Hudnut, K., Galetzka, J., Sieh, K., Heaton, T., Yang, J., Genrich, J., Briggs, R., Stephens, C., Boore, D., Acosta, A., Borsa, A., Stark, K. (2007) **Near-field strong ground-motions during the September 12-13, 2007 Sumatran earthquakes**, Eos Trans. AGU, 88(52), Fall Meet. Suppl., Abstract#U53A-05

Three K2 triaxial accelerometers were operating at 200 samples per second within the region of strong shaking during the recent Mw 8.4, Mw 7.9 and Mw 7.0 Sumatran earthquakes and the many smaller events that followed. Presently, records from two stations, Pulau Sikuai (PSKI) and Silabu (SLBU) have been processed. Station PSKI is located 392 and 165 km from the epicenters of the two larger earthquakes, near Padang. Station Silabu (SLBU) is very near the northwestern limit of rupture during the Mw 8.4 and in the direction of rupture propagation. SLBU is up-dip and \sim 50 km distant from the hypocenter of the Mw 7.9 earthquake, providing a near-field constraint on indications from teleseismic data that this event nucleated sharply. Despite this, peak horizontal acceleration was approx. 300 cm/s/s and peak horizontal velocity was approx. 70 cm/sec. The SLBU station includes a GPS receiver that is part of the Sumatran GPS Array (SuGAr). The GPS instrument recorded the two larger earthquakes at a 1 sample per second data rate. Data from both the accelerometer and GPS instrument are expected to enable a useful comparison of the records from seismic inertial sensors (accelerometers) and GPS recordings of strong ground motions. A third station called Malakone (MLKN) on Enganno island lies about 100 km southeast of the epicenter of the Mw 8.4 and in the back-azimuth direction, away from propagation of that rupture. Because these three stations are located along-strike of the several large to great events in this sequence, and in one case even immediately up-dip, these recordings may be expected to provide data that are useful for refining attenuation relations that are used in engineering and hazard mapping. Strong-motion data are available through the National Center for Engineering Strong Motion Data (http://strongmotioncenter.org).