

Working Together With Weather Satellites

In this column in the January/February 1988 issue, Larry Heacock talked about the "Third Space Agency" in the United States: the National Oceanic and Atmospheric Administration (NOAA) with its weather (environmental) satellites. I had been involved in this program from 1958 until I retired in January 1982 as Assistant Administrator for Satellites of NOAA. An important aspect of this program has been the international collaboration developed over the years which has paid great dividends to the United States as well as to the rest of the world.

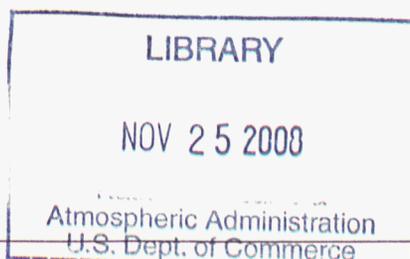
Since the inception of the NOAA operational satellite system in 1966 (then called the Environmental Survey Satellites, or ESSA), it has included Automatic Picture Transmission (APT) whereby cloud images are transmitted continuously from the satellites as they orbit the Earth. These images can be received by inexpensive ground stations.

Thus, people can instantly see the weather approaching them and take appropriate action. This program has built a large reservoir of good will toward the United States. It has also helped stimulate other nations to contribute to a global operational weather satellite system. USSR weather satellites now also carry compatible APT units.

The current series of NOAA polar orbiting satellites includes a stratospheric temperature sounder provided by the United Kingdom and a data collection and platform location system from France. France and Canada also provide equipment that makes possible transmission and reception of emergency calls through these satellites for search and rescue in land, sea and air accidents.

NOAA has also operated two Geostationary Operational Environmental Satellites (GOES), one over the eastern Pacific and one over the western Atlantic. Similar satellites are operated by European nations through EUMETSAT above the South Atlantic Ocean near Africa (at 0 degrees longitude for observations of all of Europe and its environs), by Japan (above the Western Pacific Ocean, north of New Guinea, at 140 degrees East for observations of Japan and all of East Asia), and by India (INSAT, above the Indian Ocean at about 70 degrees East). Through an informal Consultation on Geostationary Meteorological Satellites, common data formats and transmission frequencies have been developed where possible and operations coordinated.

Through this extensive international collaboration developed over almost 30 years, the United States now receives extensive benefits. For example, one of the two U.S. GOES satellites covering the Western hemisphere failed last January and a replacement cannot be launched before the early 1990s. A spare European METEOSAT (also in geostationary orbit) is being loaned to restore continuous coverage of the Atlantic, which is particularly important during the hurricane season.



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