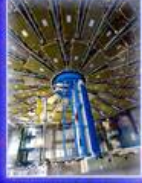
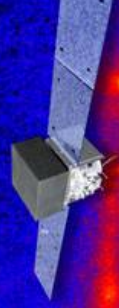


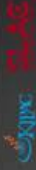
TeV PARTICLE ASTROPHYSICS 2009

July 13-17, 2009

SLAC National Accelerator Laboratory
Menlo Park, California



<http://www-conf.slac.stanford.edu/tevp09>



Agenda*

*The duration of the talks in the parallel sessions includes also time for questions:

~2 min for 15 min talk, ~3 min for 20 min talk

Welcome Party: July 13 evening

Banquet: July 15 evening

Location: Breezeway (near Panofsky auditorium)

Monday, July 13

8:00–8:30 Registration

8:30–9:00 Welcome (Panofsky)

David MacFarlane

Gianfranco Bertone

9:00–10:30 Plenary Session 1 (Panofsky)

“Particle Physics”

Chair: **Michael Peskin**

John Ellis (25'+5') — *Theoretical expectations for new physics at the LHC*

Robert Roser (25'+5') — *Experimental searches for new physics at the high energy frontier*

Helen Quinn (25'+5') — *Precision probes with sensitivity to physics at TeV scales*

10:30-11:00 Coffee break

11:00–12:30 Plenary Session 2 (Panofsky)

“Particle Physics Underground”

Chair: **Blas Cabrera**

Bernard Sadoulet (25'+5') — *WIMP direct detection: an outlook*

Giorgio Gratta (25'+5') — *Measurements of neutrino properties*

Alan Weinstein (25'+5') — *The status of the search for gravitational waves*

12:30-14:30 Lunch

14:30-18:30 Parallel Session 1 (Panofsky)

“Particle Physics”

Conveners: **Patrick Fox, Andy Haas**

Tim Tait (invited – 25') — *Looking for dark matter: here, there, and everywhere*

Yvonne Edmonds (15') — *Fermi-LAT limits on high energy gamma lines from WIMP annihilation*

Gordon Kane (15') — *Does a non-thermal wino LSP plus astrophysics describe the PAMELA and Fermi data?*

Thomas Jacques (15') — *Conservative constraints on dark matter self annihilation rate*

David Latimer (15') — *Constraining dark matter through a cosmic index of refraction*

16:00-16:30 Coffee break

David Berge (invited – 25') — *Dark matter searches with ATLAS*

Philip Schuster (invited – 25') — *Low-Energy Collider and Fixed-Target Experiments to Search For New Dark Forces*

Gregory Pawloski (15') — *Results from the MINOS Experiment*

Roni Harnik (15') — *Decaying dark matter as a probe of unification and TeV spectroscopy*

Bijan Berenji (15') — *Search for large extra dimensions with Kaluza-Klein gravitons via observations of neutron stars with Fermi-LAT*

Jeremy Mardon (15') — *Cosmic signals from the hidden sector*

Yashar Akrami (15') — *An alternative scanning technique for the profile likelihood analysis of the CMSSM parameter space*

14:30-18:30 Parallel Session 2 (Kavli aud.)

“Particle Physics Underground”

Conveners: **Jodi Cooley, Alan Weinstein**

Shawn Henderson (17') — *DM-TPC: A dark matter detector with directional sensitivity*

Lauren Hsu (invited – 17') — *Status of the cryogenic dark matter search*

Douglas Finkbeiner (17') — *Directional detection of inelastic dark matter*

Roberto Santorelli (17') — *The XENON dark matter project*

Mani Tripathi (17') — *A dark matter search program with LUX and beyond*

16:00-16:30 Coffee break

Matthew Szydagis (17') — *COUPP*

Louie Strigari (17') — *WIMP constraints including astrophysical uncertainties*

David McKee (17') — *DoubleChooz: progress and expected sensitivity*

James Loach (17') — *The Majorana neutrinoless double-beta decay experiment*

Kevin O'Sullivan (17') — *Current status of the EXO-200 experiment*

Kengo Nakamura (invited – 17') — *Status of the KamLAND experiment*

Tuesday, July 14

8:30–10:30 Plenary Session 3 (Panofsky)

“Particle astrophysics with Fermi observatory”

Chair: **Rob Cameron**

Marianne Lemoine-Goumard (25'+5') — *The Galaxy in a new light: Fermi-LAT gamma-ray observations*

Jim Chiang (25'+5') — *Fermi/LAT observations of blazars*

Hiro Tajima (25'+5') — *High energy emission from gamma-ray bursts*

Simona Murgia (25'+5') — *Search for dark matter and new physics*

10:30-11:00 Coffee break

11:00–13:00 Plenary Session 4 (Panofsky)

“Interaction of particle astrophysics and cosmology”

Chair: **Vahe Petrosian**

Wendy Freedman (25'+5') — *Measurements of neutrino mass using cosmological methods*

Carlos Frenk (30'+5') — *The structure of dark matter halos*

Nikhil Padmanabhan (25'+5') — *Constraining cosmology with LSS surveys: dark energy and non-gaussianity*

Katherine Freese (25'+5') — *Dark stars*

13:05-14:30 Lunch

14:30-18:30 Parallel Session 3 (Panofsky)

“Particle astrophysics with Fermi observatory”

Conveners: **Nicola Omodei, Jonathan Ormes**

Troy Porter (invited – 20') — *Fermi LAT measurements of the diffuse Galactic gamma-ray emission*

Markus Ackermann (invited – 20') — *Observation of the extragalactic diffuse continuum gamma-ray emission with Fermi LAT*

Keith Bechtol (15') — *GeV gamma-ray observations of galaxy clusters with the Fermi LAT*

Doron Kushnir (15') — *Relativistic particle population and magnetic fields in clusters of galaxies*

Tesla Jeltema (invited – 20') — *Searching for dark matter annihilation in dwarf spheroidal galaxies with Fermi*

16:00-16:30 Coffee break

Nicola Giglietto (invited – 20') — *Sources in the solar system observed by the Fermi Large Area Telescope*

Warit Mitthumsiri (15') — *Earth gamma-ray albedo measurements with the Fermi-LAT*

Marianne Lemoine-Goumard (15') — *Fermi-LAT observations of the Crab Pulsar and Nebula*

Yasunobu Uchiyama (invited – 20') — *Fermi-LAT observation of Supernova Remnants*

Mathew Kerr (invited – 20') — *47 Tucanae: a new laboratory for GeV millisecond pulsars*

David Paneque (15') — *Fermi view of the classical TeV high peak BL Lacs*

Chuck Dermer (invited – 20') — *Evidence for ultrahigh energy cosmic rays from Fermi observations of AGN and gamma ray bursts*

Christine Meurer (15') — *Fermi's view of the Galactic center*

Joshua Lande (poster) — *Analysis of spatially extended sources with the Fermi-LAT*

Lukasz Stawarz (poster) — *On the energy spectra of GeV/TeV cosmic ray leptons*

14:30-18:30 Parallel Session 4 (Kavli aud.)

“Interaction of particle astrophysics and cosmology”

Conveners: **Risa Wechsler, Piero Ullio**

Marla Geha (invited – 20') — *Ultra-faint satellites of the Milky Way*

Pat Scott (15') — *Direct constraints on minimal supersymmetry from Fermi-LAT observations of the dwarf galaxy Segue1*

Ping Wang (15') — *The search for dark matter Galactic satellites with Fermi-LAT*

Neelima Sehgal (15') — *Dark matter annihilation cross-section bounds from Fermi observations of dwarf galaxies*

Jennifer Siegal-Gaskins (15') — *Identifying a dark matter signal with Fermi using the anisotropy energy spectrum*

16:00-16:30 Coffee break

Andrew Zentner (invited – 20') — *New perspectives on high-energy neutrinos from dark matter in the Sun*

Shin'ichiro Ando (20') — *Gamma-ray background anisotropy from DM annihilation*

Greg Dobler (20') — *WMAP haze*

Tracey Slatyer (15') — *DM annihilation around the redshift of last scattering*

Fabio Iocco (15') — *Constraints on dark matter models with large annihilation cross-section from the early Universe*

Sofia Sivertsoon (15') — *The WIMP capture process, including scattering, for dark stars in the early universe*

Alberto Vallinotto (15') — *The WIMP forest*

Wednesday, July 15

8:30–10:20 Plenary Sessions 5 & 6 (Panofsky)

“Cosmic accelerators”

Chair: **Igor Moskalenko**

Jonathan Arons (25'+3') — *Particle acceleration in the Galaxy*

Eli Waxman (25'+3') — *What do we know about the identity of (low and high energy) cosmic-ray sources?*

Misha Malkov (25'+3') — *Wave phenomena and cosmic ray acceleration ahead of strong shocks*

Plenary Session 6:

“Particle astrophysics with neutrino observatories”

Chair: **Irina Mocioiu**

John Beacom (25'+3') — *Sources of high energy neutrinos*

10:20-10:40 Coffee break

10:40–13:10 Plenary Sessions 6 & 7 (Panofsky)

Tom Gaisser (25'+3') — *News from neutrino observatories*

Steen Hannestad (25'+3') — *Neutrinos and cosmology*

Plenary Session 7

“Particle astrophysics with multimessengers”

Chair: **Gianfranco Bertone**

Piergiorgio Picozza (25'+3') — *The PAMELA space mission for antimatter and dark matter searches in cosmic rays*

Luca Baldini (25'+3') — *Experimental review of high-energy electron/positron and proton/antiproton spectra*

Eun-Suk Seo (25'+3') — *Multimessenger perspectives*

13:10-14:30 Lunch

14:30-18:30 Parallel Session 5 (Kavli aud.)

“Cosmic accelerators”

Conveners: **Don Ellison, Lukasz Stawarz**

Masahiro Hoshino (invited – 20') — *Toward understanding of electron Fermi acceleration in magnetosonic shocks: plasma physics view*

Don Ellison (invited – 20') — *Self-generated resonant and non-resonant magnetic turbulence in efficient shock acceleration*

Elena Amato (invited – 20') — *Particle acceleration in pulsar wind nebulae*

Lukasz Stawarz (invited – 20') — *Shock versus stochastic acceleration of ultrarelativistic particles in active galaxies*

16:00-16:30 Coffee break

Greg Madejski (15') — *Gamma-ray spectra of blazars detected by Fermi/LAT*

Vasiliki Pavlidou (15') — *Two years of blazar monitoring with the OVRO 40m telescope at 15 GHz in support of the Fermi-GST*

Andy Smith (15') — *VERITAS Observations of the TeV binary LS I +61 303*

Marco Ajello (15') — *Cosmological evolution of blazars: new findings from the Swift/BAT and Fermi/LAT surveys*

Andrey Vladimirov (15') — *Strong nonresonant amplification of magnetic fields in particle accelerating shocks*

Martin Lemoine (15') — *Electromagnetic instabilities and Fermi acceleration at ultra-relativistic shock waves*

Junichi Aoi (15') — *Can we probe the Lorentz factor of gamma-ray bursts from GeV-TeV spectra integrated over internal shocks?*

14:30-18:30 Par. Session 6 (Redwood aud.[#])

“Particle astrophysics with neutrino observatories”

Conveners: **Olga Mena, Ignacio Taboada**

Irina Mocioiu (invited – 20') — *Neutrino properties and neutrino telescopes*

Nissim Fraija (15') — *Neutrino oscillation in magnetized gamma-ray burst fireball*

Sourav Mandal (15') — *Constraints on dark matter annihilation and decay from ν_e cascades*

Sarira Dahu (15') — *Propagation of high energy neutrinos in a weakly magnetized environment*

Lukas Nellen (invited – 20') — *Limits on the diffuse flux of neutrinos at ultra-high energies from the Pierre Auger Observatory*

16:00-16:30 Coffee break

Juan Antonio Aguilar (invited – 20') — *Search for neutrino point sources with the IceCube Neutrino Observatory*

Sean Grullon (15') — *Searching for high energy diffuse astrophysical neutrinos with IceCube*

Juan de Dios Zornoza (invited – 20') — *Neutrino telescopes in the Mediterranean sea*

Thomas Eberl (15') — *Status and recent data of the ANTARES neutrino telescope*

Anastasios Belias (15') — *KM3NeT, a deep sea neutrino telescope in the Mediterranean sea*

David Besson (15') — *In-ice radiowave neutrino detection at the South Pole*

Delia Tosi (15') — *Acoustic neutrino detection at the South Pole: latest results from SPATS*

[#]Redwood auditorium is located in the Research Office Building (ROB) #48

14:30-18:30 Parallel Session 7 (Panofsky)

“Particle astrophysics with multimessengers”

Elena Vannuccini, Aldo Morselli

Chairs: **Aldo Morselli, Eduardo do Couto e Silva**

John Pretz (invited – 20') — *Cosmic-ray anisotropy as observed with Milagro*

Lidia Pieri (invited – 20') — *Substructures and Sommerfeld enhancement: multi-wavelength constraints*

Joe Zunt (invited – 20') — *Can the WMAP Haze really be a signature of annihilating neutralinos?*

Marco Regis (invited – 20') — *Multi-wavelength signals of dark matter annihilations in the Galactic diffuse emission*

16:00-16:30 Coffee break

Gabrijela Zaharijas (15') — *Testing a DM explanation of the positron excess with the Inverse Compton scattering*

Pierre Brun (15') — *On the dark matter solutions to the cosmic leptons puzzle*

Alessandro Cuoco (15') — *Multi-messenger/Multi-wavelength constraints on dark matter searches*

Diego Tesaro (15') — *Multi-wavelength observations of Mrk 501 in 2008*

Philipp Mertsch (15') — *Testing astrophysical models for the PAMELA positron excess with cosmic ray nuclei*

Jeffrey Scargle (15') — *Statistical analysis of high-energy astrophysical time series*

Isabel Leonor (15') — *Gravitational-wave detectors in the nexus of multi-messenger astrophysics*

Thursday, July 16

9:00–10:30 Plenary Session 8 (Panofsky)

“Cosmic rays at the knee and above”

Chair: **Gaurang Yodh**

Pasquale Blasi (25'+5') — *Cosmic rays below and above the knee*

Angela Olinto (25'+5') — *New results from ultra-high energy frontier*

Joachim Edsjo (25'+5') — *Theoretical interpretation of new results from Fermi, PAMELA, and HESS*

10:30-11:00 Coffee break

11:00–12:30 Plenary Session 9 (Panofsky)

“Particle astrophysics with VHE gamma-ray telescopes”

Chair: **Stefan Funk**

Werner Hofmann (25'+5') — *News from the VHE gamma-ray observatories: status and galactic sources*

Frank Krennrich (25'+5') — *The extragalactic view in TeV gamma rays*

Stefano Profumo (25'+5') — *New physics with ACTs in the Fermi era*

12:30-14:30 Lunch

14:30-18:30 Parallel Session 8 (Kavli aud.)

“Cosmic rays at the knee and above”

Conveners: **Angela Olinto, Sergey Ostapchenko**

Gian Carlo Trinchero (invited – 20') — *Kascade-Grande results*

Cao Zhen (invited – 20') — *LHAASO results*

Serap Tilav (15') — *Cosmic rays at the knee and above with IceTop and IceCube*

Pierre Sokolsky (invited – 15') — *Telescope Array & Telescope Array Low-Energy extension*

Martin Lemoine (invited – 20') — *Cosmic rays around the ankle*

16:00-16:30 Coffee break

Pierre Sokolsky (invited – 20') — *HiRes results*

Nicolas Busca (invited – 20') — *Spectrum and composition of UHECRs by the Pierre Auger Observatory*

Piera Ghia (invited – 20') — *Anisotropies of UHECRs by the Auger Observatory*

Denis Allard (invited – 20') — *Interpretation of the spectrum and composition of UHECRs at the highest energies*

Kumiko Kotera (20') — *Ultra high energy nuclei*

14:30-18:30 Parallel Session 9 (Panofsky)

“Particle astrophysics with VHE gamma-ray telescopes”

Conveners: **Elisa Bernardini, James Buckley**

Chair: **Tune Kamae, Luigi Costamante**

Rouven Essig (invited – 20') — *Gamma rays from dark matter annihilation in dwarf galaxies*

Christopher van Eldik (invited – 20') — *Cosmic ray electrons and Galactic centre observations with H.E.S.S.*

Francesc Ferrer (invited – 20') — *Prospects for indirect dark matter detection with Fermi and IACTs*

Andy Smith (15') — *Indirect dark matter searches with VERITAS*

Ester Aliu (15') — *TeV gamma-ray observations of pulsar wind nebulae with VERITAS*

Niklas Karlsson (15') — *Observations of starburst galaxies with VERITAS*

16:00-16:30 Coffee break

Markus Boettcher (invited – 20') — *Models for VHE emission from blazars*

Rudy Gilmore (invited – 20') — *Cosmological gamma-ray opacity and the extragalactic background light*

Pratik Majumdar (invited – 15') — *MAGIC observations of high redshift AGNs*

Emiliano Carmona (15') — *Latest results on Galactic sources with the MAGIC telescope*

David Paneque (15') — *Study of indirect detection of axion-like particles with Fermi and IACTs*

Friday, July 17

9:00–11:00 Plenary Session 10 (Panofsky)

“New detectors”

Chair: **Tune Kamae**

Steve Kahn (18'+2') — *LSST*

Aaron Roodman (18'+2') — *JDEM: Exploring dark energy from space*

Stefan Funk (18'+2') — *Future gamma-ray telescopes*

Brenda Dingus (18'+2') — *HAWC*

Miguel Mostafa (18'+2') — *The Pierre Auger Northern Observatory*

Mark Vagins (18'+2') — *GADZOOKS!*

11:00-11:30 Coffee break

11:30–13:00 Plenary Session 11 (Panofsky)

“Conference summary”

Chair: **Elliott Bloom**

Persis Drell (30'+5') — *Experiments in astroparticle physics*

Roger Blandford (30'+5') — *Recent progress in astroparticle physics*

Elliott Bloom & Igor Moskalenko — *Closing remarks*

July 13, Monday: Ping and Josh

July 14, Tuesday: Aurelien and Alice

July 15, Wednesday: Keith, Justin, Bijan, and Alex

July 16, Thursday: Yvonne and Warit

July 17, Friday: Bijan and Alex