

Day 2

Thursday, August 28, 2008
12:33 PM

Hawking & M.

Universe - stars, planets, galaxies, ...

- far away

Speed of light - 186,000 mi/s

Alpha Centari C - 4 light years

Earth's Evolution -

Flat?

Evidence - stars motion

- ship on seas

Our Position in the Universe

geocentric → heliocentric

Scientific Theory

Good Theory - Hawking

① accurately describe a large class of observations

- model to be as simple as possible

② definite predictions

Karl Popper - good theory

predictions can be proved or

falsified by making observations

Need community to verify

Is there one theory of the universe?

Forces of universe ① Electrical + Magnetic
Maxwell 1860

EM Waves

② Weak Force - beta decay

③ Strong Force - quarks

Standard Model - Glashow, Salam, Weinberg

④ gravitation - General Relativity