



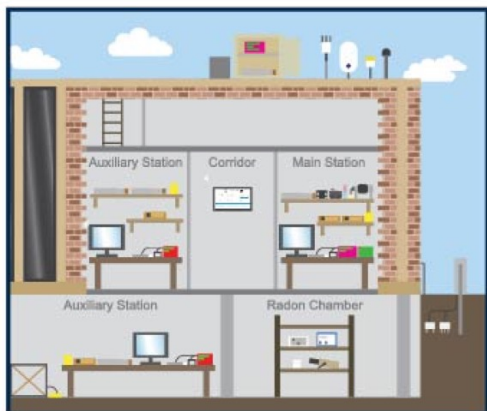
Integration of an Advanced Data Logger into a Professional Radiation Weather Station

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Introduction and Motivation

- Advanced sensor suite for background radiation monitoring
- Improve ease of data collection
- Utilization of sensors with proprietary interfaces with centralized data logger



▲ Radiation Weather Station Pro (RWSpro) system overview

Mission Relevance

- Monitoring of atypical radiation events
- Improve identification nuclear and radiological terrorism
- Establish baseline background radiation to compare measurements against

Technical Approach

Methods of communication

- Communication (COM) port identification
- Transmitting serial data between the advanced data logger and RWSpro
- Exploring serial communication over ethernet

Data and Interfacing device

- Test scripts to retrieve data from RWSpro to the advanced data logger
- Configuring data logger settings to attempt ethernet communication



High Pressure Ion Chamber and interface panel ▲



CR1000x Data Logger ▲

Results

- COM port of RWSpro to data logger identified
- Serial String from RWSpro successfully retrieved during test scripts

MTV Impact

- Continued experience working on and developing new technologies
- Industry and Graduate Applications

Conclusion

- Paves the path for automation script
- Progress on improving the RWSpro
- Improvements on the RWSpro allow for better characterization of atypical radiation events

Expected Impact

- Higher efficiency and accuracy of data collection
- Better utilization of customized sensors within sensor suite

Next Steps

- Automated Script Implementation
- Script Testing
- RWSpro data viewing HTTPS upgrade

