



Inexpensive solid state radiation detector

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Monitoring of environmental radioactivity is of interest both within the geosciences community and to groups such as the emergency services who need to quickly assess the safety of an environment. Here we present a light weight and inexpensive detector based on solid state technology, that can be easily worn or carried, or used disposably. It responds to gamma radiation and other radioactive particles such as those from space weather and cosmic rays. Unlike traditional technology such as the Geiger counter, the detector can operate at low voltage without the need for step-up circuitry, and it can also distinguish different particle energies. It is suitable for monitoring background radioactivity from cosmic rays and radon as well as responding to higher radioactivity levels. We anticipate that the device will have a broad range of end users, from terrestrial to space applications.