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Mechanical design of the MDI

Thursday, 1 July 2021 09:54 (18 minutes)

The presentation concerns: the preliminary assembly of the MDI, including vacuum chamber, quadrupoles and solenoids; a parametric mechanical analysis of the vacuum chamber and the preliminary study of heat removal in the central beam pipe.

The mechanical study examines the structural behaviour of the chamber at many thickness values, using FEA techniques.

The preliminary heat transfer study is intended to determine the feasibility of using paraffin to remove the heat load in the central part of the vacuum chamber, considering the annular gap available and the allowable pressure head.

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