

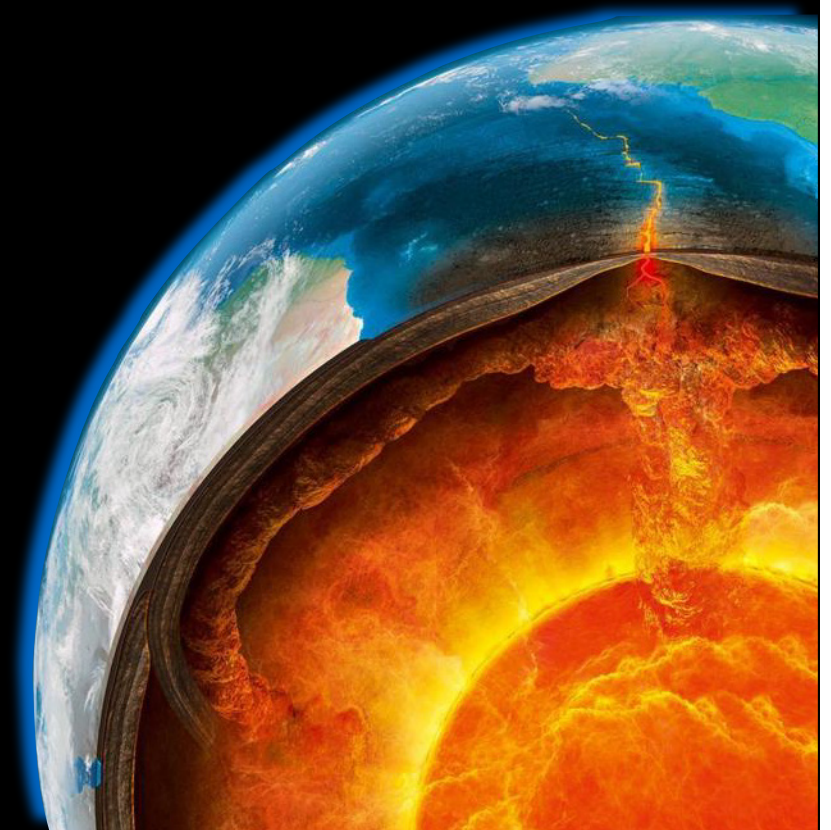
Earth's Interior

What are the different parts of Earth's interior and how did we come to define their characteristics?



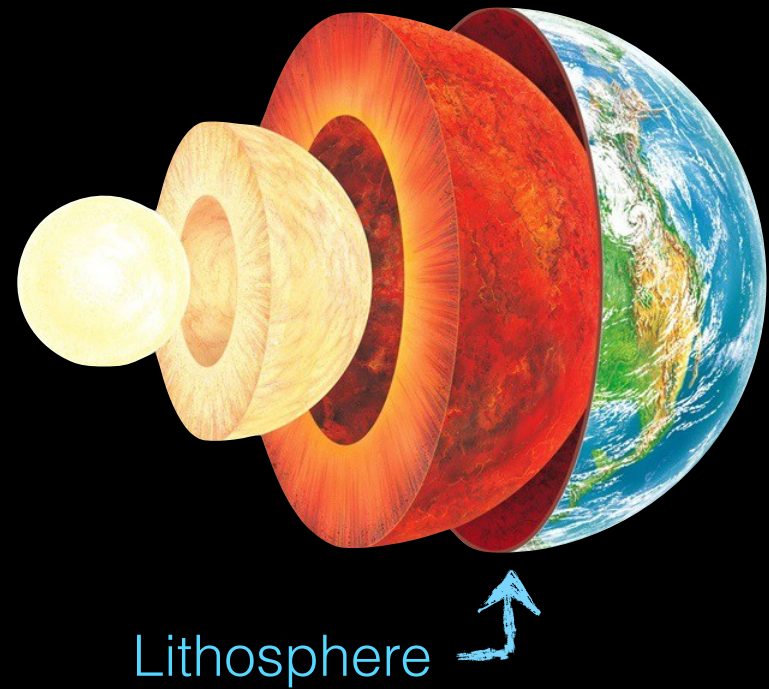
Earth's Interior

- Earth's interior structures are known through the study of seismic waves
- Seismic waves refract, reflect, change velocity and are absorbed depending on the material they are transmitted through



Earth's Interior

- Lithosphere - the rigid outer part of the Earth consisting of the crust and rigid mantle





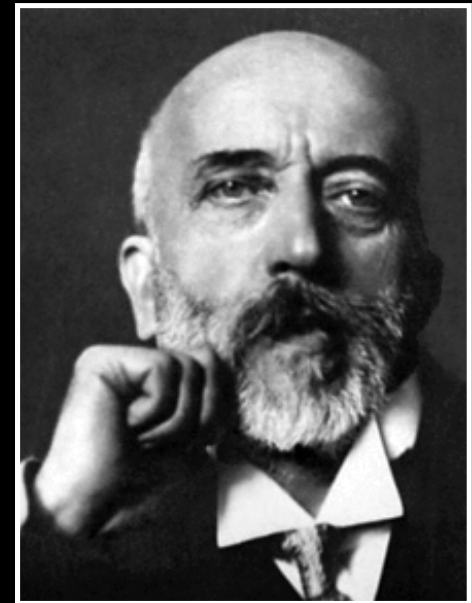
Lithosphere

Earth's Interior

- Granitic Continental Crust - thickest part of the crust [100 km] that has a density of 2.7 g/cm^3
- Basaltic Oceanic Crust - thinnest part of the crust [2-3 km] that has a density of 3.0 g/cm^3

Earth's Interior

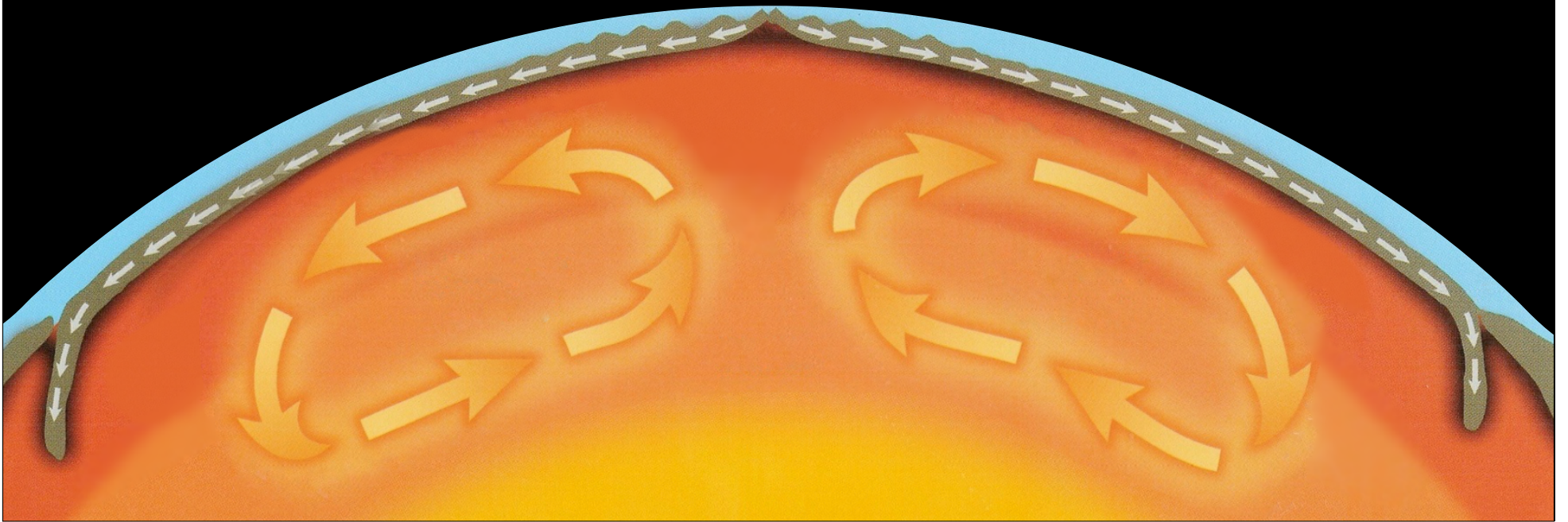
- Moho - thin interface separating the lithosphere from the asthenosphere
 - Andrija Mohorovicic' discovered it the boundary when seismic waves changed velocity

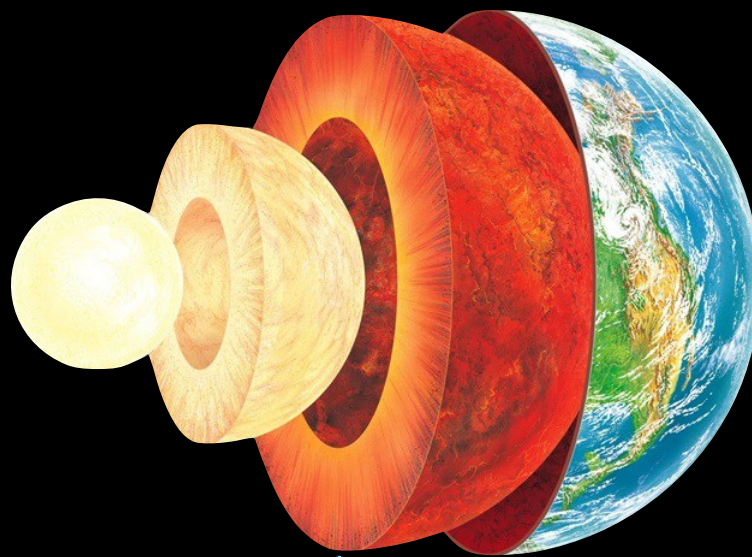


Earth's Interior

- Asthenosphere [plastic mantle] - upper portion of the mantle that is composed of partially melted rock
 - Convection currents within the asthenosphere cause the continents to move
 - Seismic waves decrease in velocity

Earth's Interior



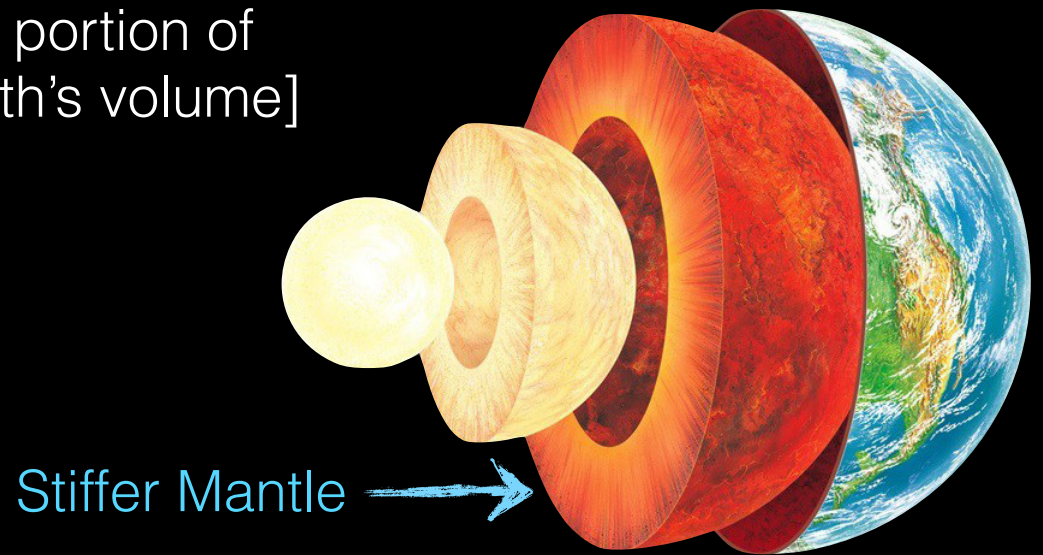


Asthenosphere



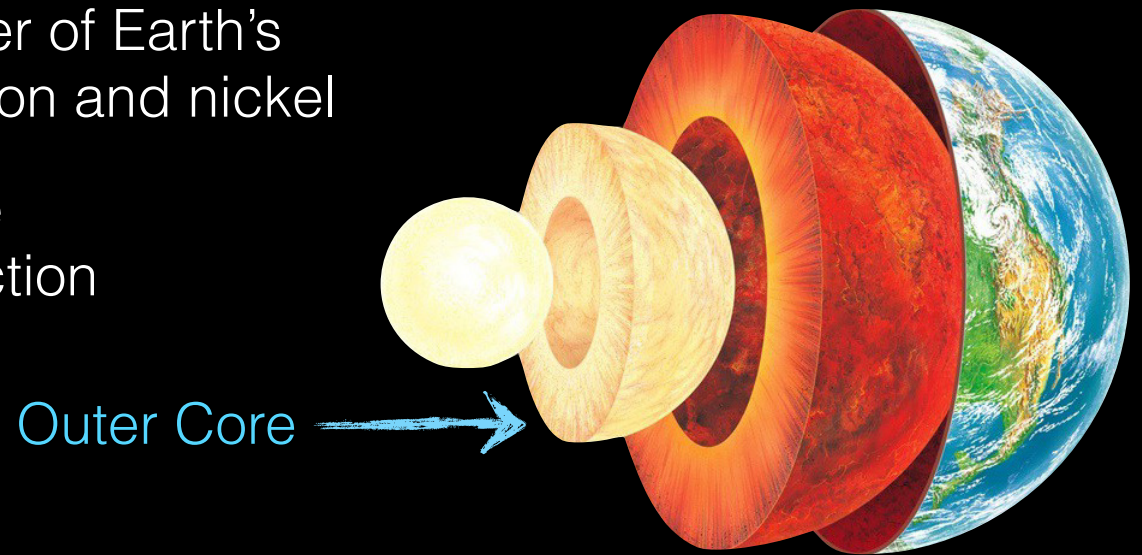
Earth's Interior

- Stiffer Mantle - the thickest portion of Earth's interior [80% of Earth's volume] that is solid



Earth's Interior

- Outer Core - liquid layer of Earth's interior composed of iron and nickel
 - Seismic waves are absorbed or refraction



Earth's Interior

- Inner Core - solid layer of Earth's interior composed of iron and nickel
 - Seismic waves increase in velocity

