

TWERLE STAFF MEETING

18 March 1974

Christchurch Test Flights

Ernie Lichfield felt that we had a good test flight series at Christchurch. However, there were a lot of TWERLE flight packages that did not check out--specifically, 4 out of 10 radio altimeters and 2 out of 5 oscillators, and 1 out of 5 data encoders.

The following observations were made about the test flights:

- a) The TWERLE solar cells were well packaged and the solar panels performed satisfactorily.
- b) There were no broken thermistors in the temperature sensor from shipping or during launch.
- c) The test flights were delayed while waiting for a clear sky and calm winds. When these conditions did not occur, they decided to start flying anyway. Flights were made as late as 8:00 a.m., even though the runway could not be used after 7:00 a.m.
- d) There was some trouble with the AC ground circuits in the electrical system (220 VAC/50 cps and 110 VAC/50 cps).
- e) The packages were not too heavy; the average weight was 1400 grams.
- f) All balloons went over land after launched; there was no over-water data.
- g) There wasn't enough time to make the site set-up as a typical launch site.
- h) The biggest problem was with the antenna/transmitter matching; they must be matched together. The leads from the antennas were not symmetrical, which caused the transmitter to be de-tuned.
- i) Sig Stenlund reported that there were a few problems with the balloons that were used in the test flights. The first lot was packed incorrectly. In the second lot, one balloon did not have an "O" ring and one did not have a holding tab.
- j) The launch truck arrived via MAC in good shape and was assembled on the first day.
- k) The weigh-off sheets need to be revised. Also, the humidity correction chart should be revised for Christchurch because it is cooler there than at the other sites.

- 1) NCAR's agreement with New Zealand expires in July 1974. The United States and New Zealand have now signed a new science agreement, which could jeopardize our current status.

Ascension Island

The launch truck (MOL) has been modified and is now ready for use.

The new BIB is 80% completed. Handles and hinges will have to be sent from here. The old BIB was moved to the north end of the NIMBUS building. No equipment was moved out of the NIMBUS building, since no satisfactory storage is available at this time.

Most of the electrical wiring has been completed in the new building. The air conditioners and 8' overhead door have not arrived. Remodeling of the Mess Hall is scheduled to be completed by 15 April. Jack Warren plans on returning to Ascension in May to review the completed inflation boxes and building and to move equipment. NASA has steel shelving that we can use.

Helium is due to arrive in Ascension on the 25th of March. It will be stored on the east side of the NIMBUS building.

There is a shortage of Pan Am vehicles on the island. We will need to have a van to carry the launch tables back and forth, so we will have to request a vehicle from NASA or consider sending one or two GSA vehicles down from Boulder.

Communications

Accra

There has been a relocation of our office space in the old terminal building. Jim Snyder talked with the Civil Aviation Department and the Meteorological Services Department in Accra and said they were most cooperative regarding space for our communications site. We can use the back side of the building for our new tower location. Jim feels that we should paint our tower orange and white for safety and possibly install a light on top. The old tower is approximately 65 feet high, but not suitable for any large antenna.

Jim talked with Harry Kakalikian, who said that the U.S. Embassy in Accra has frequencies that we could use.

Ascension Island

While Jim Snyder was in Ascension, he talked with representatives from the BBC, Cable & Wireless and RCA. We will have to request frequencies thru NASA.

There is a possibility that RCA could run our station for us; however, there is a disadvantage in that their personnel leave work at 4:30 p.m., so frequencies could not be changed after that time. Other possibilities include using the old ham station or Cross Hill or our assembly building. A vacant RCA transmitting position and antenna were also offered, but Jim predicts a 70% chance of RF interference if we would use it.

Christchurch Launch Assembly Shelter

The only bid received on the building of the Christchurch LAS was for \$40,000, so now the Christchurch Airport Authority personnel will build it for us. A firm price could not be obtained from Mr. Jamieson. Landis Parsons would like to have a firm commitment from them before construction is begun, but Vin feels we should make NSF aware of our difficulties in obtaining a contractor to do the job and ask their cooperation in not pushing for a firm quote at this time.

Scheduling

John Masterson reported that NIMBUS-F is now scheduled to be launched in September. The biggest problems are money and technology on the HIRS experiment. This experiment must work properly in order to be of any value.

At the time of the staff meeting, Mr. Matthews of NASA was meeting with his colleagues to decide on a firm schedule. It is most likely that NIMBUS will not be launched until November.

The "ERTS" satellite is due to be launched in February of 1975.

Paul Julian has scheduled a TWERLE Team Meeting for 27 March in Boulder.

By June, all NSF funds for fiscal year '74 must be used (if needed), as they cannot be renewed for fiscal year '75.

Jack Tefft talked to Mort Friedman last week, who seems to think that November would be the earliest time for the NIMBUS launch. As the lifetime of a satellite like NIMBUS is one year, there is a possibility that we would be asked to make the majority of balloon launches within the first three months of the satellite's life.

Vin Lally announced that the Carrier Balloon System will fly this year as long as the SMS satellite is launched. However, they will have to have a new location system in lieu of NIMBUS-F.

The GAMP move to PSRB-3 will not be made before the first part of April. The labs on the east side of the building will be fixed up first. The movers seem to be causing the greatest delay.

-4-

Miscellaneous

Forty "snake skins" for the TWERLE data encoder have been received, but they do not look very good. More are expected to arrive this week.

Flights 311 and 312 Digi-GHOST's were launched last week.

There are 263 antennas completed. Testing has been started from the roof.

Claude Morel and Dennis Shea have postponed their work at Marshall for 2-3 weeks, until the chamber has been repaired.

The Government of American Samoa will erect the LAS there. The anchor bolts have not yet arrived; the shipment is being traced. The building is due to arrive in ten days.

The Ghana LAS has arrived in Ghana.

The last launch truck should be completely assembled by 1 April. All 11 launch tables have been sheet metal assembled and all balloon fabrication has been completed. Now we need storage space for the balloons.

cc: P. Julian
J. Masterson
V. Lally
E. Lichfield
J. Tefft
M. Verstraete