

Abstract Submitted  
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**Environmental Monitoring and Characterization of Radiation Sources on UF Campus Using a Large Volume NaI Detector** \ JESSE A. BRUNER, HANNAH E. GARDINER, KELLY A. JORDAN, JAMES E. BACIAK, University of Florida — h *-abstract-*\pard Environmental radiation surveys are important for applications such as safety and regulations. This is especially true for areas exposed to emissions from nuclear reactors, such as the University of Florida Training Reactor (UFTR). At the University of Florida, surveys are performed using the RSX-1 NaI detector, developed by Radiation Solutions Inc. The detector uses incoming gamma rays and an Advanced Digital Spectrometer module to produce a linear energy spectrum. These spectra can then be analyzed in real time with a personal computer using the built in software, RadAssist. We report on radiation levels around the University of Florida campus using two mobile detection platforms, car-borne and cart-borne. The car-borne surveys provide a larger, broader map of campus radiation levels. On the other hand, cart-borne surveys provide a more detailed radiation map because of its ability to reach places on campus cars cannot go. Throughout the survey data, there are consistent radon decay product energy peaks in addition to other sources such as medical I-131 found in a large crowd of people. Finally, we investigate further applications of this mobile detection platform, such as tracking the Ar-41 plume emitted from the UFTR and detection of potential environmental hazards.\-/abstract-\

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