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Interactive Presentations - 52nd IAA SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) – The Next Steps (IP)

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SPACE SETTLEMENTS AS INSTRUMENTS FOR ADVANCED BIOLOGICAL CIVILIZATION EXPANSION IN SPACE

Abstract

After over 5000 exoplanets discovered we must admit that none has similar features as our own with the possibility of allowing similar types of biological life. Actually billions are expected to be found and , in those numbers we may find some similar ones but the scarcity would render very difficult the growth of a multiplanetary civilization. Underground terraforming operations may increase the number of bodies with human activity but will never represent the ideal conditions for terrestrial ecosystem life. In this situation, an advanced society, human or alien, depending on biological ecosystem , in order to expand in different planetary systems , could do so only through space settlements where it will be possible to recreate the needed atmosphere, climate and gravity conditions of their home planet. Under these conditions it could be possible to consider space settlements and traveling settlements as well, such as motherships , examples of habitats to allow expansion of a species in diferente planetary systems. Advanced societies with interstellar travel capabilities would certainly build settlements in planetary systems that They consider necessary for the utilization of local natural resources to fuel their expansion. This situation will change substantially our current research for alien civilizations and should allow the creation of new instruments, telescopes or others able to detect the presence of space settlements, fixed or traveling, with biological ecosystems in extrasolar planetary systems. This should open an entire new field of research and may lead to unexpected results.