Weekly assignment 11: Is anyone out there?
Due: December 12, 2005 at 6 p.m.

What is the object most commonly “identified” as a UFO? Why is it mistaken for a powered spacecraft so often?

What incident happened in Roswell, New Mexico, in 1947 that started the latest wave of UFO sightings (which continues to this day)? It has certainly entered the entertainment world, with several movies, a TV series and several “documentaries” made about it. You may engage in wild speculation about what it all means, if you like.

What is the Drake Equation? How certain are we of the numbers that are put into the Drake Equation? So is the answer to the equation necessarily meaningful?

Why is sending or receiving radio signals a much better method of communication between civilizations, rather than simply going by spacecraft to another star, looking for civilizations?
Why is the 21-centimeter wavelength (which is firmly in the range of microwaves) a particularly special wavelength in terms of galactic communication?

What is a von Neumann probe and how will that kind of probe aid in the search for life in the universe?

If we were to find life elsewhere in this solar system (forget about all the other star systems), what form would it take? This site, which links to a bunch of other sites, might be helpful: http://www.exploratorium.edu/origins/arecibo/ideas/index.html

My own favorite movie science flub: In Independence Day, an alien spacecraft “a quarter of the mass of the Moon” (according to one of the “scientists”) approaches the Earth. There’s a fairly cool shot of the craft nearly grazing the Moon’s surface on its way to Earth. What’s wrong with this scenario?