

Genrich, J., Konca, O., Sladen, A., Sieh, K., Avouac, J., Galetzka, J., (2007) **Analysis of High Rate GPS Data From the September 12 and 13 Strong Motion Events off Sumatra**, Eos Trans. AGU, 88(52), Fall Meet. Suppl., Abstract#U53A-06

The Sumatran Global Positioning System Array (SuGAR) consists of currently 29 continuous GPS stations that cover the forearc region of Sumatra. Four stations in the southern part of the array recorded high rate (1 sec. sampling rate) data during and surrounding the 3 major regional earthquakes (M8.4, M7.9, and M7.0) on September 12 and 13. Using the GAMIT/TRACK software, we compute 3-component time series of station displacements to investigate coseismic and postseismic kinematics. We present spectral characteristics of the recorded coseismic wave forms and compare them to model predictions. We analyze the observed early postseismic displacement in the context of frictional sliding models.