



Radon as an earthquake precursor in NW Himalayas, India

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The continuous soil gas radon and daily monitoring of radon concentration in water is carried out at Amritsar (Punjab), Kangra and Chamba Valleys of NW Himalayas India to study the correlation of radon anomalies in relation to seismic activities in the region. In this study, radon monitoring in soil was carried out by using barasol probe manufactured by Algade France whereas the radon content in water was recorded using RAD7 radon monitoring system of Durrige Company USA. The radon anomalies observed in the region have been correlated with the seismic events of $M \geq 2$ recorded in NW Himalayas by Wadia Institute of Himalayas Geology Dehradun and Indian Meteorological Department, New Delhi. The effect of meteorological parameters viz. temperature, pressure, wind velocity and rainfall on radon emission has been studied. The correlation coefficient between radon and meteorological parameters has been evaluated. The equation for the correction of these correlations to obtain a corrected radon concentration that shows less variability is derived. Empirical equations between earthquake magnitude, epicentral distance and precursor time have been examined and respective constants were determined