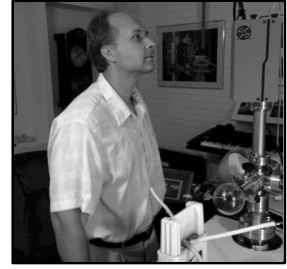


# Reliable Neutron and Gamma Radiation Detection

Max I. Fomitchev-Zamilov<sup>1</sup>  
<sup>1</sup>Maximus Energy Corporation, USA  
Email: [founder@maximus.energy](mailto:founder@maximus.energy)



Reliable neutron and gamma radiation detection is critical for nuclear science in general and for LENR experimentation in particular. In this tutorial I summarize best practices for multi-mode neutron and gamma detection including:

- Bubble detectors;
- Helium-3 and boron detectors;
- Neutron activation / gamma detection;
- Gamma shielding and gamma rejection;
- Neutron moderation and reflection;
- Makeshift neutron sources and their regulatory implications;
- EM noise screening;
- Statistical analysis of measurements in order to establish validity of results.

In conclusion I present a turn-key hardware / software solution that satisfies majority of experimenter's needs by offering exceptional sensitivity to signal while being virtually impervious to electromagnetic noise (Fig. 1). The developed hardware / software system allows monitoring, auditing, aggregation and statistical analysis of neutron and gamma counts and spectra originating from multiple devices communicating wirelessly via WiFi.



1. Fig. 1. Touch-screen helium-3 neutron detection system with WiFi in Faraday enclosure.