

Week 11 - Day 21, Tuesday November 3, 2009

Revised Reading Assignments

Please feel free to suggest or substitute papers (with approval) for reading.

Postseismic - including viscoelastic, poroelastic, fault afterslip

October 27, 2009 - Amie & Bill

Freed, A. M., R. Burgmann, and T. Herring (2007), Far-reaching transient motions after Mojave earthquakes require broad mantle flow beneath a strong crust, *Geophysical Research Letters*, *34*, 19.

Owen, S., G. Anderson, D. C. Agnew, H. Johnson, K. Hurst, R. Reilinger, Z. K. Shen, J. Svarc, and T. Baker (2002), Early postseismic deformation from the 16 October 1999 M-w 7.1 Hector Mine, California, earthquake as measured by survey-mode GPS, *Bulletin of the Seismological Society of America*, *92*, 4, 1423-1432.

October 29, 2009 - Jayne & Joe

Fialko, Y. (2004a), Evidence of fluid-filled upper crust from observations of postseismic deformation due to the 1992 M 7.3 Landers earthquake, *Journal of Geophysical Research*, *109*, B08401, doi:10.1029/2004JB002985.

Savage, J. C., and J. Svarc (2009), Postseismic relaxation following the 1992 M7.3 Landers and 1999 M7.1 Hector Mine earthquakes, southern California, *Journal of Geophysical Research*, *114*, B01401, doi:10.1029/2008JB005938.

November 3, 2009 Bill & Xiaohui

Dixon, T. H., E. Norabuena, and L. Hotaling (2003), Paleoseismology and Global Positioning System: Earthquake-cycle effects and geodetic versus geologic fault slip rates in the Eastern California shear zone, *Geology*, *31*, 1, 55-58.

Gourmelen, N., and F. Amelung (2005), Post-seismic deformation in the central Nevada seismic belt detected by InSAR: Implications for Basin and Range dynamics, *Science*, *310*, 1473-1476.

Coseismic - Case studies in inferring earthquake properties from geodesy

November 5, 2009 - Amie & Sumant

Fialko, Y., M. Simons, and D. Agnew (2001), The complete (3-D) surface displacement field in the epicentral area of the 1999 M(w)7.1 Hector Mine earthquake, California, from space geodetic observations, *Geophysical Research Letters*, *28*, 16, 3063-3066.

Fialko, Y. (2004b), Probing the mechanical properties of seismically active crust with space geodesy: Study of the coseismic deformation due to the 1992 M(w)7.3 Landers (southern California) earthquake, *Journal of Geophysical Research-Solid Earth*, *109*, B3.

November 12, 2009 - Amie & Joe

Hreinsdottir, S., J. T. Freymueller, R. Burgmann, and J. Mitchell (2006), Coseismic deformation of the 2002 Denali Fault earthquake: Insights from GPS measurements, *Journal of Geophysical Research-Solid Earth*, 111, B3.

Vigny, C., W. J. F. Simons, S. Abu, R. Bamphenyu, C. Satirapod, N. Choosakul, C. Subarya, A. Socquet, K. Omar, H. Z. Abidin, and B. A. C. Ambrosius (2005), Insight into the 2004 Sumatra-Andaman earthquake from GPS measurements in southeast Asia, *Nature*, 436, 201-206.

November 17, 2009 Sumant & Xiaohui

Kreemer, C., G. Blewitt, W. C. Hammond, and H. P. Plag (2006), Global deformation from the great 2004 Sumatra-Andaman Earthquake observed by GPS: Implications for rupture process and global reference frame, *Earth Planets and Space*, 58, 2, 141-148.

Blewitt, G., C. Kreemer, W. C. Hammond, H. P. Plag, S. Stein, and E. Okal (2006), Rapid determination of earthquake magnitude using GPS for tsunami warning systems, *Geophysical Research Letters*, 33, L11309, doi:10.1029/2006GL026145.

Plates and Plate Boundaries, including rigid plate, postglacial, and interseismic deformation

November 19, 2009 - Jayne, Sumant & Bill

Larson, K. M., J. T. Freymueller, and S. Philipson (1997), Global plate velocities from the Global Positioning System, *Journal of Geophysical Research*, 102, B5, 9961-9981.

Larson, K. M., and T. van Dam (2000), Measuring postglacial rebound with GPS and absolute gravity, *Geophysical Research Letters*, 27, 23, 3925-3928.

Thatcher, W., G. R. Foulger, B. R. Julian, J. L. Svarc, E. Quilty, and G. W. Bawden (1999), Present-day deformation across the Basin and Range province, western United States, *Science*, 283, 1714-1718.

November 24, 2009 - Xiaohui, Jayne & Joe

Meade, B. J., and B. H. Hagar (2005), Block models of crustal motion in southern California constrained by GPS measurements, *Journal of Geophysical Research*, 110, B03403, doi:10.1029/2004JB003209.

McCaffrey, R., A. I. Qamar, R. W. King, R. Wells, G. Khazaradze, C. A. Williams, C. W. Stevens, J. J. Vollick, and P. C. Zwick (2007), Fault locking, block rotation and crustal deformation in the Pacific Northwest, *Geophysical Journal International*, 169, 3, 1315-1340.

...something on rate and state friction or afterslip