

RECOMMENDATION ITU-R M.1829

Method for determining the necessary geographical separation distances, in the 5 GHz band, between the international standard microwave landing system (MLS) stations operating in the aeronautical radionavigation service and transmitters operating in the aeronautical mobile service (AMS) to support telemetry

(2007)

Scope

This Recommendation provides the method for determining the necessary geographical separation distances between international-standard MLS stations operating in the 5 GHz band and telemetry receivers.

The ITU Radiocommunication Assembly,

considering

- a) that the band 5 030-5 150 MHz is allocated to the aeronautical radionavigation service on a primary basis;
- b) that future new systems might cause interference to MLS receivers during approach and landing if sufficient sharing studies are not conducted;
- c) that the MLS can be protected through the implementation of an adequate separation distance between a radiating aeronautical mobile service (AMS) transmitter to support telemetry and MLS receivers;
- d) that WRC-03 has adopted Resolution 230 (WRC-03) to conduct technical, operational and regulatory studies to develop the necessary frequencies for the future aeronautical telemetry links,

recognizing

- a) that the methods contained herein are based on current specifications for international-standard MLS receiving equipment;
- b) that No. 4.10 of the Radio Regulations (RR) requires special measures for the protection of radionavigation and safety services;
- c) that the band 5 030-5 150 MHz is to be used for the operation of the international standard microwave landing system (MLS) for precision approach and landing; the requirements for this system shall take precedence over other uses of this band in accordance with RR No. 5.444,

recommends

- 1** that the method described in Annex 1, for determining the necessary geographical separation distances R_{min} between international-standard MLS stations operating in the 5 GHz band and telemetry transmitters should be used.

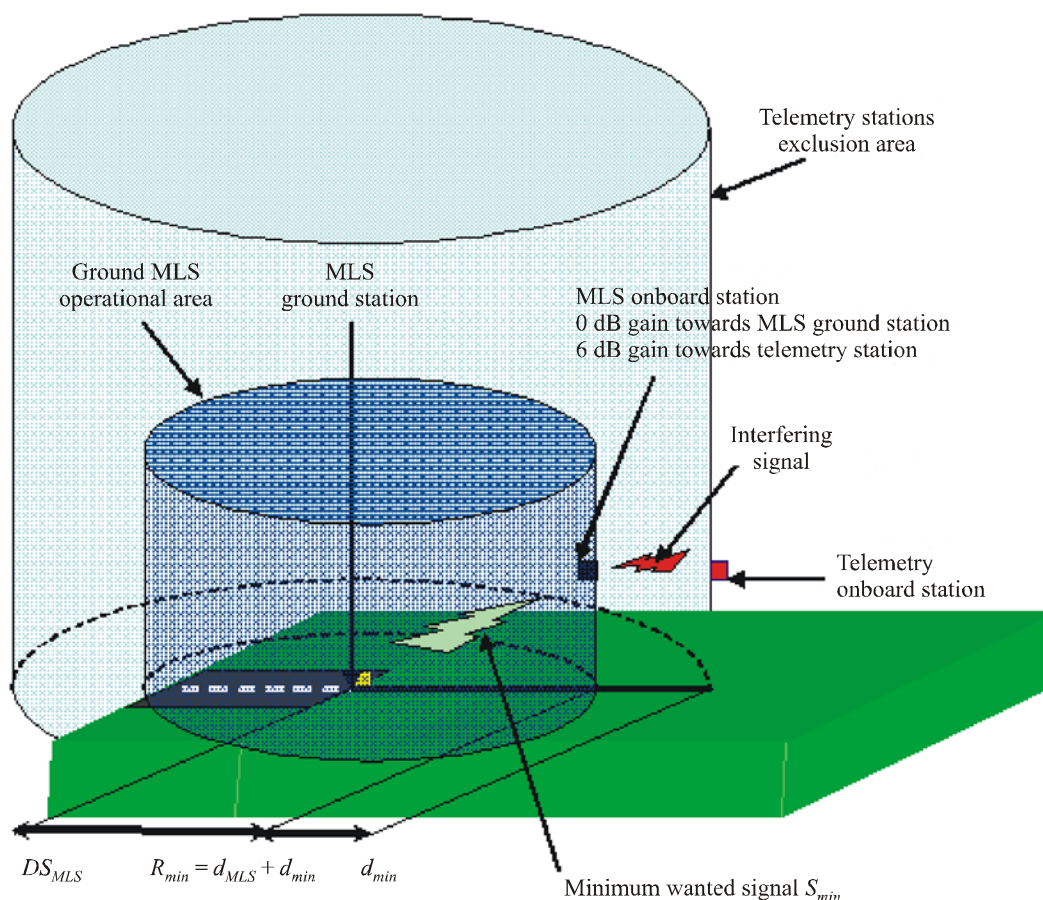
Annex 1

**Example of method for determining minimum separation distances,
in the 5 GHz band, between the international standard microwave
landing system (MLS) stations operating in the aeronautical
radionavigation service and transmitters operating in
aeronautical mobile service for aeronautical
telemetry usage**

Figure 1 shows:

- which item of the MLS system is considered to be protected.
- what is the source of potential interference from flight testing telemetry transmitters.
- how the MLS receiver in the landing approach should be protected.
- what the assumptions taken for the MLS antenna gain are toward the ground MLS station and the interfering telemetry station, respectively.

FIGURE 1
Worst-case scenario



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