

## Small, Portable Electrostatic Precipitation Based Radio-Aerosol Monitor

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Atmospheric aerosol collection using electrostatic precipitation (ESP) promises power consumption roughly one order of magnitude lower than filter paper based collection methods. For monitoring radionuclides in the atmosphere, this translates to an order of magnitude improvement in system sensitivity for the same power consumed. Conversely, small portable systems are enabled with lower battery and solar power requirements for extended operation at airflow rates matching filter-based systems that are challenging to operate in the field for extended periods. PNNL is currently developing a small, portable ESP-based radio-aerosol monitoring system. This presentation will cover the system design, projected monitoring capability, and the current status of the system build and testing.

### Promotional text

Electrostatic precipitation based atmospheric aerosol sampling promises power use ~one order of magnitude below filter based methods. This talk will cover the design of a small, portable ESP based radio-aerosol monitor, including capability, build status, and testing results.

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### Oral preference format

in-person

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