Homework problems

Rik Yoshida and Thomas Ullrich

Short-Range Nuclear Correlations
at An Electron-Ion Collider
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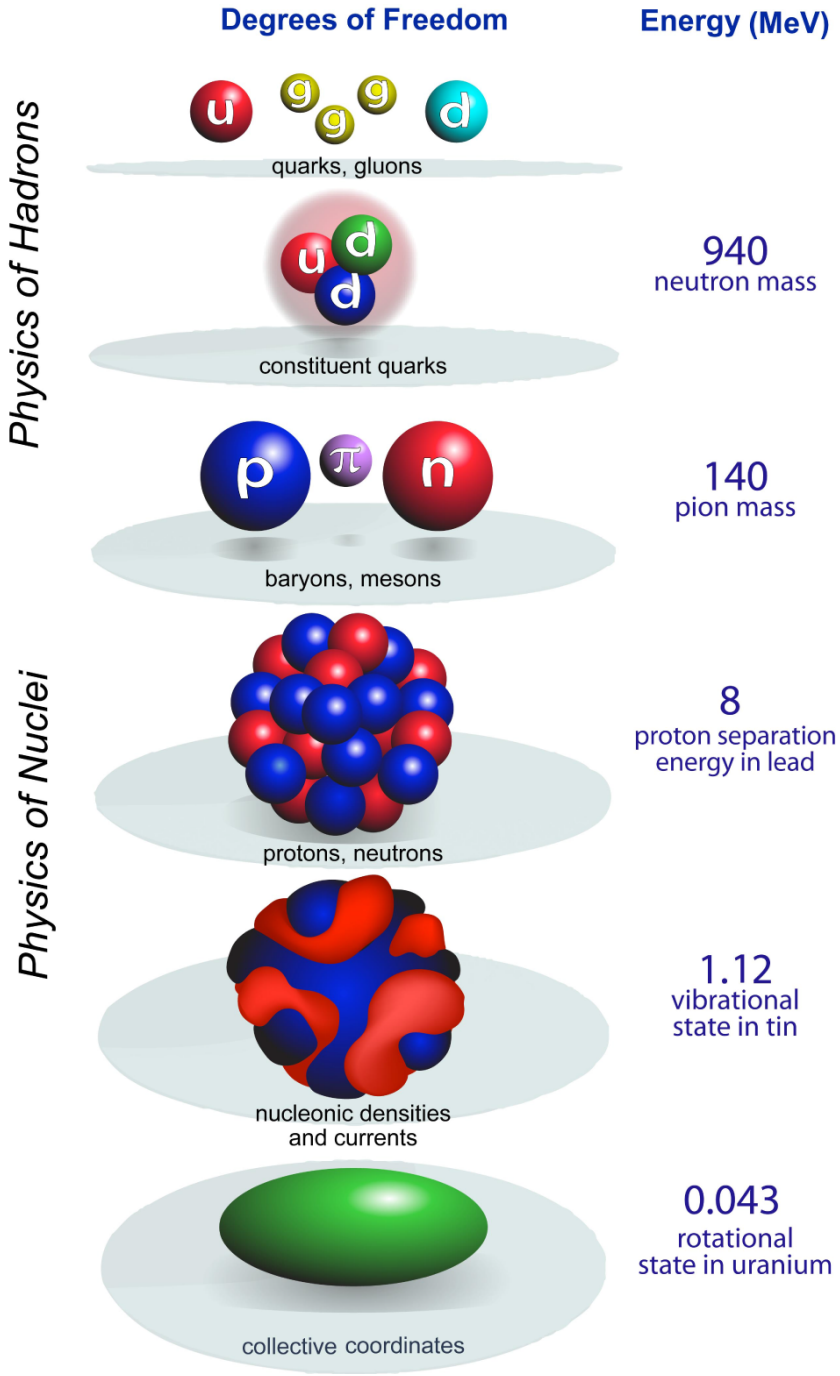

EIC

<u>Aim of the WS:</u>

Extending EIC physics program, Opening of new opportunities

EIC is the first eA collider. What we need is to

- define **measurements**
- define **requirements**
- determine **feasibility**

… early (work on EIC design is progressing)

Talking Points

- Work is progressing
  - LDRDs at BNL and JLAB on SCR
  - Work on SCR measurement at EIC (e.g. Jerry, Raju, Matt, Ian, …)
- … but more is needed
- Interdisciplinary (NS community ⇔ QCD community ⇔ LQCD community)
  - Beyond SCR
    - What can NS knowledge bring to current planned EIC science (mostly QCD community designed) ?
    - What can EIC add to NS knowledge (what are the proposed measurements)?
    - What can QCD+NS+LQCD do to further our knowledge of nucleons and nuclei?

Talking Points

- What are the measurements at the EIC?
  - What questions will have been answered (at Jlab or other facilities) before the EIC comes online
    - only repetition at EIC?
    - or improvement in precision?
    - or novel measurements only accessible at EIC?
      - What additional information do we learn at the EIC?
- Important:
  - Most of the measurements discussed involve extreme forward measurements of fragments.
    - Huge impact on IR design
  - Most of the measurements discussed are at high X
    - Huge impact on detector design.
- What are the next concrete steps?