

The International Workshop on Partial Wave Analysis for Hadron Spectroscopy

The George Washington University Virginia Science and Technology Campus
April 13–17, 2015

Website: <http://physics.columbian.gwu.edu/pwa-8-athos-3>

First Circular

The combined *8th International Workshop on Pion-Nucleon Partial-Wave Analysis and the Interpretation of Baryon Resonances* and *3rd Workshop on Partial-Wave Analysis Tools for Hadron Spectroscopy*, PWA8/ATHOS3, is being held at The George Washington University Virginia Science and Technology Campus (VSTC) in Northern Virginia, northwest of Washington, DC, near Dulles International Airport (IAD). This is the follow-up workshop of both PWA7 and ATHOS2, both held in 2013.

Ongoing precision studies concerning hadrons using multi-particle final states make it necessary to bring together expertise from different analysis groups and different experiments. The aim of the workshop is a constructive discussion about open issues, concerning both theoretical and practical problems. The aim of the combined PWA/ATHOS workshops is to review the status and progress in hadron spectroscopy and the related aspects of hadron reactions.

Theoretical issues concern basic model assumptions in reaction amplitude analysis. Practical issues are related to program libraries and the development of generic tools as well as new approaches handling large data volumes and analyses with many degrees of freedom.

Meson and baryon analysis schemes will be discussed jointly with new approaches for baryon spectroscopy being explored.

Scientific Program

Main topics include

- Spectroscopy of light- and heavy-quark mesons:
 - COMPASS, LHCb, BESIII, GlueX, CLAS12 et al. for light mesons
 - Theoretical foundations and the experimental status of the XYZ's
 - Partial wave analysis results
 - Meson Spectrum from lattice gauge and continuum approaches.
- Spectroscopy of baryons:
 - Status of experiments: photo- and electroproduction
 - KN , Hyperon, Cascade, Omega resonances.
 - Phenomenological analyses by various groups and missing resonances
 - Complete experiments
 - The need for hadron beams
 - PDG rating and related issues
 - Baryons in heavy-meson decays
- Amplitude parameterizations:
 - Resonance definition, parameterization, and extraction
 - Amplitude properties and S-matrix constraints
 - Regge and chiral constraints, dynamical effects
 - Isobar and dynamical models
 - Coupled-channels approaches
 - Beyond-isobar approaches
 - Dispersive methods
 - Constraints from Analyticity, e.g. Finite energy sum rules.
 - Light mesons and their decay
- Determination of strong phases and the analysis of CP violation in heavy meson-decays; final-state interactions
- Tools for fitting:
 - Tool development, computing issues, implementation of amplitudes
 - Fit reliability and bias; understanding of systematics and stability in PWA
- Result interpretation: Hadron resonances in LQCD and finite-volume problems; effective field theories; continuum QCD; quark model.

The program will consist of plenary talks organized by session conveners.

International Advisory Committee

Marco Battaglieri (INFN Genoa)
Volker Burkert (JLab)
Annalisa D'Angelo (Roma2 U.-INFN)
Robert Edwards (JLab)
Simon Eidelman (INP Novosibirsk)
Mauro Giannini (Genova U.-INFN)
Ralf Gothe (U. South Carolina)
David Ireland (U. Glasgow)
Bernhard Ketzer (TU München)
Eberhard Klempt (U. Bonn)
Curtis Meyer (Carnegie Mellon U.)
Stephan Paul (TU München)
José Pelaez (U. Complutense)
Klaus Peters (GSI)
Winston Roberts (Florida State U.)
Xiaoyan Shen (IHEP)
Matthew Shepherd (Indiana U.)
Igor Strakovsky (GWU)
Alfred Svarc (Rudier Boskovic Inst.)
Ulrike Thoma (U. Bonn)
Lothar Tiator (U. Mainz)
Ron Workman (GWU)
Qiang Zhao (IHEP/CAS)
Bingsong Zou (ITP/CAS)

Local Organization Committee

William J. Briscoe (GWU)
Michael Döring (GWU)
Helmut Haberzettl (GWU)
Michael Pennington (JLab)
Adam Szczepaniak (Indiana U./Jlab)

Call for Contributions

To contribute to this workshop in one of the topical sessions, please submit a title and abstract through the [Contributions](#) portal on the workshop's home page.

The deadline for abstract submission is January 15, 2015.

With emphasis on the workshop character, we appreciate active participation in numerous discussions.

Conference Venue

The conference will take place The George Washington University Virginia Science and Technology Campus (VSTC) at Ashburn, VA. This campus was founded in 1993 and houses some of GWs larger research programs.

Presentations will be held in [Exploration Hall](#),
20101 Academic Way,
Ashburn, VA 20147.

Hotel

SpringHill Suites – Ashburn Dulles North
20065 Lakeview Center Plaza
Ashburn, Virginia 20147, USA
Phone: 1-703-723-9300
Fax: 1-703-723-9310
Toll-free: 1-888-287-9400

The Springhill Suites have a capacity of about 120 rooms. A number of have been prebooked for the participants of the PWA/ATHOS 2015 workshop, at a special rate of \$109 per night (plus tax). Breakfast is included in that rate, plus free transportation to and from Dulles airport and the conference site. To make a reservation, please use the [link](#) on the conference website. You have to use this link to get the discount rate! Rooms are guaranteed at the special discounted group rate until February 15, 2015.

The number of workshop participants is limited to 80 persons.

Registration and Registration Fee

[Registration](#) is now open at the conference web page.

The conference fee is \$400 payable. The fee covers lunches, dinners, a welcome reception, conference dinner, conference kit, and coffee breaks. A late registration fee of \$450 EUR will be charged after February 1st, 2015. Please note that for on-site registration (\$500) we can only accept cash. The fee can be paid via PayPal or major credit cards as indicated on the [web page](#).

Visa Information

Nationals of countries that do not have a visa-waiver agreement with the US must obtain a visa! If a letter of invitation is required, please [contact](#) the local organizers as soon as possible.

Weather

In April the weather is usually very pleasant with sunny and mostly dry days. Temperatures vary between 65 and 75 Fahrenheit (18 and 24 Celsius).

Important Dates

January 15, 2015: Deadline for presentation topic submission **Deadline extended February 1.**
February 15, 2015: Deadline to confirm your room
February 1, 2015: Deadline for registration and early registration fee
April 12, 2015: Onsite registration at Marriott SpringHill Suites
April 13, 2015: Start of workshop at 09:00, VSTC
Welcome reception at 18:00, VSTC
April 16, 2015: Workshop dinner
April 17, 2015: End of workshop at 13:00

Contact Information

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We are looking forward to welcoming you in Northern Virginia!