question itu-r 222-2/7

Radio links between earth stations and lunar and planetary missions
by means of lunar and/or planetary data relay satellites

(1997-2003-2012)

The ITU Radiocommunication Assembly,

considering

*a)* that many space research spacecraft and space stations will require continuous communication with earth stations;

*b)* that the technical characteristics and operational requirements of inter-planetary links via lunar and/or planetary data relay satellites are different from those of direct links between earth stations and stations on lunar and planetary missions;

*c)* that there are many advantages in the use of lunar and/or planetary data relay satellites to transfer data to or from stations on lunar and/or planetary missions;

*d)* that relay stations can communicate with several spacecraft and space stations that have no line-of-sight links to the earth stations;

*e)* that these lunar and/or planetary data relay satellites are used for radiocommunication with manned as well as unmanned space stations;

*f)* that the orbital requirements for such relay stations will vary based on the mission requirements,

recognizing

1 that there is a shielded zone of the Moon for radio astronomy observation referred to in No. 22.22 of the Radio Regulations,

decides that the following Questions should be studied

1 What are the preferred frequency bands and bandwidth?

2 What are the orbital requirements of lunar and planetary data relay satellites?

3 What are the operational requirements for radiocommunication links between earth stations and space stations by means of lunar and/or planetary data relay satellites?

4 What are the technical characteristics for radiocommunication links between earth stations and space stations by means of lunar and/or planetary data relay satellites?

5 What are the requirements for sharing with other services?

further decides

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

2 that characterization of the present and future relay systems for Mars missions should be provided by 2015;

3 that a description of a conceptual lunar relay system should be provided by 2027.

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