

Fault Structure and Seismic Activity in a Region along the Red Sea and the Dead Sea on the Data of the Measurements of Radon Degassing, Atmospheric Cloudiness and Electromagnetic Noises on COSMOS-1809 Satellite

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In this work we juxtapose in details both the distribution and character of cloudiness with the location strain of the fault zone in a region along the Red Sea and Dead Sea. To compare with the known map, have the results of cloudiness strained observation obtained by the satellite RESOURCE 01. The cloudiness distribution seen in satellite photographs reveals the fault structure in the region, clouds following individual fault lines. It is known that in the Dead Sea Rift (DSR) is observed high level of radon (^{222}Rn) emanation related with tectonic activity. Analysis of analog very low frequency (0.07-20 kHz) information received on COSMOS-1809 satellite (circular orbit, H ~960 km) on 1992 and 1993 years showed some peculiarities in spectrum of the signals registered above DSR region. During the days with high level of radon emanation on dynamic spectrum of the signals presents a noise band on frequencies near local proton gyrofrequency. Upper frequency of this noise band practically is equal local proton gyrofrequency. When the latitude of the satellite position increased the boundaries of this noise increases also. This can be connected with geomagnetic field change. Region of the noise registration is localized in the latitude and longitude interval near 10° relatively region of radon registration. We assume that observed noise signals were ion-cyclotron emission excited by protons accelerated in electric field, which can be appeared in the upper ionosphere above radioactive releases zone.