IX International Conference on Interconnection between Particle Physics and Cosmology (PPC2015)

Convention Center at the Deadwood Lodge, Deadwood, South Dakota, USA
June 29 - July 3, 2015

Agenda

All plenary talks take place in Room Pine Crest A

Monday, June 29: CosmoParticle-Fest

08:00 – 08:30   Registration

08:30 – 08:45   Jose-Marie Griffiths, Bhaskar Dutta & Barbara Szczersbinska: Welcome

Session I: Cosmology Review   Chair: Barbara Szczersbinska

08:45 – 09:15   Eric Linder: Review and Status of Dark Energy
09:15 – 09:45   Olivier Perdereau: PLANCK
09:45 – 10:15   Louis Strigari: Fermi-LAT
10:15 – 10:45   Coffee Break

Session II: Astrophysical Signals   Chair: Bhaskar Dutta

10:45 – 11:15   Fabio Iocco: Evidence for dark matter in the inner Milky Way
11:45 – 12:15   Carsten Rott: IceCube
12:15 – 12:45   Thomas Weiler: Astrophysical Neutrinos
12:45 – 02:00   Lunch Break, Room: Pine Crest D

Session III: Direct Detection   Chair: Teruki Kamon

02:00 – 02:30   Jaret Heise: Sanford Underground Research Facility - Update
02:30 – 03:00   Alexander Murphy: LUX
03:00 – 03:30   Rupak Mahapatra: CDMS
03:30 – 04:00   Ko Abe: XMASS
04:00 – 04:30   Coffee Break

Session IV: Dark Matter Theory   Chair: Fabio Iocco

04:30 – 05:00   Felice Iazzi: PANDA
05:00 – 05:30   Xerxes Tata: SUSY and Dark Matter
05:30 – 06:00   Howard Baer: Axion Dark Matter
06:00 – 06:30   Keith Dienes: Dynamical Dark Matter: Review and Status Report

07:00 – 09:00   Reception at the Lodge, Room: Pine Crest D
**Tuesday, June 30: Neutrino-Fest**

**Session V: Neutrino Theory**  
*Chair: Kaladi Babu*

- 08:45 – 09:15 Lisa Everett: *Overview of Neutrino Theory*
- 09:15 – 09:45 Pilar Coloma: *Neutrino Oscillation Phenomenology*
- 09:45 – 10:15 Raymond Volkas: *Physics behind Neutrino Mass*

10:15 – 10:45 Coffee Break

**Session VI: Neutrino Theory & Experiments**  
*Chair: William Louis*

- 10:45 – 11:15 Pedro Machado: *Sterile Neutrinos*
- 11:15 – 11:45 Manfred Lindner: *Neutrinoless Double Beta Decay*
- 11:45 – 12:15 Keith Robert Rielage: *Majorana Demonstrator*
- 12:15 – 12:45 Marvin Marshak: *MINOS/NOvA/DUNE*

12:45 – 02:00 Lunch Break, Room: Pine Crest D

**Session VII: Neutrino Experiments**  
*Chair: Pilar Coloma*

- 02:00 – 02:30 William Louis: *MiniBooNE*
- 02:30 – 03:00 Kathrin Valerius: *KATRIN*
- 03:00 – 03:30 Vittorio Paolone: *T2K*
- 03:30 – 04:00 Lluis Marti Magro: *Super-K*

04:00 – 04:20 Coffee Break
Session VIII: Contributed Parallel Sessions

Session VIII (A) - Dark Matter Models, Room: Pine Crest A  Chair: Louis Strigari

04:20 – 04:40 Jason Kumar: Searching for Monoenergetic Neutrinos Arising from Dark Matter Annihilation
04:40 – 05:00 Pearl Sandick: Neutralino Dark Matter - Beyond the Standard Paradigm
05:00 – 05:20 Cynthia Trendafilova: Lepton-Flavored Asymmetric Dark Matter
05:20 – 05:40 Hyun Min Lee: Models for SIMP Dark Matter and Dark Photon
05:40 – 06:00 Brooks Thomas: Searching for Signals of Non-Minimal Dark Sectors at Colliders
06:00 – 06:20 Jiaming Zheng: Dark Matter and Gauge Coupling Unification in Non-supersymmetric SO(10) Grand Unified Models
06:20 – 06:40 Seongchan Park: A Dark Matter in Neutrally Natural Theory

Session VIII (B) - Dark Matter Detection, Room: Roosevelt  Chair: Carsten Rott

04:20 – 04:40 Ethan Brown: XENON
04:40 – 05:00 K.C. Kong: MadDM: New Dark Matter Tool in the LHC Era
05:00 – 05:20 Ranjan Laha: Direct Detection of Dark Matter in Universal Bound States
05:20 – 05:40 Chris Kelso: Is DAMA’s modulation amplitude changing with time?
05:40 – 06:00 Matthias Le Dall: Sensitivity to Light Weakly-Coupled New Physics at the Precision Frontier
06:00 – 06:20 Ana Malagon: ADMX Status and R&D
06:20 – 06:40 Kirill Pushkin: PandaX

Session VIII (C) - Neutrinos and Cosmology, Room: Bullock  Chair: Lisa Everett

04:20 – 04:40 Chee Sheng Fong: Non-Thermal CP Violation in Soft Leptogenesis
04:40 – 05:00 Fabio Pupilli: Update on OPERA results
05:00 – 05:20 Ben Rybolt: Double Chooz
05:20 – 05:40 Victoria Wagner: Status of the GERDA Phase II Upgrade
05:40 – 06:00 Yung-Ruey Yen: EXO-200/nEXO
06:00 – 06:20 Mohammad Hossein Namjoo: Primordial Standard Clock
**Wednesday, July 1: Cosmology-Fest**

**Session IX: Structure Formation**  
Chair: Tom Weiler

- 08:45 – 09:15 Jan Hamann: *Neutrinos in Cosmology*
- 09:15 – 09:45 Hai-Bo Yu: *Self-interacting Dark Matter*
- 09:45 – 10:15 Shunsaku Horiuchi: *Warm Dark Matter*
- 10:15 – 10:45 Coffee Break

**Session X: Inflation and Alternatives**  
Chair: Howie Baer

- 10:45 – 11:15 Raymond Frey: *LIGO*
- 11:15 – 11:45 Marco Peloso: *Affleck-Dine Sneutrino Inflation*
- 11:45 – 12:15 Scott Watson: *Thermal History of the Universe After Inflation*
- 12:15 – 12:45 Kurt Hinterbichler: *Alternatives to Inflation*

- 12:45 – 08:00 Boxed Lunch and Excursion to Mt Rushmore and Crazy Horse
Thursday, July 2: Colliders and the Cosmos

Session XI: Colliders and Dark Matter  
Chair: Pyungwon Ko

08:45 – 09:15  Teruki Kamon: *Dark Matter Searches at CMS*
09:15 – 09:45  Sascha Mehlhase: *Dark Matter searches at ATLAS*
09:45 – 10:15  Catrin Bernius: *Hints from Run 1 and Prospects from Run 2 at ATLAS*

10:15 – 10:45  Coffee Break

Session XII: Colliders and New Physics  
Chair: Borut Bajc

10:45 – 11:15  Qiang Li: *Hints from Run 1 and Prospects from Run 2 at CMS*
11:15 – 11:45  Jogesh Pati: *Unification and Proton Decay*
11:45 – 12:15  Stuart Raby: *Unification after Run 1 at LHC*
12:15 – 12:45  Takeo Moroi: *Footprints of Supersymmetry on Higgs Decay*

12:45 – 02:00  Lunch Break, Room: Pine Crest D

Session XIII: Genesis/Dark Matter  
Chair: Rouzbeh Allahverdi

02:00 – 02:30  Pasquale di Bari: *Review and Status of Leptogenesis*
02:30 – 03:00  Utpal Sarkar: *Baryogenesis and LHC*
03:00 – 03:30  Pyungwon Ko: *Towards EW Scale CDMs with Local Gauge Symmetries*
03:30 – 04:00  Andre de Gouvea: *Fundamental Physics with Muons*

04:00 – 04:30  Coffee Break

Session XIV: Neutrinos in Astrophysics  
Chair: Eric Linder

04:30 – 05:00  Alexander Friedland: *Supernova Neutrinos*
05:00 – 05:30  Baha Balantekin: *Neutrinos in Astrophysics*
05:30 – 06:00  David McKeen: *Dark Matter-Neutrino Connection*

06:30 – 09:00  Conference Banquet, Room: Pine Crest D
**Friday, July 3: Cosmic Surveys, Unification, Neutrinos, and Future**

### Session XV: Cosmic Surveys, Unification  
**Chair: Brooks Thomas**

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<th>Speaker</th>
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<td>08:45 – 09:15</td>
<td>Alberto Carraminana</td>
<td>HAWC</td>
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<td>09:15 – 09:45</td>
<td>Kevin Reil</td>
<td>Status of DES</td>
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<td>09:45 – 10:15</td>
<td>Borut Bajc</td>
<td>Supersymmetric spectrum in minimal GUTs</td>
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10:15 – 10:45  Coffee Break

### Session XVI: Neutrinos  
**Chair: Baha Balantekin**

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<td>10:45 – 11:15</td>
<td>Henry Wong</td>
<td>TEXONO</td>
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<td>11:15 – 11:45</td>
<td>Wei Tang</td>
<td>Daya Bay</td>
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<td>11:45 – 12:15</td>
<td>June-Ho Choi</td>
<td>RENO</td>
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<td>12:15 – 12:45</td>
<td>Zelimir Djurcic</td>
<td>JUNO</td>
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12:30 – 02:00  Lunch Break, Room: Pine Crest D

### Session XVII: Neutrinos (II) and FCC  
**Chair: Xerxes Tata**

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<td>02:00 – 02:30</td>
<td>Chris Grant</td>
<td>SNO+</td>
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<td>02:30 – 03:00</td>
<td>Masayuki Koga</td>
<td>Kamland-Zen</td>
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<td>03:00 – 03:30</td>
<td>Hongbo Zhu</td>
<td>Overview of Future Colliders</td>
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03:30 – 04:00  Coffee Break

### Session XVIII: Summary  
**Chair: Keith Dienes**

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<tr>
<td>04:00 – 04:40</td>
<td>Joe Lykken</td>
<td>Particle Physics Summary talk</td>
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<tr>
<td>04:40 – 05:20</td>
<td>Michael Turner</td>
<td>Cosmology Summary talk</td>
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5:30 Adjourn