



The 2003 Chuya (Altay) seismic sequence : an integrated study

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Altay range is the most northern tectonically active zone related to the Eusasia-India collision. The Chuya event (magnitude 7.3) occurred on September 2003 at the NW edge of one of the large right lateral strike-slip faults on which the deformation take place inside the range. It was the first event worldwide recorded on modern seismological stations. The body waves modelling shows that the rupture was complex, including strike-slip and reverse component. Nevertheless the main part of the seismic moment is released during strike-slip motion during a bilateral rupture. Modelling of 2 large aftershocks shows the same complexity. The obtained focal solutions and rupture parameters are compared with fault segmentation observed on the surface breaks report, but also, in the SE part of the rupture, to the horizontal displacements measured on a SPOT correlation image. These two independent observations present very similar characteristics but different amplitude at the surface. We use also the aftershock distribution to propose a coherent model of the sequence in agreement with regional tectonics.