

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.**

In the Matter of)	
Petition For Rule Making)	
Concerning the modification of the)	
Commission's Rules to incorporate)	RM-11351
Certain results of WRC-03)	Report 2796

PETITION FOR LEAVE TO AMEND

Jansky-Barmat telecommunications Inc. on behalf of Hispasat S.A, is pleased to offer a modification of its Petition for Rulemaking reflected in the referenced rulemaking, RM-11351. The Petition for Rulemaking was made in February of 2006, put out for comment in December 2006, and a number of supportive comments made in late December 2006.

The conditions and necessity for the Commission to modify its rules to provide for the implementation of the results of WRC-03 in regard to the band 13.75-14.00 GHz are even more valid today than at the time of the filing. There is extensive pent up demand for uplink capacity at Ku band to provide Fixed Satellite services to commercial users as well as users in various U.S. government departments and agencies.

It is understood that there has been some reluctance to advance on this proceeding due to the difficulty of having rules which can ensure that the Executive branch systems e.g. radars can be effectively protected in a reasonably straight forward and easy fashion. The purpose of this proposed modification to the previous Petition is to modify the petition to provide a methodology which can be easily adapted to the rules already proposed.

Respectfully submitted,

JANSKY-BARMAT TELECOMMUNICATIONS INC.

By Donald M. Jansky
Consultant to Hispasat S.A.

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EXECUTIVE SUMMARY

This modification proposes to amend the proposed changes to the Commission's Rules as set forth in the Petition found in RM-11351. The validity of the original Petition has been supported by the significant views indicated in the filings made after its publication for comment.

The intent of the Petition was to provide modification of the Commission's Rule to implement the Changes to the Radio Regulations adopted by the ITU World Radiocommunication Conference 2003 (WRC-03) applicable to the implementation of Fixed Satellite Service (FSS) earth stations in the band 13.75-14.0 GHz. The United States was a signatory to these treaty changes, and took no reservations against the changes reflected in Nos. 5.502 and 5.503. of the Regulations.

This Petition to modify the referenced Petition proposes modifications to the proposed rules contained in that Petition. These proposed modifications will propose that the proposed rules be changed to facilitate the authorization of earth stations with antenna diameters as small as 1.2m so as to ensure protection of U.S. government systems which share the same allocation.

The proposed modification to the Petition provides for use of a set of contours which can be associated with size of terminal antenna, associated e.i.r.p., and geographic location in relation to the coast lines of the United States. These contours will provide for easy identification of the locations where earth stations of particular size can be located. The contours are based on the methodologies set forth in ITU-R Recommendation S. 1712 which was developed for the explicit purpose of implementing the results of WRC-03 in the band 13.75-14.0 GHz.

These proposed changes to the Petition along with the other changes proposed should be acted on expeditiously in the form of an Notice of Proposed Rule Making (NPRM).

I. Introduction

Proceeding RM-11351 concerns a request for the Commission to modify its Rules to incorporate the results of the World Administrative Radio Conference – 03 (WRC-03). The Petition was put out for comment in December 2006, and in general received favorable support from a number of organizations. However, the Commission has not yet proceeded to implement the suggested rule changes. Various consultations have lead to an understanding that there is a need to provide an improved methodology for incorporation into the Rules to facilitate their application.

The purpose of this proposed modification to the referenced Petition is to propose changes to the previously proposed rule changes to provide for such improvements. These improvements are intended to simplify the determination of acceptability of proposed earth stations in the band 13.75-14.00 GHz in order to ensure protection of the other services in the band.

The sections below will review the purpose of the aforementioned Petition , describe the proposed modifications to those proposed rule changes found in RM-11351., and provide the additional methods necessary to implement the modifications.

II. Summary of Comments

In general the comments received by the Commission on the proposed rule changes in the Petition received were supportive.

They received unqualified support from both Intelsat and SES-New Skies both of which are satellite operators providing service to the United States. In addition support was received from the European Satellite Operators Association, ESOA.

The NASA also provided comments which expressed concern about use of the upper end of the band in question. These concerns were addressed in comments provided by Jansky-Barmat Telecommunications Inc in February 2007.

III Discussion of Modifications

The proposed modifications to the FCC Rules to implement the decisions taken at WRC-03 with respect to the band 13.75-14.0 GHz are reflected in Appendix B of the aforementioned Petition. The proposed modifications to these which are the subject of this Petition Modification are in the part of this Appendix concerned with modifications to Part 25 of the Rules. Under point “1.0 and 4.0 of section “B” of this Appendix where a new section (e) to Section 25.134 was proposed.

The last sentence of this proposed new section (e) to Section 25.134 states, “ *The requirements of US 357 and US 358 are considered to be met if the earth station*

antenna meets the coastal separation conditions specified for the earth station antenna size and associated e.i.r.p. [see graph XYZ].” In order to simplify the meeting of this requirement it is proposed to modify the proposed Rules in this Petition to make reference to the contours and E.I.R.P. tables found in Figures 1, 2, 3, 4, 5, and 6 as appropriate depending on geographic location of an earth station. These contours reflect the protection contours and e.i.r.p. requirements as specified in the Method 2 of ITU-R Recommendation S. 1712. The benefit of such curves is that the acceptability of an earth station antenna size and e.i.r.p. can be easily determined.

A similar modification to the proposed Rule modification in the Petition is also proposed in the proposed new text for (h) in Part 25.204 found in point 4.0 of section “B” of Appendix B of the Petition. Here, the phrase, “ *graph XYZ (to be developed based on Recommendation S. 1712)*” would be replaced by reference to the same aforementioned curves.

The specific modifications to the text found in the Petition may be found in Appendix 1 attached to this document.

IV Conclusions

This Petition proposes to modify the previously filed Petition to implement the results of WRC-03 for the band 13.75-14.0 GHz

The proposed modifications provide for a simplified implementation of these rules through use of a set of contours and tables which provide for an easy indication as to whether the proposed location and e.i.r.p of earth stations in this band would properly protect the other services in the band.

APPENDIX 1

Proposed Modification to Petition Proposed Rules

Following are the proposed changes to the Rule found in Appendix B of the referenced Petition in RM-11351;

1. Part 25.134-New (e)

(e) V sat networks operating in the 12/13.75-14.0 GHz bands

All applicants for digital and analogue V sat networks using the band 13.75-14.0 GHz shall be processed routinely in accordance with the provisions of (a) and (b) above provided they meet the requirements of No. US356 and US357(as modified).

Reference to 14 GHz bands is understood to include the band 13.75-14.00 GHz.

The requirements of US357 ad US 358 are considered to be met if the earth station antenna size and associated e.i.r.p. meets the coastal separation conditions specified for the earth station size and associated e.i.r.p. ~~[see graph XYZ]~~, as set forth in Figures 1, 2, 3, 4, 5, and 6 found in [Appendix 2].

2. Part 25.204 – New (h)

(h) FSS earth stations operating in the band 13.75-14.00 GHz having antennas from 1.2 m and smaller than 4.5 m need to meet the costal separation distance for the e.i.r.p. specified in Figures 1, 2, 3, 4, 5, and 6 found in [Appendix 2] ~~graph XYZ (to be developed based on Recommendation ITU-R S. 1712 and agreed with NTIA)~~ to be routinely processed. If the distance is not met then the earth station will be individually processed.

APPENDIX 2

Antenna Size and E.I.R.P. combinations for suitable Contours

Figure 0 below shows how is going to be spanned the USA coastline in 6 figures to create an antenna size tables and E.I.R.P. combinations for suitable contours to meet pfd limit in RR 5.502.

Figures 1-6 provide contours and associated tables which indicate the size of terminal and e.i.r.p which can be used at the indicated distances from the coastline so as to provide protection for co-frequency radars. The way in which the contours are computed is explained in section 3.5 of Annex 2 of Rec. ITU-R S.1712. A further explanation may be found in sections 3.1 to 3.4 of Annex 2 of ITU-R Rec. S. 1712.

It should be noted that in the computation method it is necessary to input a common height above ground for the focal points of all earth stations antennas. In the contours in the following Figures 1, 2, 3, 4, 5, and 6 a height (hE) of 3 meters was used as it was assumed that most of the earth stations will be of the VSAT type. For the radar tests points a height of 36 meters was used.

The terrain database used is, "USGS GTO PO30 DEM". The grid intervals are between 7km and 9km. the number of radar test points along the coast for all cases is more than 100.

Figure 0: Diagram showing that Figures 1 to 6 span the USA coastline. (Figures 1 to 6 were prepared along the lines of sections 3.1 to 3.5 of Annex 2 of Rec. ITU-R S.1712)

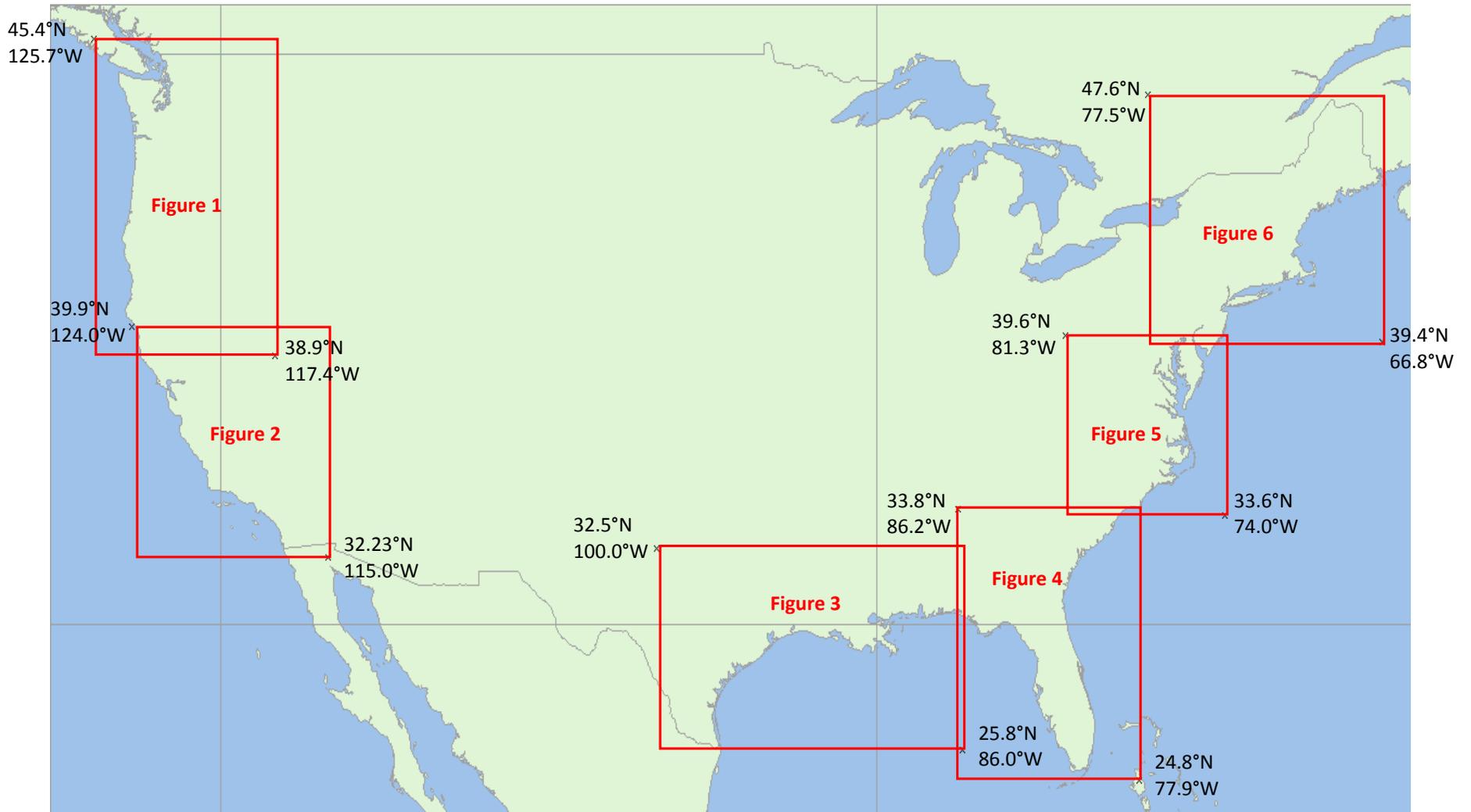
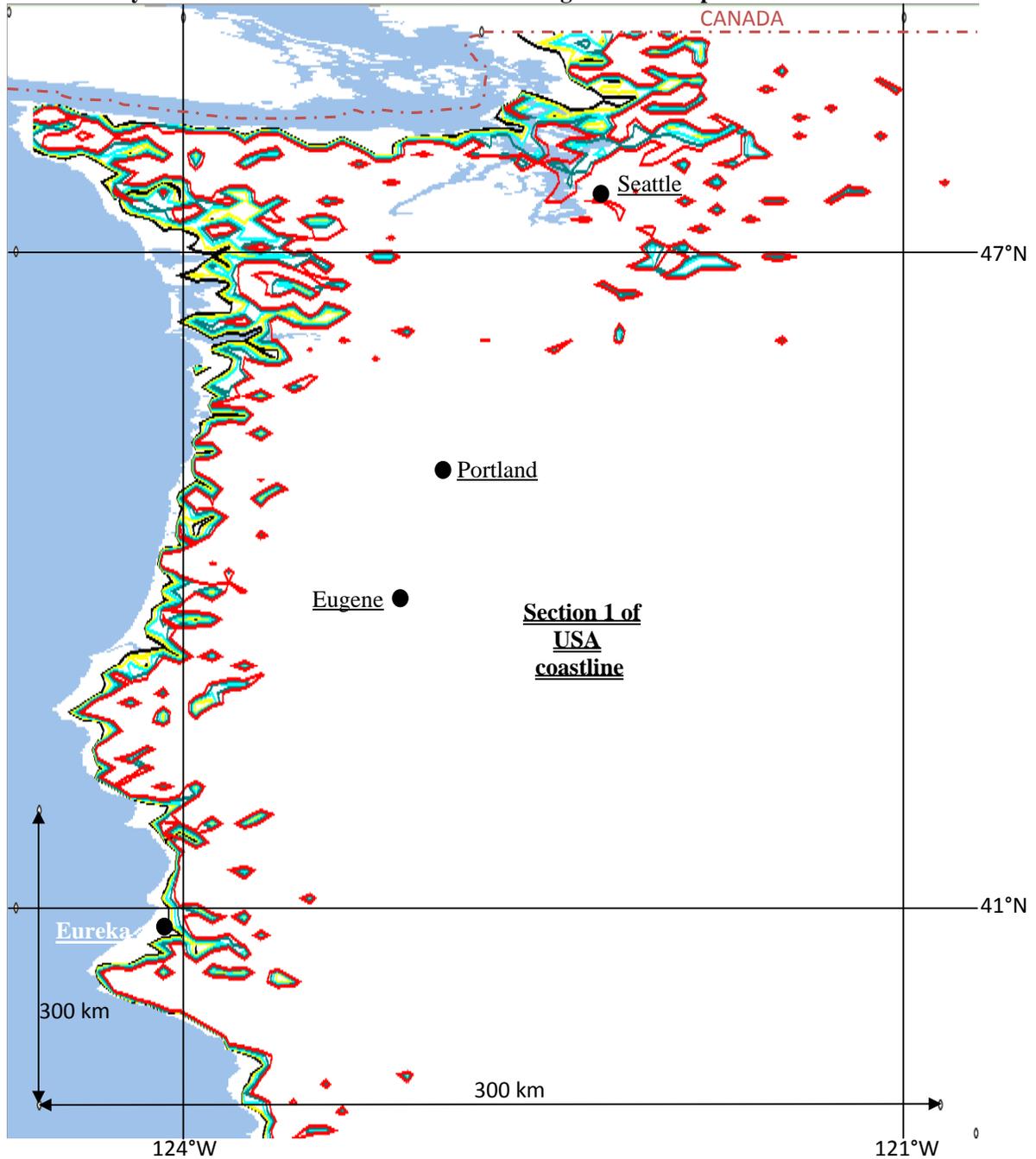


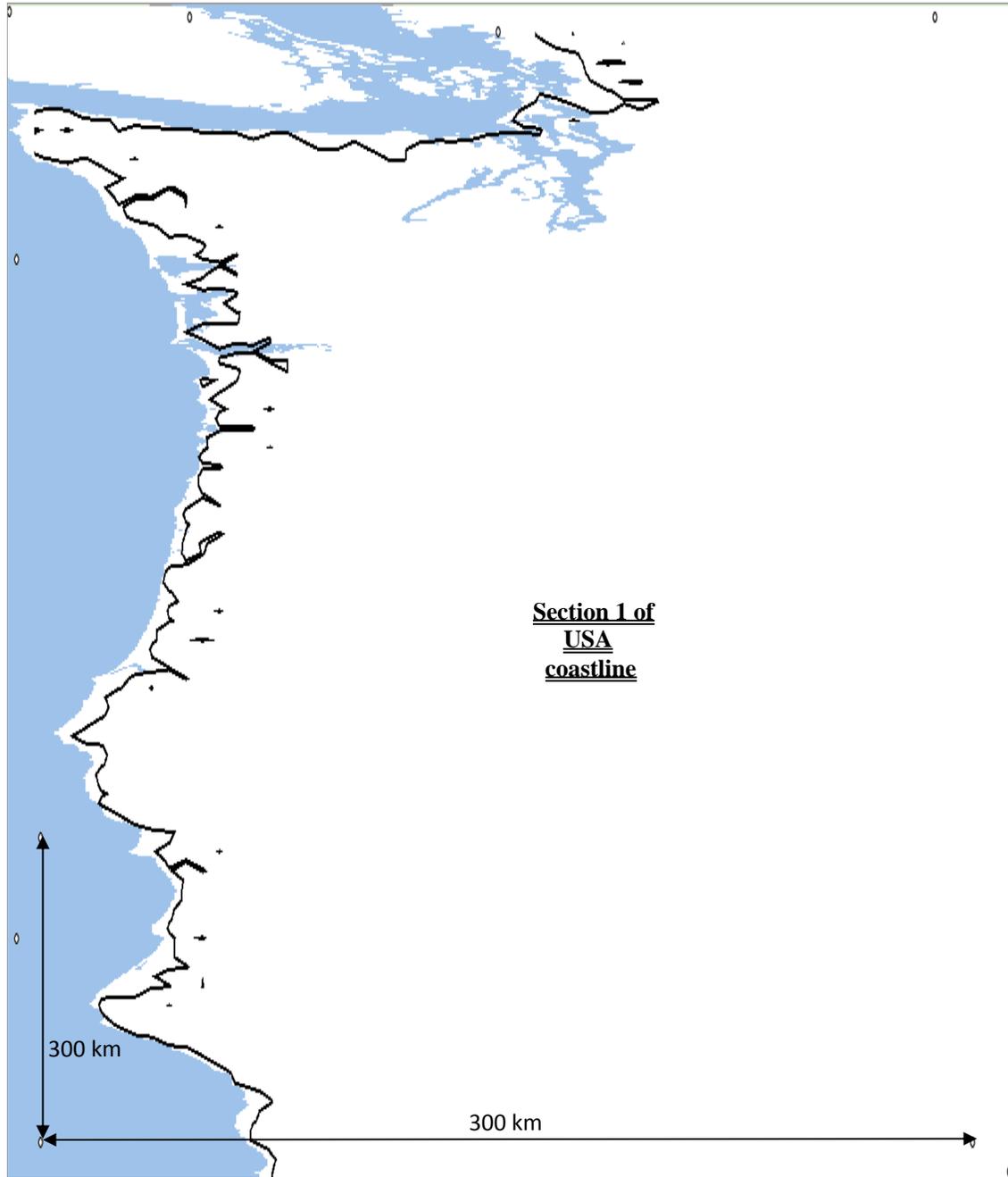
Figure 1(X)

Contours beyond which earth stations without shielding would meet pfd limit in RR 5.502



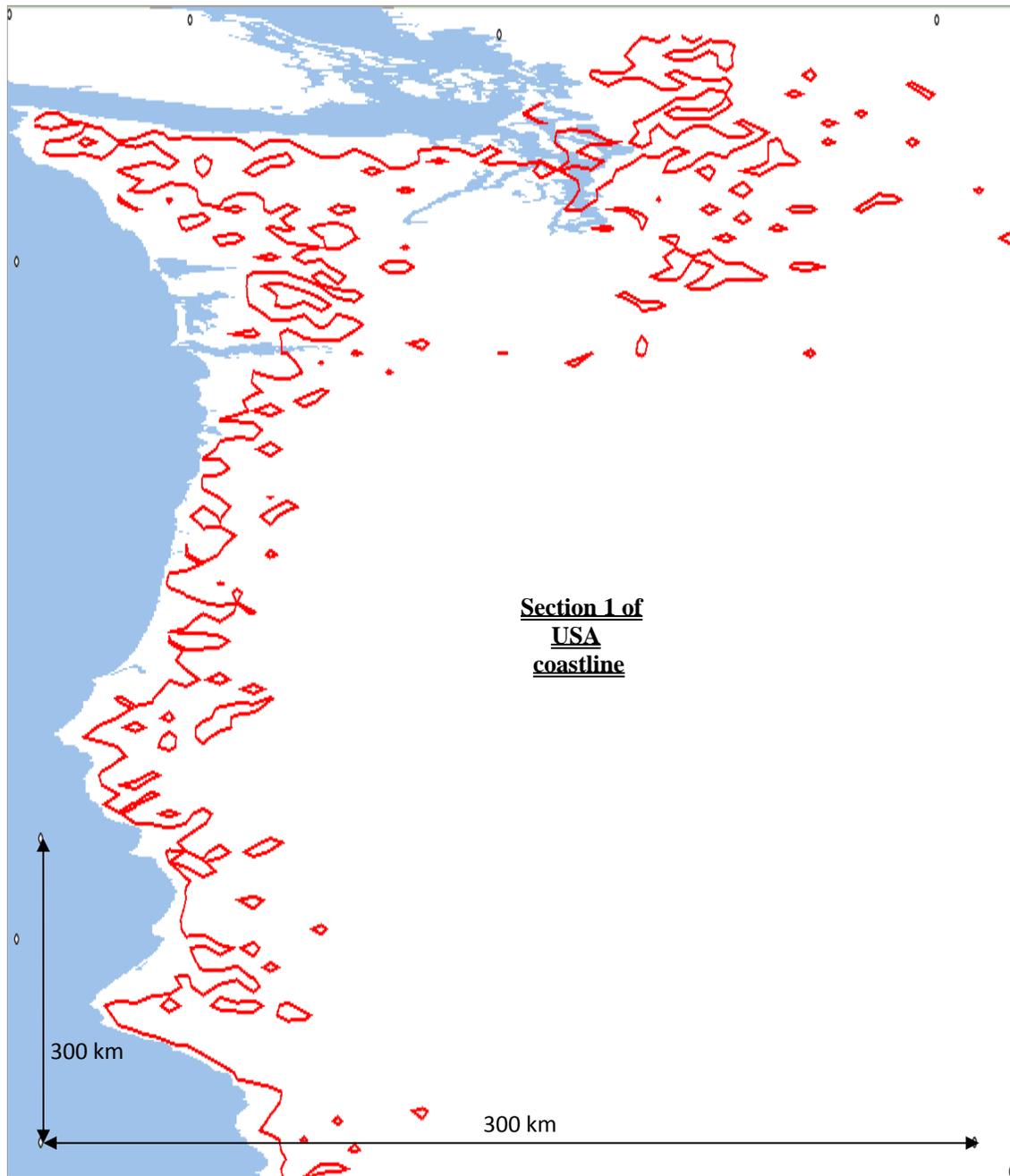
Ant. Dia. (m)	1.2-1.5	1.5-2.1	2.1-3.1	3.1-4.5
Contour	-----e.i.r.p. in 10 MHz (dBW)-----			
A	E ≤ 36.5	E ≤ 38.4	E ≤ 41.3	E ≤ 44.7
B	E ≤ 45.5	E ≤ 47.4	E ≤ 50.3	E ≤ 53.7
C	E ≤ 54.5	E ≤ 56.4	E ≤ 59.3	E ≤ 62.7
D	E ≤ 63.5	E ≤ 65.4	E ≤ 68.3	E ≤ 71.7
F	E ≤ 72.5	E ≤ 74.4	E ≤ 77.3	E ≤ 80.7

Figure 1(Y)



Ant. Dia. (m)	<u>1.2-1.5</u>	<u>1.5-2.1</u>	<u>2.1-3.1</u>	<u>3.1-4.5</u>
<u>Contour</u>	-----e.i.r.p. in 10 MHz (dBW)-----			
A _____	E ≤ 36.5	E ≤ 38.4	E ≤ 41.3	E ≤ 44.7

Figure 1(Z)



Ant. Dia. (m)	<u>1.2-1.5</u>	<u>1.5-2.1</u>	<u>2.1-3.1</u>	<u>3.1-4.5</u>
<u>Contour</u>	-----e.i.r.p. in 10 MHz (dBW)-----			
F	_____	E ≤ 72.5	E ≤ 74.4	E ≤ 77.3 E ≤ 80.7

Figure 2(X)

Contours beyond which earth stations without shielding would meet pfd limit in RR 5.502

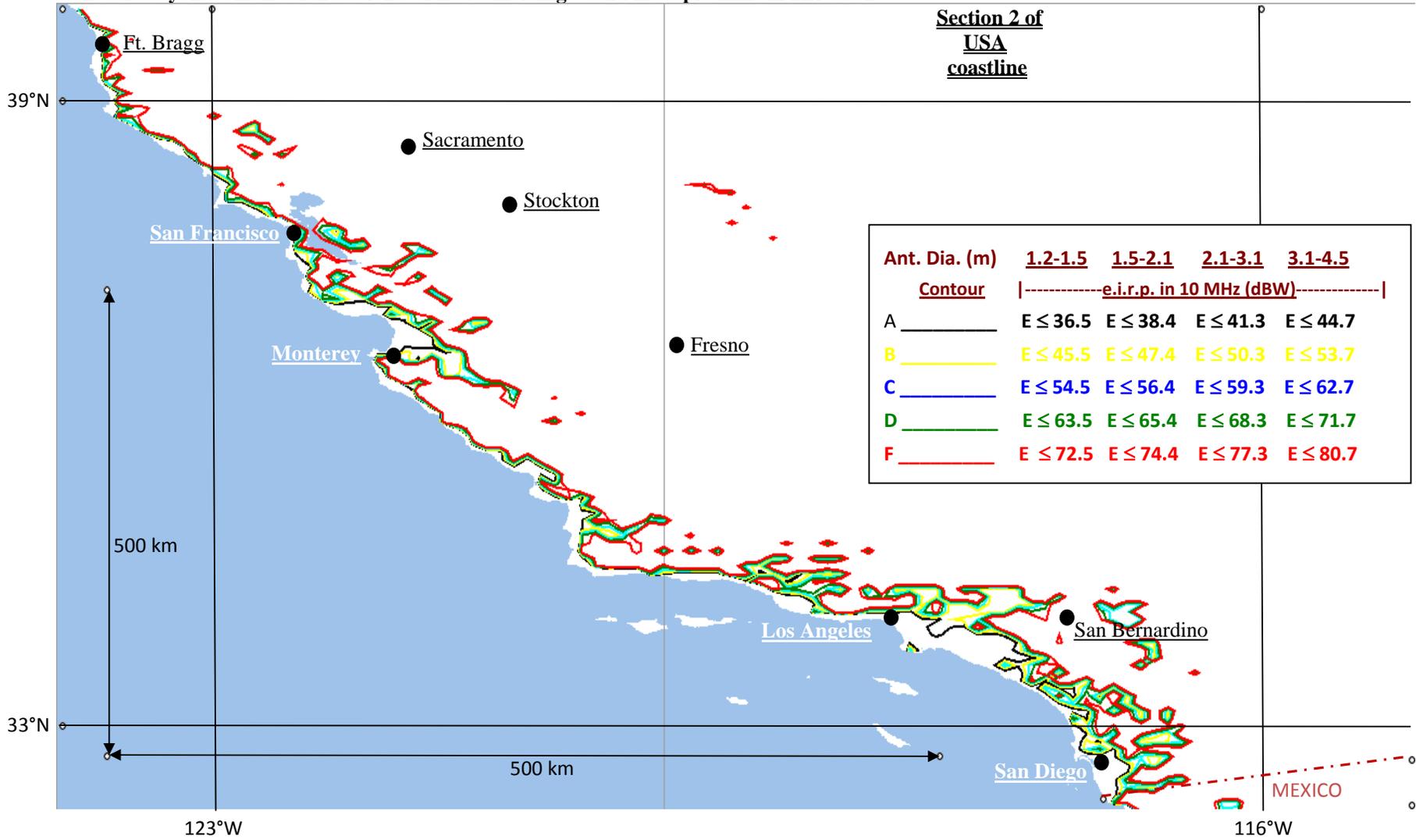


Figure 2(Y)

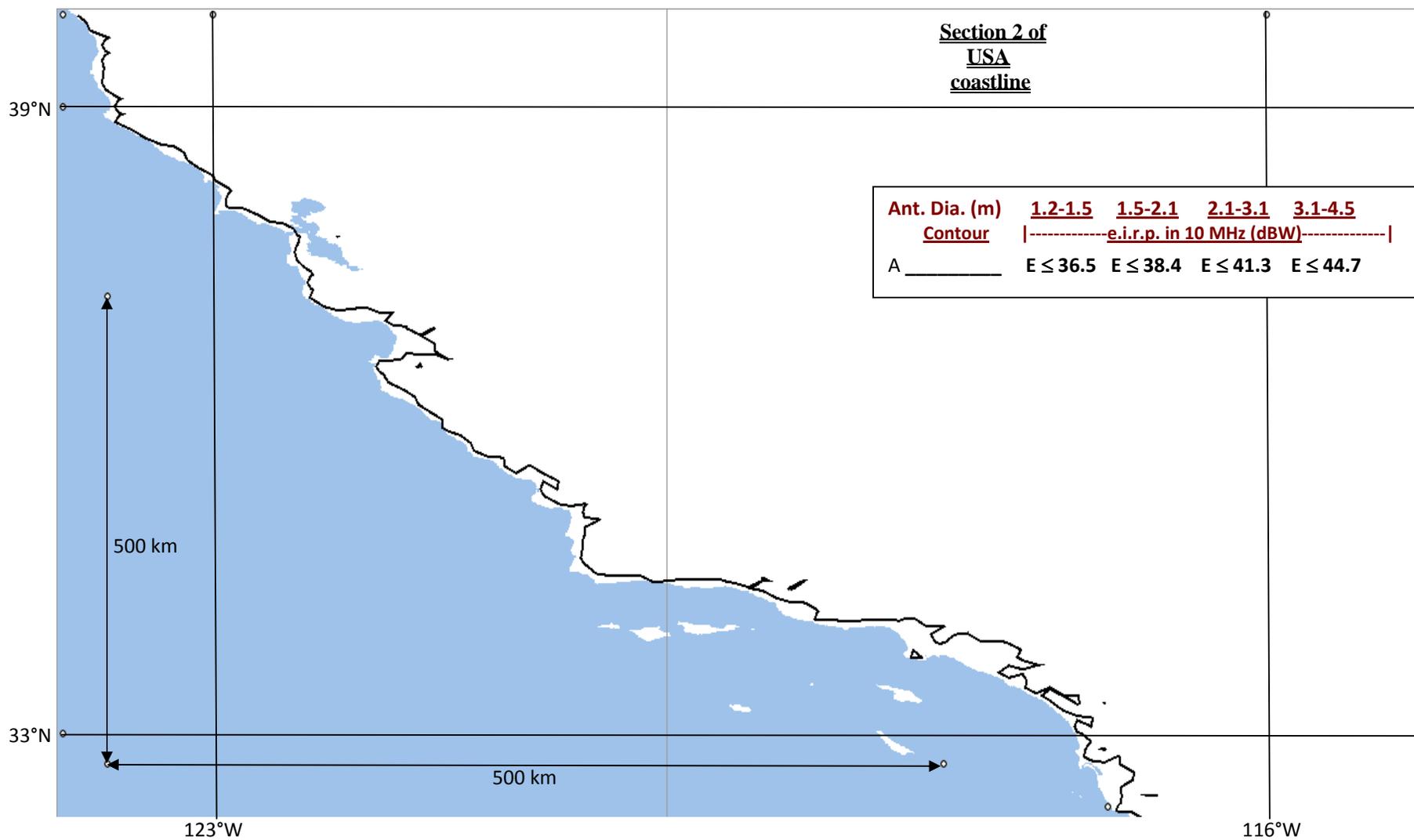


Figure 2(Z)

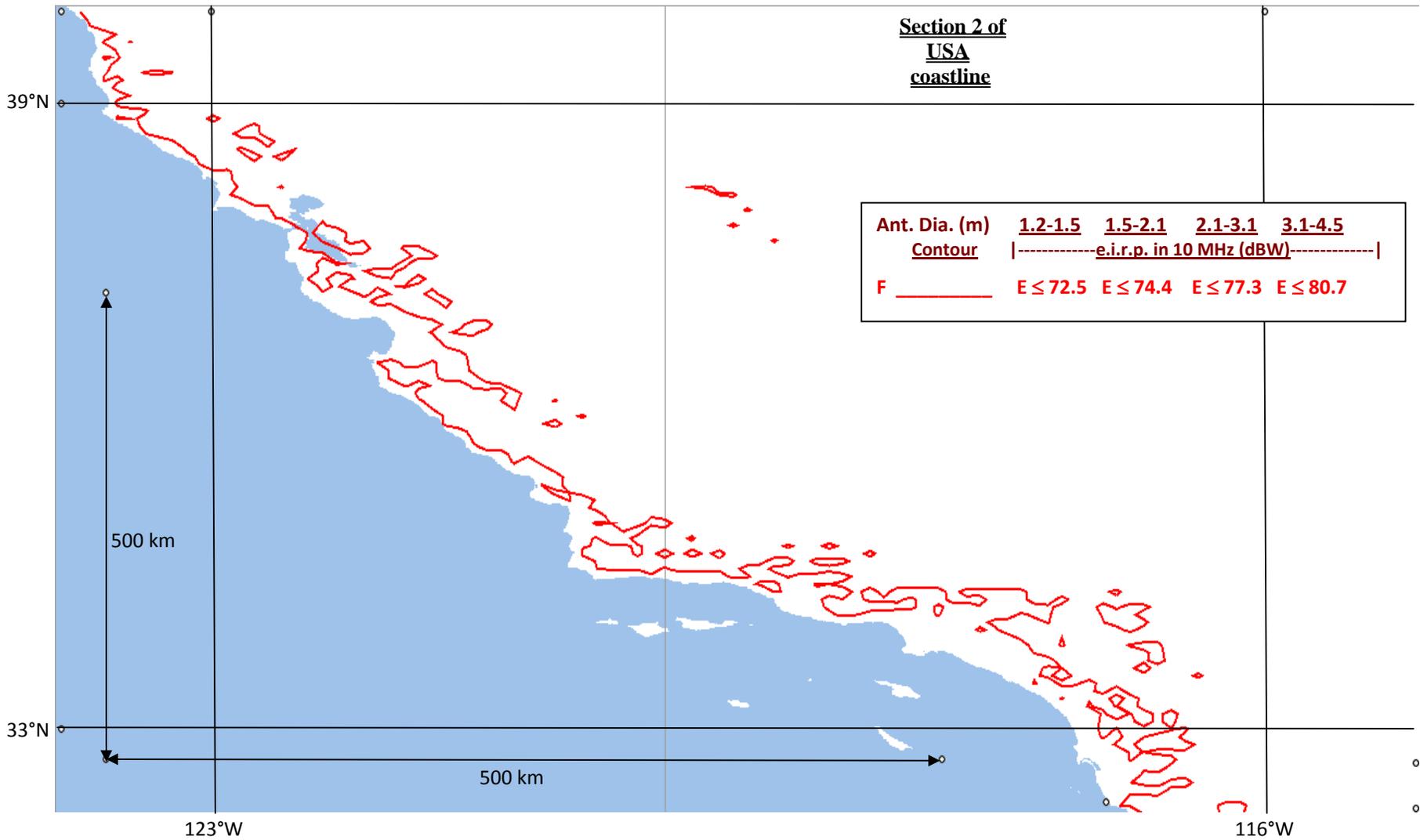


Figure 3

Contours beyond which earth stations without shielding would meet pfd limit in RR 5.502

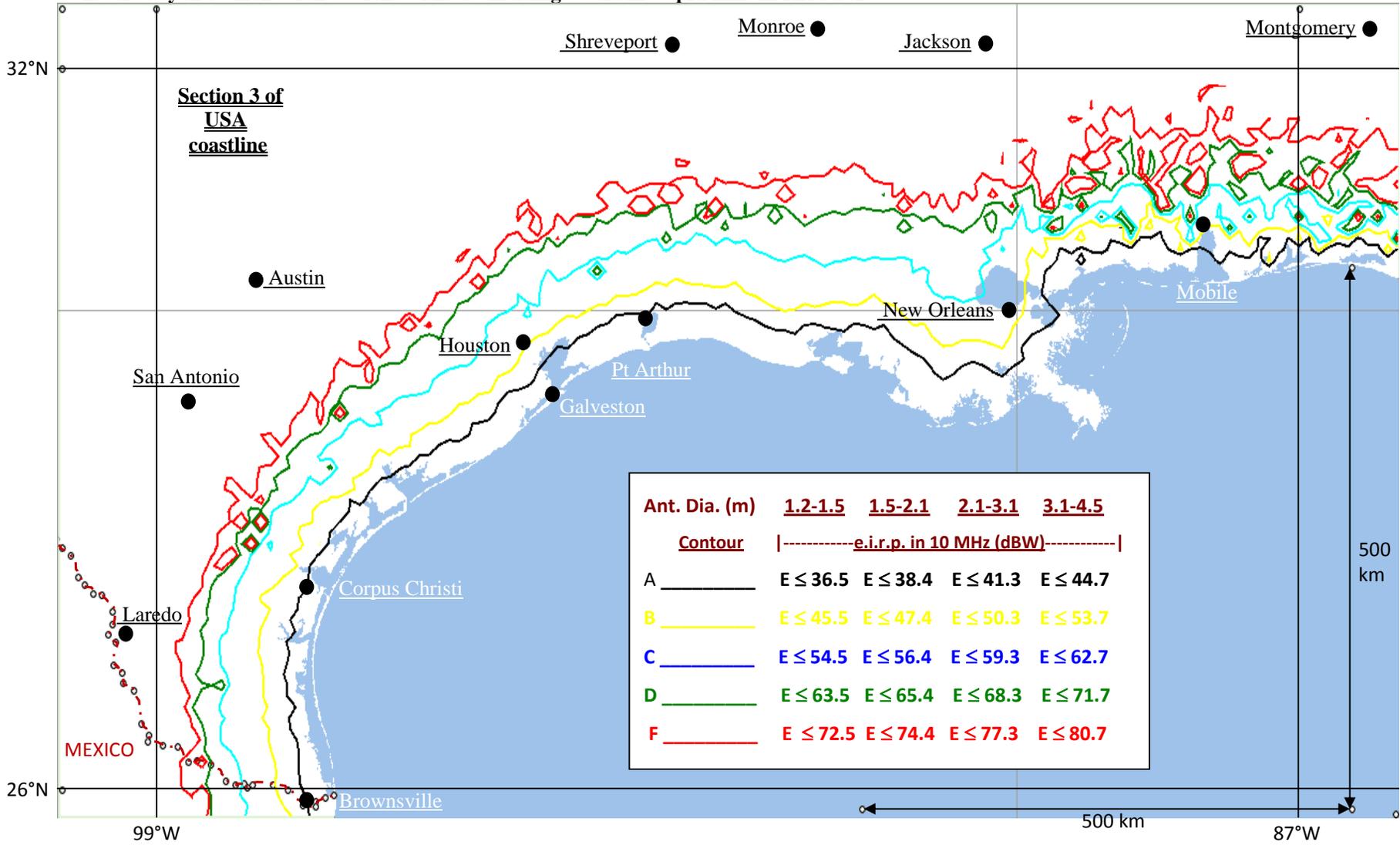
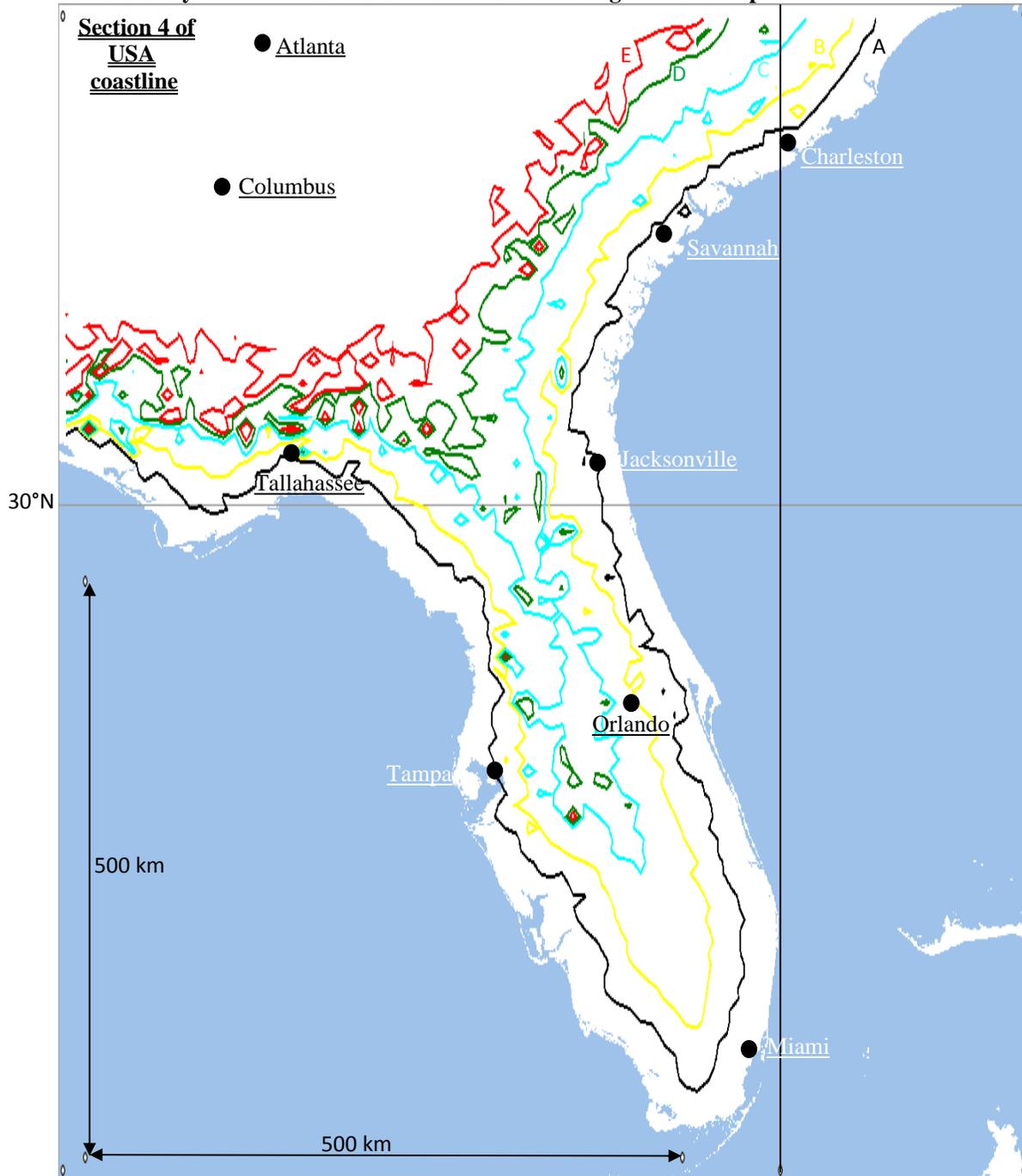


Figure 4

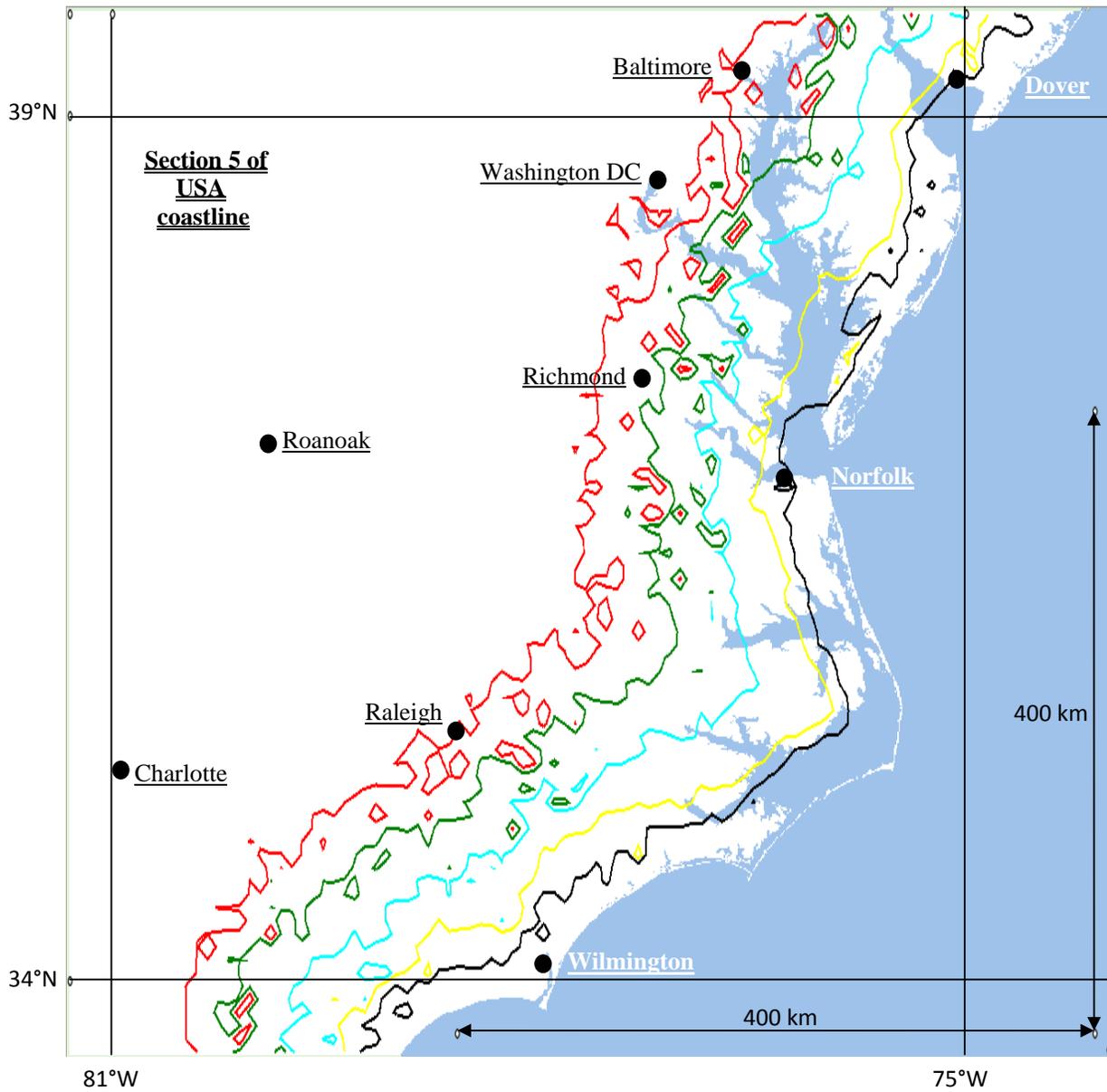
Contours beyond which earth stations without shielding would meet pfd limit in RR 5.502



Ant. Dia. (m)	<u>1.2-1.5</u>	<u>1.5-2.1</u>	<u>2.1-3.1</u>	<u>3.1-4.5</u>
Contour	-----e.i.r.p. in 10 MHz (dBW)-----			
A _____	E ≤ 36.5	E ≤ 38.4	E ≤ 41.3	E ≤ 44.7
B _____	E ≤ 45.5	E ≤ 47.4	E ≤ 50.3	E ≤ 53.7
C _____	E ≤ 54.5	E ≤ 56.4	E ≤ 59.3	E ≤ 62.7
D _____	E ≤ 63.5	E ≤ 65.4	E ≤ 68.3	E ≤ 71.7
F _____	E ≤ 72.5	E ≤ 74.4	E ≤ 77.3	E ≤ 80.7

Figure 5

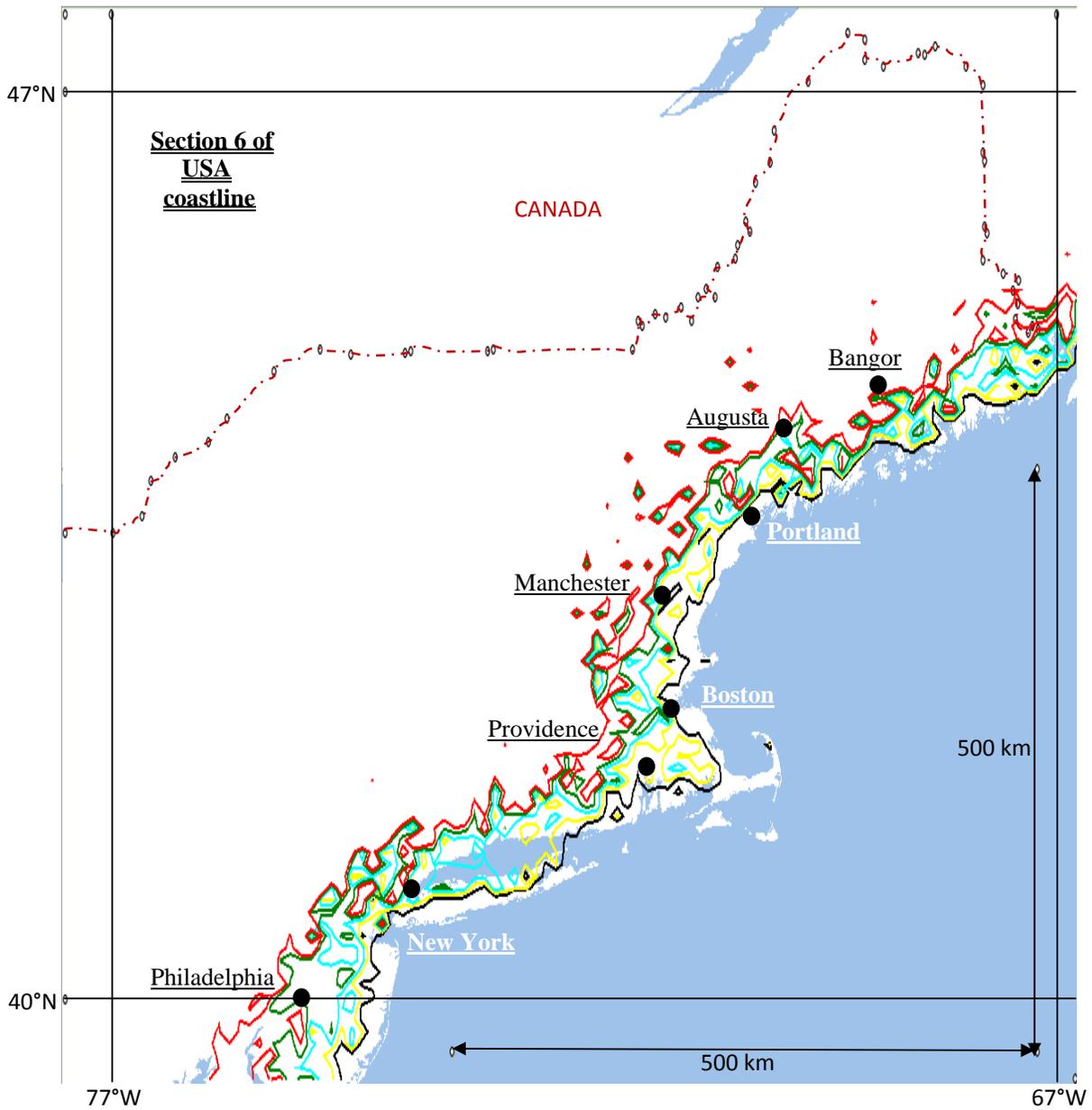
Contours beyond which earth stations without shielding would meet pfd limit in RR 5.502



Ant. Dia. (m)	1.2-1.5	1.5-2.1	2.1-3.1	3.1-4.5
Contour	-----e.i.r.p. in 10 MHz (dBW)-----			
A	E ≤ 36.5	E ≤ 38.4	E ≤ 41.3	E ≤ 44.7
B	E ≤ 45.5	E ≤ 47.4	E ≤ 50.3	E ≤ 53.7
C	E ≤ 54.5	E ≤ 56.4	E ≤ 59.3	E ≤ 62.7
D	E ≤ 63.5	E ≤ 65.4	E ≤ 68.3	E ≤ 71.7
F	E ≤ 72.5	E ≤ 74.4	E ≤ 77.3	E ≤ 80.7

Figure 6

Contours beyond which earth stations without shielding would meet pfd limit in RR 5.502



Ant. Dia. (m)	1.2-1.5	1.5-2.1	2.1-3.1	3.1-4.5
Contour	-----e.i.r.p. in 10 MHz (dBW)-----			
A	E ≤ 36.5	E ≤ 38.4	E ≤ 41.3	E ≤ 44.7
B	E ≤ 45.5	E ≤ 47.4	E ≤ 50.3	E ≤ 53.7
C	E ≤ 54.5	E ≤ 56.4	E ≤ 59.3	E ≤ 62.7
D	E ≤ 63.5	E ≤ 65.4	E ≤ 68.3	E ≤ 71.7
F	E ≤ 72.5	E ≤ 74.4	E ≤ 77.3	E ≤ 80.7