October 3, 2001 – due 10/10

1. Read: S.D. Sheriff and M.C. Stickney, 1984, *Crustal Structure of Southwestern Montana and East-central Idaho; Results of a Reversed Seismic Refraction Line*. Geophysical Research Letters, 11, #4, 299-302.

In that paper we develop a simple, two-layer refraction model for southwestern Montana. I want you t o assume the model is wrong in that there must a thin high-velocity (V = 6.8 km/s) layer (blind zone) between the upper crust and mantle. Assume our other velocities are correct and that there really is three layers. What is the thickest the blind zone can be without becoming a first arrival? Show me a graph of your result. How would you test your hypothesis?