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RECENT SEISMICITY IN KRESNA REGION AND SURROUNDINGS

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The Kresna seismic region is situated in the SW Bulgaria. This area is well known with two strong events that occurred in 1904 (M=7.2, M=7.8) and stays the most active part of our country through the recent years. This work aims to investigate the space and time distribution of the seismicity in Kresna region and surroundings for the period from 1983 to 1998 years. Thanks to the data provided by National seismological network (NOTSSI) we were able to create a catalogue with parameters (t_0 , ϕ , λ , h, M) of more than two thousand earthquakes for the space window 41.5 - 42.3N, 22.2 - 23.8E. The strongest event for the period occurred on the 23rd of January, 1984 - M=4.8, I_0 =VI (MSK), h=11km and epicenter localized east of Struma river (close to the source zone from 1904) [Solakov, Simeonova (edit.), 1993]. The epicentral map created for all events shows four zones with concentration of epicenters - the region of Plachkovitza mountain, the region west of Struma river (north of Berovo, Macedonia), the region east of Struma river (south of Blagoevgrad, Bulgaria) and the south part of Rila mountain. We consider the zones mentioned above as one seismogenic structure with direction ENE - WSW.

An attempt to compare the activity in four regions was made. The result shows higher activity for the regions west and east of Struma River, esp. the second one. The lowest activity has observed for the region of South Rila excepted the last two years. The seismic series that were observed due this period were defined as seismic swarms [Babachkova et all, 199]. A peculiarity of the time distribution of seismicity is the low activity for Kresna region just before and after seismic swarms in Rila.

The hypocentral distributions for all events with magnitude more than 2.0 were made. This picture confirms our image for all regions as for one seismogenic structure.