Contribution ID: **32** Type: **Invited Oral**

Overview of the Heavy Ion Physics Programme at CERN –Current and Future Ion Source Requirements and Challenges

Monday, 8 September 2025 09:30 (30 minutes)

CERN has a long history of providing different types of ion beams for high-energy physics, both with fixed targets and in the LHC. Over the years, the user community was growing, and the range of requested beam types and species continued to expand. Especially in the last couple of years a Future Ions Working Group was established at CERN and tasked with collecting all the requests, identifying synergies and making proposals for future upgrades and operation plans of the CERN ion accelerator complex.

This paper provides a brief overview of the status of the present requirements, limitations and possible solutions for the CERN ion source and low-energy beam line including results from tests with magnesium, krypton and oxygen beams.

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Session Classification: Oral Session

Track Classification: Production of highly charged ion beams