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The Double Chooz Outer Veto EMILY CONOVER, University of Chicago, DOUBLE CHOOZ COLLABORATION — Double Chooz is unique among reactor neutrino experiments for its Outer Veto – a multi-layered plastic scintillator strip muon detector. The far detector Outer Veto covers $95\,\mathrm{m}^2$ on top of the main detector volumes and is composed of 44 modules, each made up of 64 scintillator strips outfitted with wavelength-shifting fibers coupled to a multi-anode PMT. The Outer Veto serves two purposes: first, as a veto, it reduces muon-induced backgrounds to the neutrino signal, in particular the fast neutron and stopping muon backgrounds; second, the high-quality muon tracking it provides allows for detailed studies of these backgrounds, as well as long-lived backgrounds, which cannot be vetoed, such as ^{9}Li and ^{8}He. I will describe the design of the Outer Veto, its performance, and some background studies.

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