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Search for 4-lepton B -decay final states at BABAR BANAFSHEH FERDOUSI, STEPHEN SEKULA, Southern Methodist University, BABAR COLLABORATION — In the Standard Model, the decay of B mesons into a final state of four leptons is highly suppressed and too rare to be observed. Recently, whole new sectors of gauge bosons have been postulated in order to explain how dark matter might interact with itself and with particles in the Standard Model. A class of these models predicts that four-lepton final states of B -meson decay may be observable. We present a search for such final states using 471 million B /anti- B meson pairs produced at the PEP-II/BABAR B factory.

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