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February Newsletter

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DTG-01 Professional Desktop Geiger Counter



Our Digital Geiger Counters are NRC ready to be "NRC Certified" – To be NRC certified our Geiger counters are sent to an independent United States Government licensed nuclear laboratory, where it tested against the strict guidelines and standards of the U.S. Nuclear Regulatory Commission.

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Nuclear Geiger Counter Experiment #6 Nuclear Balloon Experiment

The GCA-01C Geiger Counter is a general purpose radiation detecting instrument. It's primary radiation indicators are an audio click and an LED blink each time a radioactive particle is detected. Detects: beta, x-rays and gamma radiation. A 3.5mm Digital Output port on the side provides a TTL logic pulse each time a radioactive particle is detected. This TTL output may be used to connected to various digital adapters: The Model GCA-01 has an internal Geiger-Mueller tube.

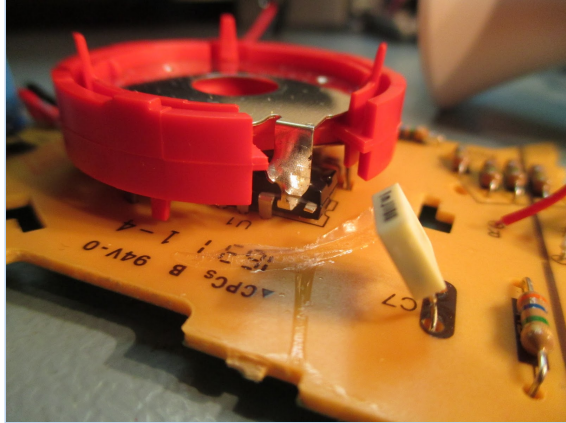
Purposes

- ^{222}Rn , 3.8 days, alpha decaying to...
- ^{218}Po , 3.10 minutes, alpha decaying to...
- ^{214}Pb , 26.8 minutes, beta decaying to...
- ^{214}Bi , 19.9 minutes, beta decaying to...
- ^{214}Po , 0.1643 ms, alpha decaying to...
- ^{210}Pb , which has a much longer half-life of 22.3 years, beta decaying to...

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Nuclear physic applied in smoke detectors



Not many people know, but in some smoke detectors, radioactive materials play an essential role. Today I will present one of those devices, and my -successful- attempt to reverse engineer it and get the circuit diagram. Those smoke detectors use a small amount of Americium-241 (chemical symbol: Am) obtained in nuclear reactors as a decay product of Plutonium-241. Am241 emits mainly alpha particles, but also some gamma rays. In smoke detectors it is in a form of an oxide AmO₂.

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