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First Results from NOvA's Magnetic Monopole Search MARTIN FRANK, University of South Alabama, NOVA COLLABORATION — The existence of the magnetic monopole has eluded physicists for centuries. The NOvA far detector (FD), used for neutrino oscillation searches, also has the ability to identify slowly moving magnetic monopoles ($v < c/100$). With a surface area of 4,100 m^2 and a location near the earth's surface, the 14 kt FD provides us with the unique opportunity to be sensitive to potential low-mass monopoles unable to penetrate underground experiments. We have designed a novel data-driven triggering scheme that continuously searches the FD's live data for monopole-like patterns. At the offline level, the largest challenge in reconstructing monopoles is to reduce the 148,000 Hz speed-of-light cosmic ray background. In this talk, I will present the first results of the NOvA monopole search for slow monopoles.

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