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ROADSTR: a Mobile Antineutrino Detector Platform for enabling Multi-Reactor Spectrum, Oscillation, and Application Measurements[1] NATHANIEL BOWDEN, Lawrence Livermore National Laboratory, ROADSTR COLLABORATION — The goal of the Reactor Operations Antineutrino Detection Surface Testbed Rover (ROADSTR) project is to develop and demonstrate enabling technologies for readily mobile antineutrino detectors able to make precision measurements at essentially any reactor facility. While readily mobile detectors have obvious appeal for reactor monitoring applications, they would also allow measurements at multiple reactors using the same detector. Such measurements with common detector response systematic uncertainties could be beneficial for short baseline oscillation studies, will help to constrain flux and spectrum predictions, and provide benchmark measurements for applications. Here we will summarize a variety of efforts underway within the project including continued development of Pulse Shape Discrimination capable scintillators, particularly ^{6}Li-doped plastic, mobile detector implementations, and the study of correlated background reduction strategies and variations.

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