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From Source to Collision: Tracing the Beams Up to Their Final Collisions at the LHC

Tuesday, July 16
Salle Curie | 16h30
[Indico webpage](#)

This presentation provides an overview of the accelerator chain at CERN, emphasizing the experiments conducted at each stage. We will trace the path of particle beams from their origins in Linac 4, through the Proton Synchrotron Booster, the Proton Synchrotron and Super Proton Synchrotron, to their ultimate destination in the LHC. Key parameters such as bunch spacing, train length, bunch intensity, and emittance will be examined, highlighting how each accelerator manipulates these factors to refine the beams for collision.

Special focus will be given to the LHC cycle, detailing the processes involved in preparing the beams for high-energy collisions in the ATLAS experiment. This includes beam injection, acceleration, squeezing, and the final stages of beam manipulation before collision.