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## Beam loss monitoring through emittance growth control and feedback with design

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Beam intensities and powers being increasingly strong, installations increasingly large, the need to reduce losses and costs (i.e. dimensions) becomes essential. Improvements are possible by increasing the acceptance in the two transverse planes. For example for LEBT lines and radioactive beams, a large geometric acceptance allows efficient transport of reaction products that have large phase space dimensions downstream of the TIS. For low intensities, the flux is preserved to allow maximum intensity on target (reactions with low cross section). We investigate the solution to control the beam line acceptance by measuring the emittance growth and a feedback with the design, e.g. pole shape and high-order modes of the fields. This is possible with detection of very low intensities of the halo and beam loss monitoring.

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### Footnotes

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Yes

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