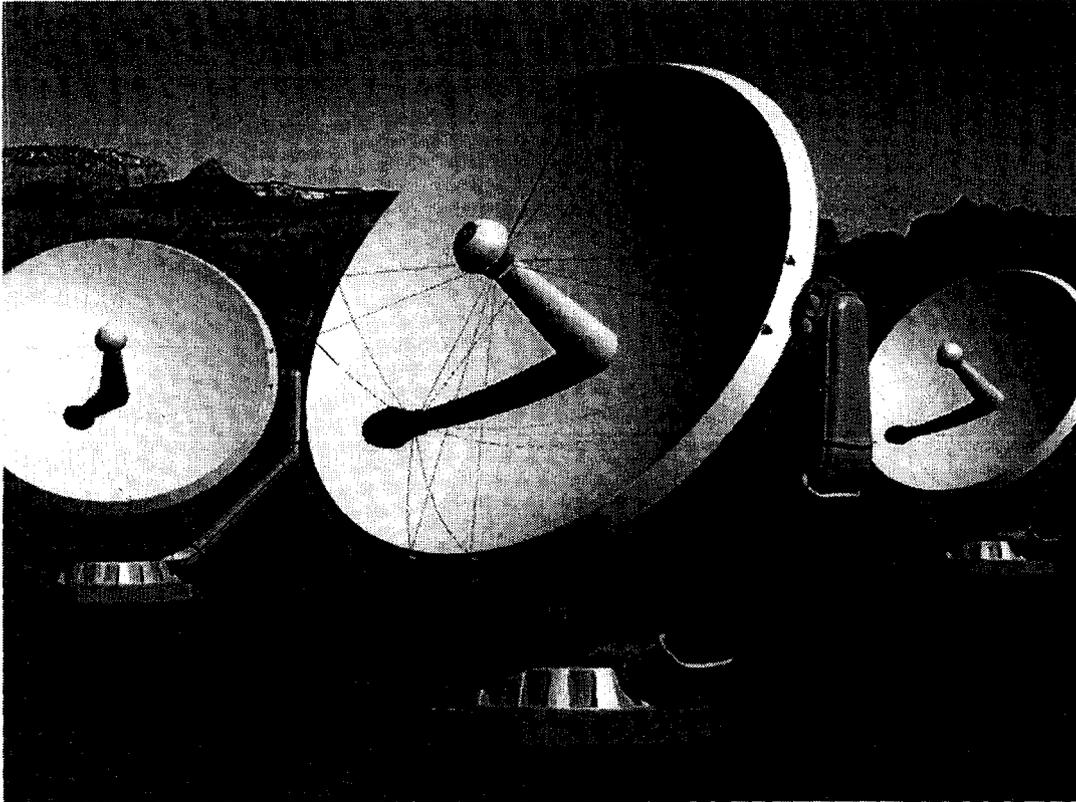


1/10th SCALE MODEL OF A FUTURE ARRAY ANTENNA



The Deep Space Network (DSN) may enable greatly enhanced mission data return from future deep space missions by implementing very large arrays of relatively small antennas for signal reception.

The vision is to have arrays at each of the three DSN longitudes with aperture and performance equivalent to 100 70-m antennas. The baseline system design calls for approximately 3600, 12-m diameter antennas at each longitude. The antennas would be located at various widely separated sites at each longitude to consider the possibility of inclement weather that would adversely affect Ka-band (32 GHz) reception, and thus providing very high system availability.