

Cold Nuclear Matter Effects: from the LHC to the EIC

White paper project

Center for Frontiers in Nuclear Science

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A white paper

Not a lengthy cold QCD program, but rather a **focused approach on nuclear QCD effects**.

The goal is to identify 3–4 key questions regarding:

- ▶ Saturation and shadowing;
- ▶ Initial-State Energy Loss / Fully Coherent Energy Loss (FCEL);
- ▶ Nuclear absorption.

Prepare a concise overview (0.5–1 page) and produce a synthesis to isolate **golden observables** that could strongly constrain these questions at the EIC (or future fixed-target experiments!).