Air and Space this Week

Item of the Week

OGO Comes Home

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Forget Lassie coming Home, how about OGO coming Home?

On second thought, "Lassie Come Home" is more warm-and-fuzzy movie title than the oxymoronic "O GO Come Home" would be. (Never perform with animals or little kids. Animals will upstage you every time, and "kids say the darndest things!")

On September 4, 1964, the United States launched *OGO-1*, the first of six of the Orbiting Geophysical Observatory satellites. Its mission was to "conduct diversified geophysical experiments to obtain a better understanding of the Earth as a planet and to develop and operate a standardized observatory-type satellite." It carried twenty different instruments, mostly used to determine the nature of near-Earth particle and magnetic fields. Its instrument booms failed to deploy properly, which messed up its attitude control and communications, but considerable useful information was obtained anyway (*e.g.* here). Operational support of the satellite ended on November 1, 1971, and the eccentricity of its orbit has steadily increased since then. Until August 29. The perigee of *OGO-1*'s orbit was very low, where atmospheric drag would slow the spacecraft, and we knew that its demise was coming soon, but most predictions were for six weeks or so from now. The Catalina Sky Survey picked up *OGO-1* on its way toward the Earth on August 25/26. Detailed tracking observations of it caused the prediction of its demise to August 29, in the late morning local time, over Tahiti. And so it was.

OGO-1, -3, and -5 were designed to study high-energy astronomy phenomena; the even-numbered OGOs were aimed at the near-Earth environment. *OGO-2* had trouble with its horizon detector, and as a consequence burned up it maneuvering fuel in but a few days. *OGO-4* and *-6* were more successful. The OGO program was basically over by the early 1970s.

OGO-1 is one of the largest satellites to come back home. Keeping track at derelict examples of early Space Age technology is a fun hobby for many; the "Heavens Above" website I use for *ISS* overpasses (and formerly, Iridium Flares), gives observing times for some of them.

The oldest still aloft? It's *Vanguard 1*, the fifth US satellite launched, back on March 17, ***1958***, in a very stable orbit that should last another two centuries. Not bad for an object with NORAD tracking number 00005!

For more information on *OGO-1* and observing old satellites, see:
https://skyandtelescope.org/astronomy-news/half-ton-ogo1-spacecraft-set-to-reenter.

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