

Radiological Multi-sensor Analysis Platform

Gamma-ray spectroscopy and imaging are well-established methods of detecting radioactive sources in a variety of scenarios. However, the natural gamma-ray background can significantly reduce detection sensitivity, especially when the source is weak and the background varies substantially. Mobile detection platforms, in particular, must contend with background that is not necessarily known or measurable a priori. This project aims to systematically measure and characterize the spatial and temporal variations of the background in order to assess their impact on detection sensitivity and specificity for homeland security applications.

Primary author: BANDSTRA, Mark

Co-authors: QUITER, Brian (LBNL); CURTIS, Joseph (LBNL); Prof. VETTER, Kai (LBNL); COOPER, Reynold (LBNL); MEYER, Ross (LBNL); SRINIVASAN, Shreyas (UC Berkeley); NEGUT, Victor (LBNL)