DIY Nuclear Event Detector: Fun Project or Risky Venture?

Description

Last year, we reported on the BhangmeterV2, an internet-connected device designed to detect nuclear blasts. It featured the HSN-1000 nuclear event detector, which aimed to alert other networked devices of an incoming electromagnetic pulse (EMP) in time to shut down electronics. Although the HSN-1000 was available then, it is no longer obtainable. Fortunately, a creator known as Bigcrimping is now developing a similar device called the BHG-2000 Nuclear Event Detector, but he needs assistance to complete it.

The HSN-1000 worked by detecting the gamma-ray pulse that signals a nuclear explosion. Similar signals were observed by the Vela Satellites, although they did not use this specific detector. Since the HSN-1000 is no longer an option, Bigcrimping decided to build his own using four BPW34S PIN diodes. These diodes, covered in black paint, can sense gamma rays while blocking visible light. By using four diodes, he increases the detection area, which helps avoid false alarms from cosmic rays.

The device amplifies the tiny current produced by these diodes using a transimpedance amplifier and an LT1797 op-amp, which then triggers a signal when an event occurs. Bigcrimping has designed this system to fit onto a printed circuit board compatible with the old HSN-1000L model.

Currently, Bigcrimping needs to test the device using gamma-ray sources. He is seeking anyone in Europe with a Cesium-137 (Cs-137) or Cobalt-60 (Co-60) source for assistance. His contact details are available on the project’s GitHub page.

CATEGORY

1. Sci/Tech - LEVEL4

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