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| **World Radiocommunication Conference (WRC-15) Geneva, 2–27 November 2015** |  |
| **INTERNATIONAL TELECOMMUNICATION UNION** |  |
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|  | **Addendum 4 to Document 62-E** |
|  | **16 October 2015** |
|  | **Original: Chinese** |
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| China (People's Republic of) | |
| Proposals for the work of the conference | |
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| Agenda item 1.4 | |

1.4 to consider possible new allocation to the amateur service on a secondary basis within the band 5 250-5 450 kHz in accordance with Resolution **649 (WRC‑12)**;

Introduction

WRC-15 agenda item 1.4 calls for consideration of possible new allocation to the amateur service on a secondary basis within the band 5 250-5 450 kHz, in accordance with Resolution 649 (WRC‑12).

The frequency range 5 250-5 450 kHz is allocated to the fixed and mobile (except aeronautical mobile) services in all three Regions on a primary basis. The range 5 250-5 275 kHz is also allocated to radiolocation service on a secondary basis in Regions 1 and 3, and on a primary basis in Region 2.

The technical Report ITU-R M.2335 addresses sharing issues between the amateur service and existing services. Some studies in this report show that sharing of amateur stations with the fixed and mobile services systems is extremely difficult and may require operational constraints on the amateur stations, while some other studies conclude that the amateur service has a very low probability of interference to existing services on condition that the amateur service follows a “listen-before-transmit” protocol and would not knowingly initiate communication on an occupied channel.

Two primary methods have been developed in the CPM Report.

Method A proposes an allocation to the amateur service (ARS), on a secondary basis, for one or more segments of spectrum not necessarily contiguous in the range 5 275-5 450 kHz. Four sub-methods have been developed:

– Method A1, calling for an allocation to the ARS on a secondary basis in the frequency band 5 275-5 450 kHz.

– Method A2, calling for an allocation to the ARS on a secondary basis in the range 5 350‑5 450 kHz.

– Method A3, calling for an allocation to the ARS up to 15 kHz or [xx] kHz, on a secondary basis, in the range 5 275-5 450 kHz.

– Method A4, calling for an allocation to the ARS at several specific channels, on a secondary basis, in the range 5 275-5 450 kHz.

Method B is for No Change to the 5 250-5 450 kHz band.

The amateur community is becoming more and more active, and has on numerous occasions played a positive role in disaster relief operations. A number of allocations for the amateur service in the 5 MHz band are necessary when the MUF falls below 7 MHz and the LUF is above 4 MHz, especially where emergency and disaster relief operations are concerned. The minimum requirement of the amateur service is estimated to be 15 kHzor five continuous 3 kHz channels to initiate and maintain the exchange of critical information in disaster relief or emergency cases – one common channel for emergency calling, two working channels for relaying emergency information, one dedicated channel for slow scan television (SSTV) and one packed channel for digital mode information such as Morse Code, RTTY, PSK-31, etc., in case of poor voice communications.

Moreover, according to research carried out in China, some 80 per cent of HF amateur stations have a maximum power of 100 W, while another 10 per cent have a maximum power of 200 W and the remaining 10 per cent have a maximum power lower than 100 W (e.g. 5 or 15 W). As regards the antenna, the typical antenna for HF amateur stations is a shortened dipole antenna with an efficiency of around 30 per cent, which means that the practical e.i.r.p. of most HF amateur stations is 30 W. To protect the existing services in the 5 MHz band and still enable the majority of amateur stations to engage in disaster relief or emergency communications, it may be appropriate for the maximum e.i.r.p. of amateur stations to be limited to 30 W.

Meanwhile, without technical and operational constraints such as emission power limitation, frequency separation, “listen before transmit” operation, etc., amateur stations will cause harmful interference to fixed/land mobile service stations operating co-frequency.

Based on the above, Method A3 may be a good compromise which can satisfy both the protection requirements of incumbent services and the allocation requirement of the amateur service.

Proposals

ARTICLE 5

Frequency allocations

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

MOD CHN/62A4/1

5 003-7 450 kHz

|  |  |  |
| --- | --- | --- |
| Allocation to services | | |
| Region 1 | Region 2 | Region 3 |
| 5 250-5 275  FIXED  MOBILE except aeronautical mobile  Radiolocation 5.132A  5.133A | 5 250-5 275  FIXED  MOBILE except aeronautical mobile  RADIOLOCATION 5.132A | 5 250-5 275  FIXED  MOBILE except aeronautical mobile  Radiolocation 5.132A |
| 5 275-5 350 FIXED  MOBILE except aeronautical mobile | | |
| 5 350-5 365 FIXED  MOBILE except aeronautical mobile  Amateur ADD 5.A14 | | |
| 5 365-5 450 FIXED  MOBILE except aeronautical mobile | | |

**Reasons:** The requirement of the ARS for access to frequencies in the vicinity of 5 300 kHz could be met, while the amount of allocation to the ARS is limited to 15 kHz.

ADD CHN/62A4/2

5.A14 The maximum equivalent isotropically radiated power (e.i.r.p.) of stations in the amateur service using frequencies in the band 5 350-5 365 kHz shall not exceed 30 W. Stations in the amateur service shall not initiate transmissions before confirming the expected operating channel is not occupied by fixed or mobile services.

**Reasons:** The impact of ARS on existing services could be further decreased by technical and operational measures, such as e.i.r.p. limitation and “listen-before-transmit” operation.

SUP CHN/62A4/3

RESOLUTION 649 (WRC‑12)

Possible allocation to the amateur service on a   
secondary basis at around 5 300 kHz

**Reasons:** This Resolution is no longer necessary.

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