

FY2017 JSA Initiatives Fund Proposal Summary Sheet

Proposal title

Workshop on New Opportunities with High Intensity Photon Sources at JLab



New proposal



Renewal

Total funds requested

\$2,500

Total leveraged support / Matching funds * See Note below.

\$2,500

To be completed by JSA: Total funds awarded **\$2,500**

Note: Identify in your budget proposal the source, type and amount of support from each institution.

Principal Investigator (PI)

Tanja Horn

Institutional affiliation
Mailing address
Email / phone #

Catholic University of America
620 Michigan Ave NE
Washington, DC 20064
hornt@cua.edu, phone: 202-319-5326

Co-PI (if more than 1 add pages with information)

Carlos Munoz-Camacho

Institutional affiliation
Mailing address
Email / phone #

Institut de Physique Nucleaire Orsay
15 rue Georges CLEMENCEAU
91406 ORSAY (FRANCE)
munoz@jlab.org, phone: 0169155112

Check one category: If PI is a Lab employee, your identification of the appropriate Associate Director below represents the acknowledgement of that AD with your submittal of proposal. **No signature required.**



Lab employee

If Lab employee, Associate director (email / phone)



Lab user

If Lab user, University affiliation. Joint appointees, identify Lab division association.

PI: Catholic University of America, Division of Physics, co-PI: IPN-Orsay



Other

If Other, Institutional affiliation

Executive summary including the projected begin/end dates. **Project Start Date** (mm/yy) 01/17

Project End date (mm/yy) 01/17

Add additional pages if necessary.

Funds are requested for the "New opportunities with high intensity photon sources at JLab" workshop. There has been recent discussion of a photon source with large gain in figure-of-merit to be used with both dynamically polarized targets to measure processes such as wide-angle and timelike Compton Scattering (WACS and TCS), and potentially to convert into a K_long beam for spectroscopy experiments. PAC43 and PAC44 at Jefferson Lab have seen a few proposals and several LOIs related to these photoproduction topics. The possible photon source would give a gain in figure-of-merit of a factor of 30 for some experiments. For processes such as wide-angle compton scattering and timelike compton scattering the high intensity photon source could be coupled with high-precision calorimetry. For the latter, plans are discussed in all four Halls. The workshop will take place at the Catholic University of America January 5-6, 2017, sufficiently early in time such that it will benefit proposals for PAC45.

The workshop will be dedicated at bringing together the communities using high precision calorimetry and high intensity photon sources, with the aim to consider the high-level science goals to be achieved by WACS and TCS processes. The workshop will also include discussions of converting a high intensity photon source into K_long beam. The emphasis will be on new avenues in hadron structure studies that could contribute to the existing program at JLab. By exploring new avenues for neutral kaon beams, it may also contribute to the hadron spectroscopy program.

The workshop is aimed at producing an optimized photon source concept with potential increase of scientific output at JLab, and at refining the science for photoproduction experiments.

The workshop will aid in addressing the PAC43 comments on a WACS proposal and LOIs on TCS and K_long beams, and also the recent PAC44 comments, and to prepare a full proposal for the next PAC.

Jefferson Science Associates, LLC
Managing and Operating the Thomas Jefferson National Accelerator Facility
for the U.S. Department of Energy

Proposal title Workshop on New Opportunities with High Intensity Photon Sources at JLab

Principal Investigator (PI) Tanja Horn

Synopsis of scientific, educational, technical, and/or business merits, and alignment with and significance to Lab's current program. Add additional pages if necessary.

The workshop provides an excellent opportunity for physicists from the hadron structure and hadron spectroscopy communities to meet and discuss opportunities with high intensity photon sources in combination with high precision calorimetry. It provides a venue for young researchers to present their ideas and work on this topic. It is an essential goal of the workshop to provide an opportunity for young research scientists to present their work, and it is an advantage to have the workshop in the DC area in close proximity to JLab and major research institutions.

The workshop is organized by the Neutral Particle Spectrometer (NPS) collaboration, which is led by the PI. The NPS collaboration consists of 32 scientists from 14 institutions in 7 countries. The workshop will likely be organized adjacent to the annual NPS collaboration meeting to increase attendance. To have this topical workshop in Washington DC will greatly enable groups that have developed plans for high-intensity compact photon sources, with many proponents located in Virginia (Charlottesville, Harrisonburg, Newport News, Norfolk, Washington DC) being able to attend. The Washington location also would allow direct flights for some of our international collaborators, like from Giessen/Germany, Glasgow/UK and Orsay/France. The workshop will reach out to proponents of the K_{long} beams, also often residing in the Virginia/Washington area, as part of the organizing committee. The organizing committee includes Carlos Munoz-Camacho (IPN-Orsay), Cynthia Keppel (JLab), Igor Strakovsky (GWU) and Tanja Horn (CUA).

The physics topics of the workshop covers many important aspects relevant to the community and the JLab scientific program. Among other topics there are: the "3-D" Structure of the Nucleon, Generalized Parton Distributions and Form Factors. It also will include a session related to hadron spectroscopy.

This will be a two-day workshop. We plan to have instead of proceedings a short white paper on an optimized compact photon source and its science potential.

Proposed evaluation plan to measure success. If this is a request for renewal of funds, assessment of prior year performance. Add additional pages if necessary.

The event will be considered a success if:

- 1) Participants actively engaged in the optimization of compact photon source
- 2) At least one third of attendance is by young scientists
- 3) Documentation of optimized photon source concept in the form of a short white paper, also shortly addressing the scientific benefits to hadron structure and spectroscopy studies, is produced
- 4) Coherent plan for the science impact to be addressed by polarized wide-angle Compton scattering is devised

Your proposal may include letters of endorsement and other supporting information. A maximum of 10 additional pages may be appended to this proposal form.

Budget Proposal

Proposal Title Workshop on New Opportunities with High Intensity Photon Sources at JLab

Principal Investigator (PI) Tanja Horn

Total funds requested \$2,500

To be completed by JSA: Total funds awarded **\$2,500**

	Item Description		Amount
<p>Equipment. Lab users submitting proposals that include equipment to be used at the Lab must review with the appropriate Lab Associate Director. The provision of the name of the AD below represents the AD's acknowledgement. No signature required.</p> <p>Associate Director: _____</p> <p>_____</p> <p>_____</p> <p>_____</p>			
	Subtotal Equipment		\$0
<p>Travel Support. Provide break-out of estimates for registration fees, lodging and transportation, catering, and facility charges (room rentals, AV equipment; etc.)</p>			
	Transportation and lodging support for 10 young reseachers: postdocs and +	\$2,500	
	_____	_____	
	_____	_____	
	_____	_____	
	Subtotal Travel		\$2,500
<p>Supplies</p> <p>_____</p> <p>_____</p> <p>_____</p>			
	Subtotal Supplies		\$0
<p>Consultants/Subcontracts</p> <p>_____</p> <p>_____</p> <p>_____</p>			
	Subtotal Consultants/Subcontracts		\$0
<p>Other Expenses. Examples include stipends and honoraria, prizes, awards. The JSA Initiatives Fund Program does not support salaries and salary-related expenses, or indirect expenses. Describe other expenses below.</p> <p>_____</p> <p>_____</p> <p>_____</p>			
	Subtotal Other Expenses		\$0
	Total Budget Proposal		\$2,500

Budget Justification and Leveraged Support/Matching Funds information. Identify the source, type and amount of support from each institution. For in-kind support, provide estimate of value. Your identification of the authorized representative who has committed institutional support for your proposal represents the acknowledgement of that individual. If support or funds are provided by the Lab, identify the associate director (or equivalent) as the authorized representative. Add additional pages if necessary.

We have received matching funds of \$2500 for this workshop. Source: Thomas Jefferson National Lab, Lab Deputy Director for Science, Robert McKeown (bmck@jlab.org). See attached documentation.

Our prior experience with the organization of a similar size meeting (the 2010 EIC collaboration meeting) at CUA, funding at the level of \$500/person assists participants in that advisors / employers of the young scientists were able to cover the remaining expenses. The location in Washington DC allows many to come by car or direct flight minimizing costs.



Tanja Horn <hornt@cua.edu>

JSA Initiatives Fund Program FY2017 - Proposal submission for High Intensity Photon Sources Workshop

Bob McKeown <bmck@jlab.org>

Sat, Aug 13, 2016 at 10:43 AM

To: Tanja Horn <hornt@cua.edu>

Cc: Carlos Munoz <munoz@jlab.org>, Elizabeth Lawson <elawson@sura.org>, Pat Stroop <Stroop@jlab.org>

Tanja,

I think such a workshop is a very good idea, especially given the result of PAC44 on WACS. Of course it will be necessary to include all the parties involved in the previous WACS proposals in these workshop discussions.

I am happy to offer the JLab will provide \$2500 in matching funds to the \$2500 from JSA to support your \$5K request for funds.

Best regards,

Bob

On 8/12/2016 11:01 PM, Tanja Horn wrote:

Dear Bob,

Carlos and I submitted a JSA Initiatives proposal for a workshop on high intensity photon sources at JLab. The workshop will be dedicated at bringing together the communities using high precision calorimetry and high intensity photon sources. The emphasis will be on new avenues in hadron structure studies that could contribute to the existing program at JLab. By exploring new avenues for neutral kaon beams, it may also contribute to the hadron spectroscopy program. Please see the attached proposal for additional details.

Elizabeth alerted us to discuss the availability of matching funds with you. Could you please let us know if this would be possible?

Best wishes,
Tanja

----- Forwarded message -----

From: **Elizabeth Lawson** <elawson@sura.org>

Date: Fri, Aug 12, 2016 at 2:24 PM

Subject: Re: JSA Initiatives Fund Program FY2017 - Proposal submission for High Intensity Photon Sources Workshop

To: Tanja Horn <hornt@cua.edu>

Cc: Carlos Munoz <munoz@jlab.org>

Dear Tanja:

Prior to forwarding IF proposals for evaluation, we are conducting a cursory review to provide proposers the opportunity to submit revised proposals to correct minor deficiencies. Note that this is not a thorough review and the completeness, accuracy, and quality of your proposal is your responsibility.

The preliminary review of your workshop proposal has been conducted. Please submit a revised proposal by

August 16 to address the following:

1. Proposal does not address the following requirement: "For scientific meeting support, proposers should discuss availability of matching funds with the Lab Deputy Director for Science (Robert McKeown, bmck@jlab.org) prior to proposal submission."

--Elizabeth

Elizabeth L. Lawson
Chief Governance Officer and Corporate Secretary
Principal JSA/JLab Liaison
Southeastern Universities Research Association (SURA)
Board Liaison and Secretary
Jefferson Science Associates, LLC (JSA)
1201 New York Avenue, NW; Suite 430
Washington, DC 20005
Office: 202.408.7872 Ext. 410
Direct: 202.408.2410
Mobile: 703.625.8750
elawson@sura.org

On 8/8/16 4:35 PM, Tanja Horn wrote:

Dear Elizabeth,

Please find attached our proposal titled "Workshop on New Opportunities with High Intensity Photon Sources at JLab".

Please let us know if you need any further information.

Best wishes,
Tanja