

letter from Copenhagen



No rockets from Thule

H-bomb jitters combine with cucumber time to cancel U.S. scientific flights; Thule loses out

Cucumber time, as the Danes call what elsewhere is the silly season, has been greatly enlivened by the Danish Government's decision to veto the firing of a batch of U.S. sounding rockets from Thule, Greenland. The press has had a merry time chastizing Foreign Minister Poul Hartling, a theologian by training, for his handling of this celestial (or at least ionospheric) affair.

The American plan was to send up 42 rockets (or 36, or 27, depending upon whom you ask) from Thule to investigate the amount and behavior of solar protons in the atmosphere, as the sun enters the most active period in its 11-year cycle.

Besides spectrometers and other instruments to study the protons themselves, some of the rockets were to carry radio transmitters to send test signals back to the ground for analysis of interference effects at wavelengths of one to 1,000 meters. These wavelengths are used in the arctic and sub-arctic regions for ship-to-shore radio, marine navigation and radar; commercial trans-polar flights; civilian radio, television and citizens' band communications; fire and police communications and long-distance telephone relays.

Ionospheric disturbances in polar regions can cause severe reduction in the strength of radio waves, a process known as polar cap absorption. This kind of interference can even disrupt communications over telephone and telegraph lines.

The U.S. applied last Nov. 21 for permission to launch from installations on Thule, since it is only about 600 miles from the North Magnetic Pole, where earth's magnetic field dips close to the surface and brings the solar protons with it. The scientists, including the Danes, who had six experiments planned for the program, expected the request to be approved as a matter of course.

Every person and group advising the Danish Government, with the sole exception of the Thule district council chairman, who apparently dissented because of a misunderstanding, endorsed the project.

Suddenly, however, the Government got cold feet. It claimed that the firings contained "an element of risk for air traffic, ocean traffic and for the local population." Foreign Minister Hartling also declared that "the time set for the rocket firings is marked by busy Greenland hunting activity, and to fence off certain areas might carry economic consequences for the population."

The main difficulty, however, was what Hartling describes as "psychological considerations," namely the memory of the crash of an H-bomb-carrying plane near Thule in January, and subsequent rumors—which Hartling admits are incorrect—of U.S. chemical and biological warfare testing in the area.

U.S. scientists were dismayed; the Danes were aghast. "The international cooperation which is the basis of Danish space research has suffered a defeat," commented Peter Stauning of the Danish Ionosphere Laboratory.

American scientists have always done their utmost to help the Danes, he said, and the Government's decision would force Danish scientists to seek future U.S. participation "with deep shame at this one-sided form of cooperation."

In the U.S., however, some officials maintain that Hartling's "psychological considerations" are valid. Two spokesmen for the U.S. Air Force, which would have conducted the rocket experiments, agreed that the bad publicity from carrying out the flights might have outweighed the scientific gain.

The Danish Foreign Ministry has suggested that the U.S. apply again next year, presumably when the publicity climate has cooled down. But the Air Force has other plans.

If the flight program does take place next year, it will be in one of two places, neither of them Danish territory. The leading candidate is the Churchill Research Range in northern Canada, from which the Canadian National Research Council and the U.S. space agency already launch many sounding rockets every year. The other possibility is Point Barrow, Alaska, the northernmost place in the United States.

Nevertheless, it would still be nice to launch from Thule. From there, particles could be monitored almost as soon as they arrive from the sun, before they get caught up in earth's magnetic lines of force, which extend from pole to pole. In addition, facilities already existing at the U.S. Air Force base at Thule would make preparations and supply easier than they would be at other sites.

But for rockets Thule is apparently out for next year, and beyond that, the sun, with its 11-year cycle of ups and downs in energy production, will have calmed down.

"Oh, well," said one Air Force official, "perhaps in 11 years. . . ."

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