JLab Hypernuclear Collaboration Meeting

Feb. 12,13, 2026

Jefferson Lab

THE UNIVERSITY OF TOKYO

QNSI

Quark Nuclear Science Institute, UTokyo

Opening, Collaboration updates

S.N.Nakamura Univ. of Tokyo

Upcoming Hypernuclear Experiments at JLab

Experiments

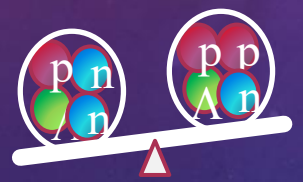
- **E12-24-003** "Studying Lambda interactions in nuclear matter with the ^{208}Pb(e,e'K^{+})$^{208}_{\Lambda}$Tl reaction" [42 PAC days]
- **E12-24-004** "Study of charge symmetry breaking in p-shell hypernuclei" [24 PAC days]
- **E12-24-011** "Study of a triaxially deformed nucleus using a Lambda particle as a probe" [28 PAC days]
- **E12-24-013** "An isospin dependence study of the Lambda-N interaction through the high precision spectroscopy of Lambda hypernuclei" [55 PAC days]

Run Group Experiment (Parasitic Experiment)

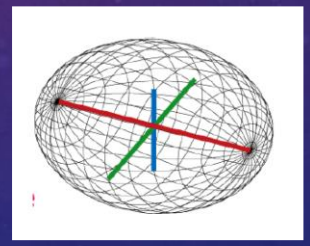
- **E12-15-008A** "High-resolution spectroscopy of light hypernuclei with the decay-pion spectroscopy"

Hyperon Puzzle

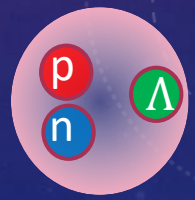
CSB of Λ Hypernuclei



Λ probe to tri-axial nucleus



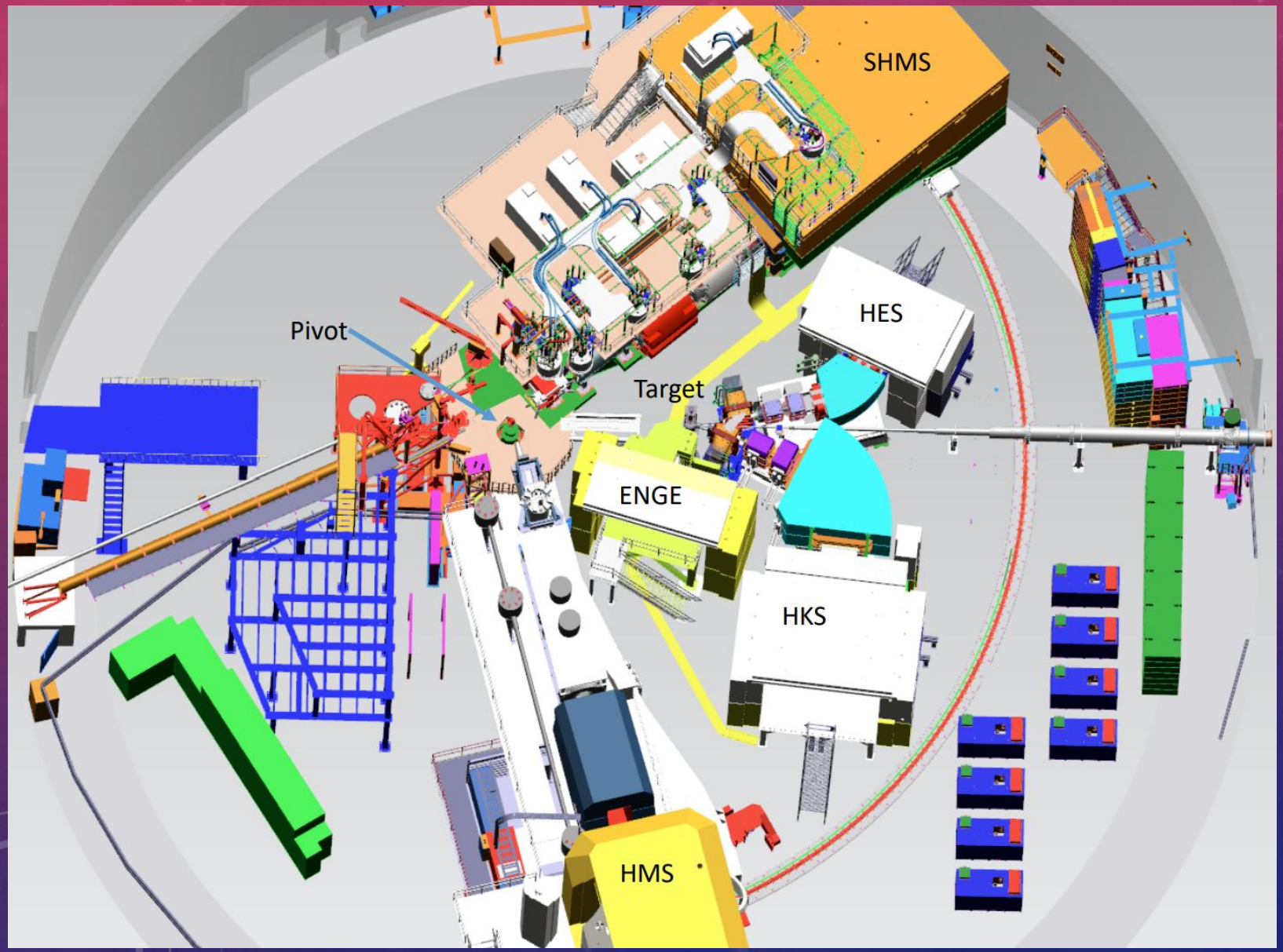
Hypertriton Puzzle



Our 2nd ERR is scheduled at 20, 21 May, 2026.

During this two-day collaboration meeting, we will assess the current preparation status for the ERR and identify the key actions required to ensure a successful review.

A single setup for five approved experiments



Today morning

Opening, Collaboration updates
Satoshi N. Nakamura (U Tokyo)

JLab updates
Mark Jones (JLab)

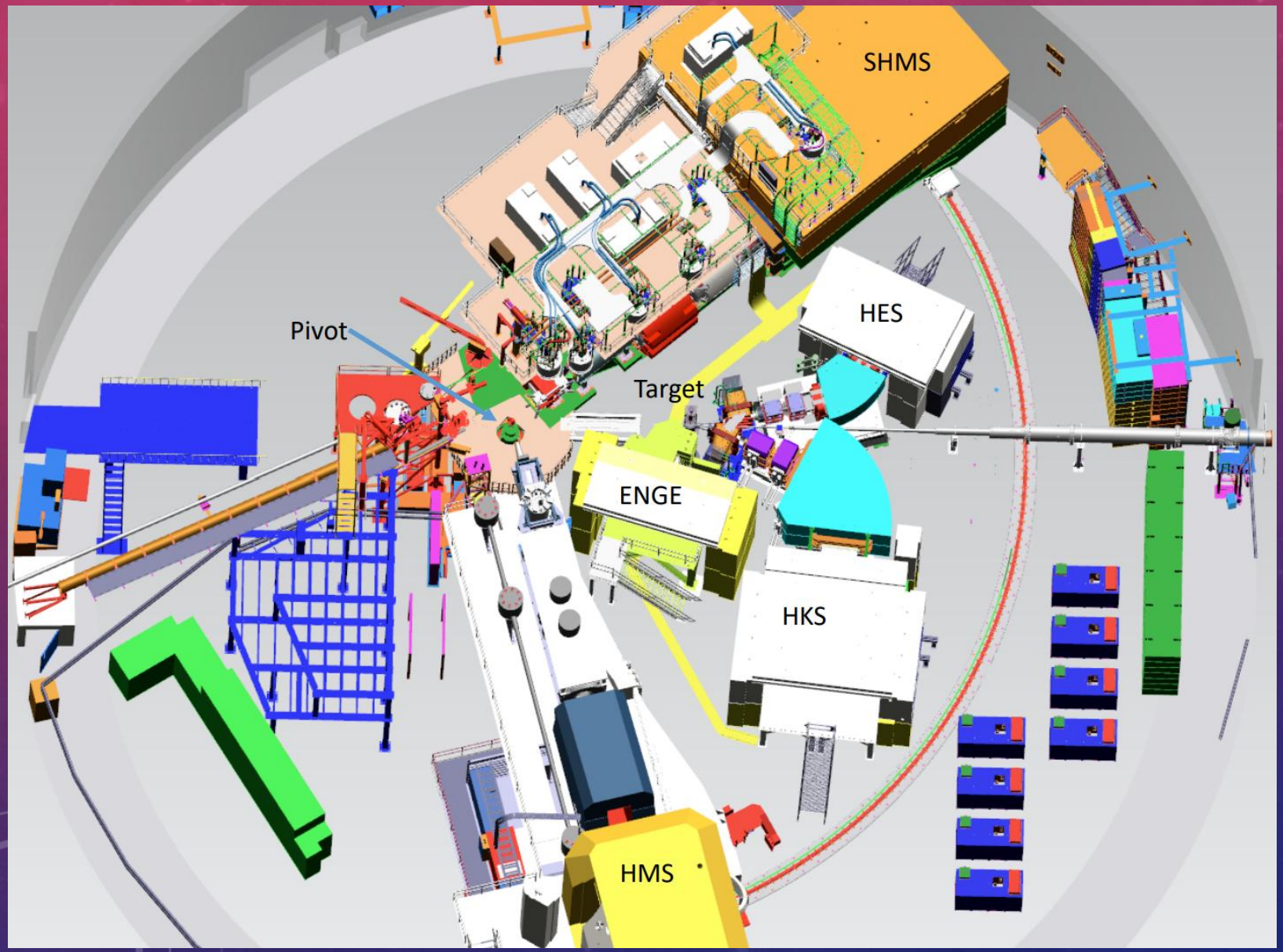
Overview of HKS-HES updates
Toshiyuki Gogami (Kyoto University)

Overview of ENGE updates
Sho Nagao (U Tokyo)

Hypernuclear Design Status
Jamine Shiflett (JLab)

Target system
David Meekins (Jefferson Lab)

A single setup for five approved experiments



Today afternoon

Beam line + SLI
Dave Gaskell (JLab)

DAQ
Alexandre Camsonne (JLab)

Analysis Software
Sanghwa Park (JLab)

Radiation budget

Documentation (safety etc.) etc.20分
William Henry (JLab)

Free Discussion

Tomorrow : Status updates and progress reports

[Online Presentation] ENGE Focal Plane Detector
Shunsuke Niwa (The University of Tokyo)

[Online Presentation] Water Cherenkov Counter in HKS
Mr Kaito Higashimoto (The University of Tokyo)

TOF Detectors (HKS/HES/ENGE)
Kotaro Nishi (The University of Tokyo)

HKS Drift Chamber (KDC)
Ravindu Kumaragamage (Hampton University)

HES Drift Chamber (EDC)
Ken Nishida (The University of Tokyo)

Maximum heat on experimental target estimated by ANSYS
Thermal simulation for targets by ANSYS will be presented.
Kei Ishido (Kyoto University)

Radiation simulation for experimental area
Jin Takahashi (The University of Tokyo)

13:20

Measurement of Meson Electroproduction Differential Cross Sections for η', ω, ρ0 (E'OR) in the Threshold Region Using HKS-HES Setup
Ralph Marinaro (Christopher Newport University)

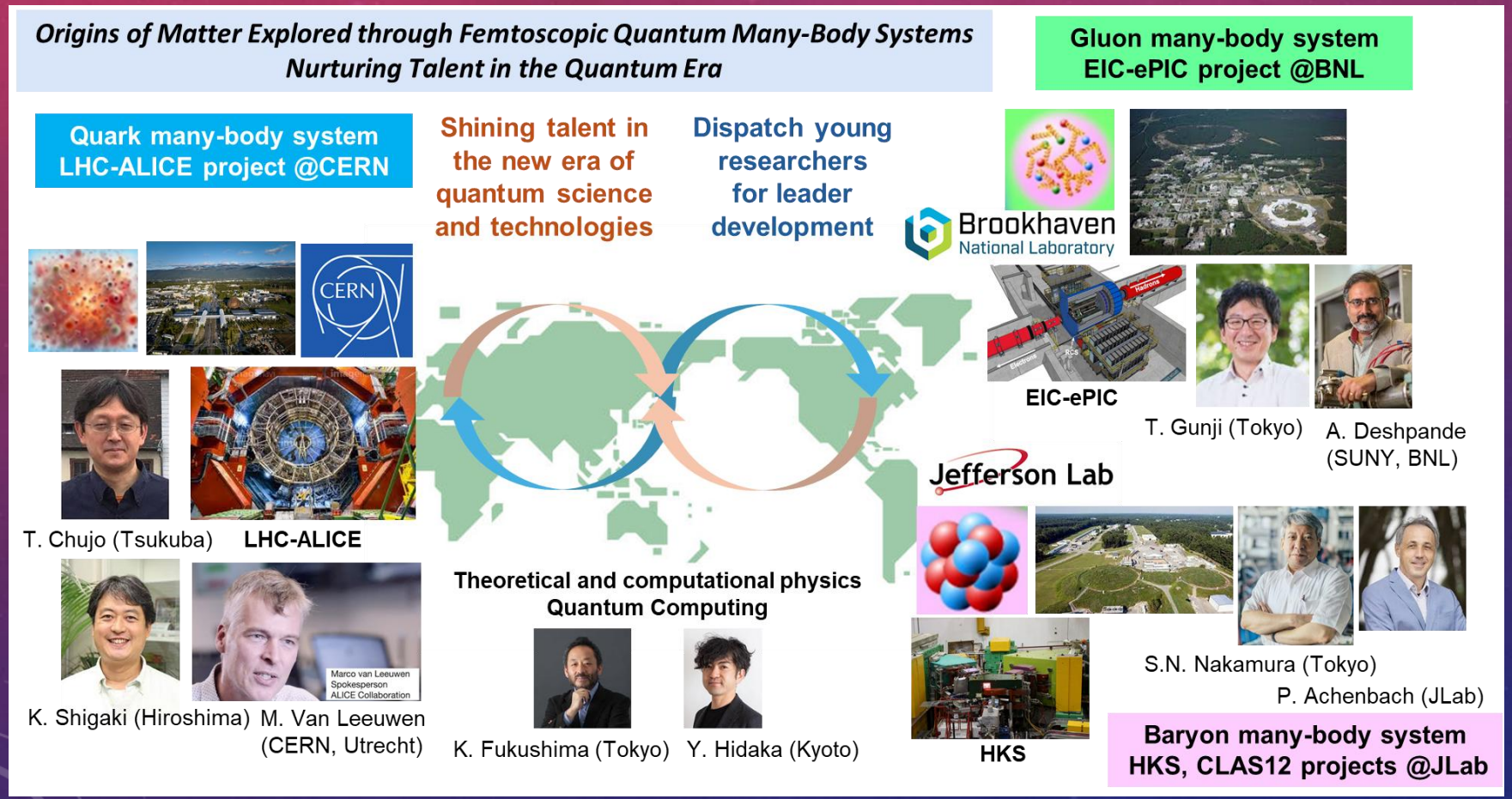
13:50

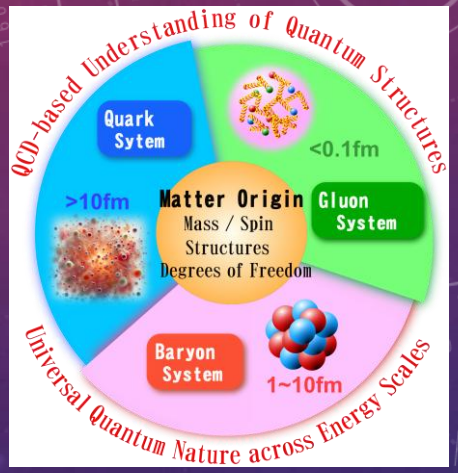
Closing

【International Leading Research】

Origins of Matter Explored through Femtoscale Quantum Many-Body Systems --- Nurturing Talent in the Quantum Era

A new grant from the Japanese government was approved in December 2025 and will run through March 2032. Nurturing Young researcher is important goal of this project. CERN, BNL and JLab are key facilities.





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