

## LIFE IN THE UNIVERSE — AST 07

### HW #10

**Complete sentences, no txt spelling in Ur wrk! :)**

**Include your name and 2-digit ID#.**

**Due at the beginning of the next class.**

**Machine-printed only; no email, no handwritten.**

P393

Q1: How did the Kepler mission search for planets?

Q2: Why is direct detection of extrasolar planets so difficult? (Hint: consider the brightness of the planet and the brightness of the home star.)

Q3: Currently, there are relatively few Earth-sized exoplanets known. In the context of selection effects, does this mean that such planets are truly rare?

Q4: Why are “hot Jupiters” surprising? (Hint: your answer should include the “frostline”.)

Q5: Would we expect to find a life-bearing terrestrial planet in a solar system with hot (or eccentric) Jupiters?

Note: I am not asking about life on the hot/eccentric Jupiter itself, or on its moons! I am asking about the prospects of life on a terrestrial planet in the system.

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