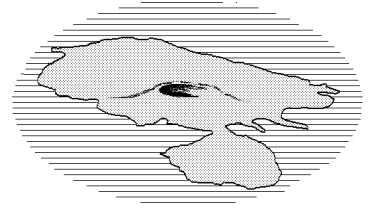


VULCANO WORKSHOP 2012

28th May – 2nd June, Vulcano, Italy

FRONTIER OBJECTS IN ASTROPHYSICS AND PARTICLE PHYSICS



COMPLETED FINAL PROGRAM

Sunday 27 Afternoon

17.00	Registration of Participants
19.00	End of Registration
19.30	Welcome Cocktail Party
20.00	Dinner

Organized by: INAF-IASF, Roma; INAF-IFSI, Torino; INFN-LNF, Frascati; INFN-LNGS, Assergi; INFN – MI, Milano);
CZECH POLYT. UN.; CAEN S.p.A., Viareggio

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Monday 28 Afternoon

OPENING REMARKS

Chairperson: RITA BERNABEI

17.00 GIULIO AURIEMMA CP Violation research with LHCb detector at the LHC. .
17.25 CARLO GUSTAVINO The $2\text{H}(\alpha,\gamma)6\text{Li}$ reaction at LUNA and Big Bang nucleosynthesis.
17.45 GIORA SHAVIV The s-process and its fundamental problem in stellar evolution.

18.10 END OF SESSION

COSMOLOGY

Chairperson: ARNO STRAESSNER

18.10 ALDO MORSELLI Search for Dark Matter with Gamma-rays: A Review.
18.35 GUENNADI BISNOVATYI-KOGAN Dark energy and key physical parameters of clusters of galaxies.
18.55 RINO PERSIANI Dark Matter: Results from XENON.

19.15 INTERVAL

Monday 28 Night

SPECIAL NIGHT SESSION

Chairperson: MARIA DIAZ TRIGO

21.45 GIULIO D'AGOSTINI Which ball? Which box? Where did the ball stop? A playful approach to Bayesian reasoning.

22.30 END SPECIAL NIGHT SESSION

Tuesday 29 Morning

COSMOLOGY

Chairperson: GIORA SHAVIV

09.00	SERGIO COLAFRANCESCO	SZ effect in the PLANCK Era.
09.25	DANIEL WHALEN	The first stars and galaxies: Cosmological implications.
09.50	NINO PANAGIA	Hubble Space Telescope highlights in cosmology.
10.15	LORENZO LOVISARI	Metals in Intergalactic Medium as Witnesses of Clusters Formation and Evolution.
10.35	KOSUKE SATO	Thermal and Chemical Evolution of the Universe.

11.00 Coffee Break

Chairperson: ANATOLY PETRUKHIN

11.30	RITA BERNABEI	DAMA Results: Dark Matter in the Galactic Halo.
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11.55 END OF SESSION

ASTROPHYSICS OF HIGH ENERGY COSMIC SOURCES

11.55	VOJTECH SIMON	Cataclysmic Variables: Their Impact on Astroparticle Physics.
12.20	RENE HUDEC	Astronomical Plate Archives and Binary Blazars Studies.
12.40	THOMAS BOLLER	The Zoo of AGNs: experimental tests of General Relativity Theories.

13.05 INTERVAL

Tuesday 29 Afternoon

ASTROPHYSICS OF HIGH ENERGY COSMIC SOURCES

Chairperson: SERGIO COLAFRANCESCO

17.00	NINO PANAGIA	Supernova 1987A: Celebrating a Silver Jubilee.
17.25	PIERO GALEOTTI	SN 1987A: The Monte Bianco Event.
17.35	MANAMI SASAKI	Review of Galactic and Extragalactic SNRs as Sites of Particle Acceleration.
18.00	BERND ASCHENBACH	RX J0852.0-4622 - the nearest historical supernova remnant.
18.20	NAOMI OTA	The Impact of SUZAKU measurements on Astroparticle Physics.
18.45	MATTEO GUAINAZZI	XMM Highlights (X-ray Spectroscopy of AGNs).
19.10	PIETER MEINTJES	A search for Blazars among the unidentified EGRET gamma-ray sources.

19.30 **INTERVAL**

Tuesday Night

SPECIAL NIGHT SESSION

Chairperson: RENE HUDEC

21.45	GIULIANO MINI	Digital Pulse Processing for Physics Applications.
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22.15 **END SPECIAL NIGHT SESSION**

Wednesday 30 Morning

ASTROPHYSICS OF HIGH ENERGY COSMIC SOURCES

Chairperson: PIETER MEINTJES

09.00 BOZENA CZERNY From microquasars to quasars.
09.25 FRANK KRENNRICH TeV Astronomy: Observations
versus Theory.
09.50 PIETRO UBERTINI INTEGRAL Highlights.
10.15 CARLOTTA PITTORI AGILE Highlights.
10.40 GIUSEPPE DI SCIASCIO ARGO-YBJ Highlights.

11.05 O F F I C I A L P H O T O

11.10 Coffee Break

Chairperson: BOZENA CZERNY

11.40 ANDY SMITH VERITAS Highlights.

12.05 In advance talk of the session
DIRECTION FOR NEXT GENERATION EXPERIMENTS

12.05 PIETRO UBERTINI Future of Space Astronomy
(A Global Road Map For the next
decades).

12.30 End of the in advance talk

12.30 INTERVAL

Wednesday 30 Afternoon

F R E E

Wednesday 30 Night

21.30 E T R U S C A N W I N E P A R T Y

Friday 01 Morning

THE CHALLENGE OF COSMIC RAY PRODUCTION

Chairperson: VERONIQUE PELASSA

09.00 ANATOLY ERLYKIN Iron Peak in CRs.
09.20 ANDREA CHIAVASSA Air shower measurements above the
knee of the CR Energy Spectrum.
09.40 ALESSIA TRICOMI LHCf Results.

10.00 END OF SESSION

GRAVITATIONAL WAVES

Chairperson: TODOR STANEV

10.00 MAURICE van PUTTEN Search for Gravitational Waves
From Supernovae and long GRBs.
10.25 LEOPOLDO MILANO The past and future of direct
search of GW from pulsars in the
interferometric GW antennas era.
10.45 DOROTA ROSINSKA Search for Gravitational Waves
From Cosmic Sources.

11.05 Coffee Break

Chairperson: ULRICH KATZ

11.35 MANUELE MARTINI Apollo Lunar Laser Ranging data and
the measurement of the Lunar Geodetic
Precession.

11.55 END OF SESSION

NEUTRINO ASTRONOMY

11.55 PETER GRIEDER Recent Developments in Neutrino
Astronomy.
12.20 SIMONE MALDERA UHE neutrino fluxes from the
Pierre Auger Observatory.
12.40 FRANCESCO RONGA Analysis of the past MACRO data to
Compare muons and neutrino times from
decays of mesons in the atmosphere.

13.00 INTERVAL

Saturday 02 Morning

NEUTRINO ASTRONOMY

Chairperson: PIERO GALEOTTI

09.00 FERNANDO FERRONI Neutrinoless Double Beta Decay.

09.25 END OF SESSION

DIRECTION FOR NEXT GENERATION EXPERIMENTS

Chairperson: FERNANDO FERRONI

09.25 RENE HUDEC The Possibilities of GRB Investigation
By GAIA and LOFT.
09.40 YOSHITOMO MAEDA The ASTRO-H Mission.
09.55 LUIGI STELLA LOFT (Large Observatory For X-ray
Timing).
10.10 IGOR YASHIN Large Area Scintillation Muon Hodoscope.
10.25 PIERO GALEOTTI The JEM-EUSO mission.
10.40 ANTONELLA ANTONELLI NA62 Experiment.

10.55 COFFEE BREAK

Chairperson: LUIGI STELLA

11.25 GIOVANNI BELLETTINI LAGEOS (LAsER GEOdynamics Satellites):
Constraining spacetime torsion.
11.40 MARCO GARATTINI MoonLIGHT: a new Lunar Laser Ranging
Retroreflector instrument.
11.55 KLAUS WEIDENHAUPT AERA - The Auger Engineering Radio
Array.
12.10 BRUNO MARTINO &
MEMMO FEDERICI A Computer Cluster System efficiently
supporting the Pseudo-Parallel
execution of Geant4 serial applications.

12.25 END OF SESSION

Saturday 02 Morning

CONCLUDING REMARKS

Chairperson: BERND ASCHENBACH

12.25 LAWRENCE JONES
12.35 GIULIO AURIEMMA
12.45 JANUSZ ZIOLKOWSI

12.55 END OF SESSION

CONCLUDING ADDRESS

12.55 FRANCO GIOVANNELLI Concluding Address

13.10 END OF THE WORKSHOP