Critique of the relevance of systems model theory essay

Literature

NAME: EVELYN NGARAKANA REG NO: R123188C COURSE: Answer: If I were searching for Earth like life else where in the Universes , I would first check to see if it’s a habitable planet. This planet should orbit a star that remains stable in output for billions of years. The star shoud provide brightness and warmth to the planet, be the energy source that lets plants make food to feed organisms. It is also important in that it will create seasons, weather patterns, oceanic currents and even sleep patterns for most living organisms. However, the planet should be a distance from the star that results in it achieving a suitable temperature so its surface water is liquid and not frozen.

It must also have a circular orbit so that constant conditions prevail for its entire “ year”. Stars more than about twice the mass of the sun do not last long long enough for life to form on their planets. If a planet is too too close to the star, its spinning wheel synchronize with its orbital motion and it will always point the same side to the star – it will always be “ tidally locked” like the Earth’s moon is locked to the Earth. The planet should not orbit a star too close to cosmic explosion like a supernova. It must be far enough from planets that they do not continually divert asteroids to hit or perturb its orbit strongly. It also must not be so massive that it retains hydrogen and becomes a “ gas giant”. It is an advantage for it to have a massive planet well outside its orbit, like Jupiter to divert potential devastating asteroids away or to make them destroy themselves (as in the asteroid belt). It must have an atmosphere like that on Earth, that is dominated by nitrogen and oxygen.

It must not be too massive for it might also retain hydrogen and helium like Jupiter. It must not be too low in mass for this will cause the oxygen and nitrogen to escape and only heavier nucleus gases like argon can be retained just as on Mass. Massive atmosphere generally trap heat at the surface of the planet by sunlight and the efficient absorption on the infrared radiation they emit by certain gases in their atmosphere such as carbon ioxide. If a planet is close to its star, its extra heating can become large and drive water away and lead to more carbon dioxide in the atmosphere, increasing the heating for what is called a runaway green house effect like is experienced on Venus. If the planet is further out , the green house effect can just heat it up wildly to make its climate more pleasant, like on Earth. Availability of water is another important property I would search for . Large amounts of water must be available on the planet for many reasons.

Water is essential for chemical reactions leading to and sustaining life. Water appears to be critical in controlling the amount of carbon dioxide in the atmosphere and avoiding run away green house effects. Water also plays a role in forming the relatively low density rocks that can “ float” over the surface and create tectonics .

The smaller planets cool relatively fast and their cores solidify. Once that happens the planet can nolonger drive large scale motions of continents by plate tectonics. If the planet retains an atmosphere and has “ weather” with water, for examples, then its continent will be eroded down and slowly approach more closely to perfectly round. The amount of land above its oceans will decrease providing less opportunity for advanced life to roam,

thus the whole pattern of geological activity and the nature of the surface of a planet is strongly influenced by the state of its interior-liquid or solid. A planet would also not be able to sustain life in areas lacking metals or an area near the centre with high radiation. References: