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ACG36-P01 Room:Convention Hall Time:May 21 15:30-17:00

seismic precursors in the ionospher, atmosphere and groundwater

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Precursory phenomena of M7.2 Hyogoken-nanbu earthquake in the morning of Jan.17, 1995 are investigated using avairable time-variations of ionospheric foF2 and foEs, seismic clouds, radio noises and Radon concentration around the epicenter before this earthquake.

The earth crust consisting largely of the granite is rich in the Radon which escapes into the atmosphere, and is chemically inert, but soluble in the water.

As the contact surface of rock grains with the groundwater increases due to the decrease of grain size by microcracks, Radon atoms are released more into the groundwater. The groundwater Radon concentration in an well of the Nishinomiya city, east of Kobe city began to increase from 78 days before the M7.2 Hyogoken-nanbu earthquake of Jan 17, 1995. Then, the Radon concentration returned to the normal level.

In general, the Radon concentration in the water and atmosphere is in reverse proportional to the water temperature and air one, the rapid decrease of groundwater Radon concentration down to the minimum suggests an arrival of hot or warm matter such as the magma coming up to the observed region from the deep origin. Therefore the rapid decrease of groundwater Radon concentration down to the minimum suggests an arrival of warm matter such as the magma from a deep origin in the Earth.

Keywords: Earthquake, Precursor, Ionosphere, Atmosphere, Groundwater