

Southern Hemisphere GHOST Test Program

Status Report

22 August to 18 September 1967

Flights

Flight 94101 GGG was launched at 2012 UT, 27 August.

Flight 95108 FFF was launched at 2103 UT, 16 September.

Flight 96104 WWW was launched at 1950 UT, 18 September.

Flight Status - 200 Millibars

Flight 93205 ZZZ was last heard on 4 September on its 18th day. It is not known whether this balloon is down or has moved to high latitudes.

Flight Status - 100 Millibars

Flight 94101 GGG was heard for only one day. It is presumed that the balloon failed on its first night.

The following balloons are still flying on 18 September 1967:

60203 TA	- 308 days
70201 KKK	- 244 days
92206 XXX	- 33 days
(93205 ZZZ	- 32 days ?)
95108 FFF	- 3 days
96104 WWW	- 1 day

Flight Plans

During September, October and November, 1967, sixteen additional flights will be made at 100 millibars. Adverse weather during late August and early September has delayed this program.

Six flights are planned in December at 300 millibars using balloons with metallized caps to increase nighttime balloon temperature.

From November to March ten flights are planned for 700 millibars and twenty flights at 900 millibars using cylinder and ellipsoid balloons provided authorization is obtained for low altitude flights.

From January to June, 1968, flights of the "Cannibal-loon" and other systems to overcome icing will be made at altitudes from 500 to 300 millibars.

Analysis of the trajectories of the first year's flights at 200 millibars has shown the average latitude for these balloons during the summer months at 50° latitude and during the winter months at 35° latitude. In order to determine whether this anomalous behavior occurred during this one year or is typical of the southern hemisphere circulation, twenty additional flights will be made at 200 millibars between January and June, 1968.

A number of flights will be made at 10 millibars as soon as the large (twenty-meter diameter) balloons required are tested.

A series of six flights is planned from Ascension Island at 30 millibars to test balloons, launch techniques, and to study the quasi-biennial oscillation at tropical latitudes, provided approval for these flights is obtained. These flights will be a prelude to a major balloon satellite experiment planned for late 1969 or early 1970.

Interim Operational Southern Hemisphere GHOST Flights

The World Meteorological Organization is undertaking preliminary discussions as to the feasibility and utility of conducting a continuing program of GHOST flights at stratospheric altitudes with balloon positions and velocities made immediately available for synoptic use by the southern hemisphere meteorological services.

Trajectory Analyses for the First Year Flight Program

Analyses of trajectories and interpolated winds for the flights at 200 millibars for the first year southern hemisphere tests are now being completed. Copies of the complete data will be forwarded to all of those desiring. Please write to the Facilities Laboratory, National Center for Atmospheric Research, Box 1470, Boulder, Colorado 80302, if you desire these data.
