TAUP 2009 Conference

The eleventh international conference on Topics in Astroparticle and Underground Physics

July 1-5, 2009
Angelicum
Pontifical University of S. Thomas Aquinas
Rome, Italy

SCIENTIFIC PROGRAM

SCIENTIFIC PROGRAM - Overview

Tuesday 30 June

Sala Colonne	*16,00-18,30*	**Pre-registration**
	17,00	**Welcome reception**

Wednesday 1 July

Sala Colonne	*08,30 - 09,00*	**Registration**
Aula Minor	*09,00 - 12,15*	**Plenary Session- Cosmology**
	12,05 - 13,15	**Plenary Session- Gravitational Waves**
Aula Minor	*14,30 - 18,30*	**Parallel Session -** Dark Matter Searches
Aula 5	*14,30 - 18,30*	**Parallel Session -** Cosmological Issues
Aula 6	*14,30 - 16,30*	**Parallel Session -** Double Beta Decay
	16,30 - 18,30	**Parallel Session -** Gravitational Waves
Aula 8	*14,30 - 18,30*	**Parallel Session -** Solar, Reactor, Low Energy Neutrinos

Thursday 2 July

Aula Minor	*09,00 - 13,15*	**Plenary Session - Direct Dark Matter Searches**
Aula Minor	*14,30 - 18,30*	**Parallel Session -** Dark Matter Searches
Aula 5	*14,30 - 18,30*	**Parallel Session -** Atmospheric Neutrinos and Beams
Aula 6	*14,30 - 18,30*	**Parallel Session -** Double Beta Decay
Aula 8	*14,30 - 18,30*	**Parallel Session -** Gravitational Waves

Friday 3 July

Aula Minor	*09,00 - 13,00*	**Plenary Session - Neutrinos**
Aula Minor	*14,30 - 18,30*	**Parallel Session -** Dark Matter Searches
Aula 1	*14,30 - 18,30*	**Parallel Session -** Outreach and Education
Aula 5	*14,30 - 18,30*	**Parallel Session -** Double Beta Decay
Aula 6	*14,30 - 18,30*	**Parallel Session -** High Energy Astrophysics
Aula 8	*14,30 - 18,30*	**Parallel Session -** Solar, Reactor, Low Energy Neutrinos

Saturday 4 July

Aula Minor	*09,00 - 10,10*	**Plenary Session - Neutrinos**
	10,10 - 13,00	**Plenary Session - Cosmic Ray and High Energy Neutrinos**
Aula Minor	*14,30 - 18,30*	**Parallel Session -** Dark Matter Searches
Aula 5	*14,30 - 18,30*	**Parallel Session -** Atmospheric Neutrinos and Beams
Aula 6	*14,30 - 18,30*	**Parallel Session -** High Energy Astrophysics
Aula 8	*14,30 - 18,30*	**Parallel Session -** Solar, Reactor, Low Energy Neutrinos

Sunday 5 July

Aula Minor	*09,00 - 12,25*	**Plenary Session - Gamma Rays and Antimatter in Space**
	12,25 - 13,10	**Plenary Session - Underground Laboratories**

SCIENTIFIC PROGRAM Wednesday 1 July
Plenary Session

Sala Colonne *08,30 - 09,00* **Registration**

Plenary Session

Aula Minor (09,00 - 12,05) **Cosmology**

Chair: Daniel Vignaud

9,00 WELCOME ADDRESS (10')

9,15 PERSPECTIVES IN COSMOLOGY (30'+5')
Alexander Vilenkin (Tufts University, Medford, MA, USA)

9,50 THE PHYSICS OF THE COSMIC MICROWAVE BACKGROUND (30'+5')
Andrew Jaffe (Imperial College, UK)

10,25 DARK ENERGY PROBES (30'+5')
Enrique Gaztanaga (Instituto de Ciencias del Espacio, CSIC, Spain)

11,00 **Coffee break** (30')

Chair: Lucia Votano

11,30 THE DARK MATTER STRUCTURE OF THE UNIVERSE (30'+5')
Ravi Sheth (University of Pennsylvania, USA)

Aula Minor (12,05 - 13,15) **Gravitational Waves**

12,05 THE PRESENT GRAVITATIONAL WAVE DETECTION EFFORT (30'+5')
Keith Riles (University of Michigan, USA)

12,40 ADVANCED GRAVITATIONAL WAVE DETECTORS (30'+5')
Giovanni Losurdo (INFN/Firenze, Italy)

SCIENTIFIC PROGRAM Wednesday 1 July
Parallel Sessions

Parallel Session - Dark Matter Searches

Aula Minor (14,30 - 18,30) **WIMP searches with noble gas; background issues**

Chair: Fiorenza Donato

The ArDM experiment (preliminary) (15'+5')
Christian Regenfus (University of Zürich)

Development of the MiniCLEAN dark matter detector (15'+5')
James Nikkel (Yale University)

Results from the first science run of ZEPLIN-III (15'+5')
Isabel Lopes (LIP-Coimbra)

Improved understanding of liquid xenon's response in dark matter searches (15'+5')
Aaron Manalaysay (University of Zurich)

Coffee break (30')

Chair: Riccardo Cerulli

The XMASS experiment at the Kamioka Observatory (15'+5')
Kai Martens (IPMU, The University of Tokyo)

The LUX Dark Matter Search (15'+5')
Dan McKinsey (Yale University)

Investigation of ambient and muon-induced neutron background in LSM (15'+5')
Klaus Eitel (Forschungszentrum Karlsruhe)

Status and Prospects of a Deep Underground Laboratory in China (15'+5')
Qian Yue (Tsinghua University)

SCIENTIFIC PROGRAM Wednesday 1 July
Parallel Sessions

Parallel Session - Double Beta Decay

Aula 6 (14,30 - 17,00)

Chair: Frank Avignone

Brief Overview of Experimental Decay, and the Majorana Project (25'+5')
Steve Elliott (Los Alamos National Lab)

Theoretical status of the double beta decay (25'+5')
Amand Faessler (Univ. Tuebingen)

Development and installation of the GERDA experiment (20'+5')
Anatoly Smolnikov (INR/JINR Dubna)

Probing the Majorana Nature of Neutrinos by the Neutrinoless Double Beta decay (20'+5')
Stefano Morisi (Univ. of Valencia)

Coffee break (30')

Parallel Session - Gravitational Waves:

Aula 6 (17,00 - 18,00) **Status of instruments and searches**

Chair: Adalberto Giazotto

Status of Virgo (15'+5')
Viviana Fafone (INFN, Sezione di Roma Tor Vergata)

Underground Cryogenic Interferometer CLIO (15'+5')
Shinji Miyoki (ICRR, The University of Tokyo)

Cosmic rays detection with Explorer and Nautilus (15'+5')
Carlo Ligi (INFN Frascati)

ET design study: science case and perspectives (15'+5')
Fulvio Ricci (University of Rome La Sapienza & INFN)

ET site selection: seismic and gravity gradient noise (15'+5')
Jo van den Brand (Nikhef)

Recent results from LIGO, GEO and Virgo searches (15'+5')
Carlo Nicola Colacino (INFN Pisa)

SCIENTIFIC PROGRAM Wednesday 1 July
Parallel Sessions

Parallel Session - Cosmological Issues

Aula 5 (14,30 - 18,30)

Chair: Nicolao Fornengo

Gravitational reheating in quintessential inflation (15'+5')
Stefano Scopel (Seoul National University)

Relic density of neutrinos with primordial asymmetries (15'+5')
Sergio Pastor (Instituto de Fisica Corpuscular (IFIC) - U. Valencia)

Interplay between the “Low" and “High” Energy CP-violation in Leptogenesis (15'+5')
Serguey Petcov (SISSA/INFN Trieste)

Coffee break (30')

Chair: Bhaskar Dutta

Constraining Super-Critical String/Brane Cosmologies with Astrophysical Data (15'+5')
Vasiliki Mitsou (Instituto de Fisica Corpuscular (IFIC) - U. Valencia)

Phantom dark energy and cosmological solutions without the Big Bang singularity (15’+5’)
Anton Baushev (Joint Institute for Nuclear Research, Dubna)

Dirac-Born-Infeld and k-inflation: the CMB anisotropies from string theory (15'+5')
Christophe Ringeval (Louvain University)

SCIENTIFIC PROGRAM Wednesday 1 July
Parallel Sessions

Parallel Session - Solar, Reactor and other Low-Energy Neutrino Physics

Aula 8 (14,30 - 18,30)

Chair: Gioacchino Ranucci

Results of the Borexino experiment (15'+5')
Lothar Oberauer (Technical University Munich)

Low energy neutrino physics at Super-Kamiokande (15'+5')
Michael Smy (University of California, Irvine)

InP solid state detector for a measurement of low energy solar neutrinos (15'+5')
Yoshiyuki Fukuda (Miyagi University of Education)

The neutrino source experiment on SAGE two-zone gallium target (15'+5')
Valery Gorbachev (INR, Moscow)

Linear solar models: the role of opacity and metals in the sun (15'+5')
Francesco Villante (University L'Aquila)

Coffee break (30')

Chair: Lothar Oberauer

Probing non-standard neutrino interactions with solar and reactor neutrinos (15'+5')
Mariam Tortola (University Hamburg)

Remaining inconsistencies with solar neutrinos: Can spin flavour precession provide a clue? (15'+5')
Joao Pulido (CFTP and IST, Lisbon)

Solar flare in underground megaton detectors (15'+5')
Daniele Fargion (University and INFN Rome 1)

Geo-neutrinos (25'+5')
Stephen Dye (University of Hawaii)

SCIENTIFIC PROGRAM Thursday 2 July
Plenary Session

Plenary Session

Aula Minor (09,00 - 13,15)

Chair: Manfred Lindner

9,00 THE ASTROPARTICLE PHYSICS CENTER AT THE GRAN SASSO LABORATORY (10')
Venyamin Berezinsky (INFN/LNGS, Italy)

Aula Minor (09,00 - 13,15) **Direct Dark Matter Searches**

9,15 RESULTS FROM DAMA/LIBRA EXPERIMENT (30'+5')
Pierluigi Belli (INFN/Roma Tor Vergata, Italy)

9.50 RESULTS FROM THE CDMS EXPERIMENT (30'+5')
Jody Cooley-Sekula (Stanford University, USA)

10,25 RESULTS FROM THE XENON EXPERIMENT (30'+5')
Elena Aprile (Columbia University, USA)

11,00 **Coffee break** (30')

Chair: Milla Baldo Ceolin

11,30 THE WARP EXPERIMENT (30'+5')
Claudio Montanari (INFN/Pavia, Italy)

12,05 PARTICLE DARK MATTER INTERPRETATIONS OF DIRECT SEARCHES (30'+5')
Alessandro Bottino (INFN/Torino, Italy)

12,40 AXION SEARCHES (30'+5')
Leslie Rosenberg (University of Washington, USA)

SCIENTIFIC PROGRAM Thursday 2 July
Parallel Sessions

Parallel Session - Dark Matter Searches

Aula Minor (14,30 - 18,30) **Directional WIMP searches, other techniques and axions**

Chair: *José Angel Villar*

Results from DMTPC 10-liter prototype (15'+5')
Denis Dujmic (MIT)

Underground Low Flux Neutron Background Measurements in LSM Using A LargeVolume (1m3) Spherical Proportional Counter (15'+5')
Ilias Savvidis (Aristotle University of Thessaloniki)

DRIFT update (15'+5')
Mark Pipe (University of Sheffield)

Dark Matter Searches with the PICASSO experiment at SNOLab (15'+5')
Berta Beltran (University of Alberta)

COUPP (15'+5')
Andrew Sonnenschein (Fermilab)

Coffee break (30')

Chair: Klaus Eitel

Dark Matter Search with CCDs (DAMIC) (15'+5')
Juan Estrada (Fermilab)

Limits on Low-Mass WIMP Dark Matter with an Ultra-Low-Energy Germanium Detector at 220 eV Threshold (15'+5')
Henry Wong (Academia Sinica, Taiwan)

LIPSS Experiment: Free-Electron Laser in Search for Dark Matter Candidates (15'+5')
Andrei Afanasev (Hampton University/Jefferson Lab)

Axion Dark matter Revisited (15'+5')
Luca Visinelli (University of Utah)

Latests results from the CERN Axion Solar Experiment (15'+5')
Igor Irastorza (University of Zaragoza)

Search for solar axions using resonant absorption by atomic nuclei (15'+5')
Alexander Derbin (Petersburg Nuclear Physics Institute)

SCIENTIFIC PROGRAM Thursday 2 July
Parallel Sessions

Parallel Session - Atmospheric Neutrinos and High Energy Neutrino Beams

Aula 5 (14,30 - 18,30)

Chair: Francesco Ronga

Current MINOS neutrino oscillation results (15'+5')
Alec Habig (Minnesota Duluth U.)

Probing theta_13 with global neutrino data analysis (15'+5')
Antonio Palazzo (IFIC, Valencia)

Status of the T2K long baseline neutrino oscillation experiment (15'+5')
Atsuko Kondo-Ichikawa (Kyoto U.)

The ND280m detectors contribution to the T2K neutrino measurements (15'+5')
Magali Besnier (Lab. Leprince Ringuet)

CP violation studies via Beta and EC-decay channels of the same ion (15'+5')
Maria-Catalina Espinoza-Hernandez (IFIC, Valencia)

Coffee break (30')

Chair: Alberto Guglielmi

Emulsion analysis in the OPERA experiment (15'+5')
Naotaka Naganawa (Nagoya U.)

Status report of ICARUS T600 at the LNGS (15'+5')
Alessandro Menegolli (INFN, Pavia)

ArgoNeuT, a Liquid Argon TPC in a low energy neutrino beam (15'+5')
Joshua Spitz (Yale U.)

The Long Baseline Neutrino Oscillation Experiment at DUSEL (15'+5')
Jelena Maricic (Drexel U.)

SCIENTIFIC PROGRAM Thursday 2 July
Parallel Sessions

Parallel Session - Double Beta Decay

Aula 6 (14,30 - 18,30)

Chair: Amand Faessler

Variances and Covariances of the Nuclear Matrix Elements for the Neutrinoless Double Beta Decay (20'+5')
Anna Maria Rotunno (Univ. of Bari)

New Concepts for the Gaseous Xenon Detector for Double-Beta Decay (20'+5')
David Sinclair (Carleton University)

Test of the Single State Dominance Hypothesis for the Two-Neutrino Double Beta Decay (20'+5')
Oscar Moreno (Universidad Complutense, Madrid)

MOON for Double-Beta Decays and Neutrino Nuclear Responses (20'+5')
Ken-Ichi Fushimi (Osaka University)

Coffee break (20')

Chair: Carla Cattadori

The NEMO-III and SuperNemo (20'+5')
Francois Mauger (LPC, Caen)

Neutrino mass, neutrinoless double EC and rare beta decays (20'+5')
Jouni Suhonen (Univ. Jyväskylä)

Searching for Double-Beta Decay with the Enriched Xenon Observatory (20'+5')
Lisa Kaufman (University of Maryland)

The effective neutrio mass at the milli-eV-frontier (20'+5')
Serguey Petcov (SISSA, Trieste)

NEXT: Searching for the Neutrinoless Double Beta Decay with a Gas-Xenon TPC (15'+5')
Pau Novella (CIEMAT)

SCIENTIFIC PROGRAM Thursday 2 July
Parallel Sessions

Parallel Session - Gravitational Waves

Aula 6 (14,30 - 18,30) **From underground up: preparing for the next nearby supernova**

Chair: Erik Katsavounidis

Search for bursts with LIGO, GEO and Virgo (15'+5')
Nicolas Leroy (University of Paris-Orsay)

Status of neutrino detectors (20'+5')
Walter Fulgione (INAF - IFSI Torino)

Search for neutrinos from core-collapse supernova from the global network of detectors (15'+5')
Alex Habig (University of Minnesota)

The future of neutrino detectors (15'+5')
Kate Scholberg (Duke University)

Supernovae rates, models and waveforms (20'+5')
Christian Ott (CalTech)

Coffee break (30

Chair: Kazuaki Kuroda

Using neutrinos to search for GW signals (15'+5')
Giulia Pagliaroli (INFN, Gran Sasso)

Multiwavelength observations with LIGO (15'+5')
Laura Cadonati (University of Massachusetts-Amherst)

Gravitational wave-neutrino joint search for core-collapse supernovae (15'+5')
Erik Katsavounidis (MIT)

Round-table discussion (30')

SCIENTIFIC PROGRAM Friday 3 July
Plenary Session

Plenary Session

Aula Minor (09,00 - 13,15) **Neutrinos**

Chair: David Sinclair

9,00 PROGRESS IN THE UNDERSTANDING OF NEUTRINO PROPERTIES (30'+5')
Jose W.F. Valle (Universidad de Valencia/IFIC, Spain)

9,35 FRONTIERS OF LOW ENERGY NEUTRINO PHYSICS AND ASTROPHYSICS (30'+5')
Gioacchino Ranucci (INFN Milano, Italy)

10,10 STATUS AND PERSPECTIVES OF SHORT BASELINE STUDIES (30'+5')
Mark Dierckxsens (University of Chicago, USA)

10,45 **Coffee break** (30')

Chair: Henry Sobel

11,15 STATUS AND PERSPECTIVES OF ATMOSPHERIC NEUTRINOS AND LONG BASELINE STUDIES (30'+5')
Takaaki Kajita (ICRR and University of Tokyo, Japan)

11,50 NEUTRINOS FROM CERN TO GRAN SASSO: THE CNGS PROJECT (30'+5')
Marcos Dracos (IPHC Strasbourg, France)

12,25 NEUTRINOLESS DOUBLE BETA DECAY (30'+5')
Stefan Schoenert (Max-Planck Institute for Nuclear Physics, Heidelberg, Germany)

SCIENTIFIC PROGRAM Friday 3 July
Parallel Sessions

Parallel Session - Dark Matter Searches

Aula Minor (14,30 - 18,30) **WIMP searches with bolometers and scintintillators**

Chair: Stefano Scopel

Dark Matter Searches with the experiment EDELWEISS-II (15'+5')
Véronique Sanglard (Institut de Physique Nucléaire de Lyon)

BGO scintillating bolometer: its application in dark matter experiments (15'+5')
Ysrael Richard Ortigoza Paredes (University of Zaragoza)

The expected background spectrum in NaI dark matter detectors and the DAMA result (15'+5')
Vitaly Kudryavtsev (University of Sheffield)

Technical aspects and dark matter searches (15'+5')
Francesco Nozzoli (Universita' e INFN Roma Tor Vergata)

Inert Doublet Model and DAMA: elastic or inelastic dark matter candidates (15'+5')
Chiara Arina (Universite Libre de Bruxelles)

Coffee break (30')

Chair: Jorge Puimedon

Relevance of ion channeling for direct dark matter detection (15'+5')
Graciela Gelmini (Physics Dept. UCLA)

Elastic and Inelastic LSP-Nucleus Scattering on Medium-Heavy Nuclei (15'+5')
Jouni Suhonen (University of Jyväskylä)

ANAIS collaboration. Status Report on the ANAIS experiment (15'+5')
Carlos Pobes (University of Zaragoza)

Tidal effect in the Radon-due neutron flux from the Earth's crust (15'+5')
Yuri Stenkin (Inst. for Nuclear Research of Russian Academy of Sciences)

Dark matter search by means of segmented scintillator (PICO-LON) (15'+5')
Ken-Ichi Fushimi (The Univ. of Tokushima)

(In)visible Z' and dark matter (15'+5')
Yann Mambrini (LPT, Orsay)

SCIENTIFIC PROGRAM Friday 3 July
Parallel Sessions

Parallel Session - Education and Outreach

Aula 1 (14,30 - 18,30)

Chair: Judy Jackson

How CERN deals with high visibility (15'+5')
Antonella Del Rosso (CERN)

Education and Public Outreach of the Pierre Auger Observatory (15'+5')
Greg Snow (University of Nebraska)

Astronomy's New Messengers: A LIGO traveling exhibit to reach out to a young adult audience (15'+5')
Marco Cavaglià (University of Mississippi)

European Week of Astroparticle Physics (15'+5')
Arnaud Marsollier (ASPERA)

Outreach activities of KamLAND (15'+5')
Tadao Mitsui (Research Center for Neutrino Science, Tohoku University)

Coffee break (30')

Chair: Roberta Antolini

ESOF 2010 exactly one year ahead (15'+5')
Enrico Predazzi (Università di Torino)

Science in the Neighborhood (15'+5')
Judy Jackson (Fermilab)

The "100 Euro" interferometer (15'+5')
Carlo Bradaschia (INFN - Pisa)

Gran Sasso National Laboratory: Outreach and Communication activities (15'+5')
Adriano Di Giovanni (LNGS - INFN)

SCIENTIFIC PROGRAM Friday 3 July
Parallel Sessions

Parallel Session - Double Beta Decay

Aula 5 (14,30 - 18,30)

Chair: Fabrice Piquemal

Effective Operators for the pionic Contributions to the Neutrinoless Double Beta Decay derived from Quarks (20'+5')
John D. Vergados (Univ. of Ioannina)

From CUORICINO to CUORE: Investigating Neutrino Properties with Double-Beta Decay (20'+5')
Monica Sisti (Universita` and INFN Milano Bicocca)

The Lepton Number Violating Double Electron Capture (20'+5')
Alexander Merle (Max Planck Inst., Heidelberg)

Status of the COBRA Experiment (20'+5')
Kai Zuber (Technische Universitaet Dresden)

Coffee break (30')

Chair: Kai Zuber

The DCBA Experiment for Studying Neutrino less Double-Beta Decay (20'+5')
Nubuhiro Ishihara (KEK)

Double Beta-Decay of ^{109}Cd with the TGV-2 Experiment (20'+5')
Nikolay Rukhadze (JINR Dubna)

Candles for the Study of Neutrino less Double-Beta Decay (20'+5')
Izumi Ogawa (Osaka University)

SNO+ (20'+5')
Carsten Krauss (Alberta U.)

SCIENTIFIC PROGRAM Friday 3 July
Parallel Sessions

Parallel Session - High Energy Astrophysics

Aula 6 (14,30 - 18,30)

Chair: Roberto Aloisio

M87 and CenA: laboratories for VHE physics of jets and near super-massive black holes (15'+5')
Martin Raue (Max-Planck-Institut fuer Kernphysik, Heidelberg)

VERITAS (15'+5')
David Hanna (McGill University)

Gamma Ray Astronomy with the ARGO-YBJ experiment (15'+5')
Tristano Di Girolamo (Universita' di Napoli Federico II and Sezione INFN Napoli)

Have Cherenkov telescopes detected a new light boson? (15'+5')
Marco Roncadelli (INFN Pavia)

CTA (Cherenkov Telescope Array) (15'+5')
Robert Wagner (Max-Planck-Institute for Physics, Munich)

Coffee break (30')

Chair: Teresa Montaruli

Search for neutrinos of astrophysical origin with IceCube (15'+5')
Andreas Gross (University of Canterbury)

First results of the ANTARES neutrino telescope (15'+5')
Juan de Dios Zornoza (IFIC and Valencia U.)

Lake Baikal: from Megaton to Gigaton (15'+5')
Bair Shaybonov (JINR, Dubna)

KM3NeT: a cubic kilometre-scale deep sea neutrino telescope in the Mediterranean Sea (15'+5')
Anna Rita Margiotta (Bologna University and INFN)

Limit on the diffuse flux of ultra-high energy neutrinos using the Pierre Auger Observatory (15'+5')
Pierre Billoir (LPHE, Paris)

SCIENTIFIC PROGRAM Friday 3 July
Parallel Sessions

Parallel Session -Solar, Reactor, Low Energy Neutrinos

Aula 8 (14,30 - 18,30) **Reactor and Supernovae Neutrinos, Cross Section**

Chair: Georg Raffelt

A search for supernova relic neutrino at Super-Kamiokande (15'+5')
Takashi Iida (ICRR, University of Tokyo)

Diffuse neutrino flux from failed supernovae (15'+5')
Cecilia Lunardini (Arizona State University)

Neutrino and antineutrino spectral splits from collective effects in supernovae (15'+5')
Irene Tamborra (University and INFN Bari)

The nuclear response of the COBRA detector to supernova neutrino energy spectra (15'+5')
Theocharis Kosmas (University of Ioannina)

Long-term study of low energy counting rate with the Large Volume Detector (15'+5')
Gianmarco Bruno (INFN-LNGS and University L'Aquila)

Coffee break (30')

Chair: Karsten Heeger

Reactor neutrino detection for non proliferation with the Nucifer experiment (15'+5')
Amanda Porta (CEA-Saclay)

Neutral current neutrino-100Mo reaction cross sections at low and intermediate energies (15'+5')
Konstantia Balasi (University of Ioannina)

Lepton-nucleon interactions at the next-to-leading order (15'+5')
Aleksandrs Aleksejevs (Memorial University Newfoundland)

Uncertainty in the low energy stopping power and anomalous enhancement in the measured D+D fusion rates (15'+5')
Massimo Coraddu (INFN Cagliari)

SCIENTIFIC PROGRAM Saturday 4 July
Plenary Session

Plenary Session

Aula Minor (09,00 - 13,15) **Neutrinos (cont.)**

Chair: Vladimir Gavrin

9,00 STATUS OF THE SUDBURY NEUTRINO OBSERVATORY *(30'+5')*
Joshua Klein (University of Pennsylvania, USA)

9,35 SUPERNOVA NEUTRINO OSCILLATIONS: WHAT DO WE UNDERSTAND? *(30'+5')*
Amol Dighe (Tata Institute of Fundamental Research, Mumbai, India)

Aula Minor (09,00 - 13,15) **Cosmic Rays and High Energy Neutrinos**

10,10 THE HIGH ENERGY UNIVERSE: COSMIC RAYS (30'+5')
Pasquale Blasi (INAF/Arcetri, Italy and Fermilab, USA)

10,45 **Coffee break** (30')

Chair: Venyamin Berezinsky

11,15 OBSERVATIONS OF UHE COSMIC RAYS (30'+5')
Giorgio Matthiae (Universita' di Roma Tor Vergata and INFN, Italy)

11,50 UHE COSMIC NEUTRINOS: THEORETICAL ASPECTS (30'+5')
Michael Kachelriess (Institute for Physics, Trondheim, Norway)

12,25 DETECTION OF HIGH ENERGY NEUTRINOS (30'+5')
Gregory Sullivan (University of Maryland, USA))

SCIENTIFIC PROGRAM Saturday 4 July
Parallel Sessions

Parallel Session - Dark Matter Searches

Aula Minor (14,30 - 18,30) **Dark matter theory and indirect WIMP searches**

Chair: Fiorenza Donato

Dark matter annihilation at cosmological redshifts: possible relic signal from WIMPs annihilation (15'+5')
Anton Baushev (JNR, Dubna)

Right-handed sneutrino as WIMP dark matter in the NMSSM (15'+5')
David G. Cerdeno (Universidad Autonoma de Madrid)

Sneutrino Dark Matter (15'+5')
Bhaskar Dutta (Texas A&M University)

Sneutrino as DM candidate and dynamical generation of neutrino masses (15'+5')
Federica Bazzocchi (Vrije Universitet)

Light neutralinos and neutrino signal (15'+5')
Viviana Niro (MPIK, Heidelberg)

Coffee break (30')

Chair: Francesco Arneodo

Pamela and Fermi data: A new background for future dark matter searches? (15'+5')
Carlos Yaguna (Universidad Autonoma de Madrid)

Results and Prospects of Dark Matter Searches with IceCube (15'+5')
Gustav Wikström (Stockholm University)

Antideuterons as an Indirect Dark Matter Signature: Development for a GAPS Balloon Mission (15'+5')
Jason Koglin (Columbia University)

Astrophysical boost factor and Dark Matter indirect detection (15'+5')
Timur Delahaye (Torino University / LAPTh Annecy)

Galactic positrons and electrons from dark matter and astrophysical sources (15'+5')
Roberto Lineros (Torino University)

SCIENTIFIC PROGRAM Saturday 4 July
Parallel Sessions

Parallel Session - Atmospheric Neutrinos and High Energy Neutrino Beams

Aula 5 (14,30 - 18,30)

Chair: Eligio Lisi

New Results from the MiniBooNE Experiment at Fermilab (15'+5')
Michael Shaevitz (Columbia U.)

The Double LAr project (15'+5')
Paola Sala (University of Milano and INFN)

Non-standard neutrino interactions from low-scale seesaw models (15'+5')
He Zhang (KTH, Stockholm)

Results of nucleon decay search in Super-Kamiokande-I+II (15'+5')
Kenji Kaneyuki (ICRR, Tokyo)

Coffee break (30')

Chair: Jose Bernabeu

Final results of a search for neutron-antineutron oscillation in SK-I (15'+5')
Jun Kameda (ICRR, Tokyo)

Oscillations of very low energy atmospheric neutrinos (15'+5')
Orlando Peres (Unicamp)

Atmospheric Neutrinos in Super-Kamiokande (15'+5')
Roger Wendell (Duke U.)

Sensitivity on Earth Core and Mantle densities using Atmospheric Nu's (15'+5')
Ofelia Pisanti (U.Federico II, Naples)

Cosmic Neutrinos: Flavor Composition at Source and Mixing Parameters (15'+5')
Arman Esmaili Taklimi (IPM, Tehran)

SCIENTIFIC PROGRAM Saturday 4 July
Parallel Sessions

Parallel Session - High Energy Astrophysics

Aula 6 (14,30 - 18,30)

Chair: Teresa Montaruli

Interpretations of the positrons flux observed by PAMELA (25'+5')
Paolo Lipari (INFN, Roma)

Dark Matter Searches with gamma-ray measurements (15'+5')
Jennifer Siegal-Gaskins (CCAPP, Ohio State University)

Cosmic rays and radiation from collapsing stars (15'+5')
Volodymyr Kryvdyk (Taras Shevchenko University of Kyiv)

Evolution of the cosmic ray anisotropy above 100 TeV (15'+5')
Piera Luisa Ghia (IFSI/INAF, Torino, LNGS/INFN, Assergi and IPN/CNRS, Orsay)

Coffee break (30')

Chair: Roberto Aloisio

Hybrid detection of UHECR with the Pierre Auger Observatory (15'+5')
Mariangela Settimo (INFN Lecce)

Study of Acoustic Ultra-high energy Neutrino Detection (SAUND) phase II (15'+5')
Naoko Kurahashi (Stanford University)

Neutrino oscillations in MHD supernova explosions (15'+5')
Shio Kawagoe (National Astronomical Observatory of Japan)

Cosmic Ray Studies with the OPERA detector at Gran Sasso (15'+5')
Nicoletta Mauri (Bologna University and INFN)

SCIENTIFIC PROGRAM Saturday 4 July
Parallel Sessions

Parallel Session - Solar, Reactor, Low Energy Neutrinos

Aula 6 (14,30 - 18,30) **Neutrino Oscillations, Neutrino Mass and Internal Properties**

Chair: Tadao Mitsui

The Double Chooz Experiment - toward the high precision measurement in the quest for theta13 (15'+5')
Jelena Maricic (Drexel University)

A High-Precision Measurement of theta13 with the Daya Bay Reactor Neutrino Experiment (15'+5')
Karsten Heeger (University of Wisconsin, Madison)

Moessbauer experiment with neutrinos and neutrino oscillations (15'+5')
Evgeny Akhmedov (MPI Nuclear Physics, Heidelberg)

Neutrino oscillations in matter with varying density (15'+5')
Ara Ioannisian (Yerevan Physics Institute)

Magnus approximation for neutrino oscillations with three flavors in matter (15'+5')
Alexis Aguilar-Arevalo (Instituto de Ciencias Nucleares, UNAM)

Coffee break (30')

Chair: Martin Hirsch

The KATRIN Experiment (15'+5')
Marcus Beck (Univ. Muenster)

Measuring neutrino mass with radioactive ions in a storage ring (15'+5')
Christopher Orme (IPPP, Durham University, UK)

Measurements of neutrino-electron scattering cross section and the EW Parameters at the Kuo-Sheng reactor neutrino laboratory (15'+5')
Muhammed Deniz (Academia Sinica, Taiwan)

Electromagnetic properties of neutrinos (15'+5')
Alexander Studenikin (Moscow State University)

SCIENTIFIC PROGRAM Sunday 5 July
Plenary Session

Plenary Session

Aula Minor (09,00 - 13,10) **Gamma Rays and Antimatter in Space**

Chair: Jose Bernabeu

9,00 ASTROPHYSICAL SOURCES OF GAMMA-RAYS (30'+5')
Isabelle Grenier (CEA and AIM, France)

9,35 GROUND BASED OBSERVATIONS OF GAMMA RAYS (30'+5')
Mosè Mariotti (INFN/Padova)

10,10 SPACE BASED OBSERVATIONS OF GAMMA RAYS (30'+5')
Philippe Bruel (LLR - CNRS/IN2P3)

10,45 **Coffee break** (30')

Chair: Alessandro Bettini

11,15 DETECTION OF ANTIMATTER IN OUR GALAXY (30'+5')
Piergiorgio Picozza (INFN/Roma Tor Vergata, Italy)

11,50 DARK MATTER SIGNALS IN SPACE (30'+5')
Pierre Salati (LAPTH/Annecy, France)

Aula Minor (12,25 - 13,10) **Underground Laboratories**

12,25 OVERVIEW OF UNDERGROUND LABORATORIES AND FACILITIES (30'+5')
Eugenio Coccia (INFN/LNGS and INFN/Tor Vergata)

13,00 FAREWELL (5')