# STRESS REGIME IN THE NEPALESE HIMALAYA FROM RECENT EARTHQUAKES

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Two recent earthquakes occurred on April 25, 2015 and May 12, 2015 on or near the Main Himalayan Thrust (MHT), the boundary between India and Eurasia at this active continent-continent collision zone. These two great earthquakes in the Indo-Eurasian plate margin killed thousands of people and caused billion dollars of property loss. Shortly after these two events, we deployed a dense array of seismometers to record the aftershocks across the Gorkha earthquake rupture area. The network NAMASTE (Nepal Array Measuring Aftershock Seismicity Trailing Earthquake) included 45 different seismic stations (16 short period, 25 broadband, and 4 strong motion sensors) at a spacing of ~20 km covering the Gorkha earthquake rupture area and as far south as the Main Frontal Thrust. This deployment recorded earthquakes for more than 10 months from June 2015 to May 2016. We used time domain short term average (STA) and long term average (LTA) algorithms (1/10s and 4/40s) respectively to detect the arrivals and then developed an earthquake catalog containing ~9000 aftershocks.

We are manually picking the P-wave first motion arrival polarity to develop a catalog of focal mechanisms for the larger magnitude (> M 2.5) events with adequate (>10) recorded arrivals. Furthermore, we use the p-wave first motion arrival polarity to develop double-couple earthquake focal mechanisms to

investigate the seismicity and faulting pattern of the Nepal Himalayas at the Indo-Eurasian plate margin.