

IAF EARTH OBSERVATION SYMPOSIUM (B1)
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QUAKESAT- A RADON MAPPING SATELLITE (RMS) TO DETECT EARTHQUAKE.

Abstract

Several studies have concluded that elevated concentrations of radon gas in soil or groundwater could be the sign of an imminent earthquake. It is believed that the radon is released from cavities and cracks as the Earth's crust is strained prior to the sudden slip of an earthquake.

Certain satellites use a spectrometer to measure different elements and compounds based on their response to certain types of light. This technology allows the satellite to measure the concentration of gases in the atmosphere.

Approximately 6-24 hours before an earthquake occurs, a large amount of Radon is released. Radon being a radioactive gas can be detected using a high efficiency spectrometer which can be placed in the satellite.

Regular observation of Earth can be done to detect abnormal levels of Radon which can help in predicting earthquakes.