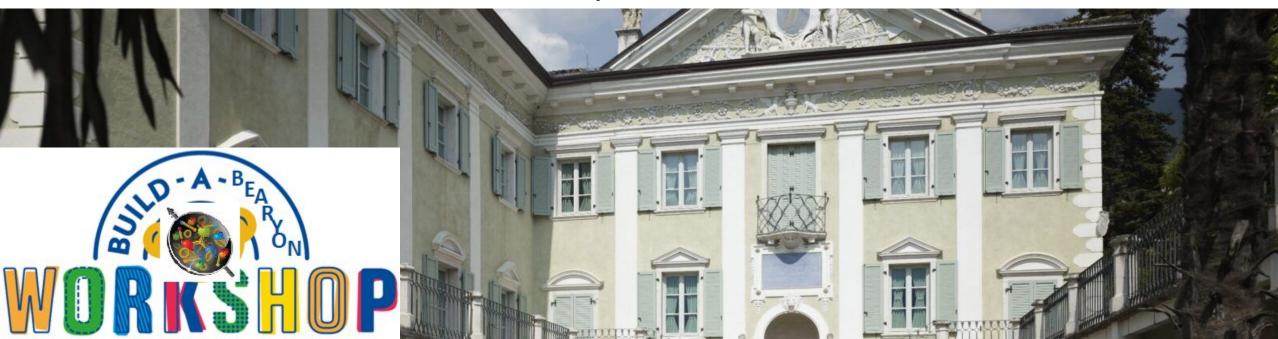




## **EMC Open Questions**

Tyler Hague

July 21, 2023



# At the last ECT\* on this topic... What were the open questions identified?

#### 2018/2019 open questions

- What is the origin of the EMC effect?
- What is the nature of the relationship between the EMC effect and SRCs?
- What is the behavior of super-fast quarks?
- Can we extract more nuclear PDFs?
- Is modification flavor dependent (isovector EMC)?
- Gluon saturation?
- High-x nuclear gluons?

- Is there a spin-dependent EMC effect?
- Sea-quark modification?
- A<=4 Nuclei</li>
- Tagged DIS
- Final State Interactions
- Generalized Parton Distributions
- A-dependence of R LT

#### 2018/2019 open questions

- What is the origin of the EMC effect?
- What is the nature of the relationship between the EMC effect and SRCs?
- What is the behavior of super-fast quarks? Data is available
- Can we extract more nuclear PDFs?
   More data taken
- Is modification flavor dependent (isovector EMC)? Data inconclusive, but suggests yes
- Gluon saturation?
- High-x nuclear gluons?

- Is there a spin-dependent EMC effect?
- Sea-quark modification? SeaQuest
- A<=4 Nuclei Hall A Tritium Program</li>
- Tagged DIS
- Final State Interactions
- Generalized Parton Distributions
- A-dependence of R\_LT

#### Discussed this week

- Flavor dependent EMC effect?
  - XEM2 and PVDIS
  - Talks by Cotton and Reimer
- Light nuclear structure
  - Talks by Cotton, Rinaldi, Fornetti,
     Nguyen, Dupre
- Isospin dependence of EMC
  - Talk by Sharda
- Final state interactions
  - Talk by Weiss

- Free neutron structure
  - Talks by Weiss and Kutz
- Super fast quarks
  - Talks by Sargsian and Li
- Polarized EMC
  - Talk by Santiesteban
- EMC-SRC Connection
  - Talks by Chen, Duran, and Fomin
- Tagged DIS
  - Talks by Kutz and Tu
- GPDs
  - Talk by Ouillon

### Thank You

