CV of Simone Dell'Agnello (INFN-LNF)

Shortlist of recent roles:

- Executive Technologist at INFN-LNF, Frascati (Rome), Italy. INFN Staff since 1995
- Coordinator of all Technology Research at INFN-LNF (2011-2019)
- Worked in Particle Physics: DoE-Fermilab (Chicago, IL, USA), INFN-LNF (1987-2003)
- Founder and Leader of INFN-LNF space research infrastructure **SCF_Lab** (≥2004)
- PI/PM of: 1 Space Science, 3 R&D Experiments of INFN (2004-2018)
- PI/PM of INFN Contracts with **Space Agencies** (ASI, ESA, ISRO, NASA) and Italian **Ministries** (Defence, Foreign Affairs, Research) for the period 2004-2017, on:
    - **Space Flagships**: Galileo, Copernicus, COSMO-SkyMed
- PI of **INFN-NASA Partnership** on Solar System Exploration and Research (≥2014)
- Member of **Scientific-Technical Council (CTS) of ASI** (2014-2018).

EARLY RESEARCH ACTIVITY IN PARTICLE PHYSICS (1987-94)

Born on 15-05-64 in Livorno, Italy. He got his Master ("Laurea") in particle physics in '89 at Univ. of Pisa, Italy (110/110; title: *Two-jet Production at CDF*). He was employed by Fermilab (US Department of Energy lab) to work on the general-purpose experiment **CDF** (Collider Detector at Fermilab), as Summer/Master Student and Guest Scientist ('87-91) under A. Tollestrup.

In '93 he got his PhD ("Dottorato") in Pisa, working mostly at Fermilab on the *discovery of the top-quark elementary particle* (INFN PI/AE 94/10). Advisor of Master and PhD thesis was G. Bellettini. His thesis was incorporated and quoted in the top-quark discovery paper, PRD 50, 2966 (1994). For his thesis he received a Prize of the Italian Physics Society ('95). In '94-95 held an INFN Postdoc fellowship at INFN-Pisa.

He worked on the Silicon Vertex Detector construction, data taking as *ACquisition Expert*, physics analysis on Quantum Chromo-Dynamics and for top-quark discovery.

RESEARCH ACTIVITY IN PARTICLE PHYSICS (1995-2003)

Since '95 he is Staff Researcher at INFN-LNF (Laboratori Nazionali di Frascati), hired with a national selection led by P. Franzini. Since then he worked mainly on the precision experiment **KLOE (**K LOng Experiment) and kept a participation in CDF. He worked on many aspects of KLOE: global construction, assembly and magnetic survey (with S. Bertolucci, now Director of Research and Scientific Computing at CERN). At KLOE he created from scratch a dedicated optical & laser-based system of precision **ground** positioning metrology in the Research Division of the LNF; tracking chamber construction; monitoring/reconstruction of DAΦNE-KLOE interaction region; run and online shift coordination; tracking analysis and physics analysis.

In '00-02 he worked on **CDF-2** as Leader for the re-commissioning of central hadron calorimeters built by INFN in the '70/'80s and was LNF Representative in the CDF2 Executive Board. After completing his CDF2 duties, he concentrated on running KLOE and optimizing its performance and data yield as KLOE Deputy Technical Manager ('03).

RESEARCH ACTIVITY IN SPACE PHYSICS & TECHNOLOGY (≥ 2004)

He won the position of "Primo Ricercatore" in '04 (formally hired in '06 due to blockage of public hiring). Since then he started from scratch a new INFN research activity in space physics and technology: **precision positioning metrology in space based on laser retroreflectors for Satellite/Lunar Laser Ranging** (SLR/LLR).

Applications: General Relativity, Galileo/GPS, Earth Observation (EO, including Copernicus & COSMO-SkyMed). He formed and leads a new research group (~20 FTE) which developed (J. Adv. Sp. Res. 47, 822–842 (2011)):

- The new **SCF_Lab** (*Satellite/lunar/gnss laser ranging/altimetry and Cube/microsatellite Characterization Facilities Laboratory*): a unique space test infrastructure with 2 Optical Ground Support Equipment (**OGSE**) facilities in a new ISO 7 Clean Room

- **SCF-Test:** interdisciplinary Industrial procedures for integrated thermal-optical-vacuum characterization of Laser Retroreflector Arrays in accurately simulated space conditions
- Thermal, optical, orbital and structural sw analysis and simulation
- Full thermal and vacuum characterization for **Cube/Micro-satellites** with the 2 OGSEs
- **ETRUSCO** ('06-09, Extra Terrestrial laser Ranging to Unified Satellite COnstellations): R&D to characterize laser reflectors of Galileo (for Satellite Navigation), LAGEOS (for Space Geodesy) and optimize laser ranging to Galileo and GPS-3
    - International effort of INFN, Italian Air Force, ILRS (International Laser Ranging Service), NASA-GSFC (inventor of SLR), Univ. Maryland (UMD, inventor of LLR).
- **ETRUSCO-2** ('10-15, ASI-INFN Contract)**:** industry-level R&D for Galileo/GPS. Flight reflectors of GPS, GLONASS, GIOVE, Galileo have been SCF-Tested
    - Built a Retroreflector Array being proposed for Galileo V2 and, soon, for a patent
- **ETRUSCO-IRNSS** ('13-14, ISRO-INFN Contract) for the Indian navigation constellation
- **Laser Ranging to Galileo** ('15-16, ASI-INFN Project competitively awarded by the Italian Ministry of Research).

Membership of International Working Groups (WGs):
- ILRS: Core Properties and Performance Requirements for laser retroreflectors (≥'05)
- Internat. Lunar Network (ILN, of 9 Space Agencies): Core Lunar Instruments ('08-10).

ASI Studies and NASA R&Ds ('07-12):
- 2 ASI studies on precision test of General Relativity, lunar science/exploration
- 4 R&Ds with NASA: GSFC (LAGEOS, hollow reflectors); JPL (deep space laser-ranged mass to test $1/r^2$); 2 Calls by **NASA-LSSO**, Lunar Sortie Scientific Opportunities, and by **NASA-NLSI,** NASA Lunar Science Institute (lunar retroreflectors).

MoonLIGHT-ILN (INFN R&D, '10-12), **MoonLIGHT-2** (INFN Science, '13-18, approved by R. Battiston) are part of an advanced lunar research program (Moon Laser Instrumentation for General relativity High accuracy Tests) of INFN, led by SCF_Lab, and UMD (inventor of LLR and PI of Apollo laser reflectors):
- Collaborators: in US, UMD, Center for Astrophysics and APOLLO laser station; in Italy ASI-MLRO laser station in Matera and INFN/Univ. of Padua
- Work program: reflector construction/test, physics analysis (including Apollo/Lunokhod) for **precision tests of General Relativity (GR)**: weak and strong equivalence principle; PPN β; variation of gravitational constant (Gdot/G); $1/r^2$ Yukawa violations; geodetic precession; GR extensions with spacetime torsion and Non-Minimally Coupled gravity
- Mission opportunities: Luna-27 by Russia, Google Lunar X Prize, Chang'E 4/5/6 by China, NASA Resource Prospector
    - Signed international multi-mission payload agreement with Moon Express and UMD on May 15, 2015, at Frascati, which includes:
        - Single, large LLR reflector payload, dubbed MoonLIGHT
        - Retroreflector array micro-payload, dubbed INRRI, to be observed by orbiters equipped with laser altimeters, (atmospheric) lidars, and/or lasercomm (not by Earth). INRRI has been developed for the Moon, Mars, other solar system moons, asteroids and comets.

SCF_Lab work program for Earth Observation Flagships: Copernicus and COSMO-SkyMed
- **ETRUSCO-GMES** ('13-15, Global Monitoring for Environment and Security), an INFN R&D experiment for Copernicus, Galileo and COSMO-SkyMed
- **AUGUSTUS** ('14-15), a **MAE-INFN** High-Relevance Project for Copernicus and USA
- **G-CALIMES** ('13-16**,** Galileo-COSMO-SkyMed Absolute Laser Intercalibration with Measurements on Earth and in Space) a **Ministry of Defence-INFN** Contract
- Includes delivered and accepted devices, like:
    - **CORA**, COSMO-SkyMed Retroreflector Array, proposed for COSMO-SkyMed 2.

ISS:
- ASI-Scientific-Technical Council: consultant of ASI President for research, including ISS

- LNF Co-PI of Lazio-SiRad experiment (PI=R. Battiston) on ISS for ESA Soyuz Mission "ENEIDE" in 2007, launched from Baikonur
- Co-chairman (with R. Battiston) of INFN-Space/2 (2005) and INFN-Space/3 (2013) national workshops on astroparticle missions and space experiments on ISS.

As NASA-NLSI broadened to **SSERVI** (Solar System Exploration Research Virtual Institute, sservi.nasa.gov), he established as PI an **INFN Partnership with NASA-SSERVI** based on the research program *SPRINGLETS*: Solar system Payloads of laser Retroreflectors of INfn for General reLativity, Exploration and planeTary Science. This also includes other particle and astroparticle test facilities of the LNF (for X/UV/Vis/IR synchrotron light, DAΦNE-Light, and for electron/positron/gamma of tagged energy up to 500 MeV/c, BTF).

- PI of INFN-CSN5 R&D experiment **NEW REFLECTIONS** ('16-'18), fully synergetic with work topics of the INFN-SSERVI research and R&D program.

On 11/Sep/2014 was appointed Member of **ASI's Scientific-Technical Council** for 4 years.

He leads an Italian team of ~20 INFN employees/associates: physicists, engineers, mathematicians, technicians, students, post-docs (LNF, Rome, Padua, Naples, Trento).

Publications: >250 papers, >7800 citations, H-index (ISI)>50 (since 1987). He passed the Italian Ministry of Research selection ("Abilitazione Scientifica Nazionale"), thus enabled to the role of Full Professor ("I Fascia", Sector 02/A1, Experimental Particle Physics) for the period 23/01/2014-23/01/2018.

Languages: speaks and writes fluent English; has good French skills.

ROLES / DUTIES WITHIN INFN-LNF

- Editor of LNF Activity Reports ('02, '03)
- Secretary of LNF International Scientific Committee ('04)
- WG member: LNF Future ('04) and LNF Scientific Computing ('05)
- RUP of LNF Public Works for upgrade/extension of >300 m^2 Clean Rooms ISO 6 to 8 ('11)
- President of LNF Committee for personnel selection for a CTER technician position ('12)
- Collaborator of LNF Support Service on "High-level training and external funds" (≥'12)

ROLES / DUTIES WITH INFN & EXTERNAL FUNDING AGENCIES

- Staff Researcher, Level II ("Primo Ricercatore") at INFN-LNF (≥1995)
- Founder and Leader of **SCF_Lab** (≥2004)
- Coordinator of all Technology Research at INFN-LNF (2011-2015), re-elected for the 2nd mandate (2016-2019)
- Worked in Particle Physics (1987-2003) within INFN-National Scientific Committee 1 (**CSN1**)
- PI/PM of: 1 Space Science/INFN-**CSN2**, 3 R&D/INFN-**CSN5** Experiments (2004-2018)
- PI/PM of INFN Contracts with **Space Agencies** and Italian **Ministries** (2004-2017)
    - Contracts for **Space Flagships**: Galileo, Copernicus, COSMO-SkyMed
- PI of **INFN-NASA/SSERVI Partnership** on Solar System Exploration and Research based also on sharing of SCF_Lab, DAΦNE-Light & BTF facilities of LNF (≥2014)
    - Formal NASA-INFN partnership signed on 15-sep-2014
- Member of **Scientific-Technical Council of ASI**, appointed on 11-sep-2014
- National PI of ETRUSCO of CSN5 ('06-09), ETRUSCO-GMES of CNS5 ('13-16)
- National PI of MoonLIGHT-ILN of CSN5 ('10-12), MoonLIGHT-2 of CSN2 ('13-18).
- LNF PI of LARES of CSN2 ('04-08). Responsible for **ASI** of industrial optical acceptance test of 110 flight reflectors of LARES in air & isothermal conditions. No SCF-Test done

- Co-PI of MoonLIGHT-Manned ('07-09), R&D of **NASA-LSSO** and INFN; PI: D. Currie of UMD
- Co-I of **NASA-NLSI** project LUNAR, continuation of NASA-LSSO
- Co-I for **ASI** Study on "Observation of the Universe from the Moon" ('07); WP 1500 on LLR (Co-PIs: R. Battiston of INFN and R. Mandolesi of INAF)
- Co-I for **ASI** Study on Cosmology and Fundamental Physics ('07-10); WP 5200 on "Deep space gravity test"; PI: P. de Bernardis of Univ. of Rome
- Co-I of **ASI** Phase A Study for lunar orbiter MAGIA ('08); WP on "MoonLIGHT precursor and improved test of gravitational redshift with retroreflectors and atomic clock"; PI: Dr. A. Coradini of **INAF**; Prime: **Rheinmetall**
- PI/PM of R&D ETRUSCO-2
- PI of SCF-Test of laser retroreflectors of Galileo In-Orbit Validation satellites (IOV). Contract **ESA-Galileo**-INFN
- PI of ETRUSCO-IRNSS, Contract Indian Space Research Organization (**ISRO)-INFN** for SCF-Test of retroreflectors of the Indian Regional Navigation Satellite System (IRNSS)
- PI/PM of R&D G-CALIMES; Contract **Ministry of Defense**-INFN; approved for the "National Plan for Military Research" 2012
- PI of AUGUSTUS, Italy-USA study of INFN-Italian **Ministry of Foreign Affairs**, for satellite laser retroreflectors & ground segment geo-referencing devices for EO. Contract MAECI-INFN ('14-15). Partners: NASA-GSFC, USGS, NOAA-NIC, ASI-MLRO, ILRS
- Proposer of "Laser Ranging to Galileo", a project of the Italian **Ministry of Research**-ASI-INFN; PI: G. Bianco of ASI
- PI of **INFN-CSN5** R&D experiment NEW REFLECTIONS ('16-'18).

ORGANIZATION OF NATIONAL & INTERNATIONAL WORKSHOPS

- 2005, Co-Chairman (with R. Battiston): **INFN-Space/2**, national workshop on all INFN astroparticle and space activities, including research for ISS. LNF Frascati, http://www.lnf.infn.it/conference/2005/spazio/;
- 2006, Co-Chairman: **Fundamental Physics in Space with Small Payloads**, international workshop, LNF Frascati; http://www.lnf.infn.it/conference/fps06/
- 2007, Co-Organizer: **Observation of the Universe from the Moon**, national workshop of ASI, INFN, INAF; LNF Frascati; http://www.lnf.infn.it/conference/moon07/
- 2012, Chairman: **International Technical Laser Ranging & ETRUSCO-2 Workshop**; http://www.lnf.infn.it/conference/laser2012/
- 2013, Co-Chairman (with R. Battiston): I**NFN-Space/3**, national workshop on all INFN space activities; LNF Frascati; http://agenda.infn.it/conferenceDisplay.py?confId=6535
- 2014, Co-Organizer: **Frontier Objects in Astrophysics & Particle Physics**, international workshop, Vulcano, Italy; http://www.lnf.infn.it/conference/vulcano2014/.
- 2015, Co-Chairman: **3rd European Lunar Symposium**, international workshop on lunar sciences and exploration; LNF Frascati, Italy http://els2015.arc.nasa.gov.
- 2016, Co-Organizer: **4th European Lunar Symposium**, international workshop on lunar sciences and exploration; Amsterdam, Holland, http://els2016.arc.nasa.gov.
- 2016, Co-organizer: **Frontier Objects in Astrophysics & Particle Physics**, international workshop, Vulcano, Italy; http://www.lnf.infn.it/conference/vulcano2016/.
- 2017, Co-Organizer: **5th European Lunar Symposium**, international workshop on lunar sciences and exploration; Muenster, Germany, http://els2017.arc.nasa.gov

CONTRIBUTIONS PRESENTED TO WORKSHOPS & CONFERENCES

He bas been the author and presenter of several tens of contributions for CDF, KLOE, CDF2 and the research activities of the SCF_Lab described in this CV.

Signature 

Curriculum Vitae di Riccardo Paoletti

Consegue la Laurea in Fisica presso l'Università di Pisa nel novembre 1987 con la votazione di 110/110 con una tesi sulla Fisica inclusiva a CDF, relatore della tesi è il Prof. Luciano Ristori. Ottiene l'associazione scientifica all'I.N.F.N. (Istituto Nazionale di Fisica Nucleare).
Consegue il titolo di Dottore di Ricerca nel 1991 presso l'Università di Pisa con una tesi sulla misura della sezione d'urto totale all'esperimento CDF, nonché alla misura della sezione d'urto elastica e diffrattiva.
Sempre in CDF ha inoltre collaborato alla calibrazione del calorimetro adronico End Wall, alla costruzione ed installazione del sistema di rivelazione di muoni Central Scintillator Extension ed all'analisi di decadimenti di mesoni B e produzione di quark top fino all'anno 2006.
Nel 1990 vince un concorso per Ricercatore presso la Facoltà di Scienze Matematiche, Fisiche e Naturali dell'Università di Siena. Afferisce al Dipartimento di Fisica di Siena.
Nel decennio 1990-2000 ha lavorato all'esperimento CLUE di rivelazione Cherenkov nel dominio ultravioletto in cui ha ricoperto la responsabilità del sistema di acquisizione dati dell'insieme dei dieci telescopi.
Nel 2000 vince il concorso per Professore Associato presso l'Università di Siena.
Dal 2002 partecipa all'esperimento Magic di cui è tuttora responsabile di gruppo, l'esperimento è finanziato dalla Commissione Scientifica Nazionale 2 dell'I.N.F.N. In questi anni il gruppo ha ricoperto importanti responsabilità tra cui la costruzione del trigger di secondo livello, del trigger stereoscopico dei telescopi e del sistema di acquisizione dati basato prima sul campionatore DRS2 e poi sul DRS4. Nel 2012 è stata ultimata l'installazione sui due telescopi del nuovo sistema di acquisizione dati con il campionatore analogico DRS4.
Nel 2007 è iniziatore per l'Università di Siena della collaborazione CTA (Cherenkov Telescope Array) che si propone la costruzione di una matrice di telescopi Cherenkov di almeno tre diversi diametri, da installare in ciascun emisfero. E' stato coordinatore del gruppo di ricerca del sito ed iniziatore e tuttora protagonista del progetto DragonCam di acquisizione dati e trigger per il telescopio di grande dimensioni (Large Size Telescope o LST).
Attualmente è impegnato della progettazione della camera a fotomoltiplicatori di silicio (SiPM) della collaborazione italiana in CTA.
Dal 2007 al 2013 è stato responsabile del Gruppo Collegato I.N.F.N. di Siena.
Dal 2016 è coordinatore locale delle attività di ricerca di gruppo 2 e membro della Commissione Scientifica Nazionale 2 dell'INFN.
E' membro IEEE e revisore per numerose riviste internazionali.
Ha ottenuto l'abilitazione scientifica a professore di I fascia per il settore 02/A1.

Curriculum formativo di Barbara Sciascia

- ottobre 1998: laurea in Fisica, conseguita presso l'Università degli studi di Roma "La Sapienza";
- novembre 1998 - gennaio 2002: dottorato di ricerca in Fisica, conseguito presso l'Università degli studi di Roma "La Sapienza";
- gennaio 2002 - dicembre 2004: assegno di ricerca quadriennale presso i Laboratori Nazionali di Frascati;
- dicembre 2004 - febbraio 2010: ricercatrice di III livello professionale con contratto a tempo determinato ai sensi dell'art. 23 D.P.R. 171/91 presso i Laboratori Nazionali di Frascati;
- a partire da febbraio 2010: ricercatrice di III livello professionale a tempo indeterminato presso i Laboratori Nazionali di Frascati.

Attività scientifica di Barbara Sciascia

La mia attività scientifica si è svolta nell'ambito della fisica sperimentale delle alte energie, studiando principalmente la fisica del *flavour* attraverso la partecipazione agli esperimenti KLOE e LHCb.

A partire dall'inizio della tesi di laura nel 1997 e fino alla fine del 2013 ho collaborato all'esperimento **KLOE**, dove mi sono occupata prevalentemente della **Camera a Deriva** [1] e del **Sistema di Trigger** [2] dell'esperimento, nonché dello studio della fisica dei mesoni K carichi.

Grazie all'attività di ricerca in KLOE, ho collaborato allo studio della matrice CKM partecipando attivamente sia a diversi **CKM workshops** sia al Network europeo **FlaviaNet**. Sempre dal lavoro in KLOE è nata la sigla **KLONE** per la misura dell'efficienza di un prototipo del calorimetro di KLOE nel rivelare neutroni veloci.

Negli anni 2003 e 2004 ho ho collaborato alla caratterizzazione dei rivelatori di muoni per l'esperimento **LHCb**; di questa collaborazione faccio parte stabilmente dal 2011, occupandomi prevalentemente dello studio dei decadimenti rari $B_{(s)} \to \mu^+\mu^-$ e di identificazione delle particelle cariche. Da gennaio 2017 sono responsabile locale del gruppo LHCb di Frascati (composto da una ventina di persone tra ricercatori, tecnici e teconologi). Da aprile 2017 sono Deputy Chair dell'OPG (il gruppo che coordina tutte le operazioni di LHCb).

Negli anni dal 2000 al 2006 ho svolto **attività didattica** come assistente al corso di "Laboratorio di Esperimentazione di Fisca"; in parallelo alla attività di ricerca, dal 1998 mi occupo anche di **divulgazione scientifica**.

KLOE

L'esperimento KLOE è stato concepito per lo studio delle simmetrie fondamentali delle particelle attraverso lo studio del sistema dei mesoni K, prodotti dall'acceleratore e^+e^- di Frascati, Dafne. Ho contribuito a buona parte della vita dell'esperimento: dalla fase di costruzione del rivelatore alla sua messa in opera, dalla partecipazione alla campagna di

presa dati fino alla fase di analisi dei dati raccolti. A partire dal 2004 e fino al 2011, ho assunto spesso l'incarico di **Run Coordinator** dell'esperimento.

• **Camera a deriva** (DC) Ho partecipato alla costruzione della camera a deriva di KLOE [155, 181, 174] e ne ho seguito le operazioni per molti anni. I miei contributi specifici sono stati:

- in fase di costruzione, turni per la misura del corretto tensionamento dei fili, cablaggio dell'alta tensione, test della tenuta stagna;
- messa a punto della procedura di test per i chip-TDC progettati specificamente per la DC e test di buona parte dei chips stessi [175];
- progettazione e realizzazione del sistema di controllo (*slow control*) per i sistemi di alta tensione della DC e del calorimetro elettromagnetico (EMC); collaborazione nella realizzazione dello slow control dei sistemi di basse tensioni di DC e EMC, e del DAQ [134];
- partecipazione all'installazione del rivelatore nella sala sperimentale e test delle prestazioni usando i raggi cosmici [161];
- dal 2000 al 2006, turni di *DC expert on call* necessari per garantire una buona funzionalità della DC durante la presa dati, e assicurarne la corretta e costante calibrazione;
- **dal 2009 al 2013, responsabile della DC**;
- comissioning del rivelatore e del sistema del gas in vista della nuova presa dati a partire dal 2010 (sotto la sigla di KLOE2).

• **Trigger** Il lavoro per il trigger [153] è iniziato nel 1999 con l'installazione del trigger carico, ed è proseguito ininterrottamente fino al 2013. I miei contributi specifici sono stati:

- installazione *hardware* e calibrazione del trigger carico, temporizzazione e connessione con il sistema di acquisizione dati e controllo;
- implementazione del software necessario a controllare il buon funzionamento del trigger carico durante la presa dati [177];
- ottimizzazione della simulazione Monte Carlo (MC) del trigger, implementazione nel MC dell'elettronica del trigger carico;
- dal 2000 al 2013, turni di *Trigger expert on call* a garanzia del buon funzionamento sia hardware che software del sistema stesso;
- calibrazione e manutenzione costanti del trigger, in particolare per garantire la buona efficienza del sistema di misura online della luminosità e del livello dei fondi macchina dell'acceleratore Dafne, entrambi basati sul sistema di trigger di KLOE;
- **dal 2009 al 2013, responsabile del Sistema di trigger**;
- implementazione di metodi per la stima delle efficienze di trigger usate dalla maggior parte delle misure pubblicate da KLOE;

• **Offline** A partire dalla raccolta dati del 2000, il mio lavoro ha incluso una parte dedicata alla selezione dei dati e al controllo della loro qualità. I miei contributi specifici sono stati:

- progettazione e implementazione di algoritmi per la selezione online e offline degli eventi $\phi \to K^+K^-$;
- scrittura e messa a punto dei programmi di "ritracciamento" degli eventi $\phi \to K^+K^-$, necessario per l'elevata perdita di energia che caratterizza questi eventi rispetto agli altri;
- caratterizzazione dei fondi macchina prodotti da Dafne all'internto del rivelatore.
- dal 2004 al 2006, turni di *expert on call per l'Offline*, per la gestione sia della ricostruzione dei dati che della produzione dei campioni di eventi MC;

• **Fisica dei mesoni K** A partire dal lavoro di tesi di dottorato, ho cominciato a occuparmi di fisica del flavor, studiando in particolare la fisica dei mesoni K, sia all'interno dell'esperimento KLOE che in ambito internazionale. I miei contributi specifici hanno riguardato:

- la misura dei BR assoluti dei decadimenti $K^\pm \to \pi^0 e^\pm \nu$ e $K^\pm \to \pi^0 \mu^\pm \nu$ che ho curato in ogni sua parte [75];
- la misura del parametro V_{us} (angolo di Cabibbo) della matrice di mescolamento dei quark (CKM) usando i dati di KLOE [118, 70];
- la misura del rapporto $\Gamma(K \to e\nu(\gamma))$ / $\Gamma(K \to \mu\nu(\gamma))$ [55];

CKM e FlaviaNet

Grazie ai primi risultati prodotti dalle *B factories*, a partire dai primi anni 2000 è iniziato un intenso lavoro internazionale per la misura di tutti gli elementi della matrice CKM; questo lavoro si è concretizzato anche in una serie di *Workshops* (*International Workshop on CKM Unitarity Triangle*) e in un progetto di cooperazione europea ("FlaviaNet", all'interno del sesto programma quadro). I miei contributi specifici sono stati dati:

- alla valutazione di V_{us} a partire dai dati sui decadimenti semileptonici dei K disponibili nel 2002 che ha messo in luce una possibile non unitarietà della matrice V_{CKM} [196, 195];
- alla misura del parametro V_{us} della matrice CKM e test di precisione del Modello Standard a partire da tutti i dati disponibili sui decadimenti leptonici e semileptonici alla fine del 2008, con revisione critica di tutte le misure precedenti [194, 191];
- come **convener del gruppo di lavoro "Precise determination of V_{ud} and V_{us}"** nell'edizione 2012 del *CKM workshop* [189].

KLONE

Per tutta la sua durata, dal 2006 al 2010, ho fatto parte della collaborazione KLONE nata per misurare l'efficienza di prototipi del calorimetro a piombo e fibre scintillanti di KLOE nel rivelare i neutroni veloci. I miei contributi specifici sono stati:

- l'idea di misurare l'efficienza del calorimetro di KLOE nel rivelare i neutroni, sfruttando le particelle prodotte dalla interazione nucleare dei mesoni K negativi con la materia, interazione che rappresentavano un fondo da rigettare nella misura dei BR($K^{\pm}_{\ell 3}$), trovando un valore 3-4 volte superiore a quanto atteso considerando il solo scintillatore;
- instrumentazione dei prototipi e tre campagne di presa dati (tra il 2006 e il 2008) usando il fascio di neutroni presente presso il The Svedberg Laboratory di Uppsala (Svezia);
- analisi dei dati raccolti e conferma della stima iniziale fatta mediante i mesoni K negativi [187, 185, 186, 188].

LHCb

L'esperimento LHCb presso il CERN è stato progettato per lo studio della violazione della simmetria CP e dei decadimenti rari dei mesoni B e D. Ho collaborato a LHCb una prima volta negli anni 2003 e 2004, e poi stabilmente a partire dall'aprile del 2011. I miei contributi specifici riguardano lo studio dei decadimenti rari del mesone B, l'identificazione delle particelle cariche e l'otimizzazione del trigger durante il Long Shutdown 1 (2013-2014) e all'inizio della presa dati di Run 2 (2015-2016). Partecipo attivamente alle operazioni dell'esperimento avendo assunto da aprile 2017 il ruolo di Deputy Chair dell'Operation Planning Group.

• **Analisi dati** Per quel che riguarda l'analisi dei dati, mi occupo principalmente dello studio dei decadimenti rari dei mesoni B. In particolare:

- ho collaborato a molte "edizioni" dello studio dei decadimenti rari $B_s \to \mu^+\mu^-$ e $B^0 \to \mu^+\mu^-$, che hanno portato prima alla misura di un limite superiore del BR($B_s \to \mu^+\mu^-$) [572], poi alla prima osservazione del processo $B_s \to \mu^+\mu^-$ [513], e infine all'evidenza per il decadimento $B_s \to \mu^+\mu^-$ e a uno stringente limite superiore per il branching ration del $B^0 \to \mu^+\mu^-$ [458]. Quest'utlimo risultato è stato combinato [360] con l'equivalente misura fatta dalla Collaborazione CMS, portando alla miglior conoscenza attuale dei processi rari $B_s \to \mu^+\mu^-$ e $B^0 \to \mu^+\mu^-$, in attesa dei nuovi risultati già in preparazione con i dati di Run 2.
- collaboro ai processi di referaggio interni alla Collaborazione e in particolare sono stata **chair del Referee Committee** per le misure [453], [427] e [220];
- i decadimenti semi-tauonici del mesone B ($B \to D\tau\nu$, $B \to D^\star\tau\nu$) mostrano a oggi una deviazione di 4 σ rispetto alle predizioni del Modello Standard. LHCb contribuisce a questa deviazione con un'accurata misura del $\mathcal{B}(\bar{B}^0 \to D^{*+}\tau^-\bar{\nu}_\tau)/\mathcal{B}(\bar{B}^0 \to D^{*+}\mu^-\bar{\nu}_\mu)$ [326]; molte altre sono in preparazione in canali di decadimento equivalenti, tra cui il $B \to D_s^\star\tau\nu$ cui collaboro attivamente.

• **Particle identification** L'identificazione delle particelle cariche (PID) è uno degli elementi chiave degli eccellenti risultati ottenuti dalla Collaborazione LHCb. In questo ambito, ho collaborato prima alla caratterizzazione del *muon system* e ai processi di identificazione dei muoni, e poi all'ottimizzazione globale della PID. I miei contributi specifici sono:

- tra il 2003 e il 2004, partecipazione ai tests beam presso il PS e la GIF al CERN e analisi dei datti raccolti, dati attraverso cui sono state caratterizzate le camere del muon system [515, 25, 579, 124, 127];

- misura delle performance nella identificazione dei muoni durante il Run 1 [470] fondamentale per molte delle misure pubblicate da LHCb [459], [472], [527],...;
- studio del miglioramento delle performance del Muon System in vista dell'upgrade dell'esperimento [202];
- selezione dei campioni di controllo per la valutazione delle performance di PID dai dati;
- ottimizzazione degli algoritmi per valutare le performance globali della PID [355];
- da gennaio 2014 a marzo 2017 **ho coordinato la Particle Identification di LHCb** facendo per questo parte anche dei due gruppi di coordinamento delle attività dell'esperimento, il *Physics Planning Group*, che definisce le linee guida per massimizzare i risultati di fisica ottenibili, e l'*Operation Planning Group*, che ha il mandato di gestire le operazioni di presa dati.

• **Operations** Con *Operations* si definiscono tutte quelle attività intermedie tra la costruzione del rivelatore e l'analisi dei dati raccolti. Queste hanno assunto una particolare importanza nell'evoluzione del trigger di LHCb avvenuta tra Run 1 e Run 2: in estrema sintesi, in Run 2 i dati vengono ricostruiti con la stessa alta qualità tipica della ricostruzione offline durante Run 1. I miei contributi specifici sono stati:

- Implementazione della selezione dei campioni di controllo per la PID direttamente nel trigger [197];
- Validazione delle nuove selezioni usando i primi dati a 13 TeV e raffinamento delle selezioni per Run 2;
- La "qualità offline" della ricostruzione dei dati nel trigger, permette di produrre risultati di fisica senza ulteriori processamenti. Questo è stato possibile grazie allo sviluppo dell'applicazione *Tesla* [276]. Il mio contributo specifico è stato lo sviluppo degli strumenti necessari a validare l'equivalenza tra la qualità dei dati del trigger e dei dati "ricostruiti offline";
- Da agosto 2014 alla fine del 2015 ho fatto parte della **Early measurement task force** che aveva il mandato di ottimizzare la qualità dell'analisi dei primi dati raccolti a 13 TeV. Questa task force ha portato alla pubblicazione della prima misura di LHCb a 13, la sezione d'urto di produzione di J/ψ [312], una settimana dopo la fine della raccolta dei dati coinvolti. La misura della sezione d'urto della produzione del charm [307] ha richiesto studi più approfonditi che hanno portato anche a un'ulteriore ottimizzazione dell'applicazione Tesla [276];
- Partecipazione ai turni di presa dati con il ruolo di **Data Manager** o di **Shift Leader**.
- Da aprile 2017 sono Deputy Chair dell'OPG
- Dal 2017, turni da Run Chief (15 giorni di cooridnamento generale della presa dati a supporto dei Run Coordinators).

• **Partecipazione a comitati**

- Ottobre 2014 - Dicembre 2016, coordinatrice dell'Early Career, Gender and Diversity (ECGD) office (http://lhcb.web.cern.ch/lhcb/ECGD_Office/ECGD-intro.html);

- Marzo - Giugno 2015, rappresentante di Italia e Spagna nel Search Committee per l'elezione del Physics Cordinator (biennio 2016-2017);
- Settembre 2015 - Marzo 2016, parte del gruppo di lavoro per l'istituzione dei "LHCb Early Career Scientist Awards" e dei "LHCb PhD Thesis Prizes";
- Da maggio 2016, rappresentante di LHCb nel gruppo di lavoro istutito dal CERN DG per la raccolta dei dati sulla carriera lavorativa degli ex-alumni del CERN.
- Ottobre - Dicembre 2016, parte del "HFAG acronym panel"[1].

Attività didattica

Negli Anni Accademici 2000-2001, 2001-2002, 2002-2003, 2004-2005 e 2005-2006, ho collaborato con il prof. A. Sciubba in qualità di assistente al corso di "Laboratorio di Esperimentazione di Fisca", frequentato, presso il Dipartimento di Energetica dell'Università degli Studi di Roma "Sapienza", dagli studenti dei corsi di laurea in Ingegneria Elettrica, Elettronica e Aerospaziale.

Nel 2012 ho seguito lo *stage formativo* (sostitutivo di un esame) di una studentessa della laurea specialistica in fisica delle particelle dell'Università di Tor Vergata, stage dedicato alla misura dell'efficienza di identificazione dei muoni in condizione di alto fondo in LHCb.

Nel 2015 ho seguito la tesi di laurea triennale dello studente M. Giovannetti su "Studio del decadimento $B_{s,d} \to \mu^+\mu^-$ in LHCb" [2] presso l'Università La Sapienza, Roma.

Divulgazione scientifica

Mi occupo di divulgazione e comunicazione della scienza da molti anni e in molti modi, spaziando da progetti per i bambini delle scuole elementari e medie, fino a lezioni per i corsi di aggiornamento per insegnanti di fisica.

• **Progetto Quasar** Sono responsabile del *progetto Quasar*, poi diventato *EduKIDS*, [3] presso i Laboratori Nazionali di Frascati (LNF), progetto ideato nel 2002 e dedicato alla divulgazione della "scienza difficile" verso bambini e ragazzi delle scuole elementari e medie. Da questa esperienza nel 2007 ho scritto e curato il libro *Da qui al big bang* che viene distribuito alle scuole in visita ai LNF ed è disponibile in e-book[4].

• **Incontri di Fisica** Fin dal loro inizio, nel 2000, ho collaborato agli *Incontri di Fisica*, corso di aggiornamento per gli insegnanti di fisica delle scuole superiori organizzato ogni anno dai LNF. In particolare ho coordinato le attività di uno dei gruppi di lavoro negli anni dal 2004 al 2007 (analisi dati KLOE), poi nel 2011 (misure di raggi cosmici mediante tracciatore a fibre scintillanti) e nel 2016 (misura della vita media del mesone D^0 a LHCb).

• **Grande pubblico** Organizzazione e preparazione di lezioni pubbliche in diverse iniziative di divulgazione scientifica proposte dall'INFN, in particolare: *Open day* annuale dei LNF (a partire dal 1999), *Notte Europea dei Ricercatori* (edizioni 2006, 2007, 2010 e 2011), *Fisica in barca* (edizione 2011), *Stage formativi per studenti delle scuole superiori* (edizioni 1998, 2007, 2013),...

[1] http://www.slac.stanford.edu/xorg/hfag/HFAGnamePanelReport_web.pdf
[2] http://www.infn.it/thesis/thesis_dettaglio.php?tid=10345
[3] http://www.lnf.infn.it/edu/kids/
[4] http://www.lnf.infn.it/edu/kids/uploads/EBOOK_Da_qui_al_Big_Bang_ITA_2015.pdf

• **Asimmetrie** Dal dicembre 2011 sono stata chiamata dal presidente dell'INFN, a far parte della **redazione scientifica** della rivista di divulgazione scientifica *Asimmetrie*[5] edita dall'INFN.

• **International MasterClasses** Da alcuni anni partecipo al programma Masterclasses organizzato dall'IPPOG sia per l'analisi dei dati di Alice, Frascati 2014 e 2015, sia per l'analisi dati di LHCb, Bologna 2014 e 2015, Pavia 2016; Frascati 2016 e 2017. Di queste due ultime ho curato l'organizzazione di tutto l'evento che a Frascati consiste in una settimana di lezioni e discussioni con i circa 50 studenti coinvolti).

May 24, 2017

Barbara Sciascia

[5] www.asimmetrie.it/

Contributi a conferenze internazionali e invited talks:

- *38th International Conference on High Energy Physics*, Chicago 2016 [242][241]
- *The 16th International Conference on B-Physics at Hadron Machines*, Marseille 2016 [249];
- *12th conference on Flavor Physics & CP Violation 2014*, Marseille 2014;
- *The 14th International Conference on B-Physics at Hadron Machines*, Bologna 2013 [12];
- *International Conference on New Frontiers in Physics*, Kolymbari 2012;
- *10th International Conference on Heavy Quarks and Leptons*, Frascati 2010 [23];
- *6th Workshop on the CKM Unitarity Triangle*, Warwick 2010 [190];
- *22nd Conference on High Energy Physics (IFAE)*, Roma 2010;
- *Les Rencontres de Physique de la Vallee dAoste*, La Thuile 2010 [42];
- *Workshop of the FlaviAnet European Network*, Bari 2009;
- *Kaon International Conference*, Tsukuba 2009 [54];
- *International Workshop on e+e- collisions from Phi to Psi*, Frascati 2008 [193];
- *IEEE Nuclear Science Symposium and Medical Imaging Conference*, Dresda 2008;
- *5th Workshop on the CKM Unitarity Triangle*, Roma 2008 [192];
- *34th International Conference on High Energy Physics*, Philadelphia 2008 [65];
- *2nd Flavianet general meeting*, Orsay 2007;
- *Kaon International Conference*, Frascati 2007 [93];
- *International Workshop on Discoveries in Flavour Physics at e+e Colliders*, Frascati 2006 [101];
- *26th International Symposium on Physics in Collision*, Buzios 2006 [103]
- *16th Conference on High Energy Physics (IFAE)*, Torino 2004 [125];
- *2nd Workshop on the CKM Unitarity Triangle*, Durham 2003 [140];
- *1st Workshop on the CKM Unitarity Triangle*, CERN 2002 [196, 195];
- *Frontier Detectors for Frontier Physics*, Isola d'Elba 2000 [172];
- Segreteria Scientifica: *Lepton and Photon Interactions at High Energies*, Roma 2001;
- Organizzazione ed Editrice: *Workshop on Dark Forces at Accelerators*, Frascati 2012 [15].

Tesi

[1] **"Il rivelatore di tracce dell'esperimento KLOE e prime misure con raggi cosmici"**
B. Sciascia, Tesi di Laurea.
http://www.infn.it/thesis/thesis_dettaglio.php?tid=2703

[2] **"Studies of charged kaon decays with the KLOE experiment"**
B. Sciascia, Tesi di Dottorato.
http://www.infn.it/thesis/thesis_dettaglio.php?tid=1620

Pubblicazioni firmate (KLOE)

[3] **"Kloe Recent Results: a Review"**
A. D. Santis *et al.*.
10.1142/9789814329682_0058

[4] **"Precision measurements of the $e^+e \to \pi^+\pi^-(\gamma)$ cross section with the KLOE detector"**
G. Mandaglio *et al.* [KLOE-2 Collaboration].
10.1016/j.nuclphysbps.2014.09.028
Nucl. Phys. Proc. Suppl. **253-255**, 115 (2014).

[5] **"Study of the Dalitz decay $\phi \to \eta e^+e^-$ with the KLOE detector"**
D. Babusci *et al.* [KLOE-2 Collaboration].
arXiv:1409.4582 [hep-ex]
10.1016/j.physletb.2015.01.011
Phys. Lett. B **742**, 1 (2015)

[6] **"Studies of ϕ meson radiative decays with KLOE"**
A. Aloisio *et al.*.
10.1016/S0920-5632(03)90644-X
Nucl. Phys. Proc. Suppl. **117**, 677 (2003).

[7] **"Annual Report: KLOE / KLOE2"**
A. Antonelli *et al.*.

[8] **"Measurement of the absolute branching ratio of the $K^+ \to \pi^+\pi^-\pi^+(\gamma)$ decay with the KLOE detector"**
D. Babusci *et al.* [KLOE KLOE-2 Collaboration].
arXiv:1407.2028 [hep-ex]
10.1016/j.physletb.2014.09.033
Phys. Lett. B **738**, 128 (2014)

[9] **"Search for light vector boson production in $e^+e^- \to \mu^+\mu^-\gamma$ interactions with the KLOE experiment"**
D. Babusci *et al.* [KLOE-2 Collaboration].
arXiv:1404.7772 [hep-ex]
10.1016/j.physletb.2014.08.005
Phys. Lett. B **736**, 459 (2014)

[10] **"Test of CPT and Lorentz symmetry in entangled neutral kaons with the KLOE experiment"**
D. Babusci *et al.* [KLOE-2 Collaboration].
arXiv:1312.6818 [hep-ex]
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[11] **"KLOE results in flavour physics and prospects for KLOE-2"**
E. Czerwinski *et al.* [KLOE KLOE-2 Collaboration].
10.1016/j.nuclphysbps.2013.06.005
Nucl. Phys. Proc. Suppl. **241-242**, 24 (2013).

[12] **"The wrong flavor - topics on Kaon physics"**
B. Sciascia.
PoS Beauty **2013**, 052 (2013).

[13] **"Status and perspectives of the KLOE-2 experiment"**
M. Martemianov *et al.* [KLOE-2 Collaboration].
10.1142/9789814436830_0071

[14] **"Recent results on hadron physics at KLOE"**
P. Moskal *et al.* [KLOE and KLOE-2 Collaborations].
arXiv:1306.5740 [hep-ex]

[15] **"Proceedings, Dark Forces at Accelerators (DARK2012) : Frascati, Italy, October 16-19, 2012"**
F. Bossi, S. Giovannella, P. Santangelo and B. Sciascia.
Frascati Phys. Ser. **56**, pp. 1 (2012).

[16] **"A new limit on the CP violating decay $K_S \to 3\pi^0$ with the KLOE experiment"**
D. Babusci *et al.* [KLOE Collaboration].
arXiv:1301.7623 [hep-ex]
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[17] **"Precision measurement of $\sigma(e^+e^- \to \pi^+\pi^-\gamma)/\sigma(e^+e^- \to \mu^+\mu^-\gamma)$ and determination of the $\pi^+\pi^-$ contribution to the muon anomaly with the KLOE detector"**
D. Babusci *et al.* [KLOE Collaboration].
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[18] **"Measurement of η meson production in $\gamma\gamma$ interactions and $\Gamma(\eta \to \gamma\gamma)$ with the KLOE detector"**
D. Babusci *et al.* [KLOE-2 Collaboration].
arXiv:1211.1845 [hep-ex]
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[19] **"Limit on the production of a light vector gauge boson in phi meson decays with the KLOE detector"**
D. Babusci *et al.* [KLOE-2 Collaboration].
arXiv:1210.3927 [hep-ex]
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[20] **"Measurement of $\Gamma(\eta \to \pi^+\pi^-\gamma)/\Gamma(\eta \to \pi^+\pi^-\pi^0)$ with the KLOE Detector"**
D. Babusci *et al.* [KLOE Collaboration].
arXiv:1209.4611 [hep-ex]
10.1016/j.physletb.2012.11.032
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[21] **"Implications of LHCb measurements and future prospects"**
R. Aaij *et al.* [LHCb Collaboration].
arXiv:1208.3355 [hep-ex]
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[22] **"Low energy QCD and ChPT studies with KLOE"**
F. Ambrosino *et al.*.
10.1393/ncc/i2011-10715-3
Nuovo Cim. C **033N5**, 149 (2010).

[23] **"Test of lepton flavor universality with Ke2 decay at KLOE and KLOE-2"**
B. Sciascia [KLOE Collaboration].
PoS HQL **2010**, 027 (2011).

[24] **"Search for a vector gauge boson in ϕ meson decays with the KLOE detector"**
F. Archilli *et al.* [KLOE-2 Collaboration].
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M. Anelli *et al.*.
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[26] **"Measurement of $\Gamma(\eta \to \pi^+\pi^-\gamma)/\Gamma(\eta \to \pi^+\pi^-\pi^0)$ with KLOE experiment"**
F. Ambrosino *et al.* [KLOE and KLOE-2 Collaborations].
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[27] **"$\gamma\gamma$ physics with the KLOE experiment"**
F. Archilli *et al.* [KLOE-2 Collaboration].
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[28] **"U boson searches at KLOE"**
S. Giovannella *et al.*.
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F. Ambrosino *et al.* [KLOE and KLOE-2 Collaborations].
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F. Ambrosino *et al.* [KLOE Collaboration].
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C. Di Donato *et al.* [KLOE Collaboration].
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E. Czerwinski *et al.* [KLOE-2 Collaboration].
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F. Ambrosino *et al.*.
PoS CD **09**, 045 (2009).

[34] **"KLOE measurement of the $\sigma(\pi^+\pi^-(\gamma))$ cross section and the pi+ pi- contribution to the muon anomaly"**
F. Nguyen *et al.* [KLOE Collaboration].
PoS EPS **-HEP2009**, 372 (2009).

[35] **"Proposal for taking data with the KLOE-2 detector at the DAΦNE collider upgraded in energy"**
D. Babusci *et al.*.
arXiv:1007.5219 [hep-ex]

[36] **"KLOE measurements of K(L) lifetime and absolute branching ratio of $K^+ \to \pi^+\pi^-\pi^+(\gamma)$"**
P. de Simone *et al.* [KLOE Collaboration].
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[37] **"Measurement of the K(S) lifetime and CPT symmetry tests in the neutral kaon system with quantum interferometry at KLOE"**
M. Dreucci *et al.* [KLOE Collaboration].
PoS EPS **-HEP2009**, 198 (2009).

[38] **"V(us) and lepton universality from kaon decays at KLOE"**
E. De Lucia *et al.* [KLOE Collaboration].
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[39] **"KLOE results on light meson properties"**
B. Di Micco *et al.* [KLOE Collaboration].
PoS EPS **-HEP2009**, 046 (2009).

[40] **"CPT symmetry and quantum mechanics tests in the neutral kaon system at KLOE"**
A. Di Domenico *et al.* [KLOE Collaboration].
10.1007/s10701-009-9366-x
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[41] **"Measurement of $\sigma(e^+e^- \to \pi^+\pi^-)$ from threshold to 0.85 GeV^2 using Initial State Radiation with the KLOE detector"**
F. Ambrosino *et al.* [KLOE Collaboration].
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S. S. Bocchetta *et al.* [KLOE Collaboration].
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[44] **"Quantum coherence and CPT symmetry tests in the neutral kaon system at KLOE"**
A. Di Domenico *et al.* [KLOE Collaboration].
PoS KAON **09**, 038 (2009).

[45] **"Hadronic physics with KLOE"**
F. Ambrosino *et al.*.
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F. Ambrosino *et al.* [KLOE Collaboration].
arXiv:1004.1319 [hep-ex]
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G. Amelino-Camelia *et al.*.
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F. Archilli *et al.* [2 Collaboration].
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[49] **"Measurement of the pion form factor for $M(\pi\pi)^2$ between 0.1 and 0.85 GeV^2 with the KLOE detector"**
S. E. Muller *et al.* [KLOE Collaboration].
arXiv:0912.2205 [hep-ex]
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[50] **"V(us) and CP violation from kaon decays with the KLOE detector"**
P. De Simone *et al.* [KLOE Collaboration].
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J. Phys. Conf. Ser. **171**, 012051 (2009).

[51] **"Study of the $\eta \to \pi^+\pi^-e^+e^-$ decay at KLOE"**
R. Versaci *et al.* [KLOE Collaboration].
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A. Di Domenico *et al.* [KLOE Collaboration].
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[53] **"Recent KLOE results on radiative kaon decays"**
M. Moulson *et al.* [KLOE Collaboration].
arXiv:0910.0190 [hep-ex]
PoS KAON **09**, 035 (2009)

[54] **"Test of lepton flavor violation with Ke2 decay at KLOE"**
B. Sciascia [KLOE Collaboration].
arXiv:0908.4584 [hep-ex]
PoS KAON **09**, 026 (2009)

[55] **"Precise measurement of $\Gamma(K \to e\nu(\gamma))/\Gamma(K \to \mu\nu(\gamma))$ and study of $K \to e\nu\gamma$"**
F. Ambrosino *et al.* [KLOE Collaboration].
arXiv:0907.3594 [hep-ex]
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[56] **"A Global fit to determine the pseudoscalar mixing angle and the gluonium content of the eta-prime meson"**
F. Ambrosino *et al.*.
arXiv:0906.3819 [hep-ph]
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[57] **"Recent results from KLOE at DAFNE"**
M. Martini *et al.*.
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[58] **"KLOE Results on Light Meson Properties"**
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[285] **"Observation of the $\Lambda_b^0 \to \Lambda\phi$ Decay"**
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[336] **"Identification of beauty and charm quark jets at LHCb"**
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[337] **"Quantum numbers of the $X(3872)$ state and orbital angular momentum in its $\rho^0 J\psi$ decay"**
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