

QUESTION ITU-R 278/4*

Use of operational facilities to meet power flux-density limitation under Article 21 of the Radio Regulations

(2009)

The ITU Radiocommunication Assembly,

considering

- a) that provision 11.31 *a*) of the Radio Regulations (RR) requires the Radiocommunication Bureau (BR) to examine the notified frequency assignments under Article 11 of the RR, *inter alia*, with respect to its conformity with Article 21 (power-flux-density limits);
- b) that the BR received in the past and is still receiving submissions from administrations for which the power flux-density examinations show an excess initially varying from 0 to 9 dB, and recently up to 10 dB or more, within a certain range of elevation angles of arrival;
- c) that after consultation with the notifying administrations the BR was informed that with the application of technical means such as energy dispersal and backoff control the power-flux density could be adjusted to the level specified in the RR;
- d) that, in examining these cases, the BR had given a favourable RR 11.31 *a*) Finding for the submissions mentioned in b) above when the subject notice contained details of the operational/technical scheme to ensure power flux-density conformance to the mandatory RR Article 21 limits;
- e) that the BR, in performing its mandatory tasks relating to the application of the above-mentioned provisions, is concerned with the extent to which the application of such operational measures to the space services could be accepted without hampering other services sharing the same frequency bands;
- f) that Article 21 contains no power flux-density limits for any frequency bands above 50.2 GHz, and that there are higher frequency bands which have co-primary allocations of broadcasting-satellite and fixed-satellite services (space-to-Earth) with terrestrial services for which no regulatory sharing mechanisms exist,

decides that the following Questions should be studied

- 1** What are the actual design capabilities of space systems regarding the use of operational facilities such as energy dispersal, back-off control and other techniques for the adjustment of power flux-density levels?

* Replaces former Question ITU-R 235/4.

2 What are the maximum limits beyond which the use of such power adjustment facilities are no longer feasible?

3 What are the technical means by which such facilities could be used in a given service area and within a certain range of angles of arrival?

4 How would these operational measures (such as the increase in the back-off to overcome the power flux-density excess) affect the performance of the subject satellite networks in the concerned service area?

further decides

1 that the results of the above studies should lead to the formulation of appropriate Reports and/or Recommendations by 2010.

Category: S1