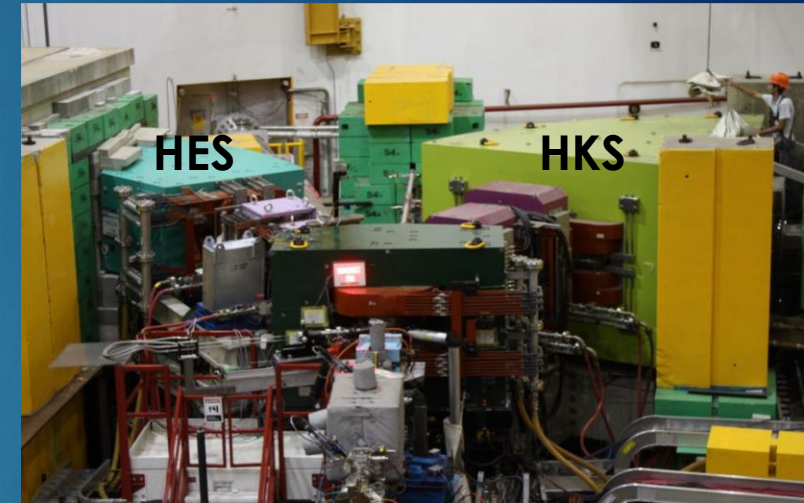


ERR for the JLab Hypernuclear Experiments  
18,19 November 2024

# Overview of personnel and other resources

E05-115 setup in Hall-C



S.N.Nakamura  
Univ. of Tokyo  
JLab Hypernuclear Collaboration

# JLab Hypernuclear Collaboration

## Spokespersons

F.Garibaldi, T.Gogami, S.N.Nakamura, S.Nagao,  
P.Markowitz, J.Reinhold, L.Tang, G.Urciuoli

JLab Liaison W.Henry

## Tasks to be done

### Beam line

D. Gaskel, J. Benesch,  
L. Tang, S. Nagao

Supports from Accelerator group is necessary

Accelerator Operations (Hall C Ops liaison and APEL)  
Instrumentation and Controls Group (I&C)  
Accelerator Controls Software Group  
Diagnostic Development Group  
Hall C Engineering and Design

Design of supports, Installation of the magnets, detectors, electronics

S. Lassiter and engineers, Hall-C technicians, J. Beaufeit  
L.Tang, S.Nagao

## Target, scattering chamber

D. Meekins,

T. Gogami, G. Urciuoli, F. Garibaldi, S. Covig

- Design solid targets only
  - Design Authority 480 hours
  - Designer 320 hours
- Fabrication
  - 6 months of calendar time at least for target group
    - Need welder, fitter, DA ...
    - Machine shop work (build to print components)
    - Ca48 can take up to 12 months to procure if approved by DOE.
- These estimates could carry significant measurement error
  - Procurement estimates are currently difficult to make.
  - Work processes have been significantly impacted by recent changes to procedures and requirements.

## Trigger, DAQ

A. Camsonne, H. Liu, W. Henry, C. Gosh, B. Raydo, B. Duran

T. Gogami, **Tepei Iwamoto**, J. Reinhold

## Simulation, Analysis

S. Park

S. Nagao, T. Gogami,

**Tatsu Ishige, Tepei Iwamoto, Ravindu Kumaragamage,**

**Kotaro Nishi, Ken Nishida, Kaito Higashimoto**

## Detector Development, Commissioning

Scintillation counters

**Teppei Iwamoto,**

Water Cherenkov (New)

**Kaito Higashimoto**

Aerogel Cherenkov

J. Reinhold, **Kotaro Nishi**

Drift Chambers

L.Tang, **Ravindu Kumaragamage,** S.Nagao

Fiber Tracker (New)

S.Nagao, **Ken Nishida, Shunsuke Niwa**

Alpha-source Calib.

S.Nagao, L.Tang

# JLab Hypernuclear Collaboration (2009)

► 21 institutes, 86 collaborators

<sup>1</sup>Department of Physics, Graduate School of Science, Tohoku University, Sendai, Miyagi 980-8578, Japan

<sup>2</sup>Department of Physics, Hampton University, Hampton, Virginia 23668, USA

<sup>3</sup>Institute for Nuclear Physics, Johannes Gutenberg-University, D-55099 Mainz, Germany

<sup>4</sup>Department of Physics, North Carolina A&T State University, Greensboro, North Carolina 27411, USA

<sup>5</sup>Department of Physics & Department of Applied Physics, University of Zagreb, HR-10000 Zagreb, Croatia

<sup>6</sup>A.I. Alikhanyan National Science Laboratory, Yerevan 0036, Armenia

<sup>7</sup>Department of Physics, Florida International University, Miami, Florida 27411, USA

<sup>8</sup>Department of Physics, Computer Science & Engineering, Christopher Newport University, Newport News, Virginia 23606, USA

<sup>9</sup>Istituto Nazionale di Fisica Nucleare, Sezione di Bari and University of Bari, I-70126 Bari, Italy

<sup>10</sup>Department of Physics, Southern University at New Orleans, New Orleans, Louisiana 70126, USA

<sup>11</sup>Thomas Jefferson National Accelerator Facility (JLab), Newport News, Virginia 23606, USA

<sup>12</sup>Department of Physics, University of North Carolina at Wilmington, Wilmington, North Carolina 28403, USA

<sup>13</sup>INFN, Sezione Sanità and Istituto Superiore di Sanità, 00161 Rome, Italy

<sup>14</sup>Nuclear Physics Institute, Lanzhou University, Lanzhou, Gansu 730000, China

<sup>15</sup>Department of Physics, University of Houston, Houston, Texas 77204, USA

<sup>16</sup>Department of Physics, Yamagata University, Yamagata, 990-8560, Japan

<sup>17</sup>Mississippi State University, Mississippi State, Mississippi 39762, USA

<sup>18</sup>Department of Physics and Astronomy, James Madison University, Harrisonburg, Virginia 22807, USA

<sup>19</sup>Escuela de Ciencias y Tecnología, Universidad Metropolitana, San Juan, 00928, Puerto Rico

<sup>20</sup>Department of Physics & Astronomy, Virginia Military Institute, Lexington, Virginia 24450, USA

<sup>21</sup>Department of Physics, Xavier University of Louisiana, New Orleans, Louisiana 70125, USA

## PhD Thesis

T.Akiyama (2025 expected, Tohoku), K.Okuyama (2024 Tohoku),  
K.Suzuki (2022 Kyoto), K.Itahashi (2022 Tohoku), B.Panday (2021 Hampton)  
T. Gogami (2014 Tohoku), C. Chen (2014 Hampton),  
D. Kawama (2012 Tohoku), F. Cussano (2011 Rome), P. Baturin (2010 FIU)  
A.Matsumura (2010 Tohoku), T. Sava (2009 Zagreb), T. Okayasu (2008 Tohoku)  
T.Miyoshi (2003 Tohoku), L.Yuan (2002 Hampton)

More than  
40 Master's Thesis

## Shift takers

149 PAC Days = 298 x 3 shifts = 894 shifts

2 shift takers/shift x 849 shifts = 1788 shift takers in total

Assuming one person takes 20 shifts, 90 collaborators are necessary.

 **Need to invite more collaborators.**

**Planning Extended Collaboration Meeting in Spring 2025,  
to invite more collaborators.**

**Exploration of a more formal collaboration framework.**