

RECOMMENDATION ITU-R SA.514-3

**INTERFERENCE CRITERIA FOR COMMAND AND DATA TRANSMISSION
SYSTEMS OPERATING IN THE EARTH EXPLORATION-SATELLITE
AND METEOROLOGICAL-SATELLITE SERVICES**

(Questions ITU-R 139/7 and ITU-R 141/7)

(1978-1990-1994-1997)

The ITU Radiocommunication Assembly,

considering

- a) that Recommendations ITU-R SA.1026, ITU-R SA.1160 and ITU-R SA.1163 contain interference criteria for space-to-Earth links in some frequency bands;
- b) that Recommendations ITU-R SA.1160 and ITU-R SA.1163 contain interference criteria for Earth-to-space links in some frequency bands;
- c) that it is necessary to have interference criteria for all command and data transmission systems operating in the Earth exploration-satellite and meteorological-satellite services,

recommends

1 that, for space-to-Earth data transmission links in bands other than those treated in Recommendations ITU-R SA.1026, ITU-R SA.1160 and ITU-R SA.1163, the interference criteria for Earth receiving sites be established as follows:

- for frequencies between 1 and 10 GHz, the power spectral density of noise-like interference or the total power of CW-type interference in any single band or in all sets of bands shall not exceed -154 dB(W/MHz) at the receiver input for more than 1% of the time;
- for frequencies less than 1 GHz, the permissible interference may increase at the rate of 20 dB per decreasing frequency decade;

2 that, for Earth-to-space command and data transmission links in bands other than those treated in Recommendations ITU-R SA.1160 and ITU-R SA.1163, the interference criteria for near-Earth spacecraft receivers be established as follows:

- for frequencies between 300 MHz and 10 GHz, the power spectral density of noise-like interference or the total power of CW-type interference in any single band or in all sets of bands 1 kHz wide shall not exceed -161 dB(W/kHz) at the receiver input for more than 0.1% of the time;
 - for frequencies less than 300 MHz, the permissible interference may increase at the rate of 20 dB per decreasing frequency decade.
-