

QUESTION ITU-R 247/7

Emergency radiocommunications for human space flight

(2009)

The ITU Radiocommunication Assembly,

considering

- a) that manned space exploration spacecraft and space stations require continuous radiocommunication with earth stations;
- b) that human space flight may require provisions for emergency radiocommunications for the entire duration of the manned missions;
- c) that the technical characteristics and operational requirements of emergency space radiocommunication channels may be different from those of routine links between earth stations and manned vehicles in space flight, including for near-Earth, lunar, and planetary missions;
- d) that there are many advantages in the use of predefined sets of frequency pairs with specific channels for manned space exploration emergency radiocommunications;
- e) that existing space research service allocations for radiocommunications could be used for emergency radiocommunication channels for human space flight; and
- f) that a number of administrations are either directly involved in human space flights, or have space-faring interests, and may be able to operationally contribute to radiocommunications that have an emergency nature,

noting

- a) that it is desirable to promote and encourage multinational monitoring capability and assistance if emergency conditions occur during human space flights;
- b) that a low-rate/low-power reliable radiocommunications link during human space flight is needed to provide backup capability in the event of a failure of the primary spacecraft radiocommunication systems;
- c) that an emergency radiocommunications link should be independent of the launch and ascent radiocommunications link, and should contain channels in the Earth-space, space-Earth, and possibly space-space directions;
- d) that the use of space research service channels for emergency radiocommunication is not considered to be a safety application and should not result in additional protection requirements for the space research service with respect to other radiocommunication services operating in the same or adjacent bands,

recognizing

- a) that Article V of the United Nations Treaty on principles governing the activities of States in the exploration and use of outer space, including the Moon and other celestial bodies, provides that, “States Parties to the Treaty shall regard astronauts as envoys of mankind in outer space and shall render to them all possible assistance in the event of accident, distress, or emergency landing on the territory of another State Party or on the high seas”; and
- b) that this Article further provides that, “In carrying on activities in outer space and on celestial bodies, the astronauts of one State Party shall render all possible assistance to the astronauts of other States Parties”,

decides that the following Questions should be studied, taking particular account of *noting* d) above

- 1 What are the possible operational scenarios and operational requirements for emergency radiocommunication channels among manned spacecraft, earth stations, and space stations?
- 2 What are the technical characteristics of emergency radiocommunication channels among manned spacecraft, earth stations, and space stations?
- 3 What are the suitable radio frequency channels within existing space research service frequency allocations and the appropriate channel bandwidths for emergency radiocommunication, including for data and voice, during human space flight?

further decides

- 1 that the results of the above studies should be included in one or more Recommendations and/or Reports;
- 2 that the above studies should be completed by 2012.

Category: S2