



Review of R&D priorities for NP program

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2023 Nuclear Science Advisory Committee Long Range Plan

RECOMMENDATION 1

The highest priority of the nuclear science community is to capitalize on the extraordinary opportunities for scientific discovery made possible by the substantial and sustained investments of the United States. We must draw on the talents of all in the nation to achieve this goal.

While RHIC will complete beam operations this month, analysis of >300 PB of raw data will last well into the next decade

- Treasure trove of data for testing new techniques such as AI

RECOMMENDATION 3

We recommend the expeditious completion of the EIC as the highest priority for facility construction.

While the actual construction of the EIC is outside LDRD scope, extending the boundaries of EIC science is well within scope

- Important to keep the scientific motivation fresh

NP Accelerator Physics

Areas of interest for EIC mission (outside of project)

- Sources
- Polarized beams
- Polarimetry
- Beam cooling
- AI / Machine Learning
- other