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The status of MICE (15' + 5')

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Muon beams of low emittance provide the basis for the intense, well characterised neutrino beams of the Neutrino Factory and for lepton-antilepton collisions at energies of up to several TeV at the Muon Collider. The international Muon Ionization Cooling Experiment (MICE) will demonstrate ionization cooling, the technique by which it is proposed to reduce the phase-space volume occupied by the muon beam. MICE is being constructed in a series of Steps. The configuration currently in operation at the Rutherford Appleton Laboratory is optimised for the study the properties of liquid hydrogen and lithium hydride that affect cooling. The results that have recently been submitted for publication will be described along with preliminary results from the MICE study of the effect of liquid hydrogen and lithium hydride on the muon beam. The plans for data taking in the present configuration will be described together with a summary of the status of preparation of the final experimental configuration by which MICE will demonstration the principle of ionization cooling.

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