

## CIPANP2015

The Twelfth Conference on the Intersections of Particle and Nuclear Physics (CIPANP 2015) was held in Vail, Colorado, May 19-24, 2015. The “Intersections” meeting, which is held triennially, traditionally focuses on subjects that cross the boundaries between nuclear physics, particle physics, astrophysics, and cosmology, and that involve theory, experiment, and instrumentation. The meeting was established to help foster interactions among these subfields important to progress on such cross-cutting physics themes as neutrinos, dark matter, and the varied aspects of QCD.

This year marked the return of the Conference to Colorado, the state where the CIPANP series began. The first meeting of the series was held in Steamboat Springs, Colorado, in 1984 by an organizing committee led by Alan Krish. One of those who helped Alan that first year, and who then chaired the second CIPANP meeting in Lake Louise in 1986, was Erich Vogt. Erich, who supported CIPANP throughout the years, sadly passed away during the preparations for CIPANP2015. We would like to dedicate these Proceedings to him.

CIPANP was attended by more than 350 scientists, who presented 319 talks in the parallel and plenary sessions. This volume includes many of the talks that were presented at the meeting. In this introduction to the Proceeding, we would like to thank the many individuals who helped make this meeting a success. A meeting of this type only succeeds because of the hard work of a team. There are critical groups that determine the success of a meeting like CIPANP. The first of these is the committee of conveners, as they are the individuals most responsible for the meeting’s intellectual focus:

Physics at High Energies:	Meenakashi Narain Brigitte Vachon Adam Martin
High Intensity and Precision Physics:	Brendan Kiburg, Dave Armstrong Adam Ritz
Cosmic Physics and Dark Energy/Inflation:	Klaus Honscheid Eduardo Rozo
Neutrino Masses and Neutrino Mixing:	Jason Detwiler Alysia Marino Silvia Pascoli
Tests of Symmetries and the Electroweak Interaction:	Mark Pitt Jens Erler
Dark Matter:	Hugh Lippincott Tim Tait
Particle and Nuclear Astrophysics:	Barry Davids Markus Ahlers

Heavy Flavor and the CKM Matrix:	Kay Konoshita Chris Bouchard
QCD, Hadron Spectroscopy, and Exotics:	Robert Edwards Raffaella De Vita
Parton Distributions in Nucleons and Nuclei:	Harut Avakian Cedric Lorce
Hadronic Physics and the Structure of the Nucleon/Nucleus:	Barbara Pasquini Doug Higinbotham Brad Sherrill
Quark Matter and High-Energy Heavy Ion Collisions:	Rosi Reed Hannah Petersen

We thank all of these individuals for putting together an outstanding program of parallel talks. The Organizing Committee is the second group critical to the success of the meeting: they designed the meeting, selected the conveners, identified the plenary speakers, and help in countless ways to address the needs of CIPANP participants. Joining us on this committee were

Dan Dwyer  
Brendan Casey  
Patrizia Rossi  
Wim Van Oers  
Gabriel Orebi Gann  
Marvin Marshak  
Christine Natrass  
David Hertzog  
David Poland  
Nikhil Padmanabhan  
Reina Maruyama

We are so grateful to this group for their efforts on behalf of CIPANP.

A meeting like CIPANP has history and tradition, which we did our best to continue. Two wonderful committees supported our efforts. The volunteers who served on the CIPANP2015 International Scientific Advisory Board are

Yorick Blumenfeld	Angela Bracco	Roy Briere
C. Konrad Gelbke	Donald Geesaman	Geoffrey Greene
Francis Halzen	Garth Huber	Xiangdong Ji
Reiner Kruecken	Krishna S. Kumar	Yoshitaka Kuno
Lawrence Littenberg	Joseph Lykken	Robert McKeown
Jamie Nagle	Ornella Palamara	Stefano Ragazzi
Dan-Olof Riska	James Ritman	Steve Ritz
Kate Scholberg	Susan Seestrom	Alexander Skrinsky
Hank Sobel	Horst Stoecker	Robert Svoboda
	Anthony W. Thomas	

CIPANP's "corporate memory" is due to the Committee of Past Chairs

Alan D. Krisch	Erich W. Vogt
Michael E. Zeller	Willem T.H. van Oers
Richard E. Mischke	Stanley B. Kowalski
William J. Marciano	David W. Hertzog
Marvin L. Marshak	

They were the body we could turn to when we needed to find out how CIPANP had managed in the past the challenges we encountered this year.

We trust you will find these Proceeding to be a helpful record of CIPANP2015.

Bonnie Fleming, Chair  
Wick Haxton, co-Chair