



Abhisek Basu

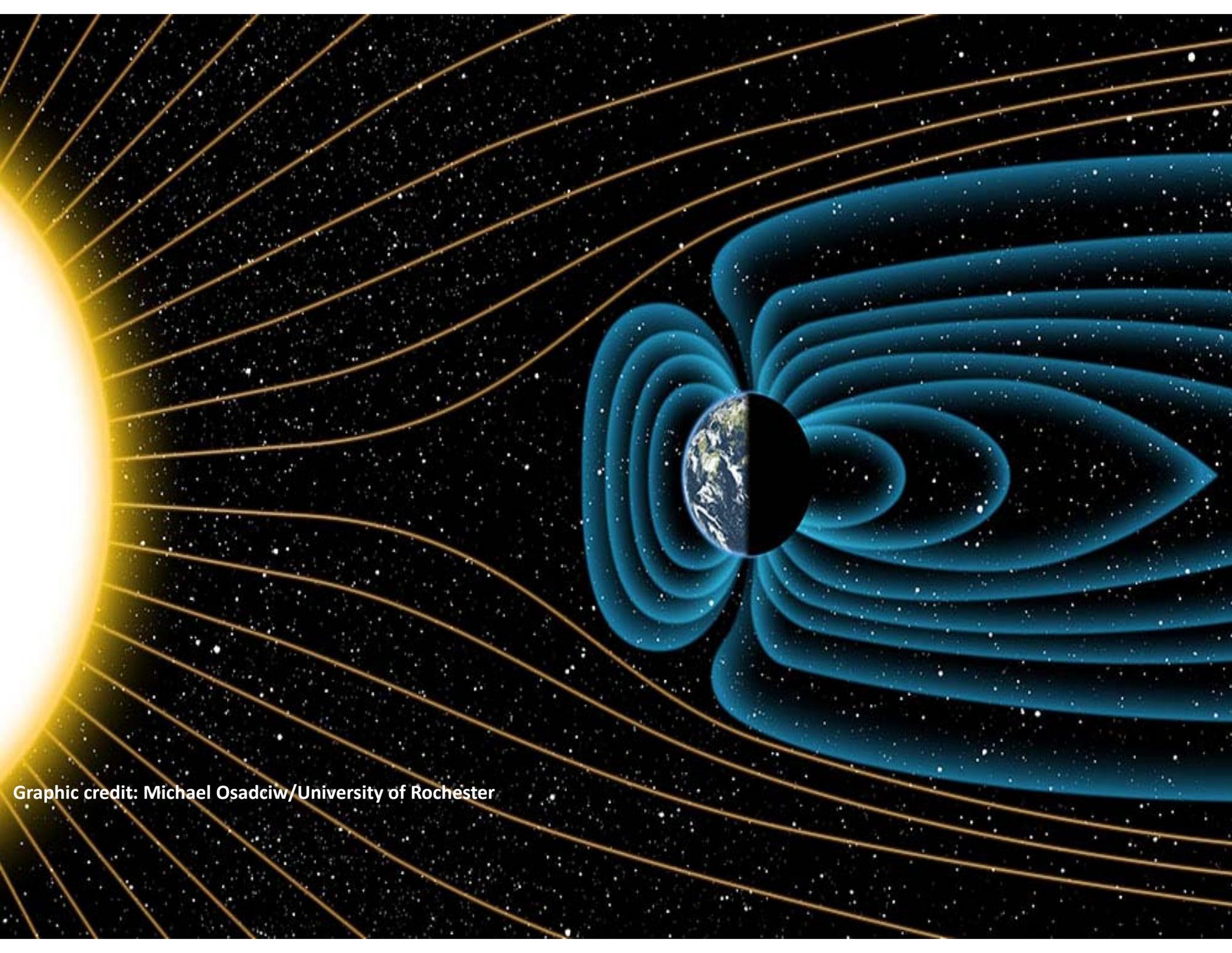
Earth, Ocean, Atmospheric Science

A peek into planetary interior

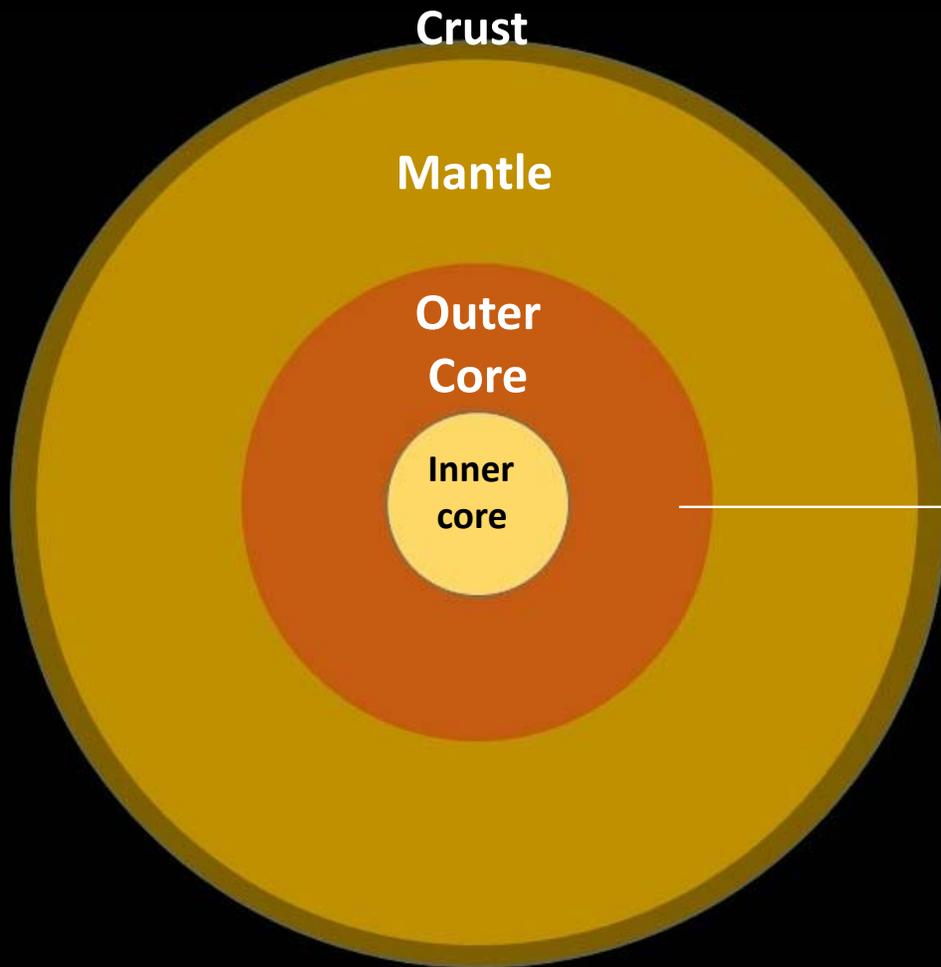
The Office of Postdoctoral Affairs

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Crust

Mantle

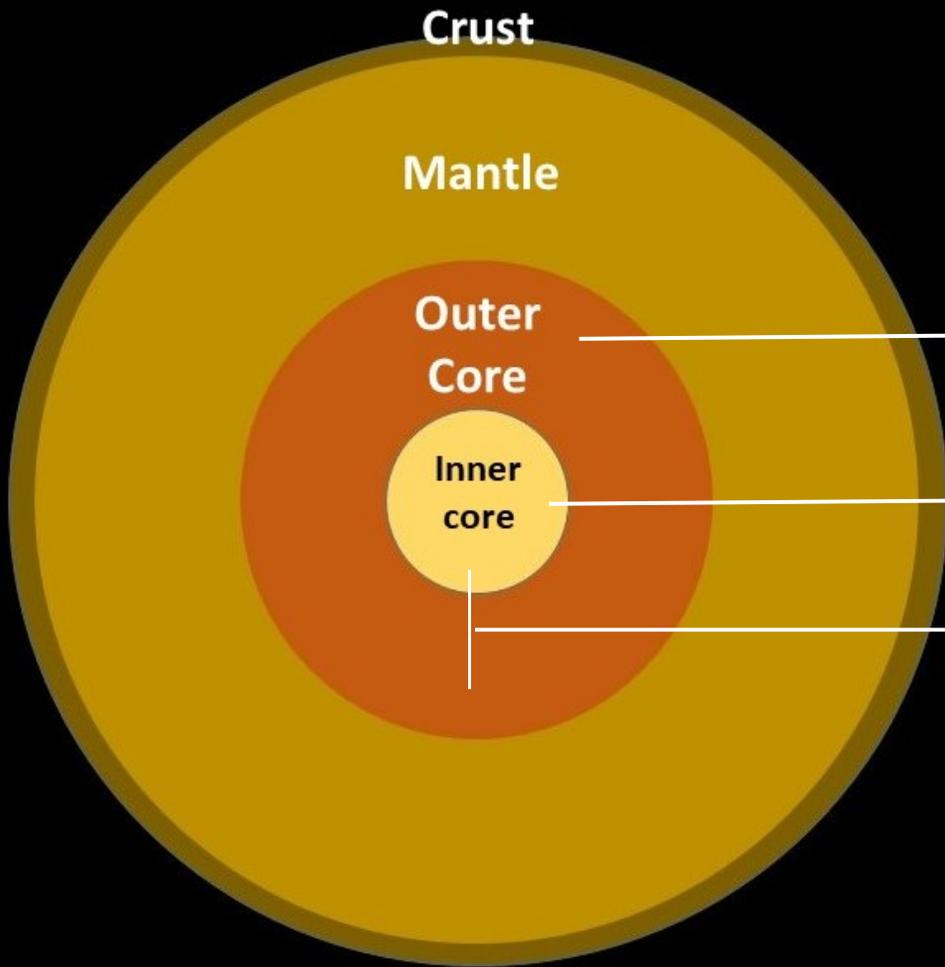
**Outer
Core**

**Inner
core**

Primarily liquid iron

1. Thermal conductivity

2. Temperature profile



Crust

Mantle

**Outer
Core**

**Inner
core**

135 GPa

1 Giga Pascal = 145038 psi

Car tire = 30 psi

330 GPa

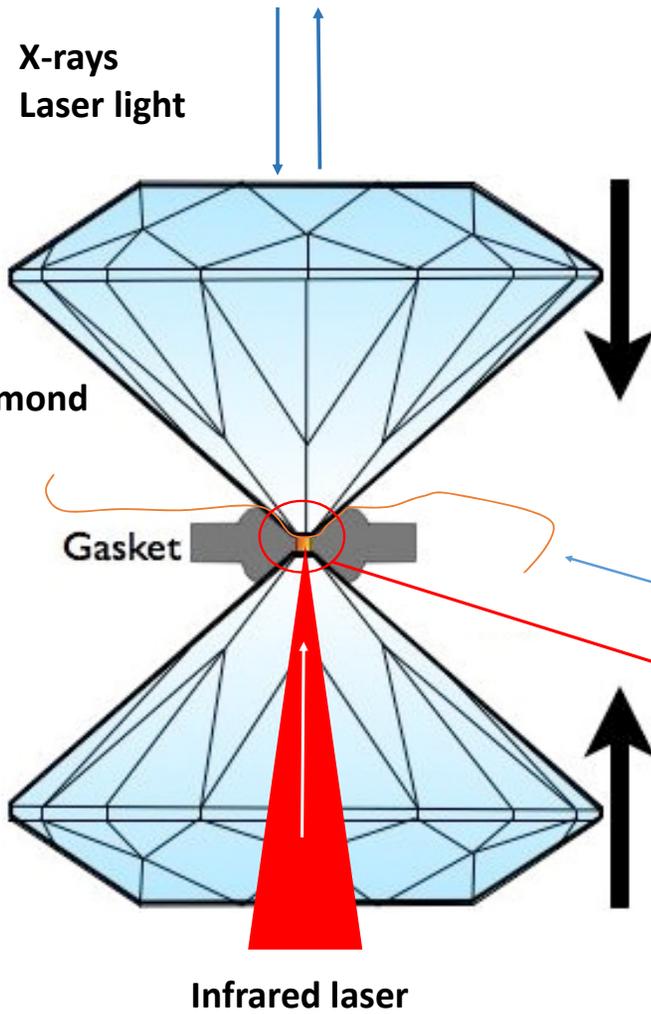
3500 K – 5500 K

300 K = 27 °C = 80 °F

Sun surface T ~ 5800 K



Diamond
anvil cell



- Structure (liquid or solid)
- Resistance – thermal conductivity

Iron wire

