

**International Workshop  
on Partial-Wave Analyses and Advanced Tools  
for Hadron Spectroscopy**

**PWA13/ATHOS8**

William & Mary  
Williamsburg, Virginia, USA  
Tuesday, May 28th – Saturday, June 1st, 2024  
<https://indico.jlab.org/e/athos2024>

**First Circular**


*Mark your calendars*

Partial Wave Analyses and Advanced Tools for Hadron Spectroscopy

**PWA13/ATHOS8**

May 28 - June 1, 2024  
William & Mary, Williamsburg, VA

For more information, go to [indico.jlab.org/e/athos2024](https://indico.jlab.org/e/athos2024)  
or email [athos2024@jlab.org](mailto:athos2024@jlab.org)



The *International Workshop on Partial-Wave Analyses and Advanced Tools for Hadron Spectroscopy* (PWA13/ATHOS8) is a joint meeting combining the *13th International Workshop on Pion-Nucleon Partial Wave Analysis and the Interpretation of Baryon Resonances* (PWA) and the *8th Workshop on Partial-Wave Analysis Tools for Hadron Spectroscopy* (ATHOS). It will take place at William & Mary in Williamsburg, Virginia, in proximity to the Thomas Jefferson National Accelerator Facility (Jefferson Lab). Previous editions were held at University of Bristol (2021), CBPF in Rio de Janeiro (2019), IHEP in Beijing (2018), George Washington University (2017), and University of Bonn (2015).

## Scientific Program

The purpose of this workshop series is to bring together experimental and theoretical groups working in hadron spectroscopy. The emphasis of the scientific program is on methods and tools for data analysis, addressing challenges that are common in the study of excited baryons, mesons, and the recently discovered exotic hadrons in the light-quark as well as in the heavy-quark sector. For the planned workshop, a special focus will be put on the application of innovative statistical methods like artificial intelligence and machine learning (AI/ML) to the field of amplitude analysis. Main topics include

- Spectroscopy of mesons, baryons, and exotic hadrons with heavy quarks
- Spectroscopy of light mesons and baryons
- Advanced tools and methods for partial-wave and amplitude analyses
- Models for partial-wave and amplitude analyses
- Amplitude analysis as input for other fields

The program will consist of plenary talks that are organized by session conveners. The talks are divided into invited and short contributions.

## Call for Contributions

To contribute to one of the workshop's topical sessions, please submit a title and an abstract through the workshop website at <https://indico.jlab.org/e/athos2024>.

**The deadline for abstract submission is March 1st, 2024.**

Conveners will select specific contributions to be invited presentations. With emphasis on the workshop character, we encourage speakers to present work in progress and to focus also on challenges encountered in their analyses. The program will leave ample time for discussions. We encourage an active participation in particular of early-career scientists (students and postdoctoral researchers) in these discussions.

## International Advisory Committee

Marco Battaglieri (INFN, Italy)  
Raúl Briceño (UC Berkeley and LBNL)  
Volker Burkert (Jefferson Lab)  
Michael Döring (George Washington University)  
David Ireland (University of Glasgow, UK)  
Beijiang Liu (IHEP, China)  
Curtis Meyer (Carnegie Mellon University)  
Eulogio Oset (Valencia University, Spain)  
Michael Ostrick (Mainz University, Germany)  
Stephan Paul (Technical University of Munich, Germany)  
Anton Poluektov (IN2P3, France)  
Elisabetta Prencipe (FZ Jülich, Germany)  
Jonas Rademacker (University of Bristol, UK)  
Alberto Corrêa dos Reis (CBPF, Brazil)  
Toru Sato (Osaka, Japan)  
Jin Shan (IHEP, China)  
Alfred Švarc (RBI, Croatia)  
Adam Szczepaniak (Indiana University and Jefferson Lab)  
Ulrike Thoma (Bonn University, Germany)  
Qiang Zhao (IHEP, China)  
Bing-Song Zou (IHEP, China)

## Local Organizing Committee

Alexander Austregesilo (Jefferson Lab)  
Justin Stevens (William & Mary)  
Boris Grube (Jefferson Lab)

## Conference Venue

The conference will take place in the Brinkley Commons Room in the Alan B. Miller Hall at William & Mary in Williamsburg, Virginia. William & Mary was founded in 1693 and is the second-oldest institution of higher education in the United States. The college educated many historic figures, among them the American presidents Thomas Jefferson, James Monroe, and John Tyler. Today, William & Mary is a public research university with about 6500 undergraduate and close to 3000 graduate students. Its 4.9 km<sup>2</sup> campus is considered one of the most beautiful college campuses in the United States. It borders on Colonial Williamsburg, which is the largest outdoor living museum in the United States spanning over 1.2 km<sup>2</sup> with more than 500 restored buildings and attracting about one million visitors per year. The city of Williamsburg is a small city with a population of about 15 500. It is located on the Virginia Peninsula in the northern part of the Hampton Roads metropolitan area.



Courtesy of William & Mary

## Transportation

Directions to the William & Mary campus can be found at <https://www.wm.edu/about/visiting/directions/>.

### By Plane

Williamsburg has three nearby airports, which can be reached by taxi, airport shuttle, or ridesharing companies:

- Newport News/Williamsburg International Airport (PHF): 30 km, ca. 40 min
- Norfolk International Airport (ORF): 70 km, ca. 1 h  
Note, that the tunnel between Norfolk and Williamsburg can cause traffic delays, especially during rush hour.
- Richmond International Airport (RIC): 74 km, ca. 1 h

### By Train or Bus

The Williamsburg Transportation Center is served by Amtrak trains connecting to Newport News, Richmond, and Washington DC. Intercity bus service is provided by Greyhound Lines (Carolina Trailways), Hampton Roads Transit (HRT), and the Williamsburg Area Transit Authority.

## Registration Fee

We will announce the registration fee and payment procedures in the second circular. At this point, we will also open the workshop registration.

## Financial Support

Depending on available funding, we plan to offer limited financial support to early-career scientists (students and postdoctoral researchers) to cover registration fees and/or lodging. To apply for financial support please submit an abstract via the workshop website at <https://indico.jlab.org/e/athos2024> and send a request for financial support to [athos2024@jlab.org](mailto:athos2024@jlab.org). The email should include information about your career stage and a brief description of your research project. In addition, we require a support letter from your supervisor to be sent to [athos2024@jlab.org](mailto:athos2024@jlab.org) as well.

**The deadline for travel-support applications is March 1st, 2024.**

## Visa Information

In order to enter the US and attend the workshop a business visa (either B-1 or WB, if from a visa-waiver country) is required. This type of activity is not allowed on a tourist visa (B-2 or WT). In particular, if you obtain any type of funding or reimbursement from the workshop, it is imperative that you enter the US with a business visa. Consult the Visa Wizard on the US Embassy website to verify whether you need a visa or your country participates in the Visa Waiver Program. Note that even if you are a citizen of a visa-waiver country, you must have a valid ESTA and the correct type of passport.

### Obtaining a Visa

There are many different requirements to obtain a visa to enter the United States. Some embassies may request the workshop attendee to present a letter from the workshop to verify their intentions to attend the specific workshop. It may also be necessary to verify that the requester has paid the registration fee in full. Visa applications are currently subject to a greater degree of scrutiny than in the past. Many applicants may be required to appear in person for an interview as part of the visa process. Applicants affected by these procedures are informed of the need for additional screening (Administrative Processing) at the time they submit their visa application and will be advised to expect delays. Therefore, we urge attendees to apply for their visa as early as possible and no later than 3 to 5 months prior to the workshop. Below are suggestions to help you secure the correct visa.

- Apply for a Business visa.
- Apply at the appropriate location. You can check on-line for the wait times for appointments.
- Be accurate and specific in completing your application. Avoid mistakes. If needed, attach an additional explanation letter.
- Attach evidence of your previous visits to the United States and of your intended return trip to your home country.
- Acquire a police clearance, if possible.

- Bring all documentation proving your home country connections. Suggestions include: past visas, bank accounts, family, professional position, home ownership, and marriage license.
- If you are presenting a paper or speaking at the meeting or are receiving travel reimbursement, bring copies of correspondence confirming that.
- Bring your letter of invitation from the workshop.
- Be prepared to allow inkless fingerprinting and digital photographs upon entry to the US.

Note that a visa only allows you to travel to the United States. You will still have to be admitted at your point of entry.

## **Invitation Letters**

Letters of invitation are only provided to attendees who are planning to participate and attend the workshop. To request a letter of invitation please register via the workshop website at <https://indico.jlab.org/e/athos2024> and fill out the form linked under Travel Information. You will need to provide the following information in your request:

- Your email address
- Your full name (family name and given name)
- Your title
- Your arrival and departure dates

## **Accommodation**

Information about hotels in the surrounding area will be provided in the second circular.

## **Meals**

We are planning to organize on-site lunches, which will be included in the registration fee. Information about restaurants in the surrounding area will be provided in the second circular.

## **Social Program**

The social program will be announced in the second circular.

## **Weather**

Williamsburg is in the humid subtropical climate zone. End of May, the weather is usually sunny with temperatures reaching up to 30 °C during the day. Nights are around 20 °C. (Do not forget your swimsuit.)

## Important Dates

November 1st, 2023	First circular with announcement and general information Start date for abstract submission
March 1st, 2024	Deadline for abstract submission
March 1st, 2024	Deadline for travel-support applications
May 28th, 2024	On-site registration and start of workshop
June 1st, 2024	End of workshop

## Contact Information

Workshop website	<a href="https://indico.jlab.org/e/athos2024">https://indico.jlab.org/e/athos2024</a>
Workshop email	<a href="mailto:athos2024@jlab.org">athos2024@jlab.org</a>
Conference venue	Alan B. Miller Hall William & Mary 101 Ukrop Way Williamsburg, VA 23185 USA <a href="https://www.wm.edu/about/visiting/campusmap/location/miller.php">https://www.wm.edu/about/visiting/campusmap/location/miller.php</a>

We are looking forward  
to welcoming you in Williamsburg!