

## **Initiated Seismic Activity May 22 of 1998 in the Orocline from the Central Bolivia Region**

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The earthquake of 22 May 1998 of magnitude 6.5 occurred in the region of central Bolivia, causing death and destruction in and around the towns of Aiquile, Totora and Mizque. The earthquake seems to have initiated intense seismic activity in a wide zone of the Bolivian Orocline. Analysis of the records of the aftershocks allows us to differentiate more than one seismic source. The macroseismic information also corroborated this observation: some possible aftershocks with magnitude more than 4.0 were felt only in Aiquile and not in Totora (distant 52 km), and viceversa for other possible aftershocks. These differences too were observed also in the past. The destructive earthquake of 6 January 1958 near the town of Pérez, distant 57 km from Aiquile, was not felt in Aiquile; the destructive Aiquile earthquake of 1 September 1958 did not cause damage in Totora; the earthquake of 19 September 1959 which caused alarm in Totora was not felt in Aiquile. The earthquake of 28 July 1999, with focus to the south of Aiquile at depth of 110 km (unusual for the region), was felt only in Aiquile. In the region of central Bolivia there are many tectonic deformations. The focal mechanisms of the earthquakes and the distribution of the aftershocks in this region will allow us to identify the tectonic structure.