

Opportunities for Heavy Ion at ATLAS with the Phase-II upgrades and synergies with the EIC

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The ATLAS experiment at the LHC is preparing for significant Phase-II upgrades in anticipation of Run 4 and the High-Luminosity LHC era. These upgrades are crucial not only for the pp physics program but also for advancing heavy ion physics.

In this talk, I will give an overview of the current status of the ATLAS Phase-II upgrades, emphasizing their importance for the ATLAS Heavy Ion program in Run 4 and beyond. Particular attention will be paid to the Zero Degree Calorimeter (HL-ZDC) and its pivotal role in event characterization and centrality measurements. I will also discuss key synergies between the ATLAS Heavy Ion program and the future Electron-Ion Collider at Brookhaven National Laboratory.

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