

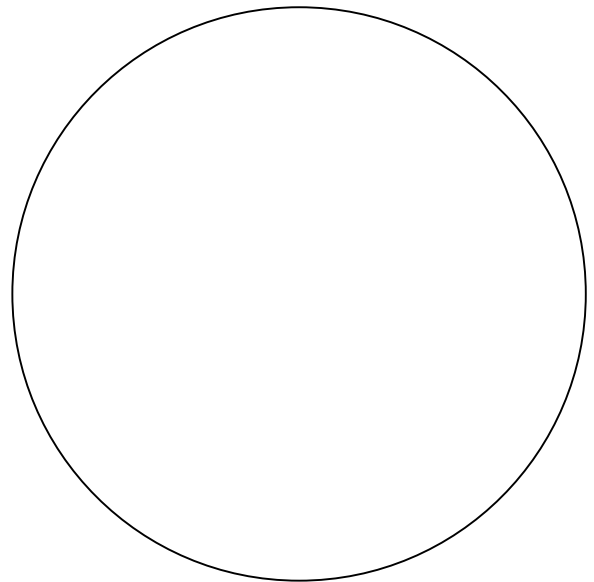
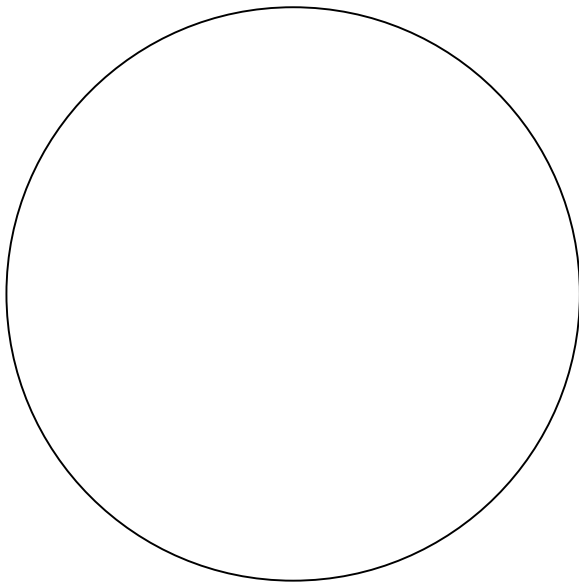
1. A fellow geologist is studying an exotic terrain that is now docked on the British Columbia coast. That geologist thinks the terrain followed the path in the table below.

a. Assume the geocentric axial dipole hypothesis and fill in the expected colatitudes, declinations and inclinations in the table below.

Time/age	Latitude	Colatitude	Longitude	Dec expected	Inclination expected
1,500 mybp	-60° (60 S)		180° East		
Cambrian	-30° (30 S)		180° East		
Silurian	0° (equator)		210° East		
Permian	30° (30 N)		210° East		
Jurassic	60° (60 N)		240° East		
Oligocene	45° (45 N)		240° East		
Holocene	60° (60 N)		240° East		

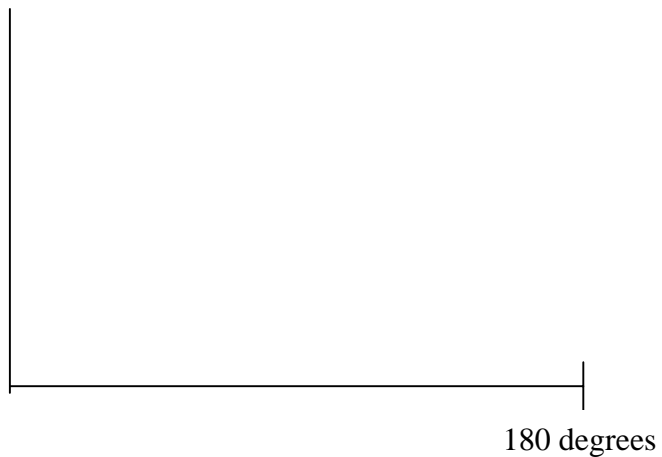
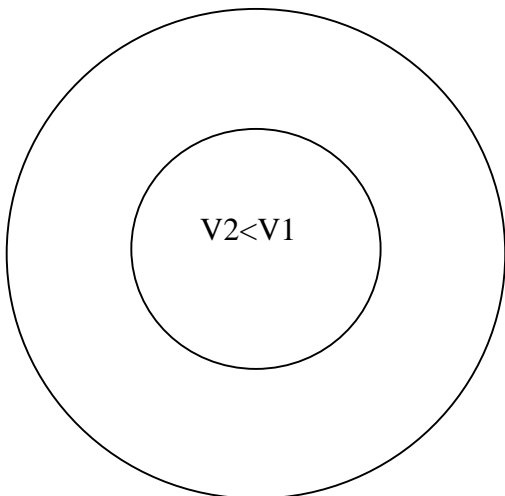
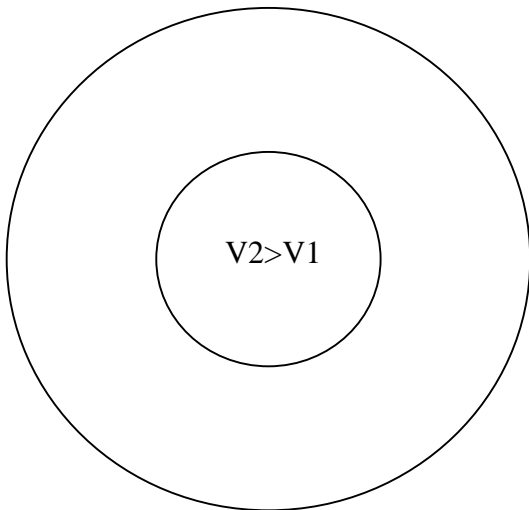
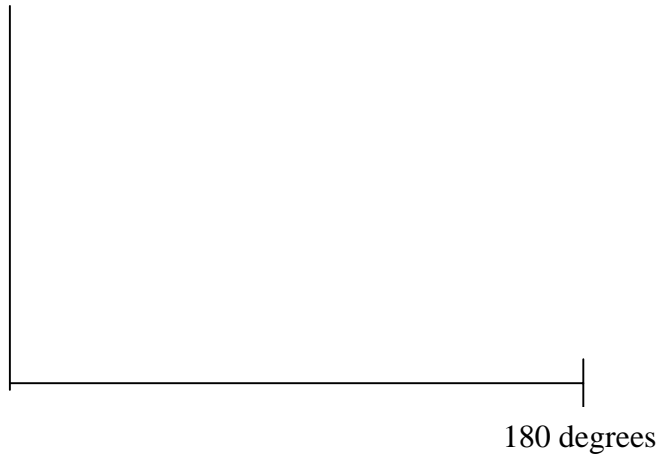
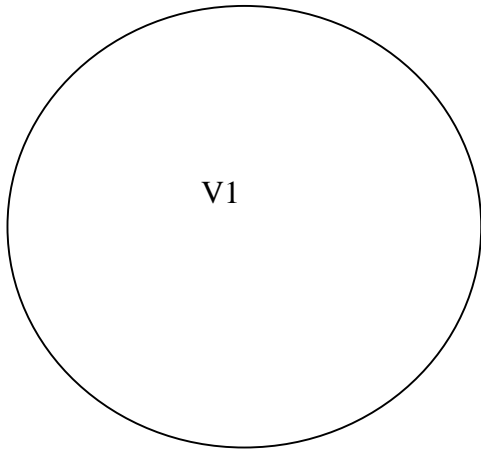
b. Label the circle neatly, appropriately, and accurately and then use it to accurately sketch the apparent polar wander path implied by the table. There is an extra if you need it, **explain/justify as necessary**.

extra stereonet



2. Below are three models for a radially symmetric planet. The cores and mantle are solid with constant velocities.

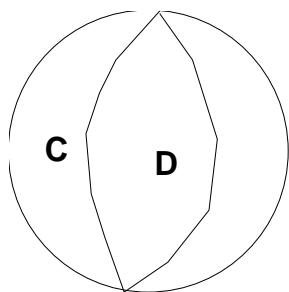
A. Sketch in the most important, representative rays in the planet and on a T-Delta diagram (label them). Make sure you scale the times the same for each diagram; that is, I will compare differences among the three diagrams.



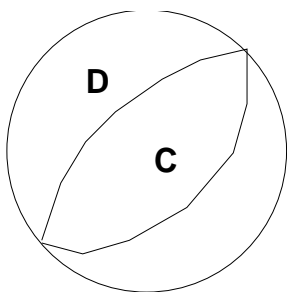
2. B. Explain how T-delta diagrams would allow you to determine which model was most accurate for the planet; how do the T-delta diagrams differ?

2 .C. For the cases with a core, explain how you would determine the radius of the core.

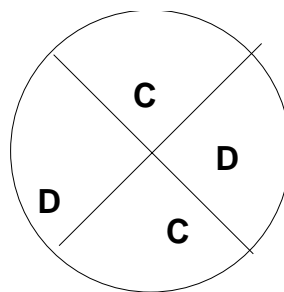
3. Label the three fault-plane solution diagrams below as to whether they indicate normal, reverse, or strike-slip motion. Explain your thinking. If one of the diagrams represents an impossible situation just say so:



A



B



C

Fault type:

A _____

B _____

C. _____

Strike of fault:

A _____

B _____

C _____

How do the above diagrams relate to Anderson's theory of faulting? (Anderson related principal stresses to fault types).