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A Measurement of Proton, Deuteron, Triton and Alpha Particle Emission after Nuclear Muon Capture on Al, Si and Ti ANDREW EDMONDS, Boston University, ALCAP COLLABORATION — The AlCap experiment has measured the emission rate and energy spectra of protons, deuterons, tritons and alpha particles associated with the nuclear capture of muons stopped in Al, Si, and Ti at PSI. These measurements quantify an important nuclear physics hit background to the Mu2e and COMET experiments, which will search for charged lepton flavor violation at an unprecedented level of sensitivity. Detailed information on the rates and energy spectra of the emitted heavy particles in the capture process is important to the design of the background-reducing aspects of these experiments. The results are also relevant for understanding the nuclear physics of these rare reaction branches. In this talk, I will describe the experiment and present the results.

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