

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

**FY2018 JSA Initiatives Fund Proposal Summary Sheet**

**Proposal title**

**Project Start Date** (month/year)

**Project End Date** (month/year)

New  
proposal

Renewal

**Total funds  
requested**

Total leveraged support / matching  
funds. Details of funds must be  
included in budget proposal.

**To be completed by JSA: Total funds awarded**

**Principal Investigator (PI)**

Institutional affiliation  
Mailing address  
Email / phone #

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

Institutional affiliation  
Mailing address  
Email / phone #

**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: Identify Associate Director (email /  
phone)

Lab user: Identify University affiliation (email / phone)  
Joint appointee: identify University and Lab division  
association (email / phone)

Other: Identify Institutional affiliation (email /  
phone)

**Proposal: Attach file with**

- (1) **Executive summary and technical proposal**
- (2) **Synopsis of scientific, educational, technical, and/or business merits, and alignment with and significance to Lab's current program**
- (3) **Proposed evaluation plan to measure success.** If this is a request for renewal of funds, assessment of prior year performance,

Your proposal may include letters of endorsement and other supporting information (maximum of 12 pages including this summary sheet and budget sheet)

# Budget Proposal

**Proposal Title**

**Principal Investigator (PI)**

**Total funds requested**

**To be completed by JSA: Total funds awarded**

	Item Description		Amount
<p><b>Equipment.</b> 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. <b>No signature required.</b></p>			
	Associate Director: _____		
	_____	_____	
	_____	_____	
		Subtotal Equipment	
<p><b>Travel Support.</b> Provide break-out of estimates for registration fees, lodging and transportation, catering, and facility charges (room rentals, AV equipment; etc.)</p>			
	_____	_____	
	_____	_____	
	_____	_____	
	_____	_____	
		Subtotal Travel	
<p><b>Supplies</b></p>			
	_____	_____	
	_____	_____	
		Subtotal Supplies	
<p><b>Consultants/Subcontracts</b></p>			
	_____	_____	
	_____	_____	
		Subtotal Consultants/Subcontracts	
<p><b>Other Expenses.</b> Examples include stipends and honoraria, prizes, awards.</p>			
	_____	_____	
	_____	_____	
		Subtotal Other Expenses	
		<b>Total Budget Proposal</b>	

**Budget Justification:** Include narrative to explain need for each line item in the budget, showing breakdown of calculations used to arrive at the amount in each line of the budget. Note that the JSA Initiatives Fund Program does not support salaries and salary-related expenses, or indirect expenses.

**Leveraged Support/Matching Funds information.** Identify the source, type and amount of dollar funds from each institution. Include **separately** estimated value of in-kind support. 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. Information may be included on separate page.

# HYP2018, the 13<sup>th</sup> International Conference on Hypernuclear and Strange Particle Physics

## Proposal to JSA for FY2017 JSA Initiatives Fund

### Executive Summary

Project Start Date: 06/18      Project End Date: 06/18

The 13<sup>th</sup> International Conference on Hypernuclear and Strange Particle Physics (HYP2018) will be the thirteenth one in the series of HYP conferences initiated in 1982 in Heidelberg and held periodically every three years. After HYP2003, held at Jefferson Lab in U.S.A., the conference has been successfully held and rotated between Japan and Europe (HYP2006 in Mainz, Germany, HYP2009 in Tokyo, Japan, HYP2012 in Barcelona, Spain, and HYP2015 in Sendai, Japan.) HYP2018 will be held in downtown Norfolk, Virginia from June 25 to 28, 2018.

The HYP conference brings together theoreticians and experimentalists working on hadron processes and nuclear systems containing strangeness, from single to multi-strangeness states and from few-body states to massive neutron stars. The topics of the HYP conference have been extended to related fields such as low-energy aspects of QCD, dense and cold matter, as well as hadronic and nuclear systems with heavier flavors. The anticipated number of participants is about 180.

Hypernuclear and strange particle experiments had been successfully carried out before the CEBAF 12 GeV upgrade, and their results had made significant contributions to the field by their unique quality and precision, that was not achievable elsewhere. The future experiments in the 12 GeV era are believed to make even bigger impact, thus the JLab program plays a vital role in the advance of the field. Therefore, it is the right time to bring this conference back to the American continent near JLab. HYP2018 will be jointly sponsored and organized by Hampton University, Carnegie Mellon University, and JLab.

The requested JSA IF support of \$2,500 will be matched with funds from JLab (\$2,500) and Hampton University (\$10,000 from Dr. Liguang Tang's DOE research grant on hypernuclear physics).

This combined supporting fund will be used to selectively provide partial support to retired senior scientists who have had leadership roles and remain active in the field. Many of them are current members in the International Advisory Committee to the HYP conference. This fund will also provide needed partial support to selected young scientists (students and postdocs) who are new in the field but are already starting to make important contributions.

### Synopsis

HYP2018 is the 13<sup>th</sup> conference in the series of hypernuclear and strange particle physics conferences that focus on nuclear physics and hadronic interactions beyond the nucleon-nucleon interaction, particularly on the strangeness degree of freedom. It will have invited, contributed, and poster presentations on the following broad topics:

- 1 Production of hyperons (strange baryons)
- 2 Structure of hyperons (baryon structure)
- 3 NN, YN, and YY interactions
- 4 Heavy flavor hyperon physics
- 5 Production of hypernuclei including multi-strange bound system
- 6 Weak decay of  $\Lambda$  hypernuclei

- 7 Structure of  $\Lambda$  hypernuclei (*few-body systems, heavy hypernuclei*)
- 8 Structure of multi-strange hypernuclei
- 9 Hyperons in nuclear matter
- 10 Hyperons in neutron stars
- 11 Structure of strange mesons
- 12 Strange meson interactions with baryons
- 13 Structure of nuclei containing strange mesons (*kaonic atoms*)
- 14 Future experiments by HYP2021
- 15 Experiments requiring longer lead time
- 16 New facilities addressing strangeness physics

At this conference, held once every three years, theoreticians and experimentalists working on these topics will meet to present and exchange ideas on achievements and/or progress from previous plans, new findings and results from work carried out since the last conference, and new suggestions and/or considerations for future advancing plans/facilities.

### **Proposed evaluation plan**

The International Advisory Committee that developed the above scope of topics includes:

H.C. Bhang (Seoul), E. Botta (Torino), T. Bressani (Torino), C. Curceanu (Frascati), D.H. Davis (London), A. Feliciello (Torino), V.N. Fetisov (Moscow), A. Gal (Jerusalem), B.F. Gibson (Los Alamos), J. Haidenbauer (Juelich), K. Imai (JAEA/J-PARC), T. Kishimoto (Osaka), H. Lenske (Giessen), Yu-Gang Ma (Shanghai), J. Mares (Rez), D.J. Millener (BNL), T. Motoba (Osaka), T. Nagae (Kyoto), S.N. Nakamura (Tohoku), H. Noumi (RCNP), M. Oka (Tokyo I. T.), E. Oset (Valencia), J. Pochodzalla (Mainz), A. Ramos (Barcelona), **R. Schumacher** (CMU, Co-chair), H. Tamura (Tohoku), **L. Tang** (Hampton/JLab, Chair), R.G.E. Timmermans (Groningen), T. Yamazaki (Tokyo), Shi-Lin Zhu (Peking)

In addition, a Scientific Program Committee was formed by scientists from U.S. institutes to ensure a well balanced program and this committee includes:

**L. Tang** (Hampton/JLab, Chair), **R. Schumacher** (CMU, Co-Chair), Dan Carman (JLab), Stefano Gandolfi (LANL), Ben Gibson (LANL), Pete Markowitz (FIU), Robert McKeown (JLab), John Millener (BNL), Mac Mestayer (JLab), Joerg Reinhold (FIU), Zhangbu Xu (BNL).

The scientific program will be finalized by May 2018. Conference registration and abstract acceptance will start in November of 2017.

The Local Organizing Committee with JLab support carries out the organization of this conference and it has members:

L. Tang (Hampton/JLab, Chair), R. Schumacher (CMU, Co-Chair), Josh Cameron (JLab), Cynthia Lockwood (JLab), Stephanie Vermeire (JLab), plus JLab Hall-A, -B, and -C secretaries.

The conference will publish proceedings for all presentations with peer review done by IAC and SPC members.

**Zimbra****tangl@jlab.org**

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**Re: JLab sponsoring to HYP2018**

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**From :** Bob McKeown <bmck@jlab.org>

Wed, Jun 21, 2017 09:39 AM

**Subject :** Re: JLab sponsoring to HYP2018**To :** Liguang Tang <tangl@jlab.org>**Cc :** Reinhard Schumacher <schumacher@cmu.edu>, Stephanie Vermeire <schatzel@jlab.org>, Cynthia Lockwood <lockwood@jlab.org>, Pat Stroop <Stroop@jlab.org>

Dear Liguang and Reinhard,

We are certainly looking forward to hosting HYP2018. Of course, JLab will provide financial support. However, I would suggest that you submit a proposal to the JSA Initiatives Fund for \$2500 and JLab would provide \$2500 matching funds. The JSA proposals are usually due in August and awards are announced in November. The call for proposals for this year should come out soon.

Best regards,

Bob

On 6/20/2017 2:27 PM, Liguang Tang wrote:

&gt; Dear Bob,

&gt;

&gt; As you well aware from HYP2015 and few communications between us, we

&gt; are organizing and hosting HYP2018 which will be held near here in Norfolk

&gt; from June 25 to 29, 2018, about one year from now. Per your request, I

&gt; am writing to you to confirm Jefferson Lab support of \$5000 to the conference.

&gt;

> Up to now, JLab Staff Services have provide me great support in  
setting  
> up this conference. The contract for the conference site has been  
signed and  
> I am ready to mail posters to people and institutes worldwide. I  
will also  
> bring the posters personally to a few conferences and workshops in  
the next  
> several months. We believe the conference will be successful here,  
back  
> on American continent once again after more than 12 years elsewhere  
in  
> Europe and Japan. We are certainly proud of what has been achieved  
at  
> JLab in this area of physics and optimistic of what we will further  
achieve.  
> JLab has a big role in it nowadays.  
>  
> We would really appreciate this requested JLab support as well  
as your  
> personal support for this conference and for the field. Please let  
us know  
> your confirmation and your decision about when the fund should be  
available.  
>  
> Sincerely,  
>  
> Liguang and Reinhard  
>  
> On behalf of the HYP2018 organizing committee  
>

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