

# Report of the USQCD Scientific Program Committee

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US Lattice Quantum Chromodynamics

USQCD Collaboration meeting MIT, April 18-19, 2024

# USQCD Scientific Program Committee (SPC)

Martha Constantinou (Temple Univeristy)

George Fleming (FNAL)

Chris Kelly (BNL), **new member**

Stefan Meinel (Univeristy of Arizona), **new member**

Peter Petreczky (BNL), **Chair**

James Simone (FNAL), **Deputy Chair**

Sergey Syritsyn (Stony Brook University )

Outgoing SPC members:

Meifeng Lin (BNL), Tanmoy Bhattacharya (LANL) , former chair

**Many thanks to their service !**

# USQCD Resource for 2024–2025

- FNAL new GPU cluster in the new FY is available for the entire allocation period (was available only for the  $\frac{3}{4}$  of the last allocation cycle)
- The Jlab KNL systems (18p and 16p) are retiring after record long service
- New 24s (Intel Xeon) cluster in Jlab is available for the next allocation cycle
- New system are expected to be installed in BNL later in the allocation year, see talks by Peter Boyle and Zhihua Dong

A separate call for proposal will be issued later in the allocation year when the new BNL system is operational

- CPU (LQ1@FNAL+ 24s @Jlab): 126.6M Sky Core Hours
- GPU 19g : 1.66 M RTX 2080 GPU Hours
- GPU 21g: 0.414M MI100 GPU Hours
- GPU LQ2: 0.508M A100 GPU Hours

# USQCD Requests for 2024–2025

20 Type A Proposals (3 new + 17 continuation) received for 2024 Call for Proposals

This is down from previous calls: 26 (2023,2022), 30 (2021,2020), 31 (2019)

1 Type B proposal (Hot QCD, PI David Clarke) ; Type B proposal can be submitted any time by e-mail to SPC

For Class C proposal contact:

- BNL: Peter Boyle ([pboyle@bnl.gov](mailto:pboyle@bnl.gov))
- FNAL: Jim Simone ([simone@fnal.gov](mailto:simone@fnal.gov))
- JLab: Robert Edwards ([edwards@jlab.org](mailto:edwards@jlab.org))

This is mostly to test the code

# Distribution of Type A proposals by Area and Resources

7 NP, Cold QCD/Hadron Structure

1 NP, Cold QCD/Spectroscopy

2 NP, Hot QCD

1 NP, Nuclei

HEP, Intensity Frontier (IF): 7 (g-2, QCD+QED, flavor physics, EDM)

HEP, Energy Frontier (EF): 2 (1 BSM, 1 on strong coupling constant)

CPU: Request: 187M, Available 126M, **Ratio: 1.5**

A100 GPU: Request 0.91M, Available: 0.51M, **Ratio: 1.8**

MI100 GPU: Request: 0.74M, Available: 0.41M, **Ratio 1.8**

RTX2080 GPU: Request 1.6M, Available: 1.67M, **Ratio 0.96**

## Next steps

- Questions to the proposals have been sent and responses received (**many thanks !**) Some of the responses will be discussed during this meeting.
- We will recommend allocations based on discussions covering:
  - scientific merit and timely impact on experimental programs
  - alignment with USQCD goals, and those of US HEP/NP programs – efficient use of resources
  - avoiding duplication of effort and redundancy
  - balance between HEP and NP
  - sustainability of project if cut
- Storage allocations are based on
  - broad need within USQCD
  - storage/compute costs and expected reuse valency – possibility of loss of data if allocations not made

**Allocation will be announced on May 31, 2024**

**Allocation will take effect on July 1, 2024**

## For this meeting...

All time slots for talks include 5min for questions, e.g. 20min =15+5 min !  
Please allow time to questions !

Please upload your talk into Indico before the session if you are a speaker

- If you wish to ask a question, or contribute to discussions:
  - For the scientific sessions, please wait until discussion time if possible
  - Use chat—to everyone
  - In general, not necessary to pose question in chat, just say you want to contribute
  - Chairman should call on you
- Please remember to “unmute” before speaking, and “mute” afterwards