

O'Neill, Gerard K Encyclopedia Article

O'Neill, Gerard K

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O'Neill, Gerard K

American Physicist and Visionary 1927-1992

Gerard K. O'Neill is sometimes considered the father of space colony design. Born in Brooklyn, New York, O'Neill served as a **radar** technician in the navy, then earned a bachelor's degree from Swarthmore College in 1950 and a doctoral degree in physics from Cornell University in 1954. Upon earning his doctorate, O'Neill joined the faculty of Princeton University's physics department, where he remained until his retirement in 1985.

O'Neill's early research focused on experiments in high-energy particle physics. He invented the colliding-beam storage ring and developed the technology that is now the basis of all high-energy particle accelerators. By the end of the 1960s, O'Neill became very interested in the idea of space colonization. In 1977 he founded the Space Studies Institute at Princeton, the purpose of which was to develop tools for space exploration. The institute today is a major source of funds for research on space resources and manufacturing. O'Neill became world-famous in 1977 with the publication of his book *The High Frontier*. It was here that he described plans for the construction of large, cylindrical space colonies. Such a colony, O'Neill said, could become self-sustaining when placed in a stable orbit between Earth and the Moon. This was the first serious description of how a space colony could be sustained and it continues to serve as a model as such settlements are planned.

See Also

Dyson Spheres (Volume 4);; Dyson, Freeman John (Volume 4);; O'Neill Colonies (Volume 4);; Space Stations of the Future (Volume 4).

Bibliography

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O'Neill, Gerard K. *The High Frontier: Human Colonies in Space*. Garden City, New York: Anchor Books, 1977.