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Material Budget of the FCC-ee IR

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We present the material budget for the latest engineered design of the interaction region (IR) of the Future Circular Collider (FCC).

In order for the LumiCal to reach the required absolute precision, it is necessary to use high radiation length (X0) material for the beam pipe elements in front of this detector.

We compare the material budget in the LumiCal acceptance for two versions of the IR beam pipe, mainly differing for the cooling manifolds material (copper and AlBeMet162). We also show the energy deposit in the LumiCal induced by secondary showers coming from the beam pipe material.

Author: NIGRELLI, Giulia

Co-authors: CIARMA, Andrea (INFN e Laboratori Nazionali di Frascati (IT)); FRANCESINI, Francesco (INFN e Laboratori Nazionali di Frascati (IT)); BOSCOLO, Manuela (INFN e Laboratori Nazionali di Frascati (IT))

Presenter: NIGRELLI, Giulia

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