

# Machine Detector Interface for $\sqrt{s} = 3 \text{ TeV}$ Muon Collider

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Muon collisions are considered a promising mean for exploring the energy frontier, leading to a detailed study of the possible feasibility issues. Beam intensities of the order of  $10^{12}$  muons per bunch are needed to achieve the necessary luminosity, generating a high flux of secondary and tertiary particles that reach both the machine elements and the detector region. A strategy to reduce the beam-induced background to manageable levels at 3 TeV center-of-mass energy will be discussed. The configuration of the interaction region will be presented with particular focus on the absorber design, as well as the overall background-mitigation strategy with the relevant detector parameters in mind.

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