A. Bottino, F. Donato, G. Mignola, S. Scopel, P. Belli, A. Incicchitti, “Exploring the supersymmetric parameter space by direct search for WIMPs”, *Phys. Lett.* **B402** (1997) 113-121.
41. R. Bernabei, P. Belli, F. Montecchia, A. Incicchitti, W. Di Nicolantonio, D. Prospero, C. Bacci, C. J. Dai, L.K. Ding, H.H. Kuang, J. M. Ma, Z.G. Yao, “Improved limits on WIMP- ^{19}F

elastic scattering and first limit on the $2EC2\nu$ ^{40}Ca decay by using a low radioactive $\text{CaF}_2(\text{Eu})$ scintillator”, *Astrop. Phys.* **7** (1997) 73-76.

42. R. Bernabei, P. Belli, A. Incicchitti, D. Prospero, C. Bacci, F. De Notaristefani, G.J. Davies, C.J. Dai, “Feasibility of $\beta\beta$ decay searches with Ce isotopes using CeF_3 scintillators”, *Il Nuovo Cimento* **A110** (1997) 189-195.
43. R. Bernabei, P. Belli, F. Montecchia, M. De Sanctis, W. Di Nicolantonio, A. Incicchitti, D. Prospero, C. Bacci, C.J. Dai, L.K. Ding, H.H. Kuang, J. M. Ma, “Search for non-paulian transitions in ^{23}Na and ^{127}I ”, *Phys. Lett.* **B408** (1997) 439-444.
44. I.R. Barabanov, P. Belli, R. Bernabei, C.J. Dai, L.K. Ding, W. Di Nicolantonio, V. I. Gnrentzov, E.A. Janovich, A. Incicchitti, V.E. Janz, V.N. Kornoukhov, H.H. Kuang, J.M. Ma, F. Montecchia, I.V. Orekhov, C.V. Danshin, D. Prospero, “Perspectives to measure neutrino magnetic moment deep underground”, *Astrop. Phys.* **8** (1997) 67-76.
45. I.R. Barabanov, P. Belli, R. Bernabei, C.J. Dai, L.K. Ding, W. Di Nicolantonio, V. I. Gnrentzov, E.A. Janovich, A. Incicchitti, V.E. Janz, V.N. Kornoukhov, H.H. Kuang, J.M. Ma, F. Montecchia, I.V. Orekhov, C.V. Danshin, D. Prospero, “Perspectives for a search of neutrino magnetic moment deep underground”, *Nuclear Phys.* **B66** (Proc. Sup.) (1998) 222-225.
46. R. Bernabei, P. Belli, F. Montecchia, W. Di Nicolantonio, A. Incicchitti, D. Prospero, C. Bacci, C.J. Dai, L.K. Ding, H.H. Kuang, J.M. Ma, “Searching for WIMPs by the annual modulation Signature”, *Phys. Lett.* **B424** (1998) 195-201.
47. R. Bernabei, P. Belli, F. Montecchia, W. Di Nicolantonio, A. Incicchitti, D. Prospero, C.J. Dai, L.K. Ding, H.H. Kuang, J.M. Ma, M. Angelone, P. Batistoni, M. Pillon, “The DAMA experiments at Gran Sasso”, *Phys. Rep.* **307** (1998) 269-273.
48. R. Bernabei, P. Belli, F. Montecchia, W. Di Nicolantonio, A. Incicchitti, D. Prospero, C.J. Dai, M. Angelone, P. Batistoni, M. Pillon, “New limits on particle dark matter search with liquid Xenon target-scintillator”, *Phys. Lett.* **B436** (1998) 379-388.
49. R. Bernabei, P. Belli, A. Incicchitti, D. Prospero, C.J. Dai, “Improved limits on neutrinoless double beta decays of ^{46}Ca and ^{130}Ba by using scintillators as source detectors”, *Il Nuovo Cimento* **A111** (1998) 347-352 e *Il Nuovo Cimento* **A** ott. 1998, 1231.
50. R. Bernabei, P. Belli, F. Montecchia, W. Di Nicolantonio, A. Incicchitti, D. Prospero, C. Bacci, C.J. Dai, L.K. Ding, H.H. Kuang, J.M. Ma, “WIMPs search by scintillators: possible strategy for annual modulation search with large-mass highly-radiopure $\text{NaI}(\text{Tl})$ ”, *Nuclear Phys.* **B70** (Proc. Sup.) (1999) 79-84.
51. P. Belli, R. Bernabei, A. Incicchitti, C. Arpesella, V.V. Kobychov, O.A. Pon\k-\kra\ten\ko, V.I. Tretyak, Yu. G. Zdesenko, “New limits on $2\beta^+$ decay processes in ^{106}Cd ”, *Astrop. Phys.* **10** (1999) 115-120.
52. R. Bernabei, P. Belli, F. Montecchia, W. Di Nicolantonio, G. Ignesti, A. Incicchitti, D. Prospero, C.J. Dai, L.K. Ding, H.H. Kuang, J.M. Ma, “On a further search for a yearly modulation of the rate in particle Dark Matter direct search”, *Phys. Lett.* **B450** (1999) 448-455.
53. R. Bernabei, P. Belli, F. Montecchia, W. Di Nicolantonio, G. Ignesti, A. Incicchitti, C.J. Dai, L.K. Ding, H.H. Kuang, J.M. Ma, D. Prospero, “Performances of the ~ 100 kg $\text{NaI}(\text{Tl})$ set-up of the DAMA experiment at Gran Sasso”, *Il Nuovo Cimento* **A112** (1999) 545-575.
54. R. Bernabei, P. Belli, C.J. Dai, H.L. He, G. Ignesti, A. Incicchitti, H.H. Kuang, J.M. Ma, F. Montecchia, O.A. Ponkratenko, D. Prospero, V.I. Tretyak, Yu.G. Zdesenko: “New

experimental limit on the electron stability and non-paulian transitions in Iodine atoms”, *Phys. Lett.* **B460** (1999) 236-241.

55. R. Bernabei, P. Belli, C.J. Dai, F. Grianti, H.L. He, G. Ignesti, A. Incicchitti, H.H. Kuang, J.M. Ma, F. Montecchia, O.A. Ponkratenko, D. Prospero, V.I. Tretyak, Yu.G. Zdesenko, “New limits on spin-dependent coupled WIMPs and on 2β processes in ^{40}Ca and ^{46}Ca by using low radioactive $\text{CaF}_2(\text{Eu})$ crystal scintillators”, *Nucl Phys.* **B563** (1999) 97-106.
56. R. Bernabei, P. Belli, R. Cerulli, F. Montecchia, M. Amato, G. Ignesti, A. Incicchitti, D. Prospero, C.J. Dai, H.L. He, H.H. Kuang, J.M. Ma, G.X. Sun, Z. Ye, “Extended limits on neutral SIMPs and nuclearities from $\text{NaI}(\text{Tl})$ scintillators”, *Phys. Rev. Lett.* **83** (1999) 4918-4921.
57. R. Bernabei, P. Belli, C.J. Dai, H.L. He, G. Ignesti, A. Incicchitti, H.H. Kuang, J.M. Ma, F. Montecchia, O.A. Ponkratenko, D. Prospero, V.I. Tretyak, Yu.G. Zdesenko, “New limits on the nuclear level excitation of ^{127}I and ^{23}Na during charge non conservation”, *Phys. Rev.* **C60** (1999) 065501, 7 pag.
58. R. Bernabei, P. Belli, C.J. Dai, G. Ignesti, A. Incicchitti, F. Montecchia, O.A. Ponkratenko, D. Prospero, V.I. Tretyak, Yu.G. Zdesenko, “Charge non conservation restrictions from the nuclear levels excitation of ^{129}Xe induced by the electron's decay on the atomic shell”, *Phys. Lett.* **B465** (1999) 315-322.
59. R. Bernabei, P. Belli, R. Cerulli, F. Montecchia, M. Amato, G. Ignesti, A. Incicchitti, D. Prospero, C.J. Dai, H.L. He, H.H. Kuang, J.M. Ma, “Investigation on possible diurnal effects induced by Dark Matter particles”, *Il Nuovo Cimento* **A112** (1999) 1541-1552.
60. R. Bernabei, P. Belli, C.J. Dai, G. Ignesti, A. Incicchitti, F. Montecchia, O.A. Ponkratenko, D. Prospero, V.I. Tretyak, Yu.G. Zdesenko, “Quest for electron decay $e \rightarrow \nu_e \gamma$ with liquid Xenon scintillator”, *Phys. Rev.* **D61** (2000) 117301, 4 pag.
61. R. Bernabei, P. Belli, R. Cerulli, F. Montecchia, M. Amato, G. Ignesti, A. Incicchitti, D. Prospero, C.J. Dai, H.L. He, H.H. Kuang, J.M. Ma, “Dark Matter search with the DAMA experiments”, *Nucl. Phys.* **B87** (Proc. Sup.) (2000) 67-69.
62. R. Bernabei, P. Belli, R. Cerulli, F. Montecchia, M. Amato, G. Ignesti, A. Incicchitti, D. Prospero, C.J. Dai, H.L. He, H.H. Kuang, J.M. Ma, “Search for WIMP annual modulation signature: results from DAMA/NaI-3 and DAMA/NaI-4 and the global combined analysis”, *Phys. Lett.* **B480** (2000) 23-31.
63. R. Bernabei, P. Belli, R. Cerulli, C. J. Dai, G. Ignesti, A. Incicchitti, F. Montecchia, D. Prospero, “Improved limits on WIMP- ^{129}Xe inelastic scattering”, *New Journal of Physics* **2** (2000) 15.1-15.7, (<http://www.njp.org/>).
64. R. Bernabei, M. Amato, P. Belli, R. Cerulli, C.J. Dai, V. Yu. Denisov, H.L. He, A. Incicchitti, H.H. Kuang, J.M. Ma, F. Montecchia, O.A. Ponkratenko, D. Prospero, V.I. Tretyak, Yu.G. Zdesenko, “Search for the nucleon and di-nucleon decay into invisible channels”, *Phys. Lett.* **B493** (2000) 12-18.
65. R. Bernabei, P. Belli, R. Cerulli, F. Montecchia, M. Amato, G. Ignesti, A. Incicchitti, D. Prospero, C.J. Dai, H.L. He, H.H. Kuang, J.M. Ma, “On the investigation of possible systematics in WIMP annual modulation search”, *Eur. Phys. J.* **C18** (2000) 283-292.
66. R. Bernabei, P. Belli, R. Cerulli, F. Montecchia, M. Amato, G. Ignesti, A. Incicchitti, D. Prospero, C.J. Dai, H.L. He, H.H. Kuang, J.M. Ma, “Searching for signals from the dark Universe by DAMA at Gran Sasso”, *Nucl. Phys.* **B91** (Proc. Sup.) (2001) 361-367.

67. R. Bernabei, M. Amato, P. Belli, R. Cerulli, C.J. Dai, H.L. He, A. Incicchitti, H.H. Kuang, J.M. Ma, F. Montecchia, D. Prosperi, "Investigating the DAMA annual modulation data in a mixed coupling framework", *Phys. Lett.* **B509** (2001) 197-203.
68. I. Barabanov, P. Belli, R. Bernabei, C.J. Dai, V. Gurentsov, A. Incicchitti, V. Kornukhov, E. Yanovich, "On the search for neutrino oscillation by artificial neutrino source", *New Journal of Physics* **3** (2001) 5.1-5.7, (<http://www.njp.org/>), 8 pag.
69. R. Bernabei, P. Belli, C.J. Dai, F. Grianti, H.L. He, G. Ignesti, A. Incicchitti, H.H. Kuang, J.M. Ma, F. Montecchia, O.A. Ponkratenko, D. Prosperi, V.I. Tretyak, Yu.G. Zdesenko, "New limits on 2β processes in ^{40}Ca and ^{46}Ca by using low radioactive $\text{CaF}_2(\text{Eu})$ crystal scintillators", *Part. Nucl. Lett.* **109** (2001) 18-25.
70. R. Bernabei, P. Belli, C.J. Dai, H.L. He, G. Ignesti, A. Incicchitti, H.H. Kuang, J.M. Ma, F. Montecchia, O.A. Ponkratenko, D. Prosperi, V.I. Tretyak, Yu.G. Zdesenko, "New experimental limits on the electron stability and excitation of nuclear levels in ^{23}Na , ^{127}I and ^{129}Xe induced by the electron decay on the atomic shell", *Part. Nucl. Lett.* **109** (2001) 58-68.
71. R. Bernabei, P. Belli, R. Cerulli, C.J. Dai, H.L. He, A. Incicchitti, H.H. Kuang, J.M. Ma, F. Montecchia, F. Nozzoli, D. Prosperi, S. Scopel, "Search for solar axions by Primakoff effect in NaI crystals", *Phys. Lett.* **B515** (2001) 6-12.
72. R. Bernabei, M. Angelone, P. Batistoni, P. Belli, R. Cerulli, C.J. Dai, A. Incicchitti, F. Montecchia, M. Pillon, D. Prosperi, "Light response of a pure Liquid Xenon scintillator irradiated by 2.5 MeV neutrons", *Eur. Phys. J.-direct* **C11** (2001) 1-8.
73. R. Bernabei, P. Belli, A. Bussolotti, F. Cappella, R. Cerulli, C.J. Dai, A. Incicchitti, A. Mattei, F. Montecchia, D. Prosperi, "The liquid Xenon set-up of the DAMA experiment", *Nucl. Instr. & Meth.* **A482** (2002) 728-743.
74. R. Bernabei, M. Amato, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, H.L. He, G. Ignesti, A. Incicchitti, H.H. Kuang, J.M. Ma, F. Montecchia, F. Nozzoli, D. Prosperi, "Results with the DAMA/NaI(Tl) experiment at LNGS", *Nucl. Phys. B (Proc. Supp.)* **110** (2002) 61-63.
75. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, A. Incicchitti, F. Montecchia, D. Prosperi, "Results with the DAMA/LXe experiment at LNGS", *Nucl. Phys. B (Proc. Supp.)* **110** (2002) 88-90.
76. R. Bernabei, M. Amato, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, H.L. He, G. Ignesti, A. Incicchitti, H.H. Kuang, J.M. Ma, F. Montecchia, F. Nozzoli, D. Prosperi, "Results with the DAMA experiment at LNGS", *Nucl. Phys. B (Proc. Supp.)* **109** (2002) 329-334.
77. R. Bernabei, M. Amato, P. Belli, R. Cerulli, C.J. Dai, H.L. He, A. Incicchitti, H.H. Kuang, J.M. Ma, F. Montecchia, D. Prosperi, "Investigating the DAMA annual modulation data in the framework of inelastic Dark Matter", *Eur. Phys. J.* **C23** (2002) 61-64.
78. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, A. Incicchitti, F. Montecchia, D. Prosperi, "Search for neutrinoless $\beta\beta$ decay in ^{134}Xe at Gran Sasso", *Phys. Lett.* **B527** (2002) 182-186.
79. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, A. Incicchitti, F. Montecchia, F. Nozzoli, O.A. Ponkratenko, D. Prosperi, V.I. Tretyak, Yu. G. Zdesenko, "Search for β and $\beta\beta$ decays in ^{48}Ca ", *Nucl. Phys.* **A705** (2002) 29-39.
80. F. Cappella, R. Cerulli, A. Incicchitti, "A preliminary search for Q-balls by delayed coincidences in NaI(Tl)", *Eur. Phys. J.-direct* **C14** (2002) 1-6.

81. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, A. Incicchitti, F. Montecchia, D. Prosperi, "Investigation of $\beta\beta$ decay modes in ^{134}Xe and ^{136}Xe ", *Phys. Lett.* **B546** (2002) 23-28.
82. R. Bernabei, M. Amato, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, H.L. He, G. Ignesti, A. Incicchitti, H.H. Kuang, J.M. Ma, F. Montecchia, F. Nozzoli, D. Prosperi, "WIMP search by the DAMA experiment at Gran Sasso", *Nucl. Phys. B (Proc. Supp.)* **124** (2003) 181-184.
83. R. Bernabei, M. Amato, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, G. Ignesti, A. Incicchitti, H.H. Kuang, J.M. Ma, F. Montecchia, F. Nozzoli, Z.P. Ye, D. Prosperi, "Searching for the dark Universe by the DAMA experiment", *Nucl. Phys.* **A719** (2003) 257c-265c.
84. P. Belli, R. Bernabei, R. Cerulli, C.J. Dai, F. A. Danevich, A. Incicchitti, V.V. Kobychev, O.A. Ponkratenko, D. Prosperi, V.I. Tretyak, Yu. G. Zdesenko, "Performances of a CeF_3 crystal scintillator and its application to the search for rare processes", *Nucl. Instr. & Meth.* **A498** (2003) 352-361.
85. R. Bernabei, P. Belli, F. Nozzoli, A. Incicchitti, "Anisotropic scintillators for WIMP direct detection: revisited", *Eur. Phys. J.* **C28** (2003) 203-209.
86. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, F. Montecchia, F. Nozzoli, A. Incicchitti, D. Prosperi, C.J. Dai, H.H. Kuang, J.M. Ma, Z.P. Ye, "Dark Matter search", *Riv. N. Cim.* **26** n.1. (2003) 1-73.
87. R. Cerulli, P. Belli, R. Bernabei, F. Cappella, F. Nozzoli, F. Montecchia, A. d'Angelo, A. Incicchitti, D. Prosperi, C.J. Dai, "Performances of a BaF_2 detector and its application to the search for $\beta\beta$ decay modes in ^{130}Ba ", *Nucl. Instr. & Meth.* **A525** (2004) 535-543.
88. R. Bernabei, P. Belli, F. Cappella, F. Montecchia, F. Nozzoli, A. Incicchitti, D. Prosperi, R. Cerulli, C.J. Dai, H.H. Kuang, J.M. Ma, Z.P. Ye, "Dark Matter particles in the galactic halo: results and implications from DAMA/NaI", *Int. J. Mod. Phys.* **D13** (2004) 2127-2159.
89. R. Bernabei, P. Belli, F. Cappella, F. Montecchia, F. Nozzoli, A. Incicchitti, D. Prosperi, R. Cerulli, C.J. Dai, H.H. Kuang, J.M. Ma, Z.P. Ye, "Signature for signals from the Dark Universe", *Nuovo Cim* **B120** (2005) 677-685.
90. R. Bernabei, P. Belli, F. Cappella, F. Montecchia, F. Nozzoli, A. d'Angelo, A. Incicchitti, D. Prosperi, R. Cerulli, C.J. Dai, H.H. Kuang, J.M. Ma, Z.P. Ye, "Prospects for DAMA/LIBRA and beyond", *Nucl. Phys. B (Proc. Supp.)* **138** (2005) 48-50.
91. R. Bernabei, P. Belli, F. Cappella, F. Montecchia, F. Nozzoli, A. Incicchitti, D. Prosperi, R. Cerulli, C.J. Dai, H.H. Kuang, J.M. Ma, Z.P. Ye, "Further results on the WIMP annual modulation signature by DAMA/NaI", *Nucl. Phys. B (Proc. Supp.)* **138** (2005) 45-47.
92. R. Bernabei, P. Belli, F. Cappella, F. Montecchia, F. Nozzoli, A. d'Angelo, A. Incicchitti, D. Prosperi, R. Cerulli, C.J. Dai, H.H. Kuang, J.M. Ma, Z.P. Ye, "Search for spontaneous transition of nuclei to a superdense state", *Eur. Phys. J.* **A23** (2005) 7-10.
93. R. Bernabei, P. Belli, F. Cappella, F. Montecchia, F. Nozzoli, A. d'Angelo, A. Incicchitti, D. Prosperi, R. Cerulli, C.J. Dai, H.H. Kuang, J.M. Ma, Z.P. Ye, V. Tretyak, "A search for spontaneous emission of heavy cluster in the ^{127}I nuclide", *Eur. Phys. J.* **A24** (2005) 51-56.
94. R. Bernabei, P. Belli, F. Cappella, F. Montecchia, F. Nozzoli, A. d'Angelo, A. Incicchitti, D. Prosperi, S. Castellano, R. Cerulli, C.J. Dai, H.H. Kuang, J.M. Ma, Z.P. Ye, V. Tretyak, "Performances and potentialities of a $\text{LaCl}_3:\text{Ce}$ scintillator", *Nucl. Instr. & Meth.* **A555** (2005) 270-281.

95. R. Bernabei, P. Belli, F. Cappella, F. Montecchia, F. Nozzoli, A. d'Angelo, A. Incicchitti, D. Prospero, R. Cerulli, C.J. Dai, H.L. He, H.H. Kuang, J.M. Ma, Z.P. Ye, "Particle Dark Matter: from DAMA/NaI to DAMA/LIBRA", *Physics of Atomic Nuclei* **69** (2006) 2056-2067.
96. R. Bernabei, P. Belli, F. Cappella, F. Montecchia, F. Nozzoli, A. d'Angelo, A. Incicchitti, D. Prospero, R. Cerulli, C.J. Dai, H.L. He, H.H. Kuang, J.M. Ma, Z.P. Ye, "Physics and astrophysics with dark matter particles", *Journal of Physics: Conf. Series* **39** (2006) 148-150.
97. R. Bernabei, P. Belli, F. Cappella, F. Montecchia, F. Nozzoli, A. d'Angelo, A. Incicchitti, D. Prospero, R. Cerulli, C.J. Dai, H.L. He, H.H. Kuang, J.M. Ma, Z.P. Ye, "Highlights of DAMA", *Journal of Physics: Conf. Series* **39** (2006) 82-88.
98. R. Bernabei, P. Belli, F. Cappella, F. Montecchia, F. Nozzoli, F. Cappella, A. Incicchitti, D. Prospero, R. Cerulli, C.J. Dai, V.Yu. Denisov, V. Tretyak, "Search for rare processes with DAMA/LXe experiment at Gran Sasso", *Eur. Phys. J.* **A27s01** (2006) 35-41.
99. R. Bernabei, P. Belli, F. Cappella, F. Montecchia, F. Nozzoli, A. d'Angelo, F. Cappella, A. Incicchitti, D. Prospero, R. Cerulli, C.J. Dai, V.Yu. Denisov, V. Tretyak, "From DAMA/NaI to DAMA/LIBRA at LNGS", *Eur. Phys. J.* **A27s01** (2006) 57-62.
100. R. Bernabei, P. Belli, F. Montecchia, F. Nozzoli, F. Cappella, A. Incicchitti, D. Prospero, R. Cerulli, C.J. Dai, H.L. He, H.H. Kuang, J.M. Ma, Z.P. Ye, "Investigating pseudoscalar and scalar dark matter", *Int. J. Mod. Phys.* **A21** (2006) 1445-1469.
101. R. Bernabei, P. Belli, F. Montecchia, F. Nozzoli, A. d'Angelo, F. Cappella, A. Incicchitti, D. Prospero, S. Castellano, R. Cerulli, C.J. Dai, V. Tretyak, "Search for possible charge non conserving decay of ^{139}La into ^{139}Ce with $\text{LaCl}_3(\text{Ce})$ scintillator", *Ukrainian Journal of Physics* **51** (2006) 1037-1043.
102. R. Bernabei, P. Belli, F. Montecchia, F. Nozzoli, F. Cappella, A. Incicchitti, D. Prospero, R. Cerulli, C.J. Dai, H.L. He, H.H. Kuang, J.M. Ma, X.D. Sheng, Z.P. Ye, M. Martinez, G. Giuffrida, "Investigating halo substructures by annual modulation signature", *Eur. Phys. J.* **C47** (2006) 263-271.
103. P. Belli, R. Cerulli, F.A. Danevich, B.V. Grinyov, A. Incicchitti, V.V. Kobychyev, M. Laubenstein, S.S. Nagorny, A.V. Tolmachev, V.I. Tretyak, R.P. Yavetskiy, "Intrinsic radioactivity of $\text{Li}_6\text{Eu}(\text{BO}_3)_3$ crystal and α decays of Eu", *Nucl. Instr. & Meth.* **A572** (2007) 734-738.
104. P. Belli, R. Bernabei, F. Cappella, R. Cerulli, C.J. Dai, F.A. Danevich, A. d'Angelo, A. Incicchitti, V.V. Kobychyev, S.S. Nagorny, S. Nisi, F. Nozzoli, D. Prospero, V.I. Tretyak, S.S. Yurchenko, "Search for α decay of natural Europium", *Nucl. Phys.* **A789** (2007) 15-29.
105. R. Bernabei, P. Belli, F. Montecchia, F. Nozzoli, F. Cappella, A. Incicchitti, D. Prospero, R. Cerulli, C.J. Dai, H.L. He, H.H. Kuang, J.M. Ma, Z.P. Ye, "Dark Matter signals: from underground to space investigation", *Nucl. Phys. B (Proc. Suppl.)* **166** (2007) 87-95.
106. R. Bernabei, P. Belli, F. Montecchia, F. Nozzoli, F. Cappella, A. Incicchitti, D. Prospero, R. Cerulli, C.J. Dai, H.L. He, H.H. Kuang, J.M. Ma, X. D. Sheng, Z.P. Ye, "On electromagnetic contributions in WIMP quests", *Int. J. Mod. Phys.* **A22** (2007) 3155-3168.
107. R. Bernabei, P. Belli, F. Montecchia, F. Nozzoli, F. Cappella, A. Incicchitti, D. Prospero, R. Cerulli, C. J. Dai, H. L. He, H. H. Kuang, J. M. Ma, X. H. Ma, X. D. Sheng, Z. P. Ye, R.G. Wang, Y.J. Zhang, "Possible implications of the channeling effect in $\text{NaI}(\text{Tl})$ crystals", *Eur. Phys. J. C* **53** (2008) 205-213.
108. P. Belli, R. Bernabei, F. Cappella, R. Cerulli, C.J. Dai, F.A. Danevich, B.V. Grinyov, A. Incicchitti, V.V. Kobychyev, L.L. Nagornaya, S.S. Nagorny, F. Nozzoli, D.V. Poda, D.

- Prosperi, V.I. Tretyak, S.S. Yurchenko, "Search for 2β processes in ^{64}Zn with the help of ZnWO_4 crystal scintillator", *Phys. Lett.* **B658** (2008) 193-197.
109. P. Belli, R. Bernabei, N. Bukilic, F. Cappella, R. Cerulli, C.J. Dai, F. A. Danevich, J. R. de Laeter, A. Incicchitti, V. V. Kobaychev, S. S. Nagorny, S. Nisi, F. Nozzoli, D.V. Poda, D. Prospero, V. I. Tretyak, S. S. Yurchenko, "Investigation of β decay of ^{113}Cd ", *Phys. Rev.* **C76** (2007) 064603.
110. R. Bernabei, P. Belli, F. Montecchia, F. Nozzoli, F. Cappella, A. Incicchitti, D. Prospero, R. Cerulli, C.J. Dai, H.L. He, H.H. Kuang, J.M. Ma, X.H. Ma, X.D. Sheng, Z.P. Ye, R.G. Wang, Y.J. Zhang, "Investigating electron interacting dark matter", *Phys. Rev.* **D77** (2008) 023506.
111. P. Belli, R. Bernabei, R. Cerulli, F. A. Danevich, A. d'Angelo, V.I. Goriletsky, B.V. Grinyov, A. Incicchitti, V.V. Kobaychev, M. Laubenstein, V.M. Mokina, S.S. Nagorny, F. Nisi, D. Prospero, O.G. Shkulkova, V.I. Tretyak, " ^7Li solar axions: preliminary results and feasibility studies", *Nucl. Phys.* **A806** (2008) 388-397.
112. F. Cappella on behalf of DAMA Collaboration, "From DAMA/NaI to DAMA/LIBRA and beyond", *Nuovo Cimento* **B122** (2007) 707-715.
113. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, H.L. He, A. Incicchitti, H.H. Kuang, J.M. Ma, X.H. Ma, F. Montecchia, F. Nozzoli, D. Prospero, X.D. Sheng, Z.P. Ye, R.G. Wang, Y.J. Zhang, "Investigation on light Dark Matter", *Mod. Phys. Lett.* **A23** (2008) 2125-2140.
114. P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, S. d'Angelo, A. Incicchitti, V.V. Kobaychev, S.S. Nagorny, F. Nozzoli, V.M. Mokina, D.V. Poda, D. Prospero, V.I. Tretyak, "Search for double- β decay processes in ^{108}Cd and ^{114}Cd with the help of low-background CdWO_4 crystal scintillator", *Eur. Phys. J.* **A36** (2008) 167-170.
115. R. Bernabei, P. Belli, A. Bussolotti, F. Cappella, R. Cerulli, C.J. Dai, A. d'Angelo, H.L. He, A. Incicchitti, H.H. Kuang, J.M. Ma, A. Mattei, F. Montecchia, F. Nozzoli, D. Prospero, X.D. Sheng, Z.P. Ye, "The DAMA/LIBRA apparatus", *Nucl. Instr. & Meth.* **A592** (2008) 297-315.
116. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, A. d'Angelo, H.L. He, A. Incicchitti, H.H. Kuang, J.M. Ma, F. Montecchia, F. Nozzoli, D. Prospero, X.D. Sheng, Z.P. Ye, "First results from DAMA/LIBRA and the combined results with DAMA/NaI", *Eur. Phys. J.* **C56** (2008) 333-355.
117. R. Bernabei, P. Belli, F. Montecchia, F. Nozzoli, F. Cappella, A. Incicchitti, D. Prospero, R. Cerulli, C.J. Dai, H.L. He, H.H. Kuang, J.M. Ma, X.D. Sheng, Z.P. Ye, "From DAMA/NaI to DAMA/LIBRA and beyond", *J. of Phys.: Conf. Series* **120** (2008) 042018.
118. R. Bernabei e A. Incicchitti, "Ultra-low level detection of Dark Matter and rare processes", nel vol. *Karlsruher Nuklidkarte: Commemoration of the 50th Anniversary*, edited by G. Pfenning, C. Normand, R. Dreher, J. Magill, T. Fanghanel - Publishing Editor: G. Weber, 2008.
119. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, A. d'Angelo, H.L. He, A. Incicchitti, H.H. Kuang, J.M. Ma, F. Montecchia, F. Nozzoli, D. Prospero, X.D. Sheng, Z.P. Ye, "Direct detection of dark matter particles", *Il Nuovo Cimento* **B123** (2008) 928-931.
120. P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, B.V. Grinyov, A. Incicchitti, V.V. Kobaychev, V.M. Mokina, L.L. Nagornaya, S.S. Nagorny, S. Nisi, F. Nozzoli, D.V. Poda, D. Prospero, V.I. Tretyak, S.S. Yurchenko, "Search for double beta decay of zinc and tungsten with low background ZnWO_4 crystal scintillators", *Nucl. Phys.* **A826** (2009) 256-273.

121. P. Belli, R. Bernabei, S. d'Angelo, F. Cappella, R. Cerulli, A. Incicchitti, M. Laubenstein, D. Prospero, V.I. Tretyak, "First limits on neutrinoless resonant 2ϵ captures in ^{136}Ce and new limits for other 2β processes in ^{136}Ce and ^{138}Ce isotopes", *Nucl. Phys.* **A824** (2009) 101-114.
122. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, A. d'Angelo, H.L. He, A. Incicchitti, H.H. Kuang, X.H. Ma, F. Montecchia, F. Nozzoli, D. Prospero, X.D. Sheng, Z.P. Ye, "New search for processes violating the Pauli exclusion principle in sodium and in iodine", *Eur. Phys. J.* **C62** (2009) 327-332.
123. R. Bernabei, P. Belli, A. Incicchitti, D. Prospero, "Liquid Noble gases for Dark Matter searches: a synoptic survey", ISBN 978-88-95688-12-1, 1-53 (2009) Exorma Ed. (arXiv: 0806.0011v2).
124. P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, S. d'Angelo, A. Incicchitti, M. Laubenstein, O.G. Polischuk, D. Prospero, V.I. Tretyak, "Search for double β decays of ^{96}Ru and ^{104}Ru by ultra-low background HPGe γ spectrometry", *Eur. Phys. J.* **A42** (2009) 171-177.
125. R. Bernabei, P. Belli, F. Montecchia, F. Nozzoli, F. Cappella, A. d'Angelo, A. Incicchitti, D. Prospero, R. Cerulli, C.J. Dai, H.L. He, H.H. Kuang, J.M. Ma, X.D. Sheng, Z.P. Ye, "Dark Matter particles in the galactic halo", *Phys. Atom. Nucl.* **72** (2009) 2076-2088.
126. R. Bernabei, P. Belli, F. Montecchia, F. Nozzoli, F. Cappella, A. d'Angelo, A. Incicchitti, D. Prospero, R. Cerulli, C.J. Dai, H.L. He, H.H. Kuang, X.H. Ma, X.D. Sheng, Z.P. Ye, "Particle Dark Matter in the galactic halo: results from DAMA/LIBRA", *Il Nuovo Cimento* **C32** (2009) 313.
127. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, A. d'Angelo, H.L. He, A. Incicchitti, H.H. Kuang, X.H. Ma, F. Montecchia, F. Nozzoli, D. Prospero, X.D. Sheng, Z.P. Ye, "Non-paulian nuclear processes in highly radiopure NaI(Tl): status and perspectives", *Found. Phys.* **40** (2010) 807-813.
128. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, A. d'Angelo, H.L. He, A. Incicchitti, H.H. Kuang, X.H. Ma, F. Montecchia, F. Nozzoli, D. Prospero, X.D. Sheng, Z.P. Ye, "Results from DAMA/LIBRA at Gran Sasso", *Found. Phys.* **40** (2010) 900-916.
129. P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, A.M. Dubovik, S. d'Angelo, E.N. Galashov, B.V. Grinyov, A. Incicchitti, V.V. Kobychyev, L.L. Nagornaya, S. Nisi, F. Nozzoli, D.V. Poda, R.B. Podviyanyuk, D. Prospero, V.N. Shlegel, V.I. Tretyak, Ya.V. Vasiliev, Yu.Ya. Vostretsov, "Radiopurity of ZnWO_4 crystal scintillators", *Acta Physica Polonica* **A117** (2010) 139-142.
130. R. Bernabei, P. Belli, R.S. Boiko, V.B. Brudanin, N. Bukilic, R. Cerulli, D.M. Chernyak, F.A. Danevich, S. d'Angelo, V.Ya. Degoda, A.E. Dossovitskiy, E.N. Galashov, S.V. Ildyakov, A. Incicchitti, V.V. Kobychyev, O.S. Kolesnyk, G.P. Kovtun, V.M. Kudovbenko, J.R. de Laeter, A.L. Mikhlin, S.S. Nagorny, S.G. Nedilko, A.S. Nikolaiko, S. Nisi, D.V. Poda, R.B. Podviyanyuk, O.G. Polischuk, D. Prospero, A.P. Shcherban, V.P. Shcherbatskyi, V.N. Shlegel, D.A. Solopikhin, Yu.G. Stenin, V.I. Tretyak, Ya.V. Vasiliev, V.D. Virich, "Development of enriched $^{106}\text{CdWO}_4$ crystal scintillators to search for double β decay processes in ^{106}Cd ", *Nucl. Instr. & Meth.* **A615** (2010) 301-306.
131. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, A. d'Angelo, H.L. He, A. Incicchitti, H.H. Kuang, X.H. Ma, F. Montecchia, F. Nozzoli, D. Prospero, X.D. Sheng, Z.P. Ye, "Searches for processes violating the Pauli Exclusion Principle In Sodium and Iodine", *J. Phys.: Conf. Series* **202** (2010) 012039, 4p.
132. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, F.A. Danevich, B.V. Grinyov, A. Incicchitti, V.V. Kobychyev, V.M. Mokina, S.S. Nagorny, L.L. Nagornaya, S. Nisi, F. Nozzoli, D.V.

- Poda, D. Prosperi, V.I. Tretyak, S.S. Yurchenko, "Search for double beta decay of zinc and tungsten with low background ZnWO₄ crystal scintillators", *J. of Phys.: Conf. Series* **202** (2010) 012038, 4p.
133. P. Belli, R. Bernabei, R.S. Boiko, F. Cappella, R. Cerulli, F. A. Danevich, S. d'Angelo, A. Incicchitti, V.V. Kobychhev, B.N. Kropivnyansky, M. Laubenstein, P.G. Nagornyi, S.S. Nagorny, S. Nisi, F. Nozzoli, D.V. Poda, D. Prosperi, O.G. Polischuk, V.I. Tretyak, I.M. Vyshnevskiy, S.S. Yurchenko, "New observation of 2β decay of ¹⁰⁰Mo to the 0^+_1 level of ¹⁰⁰Ru in the ARMONIA experiment", *J. Phys.: Conf. Series* **203** (2010) 012142, 4p.
 134. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, A. d'Angelo, H.L. He, A. Incicchitti, H.H. Kuang, X.H. Ma, F. Montecchia, F. Nozzoli, D. Prosperi, X.D. Sheng, Z.P. Ye, "Results from the DAMA/LIBRA experiment", *J. of Phys.: Conf. Series* **203** (2010) 012003, 4p.
 135. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, A. d'Angelo, H.L. He, A. Incicchitti, H.H. Kuang, X.H. Ma, F. Montecchia, F. Nozzoli, D. Prosperi, X.D. Sheng, Z.P. Ye, "Technical aspects and dark matter searches", *J. of Phys.: Conf. Series* **203** (2010) 012040.
 136. R. Bernabei, P. Belli, F. Montecchia, F. Nozzoli, F. Cappella, A. d'Angelo, A. Incicchitti, D. Prosperi, R. Cerulli, C. J. Dai, H. L. He, X. H. Ma, X. D. Sheng, R.G. Wang, Z. P. Ye, "Signals from Dark Universe: DAMA/LIBRA at LNGS", *PRAMANA-Journal of Physics* **75** (2010) 293-303.
 137. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, A. d'Angelo, H.L. He, A. Incicchitti, H.H. Kuang, X.H. Ma, F. Montecchia, F. Nozzoli, D. Prosperi, X.D. Sheng, R.G. Wang, Z.P. Ye, "New results from DAMA/LIBRA", *Eur. Phys. J.* **C67** (2010) 39-49.
 138. P. Belli, R. Bernabei, R.S. Boiko, F. Cappella, R. Cerulli, F.A. Danevich, S. d'Angelo, A. Incicchitti, V.V. Kobychhev, B.N. Kropivnyansky, M. Laubenstein, P.G. Nagornyi, S.S. Nagorny, S. Nisi, F. Nozzoli, D.V. Poda, D. Prosperi, O.G. Polischuk, V.I. Tretyak, I.M. Vyshnevskiy, S.S. Yurchenko, "New observation of $2\beta 2\nu$ decay of ¹⁰⁰Mo to the 0^+_1 level of ¹⁰⁰Ru in the ARMONIA experiment", *Nucl. Phys* **A846** (2010) 143-156.
 139. P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, S. d'Angelo, A. Incicchitti, M. Laubenstein, O.G. Polischuk, D. Prosperi and V.I. Tretyak, "Search for double beta decays of ⁹⁶Ru and ¹⁰⁴Ru by ultra-low background gamma spectrometry", *Nuclear Physics and Atomic Energy* **11** (2010) 362-366.
 140. P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, A.M. Dubovik, S. d'Angelo, E.N. Galashov, B.V. Grinyov, A. Incicchitti, V.V. Kobychhev, M. Laubenstein, L.L. Nagornaya, F. Nozzoli, D.V. Poda, R.B. Podvivanuk, O.G. Polischuk, D. Prosperi, V.N. Shlegel, V.I. Tretyak, I.A. Tupitsyna, Ya.V. Vasiliev, Yu.Ya. Vostretsov, "Radioactive contamination of ZnWO₄ crystal scintillators", *Nucl. Instr. Meth.* **A626** (2011) 31-38.
 141. P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, A. d'Angelo, A. Di Marco, A. Incicchitti, F. Nozzoli, V.I. Tretyak, "Search for 2β decay of cerium isotopes with CeCl₃ scintillator", *J. Phys.* **G38** (2011) 015103.
 142. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, A. d'Angelo, H.L. He, A. Incicchitti, X.H. Ma, F. Montecchia, F. Nozzoli, D. Prosperi, X.D. Sheng, Z.P. Ye, R.G. Wang, "Particle Dark Matter in the galactic halo: recent results from DAMA/LIBRA", *Nucl. Phys. B (Proc. Suppl.)* **212-213** (2011) 307-314.
 143. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, A. d'Angelo, C.J. Dai, H.L. He, A. Incicchitti, H.H. Kuang, X.H. Ma, F. Montecchia, F. Nozzoli, D. Prosperi, X.D. Sheng, Z.P. Ye, R.G. Wang, "Direct detection of dark matter particles", *Nucl. Instr. & Meth.* **A630** (2011) 279-284.

144. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, A. d'Angelo, H.L. He, A. Incicchitti, X.H. Ma, F. Montecchia, F. Nozzoli, D. Prosperi, X.D. Sheng, R.G. Wang, Z.P. Ye, "Results on Dark Matter by DAMA/LIBRA at Gran Sasso", *Nucl. Phys. and Atom. En.* **12** (2011) 40-48.
145. P. Belli, R. Bernabei, R.S. Boiko, V.B. Brudanin, F. Cappella, V. Caracciolo, R. Cerulli, D.M. Chernyak, F.A. Danevich, S. d'Angelo, A.E. Dossovitskiy, E.N. Galashov, A. Incicchitti, V.V. Kobychyev, S.S. Nagorny, F. Nozzoli, B.N. Kropivnyansky, V.M. Kudovbenko, A.L. Mikhlin, A.S. Nikolaiko, D.V. Poda, R.B. Podviyanuk, O.G. Polischuk, D. Prosperi, V.N. Shlegel, Yu.G. Stenin, J. Suhonen, V.I. Tretyak, Ya.V. Vasiliev, "First results of the experiment to search for 2β decay of ^{106}Cd with the help of $^{106}\text{CdWO}_4$ crystal scintillators", *Nucl. Phys. and Atom. En.* **12** (2011) 124-128.
146. R. Bernabei, P. Belli, F. Montecchia, F. Nozzoli, F. Cappella, A. d'Angelo, A. Incicchitti, D. Prosperi, R. Cerulli, C.J. Dai, H.L. He, X.H. Ma, X.D. Sheng, R.G. Wang, Z.P. Ye, "Particle Dark Matter in the galactic halo: recent results from DAMA/LIBRA", *Can. J. Phys.* **89** (2011) 141.
147. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, A. d'Angelo, H.L. He, A. Incicchitti, X.H. Ma, F. Montecchia, F. Nozzoli, D. Prosperi, X.D. Sheng, R.G. Wang, Z.P. Ye, "Particle Dark Matter in the galactic halo", *Prog. Part. Nucl. Phys.* **66** (2011) 169.
148. P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, A. Incicchitti, M. Laubenstein, S.S. Nagorny, S. Nisi, O.G. Polischuk, V.I. Tretyak, "First observation of α decay of ^{190}Pt to the first excited level ($E_{\text{exc}} = 137.2$ keV) of ^{186}Os ", *Phys. Rev.* **C83** (2011) 034603.
149. P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, S. d'Angelo, M.L. Di Vacri, A. Incicchitti, M. Laubenstein, S.S. Nagorny, S. Nisi, A.V. Tolmachev, V.I. Tretyak, R.P. Yavetskiy, "First search for double β decay of dysprosium", *Nucl. Phys.* **A859** (2011) 126-139.
150. P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, A. Di Marco, A. Incicchitti, M. Laubenstein, S.S. Nagorny, S. Nisi, O.G. Polischuk, V.I. Tretyak, "First search for double beta decay of platinum by ultra-low background HP Ge spectrometry", *Eur. Phys. J.* **A47** (2011) 91.
151. A.S. Barabash, P. Belli, R. Bernabei, R.S. Boiko, F. Cappella, V. Caracciolo, D.M. Chernyak, R. Cerulli, F.A. Danevich, M.L. Di Vacri, A.E. Dossovitskiy, E.N. Galashov, A. Incicchitti, V.V. Kobychyev, S.I. Konovalov, G.P. Kovtun, V.M. Kudovbenko, M. Laubenstein, A.L. Mikhlin, S. Nisi, D.V. Poda, R.B. Podviyanuk, O.G. Polischuk, A.P. Shcherban, V.N. Shlegel, D.A. Solopikhin, Yu.G. Stenin, V.I. Tretyak, V.I. Umatov, Ya.V. Vasiliev, V.D. Virich, "Low background detector with enriched $^{116}\text{CdWO}_4$ crystal scintillators to search for double beta decay of ^{116}Cd ", *J. of Instr.* **6** (2011) P08011.
152. P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, S. d'Angelo, A. Incicchitti, V.V. Kobychyev, D.V. Poda, V.I. Tretyak, "Final results of experiment to search for 2β processes in zinc and tungsten with the help of radiopure ZnWO_4 crystal scintillators", *J. Phys. G: Nucl. Part. Phys.* **38** (2011) 115107.
153. P. Belli, R. Bernabei, R. Cerulli, F.A. Danevich, E. Galenin, A. Gektin, A. Incicchitti, V. Isaienko, V.V. Kobychyev, M. Laubenstein, S.S. Nagorny, R.B. Podviyanuk, S. Tkachenko, V.I. Tretyak, "Radioactive contamination of $\text{SrI}_2(\text{Eu})$ crystal scintillator", *Nucl. Instr. & Meth.* **A670** (2012) 10-17.
154. R. Bernabei, P. Belli, A. Bussolotti, F. Cappella, V. Caracciolo, M. Casalboni, R. Cerulli, C.J. Dai, A. d'Angelo, A. Di Marco, H.L. He, A. Incicchitti, H.H. Kuang, M. Laubenstein, X.H. Ma, A. Mattei, F. Montecchia, C. Palazzesi, P. Prospero, X.D. Sheng, R.G. Wang, Z.P. Ye,

- “Performances of the new high quantum efficiency PMTs in DAMA/LIBRA”, *Journal of Instrumentation* **7** (2012) P03009 (doi: 10.1088/1748-0221/7/03/P03009).
155. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, C.J. Dai, A. d'Angelo, S. d'Angelo, A. Di Marco, H.L. He, A. Incicchitti, X.H. Ma, F. Montecchia, X.D. Sheng, R.G. Wang, Z.P. Ye, “Search for charge non-conserving processes in ^{127}I by coincidence technique”, *Eur. Phys. J. C* **72** (2012) 1920 (doi: 10.1140/epjc/s10052-012-1920-6).
 156. R. Bernabei, P. Belli, F. Cappella, R. Cerulli, A. d'Angelo, F. Emiliani, A. Incicchitti, “SEARCH FOR DAEMONS WITH NEMESIS”, *Mod. Phys. Lett. A* **27** (2012) 1250031 (doi: 10.1142/S0217732312500319).
 157. P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, A. d'Angelo, A. Incicchitti, V.V. Kobychyev, M. Laubenstein, O.G. Polischuk, V.I. Tretyak, “Search for ^7Li solar axions using resonant absorption in LiF crystal: final results”, *Physics Letters* **B711** (2012) 41.
 158. P. Belli, R. Bernabei, R.S. Boiko, V.B. Brudanin, F. Cappella, V. Caracciolo, R. Cerulli, D.M. Chernyak, F.A. Danevich, S. d'Angelo, E.N. Galashov, A. Incicchitti, V.V. Kobychyev, M. Laubenstein, V.M. Mokina, D.V. Poda, R.B. Podviyanuk, O.G. Polischuk, V.N. Shlegel, Yu.G. Stenin, J. Suhonen, V.I. Tretyak, Ya.V. Vasiliev, “Search for double beta decay processes in ^{106}Cd with the help of $^{106}\text{CdWO}_4$ crystal scintillator”, *Phys. Rev. C* **85** (2012) 044610 (doi: 10.1103/PhysRevC.85.044610).
 159. R. Bernabei, P. Belli, F. Cappella, V. Caracciolo, R. Cerulli, C. J. Dai, A. d'Angelo, A. Di Marco, H. L. He, A. Incicchitti, X. H. Ma, F. Montecchia, X. D. Sheng, R. G. Wang, Z. P. Ye, “No role for muons in the DAMA annual modulation results”, *Eur. Phys. J. C* **72** (2012) 2064 (doi: 10.1140/epjc/s10052-012-2064-4).
 160. R. Bernabei, P. Belli, A. Di Marco, F. Montecchia, F. Cappella, A. d'Angelo, A. Incicchitti, D. Prospero, R. Cerulli, C.J. Dai, H.L. He, X.H. Ma, X.D. Sheng, R.G. Wang, Z.P. Ye, Particle dark matter signal in DAMA/LIBRA, *Nucl. Inst. and Meth. A* **692** (2012) 120-122.
 161. R. Bernabei, P. Belli, F. Cappella, V. Caracciolo, R. Cerulli, C.J. Dai, A. d'Angelo, A. Di Marco, H.L. He, A. Incicchitti, X.H. Ma, F. Montecchia, X.D. Sheng, R.G. Wang and Z.P. Ye, “DAMA/LIBRA results and perspectives”, *J. Phys.: Conf. Ser.* **384** (2012) 012005.
 162. P. Belli, R. Bernabei, R.S. Boiko, V.B. Brudanin, F. Cappella, V. Caracciolo, R. Cerulli, D.M. Chernyak, F.A. Danevich, S. d'Angelo, A. Di Marco, M.L. Di Vacri, E.N. Galashov, A. Incicchitti, V.V. Kobychyev, G.P. Kovtun, N.G. Kovtun, V.M. Mokina, M. Laubenstein, S.S. Nagorny, S. Nisi, D.V. Poda, R.B. Podviyanuk, O.G. Polischuk, D. Prospero, A.P. Shcherban, V.N. Shlegel, D.A. Solopikhin, Yu.G. Stenin, J. Suhonen, A.V. Tolmachev, V.I. Tretyak, Ya.V. Vasiliev, R.P. Yavetskiy, “Searches for neutrinoless resonant double electron captures at LNGS”, *J. Physics: Conf. Ser.* **375** (2012) 042024.
 163. R. Cerulli, R. Bernabei, P. Belli, F. Cappella, C.J. Dai, A. d'Angelo, A. Di Marco, H.L. He, A. Incicchitti, X.H. Ma, F. Montecchia, X.D. Sheng, R.G. Wang, Z.P. Ye, Technical aspects in dark matter investigations, *J. Physics: Conf. Ser.* **375** (2012) 012006.
 164. P. Belli, R. Bernabei, R.S. Boiko, V.B. Brudanin, F. Cappella, V. Caracciolo, R. Cerulli, D.M. Chernyak, F.A. Danevich, S. d'Angelo, E.N. Galashov, A. Incicchitti, V.V. Kobychyev, M. Laubenstein, V.M. Mokina, D.V. Poda, R.B. Podviyanuk, O.G. Polischuk, V.N. Shlegel, Yu.G. Stenin, J. Suhonen, V.I. Tretyak and Ya.V. Vasiliev, “Search for double decay of ^{106}Cd by using isotopically enriched $^{106}\text{CdWO}_4$ crystal scintillator” *J. Physics: Conf. Ser.* **375** (2012) 042021.

165. R. Bernabei, P. Belli, F. Cappella, V. Caracciolo, R. Cerulli, C. J. Dai, A. d'Angelo, A. Di Marco, H. L. He, A. Incicchitti, X. H. Ma, F. Montecchia, X. D. Sheng, R. G. Wang and Z. P. Ye, "DAMA/LIBRA results and perspectives" *J. Physics: Conf. Ser.* **375** (2012) 012002.
166. R. Bernabei, P. Belli, A. Di Marco, F. Montecchia, F. Cappella, A. d'Angelo, A. Incicchitti, V. Caracciolo, R. Cerulli, C.J. Dai, H.L. He, X.H. Ma, X.D. Sheng, R.G. Wang, Z.P. Ye, "DAMA/LIBRA at Gran Sasso", *Phys. Proc.* **37** (2012) 1095-1104.
167. R. Bernabei, P. Belli, F. Cappella, V. Caracciolo, R. Cerulli, C. J. Dai, A. d'Angelo, A. Di Marco, H. L. He, A. Incicchitti, X. H. Ma, F. Montecchia, X. D. Sheng, R. G. Wang, Z. P. Ye, "Particle Dark Matter in the galactic halo: results from DAMA/LIBRA", *Int. J. of Modern Physics (Conf. Ser.)* **12** (2012) 37.
168. D. Poda, A. Barabash, P. Belli, R. Bernabei, R. Boiko, V. Brudanin, F. Cappella, V. Caracciolo, S. Castellano, R. Cerulli, D. Chernyak, F. Danevich, S. d'Angelo, V. Degoda, M. Di Vacri, A. Dossovitskiy, E. Galashov, A. Incicchitti, V. Kobychyev, S. Konovalov, G. Kovtun, M. Laubenstein, A. Mikhlin, V. Mokina, A. Nikolaiko, S. Nisi, R. Podviyanuk, O. Polischuk, A. Shcherban, V. Shlegel, D. Solopikhin, V. Tretyak, V. Umatov, Ya. Vasiliev, V. Virich, "CdWO₄ crystal scintillators from enriched isotopes for double beta decay experiments", *Radiation Measurements* **56** (2013) 66.
169. P. Belli, R. Bernabei, S.V. Budakovsky, F. Cappella, R. Cerulli, F.A. Danevich, S. d'Angelo, A. Incicchitti, M. Laubenstein, D.V. Poda, O.G. Polischuk, V.I. Tretyak, "Radioactive contamination of ⁷Li(Eu) crystal scintillators", *Nucl. Instr. Meth. A* **704** (2013) 40 (<http://dx.doi.org/10.1016/j.nima.2012.11.185>).
170. F. Cappella, R. Bernabei, P. Belli, V. Caracciolo, R. Cerulli, F.A. Danevich, A. d'Angelo, A. Di Marco, A. Incicchitti, D.V. Poda, V.I. Tretyak, "On the potentiality of the ZnWO₄ anisotropic detectors to measure the directionality of Dark Matter", *Eur. Phys. J. C* **73** (2013) 2276.
171. P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, S. d'Angelo, A. Di Marco, A. Incicchitti, G.P. Kovtun, N.G. Kovtun, M. Laubenstein, D.V. Poda, O.G. Polischuk, A.P. Shcherban, V.I. Tretyak, "First search for double- β decay of ¹⁸⁴Os and ¹⁹²Os", accettato per la pubblicazione su *Eur. Phys. J. A* **49** (2013) 24.
172. R. Bernabei, P. Belli, A. Di Marco, F. Montecchia, F. Cappella, A. d'Angelo, A. Incicchitti, V. Caracciolo, R. Cerulli, C. J. Dai, H. L. He, X. H. Ma, X. D. Sheng, R. G. Wang, Z. P. Ye, "Particle Dark Matter in the galactic halo: results and perspectives", *Int. J. of Mod. Phys. D22* (2013) 1360001.
173. P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, S. d'Angelo, A. Incicchitti, G.P. Kov- tun, N.G. Kovtun, M. Laubenstein, D.V. Poda, O.G. Polischuk, A.P. Shcherban, D.A. Solopikhin, J. Suhonen, V.I. Tretyak, Search for 2 β decays of ⁹⁶Ru and ¹⁰⁴Ru by ultra-low background HPGe spectrometry at LNGS: final results, *Phys. Rev.* **C87** (2013) 034607.
174. R. Bernabei, P. Belli, F. Cappella, V. Caracciolo, S. Castellano, R. Cerulli, C.J. Dai, A. d'Angelo, A. Di Marco, H.L. He, A. Incicchitti, M. Laubenstein, X.H. Ma, F. Montecchia, X.D. Sheng, V.I. Tretyak, R.G. Wang, Z.P. Ye, "New search for correlated e⁺e⁻ pairs in the α decay of ²⁴¹Am", *Eur. Phys. J.* **A49** (2013) 64.
175. R. Bernabei, P. Belli, F. Cappella, V. Caracciolo, R. Cerulli, C. J. Dai, A. d'Angelo, A. Di Marco, H. L. He, A. Incicchitti, X. H. Ma, F. Montecchia, X. D. Sheng, R. G. Wang, Z. P. Ye, "DAMA/LIBRA results and perspectives of the second stage", *YADERNA FIZYKA TA ENERHETYKA* **14** n.2 (2013) 113-120.

176. R. Bernabei, P. Belli, F. Cappella, V. Caracciolo, R. Cerulli, C.J. Dai, A. d'Angelo, A. Di Marco, H.L. He, A. Incicchitti, H.H. Kuang, X.H. Ma, F. Montecchia, D. Prosperi, X.D. Sheng, R.G. Wang, Z.P. Ye, "DAMA results: Dark Matter in the galactic halo", *Acta Polytechnica* **53** (Suppl.) (2013) 589-594.
177. R. Bernabei, P. Belli, S. d'Angelo, A. Di Marco, F. Montecchia, F. Cappella, A. d'Angelo, A. Incicchitti, V. Caracciolo, S. Castellano, R. Cerulli, C.J. Dai, H.L. He, X.H. Ma, X.D. Sheng, R.G. Wang, Z.P. Ye, "Dark Matter investigation by DAMA at Gran Sasso", *Int. J. of Mod. Phys. A* **28** (2013) 1330022 (73 pages).
178. R. Bernabei, P. Belli, F. Cappella, V. Caracciolo, S. Castellano, R. Cerulli, C.J. Dai, A. d'Angelo, S. d'Angelo, A. Di Marco, H.L. He, A. Incicchitti, H.H. Kuang, X.H. Ma, F. Montecchia, D. Prosperi, X.D. Sheng, R.G. Wang, Z.P. Ye, "Final model independent result of DAMA/LIBRA-phase1", *Eur. Phys. J. C* **73** (2013) 2648.
179. R. Bernabei, P. Belli, F. Cappella, V. Caracciolo, R. Cerulli, C.J. Dai, A. d'Angelo, S. d'Angelo, A. Di Marco, H.L. He, A. Incicchitti, X.H. Ma, F. Montecchia, D. Prosperi, X.D. Sheng, R.G. Wang, Z.P. Ye, "DAMA/LIBRA results and perspectives of phase 2", *Nucl. Instr. Meth. A* **742** (2014) 177-180.
180. R. Bernabei, P. Belli, F. Cappella, V. Caracciolo, S. Castellano, R. Cerulli, C.J. Dai, A. d'Angelo, S. d'Angelo, A. Di Marco, H.L. He, A. Incicchitti, H.H. Kuang, X.H. Ma, F. Montecchia, X.D. Sheng, R.G. Wang, Z.P. Ye, "The annual modulation signature for Dark Matter: DAMA/LIBRA-phase1 results and perspectives", *Advances in High Energy Physics* 2014 (2014), Article ID 605659, 10 pages (<http://dx.doi.org/10.1155/2014/605659>).
181. R. Bernabei, P. Belli, F. Cappella, V. Caracciolo, S. Castellano, R. Cerulli, C.J. Dai, A. d'Angelo, S. d'Angelo, A. Di Marco, H.L. He, A. Incicchitti, H.H. Kuang, X.H. Ma, F. Montecchia, D. Prosperi, X.D. Sheng, R.G. Wang, Z.P. Ye, "Model independent result on possible diurnal effect in DAMA/LIBRA-phase1", *Eur. Phys. J. C* **74** (2014) 2827.
182. P. Belli, A. Incicchitti, F. Cappella, "Inorganic scintillators in direct dark matter investigation", *Int. J. of Mod. Phys. A* **29** (2014) 1443011 (44 pages).
183. P. Belli, R. Bernabei, F. Cappella, V. Caracciolo, R. Cerulli, F.A. Danevich, A. Di Marco, A. Incicchitti, D.V. Poda, O.G. Polischuk, V.I. Tretyak, "Investigation of rare nuclear decays with BaF₂ crystal scintillator contaminated by radium", *Eur. Phys. J. A* **50** (2014) 134.
184. R. Bernabei, P. Belli, F. Cappella, V. Caracciolo, R. Cerulli, C.J. Dai, A. d'Angelo, S. d'Angelo, A. Di Marco, H.L. He, A. Incicchitti, H.H. Kuang, X.H. Ma, F. Montecchia, X.D. Sheng, R.G. Wang and Z.P. Ye, "No role for neutrons, muons and solar neutrinos in the DAMA annual modulation results", *Eur. Phys. J. C* **74** (2014) 3196.
185. P. Belli, R. Bernabei, R.S. Boiko, F. Cappella, R. Cerulli, F.A. Danevich, A. Incicchitti, B.N. Kropivnyansky, M. Laubenstein, D.V. Poda, O.G. Polischuk, V.I. Tretyak, "Search for double beta decay of ¹³⁶Ce and ¹³⁸Ce with HPGe gamma detector", *Nucl. Phys. A* **930** (2014) 195-208.
186. P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, S. d'Angelo, A. Incicchitti, V.V. Kobyshev, D.V. Poda, V.I. Tretyak, Search for rare processes with ZnWO₄ crystal scintillators, *EPJ Web of Conf.* **65** (2014) 01002.
187. P. Belli, R. Bernabei, F. Cappella, V. Caracciolo, R. Cerulli, A. Di Marco, F.A. Danevich, A. Incicchitti, D.V. Poda, O.G. Polischuk, V.I. Tretyak, Radioactive contamination of BaF₂ crystal scintillator, *EPJ Web of Conf.* **65** (2014) 04004.
188. R.S. Boiko, A.S. Barabash, P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, A. Incicchitti, M. Laubenstein, V.M. Mokina, S. Nisi, D.V. Poda, O.G. Polischuk, V.I. Tretyak,

Purification of cerium, neodymium and gadolinium for low background experiments, *EPJ Web of Conf.* **65** (2014) 04001.

189. D.V. Poda, A.S. Barabash, P. Belli, R. Bernabei, F. Cappella, V. Caracciolo, S. Castellano, D.M. Chernyak, R. Cerulli, F.A. Danevich, S. d'Angelo, A. Incicchitti, V.V. Kobychhev, S.I. Konovalov, M. Laubenstein, R.B. Podviyanuk, O.G. Polischuk, V.N. Shlegel, V.I. Tretyak, V.I. Umatov, Ya.V. Vasiliev, Search for 2β decay of ^{116}Cd with the help of enriched $^{116}\text{CdWO}_4$ crystal scintillators, *EPJ Web of Conf.* **65** (2014) 01005.
190. V.I. Tretyak, P. Belli, R. Bernabei, V.B. Brudanin, F. Cappella, V. Caracciolo, R. Cerulli, D.M. Chernyak, F.A. Danevich, S. d'Angelo, A. Incicchitti, M. Laubenstein, V.M. Mokina, D.V. Poda, O.G. Polischuk, R.B. Podviyanuk, I.A. Tupitsyna, First results of the experiment to search for 2β decay of ^{106}Cd with $^{106}\text{CdWO}_4$ crystal scintillator in coincidence with four crystals HPGe detector, *EPJ Web of Conf.* **65** (2014) 01004.
191. R. Bernabei, P. Belli, F. Cappella, V. Caracciolo, S. Castellano, R. Cerulli, C.J. Dai, A. d'Angelo, S. d'Angelo, A. Di Marco, H.L. He, A. Incicchitti, H.H. Kuang, X.H. Ma, F. Montecchia, D. Prospero, X.D. Sheng, R.G. Wang, Z.P. Ye, "Final model independent results of DAMA/LIBRA- phase1 and perspectives of phase2", *Physics of Particles and Nuclei* **46** (2015) 138-146 (DOI: 10.1134/S1063779615020045).
192. O.G. Polischuk, P. Belli, R. Bernabei, V.D. Brudanin, F. Cappella, V. Caracciolo, R. Cerulli, D. M. Chernyak, F. A. Danevich, S. d'Angelo, A. Incicchitti, M. Laubenstein, V. M. Mokina, D.V. Poda, V.I. Tretyak, I.A. Tupitsyna, Search for 2β processes in ^{106}Cd with $^{106}\text{CdWO}_4$ crystal scintillator *Functional Materials* **22** n. 1 (2015) 135-139.
193. P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F. Danevich, V. Yu. Denisov, A. d'Angelo, A. Incicchitti, V.V. Kobychhev, D.V. Poda, O.G. Polischuk, V.I. Tretyak, Search for long-lived superheavy eka-tungsten with radiopure ZnWO_4 crystal scintillator, *Physica Scripta* **90** (2015) 085301.
194. R. Bernabei, P. Belli, S. d'Angelo, A. Di Marco, F. Montecchia, A. d'Angelo, A. Incicchitti, F. Cappella, V. Caracciolo, R. Cerulli, Investigating Earth Shadowing effect with DAMA/LIBRA-phase1, *Eur. Phys. J.* **C75** (2015) 239.
195. R. Bernabei, P. Belli, F. Cappella, V. Caracciolo, R. Cerulli, C.J. Dai, A. d'Angelo, S. d'Angelo, A. Di Marco, H.L. He, A. Incicchitti, H.H. Kuang, X.H. Ma, F. Montecchia, X.D. Sheng, R.G. Wang, Z.P. Ye, DAMA-phase1 results and perspectives of the phase2, *EPJ Web of Conf.* **95** (2015) 03001.
196. A. Addazi, Z. Berezhiani, R. Bernabei, P. Belli, F. Cappella, R. Cerulli, A. Incicchitti, DAMA annual modulation effect and asymmetric mirror matter, *Eur. Phys. J.* **C75** (2015) 400.
197. R. Bernabei, P. Belli, A. Incicchitti, F. Cappella, R. Cerulli, Liquid noble gases for dark matter searches: an updated survey, *Int. J. of Mod. Phys.* **A30** (2015) 1530053-1 (76 pages).
198. R. Bernabei, P. Belli, S. d'Angelo, A. Di Marco, F. Montecchia, A. d'Angelo, A. Incicchitti, F. Cappella, V. Caracciolo, R. Cerulli, C.J. Dai, H.L. He, H.H. Kuang, X.H. Ma, F. Montecchia, X.D. Sheng, R.G. Wang, Z.P. Ye, Particle Dark Matter in the galactic halo, *Int. J. of Mod. Phys.* **A30** (2015) 1545006-1.
199. P. Belli, R. Bernabei, V.B. Brudanin, F. Cappella, V. Caracciolo, R. Cerulli, D.M. Chernyak, F.A. Danevich, S. d'Angelo, A. Di Marco, A. Incicchitti, M. Laubenstein, V.M. Mokina, D.V. Poda, O.G. Polischuk, V.I. Tretyak, I.A. Tupitsyna, Search for 2β decay of ^{106}Cd with enriched $^{106}\text{CdW}_4$ crystal scintillator in coincidence with four HPGe detectors, *Phys. Rev.* **C93** (2016) 045502.

200. A.S. Barabash, P. Belli, R. Bernabei, Yu.A. Borovle, F. Cappella, V. Caracciolo, R. Cerulli, F.A. Danevich, A. Incicchitti, V.V. Kobychhev, S.I. Kononov, M. Laubenstein, V.M. Mokina, O.G. Polischuk, O.E. Safonova, V.N. Shlegel, V.I. Tretyak, I.A. Tupitsyna, V.I. Umatov, V.N. Zhdankov, Improvement of radiopurity level of enriched $^{116}\text{CdWO}_4$ and ZnWO_4 crystal scintillators by recrystallization, *Nucl. Instr. & Meth.* **A833** (2016) 77.
201. R. Bernabei, P. Belli, A. Incicchitti, C.J. Dai, Adopted low background techniques and analysis of radioactive trace impurities, *Int. J. of Mod. Phys.* **A31** (2016) 1642003.
202. R. Bernabei, P. Belli, S. d'Angelo, A. Di Marco, F. Montecchia, A. d'Angelo, A. Incicchitti, D. Prosperi, F. Cappella, V. Caracciolo, R. Cerulli, C.J. Dai, H.L. He, H.H. Kuang, X.H. Ma, X.D. Sheng, R.G. Wang, Z.P. Ye, DAMA/LIBRA phase1 model independent results, *Int. J. of Mod. Phys.* **A31** (2016) 1642006.
203. R. Bernabei, P. Belli, A. Di Marco, A. d'Angelo, A. Incicchitti, F. Cappella, R. Cerulli, C.J. Dai, X.H. Ma, Z.P. Ye, Investigation on possible systematics and side processes, *Int. J. of Mod. Phys.* **A31** (2016) 1642008.
204. R. Bernabei, P. Belli, A. Incicchitti, F. Cappella, R. Cerulli, C.J. Dai, H.L. He, H.H. Kuang, X.H. Ma, X.D. Sheng, R.G. Wang, Z.P. Ye, R.S. Boiko, F.A. Danevich, V.V. Kobychhev, D.V. Poda, O.G. Polischuk, V.I. Tretyak, Main results and perspectives on other rare processes with DAMA experiments, *Int. J. of Mod. Phys.* **A31** (2016) 1642010.
205. R. Bernabei, P. Belli, A. Incicchitti, R. Cerulli, C.J. Dai, X.H. Ma, Z.P. Ye, On corollary model-dependent analyses and comparisons, *Int. J. of Mod. Phys.* **A31** (2016) 1642009.
206. R. Bernabei, P. Belli, A. Incicchitti, R. Cerulli, A. Mattei, F. Cappella, R. Cerulli, C.J. Dai, X.H. Ma, Z.P. Ye, The highly radiopure NaI(Tl) DAMA/LIBRA set-up, *Int. J. of Mod. Phys.* **A31** (2016) 1642002.
207. R. Bernabei, P. Belli, A. Incicchitti, R. Cerulli, C.J. Dai, X.H. Ma, Towards the next and far future, *Int. J. of Mod. Phys.* **A31** (2016) 1642011.
208. R. Bernabei, P. Belli, A. d'Angelo, S. d'Angelo, A. Di Marco, F. Montecchia, A. Incicchitti, F. Cappella, V. Caracciolo, R. Cerulli, C.J. Dai, H.L. He, H.H. Kuang, X.H. Ma, X.D. Sheng, R.G. Wang and Z.P. Ye, Highlights of DAMA/LIBRA, *EPJ Web of Conf.* **126** (2016) 02014.
209. R. Bernabei, P. Belli, A. Di Marco, F. Montecchia, A. d'Angelo, A. Incicchitti, F. Cappella, V. Caracciolo, R. Cerulli, C.J. Dai, H.L. He, H.H. Kuang, X.H. Ma, X.D. Sheng, R.G. Wang, Z.P. Ye, Recent analyses on the DAMA/LIBRA-phase1 data. *J. of Phys.: Conf. Series* **718** (2016) 042013.
210. V.I. Tretyak, P. Belli, R. Bernabei, V.B. Brudanin, F. Cappella, V. Caracciolo, R. Cerulli, D.M. Chernyak, F.A. Danevich, S. d'Angelo, A. Di Marco, A. Incicchitti, M. Laubenstein, V.M. Mokina, D.V. Poda, O.G. Polischuk, I.A. Tupitsyna, New limits on 2β processes in ^{106}Cd , *J. of Phys.: Conf. Series* **718** (2016) 062062.
211. F. A. Danevich, A. S. Barabash, P. Belli, R. Bernabei, F. Cappella, V. Caracciolo, R. Cerulli, D. M. Chernyak, S. d'Angelo, A. Incicchitti, V. V. Kobychhev, S. I. Kononov, M. Laubenstein, V. M. Mokina, D. V. Poda, O. G. Polischuk, V. N. Shlegel, V. I. Tretyak, V. I. Umatov, Search for double beta decay of ^{116}Cd with enriched $^{116}\text{CdWO}_4$ crystal scintillators (Aurora experiment), *J. of Phys.: Conf. Series* **718** (2016) 062009.
212. V. Caracciolo, R. Bernabei, P. Belli, F. Cappella, R. Cerulli, F.A. Danevich, A. d'Angelo, A. Di Marco, A. Incicchitti, D.V. Poda, V.I. Tretyak, The ADAMO project and development, *J. of Phys.: Conf. Series* **718** (2016) 042011.
213. R. Bernabei, P. Belli, F. Cappella, V. Caracciolo, R. Cerulli, C.J. Dai, A. d'Angelo, S. d'Angelo, A. Di Marco, H.L. He, A. Incicchitti, H.H. Kuang, X.H. Ma, F. Montecchia, X.D.

- Sheng, R.G. Wang, Z.P. Ye, Recent results from DAMA/LIBRA-phase1 and perspectives, *Nucl. and Part. Phys. Proc.* **273-275** (2016) 321-327.
214. R. Bernabei, P. Belli, F. Cappella, V. Caracciolo, R. Cerulli, C.J. Dai, A. d'Angelo, S. d'Angelo, A. Di Marco, H.L. He, A. Incicchitti, H.H. Kuang, X.H. Ma, F. Montecchia, X.D. Sheng, R.G. Wang, Z.P. Ye, DAMA/LIBRA-phase1 results and perspectives of the phase2, *EPJ Web of Conf.* **121** (2016) 06005.
215. R. Bernabei and A. Incicchitti, Low Background Techniques in NaI(Tl) set-ups, *Int. J. Mod. Phys. A* **32** (2017) 1743007.
216. R. Cerulli, P. Villar, F. Cappella, R. Bernabei, P. Belli, A. Incicchitti, A. Addazi, Z. Berezhiani, DAMA annual modulation and mirror Dark Matter, *Eur. Phys. J. C* **77** (2017) 83.
217. P. Belli, R. Bernabei, R.S. Boiko, F. Cappella, R. Cerulli, F.A. Danevich, A. Incicchitti, B.N. Kropivnyansky, M. Laubenstein, V.M. Mokina, O.G. Polischuk, V.I. Tretyak, New limits on 2ϵ , $\epsilon\beta^+$ and $2\beta^+$ decay of ^{136}Ce and ^{138}Ce with deeply purified cerium sample, *Eur. Phys. J. A* **53** (2017) 172.
218. R. Bernabei, P. Belli, A. Di Marco, F. Montecchia, A. d'Angelo, A. Incicchitti, F. Cappella, V. Caracciolo, R. Cerulli, C.J. Dai, H.L. He, H.H. Kuang, X.H. Ma, X.D. Sheng, R.G. Wang, Z.P. Ye, DAMA/LIBRA results and perspectives, *EPJ Web of Conferences* **136** (2017) 05001.
219. R. Bernabei, P. Belli, F. Cappella, V. Caracciolo, R. Cerulli, F.A. Danevich, A. d'Angelo, A. Di Marco, A. Incicchitti, V.M. Mokina, D.V. Poda, O.G. Polischuk, C. Taruggi, V.I. Tretyak, ZnWO_4 anisotropic scintillator for Dark Matter investigation with the directionality technique, *EPJ Web of Conferences* **136** (2017) 05002.
220. R. Bernabei, P. Belli, S. d'Angelo, A. Di Marco, F. Montecchia, A. d'Angelo, A. Incicchitti, F. Cappella, V. Caracciolo, R. Cerulli, C.J. Dai, H.L. He, H.H. Kuang, X.H. Ma, X.D. Sheng, R.G. Wang, Z.P. Ye, Recent results from DAMA/LIBRA-phase1 and perspectives, *Astronomical and Astrophysical Transactions (AApTr)* **30** (2017) 71.
221. R. Bernabei, P. Belli, A. Di Marco, F. Montecchia, A. d'Angelo, A. Incicchitti, F. Cappella, V. Caracciolo, R. Cerulli, C. J. Dai, H. L. He, H. H. Kuang, X. H. Ma, X. D. Sheng, R. G. Wang, and Z. P. Ye, Highlights on signals from Dark Matter particles, *EPJ Web of Conf.* **164** (2017) 01013.
222. A. Incicchitti, Guest Editor's Preface to the Special Issue on Results and Developments in the Investigation of Rare Nuclear Decays and Processes, *Int. J. of Mod. Phys. A* **33** (2018) 1802002.
223. P. Belli, R. Bernabei, R.S. Boiko, F. Cappella, V. Caracciolo, R. Cerulli, F. Danevich, A. Incicchitti, B.N. Kropivnyansky, M. Laubenstein, S. Nisi, D.V. Poda, O.G. Polischuk, V.I. Tretyak, First search for 2ϵ and $\epsilon\beta^+$ decay of ^{162}Er and new limit on 2β -decay of ^{170}Er to the first excited level of ^{170}Yb , *Journal of Physics G: Nuclear and Particle Physics*, **45** (2018) 095101.
224. A.S. Barabash, P. Belli, R.S. Boiko, V.B. Brudanin, F. Cappella, V. Caracciolo, R. Cerulli, D.M. Chernyak, C.J. Dai, F.A. Danevich, A. d'Angelo, A. Di Marco, H.L. He, A. Incicchitti, D.V. Kasperovych, V.V. Kobychyev, S.I. Konovalov, H.H. Kuang, X.H. Ma, V. Merlo, F. Montecchia, D.V. Poda, O.G. Polischuk, X.D. Sheng, V.N. Shlegel, V.I. Tretyak, V.I. Umatov, R.G. Wang, Z.P. Ye and M.M. Zarytskyy, Search for rare processes with DAMA experimental set-ups, *EPJ Web of Conf.* **182** (2018) 02026.
225. R. Bernabei, P. Belli, F. Cappella, V. Caracciolo, R. Cerulli, C.J. Dai, A. d'Angelo, A. Di Marco, H.L. He, A. Incicchitti, H.H. Kuang, X.H. Ma, F. Montecchia, X.D. Sheng, R.G. Wang and Z.P. Ye, DAMA/LIBRA Results and Perspectives, *EPJ Web of Conf.* **182** (2018) 02027.

226. A. S. Barabash, P. Belli, R. Bernabei, R. S. Boiko, R. Cerulli, F. A. Danevich, A. Di Marco, A. Incicchitti, D. V. Kasperovych, R. V. Kobychyev, V. V. Kobychyev, S. I. Konovalov, M. Laubenstein, D. V. Poda, O. G. Polischuk, V. I. Tretyak, V. I. Umatov, Double beta decay of ^{150}Nd to the first excited 0^+ level of ^{150}Sm : preliminary results, *Nucl. Phys. At. Energy* vol. **19** (2018) 95-102 (DOI:10.15407/jnpae2018.02.095).
227. R. Bernabei, P. Belli, A. Bussolotti, F. Cappella, V. Caracciolo, R. Cerulli, C. J. Dai, A. d'Angelo, A. Di Marco, H. L. He, A. Incicchitti, X. H. Ma, A. Mattei, V. Merlo, F. Montecchia, X. D. Sheng, Z. P. Ye, First model independent results from DAMA/LIBRA-phase2, *Universe* **4** (2018) 116 (doi:10.3390/universe4110116), and arXiv:1805.10486.
228. A. S. Barabash, P. Belli, R. Bernabei, F. Cappella, V. Caracciolo, R. Cerulli, D. M. Chernyak, F. A. Danevich, S. d'Angelo, A. Incicchitti, D. V. Kasperovych, V. V. Kobychyev, S. I. Konovalov, M. Laubenstein, D. V. Poda, O. G. Polischuk, V. N. Shlegel, V. I. Tretyak, V. I. Umatov, Ya. V. Vasiliev, Final results of the Aurora experiment to study 2beta decay of ^{116}Cd with enriched $^{116}\text{CdWO}_4$ crystal scintillators, *Phys. Rev. D* **98** (2018) 092007.
229. P. Belli, R. Bernabei, R. S. Boiko, F. A. Danevich, A. Di Marco, A. Incicchitti, D. V. Kasperovych, F. Cappella, V. Caracciolo, V. V. Kobychyev, O. G. Polischuk, N. V. Sokur, V. I. Tretyak, R. Cerulli, Half-life measurements of ^{212}Po with thorium-loaded liquid scintillator, *Nucl. Phys. At. Energy* **19** (2018) 220 [doi: 10.15407/jnpae2018.03.220].
230. Alessandro Di Marco, Alexander S. Barabash, Pierluigi Belli, Rita Bernabei, Roman S. Boiko, Viktor B. Brudanin, Fabio Cappella, Vincenzo Caracciolo, Riccardo Cerulli, Dmitry M. Chernyak, Fedor A. Danevich, Antonella Incicchitti, Dmytro V. Kasperovych, Vladislav V. Kobychyev, Sergey I. Konovalov, Matthias Laubenstein, Vittorio Merlo, Francesco Montecchia, Oksana G. Polischuk, Denys V. Poda, Vladimir N. Shlegel, Vladimir I. Tretyak, Vladimir I. Umatov, Yan V. Vasiliev and Mykola M. Zarytskyy, Recent Developments and Results on Double Beta Decays with Crystal Scintillators and HPGe Spectrometry, *Universe* **4** (2018) 147 [doi: 10.3390/universe4120147].

Massimo Caccia

1. Academic cursus honorum
2. Main Research activities
3. Management, coordination, evaluation & peer reviewing, Technology Transfer activities
4. Teaching Activity
5. Publications, conference presentations and seminars

1 Academic Cursus Honorum

- **1985:** Laurea Degree in Physics, cum laude, at Università degli Studi di Milano
- **1986:** fellow of the *Angelo della Riccia Foundation* at the European Centre for Nuclear Research (CERN, Geneva, Switzerland) for 12 months
- **1987-1989:** graduate Student in Physics at Università degli Studi di Milano. The Ph.D. degree was awarded in 1990 after a defence at national level
- **1990:** post-doctoral Fellow of the Italian National Institute of Nuclear Physics (I.N.F.N.)
- **1990:** CERN Fellow in the Experimental Physics Division (2 year contract)
- **1991, December:** Appointed, after a public selection procedure, Research Officer with a permanent position at the Physics Dept. of Università degli Studi di Milano
- **1999:** after a public selection procedure at national level, M.C. is one of the candidates qualified for an Associate professorship in Experimental Physics. In November 1999, M.C. is appointed by Università degli Studi dell'Insubria, Faculty of Science.
- **2004:** director of the Dept. of Physics and Mathematics, Università degli Studi dell'Insubria, with a three year mandate
- **2010, September:** habilitation as Full Professor of Experimental Physics
- **2011, November:** appointment as Full Professor at Università degli Studi dell'Insubria, Faculty of Science

2 Main Research activities

M. Caccia's research activity is focused on the use of solid state detectors of ionizing particles and photons for High Energy Physics experiments, instruments and methods in Medicine, Radioprotection, Homeland Security and High level Education. He contributed to the development of high granularity position sensitive sensors based on the direct detection of ionization in a Silicon substrate (microstrip and pixel detectors). Since 2006, the focus of his activity is related to Silicon Photomultipliers (SiPM), state-of-the-art sensors of light with single photon sensitivity and photon number resolving capability.

M.C. was member of the CERN based DELPHI collaboration at the Large Electron-Positron collider (1985-2000), where he served as project leader of the Very Forward Tracking Detector in 1997-1998. He also participated in the early development of the pixel detector for the ATLAS experiment at the CERN Large Hadron Collider.

Since 2001, his prevailing interest is in applied physics projects based on the technology developed for Particle Physics experiments:

- **2001-2004: Principle Investigator and coordinator of the SUCIMA project (Silicon Ultra fast Cameras for electron and gamma sources In Medical Applications, project id G1RD-CT-2001-00561), approved by the European Commission (EC) within the Fifth Framework Program. The proposal involved 10 partners, had a total budget of 3.5 million EUR and a financial contribution by the EC of 2.8 million EUR.** The project was focused on the development of novel imaging techniques for radioactive sources used in intravascular brachytherapy and for the quality control (QC) of beams at hadron therapy facilities. The development was based on custom designed pixel detectors in CMOS and SOI technology targeted to the design, construction and commissioning of a high granularity dosimeter and a particle beam real-time monitor. In terms of detectors, the consortium pioneered the pixel technology based on high resistivity Silicon-on-insulator wafers. Moreover, it developed the MIMOTERA, a CMOS monolithic active pixel sensor yet today with unique characteristics. The detector, back illuminated after an extreme thinning down to the epitaxial layer, is characterized by a modest granularity (153-micron pitch, for a total number of 10 000 pixels in the sensor) and by a patented architecture implementing a dead timeless operational scheme, with a frame rate up to 10 kHz and a full well capacity corresponding to a deposited energy of 30 MeV/pixel. The MIMOTERA, originally designed for QC at the hadron therapy machines, was exploited in a number of applications, reported in the following. **The project was classified as excellent by an ex-post evaluation performed for the EC by independent experts.**
- **2006-2008: Principal Investigator and coordinator of the RAPSODI project (Radiation Protection with Silicon Optoelectronics Devices), approved by the EC within the Sixth Framework Program (project id 32993, FP6-SME-COOP). The proposal involved 7 partners, had a total budget of 2.2 million EUR and a financial contribution by the EC of 1.5 million EUR.** The project was targeted to collaborative research

for the benefit of Small and Medium Enterprises and addressed the development of SiPM sensors, by the time in their infancy. The sensor activities within the collaboration were lead by SENSL, today one of the major player, and was aiming to the development of an end-user driven design & production process which could end-up with customized optimal sensors. The goal was pursued addressing the specific and complementary features required to integrate SiPM into novel instruments, namely: a device for real-time dosimetry in mammography (with PTW-Freiburg, D); a novel instrument for the measurement of indoor Radon concentration (with JP-SMM, Prague, CZ); a hand-held, battery operated pager compliant with the ISO standards concerning the illicit trafficking of radioactive material (FORIMTECH, Geneva, CH). By the end of the project, the objectives were fully met. **RAPSODI was also classified as excellent by an ex-post evaluation. It is worth mentioning that the know-how by the 3 research partners was licensed to CAEN s.p.a. and lead to the development of a flexible SiPM kit currently on the market. As a consequence, CAEN and Uni. Insubria established a Joint Development Center, still active by the time of writing.**

- **2009-2011: Principal Investigator and coordinator of the CLAVIUS project, approved within the EC-INTERREG program of cross border cooperation between Italy and Switzerland (INTERREG IT-CH). The proposal involved 5 partners, had a total budget of 384 kEUR and a financial contribution of 171 kEUR.** The workplan was based on the use of the MIMOTERA, resulting by the SUCIMA project. The goal of the activity was to qualify the MIMOTERA as a beam monitor of accelerated particle beams and to perform a measurement of the sun diameter relying on the drift-scan method and profiting from the high frame rate of the detector. The detector was commissioned for direct imaging and optimisation of ion beams extracted by a tandem accelerator used for material science and irradiation of living cells (in collaboration with the Laboratoire d'Analyses par Reactions Nucleaires (LARN), Namur, Belgium). The sensor was also used as a beam profilometer at the CERN-AD antiproton machine, in collaboration with the ACE-AD4 collaboration (2010-2014) studying the possibility to improve cancer hadron therapy by using anti-protons. Beam profilometry by direct impact was also performed at the Heidelberg Ion Therapy center, demonstrating an excellent linearity of the response over the full range of intensities and beam energies. Measurements of the sun diameter were performed at the IRSOL solar observatory (Istituto Ricerche Solari di Locarno, CH), following the development of a dedicated data acquisition system in collaboration with SUPSI (Scuola Universitaria Professionale della Svizzera Italiana). The results report a relative intrinsic precision at the 10^{-5} level, to be compared to atmospheric variations larger by 2 orders of magnitude, possibly the most precise measurement ever performed for a ground based experiment.
- **2011-2014: Principal Investigator and coordinator of RADICAL (RADon: Integrating Capabilities of Associated Labs), an EC-INTERREG IT-CH proposal. The proposal involved 4 partners, had a total budget of 771 kEUR and a financial contribution of 289 kEUR.** The project addressed the development of instruments and methods for monitoring the indoor

radon concentration. More specifically, it targeted:

- the development of an auxiliary module for the wireless GPRS transmission to a web server of radon concentration values and environmental parameters;
- the study of protocols for monitoring and control of the radon concentration in buildings with public access and complex architecture (schools, hospitals, bank agencies), using a network of instruments;
- the development of on-field methods for the measurement of the equilibrium factor between radon and its progeny, essential for dosimetric studies.

The project was successfully completed

- **2012-2014:** partner of the FP7 project identified as **MODES-SNM (project id 284842, FP7-SECURITY)**, lead by **Università di Padova**. The proposal involved 8 partners, had a total budget of 3.2 million EUR and a financial contribution by the EC of 2.4 million EUR. The project addressed the development of a novel fast neutron detector for homeland security at seaports and airports, based on the scintillation by ^4He gas in a high pressure tube. The team lead by M.C. was in charge of the integration of SiPM arrays in a re-designed, optimized detector. The collaboration successfully concluded the project engineering a full scale prototype that was qualified by external, independent experts and authorities at the Rotterdam and Dublin seaport, at Heathrow airport and at the Basel custom. The main partner company (ARKTIS detectors, located in Zuerich, Switzerland) engineered the prototype, currently on the market. The know-how in security applications generated within the project lead the team to new contracts with agencies and companies in the field.
- **2015-today:** partner of University of Aveiro (Pt) and CAEN s.p.a. in a project targeting the development of a novel Positron Emission Tomography System for pre-clinical studies. A 2D prototype for high level education has been designed, qualified, optimized and engineered and it is currently being commissioned.
- **2106-today:** leading partner of a collaboration with AWE, the U.K. Atomic Weapons Establishment, focused on the characterization of a new class of neutron sensitive plastic and inorganic scintillator, neutron sensitive and with gamma-neutron discrimination. The collaboration involves as well KROMEK, a British based company active in the field of protection against nuclear threats.
- **2016:** Principal investigator of an exploratory project on radio-guided surgery based on the detection of positrons emitted by a ^{18}F source, in partnership with Light Point Medical and UNITIVE design, two U.K. based companies.
- **2016-today:** Principal investigator of the design, construction, commissioning and qualification of a calorimetric module based on the detection of scintillation and Cherenkov fibers embedded in a copper converter. The prototype module, based on the use of a 64 channel SiPM array, was commissioned on beam in July 2016. An upgraded module has been constructed and qualified on a beam test in July 2017.

- **2017-today:** Principal investigator of a pilot project with EUROTEC s.r.l., Italy, targeted to the development of an innovative instrument for dual energy bone densitometry.

M. Caccia continues on the track of basic research as a member of the AEGIS collaboration at CERN and being active in the International Linear Collider (ILC) community. As far as AEGIS is concerned, in 2015 the team lead by M.C. successfully commissioned a monitor for the slow antiproton beam at the entrance of the experiment, yet based on the MIMOTERA thinned down to a total thickness of $50\mu m$ and operated at cryogenic temperature in high vacuum.

Concerning the ILC, M.C. lead an R&D project supported by the Italian National Institute of Nuclear Physics oriented to pixel based vertex reconstruction and SiPM based calorimetry (2006-2010).

Since 2016, M.C. is also part of the international collaboration involved in the design study of the next generation electron-positron circular collider in China (CepC). By the time of writing, he is part of the team engineering and drafting the Conceptual Design Report that late in 2018 shall be made available to the scientific community and the International Committee for Future Accelerators.

3 Management, coordination, evaluation & peer reviewing, Technology Transfer activities

Beside the leadership of Research collaborations and project management, Massimo Caccia was serving as director of the Department of Physics and Mathematics for three years (2004-2007). Since its establishment (2005) and till June 2013, M.C. has been directing the unit at Uni. Insubria identified as SISRIT (*SIstema di Supporto alla Ricerca, Innovazione e Trasferimento tecnologico*), in charge of supporting the Research personnel in Technology Transfer activities and submission of proposals to the EC.

As a consequence of the performed activities related to exploitation projects and collaborative projects with industries, since May 2007 till October 2012, M.C. was serving as Italian representative in the Technology Transfer Task Force (T^3F), following a nomination by the I.N.F.N. President and the appointment by the CERN Council. The T^3F had the main charge to analyze the Knowledge Exchange & Technology Transfer process within the High Energy Physics community and propose actions to improve its efficiency and efficacy at CERN and in the member states.

Since October 2010 with a three year appointment M.C. has been member of the National Committee for Technology Transfer at I.N.F.N.

Since 2004 until 2008, M.C. was member of the International Advisory Committee of the international VERTEX yearly workshop. Since 2009, he is member of the International Advisory Committee for the Front-End Electronics international workshop.

Since 2006, M.C. is serving as Program Reviewer for the IEEE Nuclear Science Symposium and Medical Imaging Conference; in 2008, he was topic convener for the *New Solid State Detectors* session, together with G. Deptuch (now at FERMILAB).

M.C. has been reviewing papers for Nuclear Instruments and Methods, the Journal of Instrumentation and the IEEE Transaction in Nuclear Science. Occasionally, he reviewed papers for the Journal of Micromechanics and Microengineering and the Chinese Optics Letters. In 2006 and 2007 he served as project evaluator for the French *Agence Nationale de la Recherche* while in 2006 he acted as external reviewer for the *Development Plan of the Research Activities* at Uni. Siena. Recently, he was reviewing research proposals for Uni. Padova and Uni. Catania. In 2017, he was appointed by the Polish National Research Agency as member of the evaluation board for the assignment of the POLONNEZ grants.

Since 2013, Massimo Caccia is coordinator of the Graduate School in Physics and Astrophysics at Uni. Insubria.

4 Teaching activity

Since his appointment as Full Professor, Massimo Caccia is in charge of the following courses for Physics students:

- Statistics and Probability (year 1)
- Physics Lab (year 1)
- High Energy Physics (year 4 or 5)
- Semiconductor particle detector laboratory (year 4 or 5)

Moreover, during the academic year 2012/2013, M.C. was in charge of the course on *General Physics* for students at the School of Engineering (year 1).

Massimo Caccia has been tutor and person in charge of more than 20 thesis at diploma and master level and internal reviewer for 6 thesis in Environmental and Medical Physics, with activities developed in Medical Physics units hosted by hospitals or at the Environmental Protection Agency. Moreover, he has been supervising (Directeur de thèse) 7 Ph.D. students and co-supervising 1 graduate student enrolled within the Ph.D. program in Milano.

5 Publications, conference presentations and seminars

Massimo Caccia is author or co-author of more than 405 articles published in peer reviewed journals and conference proceedings. According to the SPIRES data base (<http://www-spires.fnal.gov/>) his papers have a total number of citations (excluding self-citations) = 29 926 and a h-factor = 75. According to the WebofScience, numbers are adjusted to 390 papers, 22313 citations, h-factor = 51. The majority of the papers can be associated to the activity within the CERN based large collaborations. Throughout his career, M.C. presented the results of his activity in about 120 conferences and seminars.

Como, September 2018

A handwritten signature in black ink, consisting of a large, stylized 'M' followed by a horizontal line and the name 'Caccia' written in a cursive script.

Massimo Caccia

Education – Academic Achievements

- 2018 Full Professor at S.B.A.I. Department of Rome University “La Sapienza”
- 2018 Appointed with the Italian ASN National scientific qualification for FIS/07- 01/D1 scientific sector
- 2014 Appointed with the Italian ASN National scientific qualification for FIS/01- 01/A2 scientific sector
- 2002-2018 Confirmed Associate Professor at S.B.A.I. Department of Rome University “La Sapienza”
- 1999-2002 Associate Professor at Energetics Department of Rome University “La Sapienza”
- 1992-1999 Permanent Researcher at Energetics Department of Rome University "La Sapienza"
- 1992 Visiting Researcher at California Institute of Technology.
- 1990-1992 Permanent Researcher at Istituto Nazionale di Fisica Nucleare (INFN) at Frascati National Laboratory (LNF)
- 1988-1989 Research grant of INFN at Frascati National Laboratory
- 1987 Degree in Elementary Particle Physics: 110/110 cum laude at Rome University "La Sapienza”

Scientific Responsibilities

- 2016-now Spokesperson of the FOOT (FragmentatiOn Of Target) international collaboration (France, Germany, Italy, Japan)
- 2016-now Coordinator of the Working Package 5 “Charged detector for Imaging in Particle Therapy” of the European Nuclear Science and Applications Research (ENSAR-2) - MediNet project.
- 2014-2016 Principal Investigator (PI) of the NCS@HIT experiment at Heidelberg Ion-Beam Therapy Center (HIT) funded by the Union of Light Ion Centers in Europe (ULICE) Program for the study of the beam fragmentation in Particle Therapy
- 2012-2015 PI of the Flagship Project (Progetto Premiale) of the MIUR (Italian Ministry of Education, University and Research) for the Centro Fermi Research Institute: “Multiple source, real-time Imaging for Hadrontherapy”
- 2012-2015 PI at “La Sapienza” University of Rome of the PRIN project (Research Project of National Relevance) INSIDE: “Innovative Solution of Imaging and Dosimetry in Hadrontherapy”
- 2012-2016 PI of the INFN experiment RDH (R&D in Hadrontherapy) at Roma1 section
- 2012-now PI of the project of the Centro Fermi Research Institute: “Innovative non invasive imaging of dose release in hadrontherapy”
- 2010-2015 Spokesperson of the FIRST-S361 (Fragmentation of Ions Relevant for Space and Therapy) international collaboration at GSI laboratory (Darmstadt, Germany)
- 2009-2012 PI of the INFN project TPS (Treatment Planning System for hadrontherapy) at Frascati National Laboratory of INFN
- 2006-2009 PI at “La Sapienza” University of Rome of the PRIN project on “Read-out optimization and DAQ electronics development of a scintillating fiber tracking calorimeter”

Memberships

- 2018- Users selection Panel of the Beam Test Facility (BTF) of Laboratori Nazionali di Frascati (LNF)
- 2017 Committee for the assignment of the INFN post-doc fellowships for foreigners
- 2016-now Committee for the assignment of the INFN post-doc fellowships at Roma 1 section.
- 2013-now Ph.D. School in Accelerator Physics at Rome University “La Sapienza”

- 2015-now Specialization School in Medical Physics at Rome University “La Sapienza”
- 2012-2014 Users Committee of Laboratori Nazionali del Sud (LNS)
- 2010-2014 Scientific Committee of FLUKA international collaboration
- 2008-now Policy Board of KLOE-2 (K Long Experiment) experiment at LNF
- 2006-2009 Panel for TARI (Transnational Access to Research Infrastructure) funds assignment of the European Network of Underground Laboratories
- 2004-2018 Jury for PhD thesis examination at University of Rome “La Sapienza”, University of Rome “Tor Vergata”, University of Rome “Tre”, University of Milano, University of Napoli and University of Torino
- 2004-2007 Committee for permanent researcher positions in experimental physics (FIS/01) at Perugia and Lecce Universities
- 2003-2009 Panel for TARI funds assignment of Laboratori Nazionali del Gran Sasso (LNGS) of INFN
- 2002-2005 Executive Committee of the Energetics Department of Rome University “La Sapienza”.
- 2001-2007 Scientific Committee of LNGS of INFN

Referee/Reviewer activities

- 2016-now referee for DFG (German Research Foundation) for Nuclear and Medical physics project funding
- 2005-now referee for MIUR (Italian Ministry of Education, University and Research): VQR (Research Evaluation) 2004-2010, VQR 2011-2014, PRIN and FIRB (Futuro In Ricerca) research project, CIVR (Comitato di Indirizzo per la Valutazione della Ricerca), FARE (Framework per l’Attrazione e il Rafforzamento della Ricerca) research projects of MIUR.
- 2010-now Reviewer of International Scientific Journals (Physics in Medicine and Biology, Physica Medica, Medical Physics, Journal of Radiation Research, Nuclear Instruments and Methods, Translational Cancer Research, Frontiers in Oncology, Advances in Physics, Transaction of Nuclear Science, IEEE Transactions on Radiation and Plasma Medical Sciences)

Teaching and Training activities

Teaching activity took place within the Faculty of Engineering of the University of Rome “Sapienza” since 1995 until 2017. V.P. was the professor of courses of General Physics II (Electromagnetism), General Physics I (Mechanics and Thermodynamics), Laboratory of Physics, Modern Physics, Radioprotection, Radiation Physics applied to Medicine.

Supervisor of more 34 thesis in the faculty of Engineering and of Mathematical, Physical and Natural Science of the Rome University "Sapienza".

Supervisor of 9 Ph.D. thesis of University of Rome "Sapienza", of University of Rome "Tor Vergata" and University "ROMA 3".

Supervisor of post-doc contracts funded by University "Sapienza", by INFN, by Centro Fermi Research Institute and by Istituto Italiano di Tecnologia (IIT)

Summary of Research Activities

a) 2008-2018: Physics applied to particle therapy and to medical imaging

In 2009 V.P. promoted the birth, and since then coordinates, a group aiming at developing cutting-edge applications of nuclear and particle physics in the field of medical diagnostics and therapy. This group includes members from "La Sapienza" University of Rome and from Centro Fermi Research Institute, and is collaborating with the GSI Laboratory (Darmstadt, Germany), the HIT

Therapy Center (Heidelberg, Germany), the CNAO Centro Nazionale di Adroterapia Oncologica (Pavia, Italy), the IFJ PAN Proton Therapy Center (Krakow, Poland) and with the APSS Proton Therapy Center (Trento, Italy). The group has very close collaborations with several sections of INFN (Bo, LNS, LNF, Mi, Na, Pi, RM2, TIFPA, To).

The group focused on nuclear techniques related with the use of proton and carbon beams for tumor treatment:

- Evaluation of the effects of the ion beam fragmentation in the patient, both in carbon treatment (projectile fragmentation) and proton treatment (target fragmentation). V.P. has been the spokesperson of two international collaborations addressing this issue: S371-FIRST (Fragmentation of Ions Relevant for Space and Therapy; Germany, France, Italy), which took data at GSI in 2011-2012, and the FOOT (FragmentatiOn Of Target) (Germany, France, Japan and Italy), which at present is in construction. The FOOT experiment has been included in the NUPEC 2017 roadmap and has been included in the European Space Agency research program for radioprotection on space
- Imaging optimization of the dose release in particle therapy treatment. Beam range monitoring during the treatment is one of the major improvement of the quality assurance of the treatment. It can be achieved exploiting the neutral and charged secondary flux produced by the interaction of the beam with the patient tissue. Due the absence of data about the secondary production V.P. had been the PI of the design, construction, data taking, data analysis, and simulation of several measurement campaigns at LNS, GSI, HIT, CNAO and TIFPA.
- The study of the secondary emission provided the V.P. group with the knowledge necessary for the design of an on-line beam range monitor device, to be used at CNAO. This device is made of a compact tracker to detect charged secondary emission allowing on-line monitoring of carbon beam range. The group led by V.P. designed and built the detector, the front-end electronics, the data acquisition and an innovative on-line reconstruction technique. This activity has been carried out initially within the INSIDE PRIN project and then within the Centro Fermi Project dedicated to the Particle Therapy technology development, in both cases with V.P. as PI.
- V.P. has been deeply involved in Monte Carlo software development applied to medical physics and radioprotection, notably to its use in developing the Treatment Planning System in particle therapy. Such an activity has been carried out within the INFN-CERN FLUKA collaboration (V.P. is a contributing author of the FLUKA code) and within the INFN-TPS collaboration, which produced a commercial Treatment Planning System for carbon and proton. V.P. is coordinating the development of the FRED (Fast paRticle thErapy Dose evaluator) Monte Carlo software that computes on GPU the dose released to the patient by a proton beam reducing the CPU time of two orders of magnitude. That software is under test at CNAO center and at IFJ PAN proton therapy center (Krakow).
- A parallel research stream has been focused on the development of an innovative intraoperative probe for brain surgery in oncology. Such an intraoperative tool, which effectively detects tumor margins in real time, could be a useful surgical adjunct for brain tumor resection. That work provided V.P. of a patent about “Intraoperative detection of tumor residues using β - radiation and corresponding probes, N.PCT/IT2014/000025

b) 1993-today. Study of fundamental discrete symmetries of sub-nuclear interaction and of the quark mixing matrix unitarity.

This research took place within the international KLOE collaboration, that designed and built an apparatus optimized for the study of discrete symmetries (parity inversion, time inversion and charge conjugation) in the quantum system of charged and neutral kaon pairs generated in the decay at rest of phi mesons, and of the unitarity test of the quark mixing matrix (CKM). The KLOE data taking at the DAPHNE electron-positron collider of the Frascati National Laboratory of INFN ended in april 2006.

The contribution of the candidate to the detector was first focused in the design of the charged particle trigger system and in the development of the simulation and reconstruction software of the drift chamber. V.P. was also the coordinator of the analysis group that studied the charged kaon physics. This activity updated all the charged kaon branching ration in literature and led to an updated determination of the V_{us} element of the CKM quark mixing matrix.

In 2008 V.P. has become a member of Policy Board of the KLOE2 collaboration that extended the KLOE physics program at the renewed DAPHNE machine with an upgraded detector.

c) 1987-2004 Study of high energy penetrating cosmic rays

The main effort in this field was carried out within the MACRO experiment, hosted in Hall B of the underground laboratories of Gran Sasso (INFN) and conducted by an Italy-US collaboration. The aims of this experiment were the study of the penetrating cosmic radiation, the search for neutrinos from stellar collapses inside our galaxy, and the possible detection of magnetic monopoles of cosmological origin.

The MACRO detector was optimized for the detection of magnetic monopoles. V.P. carried out the computation of the interaction probability (and the tracking efficiency) of the slow monopoles in the MACRO tracking system, providing an important contribution to the monopole flux limit determination.

Summary: 296 International Papers, 6188 Citations, 41 H index (Source Scopus)

V.P. gave 11 invited talks at international conference and 6 seminar in the last 5 years

Patrizia Cenci

📍 Sezione INFN di Perugia – Via A. Pascoli – 06123 Perugia

☎ +39 0755852748

✉ patrizia.cenci@pg.infn.it

FORMAZIONE SCOLASTICA

- Laurea in fisica all'Università degli Studi di Perugia conseguita il 18.10.1984 (punteggio massimo con lode).
- Scuola di Perfezionamento in Fisica (Classe di Scienze) della Scuola Normale Superiore di Pisa (1984-1987).

POSIZIONI PROFESSIONALI

- Dirigente di Ricerca INFN (Livello I) dal 01.08.2018
- Primo Ricercatore INFN (Livello II) dal 01.03.2002
- Ricercatore INFN (Livello III) dal 16.04.1988

BORSE DI STUDIO E CONTRATTI PER ATTIVITÀ DI RICERCA IN ITALIA E ALL'ESTERO:

- Associato Scientifico (Scientific Associate) della Divisione di Fisica Sperimentale del CERN dal 01.01.1996 al 31.12.1996
- Borsista INFN presso la Sezione INFN di Perugia dal 01.01.1988 al 15.04.1988
- Borsista (Fellow) della Divisione di Fisica Sperimentale del CERN dal 01.09.1985 al 31.12.1987

INCARICHI ISTITUZIONALI:

- Responsabile esperimento NA62 della *Sezione INFN di Perugia* (2008-2018);
- Responsabile esperimento P326 (R&D esperimento NA62 del CERN) della *Sezione INFN di Perugia* (2006-2007);
- Responsabile esperimento EPSI (esp. NA48, NA48/1 e NA48/2) della *Sezione INFN di Perugia* (2000-2005);
- Presidente del Comitato per le Pari Opportunità dell'INFN (2002-2010);
- *Coordinatore di Gruppo 1*: rappresentante della Sezione INFN di Perugia nella Commissione Scientifica Nazionale I dell'INFN (2001-2004);
- *Coordinatore di Gruppo 5*: rappresentante della Sezione INFN di Perugia nella Commissione Scientifica Nazionale V dell'INFN (1989-1995);
- Componente e presidente di numerose commissioni di concorso per borse di studio, assegni di ricerca, posizioni a tempo indeterminato dell'INFN e di commissioni di gare indette dall'INFN per forniture e servizi.

ALTRE ATTIVITÀ E INCARICHI:

- Componente del Comitato Scientifico del Dipartimento di Fisica delle Particelle Elementari presso il laboratorio Paul Scherrer Institut (PSI, Villigen, Svizzera) e referee di numerosi esperimenti (2003-2011).
- Valutatore esterno della Swiss National Science Foundation (SNSF) per il finanziamento di progetti nel settore della fisica delle particelle elementari dal 2011.
- Valutatore di proposte ERC Starting Grant 2014 nel settore *Fundamental Constituents of Matter*.
- Iscritta all'Albo Revisori del MIUR dal 2014.
- Referee dell'esperimento MEGII incaricato dalla CSN1 dell'INFN.
- Proponente e componente del gruppo INFN (responsabile: dott.ssa O. di Carlo, A.C. INFN) del progetto europeo Genis-Lab (*The Gender in Science and Technology Laboratory*, FP7, 2010-2014).
- Componente della delegazione italiana della Società Italiana di Fisica (SIF) ad alcune edizioni della International Conference on Women in Physics (ICWIP) organizzate con cadenza triennale dalla International Union of Pure and Applied Physics, nel 2008, 2011 e 2017.
- Componente del Comitato Scientifico della rivista *Il Nuovo Saggiatore* della SIF dal 2011.

PARTECIPAZIONE A CONFERENZE, WORKSHOP E SCUOLE INTERNAZIONALI DI FISICA

- >25 relazioni a conferenze, workshop e a scuole internazionali di fisica;
- numerose relazioni a convegni nazionali e internazionali sul tema delle pari opportunità nel mondo della scienza e della presenza femminile nelle professioni scientifiche.

ORGANIZZAZIONE DI CONFERENZE E CORSI DI FORMAZIONE PROFESSIONALE:

- Responsabile (*chair-person*) del Comitato Locale Organizzatore della edizione 2019 dell'*International Conference on Kaon Physics* (KAON2019), Perugia, 10-13.09.2019;
- Componente del Comitato di Organizzazione permanente della serie di conferenze internazionali biennali chiamata "BEACH" (International Conference on Hyperons, Charm and Beauty Hadrons), dedicata alla fisica del sapore, dal 2012;

- Responsabile (*chair-person*) del comitato organizzatore della *IX International Conference X International Conference on Hyperons, Charm and Beauty Hadrons* (BEACH2010), Perugia, 21-26.06.2010;
- Componente dell'*International Advisory Committee* del *II International Workshop on the Physics of fundamental Symmetries and Interactions* (PSI2010), Paul Scherrer Institute, 11-14.10.2010, Villigen (Svizzera);
- Componente dei comitati locali per l'organizzazione di numerose conferenze internazionali a Perugia;
- Organizzatrice e *convener* di sessioni su tematiche specifiche di fisica sperimentale in convegni internazionali;
- Proponente, organizzatore e docente di diversi corsi di formazione per il personale INFN sulla gestione delle risorse umane e le pari opportunità professionali nelle istituzioni di ricerca e sulla comunicazione e divulgazione della fisica.

ATTIVITÀ DIDATTICA E ACCADEMICA:

- Abilitazione Scientifica Nazionale alle funzioni di professore di prima fascia nel settore concorsuale 02/A1 (Bando 2012 – DD n. 222/2012).
- Proponente e componente dell'unità di Perugia in alcuni progetti PRIN finanziati dal MIUR: 2006 (resp. nazionale prof. F. Costantini), 2008 (resp. nazionale prof. F. Costantini), 2010-11 (resp. nazionale prof. E. Iacopini).
- Attività didattica svolta dal 1988 in avanti nei corsi di laurea e di dottorato della Facoltà di Scienze MMFFNN dell'Università di Perugia, sotto forma di lezioni esercitazioni, partecipazione a commissioni di esame:
 - o corso di laurea in fisica: Fisica generale II, Fisica superiore, Laboratorio di Fisica Nucleare e subnucleare;
 - o corso di laurea in geologia: Fisica Sperimentale I;
 - o X Ciclo del Dottorato in Fisica dell'Università di Perugia: serie di lezioni intitolate: *Violazione di CP in sistemi di K neutri*;
 - o titolare di cattedra a contratto del corso di laurea in fisica nell'a.a. 1991-92 (corso: *Introduzione alla fisica degli acceleratori*) e nell'a.a. 1997-98 (corso: *Rivelatori di Particelle Elementari*);
 - o co-relatrice di tesi di laurea in fisica discusse presso l'Università degli Studi di Perugia.
- Componente della commissione per l'ammissione al dottorato di ricerca in fisica e geologia (XXXIII e XXVI ciclo) presso l'Università degli Studi di Perugia; componente esterno delle commissioni di esame finale per il conseguimento del dottorato di ricerca in fisica presso l'Università di Pisa (XX ciclo) e di Perugia (XXI ciclo).
- Docente della scuola internazionale di fisica *LNF Spring School in Nuclear, Subnuclear and Astroparticle Physics*, tenuta a Frascati nel maggio 2003 (titolo della lezione: *Experimental progress in kaon physics*).

ATTIVITÀ DI RICERCA:

Svolta nel campo della fisica sperimentale delle particelle elementari negli esperimenti:

- **NA62** (CERN-SPSC-2005-013, SPSC-P-326, dal 2005 in avanti): misura del rapporto di decadimento del decadimento raro del mesone K^+ in π^+ , neutrino, antineutrino.
- **KOPIO** (E926, BNL, 2001-2004): rivelazione del decadimento ultra-raro del mesone K^0 in π^0 , neutrino, antineutrino.
- **NA48/2** (CERN-SPSC 2000-005): violazione diretta di CP e misure di precisione delle proprietà dei decadimenti di mesoni K carichi.
- **NA48/1** (CERN-SPSC 2000-005): studio e misure delle proprietà dei decadimenti del mesone neutro K_S e degli iperoni neutri.
- **NA59** (CERN, 1998-2000): studio di fattibilità della produzione, attraverso cristalli, di fasci di fotoni polarizzati di alta energia.
- **NA48** (CERN-SPSC/90-22, 1990-2004): misura del parametro di violazione diretta di CP nei decadimenti dei mesoni K neutri in coppie di pioni.
- **UA2'** (CERN-SPSC, 1985-1992): studio delle collisioni antiprotone-protone ad energia del centro di massa pari a 630 GeV presso il Collider del CERN.
- **UA2** (CERN-SPSC, 1983-1987): studio delle collisioni antiprotone-protone ad energia del centro di massa pari a 540 GeV presso il Collider del CERN.
- **SLD** (SLAC, US, 1982-1985): studi di precisione della fisica elettrodebole al picco dello Z.

SINTESI DELL'ATTIVITÀ DI RICERCA E DELLE RESPONSABILITÀ:

Esperimento NA62

- *Chair-person* dello Speaker Bureau dell'esperimento NA62, dal 2019;
- responsabile del progetto di un odoscopio realizzato con scintillatore plastico utilizzato come elemento di trigger; coordinatore dei run di fisica dell'esperimento (*run coordinator*) nel 2015 e 2016;
- co-proponente di un rivelatore RICH (Ring Imaging Cherenkov) per distinguere pioni da muoni ed elettroni; coordinatore (*run coordinator*) di due test del prototipo di rivelatore al CERN nel 2007 e nel 2009;
- contributi all'analisi dei dati dell'esperimento e alla definizione dei parametri di disegno di parti del rivelatore;
- responsabile locale INFN del gruppo di Perugia dell'esperimento NA62 (2005-2018).

Esperimenti NA48, NA48/1 e NA48/2

- Responsabile del progetto di un odoscopio realizzato con scintillatore plastico e del trigger veloce per particelle cariche dell'esperimento, utilizzato in NA48 e nei successivi progetti NA48/1 e NA48/2; contributi specifici al disegno e alla realizzazione del rivelatore a scintillatori sottili utilizzato per distinguere i mesoni K_S in NA48 (*tagger*);

- coordinamento dell'analisi dei dati (*analysis coordinator*) di NA48 (1995-97);
- contributi all'analisi per la misura della violazione diretta di CP nel sistema dei mesoni K neutri (NA48) e allo studio delle proprietà di alcuni decadimenti dei K carichi e neutri e di iperoni neutri (NA48, NA48/1, NA48/2);
- contributi allo sviluppo di programmi generali per la ricostruzione di particelle cariche;
- partecipazione a tutti i periodi di presa dati di NA48, NA48/1 e NA48/2 con responsabilità sul funzionamento dell'odoscopio e del trigger veloce carico nei tre esperimenti;
- responsabile locale INFN del gruppo di Perugia degli esperimenti NA48, NA48/1 e NA48/2 dal 2000 al 2005.

Esperimento KOPIO

- Partecipazione all'R&D dell'esperimento, co-proponente del rivelatore per fotoni a piccoli angoli (calorimetro a cristalli) e componente del corrispondente gruppo di lavoro; componente del gruppo di lavoro sul sistema di trigger.

Esperimento NA59

- Responsabile della realizzazione e del funzionamento dell'elettronica di lettura delle camere a drift.

Esperimenti UA2, UA2'

- Contributi all'analisi dei dati per la ricerca del quark top e per lo studio di eventi con fotoni nello stato finale;
- sviluppo di programmi di uso generale per la ricostruzione di eventi con elettroni e fotoni nello stato finale;
- responsabile dello sviluppo e del funzionamento del programma di visualizzazione grafica in linea degli eventi rivelati in UA2';
- contributi alla realizzazione di due rivelatori a *pads* di silicio per la rivelazione delle tracce e dei vertici di decadimento in UA2': co-responsabile dei test di caratterizzazione dei substrati di silicio dei due rivelatori, co-proponente della realizzazione del tracciante di silicio più interno;
- partecipazione a tutti i periodi di presa dati di UA2'; co-responsabile del funzionamento dei tracciatori di silicio;
- partecipazione agli ultimi due periodi di presa dati di UA2 nel 1983 e 1984.

Esperimento SLD

- Co-proponente del calorimetro adronico costituito da tubi a streamer limitato, componente del gruppo di lavoro per la realizzazione del prototipo del calorimetro adronico.

PUBBLICAZIONI:

Elenco dettagliato delle pubblicazioni: <http://inspirehep.net/search?ln=en&p=find+a+cenci%2C+p>

- co-autore di >150 articoli su rivista internazionale e atti di conferenza, citazioni >8000, h-index = 50;
- autore di 6 proposte di esperimento;
- co-editore di 4 atti di conferenza internazionale.