UNITED STATES OF AMERICA

PROPOSALS FOR THE WORK OF THE CONFERENCE

Agenda Item 1.12: *to consider an extension of the current worldwide allocation to the Earth exploration-satellite (active) service in the frequency band 9 300 – 9 900 MHz by up to 600 MHz within the frequency bands 8 700 – 9 300 MHz and/or 9 900 – 10 500 MHz, in accordance with Resolution **651 (WRC-12)***

Background Information: This agenda item considers extending the current Earth exploration-satellite service (EESS) (active) allocation in the range 9 300 – 9 900 MHz by an additional 600 MHz within portions of the range 8 700 – 10 500 MHz.

Incumbent services in the 9 900 – 10 500 MHz range include the radiolocation, fixed, mobile, amateur, and amateur-satellite services. The radiolocation service is primary worldwide throughout the band. The fixed service is secondary worldwide from 9 900 – 10 000 MHz. The fixed and mobile services are primary in ITU Regions 1 and 3 from 10 000 – 10 450 MHz. The amateur service is secondary at 10 000 – 10 500 MHz worldwide, and the amateur-satellite service is secondary at 10 450 – 10 500 MHz worldwide.

Currently, the 9 000 – 9 300 MHz range contains primary allocations to aeronautical and maritime radionavigation safety services. It is imperative to protect these safety service operations from harmful interference. There is potential interference to stations operating in the adjacent 10.5 – 10.7 GHz frequency range if the extension is made in the upper 9 900 – 10 500 MHz range, including stations in passive services (radio astronomy, Earth exploration-satellite (passive), and space research (passive). Similarly, there is potential interference to stations operating in the space research service in the band 8 400 – 8 500 MHz if the EESS allocation is extended to the lower 8 700 – 9 300 MHz frequency range.

In accordance with Resolution **651 (WRC-12)**, the ITU conducted sharing studies to ensure the protection of existing in-band services and compatibility studies to address interference due to unwanted emissions into the services in the 10 600 – 10 700 MHz frequency range and the space research service in the 8 400 – 8 500 MHz band.

Studies have demonstrated that sharing is possible between EESS (active) and the existing services in the 9 900 – 10 500 MHz frequency range and that passive services in the 10 600 – 10 700 MHz frequency range can be protected from unwanted emissions from a new EESS (active) allocation. Given the results of sharing studies, this proposal supports an allocation of an additional 600 MHz to the EESS (active) as a primary allocation in the frequency range 9 900 – 10 500 MHz. This proposal extends the protections for incumbent services in No. **5.476A** to the new frequency allocations and indicates that the use of this frequency allocation extension may be limited to systems requiring a necessary bandwidth of greater than 600 MHz that cannot be fully accommodated within the 9 300 – 9 900 MHz band, pending the results of ITU-R studies. This proposal ensures that secondary amateur-satellite service operations in the frequency band 10.45-10.5 GHz that are advance published prior to the date of entry into force of the primary EESS (active) allocation in 9 900 – 10 500 MHz are treated on a co-equal basis with EESS

(active) operations. This proposal supports no change to allocations in the 8 700 – 9 300 MHz frequency range because ITU-R studies show that EESS (active) and radionavigation systems below 9 300 MHz are not compatible. The studies also show that it is feasible to make the entire 600 MHz extension to the EESS (active) in frequencies above the existing EESS (active) allocation 9 300 – 9 900 MHz.

Proposal:

ARTICLE 5

Frequency allocations

Section IV – Table of Frequency Allocations
(See No. **2.1**)

MOD USA/AI 1.12/1

9 500-10 000 MHz

Allocation to services		
Region 1	**Region 2**	**Region 3**
9 500-9 800	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION RADIONAVIGATION SPACE RESEARCH (active) 5.476A	
9 800-9 900	RADIOLOCATION Earth exploration-satellite (active) Fixed Space research (active) 5.477 5.478 5.478A 5.478B	
9 900-10 000	EARTH EXPLORATION-SATELLITE (active) ADD 5A.112 RADIOLOCATION Fixed 5.477 5.478 5.479 ADD 5.B112 ADD 5.C112	

Reasons: Studies have shown that sharing between the EESS (active) and other services in the frequency range of 9 900 – 10 500 MHz is feasible.

MOD USA/AI 1.12/2

10-10.5 GHz

Allocation to services		
Region 1	**Region 2**	**Region 3**
10-10.45 EARTH EXPLORATION-SATELLITE (active) ADD 5.A112 FIXED MOBILE RADIOLOCATION Amateur 5.479 ADD 5.B112 ADD 5.C112	**10-10.45** EARTH EXPLORATION-SATELLITE (active) ADD 5.A112 RADIOLOCATION Amateur 5.479 5.480 ADD 5.B112 ADD 5.C112	**10-10.45** EARTH EXPLORATION-SATELLITE (active) ADD 5.A112 FIXED MOBILE RADIOLOCATION Amateur 5.479 ADD 5.B112 ADD 5.C112
10.45-10.5	EARTH EXPLORATION-SATELLITE (active) ADD 5.A112 RADIOLOCATION Amateur Amateur-satellite 5.481 ADD 5.B112 ADD 5.C112 ADD 5.D112	

Reasons: Studies have shown that sharing between the EESS (active) and other services in the frequency range of 9 900 – 10 500 MHz is feasible.

ADD USA/AI 1.12/3

5.A112 The use of the frequency range 9 900 – 10 500 MHz by the Earth exploration-satellite service (active) is limited to systems requiring necessary bandwidths greater than 600 MHz that cannot be fully accommodated within the 9 300-9 900 MHz band.
(WRC 15)

Reasons: To limit the use of the extension to the existing allocation to systems employing very wide bandwidths in order to protect incumbent services.

ADD USA/AI 1.12/4

5.B112 In the bands 9 900 – 10 000 MHz, 10 – 10.45 GHz, and 10.45 – 10.5 GHz stations in the Earth exploration-satellite service (active) shall not cause harmful interference to, nor claim protection from, stations of the radiolocation service. (WRC-15)

Reasons: To extend the same protections to the radiolocation service for the new allocation to the Earth exploration-satellite service (active) in the bands 9 900 – 10 000 MHz, 10 – 10.45 GHz, and 10.45 – 10.5 GHz as in the 9 300 – 9 800 MHz band.

ADD USA/AI 1.12/5

5.C112 Space stations operating in the Earth exploration-satellite (active) service shall comply with Recommendation ITU-R RS.2066. (WRC-15)

Reasons: It ensures protection of RAS stations in the frequency band 10.6-10.7 GHz through incorporation by reference of Recommendation ITU-R RS.2066.

ADD USA/AI 1.12/6

5.D112 In the band 10.45-10.5 GHz, stations operating with networks or systems in the amateur-satellite service for which information for advance publication has been received by the Bureau prior to 1 January 2017 shall have an equality of right to operate with stations in the Earth exploration-satellite service (active); after that date, new stations in the amateur-satellite service will operate on a secondary basis. (WRC-15)

Reasons: To ensure that secondary amateur-satellite service operations in the frequency band 10.45-10.5 GHz that are advance published prior to the entry into force date of the primary EESS (active) allocation in 9 900 – 10 500 MHz are treated on a co-equal basis with EESS (active) operations.

NOC USA/AI 1.12/7

8 650-9 300 MHz

Allocation to services		
Region 1	**Region 2**	**Region 3**
8 650-8 750	RADIOLOCATION 5.468 5.469	
8 750-8 850	RADIOLOCATION AERONAUTICAL RADIONAVIGATION 5.470 5.471	
8 850-9 000	RADIOLOCATION MARITIME RADIONAVIGATION 5.472 5.473	
9 000-9 200	RADIOLOCATION AERONAUTICAL RADIONAVIGATION 5.337 5.471 5.473A	
9 200-9 300	RADIOLOCATION MARITIME RADIONAVIGATION 5.472 5.473 5.474	

Reasons: ITU-R studies of aeronautical radionavigation systems below 9200 MHz have shown that EESS (active) and ARNS are not compatible. The maritime radionavigation systems in use in the 9 200 – 9 300 MHz frequency range are very similar to the systems operating in the ARNS. Therefore, the EESS (active) will not be compatible with the maritime radionavigation systems as well. It has been shown to be feasible to allocate the entire 600 MHz extension to the EESS (active) in frequencies above the existing EESS (active) allocation at 9 300 – 9 900 MHz, therefore no change to allocations in the 8 700 – 9 300 MHz frequency range should be made.

SUP USA/AI 1.12/8

RESOLUTION 651 (WRC-12)

Possible extension of the current worldwide allocation to the Earth exploration-satellite (active) service in the frequency band 9 300-9 900 MHz by up to 600 MHz within the frequency bands 8 700-9 300 MHz and/or 9 900-10 500 MHz

Reasons: The required studies have been completed and this resolution is no longer needed.