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Analysis of a double-resonance crossing for beam splitting

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Beam splitting can be performed by adiabatic crossing of a given one-dimensional non-linear resonance. This process is routinely used at the CERN PS to deliver the proton beam to the SPS fixed-target physics. To improve the efficiency of the intensity sharing between the various beamlets, a dipole kicker can be used to excite the beam during the resonance crossing process. This entails a double-resonance crossing phenomenon that will be described and discussed in detail in this paper.

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Footnotes

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Yes

Primary authors: CAPOANI, Federico (European Organization for Nuclear Research); BAZZANI, Armando (Bologna University); GIOVANNOZZI, Massimo (European Organization for Nuclear Research)

Presenter: CAPOANI, Federico (European Organization for Nuclear Research)

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