

Assignment 5

Due: December 2, 2014

I. Explain why we sometimes need to use Moment tensors instead of using strike, dip and rake to characterize earthquakes?

II. Explain what is CLVD and what kinds of fractures cause CLVD.

III. Characterize earthquakes shown in Figure 1. (*hint*: what kind of faulting, is the dip shallow or steep, is the mechanism deviatoric, what is the horizontal direction of faulting, etc?)

IV. Characterize earthquakes shown in Figure 2.

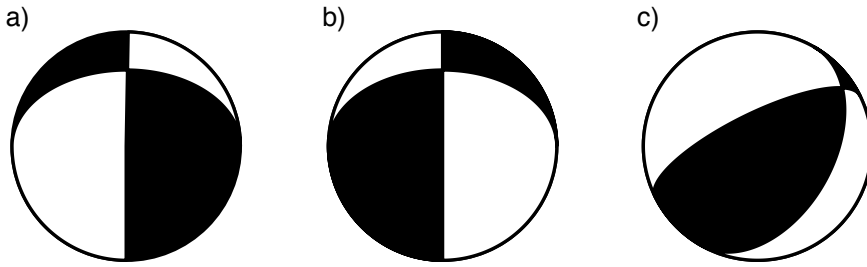


Figure 1: Focal mechanisms. Angles of strike, dip and rake are a) $[270^\circ, 30^\circ, 0^\circ]$, b) $[0^\circ, 90^\circ, 60^\circ]$, and c) $[30^\circ, 30^\circ, 60^\circ]$.

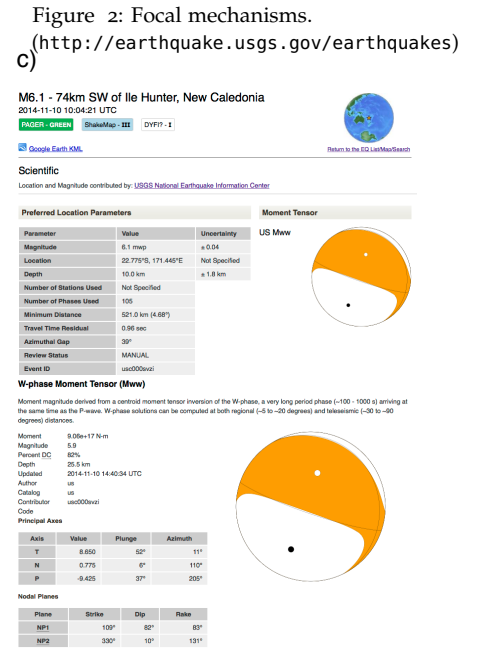
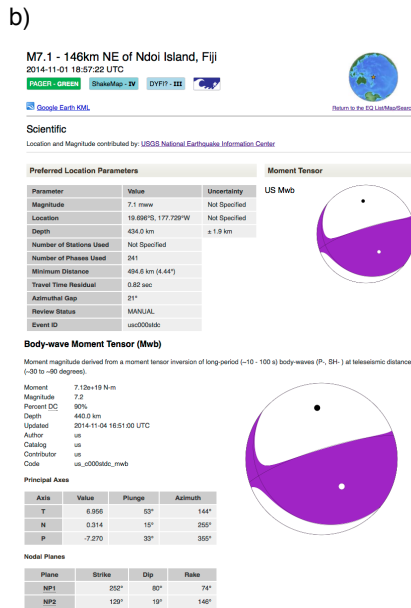
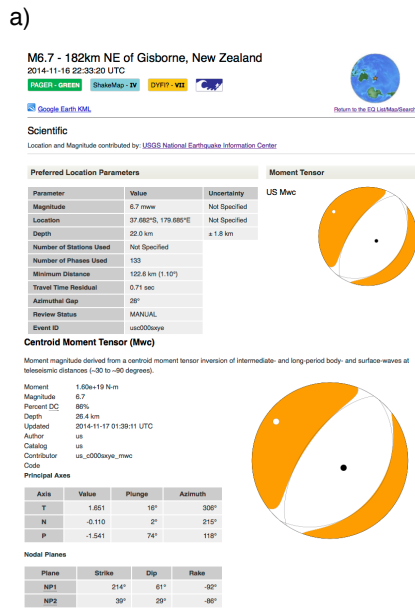


Figure 2: Focal mechanisms. (<http://earthquake.usgs.gov/earthquakes>)