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## IAF HUMAN SPACEFLIGHT SYMPOSIUM (B3)

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## **NEW WORLDS**

## Abstract

Probably, each of us thinks about the development of our civilization and the establishment of colonies in new worlds. Of course, in one place, our beloved earth will not be enough for human civilization. At this time, we must leave our beloved world and build new colonies. For this, each of us must ask these questions. "What do we need to build new colonies" or "what civilizations can build new colonies? " Of course, we need energy to build new worlds. If we can evolve to a civilization that can manage enough energy, new colonies can be built. To measure the development of my culture, we use the Kardashev table prepared by Nikolay Kardashev. According to Kardashev's theory, the development of a culture is measured by the energy it spends. According to Kardashev, the more energy a civilization can control, the more it has evolved. According to Kardashev's theory, there are three types of media. 1. The first type of civilization is called civilizations that use all the energy of the world they own.

2. The second type of civilization is civilizations that use all or part of the energy of the star they own.

3. The third type of civilizations are civilizations that use the energy of the galaxy in which they are located.

As seen in the Kardashev chart above, we need to develop our civilization to build new colonies. As you can see, we need to be at least a second type civilization to be able to build new colonies. We become the second type of civilization before settling on other planets. For this reason, we do not use the energy of the sun. How do we use the energy of the sun? for that, let's take a look at Ferman Dyson's theory. According to this theory, if we can form a sphere of solar panels around the sun, we can control solar energy. Let's think for a moment that we can use the energy of the sun. We can use the energy of the sun to turn any planet into an earth. If we develop enough to build a Dyson sphere, we can build and live in this Dyson sphere and make the world we want to be our place. here we can conclude that in order to build new colonies, we must first be able to manage energy. with energy we can build new worlds and new colonies.