

PLANS ON THE USE OF THE FREQUENCY BAND 7750 – 7850 MHz

This document replies to action 27.09 concerning the use of the frequency band 7750 – 7850 MHz by CGMS Members

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The World Radio Conference 1997 allocated the frequency band 7750 – 7850 MHz to the Meteorological Satellite Service on a primary basis. The allocation was made for all three regions of the ITU. A footnote in the Radio Regulations limits the use of the band by the Meteorological Satellite Service to NGSO (Non-Geo Synchronised Satellites).

First plans to use the band were indicated at CGMS XXVII by NOAA and EUMETSAT. It was agreed that careful planning would be necessary to avoid interference between the various services.

In the beginning of the year 2000 ESA and EUMETSAT have issued the “Form of Notice (ApS4/V) for the METOP satellites to the International Telecommunication Union (ITU). This is the first step for registration of the METOP satellite network. The notifying administration is France (F/ESA). Distribution of this “advanced publication” by the ITU to all member organisations is in progress.

In the preparation of this notification process it was discussed how much bandwidth would be required for the downlink transmissions of METOP data in the band 7750 – 7850 MHz. It was concluded that the required bandwidth would be approximately 70 MHz for the first spacecraft but could increase up to 100 MHz for follow-on spacecraft. This depends on the instrumentation of the various models. The quoted bandwidth in the ITU forms was therefore set to 100 MHz.

The bandwidth requirements exclude a frequency separation process between the various satellite systems and it would be necessary to plan for time separation. This would require coordination concerning the various transmission times. It appears feasible to coordinate downlinks to major data acquisition stations. The situation could become much more difficult if the band would be used for direct broadcasts from spacecraft. In such a case it would be necessary to interrupt such transmissions when passing the data acquisition station using the same band. This would only be necessary in situations where both spacecraft using the band are in the reception range of the Earth station.

It will be necessary to discuss possible sharing scenarios between CGMS Members planning to use the band 7750 – 7850 MHz and to prepare an agreement on a plan to share the frequency band.