

Luciano Fava

Curriculum vitae

BIO AND EDUCATION

1986 - MS in Physics obtained at the Turin University, with the thesis "Studio dell'annichilazione di antiprotoni in elio-4 a 300 MeV/c" (Study of antiprotons annihilation on helium-4 at 300 MeV/c", Summa cum laude and Academic Honorable Mention.

2013 - MS in Mind Sciences - Faculty of Psychology obtained at the Turin University, with the thesis "Meta-analisi di correlazioni tra spettri psichiatrici e alterazioni cerebrali" (Meta analysis of correlations between psychiatric spectra and brain alterations), Summa cum laude and Academic Honorable Mention.

2013 – State examination at the Turin University with qualification of Psychologist Class A.

2016 – Graduate School of Clinical Psychology at the Turin University.

UNIVERSITY CAREER

1994 -	Researcher, Università del Piemonte Orientale, DISIT
1989-1993	Researcher at the INFN (National Institute of Nuclear Physics) - Turin

UNIVERSITY POSITIONS

2015-2016	Member of the commission for the management of departmental areas
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SCIENTIFIC POSITIONS

2010-	Member of the team for the Data analysis of BES III experiment Beijing P.R. of China
2001-2009	Member of the team for the Data Acquisition of ULTRA experiment - EUSO Project
2000-2007	Member of the team for the Data analysis of DUBTO experiment Dubna Russian Fed.
1991-2000	Member of the team for the Second Level Trigger of DISTO experiment LNS Saclay (F)
1989-2000	Member of the team for the Off Line Analysis of OBELIX experiment CERN Geneva
1985-1989	Member of the team for the Data Analysis of STREAMER experiment CERN Geneva

MAIN FIELDS OF INTEREST

1. Nuclear Physics: Interactions of antiprotons at low energy on light nuclei.
2. Nuclear Physics: Interactions of antiprotons and antineutrons with nucleons and nuclei at rest and low energy.
3. Nuclear Physics: measurements of spin observables and polarization of strange hyperons produced in proton-proton interactions.
4. Nuclear Physics: Analysis of interaction channels between pions and light nuclei.

5. Technology: Measurements of reflected and/or diffused signal produced by extensive cosmic-ray air showers.
6. Particle Physics: tau, charm channels, spectroscopy in electron/positron interactions.

CURRENT ISSUES OF RESEARCH

BES EXPERIMENT

1. study and algorithm optimizations for adaptive digital elaboration and filtering of signals.
 Detector development: chip test for the data analogical reading of CGEM detector proposed in order to substitute the inner tracker partially damaged due to the luminosity enhancement.

CURRENT FUNDED PROJECTS

PROGRAMME	FUNDED PROJECT
IHEP – BEPCII – BES Beijing People’s Republic of China <i>Italian funding agency:</i> Istituto Nazionale di Fisica Nucleare	BESIII is an experiment running at the Beijing electron-positron collider (BEPCII), based at the IHEP laboratory of the Chinese Academy of Sciences. The collider BEPCII is a multibunch machine (inter-bunch interval 8 ns) designed to operate in the total energy range 2-4.2 GeV in the laboratory center of mass, at design total beam currents of 910 mA for both beams. The expected luminosity of BEPCII, optimized at the one-beam energy of 1.89 GeV, is $1 \times 10^{33} \text{ cm}^{-2} \text{ s}^{-1}$. Construction started in 2004 and commissioning went through 2 phases: in 2006, with the interaction region run on conventional magnets, and 2007, when superconducting quadrupoles were installed. During these periods the machine gave data-taking time to Synchrotron Radiation experiments. Installation of the BESIII detector started in March 2008, and data taking followed on March 6 2009, with a scan of the $\psi(2S)$ peak. During the next month, as machine commissioning continued, the peak luminosity of BEPCII increased steadily from 1.4 to $2.3 \times 10^{32} \text{ cm}^{-2} \text{ s}^{-1}$, with beam currents of 550 mA for both electrons and positrons, reaching a new record of $6 \times 10^{32} \text{ cm}^{-2} \text{ s}^{-1}$ in February 2011 with currents close to 700 mA.

TOP FIVE PAPERS

1. [A cylindrical GEM detector with analog readout for the BESIII experiment](#)
 By: Amoroso, A.; Baldini, R.; Bertani, M.; et al.

NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS
SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT Volume: 824 Pages: 515-
517 Published: JUL 11 2016

2. Determination of the number of J/psi events with J/psi -> inclusive decays

By: Ablikim, M.; Achasov, M. N.; Ambrose, D. J.; et al.

Group Author(s): BESIII Collaboration

CHINESE PHYSICS C Volume: 36 Issue: 10 Pages: 915-925 Published: OCT 2012

3. Diffused Cerenkov light measurements for the EUSO project

By: Vallania, P; Cappa, A; Fava, L; et al.

Conference: 19th European Cosmic Ray Symposium Location: Florence, ITALY Date: AUG
30- SEP 03, 2003

Sponsor(s): Inst Nazi Fis Nucl; Univ Firenze, Dept Fis; Municipalita Firenze;
Ente Cassa Risparmio Firenze

INTERNATIONAL JOURNAL OF MODERN PHYSICS A Volume: 20 Issue: 29
Pages: 6906-6908 Published: NOV 20 2005

4. Production of eta ' mesons in the pp -> pp eta ' reaction at 3.67 GeV/c

By: Balestra, F; Bedfer, Y; Bertini, R; et al. Group Author(s): DISTO Collaboration

PHYSICS LETTERS B Volume: 491 Issue: 1-2 Pages: 29-35 Published: OCT 12 2000

**5. MEASUREMENT OF THE FREQUENCY OF THE ANNIHILATION REACTION (P)OVER-
BARP-JPI(0)PI(0) AT REST IN A NTP HYDROGEN TARGET**

By: AGNELLO, M; ANDRIGHETTO, A; BALESTRA, F; et al.

PHYSICS LETTERS B Volume: 337 Issue: 1-2 Pages: 226-234 Published: OCT 6 1994