

# Brookhaven Forum 2011 “A First Glimpse of the Tera Scale”

## Brookhaven National Laboratory, Upton, NY -- October 19-21, 2011

All plenary and parallel sessions will be held October 19-20, 2011 in Berkner Hall, building 488  
and October 21, 2011 in the Chemistry Auditorium, building 555.

Wednesday, October 19, 2011		
PLENARY PROGRAM I, Berkner Hall, Auditorium, Chair: H. Gordon (BNL)		
9:00-9:10 a.m.	Welcome	Howard Gordon (BNL)
9:10-9:15 a.m.	Organizer's Welcome	Hooman Davoudiasl, Amarjit Soni (BNL)
9:15-9:55 a.m.	“Tevatron Highlights”	Amnon Harel (Rochester/CERN, D0)
9:55-10:35 a.m.	“Fermi Results”	Keith Bechtol (Stanford, Fermi)
10:35-11:00 a.m.	Coffee Break	
PLENARY PROGRAM II, Berkner Hall, Auditorium, Chair: E. Ponton (Columbia)		
11:00-11:40 a.m.	“Direct Dark Matter Searches”	Antonio Melgarejo Fernandez (Columbia, Xenon 100)
11:40-12:20 p.m.	“Dark Matter Theory”	Kathryn Zurek (Michigan)
12:20-2:00 p.m.	Lunch (cafeteria is located in Berkner Hall)	

2:00-3:40 p.m. PARALLEL SESSION, Berkner Hall (Talks are 15' + 5' minutes)			
SUSY (I) Location: Room A Chair: S. Gori	Top Physics Location: Room B Chair: I. Lewis	Particle Cosmology (I) Location: Room C Chair: H-S Lee	Higgs & EWSB (I) Location: Auditorium Chair: D. Stojkovic
J. Reuter: “Exceptional Grand Unification in the Light of LHC Data”	D. Orbaker: “Forward-backward Asymmetry in $t\bar{t}$ Events at D0”	C. Carone: “Two Models of TeV-scale Decaying Dark Matter”	F. Caola: “Finite fermion mass effects in Higgs physics production beyond NLO”
J. Fan: “Stealth Supersymmetry”	S. Westhoff: “Massive Gluons in Top-quark Pair Production”	I. Shoemaker: “A Dark Force for Baryons”	J. Hubisz: “Quantum Effects in 5D: A 5D NJL Model”
K. Yang: “Discovering Higgs Bosons in SUSY GUT's with Tau Leptons at the LHC”	T. McElmurry: “Top Pair Forward-backward Asymmetry from Loops of New Strongly Coupled Quarks”	P. Agrawal: “Flavored Dark Matter: Direct Detection and Colliders”	M. Lin: “Lattice Exploration of Strong Dynamics at the TeV Scale”
S. Rizvi: “Light Stop from b-tau Yukawa Unification”	D. Atwood: “An effective Lagrangian Approach to Like Sign Top Pair Production at the LHC”	J. Kile: “Flavored Dark Matter”	S-C Hsu: “Diboson Production and Anomalous Triple Gauge Couplings in ATLAS”
P. Kumar: “Electroweak Symmetry Breaking in the DSSM”		B. Dev: “Inelastic Dark Matter in SUSY Inverse Seesaw”	E. Shintani: “Conformal Fixed Point of SU(3) Gauge Theory with 12 Fundamental Fermions in the Twisted Polyakov Loop Scheme”
3:40-4:00 p.m.	Coffee Break	Berkner Hall Lobby	
4:00-4:10 p.m.	Director's Welcome	Sam Aronson (BNL): Berkner Hall Auditorium	
4:15-5:15 p.m.	<i>BSA Distinguished Lecture:</i> Dr. Nima Arkani-Hamed (IAS)	Berkner Hall Auditorium Hosted by Peter Wanderer	
5:15-6:15 p.m.	BSA Reception	Berkner Hall Lobby	

Thursday, October 20, 2011		
PLENARY PROGRAM I, Berkner Hall, Auditorium, Chair: M. Artuso		
9:00-9:40 a.m.	“CMS Results”	Albert de Roeck (CERN, CMS)
9:40-10:20 a.m.	“ATLAS Results”	Henri Bachacou (Saclay, ATLAS)
10:20-10:50 a.m.	Coffee Break	
PLENARY PROGRAM II, Berkner Hall, Auditorium, Chair: T. Gherghetta		
10:50-11:30 a.m.	“Heavy Flavor Highlights”	Sheldon Stone (Syracuse, LHCb)
11:30-12:10 p.m.	“Developments in QCD”	Kirill Melnikov (Johns Hopkins)
12:10-2:00 p.m.	Lunch	

**Thursday, October 20, 2011 (continued)**

**2:00-3:40 p.m. PARALLEL SESSION I, Berkner Hall (Talks are 15' + 5' minutes)**

<b>SUSY (II)</b> Location: Room A Chair: C. Carone	<b>Flavor &amp; CPV (I)</b> Location: Room B Chair: S. Bar-Shalom	<b>Particle Cosmology (II)</b> Location: Room C Chair: J. Kile	<b>Alternative Models</b> Location: Auditorium Chair: J. Hubisz
O. Stal: "Light Higgs Bosons in SUSY Cascades"	S. Gori: "Signals of CP Violation Beyond the MSSM in Higgs Physics"	L. van Nierop: "Codimension-2 Brane Back Reaction and Cosmology"	D. Pomeroy: "ATLAS Searches for New Physics With an e <sup>+</sup> Final State"
Z. Thomas: "Goldstini Give the Higgs a Boost"	L. Zhang: "CPV Measurement at LHCb"	J. Verbus: "Status of the LUX Dark Matter Experiment"	I. Lewis: "Majorana Neutrino and W' Chiral Couplings at the LHC"
W. Waltenberger: "CMS SUSY Searches - Interpretation in Terms of Simplified Models"	K. Gemmler: "Flavour Physics of a Generalized Left-right Symmetric Model"	D. Malling: "After LUX: The LZ Program"	D. Stojkovic: "Vanishing Dimensions: Theory and Phenomenology"
P. Jaiswal: "SQCD Corrections to $b_g \rightarrow bh$ "	F. Archilli: "Search for New Physics in $B(s,d) \rightarrow \mu\mu$ Decays at LHCb"	Z. Surujon: "WIMPlless Dark Matter in Anomaly Mediation"	L. Vecchi: "Collider bounds on neutrino interactions"
No talk	No talk	No talk	G. Alverson: "Search for Heavy Resonances at CMS"
<b>3:40-4:10 p.m.</b>	<b>Coffee Break</b>	<b>Berkner Hall Lobby</b>	

**4:10-5:50 p.m. PARALLEL SESSION II, Berkner Hall (Talks are 15' + 5' minutes)**

<b>SUSY (III)</b> Location: Room A Chair: J. Fan	<b>Flavor &amp; CPV (II)</b> Location: Room B Chair: S. Westhoff	<b>Higgs &amp; EWSB (II)</b> Location: Room C Chair: D. Atwood	<b>Collider Topics</b> Location: Auditorium Chair: T. McElmurry
Y. Pakhotin: "Searches for Supersymmetry with the CMS Detector at the LHC"	E. Izaguirre: "Heavy Flavor Simplified Models at the LHC"	Bar Shalom: "4th Generation Phenomenology with More than One Higgs Doublet"	Ye Li: "Transverse Momentum Distributions from Effective Field Theory"
J. Stupak: "Recent Results from BSM Searches at ATLAS (Including SUSY)"	M. Artuso: "Heavy Flavor Production and Decays at the LHC: Selected Highlights"	M. Geller: "Search Strategies For 4th Generation Quarks at the LHC; Beyond the SM4"	Z. Han: "Tracking the Identities of Boosted Objects"
A. Kumar: "Kinectically-Enhanced Anomaly Mediation"	S. Esen: "Belle Results at Y(5S)"	E. Furlan: "Precise Predictions for Higgs Production via Gluon Fusion in BSM Scenarios"	D. Stolarski: "Peering into the UV with Late Decays at the LHC"
C. Frugiuele: "Making the Sneutrino a Higgs with a U(1)R Lepton Number"	W. Hopkins: "Search for $B_s \rightarrow \mu^+\mu^-$ and $B_d \rightarrow \mu^+\mu^-$ Decays with CDF II"	G. Panico: "The Discrete Composite Higgs Model"	S. Quackenbush: "W b bbar Production via Double Parton Scattering at the LHC"
No talk	No talk	T-M Hong: "Recent Results from Higgs Boson Searches at ATLAS"	C-Y Chen: "General Analysis of Decay Chains with Three-body Decays Involving Missing Energy"
<b>6:30—8:30 p.m.</b>	<b>BF2011 Banquet</b>	<b>Brookhaven Center (Bldg.30)</b>	

**Friday, October 21, 2011**

**PLENARY PROGRAM I, Chemistry, building 555, Chair: F. Paige**

<b>9:00—9:40 a.m.</b>	"Status of SUSY"	Scott Thomas (Rutgers)
<b>9:40—10:20 a.m.</b>	"Non-SUSY BSM"	Tony Gherghetta (Melbourne)
<b>10:20—10:50 a.m.</b>	<b>Coffee Break</b>	Berkner Hall Lobby

**PLENARY PROGRAM II, Chemistry, building 555, Chair: A. de Roeck**

<b>10:50—11:30 p.m.</b>	"Recent Neutrino Results"	Andre De Gouvea (Northwestern)
<b>11:30—12:10 p.m.</b>	"Overview of Cosmology"	Roman Scoccimarro (NYU)

**\*\*END OF FORUM\*\***

*(If you require assistance, please contact the conference coordinator, Nicole Kelly, (631) 344-3807 (onsite x3807) or [nkelly@bnl.gov](mailto:nkelly@bnl.gov))*

**Thank you for your participation in the 2011 Brookhaven Forum.**