

Abstract Submitted  
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**Construction and Physics program for MICE next step IV** BEN FREEMIRE, Illinois Institute of Technology, Chicago, MICE COLLABORATION<sup>1</sup> — The International Muon Ionisation Cooling Experiment is progressing towards full demonstration of the feasibility of this cooling technology decisive for neutrino physics and muon colliders. Its next step IV should provide the first precise measurements of emittances and first evidence of cooling. Spectrometer solenoids, muon trackers and absorber-FC (focus coil) modules are being assembled to make this possible in 2015. The physics programme of ionization cooling Step IV measurements will be described in detail, with Li-H and a few other promising absorber materials of different shapes. So will the progress of the hardware. The longer term final step V and step VI complete demonstration measurements being simultaneously prepared (re-accelerating RFCC modules, RF cavities inside their own focusing CC (“coupling” coils) will also be outlined.

<sup>1</sup>Muon Ionisation Cooling Experiment

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