

2017 JSA Initiative Funds - Report

International Workshop on Positron Physics at Jefferson Lab (JPos17)

J. Grames, E. Voutier for the Organizing Committee

1. Introduction

The purpose of the JPos17 International Workshop on Positron Physics at the Jefferson Laboratory was to discuss the new opportunities offered by the perspective of a polarized positron beam at CEBAF and JLEIC. These included: interference physics, charged current physics, tests of the Standard Model, positron applications, positron production, and beam physics. Within the general context of the Jefferson Lab Positron Working Group, this effort aims at developing a successful scientific agenda and producing a White Paper on Positron Physics at Jefferson Lab.

2. Organization

The workshop took place at Jefferson Lab, September 12-15, 2017. It was organized by a group of international experts in all the fields related to Jefferson Lab science and technology, and strongly involved in the CEBAF and/or JLEIC experimental programs: J. Arrington (ANL), M. Battaglieri (INFN Genova), T. Forest (ISU), Y. Furetova (JLab), J. Grames (co-chair, JLab), C. Hyde (ODU), W. Melnitchouk (JLab), V. Morozov (JLab), F. Selim (BGSU), B. Vlahovic (NCCU), E. Voutier (co-chair, IPNO), X. Zheng (UVa).

3. Highlights

The workshop lasted 4.5 days. A total of 48 oral presentations, 2 Round Table discussions and 5 poster presentations during a two-hour social event were held. In addition, more than 20 individuals participated in a tour of CEBAF, LERF and Hall B. All of the oral presentations are managed and freely available at the workshop CERN Indico website. Proceedings of the workshop are in preparation and will be published by the American Institute of Physics in on-line format available freely in perpetuity.

A total of 82 people representing 6 countries (France, Germany, India, Italy, Japan, USA) registered for the workshop. Nearly half of the workshop (38) were represented by the Jefferson Lab Accelerator, Physics and Theory divisions. The remaining participants span US Universities (27), International Universities and International National Facilities (12), and companies with which Jefferson Lab participates as a sub-contractor in US DOE SBIR/STTR programs (3).

JPos17 was a real success, generating interactions between different communities and group of experts. Scientific discussions developing along the workshop led to a better definition of

requirements and synergies needed to address polarized positron beams at JLab and were essential to establish the White Paper strategy. This document will build on the basis of the workshop proceedings and will be made available to the scientific community before July 2018.

4. JSA award Profile

The workshop was supported by JSA (\$4000), JLab (\$3652), IPNO (\$1075), and collected \$5685 in terms of registration fees. JSA award supported a total of 17 participants in the form of both registration waivers (\$1700) and Residence Facility housing (\$2300). A total of 7 Graduate Students and 3 Junior Faculty/Scientists were supported. The remaining participants who received support were judged on two criteria, being critical to the success of the workshop and/or incurring the greatest effort to attend (for example, international travelers). Those whom received support are:

- S. Agarwal (Bowling Green State University, Bowling Green, OH, USA),
- A. Kawasuso (National Institute for Quantum and Radiobiological Science and Technology, Takasaki, Japan),
- O. Koschii (George Washington University, Washington, DC, USA),
- J. Kuriplach (Charles University, Prague, Czech Republic),
- L. Marsicano (Istituto Nazionale di Fisica Nucleare, Genova, Italy),
- M. Murray (University of Kansas, Lawrence, KS, USA),
- M. Palone (Temple University, Philadelphia, PA, USA)
- S. Riordan (Argonne National Laboratory, USA),
- A. Schmit (Massachusetts Institute of Technology, Cambridge, MA, USA),
- S. Schmitt (Deutsches Elektronen-Synchrotron, Hamburg, Germany),
- N. Sherrill (Indiana University, Bloomington, IN, USA),
- P. Stepanov (Bowling Green State University, Bowling Green, OH, USA),
- C. Van Hulse (Universidad del Pais Vasco, Bilbao, Spain),
- A. Wagner (Helmoltz-Zentrum Dresden-Rossendorf, Dresden, Germany)
- F. Willeke (Brookhaven National Laboratory, Upton, NY, USA),
- F. Wu (University of Missouri, Columbia, MO, USA),
- M. Yurov (University of Virginia, Charlottesville, VA, USA).