



# SX2025, Spill Ripple & Beam Quality

October 9, 2025

Y. Dutheil "Studies on replacement of electrostatic septa with crystal technology"

- A total of  $10^{19}$  protons at 400 GeV delivered to the North-Area per year.
- Goal to improve the losses to reach an extraction efficiency of 99%.
- Existing inefficiencies total 3.4%. Scheme with crystals reached  $\sim 6\%$  losses (2% on the crystal, 4% on the septum)
- Can further improvements be made?

P. Arrutia "RF Techniques for spill ripple improvement"

- Transverse RF excited to improve spill quality.
- Observed improvement in spill quality and an achieved reduction of  $\sim 3$  on the 50 Hz ripple.
- Is the increase in spill ripple at the excited frequency an issue? (seems not)