


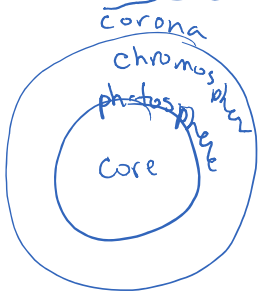
The Sun

March 2, 2015 10:00 AM

The sun is the dot on an "i" if the galaxy is the size of the USA.

- Data
- average sized
 - 1,380,000 km (110 × ⊕'s diameter) 
 - can hold more than a million ⊕'s
 - heavier than 700x all planets together
 - surface 5500°C
 - interior 15,000,000°C ← gravity
← fusion reactions

Features



- photosphere - bright yellow surface layer 400 km thick
- chromosphere - outer, less dense atmosphere, seen only in solar eclipses, red by glowing H, thousands of km thick
- corona - would be a vacuum on ⊕ (so few atoms), more than 1 mill. km thick, seen in eclipse as faint pearly light
- solar prominences - flames that rise out of sunspots
- sunspots - dark, cooler areas on photosphere 3500°C, show that sun rotates

- solar flares - big prominences
 - send particles into space, interact w \oplus 's magnetic field = aurora (northern lights)
- solar wind - stream of protons from corona more than 1 mill km/hr

Energy - fusion $4\text{H} \rightarrow 1\text{He}$
slight mass loss, turns into Energy
 $E = mc^2$

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