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The 12 July 2004 MLV = 4.9 Upper Soca valley (SW Slovenia) Earthquake

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The 12 July 2004 MLV = 4.9 earthquake which was about 10 times weaker than the 12 April 1998 earthquake was a reminder of the tectonic activity in the region. The earthquake occurred at 15:04 local time (13:04 UTC) on the same fault system as the 1998 earthquake, which is the Ravne fault and is a part of the Idrija fault system. The earthquake happened on a vertical fault striking in NW-SE direction. The movement on the fault was horizontal in the right-lateral sense. The hypocentral coordinates were 46.31 N and 13.61 E and its depth 8 km.

The maximum intensity, VI - VII EMS-98, was observed in a small region around Cezsoca and Bovec. The effects of local geology on ground motion amplification were observed. Local seismic and geological properties are typical of alpine terrain. Larger number of smaller landslides, several rock-falls and cracks at terrace edges were observed.

In the first day about 300 aftershocks were located, all together around 2000 by the end of year 2004. There were 15 aftershocks with MLV larger than 2.5 with the largest aftershock of 3.6. For the aftershock recording 19 portable stations were deployed in the epicenter region in a collaboration with INGV (Rome), DST-UT (Trieste), CRS-INOGS (Udine), PC RFVG (Palmanova) and Kinemetrics (USA).