

Status of Satellite Dishes

July 17, 1997 (4:43pm)

AVHRR (three meter articulating dish on roof);

Damage:

low noise amplifier
End cover knocked or blown off of feed and damaged beyond repair, causing LNA to be exposed to elements. Single-piece aluminum reflector severely dented.

Actions to date:

Feed arm assembly replaced with spare. Damaged feed being returned to manufacturer for refurbishment.

Action remaining:

Replace reflector or install higher gain LNA to increase signal strength. The vendor has been asked to estimate both options.

Impact on production:

dropped lines on Monday, but not since.
Some data degradation occurred prior to feed replacement. Following feed replacement, system performed perfectly until a N14 pass (on 7/17) encountered total signal loss for the first 6 minutes of the pass (remainder of pass perfect). This is unexplained and has not recurred.

Risk:

The recent signal loss may be caused by faulty spare feed. Even if a faulty feed is the cause of the recent problem and is repaired, the damaged reflector will cause a signal reduction and could be problematic in inclement weather.

Cost estimates:

replacement
LNA cost is estimated at \$500. Reflector replacement would cost an estimated \$25-\$40k+ including parts, installation and re-boresighting by the manufacturer.

\$50K

down-time due to replacement

DOMSAT (eight meter fixed dish on front lawn);

Damage:

Teflon cover ripped, water in feed horn. Most panels in the aluminum reflector severely dented.

Actions to date:

Ripped cover removed, feed horn dried with a rag and left to air dry overnight. A mylar cover was fabricated and installed.

Action remaining:

Replace reflector or install higher gain LNA to increase signal strength. The vendor has been asked to quote both options.

Impact on production: No data loss. Pass during hail storm received.

Risk: Although reflector damage is not sufficient to impact fair weather reception, the signal is reduced and could be problematic in inclement weather. Although dish has never been used for uplink, it is equipped to do so. The hail damage would now prevent this use. A higher gain LNA would not restore transmit capabilities.

Cost estimates: LNA cost is estimated at \$1000. Reflector replacement would cost an estimated \$50k+ including parts, installation and re-boresighting by the manufacturer.

down time could be 4-5 days

L7 (ten meter articulating dish behind building);

Damage: Reflector damaged beyond repair according to Datron. Dichroic sub-reflector also destroyed. S-band transmit elliptical waveguide destroyed. Lightning rods knocked off.

Actions to date: Datron staff on site assessing damage and proposing resolution.

Action remaining: Unknown but replacement of all damaged components likely.

Impact on production: Not in production, but will delay installation and testing and may ultimately impact production.

Risk: Delay in L7 equipment testing may negatively impact schedule. A further complication may be that replacement parts may not be delivered and installed until winter (perhaps as long as 6-9 months).

Cost estimates: The presumption is that since EDC has not accepted the dish, Datron is responsible. Preliminary estimates are as high as \$500k.

double it

Report assembled by Tom Bodoh, Dick Heinemann, Al Engelbrecht and Tom Senden.