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Moon, Mars and Beyond: Analogues, Habitation and Spin-Offs (2)

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APOGEIOS, A SPACE CITY FOR 10.000 INHABITANTS

Abstract

Inspired by "space islands" imagined in the '70s by the American scientist and engineer Gerard K. O'Neill, Apogeios is a concept of a city for 10,000 inhabitants, located at Lagrange point 5 of the Earth-Moon system.

Built by robots with extraterrestrial material from the Moon and asteroids, protected from galactic radiation and solar wind, Apogeios offers residents the comfort of a real city and a unique socio-cultural environment. The sun provides all the necessary energy and brings warmth and light to greenhouses for food production and atmosphere recycling.

As a prerequisite, an initial program of space industrialization will produce, locally and in large quantities, materials and equipment needed for construction and transportation. To this basic industry will be added later finished products, but highly processed products such as drugs or computer hardware will continue to be manufactured on Earth.

Despite their high automation, minerals mining and processing, and first of all the construction of the city, will require the presence of man in situ. All the processes won't be remotely controlled. More than "site sheds", real living quarters will be needed. Larger and more autonomous than the current orbital stations, they prefigure the city to come. Besides their role in the industrialization and the construction, they will qualify number of essential functions such as artificial gravity, culture in greenhouses, recycling of air and water, ecosystem monitoring and safety.

Time for such a project has not yet come, but this is more than science fiction according with today's space technology. Ambitious as it may seem, it is feasible on an international basis and across one or two generations.

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