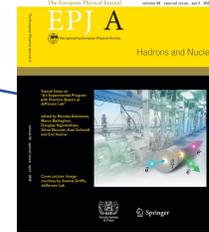
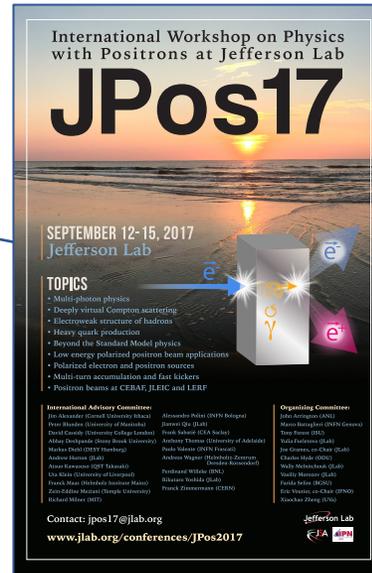
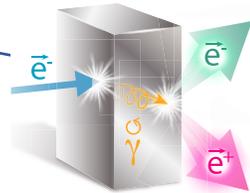


# LEPP Workshop Charge

LEPP @ JLab

D. Cassidy, J. Grames, D. Higinbotham, K. Jordan, T. Kutz, A. Schmidt, F. Selim, E. Voutier *et al.*



PAC  
Proposals  
Accelerator  
R&D

## LOW ENERGY ELECTRON POSITRON PHYSICS INTERNATIONAL WORKSHOP

LEPP@JLab

Newport News, VA, USA  
March 23<sup>rd</sup>-27<sup>th</sup>, 2026!

In the context of the Ce-BAF 12 GeV upgrade initiative, new beam capabilities at sub-GeV energies will become available at Jefferson Lab. The LEPP @ Jefferson Lab International Workshop explores new pathways for science with both unpolarized and polarized electron and positron beams at low energies.

**SCOPE** This workshop will cover:

- Beam energies ranging from 1-100 MeV for both species
- Moderated/slow positrons to several eV

**EMERGING CAPABILITIES** The path toward GeV positron beams opens the door to new capabilities:

- Positron sources
- Low-energy (sub-GeV) nuclear physics
- Atomic physics
- Materials science

**ORGANIZING COMMITTEE**

Axel Schmidt, George Washington University  
David Cassidy, University College London  
Doug Higinbotham, Jefferson Lab  
Eric Voutier, UC/Lab  
Farido Selim, Arizona State University  
Joe Grames, Jefferson Lab  
Kevin Jordan, Jefferson Lab  
Tyler Kutz, Johannes Gutenberg University Mainz

Jefferson Lab

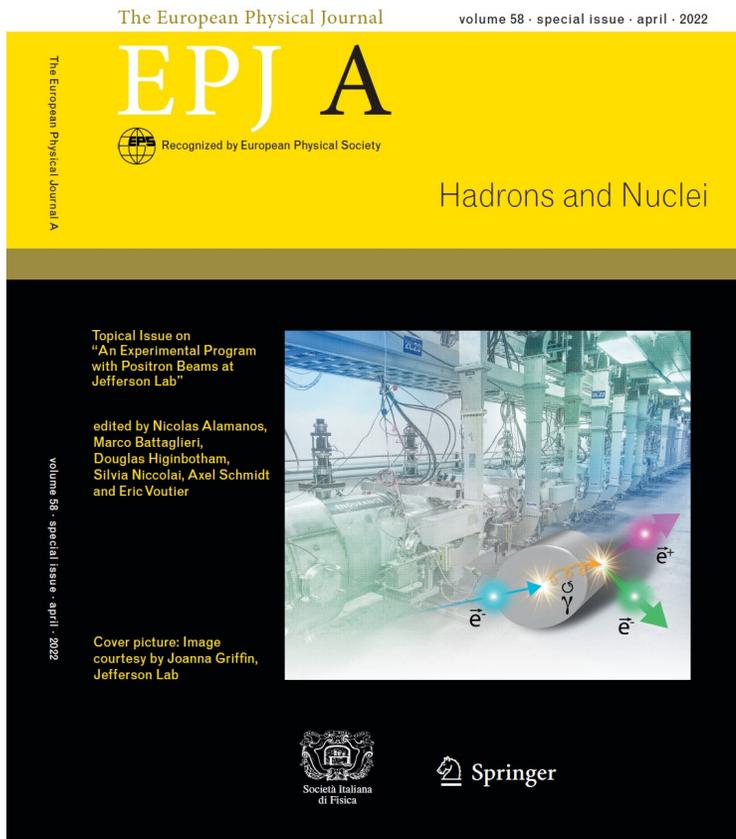
SCAN FOR MORE INFORMATION

JPos09, AIP Conference Proceedings 1160 (2009)

JPos17, AIP Conference Proceedings 1970 (2018)

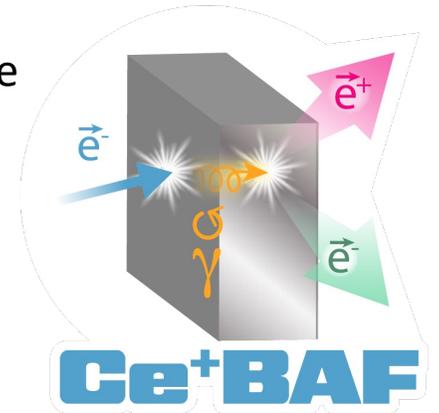


## Positron White Paper



❖ The  $Ce^+BAF$  initiative aims at developing **high-duty cycle polarized** and unpolarized **positron beams** for a unique **Nuclear Physics** experimental program on fixed targets addressing:

- Nucleons and nuclei structure at the partonic scale  
*Generalized Parton Distributions...*
- Two- and Multi-Photon Exchange phenomena  
*Forms factors, Coulomb corrections, Dispersive effects...*
- Tests of the standard model of Particle Physics  
*Search for light dark matter mediator...*

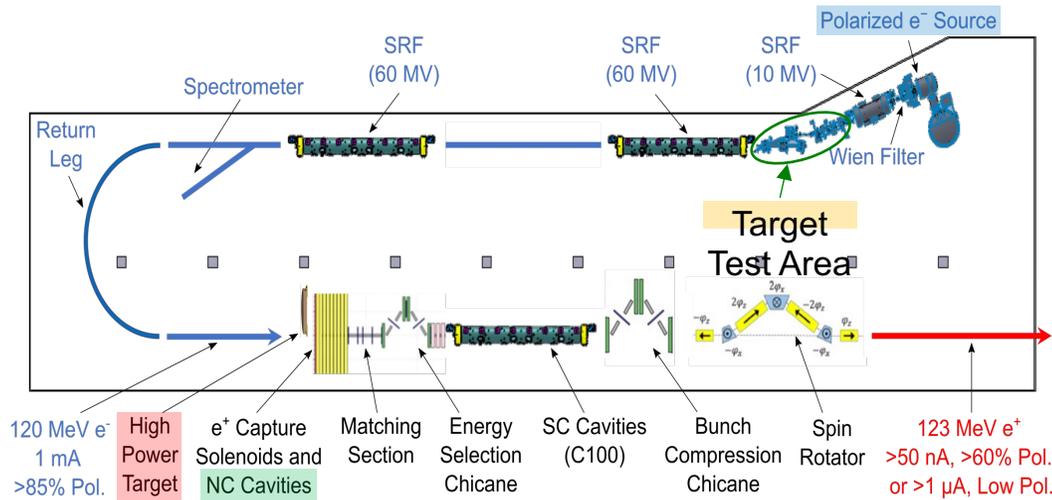


❖ The **JLab Positron Experimental Program** represents today **8 approved (C1) proposals** covering the **3 pillars** of the **JLab Positron White Paper** and accounting for **471 days** of single hall running.

# The $Ce^+BAF$ initiative

## LEEPP @ JLab

- The success of **Ce<sup>+</sup>BAF 12 GeV** relies on the development of **crucial R&D** for generating the required **electron** and **positron beams**. Consequently, **new capabilities** should emerge in the meantime, with opportunities for **Low-Energy (sub-GeV) Electron and Positron Physics**.

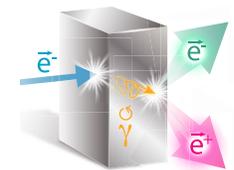


*Ce<sup>+</sup>BAF positron source concept at the LERF*

- ❖ The LEEPP@JLab Workshop aims to explore **new pathways for Science** with both (un)polarized **electron** and **positron beams** from a **few eV** to a **few 100 MeV**.

- Positron source & instrumentation
- Materials Science
- Atomic Physics
- Nuclear Physics
- Tests of the standard model of Particle Physics

*What would be a **high impact** experimental program with **low-energy electron and positron beams** at JLab ?*



*Agenda*

	Monday 23 <sup>rd</sup>	Tuesday 24 <sup>th</sup>	Wednesday 25 <sup>th</sup>	Thursday 26 <sup>th</sup>	Friday 27 <sup>th</sup>
08:45-12:30	General Introduction	Materials Science	Atomic Physics	Nuclear Physics II	Test of the Standard Model
12:30-13:45	Lunch	Lunch	Lunch	Lunch	
13:45-17:30	Positron source & Instrumentation I	Nuclear Physics I	JLab Tour	Positron source & Instrumentation II	
17:30-19:00	Reception & Posters		Social Event	Diner	

- **LEPP proceedings** will be published in Proceedings of Science (PoS).