



Earthquake forecasting studies using radon time series data in Taiwan

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For few decades, growing number of studies have shown usefulness of data in the field of seismogeochemistry interpreted as geochemical precursory signals for impending earthquakes and radon is identified to be as one of the most reliable geochemical precursor. Radon is recognized as short-term precursor and is being monitored in many countries. This study is aimed at developing an effective earthquake forecasting system by inspecting long term radon time series data. The data is obtained from a network of radon monitoring stations established along different faults of Taiwan. The continuous time series radon data for earthquake studies have been recorded and some significant variations associated with strong earthquakes have been observed. The data is also examined to evaluate earthquake precursory signals against environmental factors. An automated real-time database operating system has been developed recently to improve the data processing for earthquake precursory studies. In addition, the study is aimed at the appraisal and filtrations of these environmental parameters, in order to create a real-time database that helps our earthquake precursory study. In recent years, automatic operating real-time database has been developed using R, an open source programming language, to carry out statistical computation on the data. To integrate our data with our working procedure, we use the popular and famous open source web application solution, AMP (Apache, MySQL, and PHP), creating a website that could effectively show and help us manage the real-time database.