

**TEST REPORT**  
**for**  
**COMSAT MOBILE COMMUNICATIONS**  
**C-BAND EXPERIMENT**

**JUNE 1, 1999**

## 1.0 General

COMSAT Mobile Communications (CMC), a business unit of COMSAT, has been conducting an experiment to determine the viability of providing communications using C-band to ships in the Caribbean Sea and in U.S. coastal waters. The continuing technical results of this experiment are most promising. System performance and communications availability has been very high and meets customer expectations.

The following provides a summary of spacecraft performance and interference potential.

## 2.0 Spacecraft Performance

The COMSTAR D-4 spacecraft is performing to specification and has shown no sign of degradation since it was placed into inclined orbit. See COMSAT General Corp., 4 FCC Rcd 3820 (1989). The spacecraft is currently in an inclined orbit with a north/south inclination of approximately 10 degrees. A satellite life of at least four more years is expected. The anticipated rate of change in inclination per year was previously reported to the FCC (File No. 130/134-SAT-STA-96) as follows:

| DATE    | INCLINATION | INCLINATION GROWTH RATE |
|---------|-------------|-------------------------|
| 2/26/97 | 9.24 DEG    | 0.52 DEG/YEAR           |
| 2/26/98 | 9.76 DEG    | 0.46 DEG/YEAR           |
| 2/26/99 | 10.22 DEG   | 0.41 DEG/YEAR           |
| 2/26/00 | 10.63 DEG   | 0.37 DEG/YEAR           |

The Aurora 2 spacecraft continues to provide reliable service and excellent coverage of the waters around Alaska and along the Pacific coast during the Alaskan cruise season.

## 3.0 Interference Potential

There have been no reports of interference to other radio communications facilities due to the operation of this C-band experiment. Interference from other C-band radio communications facilities has not affected the performance of this C-band experiment.