week of September 16

I will be traveling Monday-Wednesday

8. Viscoelastic rheology


week of September 23

9. “Dynamic” loads of subducting plates

• Bird, P., 1984, Laramide crustal thickening event in the Rocky Mountain foreland and Great Plains: Tectonics, v. 3, p. 741-758 (assignment: p. 741, 742; p. middle of 745 to middle 750)

10. McKenzie’s pure-shear quantitative model of extensional basins

*Allen & Allen, chapt 3 (p. 61-67)

the following three references are all very short and fairly repetitive, but because the same thing is expressed in the words of various different authors, you may find that one of these is better for your retention than another -- pick your favorite:

Bond et al (chapt 4 in BIB, p. 164-167)
Leeder (chapt. 3 in BIB, p. 127-134)
Sengör (chapter 2 in BIB, p. 64-66)

11. simple-shear extension; more complex quantitative models; introduction to backstripping

HOMEWORK 3: McKenzie calculations of stretching (due Wednesday, October 2)

week of September 30

12. backstripping rock thicknesses to determine tectonic subsidence; decompaction

combined assignment for backstripping (general) and decompaction:

*Allen & Allen; chapter 8 (p. 263-281)
*Bond et al (chapter 4 in BIB, p. 160-161)
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13. picking your basin; organization into teams

14. Lower crustal flow and its consequences for isostatic compensation and flexure
   OR

HOMEWORK 4: Geohistory Analysis: Calculation of Tectonic Subsidence from Stratigraphic Data (due October 4)