

RADIO FREQUENCY MATTERS

(Submitted by WMO)

Summary and purpose of document

This working paper discusses issues related to frequency bands allocated to the Meteorological Satellite Service (MetSat) in view of the next World Radiocommunication Conference - WRC-2003.

ACTION PROPOSED

The meeting is invited to consider the information provided.

DISCUSSION

1. INTRODUCTION

The preliminary agenda for the next World Radiocommunication Conference (WRC-2003) includes items of importance for meteorological satellites, and this document focuses on the following:

Agenda Item 1.20 – Additional MSS Allocations below 1 GHz

Possible additional allocations for the non-GSO MSS below 1 GHz may affect several MetSat (as well as MetAids) applications. Although WRC-2000 suppressed Resolution 219 (WRC-97) on the band 401–406 MHz, Resolution 214 (Rev.WRC-2000) makes it possible to address any band below 1 GHz in this respect. There has not been so far any ITU-R contribution addressing MetSat bands, but developments on this matter should be carefully monitored. It shall be noted that ITU-R/Working Party 8D is the responsible group for this agenda item.

Agenda Item 1.31 – Additional MSS Allocations in the Range 1–3 GHz

This agenda item is of particular concern with Resolution 227 (WRC-2000) that addresses possible MSS allocations in the band 1683–1690 MHz as well as alternative frequency bands in the 1-3 GHz range. It shall be noted that ITU-R/Working Party 8D is also the responsible group for this agenda item.

Resolution 227 requests that the technical and operational studies on the feasibility of sharing between MSS and MetSat in the band 1683–1690 MHz be completed. GVAR and S-VISSR stations are critical in this respect. This request is an opportunity to revisit criteria for sharing and coordination (likely to the benefit of MetSat) as well as the MetSat partitioning of the frequency band 1670–1710 MHz as stated in the current recommendation ITU-R SA.1158 -Sharing of the 1 670-1 710 MHz band between MSS and MetSat, that did not fully reflected GVAR and S-VISSR applications. It should be noted that the band 1 670-1 675 MHz is also considered as an alternative frequency band for MSS (Earth-to-space) in the 1-3 GHz range

Resolution 227 also requests ITU-R to assess, with the participation of WMO, the current and future spectrum requirements of the MetSat service and of the MetAids service in the band 1683-1690 MHz, with a view to a possible allocation to the MSS (Earth-to-space).

2. CURRENT DEVELOPMENT

2.1 WMO/CBS/SG-RFC (3-8 May 2001)

The CBS/Steering Group on Radio Frequency Coordination held a meeting from 3-8 May 2001 (WMO Headquarters), just prior to the ITU-R/Working Party 7C session (9-18 May 2001, ITU). Particular attention was given to Resolution 227 (WRC-2000) and the SG-RFC developed the following contributions to ITU-R/WP 7C in this respect:

- Preliminary draft revision of Recommendation ITU-R SA.1158 (Doc. 7C/99-E): <http://www.wmo.ch/web/www/TEM/SG-RFC01/revsa1158wmo.doc>
The purpose of the document was to revise the MetSat partitioning of the frequency band 1670–1710 MHz, taking into account the outcome of CGMS-XXVIII in this respect, and to review conclusions on possible sharing between MSS and MetSat;
- Assessment of frequency requirements for meteorological services in the 1670-1675 and 1683-1690 MHz bands (Doc. 7C/102-E): <http://www.wmo.ch/web/www/TEM/SG-RFC01/wmo1680requ.doc>

The purpose of the document was the WMO contribution in direct reply to Resolution 227(WRC-2000) requesting the current and future spectrum requirements of the MetSat and MetAids service.

These contributions were also submitted to WP 8D.

2.2 ITU-R/WP 7C (9-18 May 2001)

Working Party 7C developed a preliminary draft revised Recommendation ITU-R SA.1158, based on the above-mentioned WMO contribution, on a EUMETSAT contribution revising criteria for MSS/MetSat sharing and coordination, including separation distances and a USA contribution.

WP 7C fully endorsed the WMO *Assessment of Frequency Requirements for Meteorological Services in the 1 670-1 675 MHz and 1 683-1 690 MHz Bands*, and agreed on an estimation of number and locations of GVAR/S-VISSR ground stations.

WP 7C developed the Conference Preparatory Meeting (CPM) text on agenda item 1.31 with respect to the meteorological services.

(WP 7C also developed a preliminary draft revised Recommendation ITU-R SA.1264 -Sharing between MetAids and MSS)

The WP 7C outcome on this issue was consolidated into a liaison statement to WP 7E and WP 8D (Doc. 7E/15-E & 8D/108-E): <http://www.wmo.ch/web/www/TEM/SG-RFC01/liais8D.doc>

It should also be noted further that WP 7C endorsed *the Handbook on use of radio frequency spectrum for meteorology*, which had been consolidated by the CBS/SG-RFC, and the process for its publication has been initiated.

2.2 ITU-R/WP 8D (21 May - 1 June 2001)

Working Party 8D reviewed *in details* the contributions from WP 7C. A number of detailed comments on the preliminary draft revised Recommendations ITU-R SA.1158 and SA. 1264 were sent back to WP 7C for consideration. Very long and tough discussions took place during the review of the CPM text on agenda item 1.31. It should be noted in this respect that the number of participants to the WP 8D from the meteorological community was rather limited (USA, EUMETSAT and WMO), although they were quite active. WP 8D in its capacity as the ITU-R group responsible for this agenda item, significantly revised the text, which nevertheless still reflects the MetSat and MetAids concerns:

<http://www.wmo.ch/web/www/TEM/SG-RFC01/CPM8D.doc>

3. FUTURE DEVELOPMENT

As indicated above, Working Party 8D is the ITU-R group responsible for the technical preparation, and in particular the relevant CPM text, related to agenda items 1.20 and 1.31 of WRC-2003. WP 8D dealing with Mobile-Satellite Services is obviously more focused on MSS interests and requirements. It is therefore of particular importance that meteorological experts participate in the forthcoming WP 8D meetings in order to support and defend meteorological applications, and that contributions be submitted.

CGMS may wish to draw the attention of its Members on this issue.

The schedule of relevant meetings is as follows:

17-19.X.2001	WP 7E
23.X - 02.XI.2001	WP 8D, important milestone in developing relevant CPM text and technical issues, in particular on agenda item 1.31
06-08.II.2002	WMO/SG-RFC, to consolidate WMO's position and contributions on all WRC-2003 issues
11-15.II.2002	WP 7C, last opportunity to develop 7C contributions to WP 8D
08-14.V.2002	WP 8D, which will finalize its contributions to CPM
27-30.V.2002	WP 7E (which will finalize SG7 contributions to CPM)
18-29.XI.2002	CPM, which will finalize the whole CPM report to WRC-2003