НТР, 2011, том 90, № 1, с.27-34

ANALYSIS OF TEMPORAL VARIATIONS OF SEISMIC STRAIN RELEASE IN SOURCE ZONES OF LARGE EARTHQUAKES

S.L. Yunga

Schmidt Institute of Physics of the Earth, Russian Academy of Sciences, Moscow, Russia

Abstract. Seismic strain release was considered in the source zones of strong earthquakes with $M \geq 8$, as well as 2011 Tohoku $M=9$ event. Seismic strain release tensor is determined as a normalized sum of local seismic moment tensors for a representative number of seismic events within 2 or 2.5 degree vicinity of each point. Analysis is based on scalar product of tensors under investigation. Temporal variations are revealed on the basis of comparison individual seismic moment tensor and seismic strain rate tensor obtained through this averaging procedure.

Keywords: earthquake, centroid moment tensors, CMT-catalogue, seismic strain release, Honshu, Tohoku.