Question ITU-R 228-2/3[[1]](#footnote-1)\*

Propagation data required for the planning of radiocommunication  
systems operating above 275 GHz[[2]](#footnote-2)\*[[3]](#footnote-3)\*

(2000-2005)

The ITU Radiocommunication Assembly,

considering

a) that the spectrum in many of the frequency bands used for radiocommunication is increasingly congested and this problem is expected to get worse;

b) that telecommunication links are being used or planned for use on some terrestrial applications at frequencies above 275 GHz;

c) that telecommunication links are being used or planned for use on some satellite systems for inter-satellite communications at frequencies above 275 GHz;

d) that the viability of telecommunication links operating above 275 GHz (space-to-Earth and Earth-to-space) is currently being investigated;

e) that remote sensing and astronomical applications are using frequencies above 275 GHz;

f) that interest exists in extending the range of frequencies used for telecommunication applications;

g) that the focus of study of Questions by Radiocommunication Study Groups includes the following:

– use of the radio-frequency spectrum in radiocommunication;

– characteristics and performance of radio systems;

– operation of radio systems;

h) that propagation models are urgently required for planning and design of telecommunication systems at frequencies above 275 GHz,

noting

that according to No. 78 of the ITU Constitution and Note 2 of No. 1005 of the ITU Convention, study groups may adopt Recommendations without limit of frequency range,

decides that the following Question should be studied

**1** What models best describe the relationship between atmospheric parameters and electromagnetic wave characteristics on terrestrial, space-to-Earth and Earth-to-space links operating at frequencies above 275 GHz?

**2** What models best describe the relationship between free-space parameters and electromagnetic wave characteristics on inter-satellite links operating at frequencies above 275 GHz?

**3** What models best describe the relationship between atmospheric parameters and electromagnetic wave characteristics on science service links operating at frequencies above 275 GHz?

**4** What models best describe the relationship between atmospheric parameters and the minimum practical altitude for space-to-space links operating at frequencies above 275 GHz?

further decides

**1** that the results of studies above 275 GHz should be brought to the attention of the other Study Groups;

**2** that the results of the above studies should be included in one or more Recommendations;

**3** that the results related to terrestrial applications should be available by 2006, and should be included in future Recommendation(s) or Report(s).

further decides

1 that the above studies should be completed by 2019.

Category: C1

1. \* This Question should be brought to the attention of Radiocommunication Study Groups 1, 7 and 9. [↑](#footnote-ref-1)
2. \*\* The frequency spectrum above 275 GHz is currently not allocated (see also No. 5.565 of the Radio Regulations). [↑](#footnote-ref-2)
3. [↑](#footnote-ref-3)