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Terrestrial Sate lites for Human Welfare

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Introduction

The space age was born abruptly in October, 1957 when the first earth-orbiting satellite "Sputnik" was launched by the Soviet Union. In 1958 The United States followed with Vanguard, Explorer, and Score. Today at least nine other nations have now manufactured entire satellites or significant portions thereof, and this number continues to increase as the technology is internationalized.

The civilian use of space has grown very rapidly, and now encompasses applications such as meteorology, earth resources, space science, and communications. More than 102 nations have established ground stations for operational communications satellites, and as costs decrease this group will grow.

Although the number of nations building satellites is still limited, essentially all nations can now use such data directly or indirectly. For example, several of the operational weather satellites now carry automatic picture-transmission equipment which enables inexpensive ground equipment to receive almost instantly images of the weather obtained from the satellite as it flies overhead, all without payment of any money for the satellites themselves. For the approximate cost of printing and mailing, any nation can now purchase copies of any photographs obtained from the United States Landsat Earth Resources Satellites. Some satellites launched by other nations or international groups are similarly providing data for public use.

Space science is also increasingly an international activity and the results are widely discussed and shared by all. Even in the military sector, where the data is generally not shared, the increased mutual awareness of activities by various nations serves to reduce the probability of surprises and the incentives for covert hostile strategies.

Since 1957 thousands of satellites have been launched, of which a significant fraction have been civilian payloads designed to enhance human welfare through communications and increased understanding of our global environment.