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## MACE Phase-I and Its Detector System

The Muonium-to-Antimuonium Conversion Experiment (MACE) aims to probe charged lepton flavor violation (cLFV) through an advanced detector system. The MACE calorimeter system could satisfy the requirement in searching for lepton flavor violating  $M \rightarrow \gamma\gamma$  and  $\mu \rightarrow e\gamma\gamma$  decay in the MACE Phase-I. With an inner tracking system comprising a Multigap Resistive Plate Chamber (MRPC) and a Scintillating Fiber (SciFi) tracker, the MACE Phase-I detector aims to achieve unprecedented sensitivity to these cLFV processes. This presentation will outline the experimental design of the MACE Phase-I apparatus and discuss recent progress in prototype development and simulations. The results highlight the experiment's potential to advance our understanding of fundamental symmetries and physics beyond the Standard Model.

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