HFTA Analysis for USA from AD7L QTH
For **20 Meters**
Antenna = 2 Element Yagi (Force 12 C3) at 50 feet

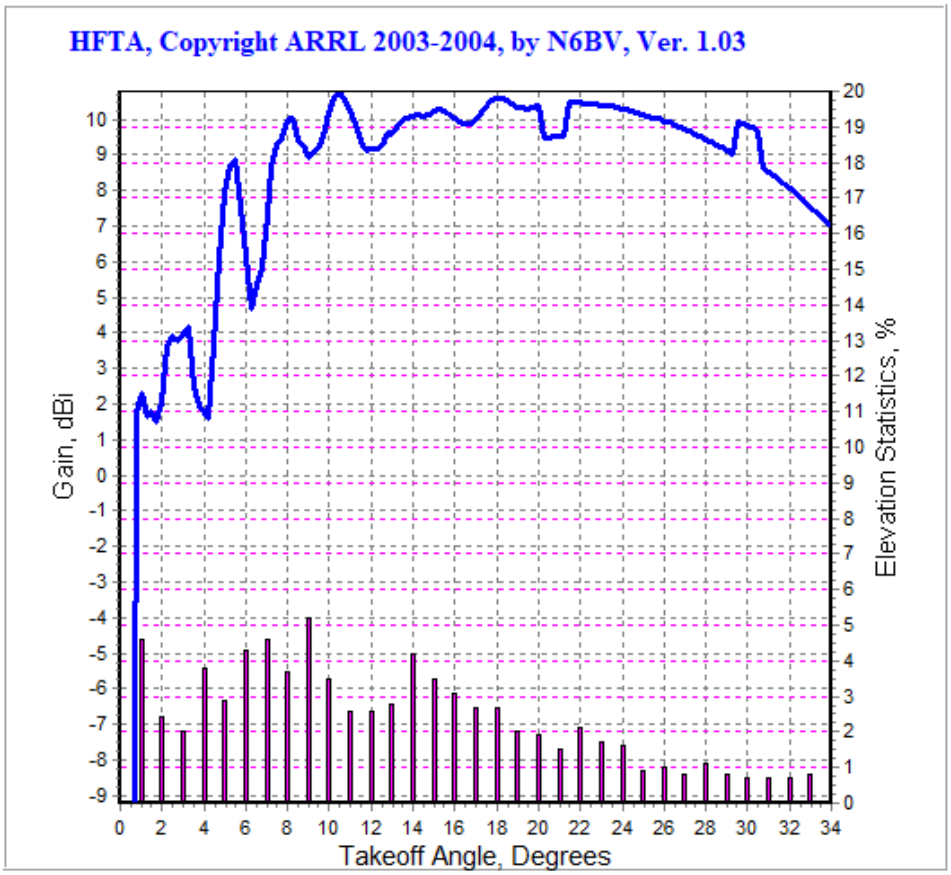
Analysis and Terrain profiles shown for 10-degree increments, from 0 to 350 degrees.

80 Meter analysis shown later in the document, with terrain profiles being the same as for 20 Meters.

Only 20 Meters and 80 Meters were used by AD7L in the SEQP, and only contacts with the continental USA were made, so analysis was limited to just these bands / geographical area.

20 Meters

Output Graph, HFTA



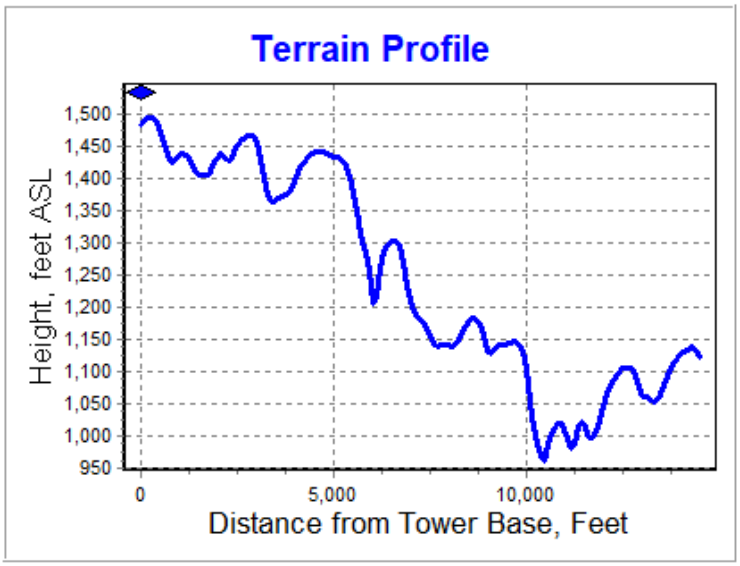
Freq. = 14.1 MHz
Max. Gain: 10.8 dBi
AD7L-1-0.00.PRO
50 ft
2-Ele.
Fig. of Merit: 8

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

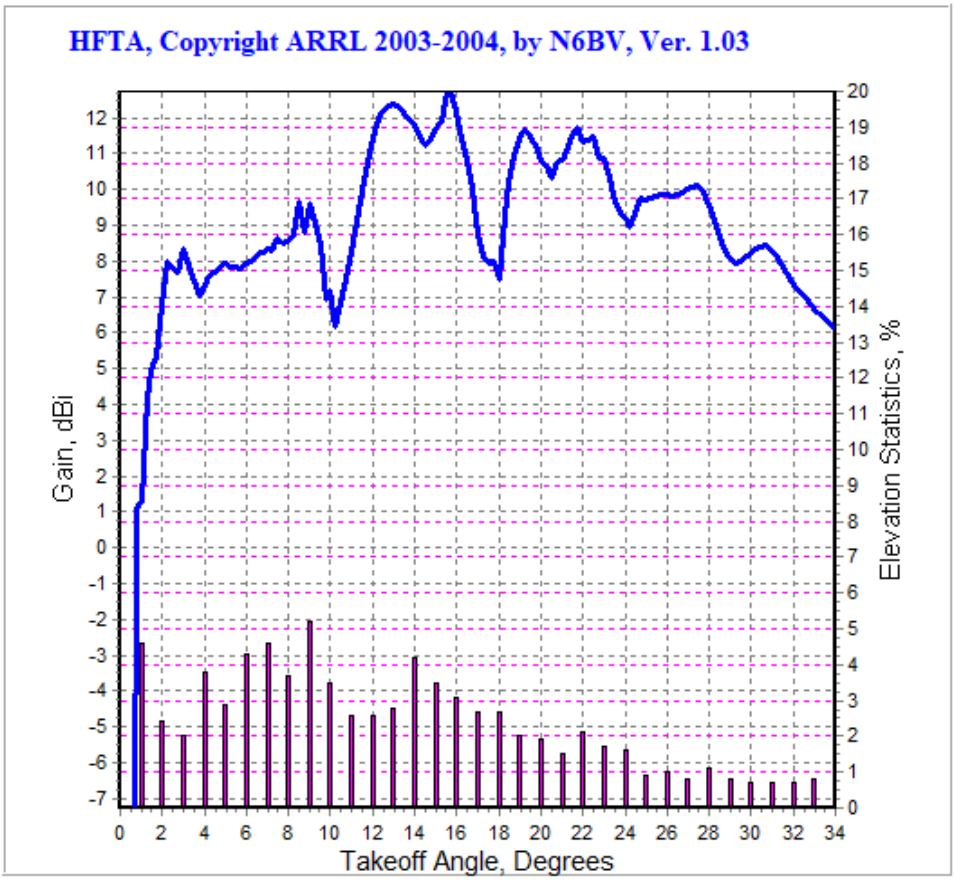


AD7L-1-0.00.PRO
50 ft

Print

Close

Output Graph, HFTA



Freq. = 14.1 MHz
Max. Gain: 12.7 dBi
AD7L-1-10.00.PRO
50 ft
2-Ele.
Fig. of Merit: 8.6

Elev. Statistic
W7-OR-US.PRN

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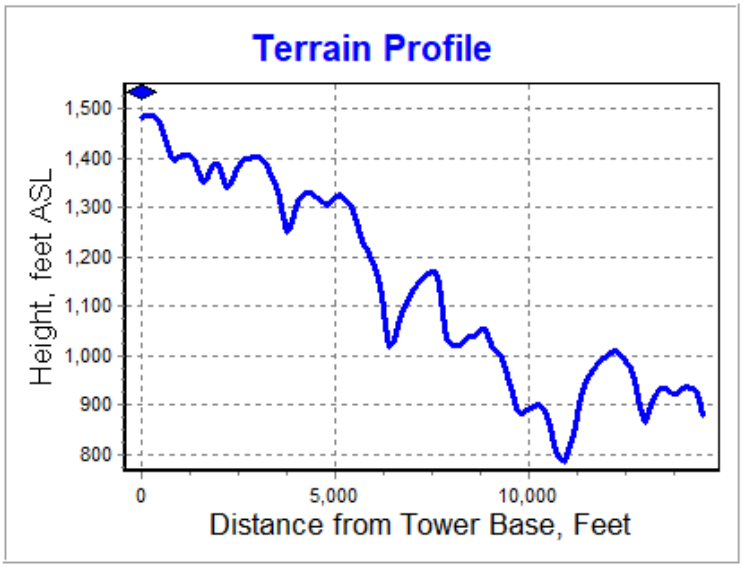
Close

Terrain Plot, HFTA

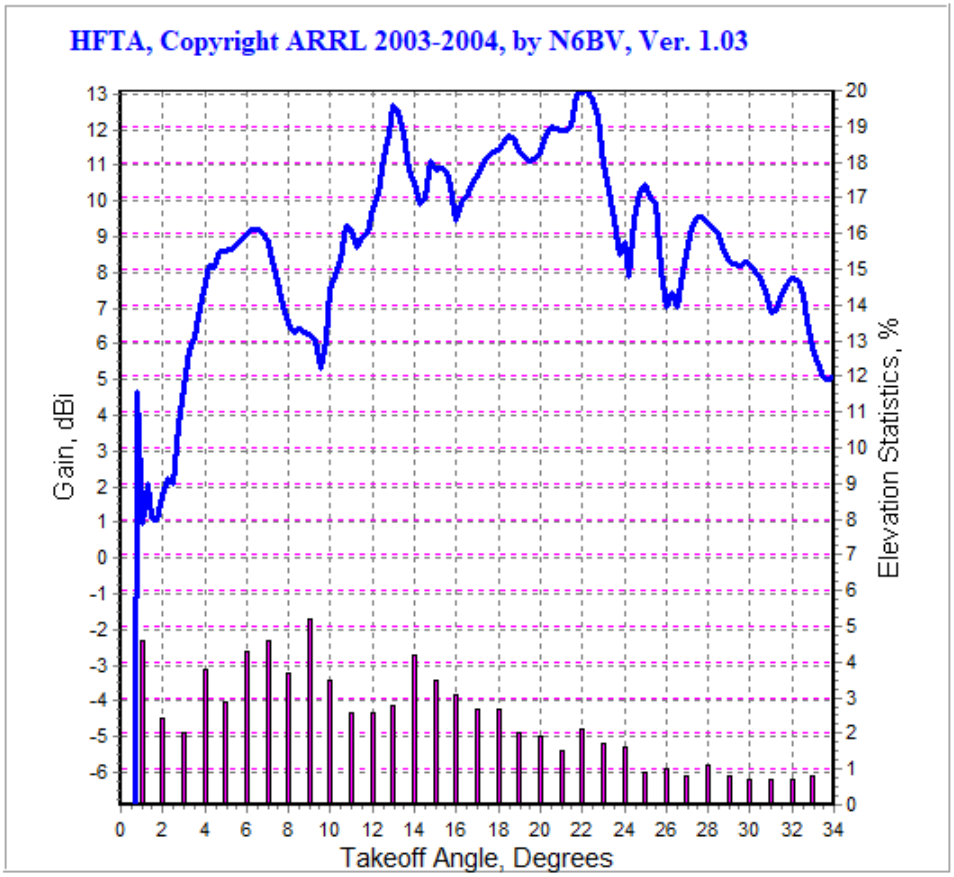


AD7L-1-10.00.PRO
50 ft

Print

Close

Output Graph, HFTA



Freq. = 14.1 MHz
Max. Gain: 13.1 dBi
AD7L-1-20.00.PRO
50 ft
2-Ele.
Fig. of Merit: 8.3

Elev. Statistic
W7-OR-US.PRN

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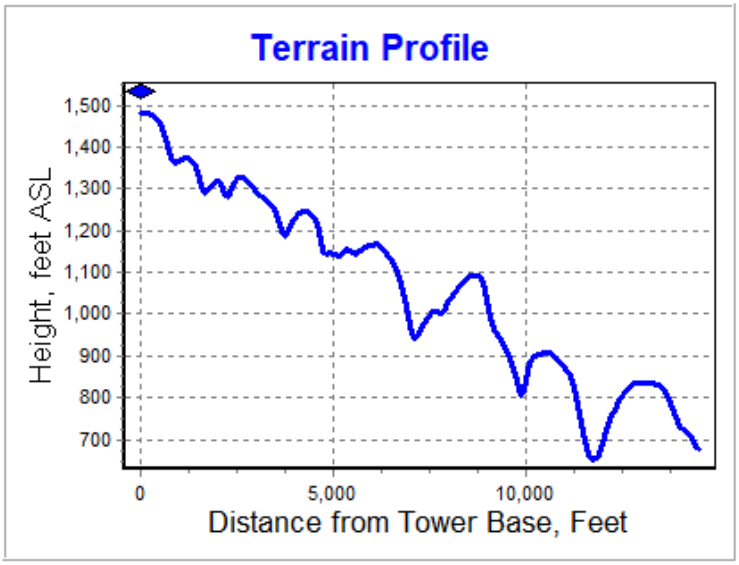
Terrain Plot, HFTA

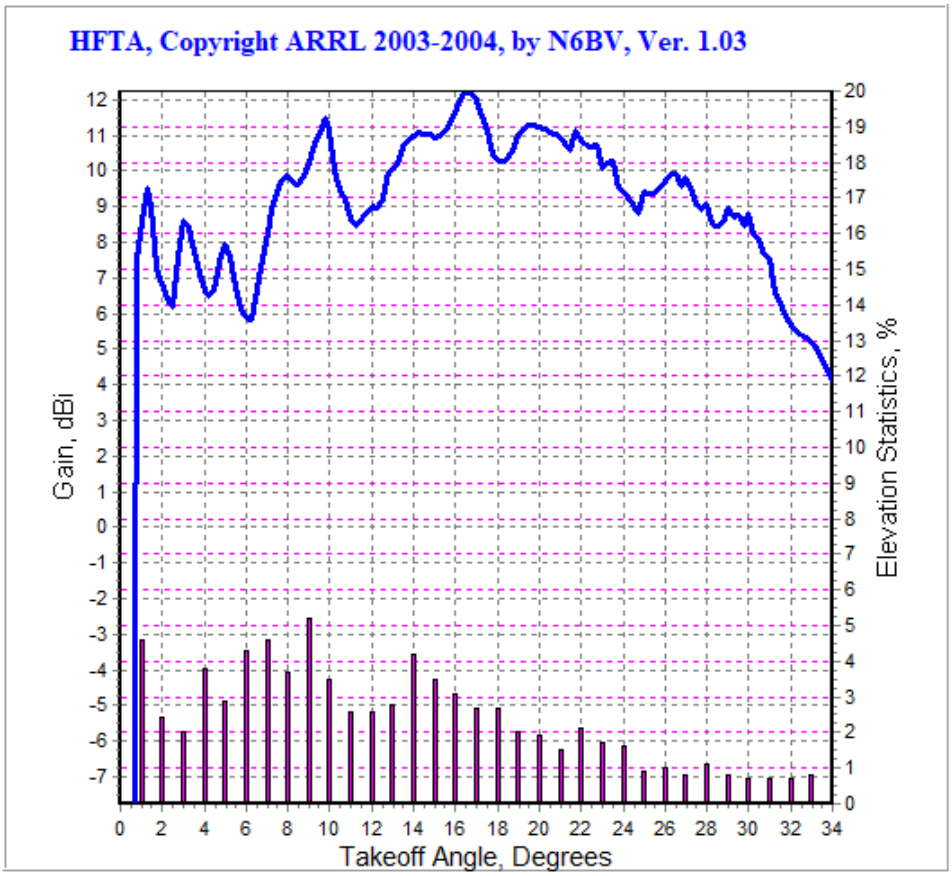


AD7L-1-20.00.PRO
50 ft

Print

Close

Output Graph, HFTA



Freq. = 14.1 MHz
Max. Gain: 12.2 dBi
AD7L-1-30.00.PRO
50 ft
2-Ele.
Fig. of Merit: 8.7

Elev. Statistic
W7-OR-US.PRN

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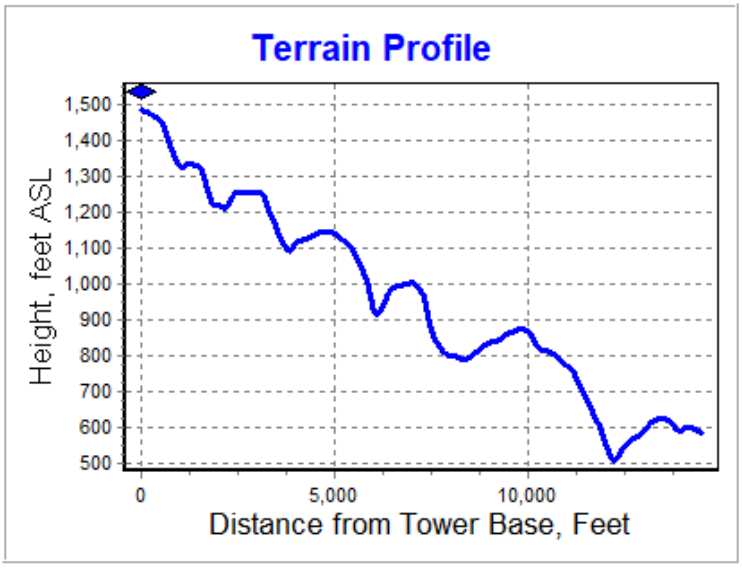
Terrain Plot, HFTA

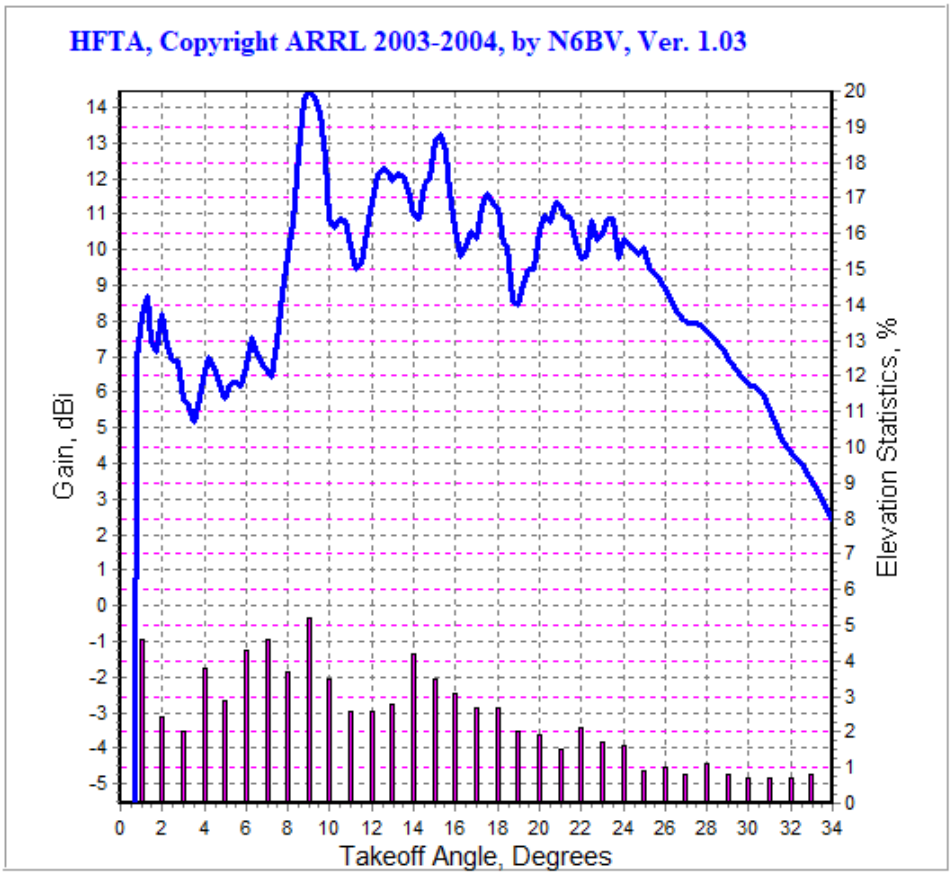


AD7L-1-30.00.PRO
50 ft

Print

Close

Output Graph, HFTA



Freq. = 14.1 MHz
Max. Gain: 14.5 dBi
AD7L-1-40.00.PRO
50 ft
2-Ele.
Fig. of Merit: 9.2

Elev. Statistic
W7-OR-US.PRN

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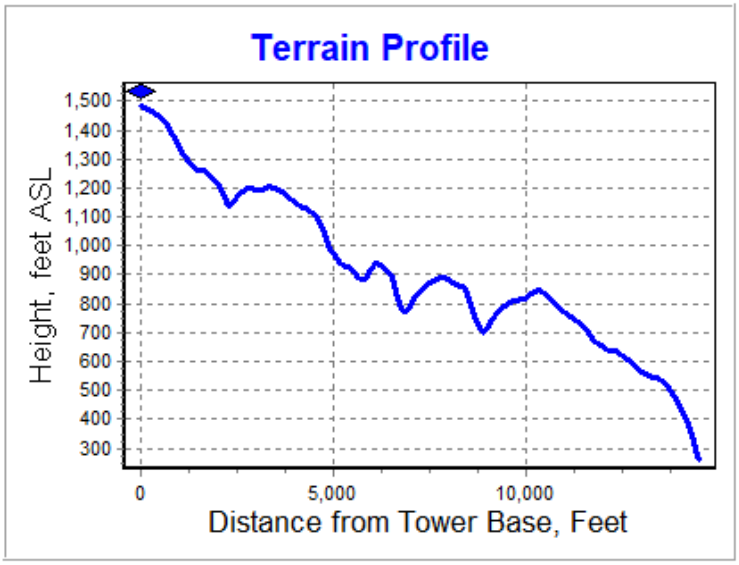
Close

Terrain Plot, HFTA

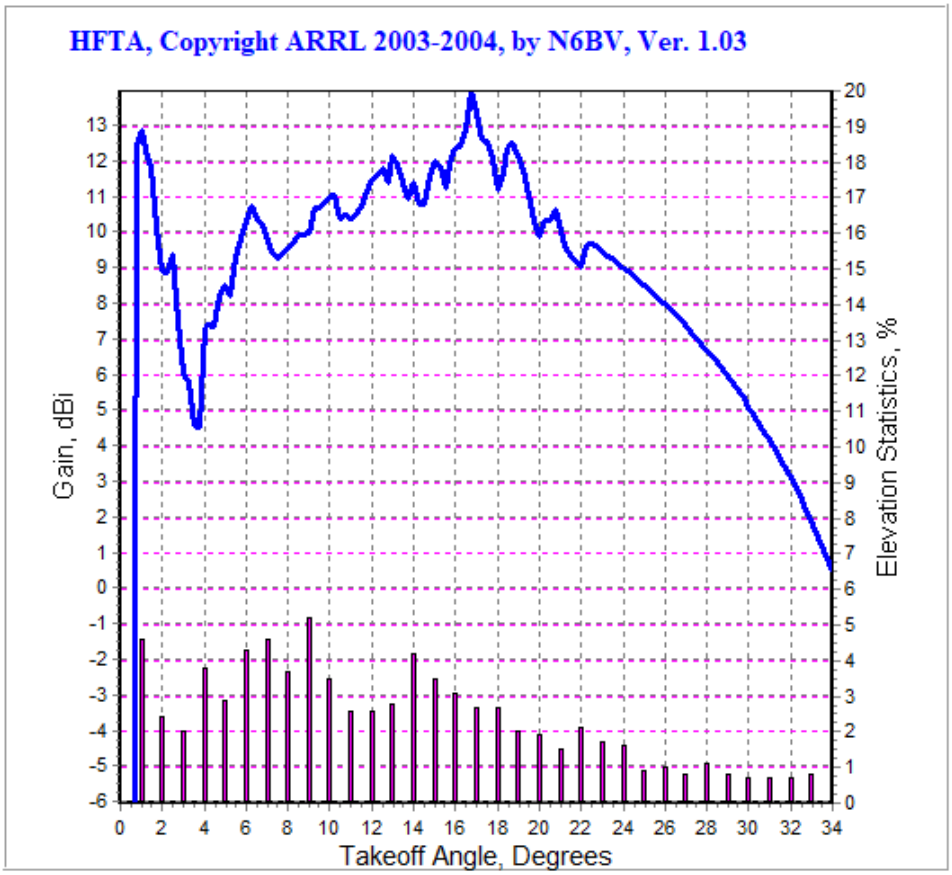


AD7L-1-40.00.PRO
50 ft

Print

Close

Output Graph, HFTA



Freq. = 14.1 MHz
Max. Gain: 14.0 dBi
AD7L-1-50.00.PRO
50 ft
2-Ele.
Fig. of Merit: 9.5

Elev. Statistic
W7-OR-US.PRN

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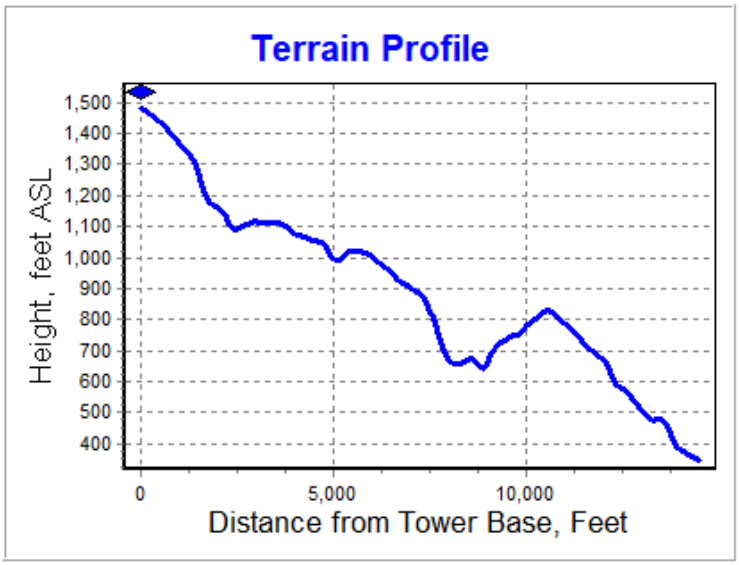
Terrain Plot, HFTA

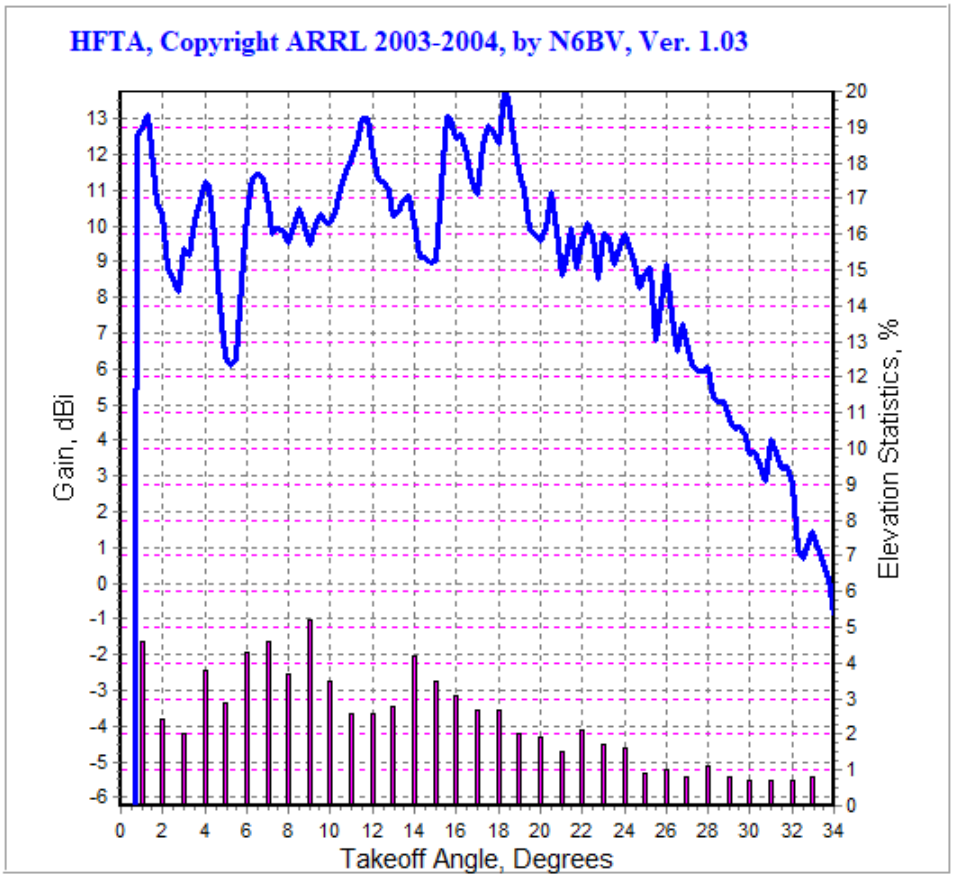


AD7L-1-50.00.PRO
50 ft

Print

Close

Output Graph, HFTA



Freq. = 14.1 MHz
Max. Gain: 13.8 dBi
AD7L-1-60.00.PRO
50 ft
2-Ele.
Fig. of Merit: 9.4

Elev. Statistic
W7-OR-US.PRN

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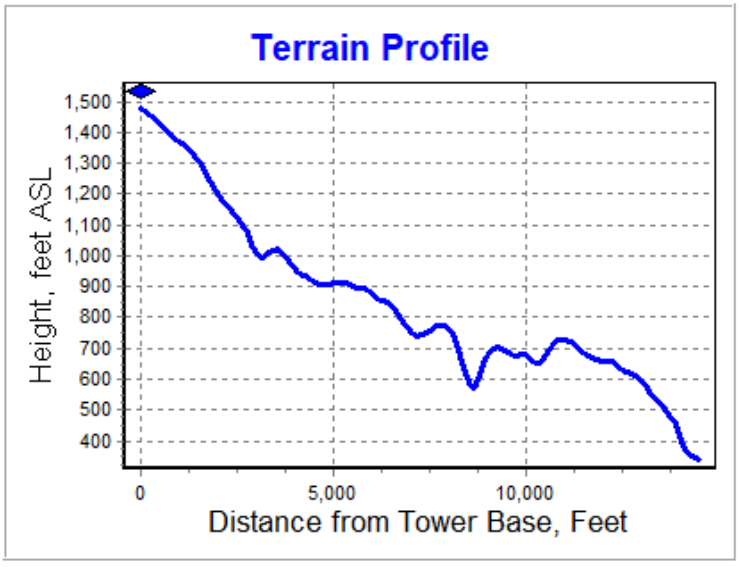
Close

Terrain Plot, HFTA

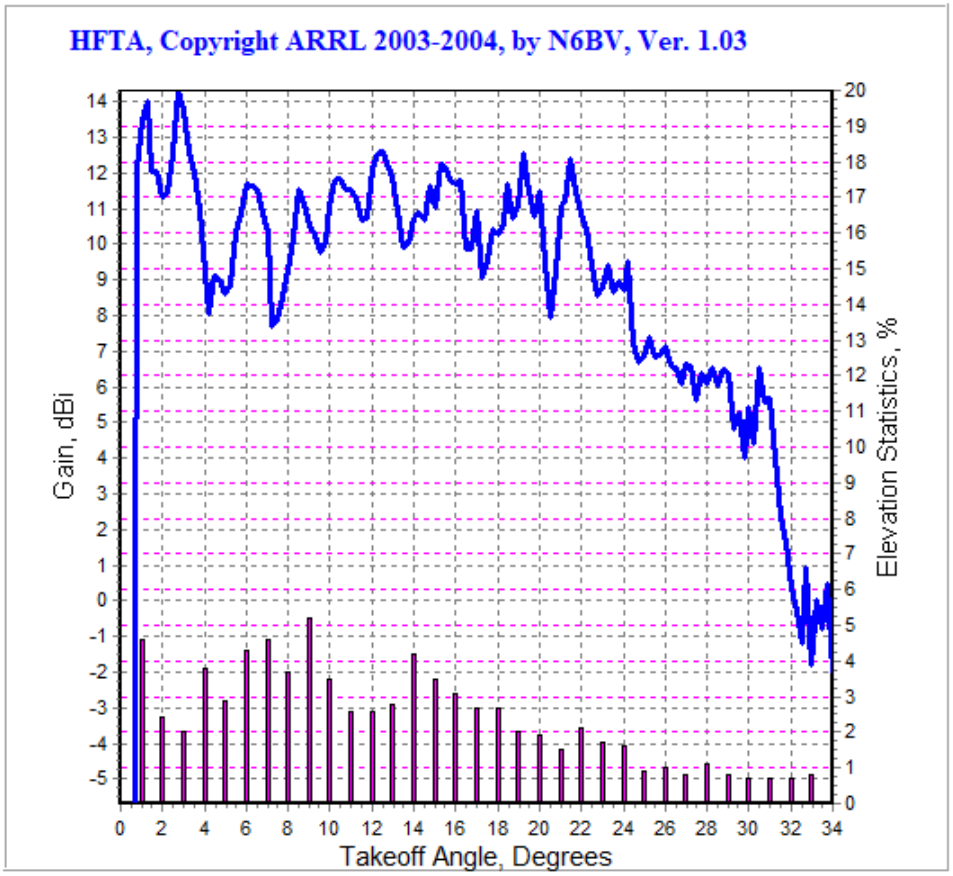


AD7L-1-60.00.PRO
50 ft

Print

Close

Output Graph, HFTA



Freq. = 14.1 MHz
Max. Gain: 14.3 dBi
AD7L-1-70.00.PRO
50 ft
2-Ele.
Fig. of Merit: 9.8

Elev. Statistic
W7-OR-US.PRN

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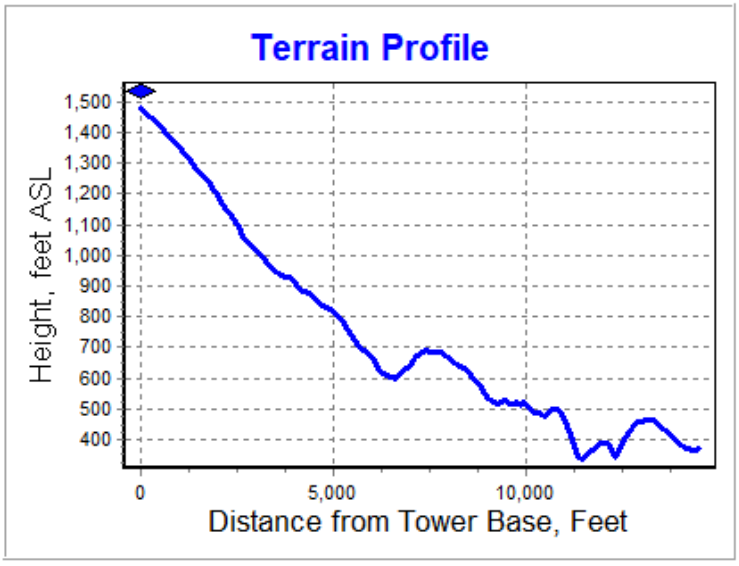
Terrain Plot, HFTA

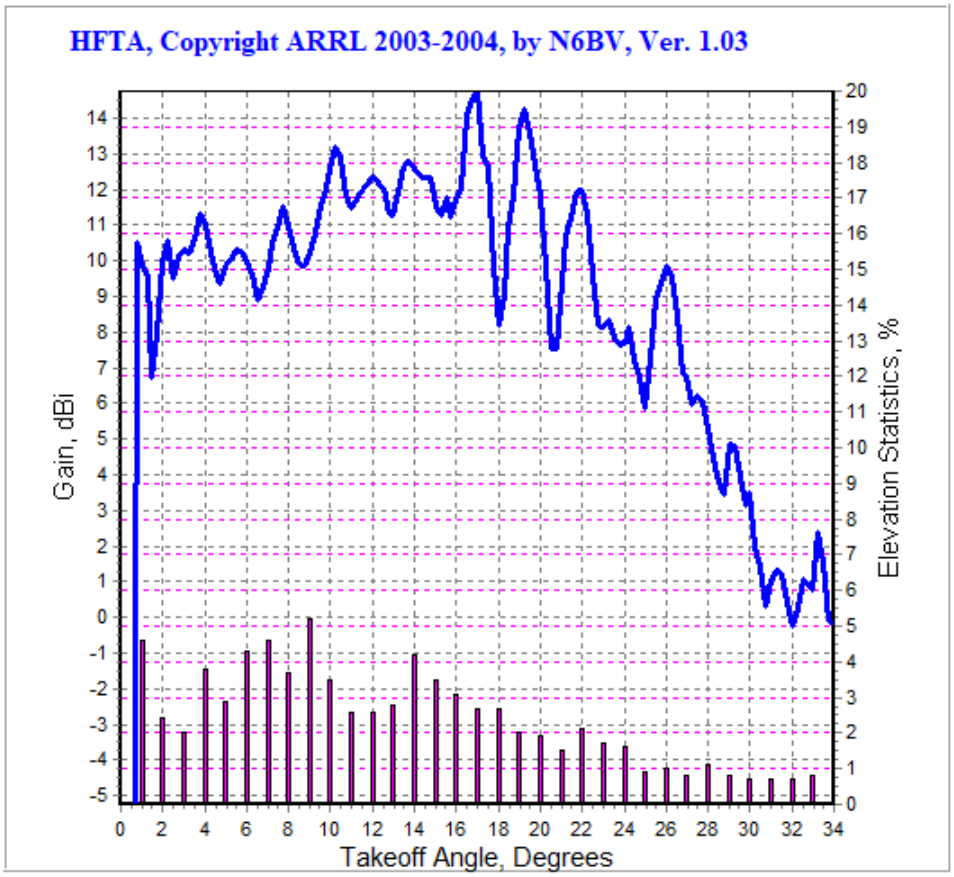


AD7L-1-70.00.PRO
50 ft

Print

Close

Output Graph, HFTA



Freq. = 14.1 MHz
Max. Gain: 14.8 dBi
AD7L-1-80.00.PRO
50 ft
2-Ele.
Fig. of Merit: 9.9

Elev. Statistic
W7-OR-US.PRN

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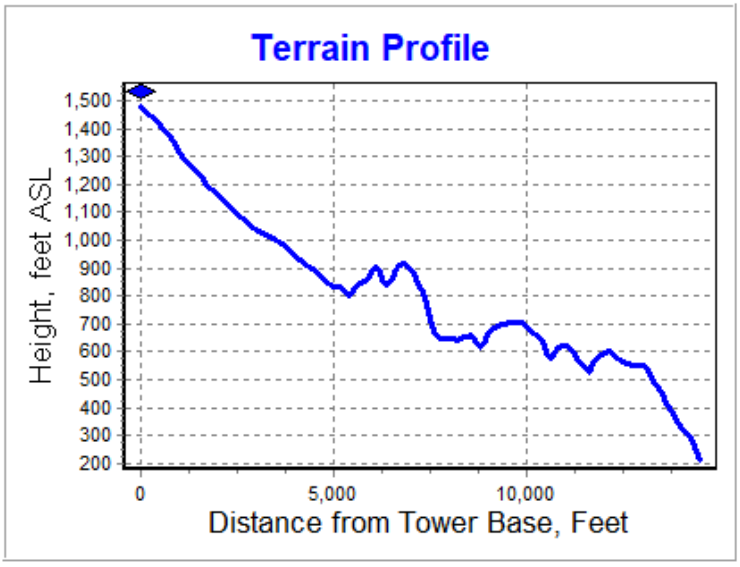
Close

Terrain Plot, HFTA

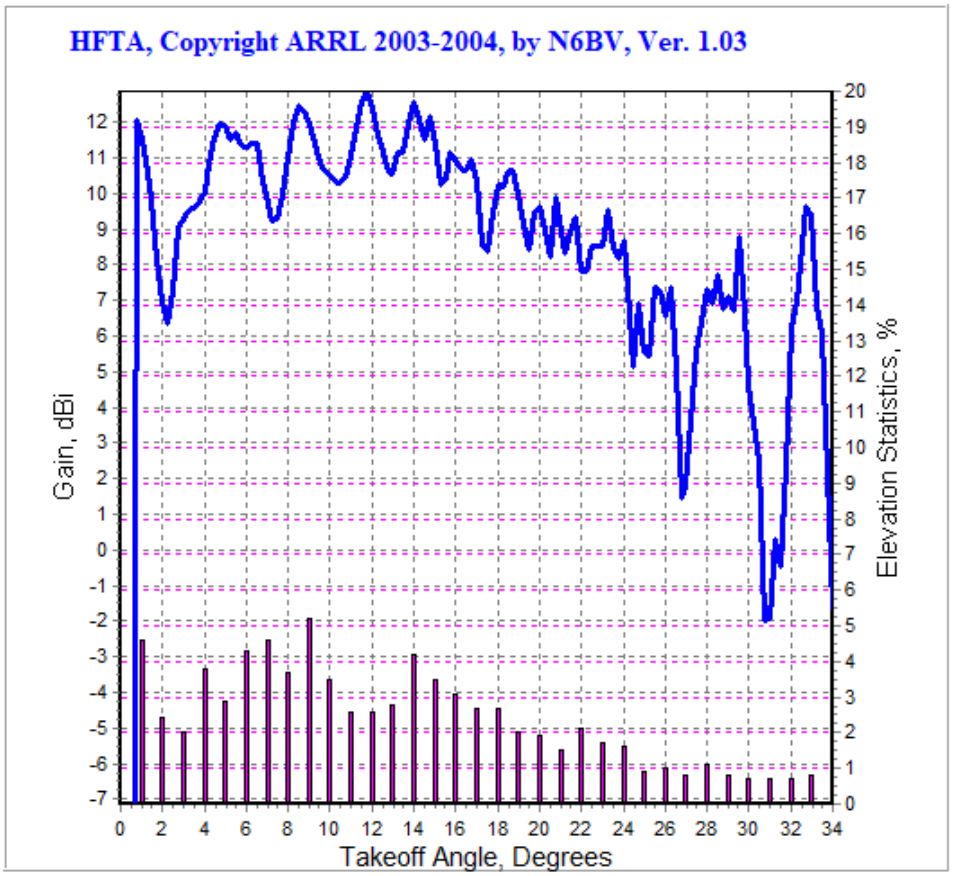


AD7L-1-80.00.PRO
50 ft

Print

Close

Output Graph, HFTA



Freq. = 14.1 MHz
Max. Gain: 12.9 dBi
AD7L-1-90.00.PRO
50 ft
2-Ele.
Fig. of Merit: 9.5

Elev. Statistic
W7-OR-US.PRN

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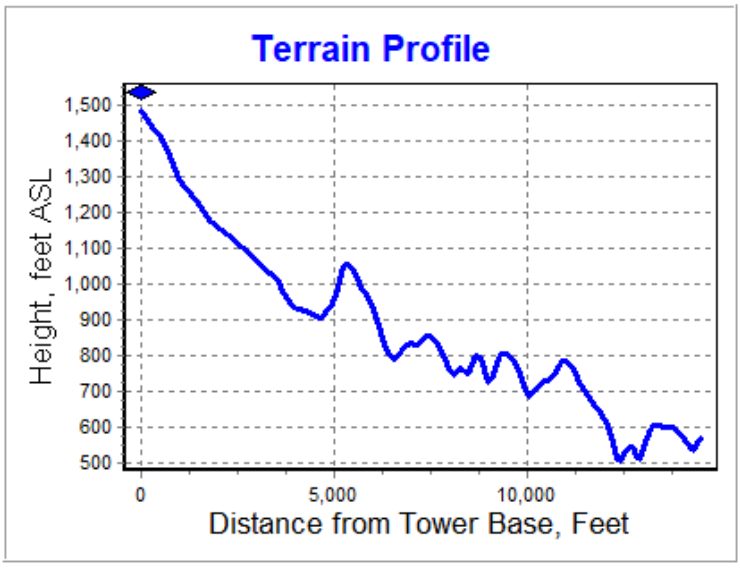
Close

Terrain Plot, HFTA

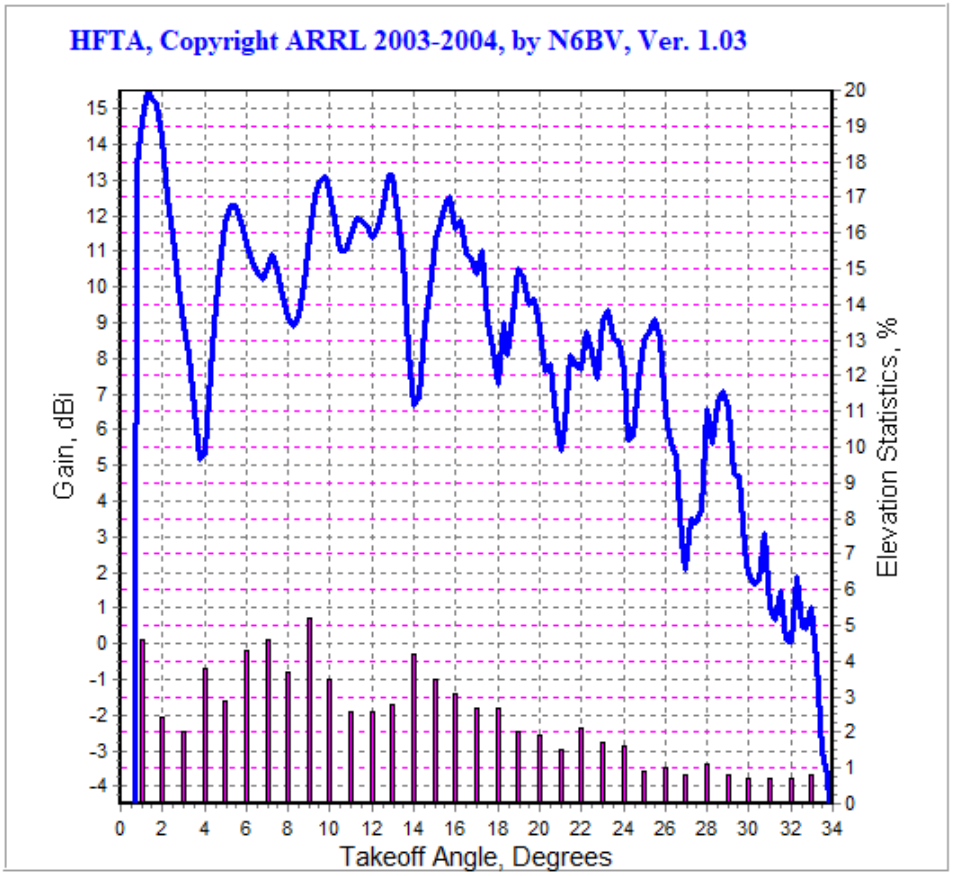


AD7L-1-90.00.PRO
50 ft

Print

Close

Output Graph, HFTA



Freq. = 14.1 MHz
Max. Gain: 15.5 dBi
AD7L-1-100.00.PRO
50 ft
2-Ele.
Fig. of Merit: 9.7

Elev. Statistic
W7-OR-US.PRN

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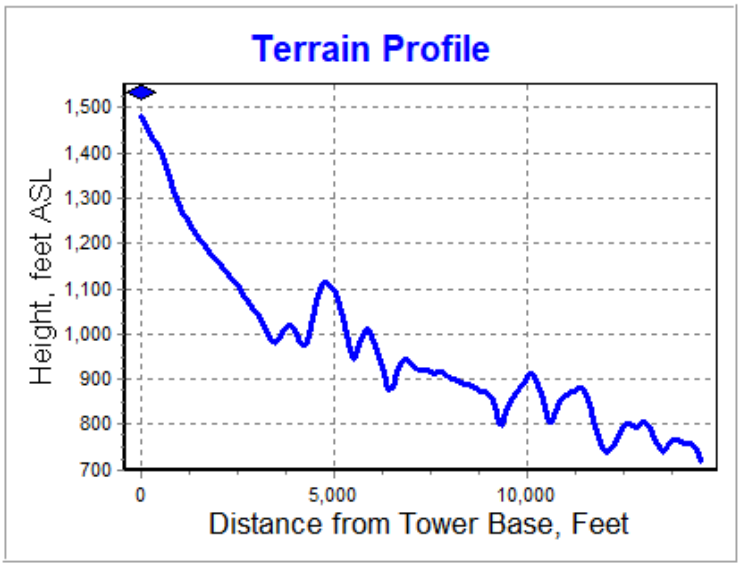
Terrain Plot, HFTA

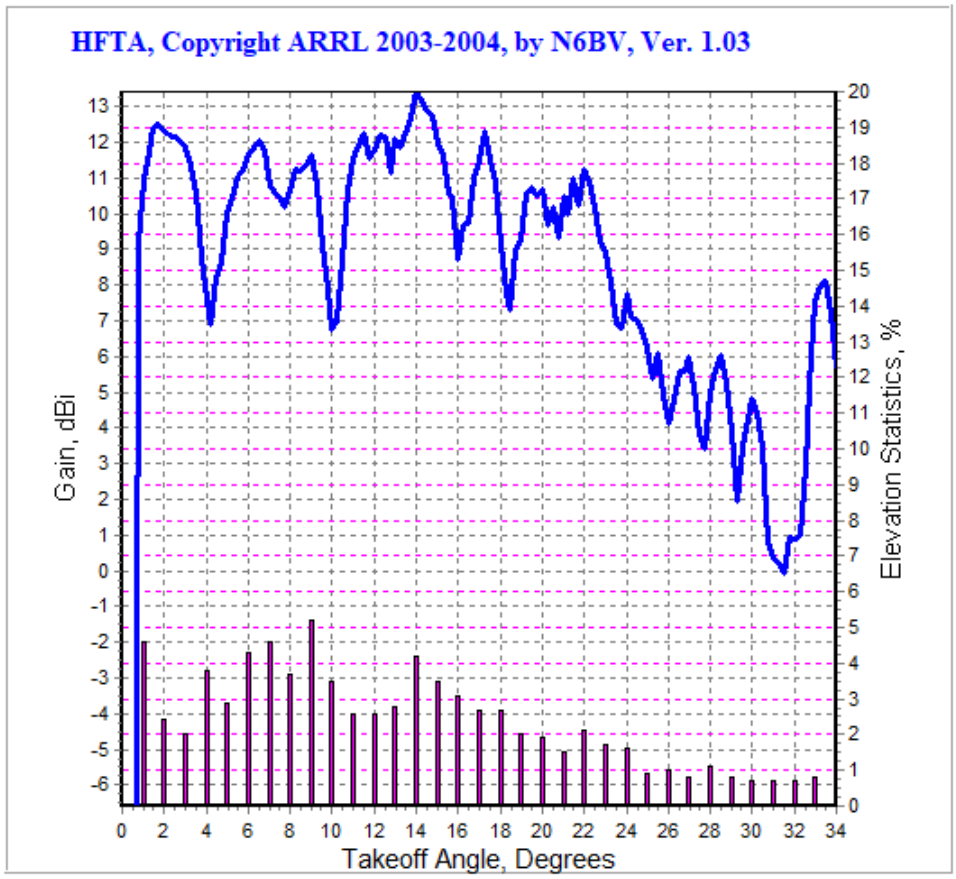


AD7L-1-100.00.PRO
50 ft

Print

Close

Output Graph, HFTA



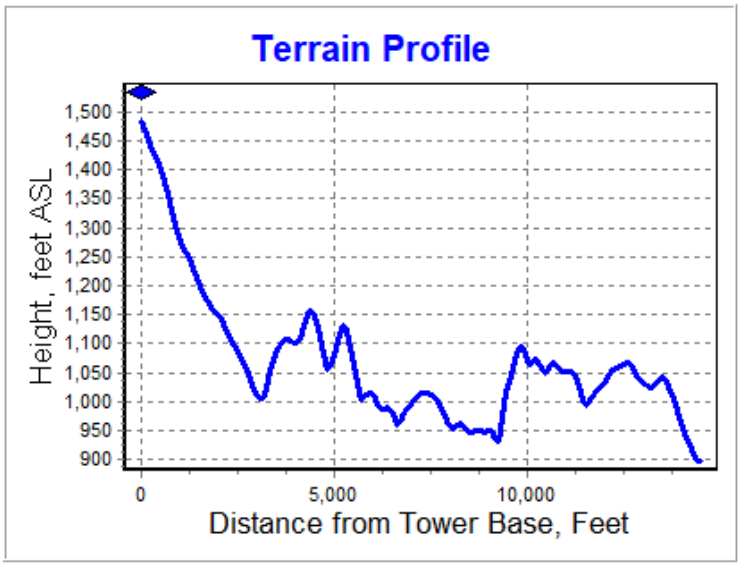
Freq. = 14.1 MHz
Max. Gain: 13.4 dBi
AD7L-1-110.00.PRO
50 ft
2-Ele.
Fig. of Merit: 9.6

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

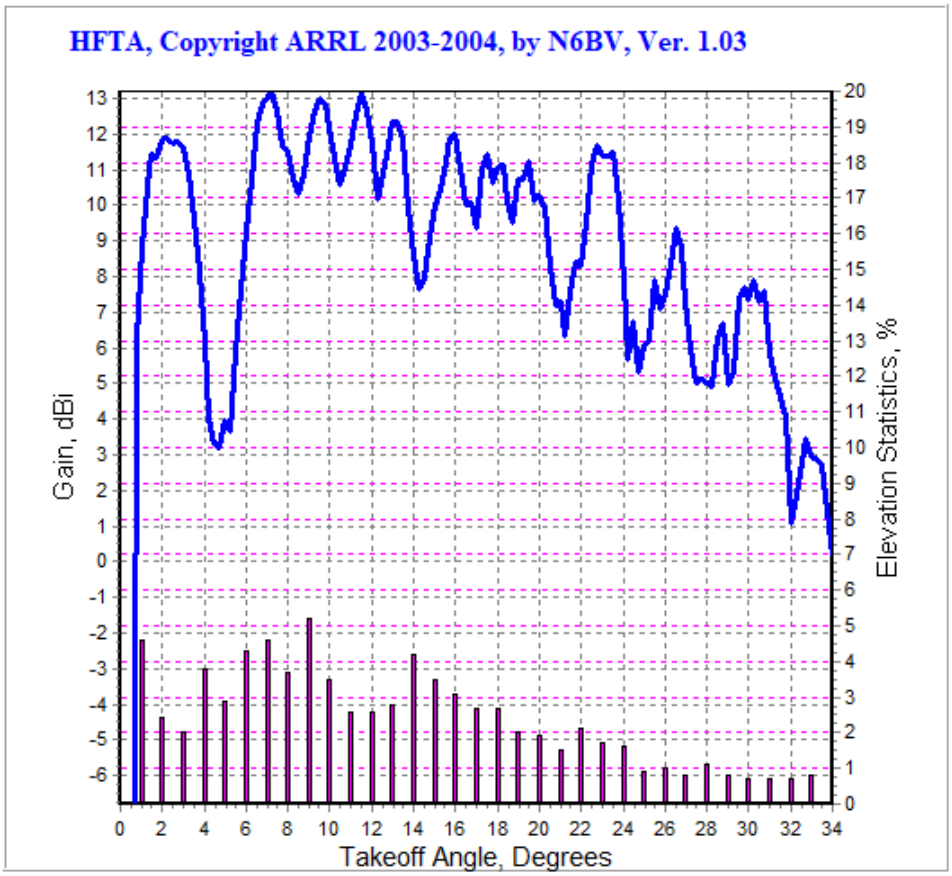


AD7L-1-110.00.PRO
50 ft

Print

Close

Output Graph, HFTA



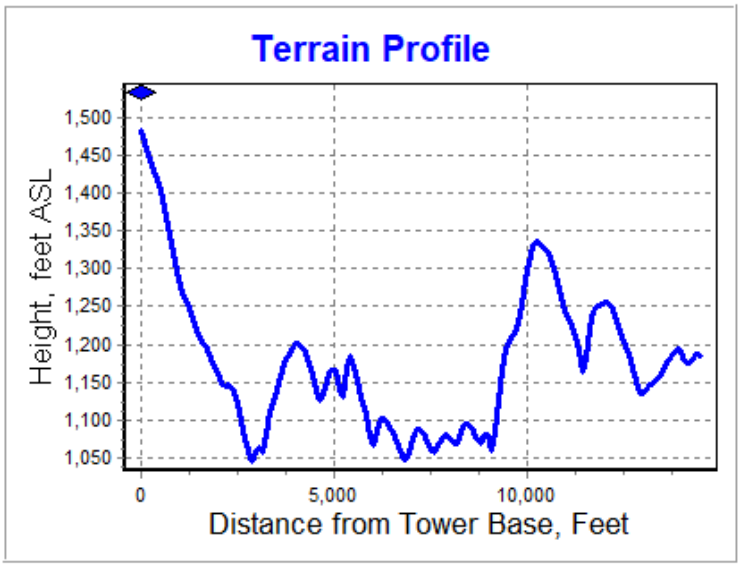
Freq. = 14.1 MHz
Max. Gain: 13.2 dBi
AD7L-1-120.00.PRO
50 ft
2-Ele.
Fig. of Merit: 9.4

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

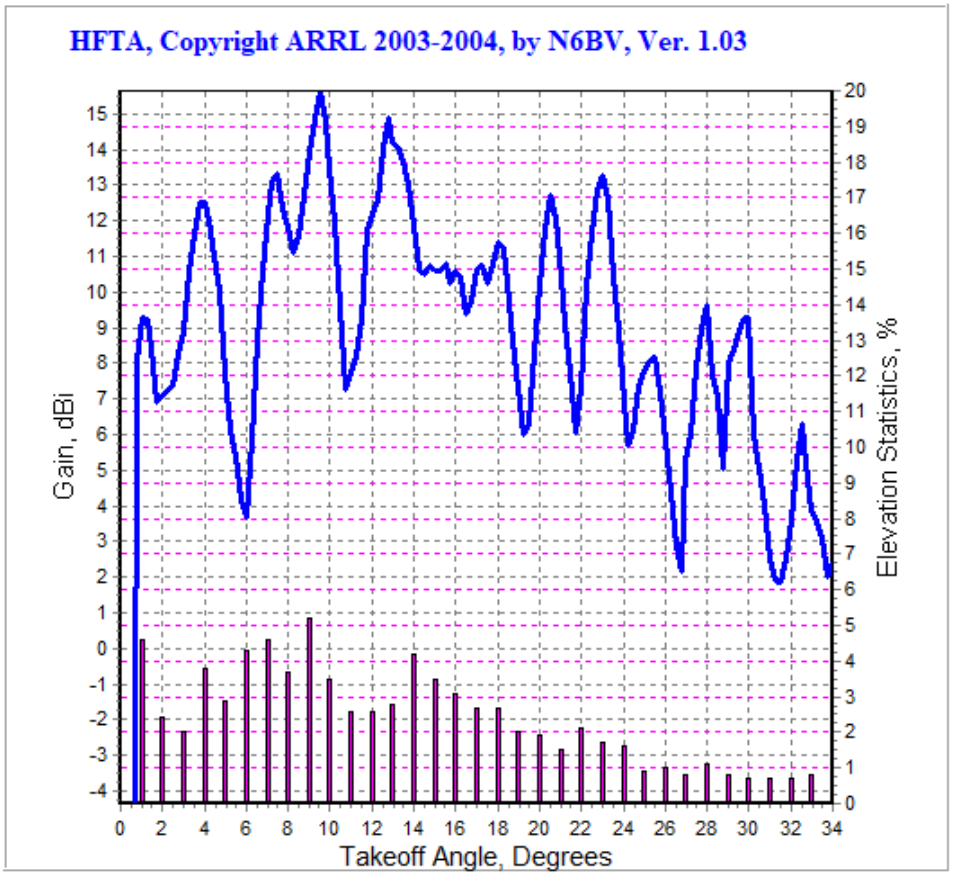


AD7L-1-120.00.PRO
50 ft

Print

Close

Output Graph, HFTA



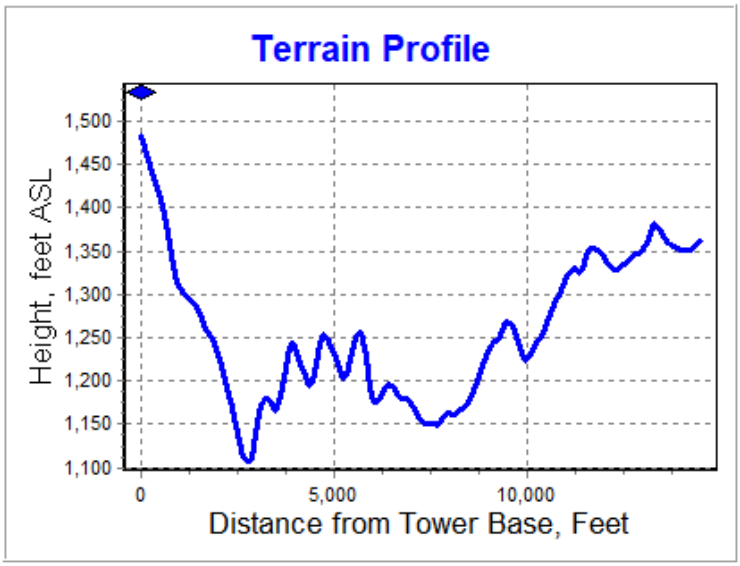
Freq. = 14.1 MHz
Max. Gain: 15.6 dBi
AD7L-1-130.00.PRO
50 ft
2-Ele.
Fig. of Merit: 9.9

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

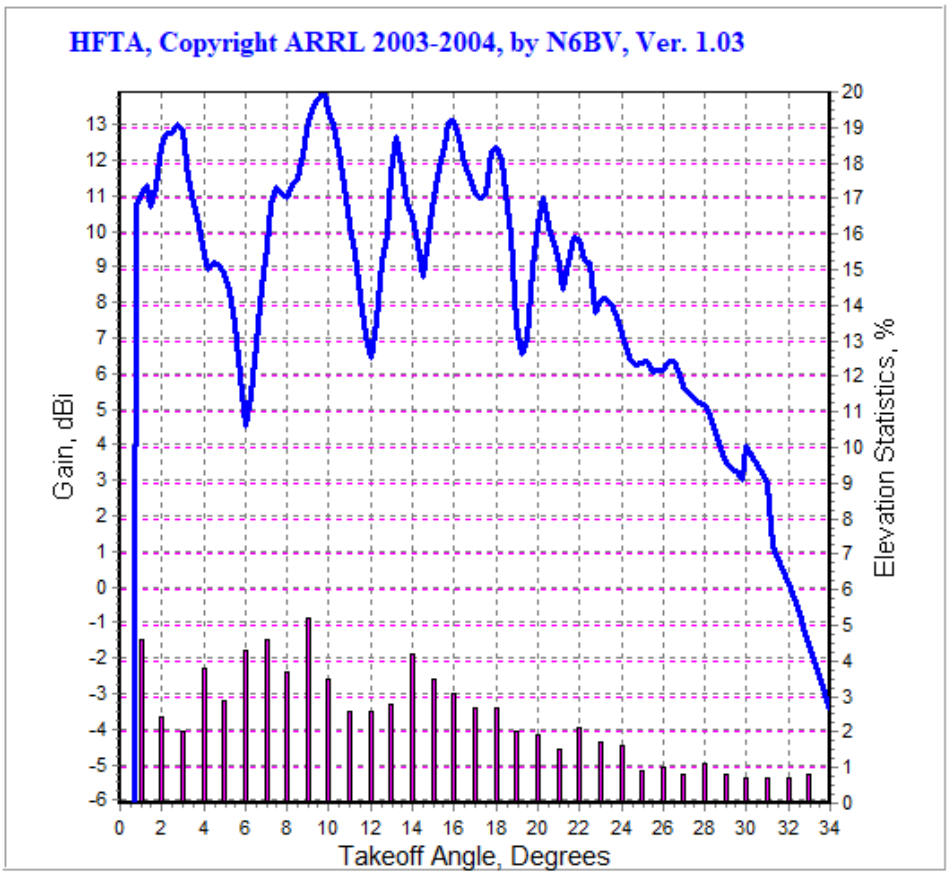


AD7L-1-130.00.PRC
50 ft

Print

Close

Output Graph, HFTA



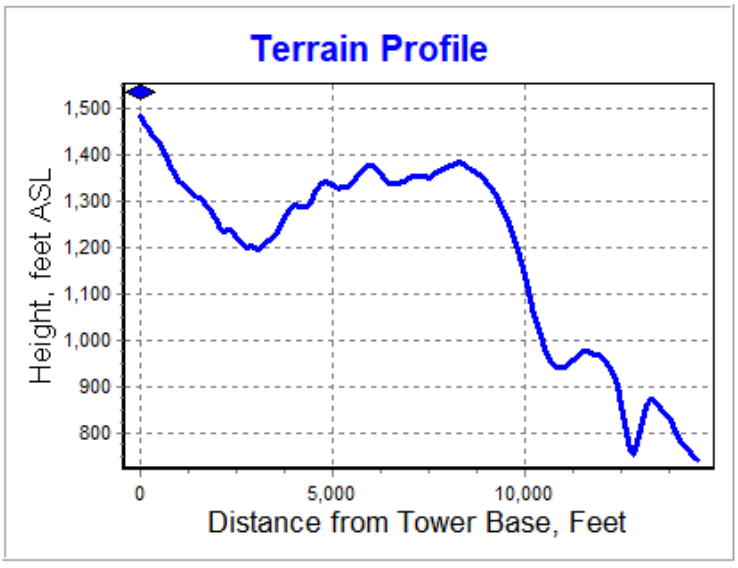
Freq. = 14.1 MHz
Max. Gain: 13.9 dBi
AD7L-1-140.00.PRO
50 ft
2-Ele.
Fig. of Merit: 9.5

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

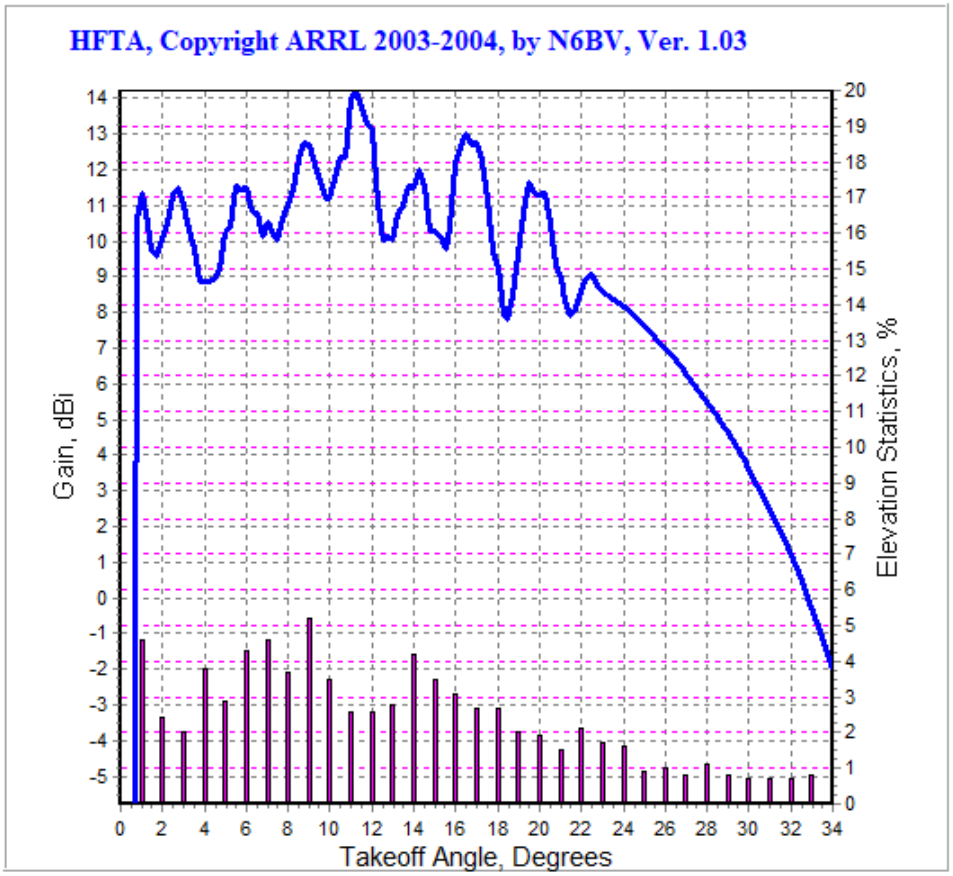


AD7L-1-140.00.PRC
50 ft

Print

Close

Output Graph, HFTA



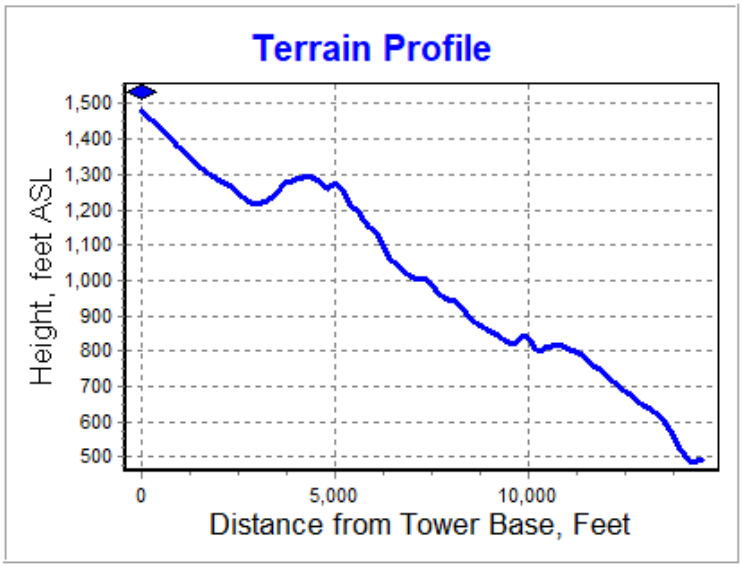
Freq. = 14.1 MHz
Max. Gain: 14.2 dBi
AD7L-1-150.00.PRO
50 ft
2-Ele.
Fig. of Merit: 9.8

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

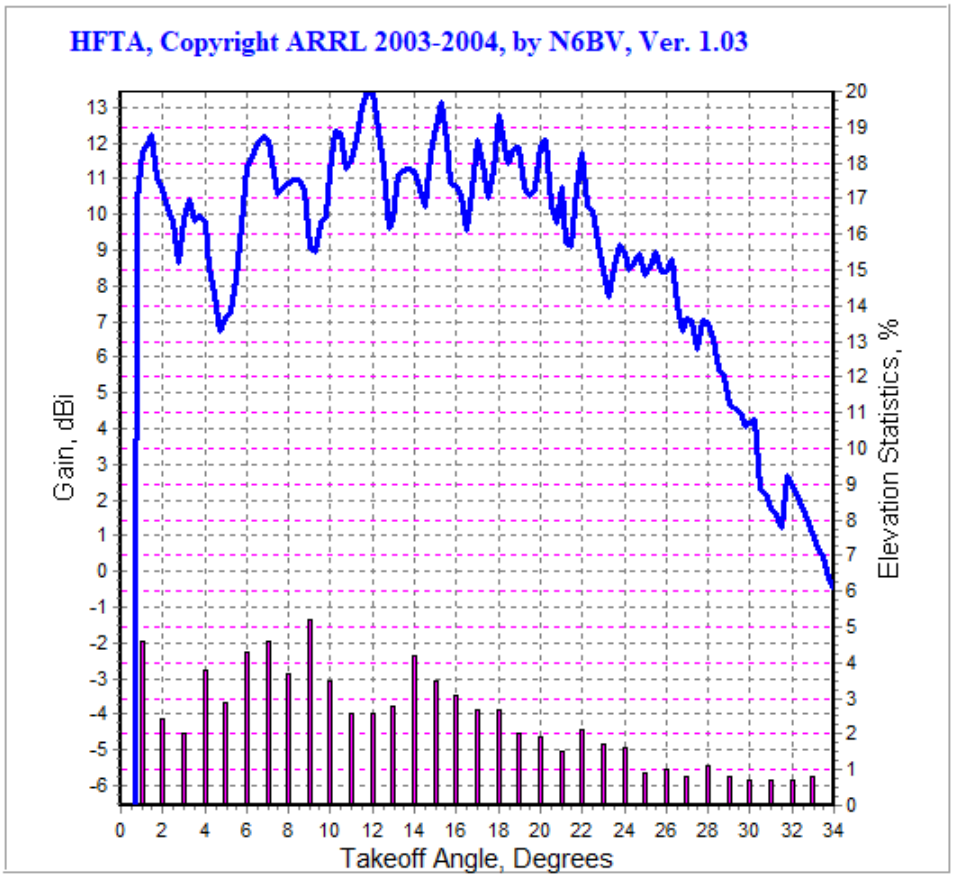


AD7L-1-150.00.PRC
50 ft

Print

Close

Output Graph, HFTA



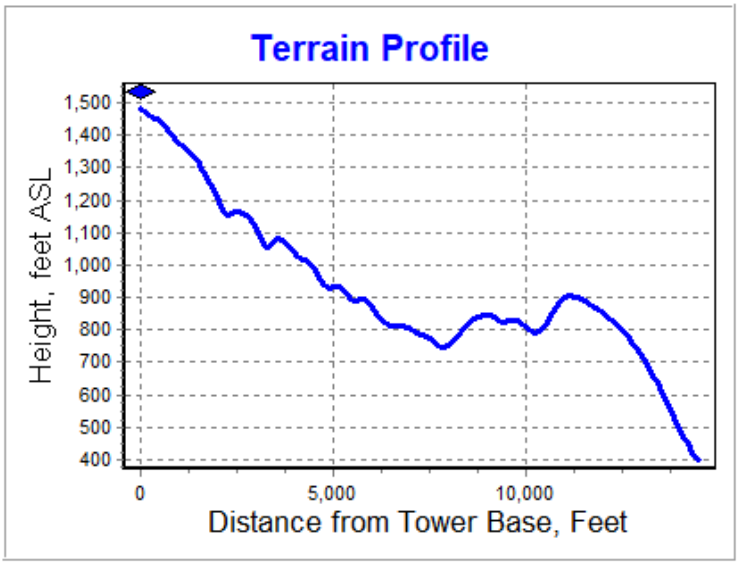
Freq. = 14.1 MHz
Max. Gain: 13.4 dBi
AD7L-1-160.00.PRO
50 ft
2-Ele.
Fig. of Merit: 9.9

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

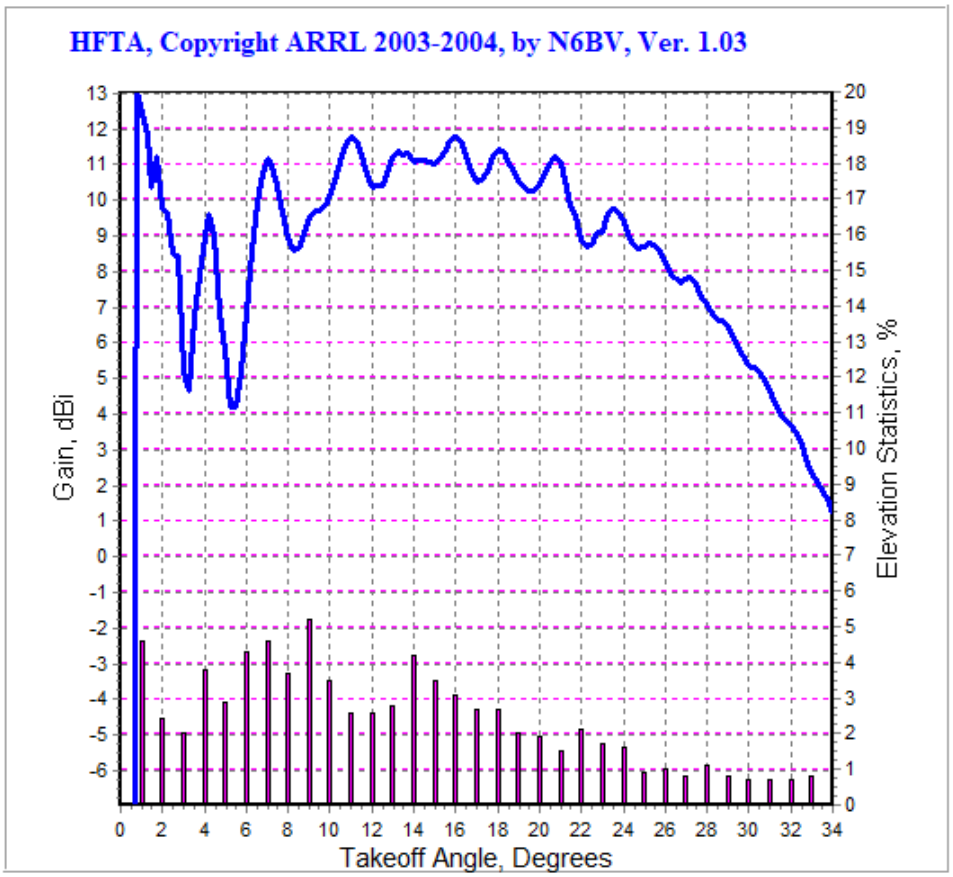


AD7L-1-160.00.PRO
50 ft

Print

Close

Output Graph, HFTA



Freq. = 14.1 MHz
Max. Gain: 13.0 dBi
AD7L-1-170.00.PRO
50 ft
2-Ele.
Fig. of Merit: 9.1

Elev. Statistic
W7-OR-US.PRN

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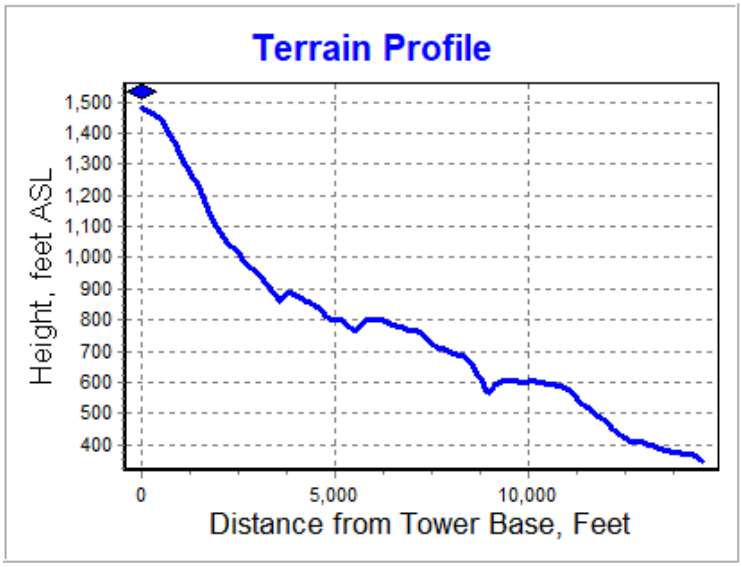
Close

Terrain Plot, HFTA

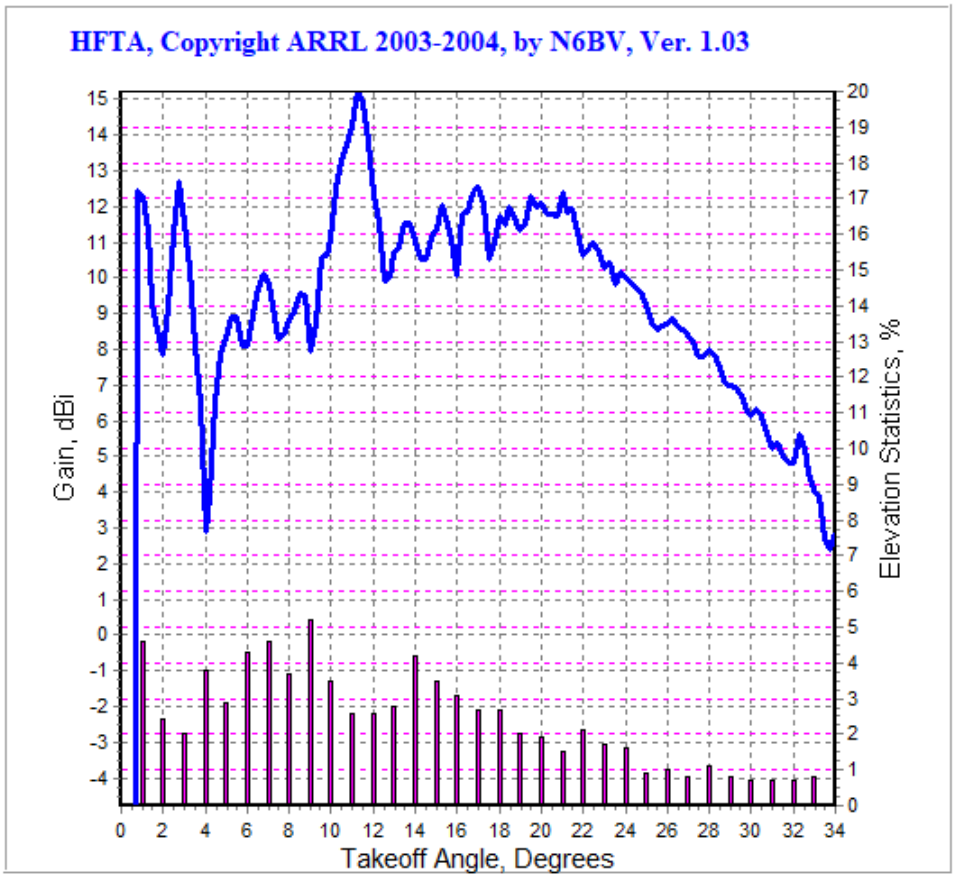


AD7L-1-170.00.PRO
50 ft

Print

Close

Output Graph, HFTA



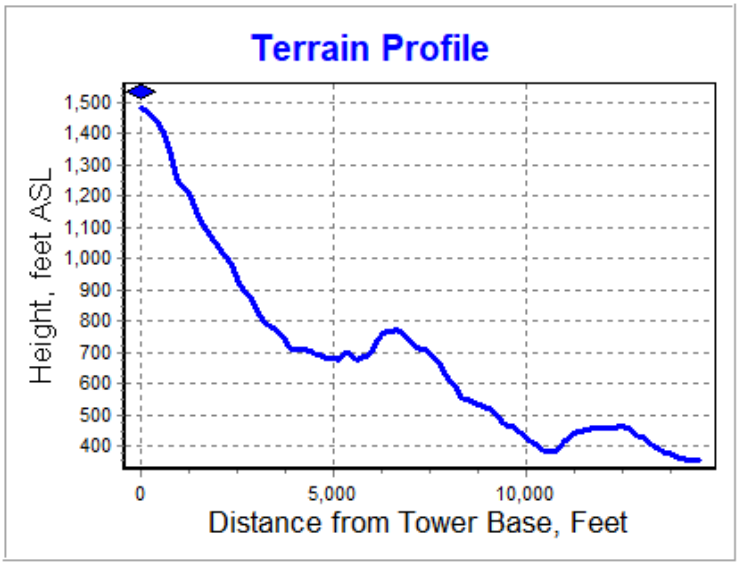
Freq. = 14.1 MHz
Max. Gain: 15.2 dBi
AD7L-1-180.00.PRO
50 ft
2-Ele.
Fig. of Merit: 9.4

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

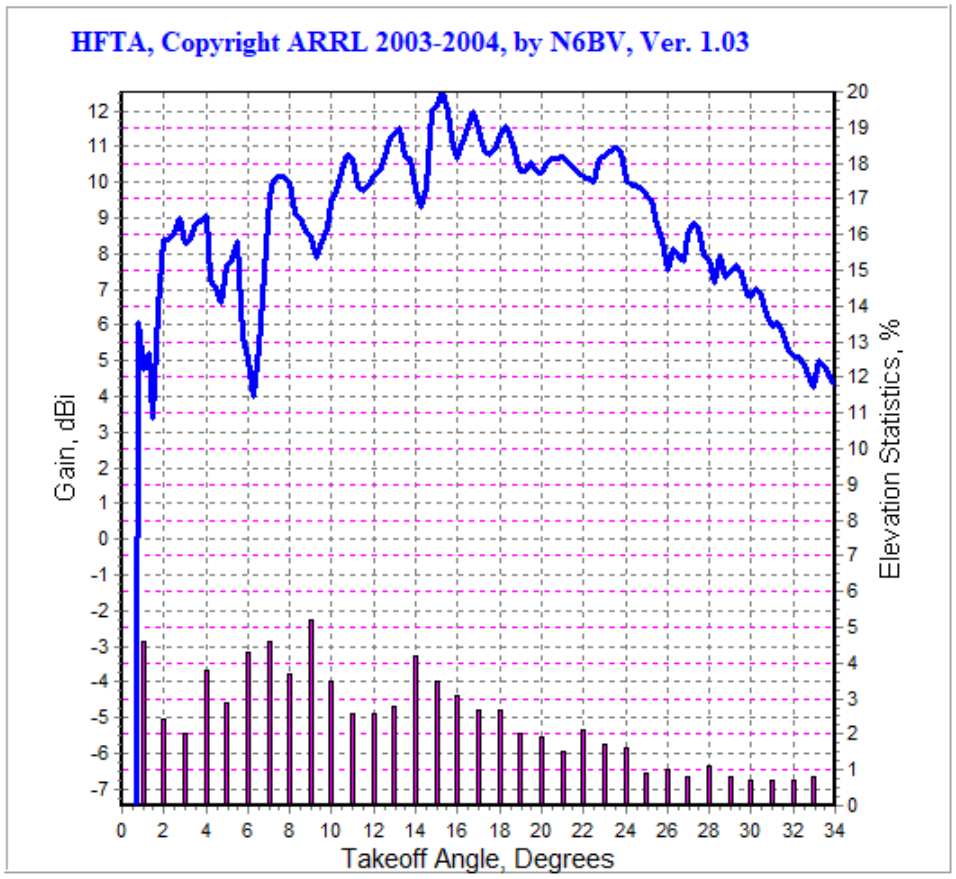


AD7L-1-180.00.PRC
50 ft

Print

Close

Output Graph, HFTA



Freq. = 14.1 MHz
Max. Gain: 12.5 dBi
AD7L-1-190.00.PRO
50 ft
2-Ele.
Fig. of Merit: 8.6

Elev. Statistic
W7-OR-US.PRN

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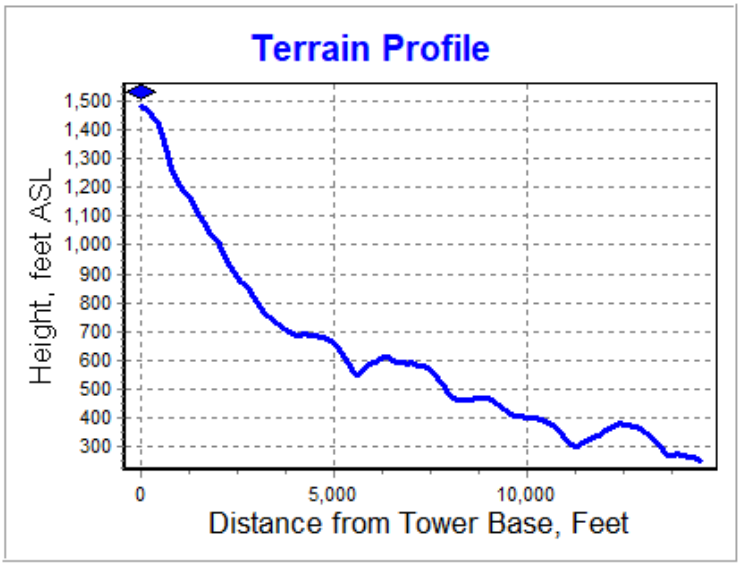
Close

Terrain Plot, HFTA

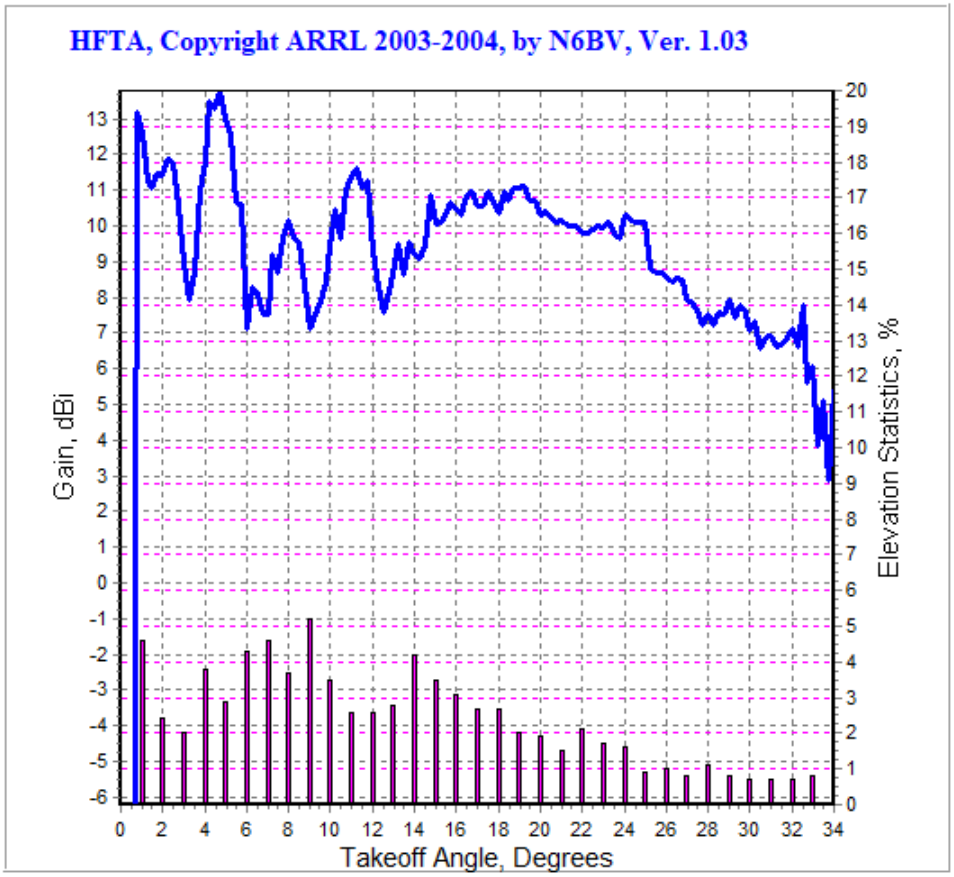


AD7L-1-190.00.PRO
50 ft

Print

Close

Output Graph, HFTA



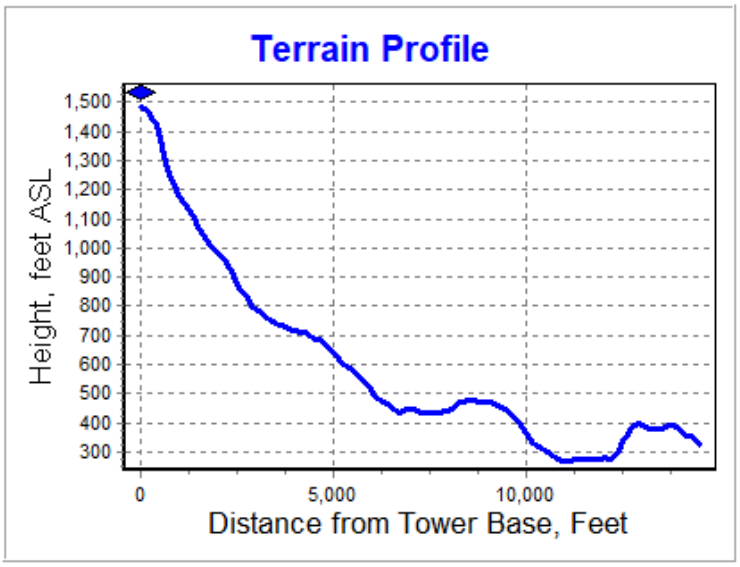
Freq. = 14.1 MHz
Max. Gain: 13.8 dBi
AD7L-1-200.00.PRO
50 ft
2-Ele.
Fig. of Merit: 9

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

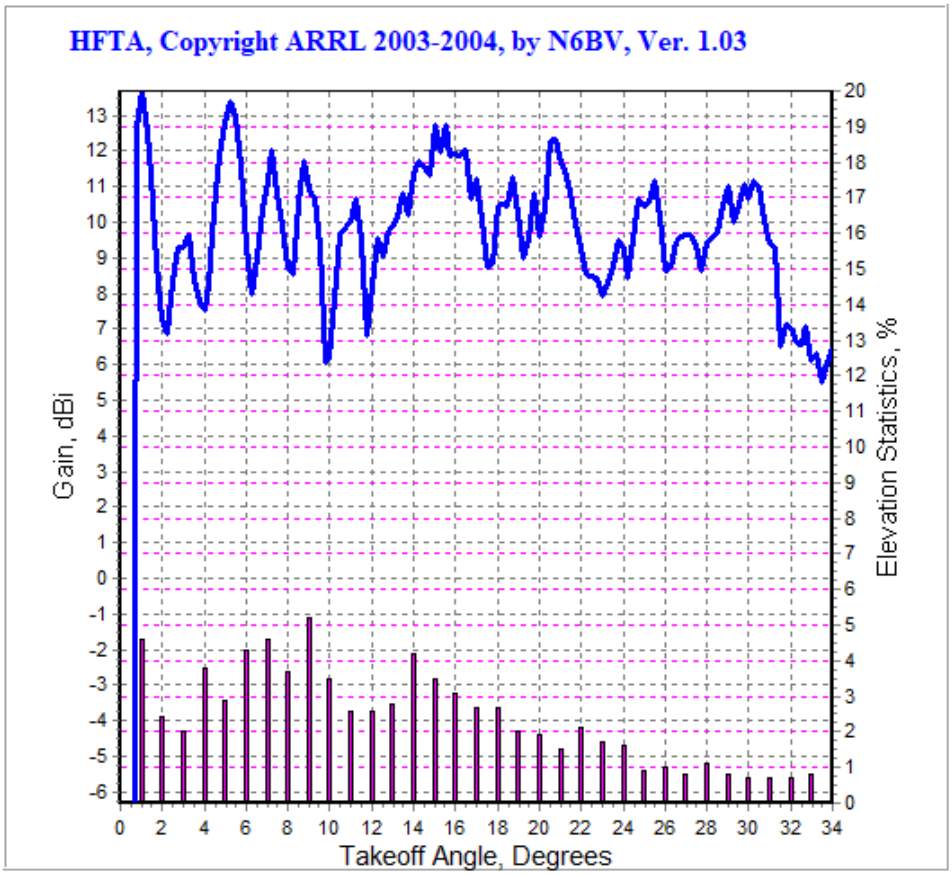


AD7L-1-200.00.PRC
50 ft

Print

Close

Output Graph, HFTA



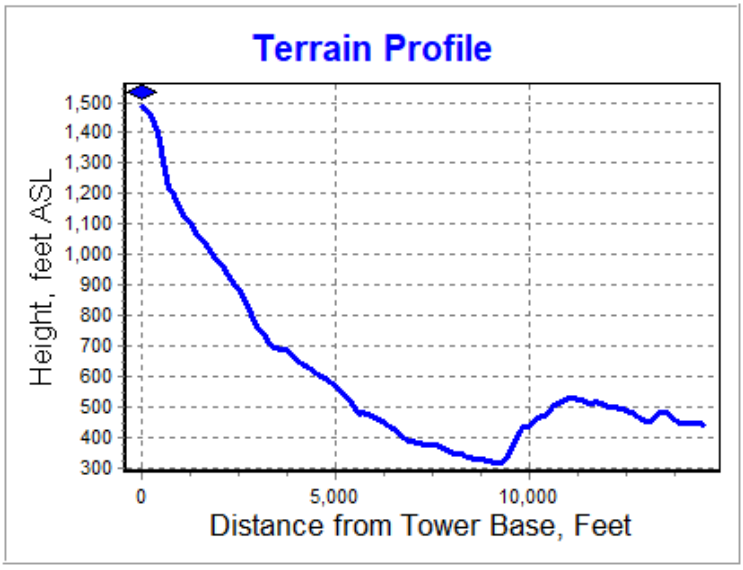
Freq. = 14.1 MHz
Max. Gain: 13.7 dBi
AD7L-1-210.00.PRO
50 ft
2-Ele.
Fig. of Merit: 9.5

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

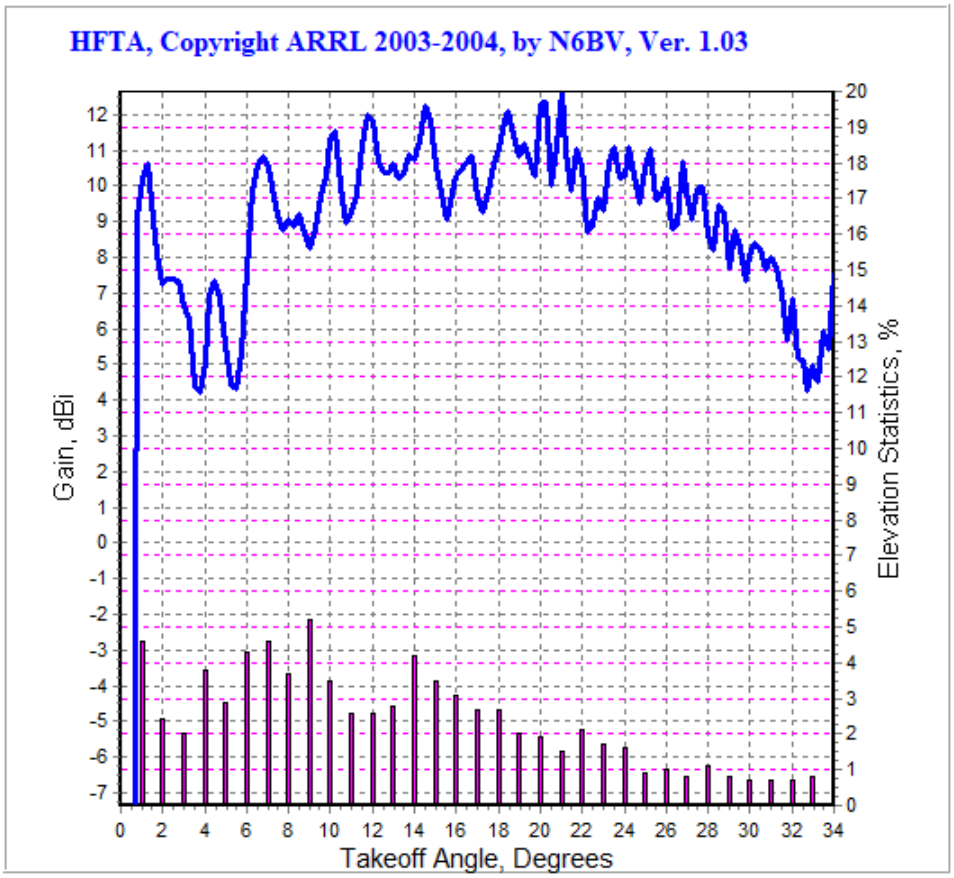


AD7L-1-210.00.PRO
50 ft

Print

Close

Output Graph, HFTA



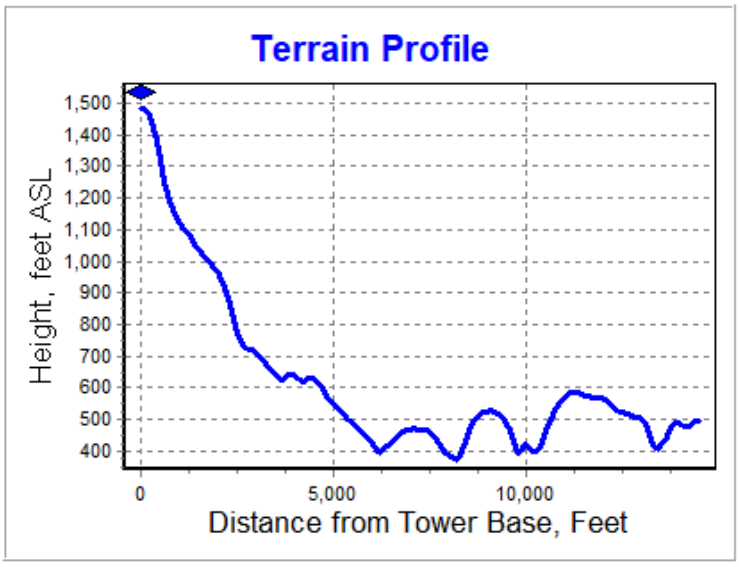
Freq. = 14.1 MHz
Max. Gain: 12.6 dBi
AD7L-1-220.00.PRO
50 ft
2-Ele.
Fig. of Merit: 8.8

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

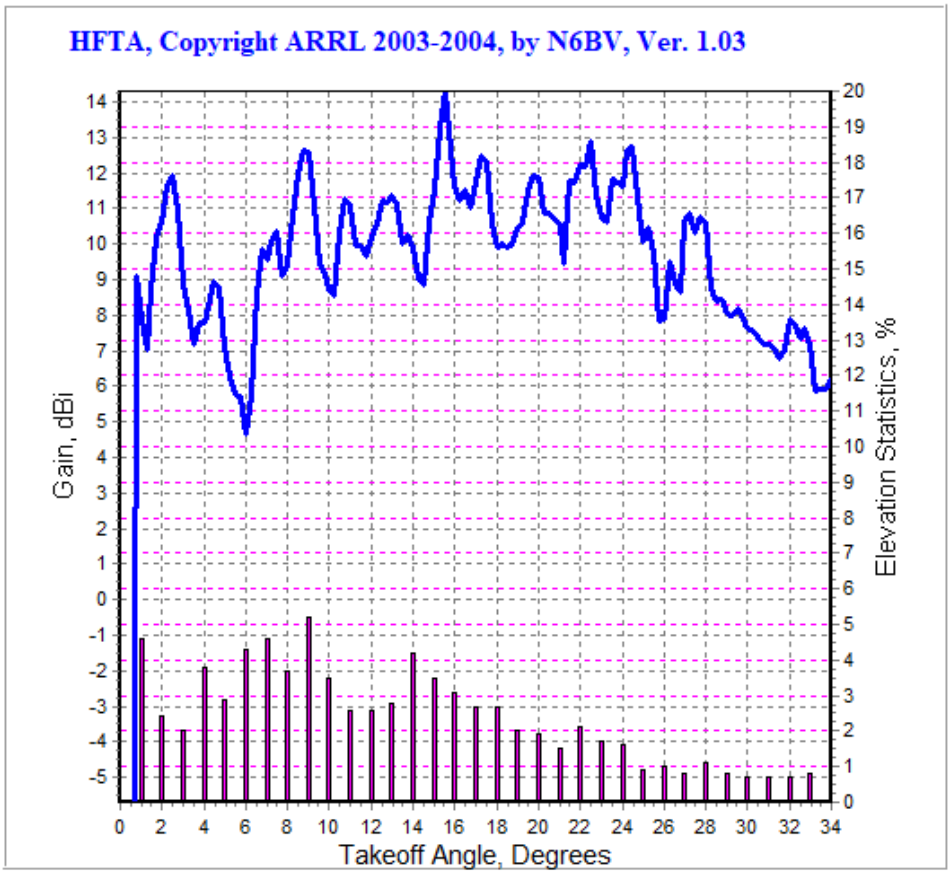


AD7L-1-220.00.PRC
50 ft

Print

Close

Output Graph, HFTA



Freq. = 14.1 MHz
Max. Gain: 14.3 dBi
AD7L-1-230.00.PRO
50 ft
2-Ele.
Fig. of Merit: 9.2

Elev. Statistic
W7-OR-US.PRN

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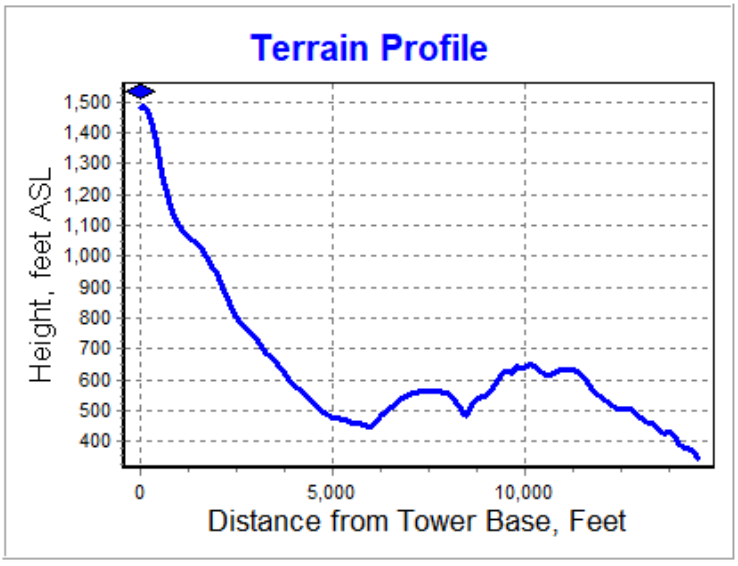
Close

Terrain Plot, HFTA

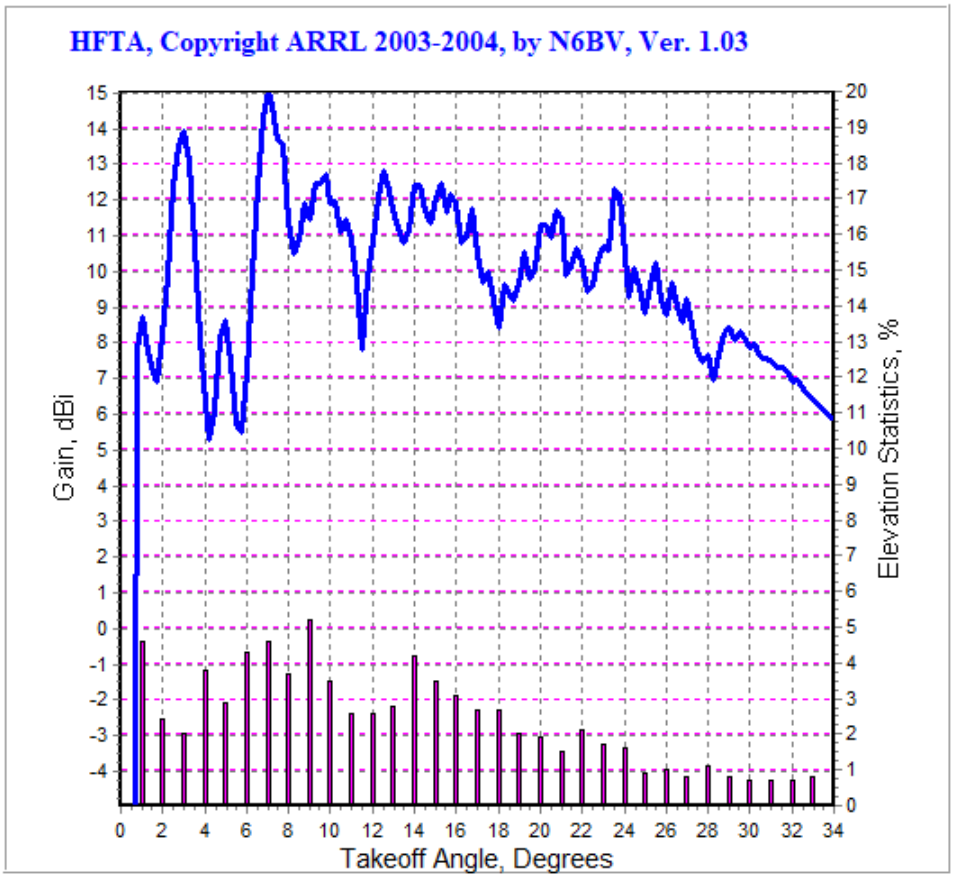


AD7L-1-230.00.PRC
50 ft

Print

Close

Output Graph, HFTA



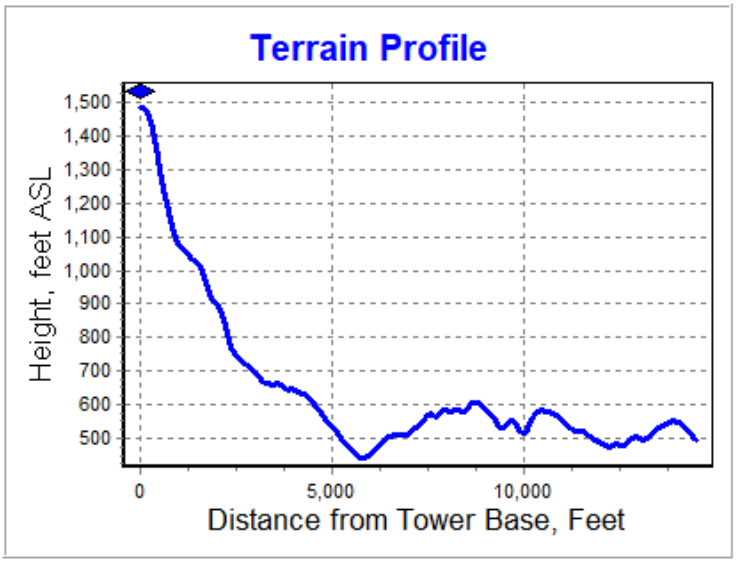
Freq. = 14.1 MHz
Max. Gain: 15.0 dBi
AD7L-1-240.00.PRO
50 ft
2-Ele.
Fig. of Merit: 10

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

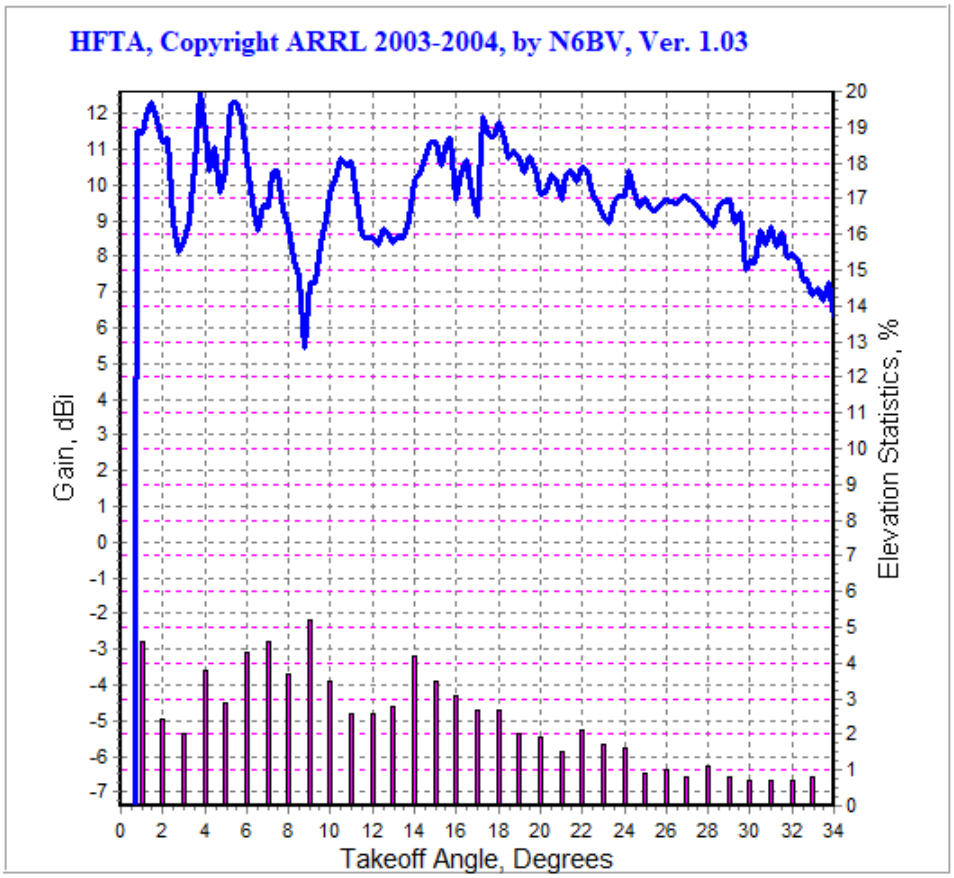


AD7L-1-240.00.PRC
50 ft

Print

Close

Output Graph, HFTA



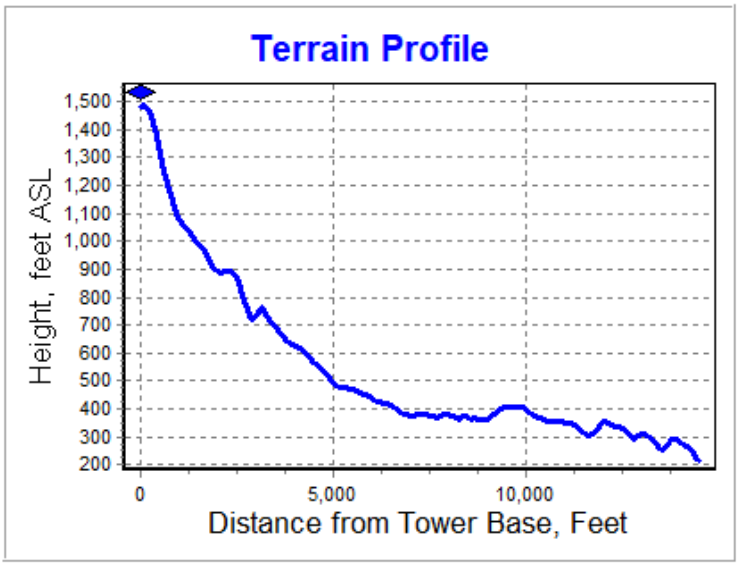
Freq. = 14.1 MHz
Max. Gain: 12.6 dBi
AD7L-1-250.00.PRO
50 ft
2-Ele.
Fig. of Merit: 9

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

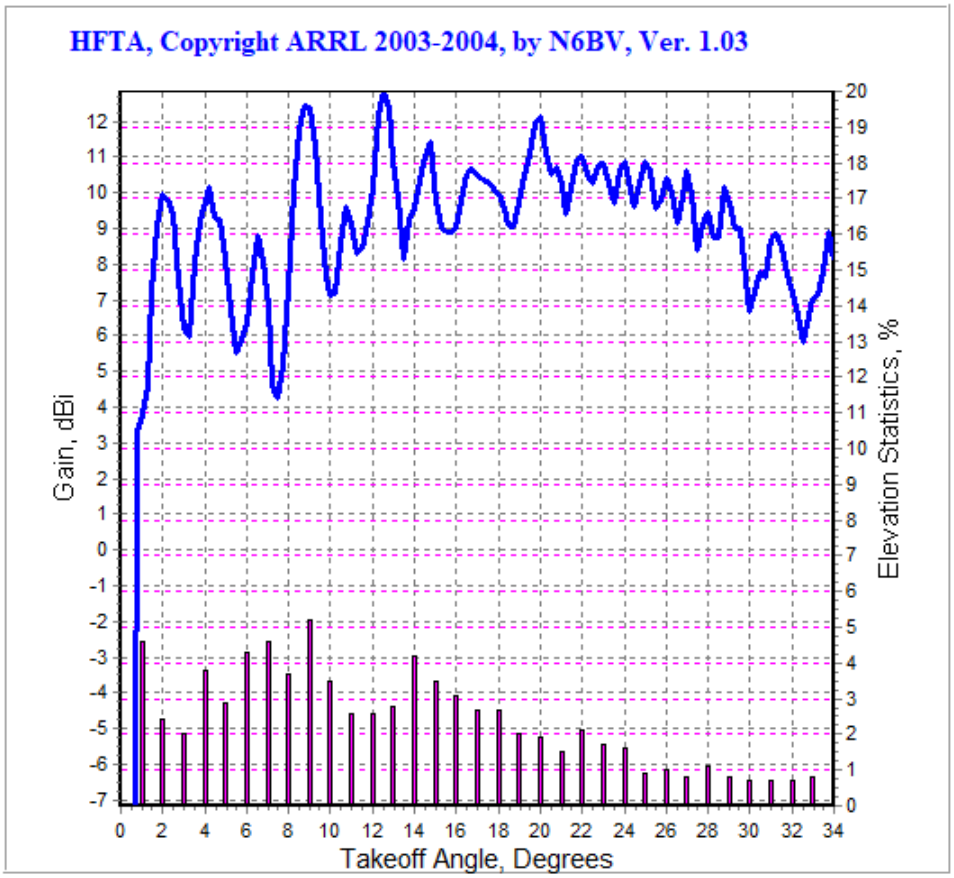


AD7L-1-250.00.PRO
50 ft

Print

Close

Output Graph, HFTA



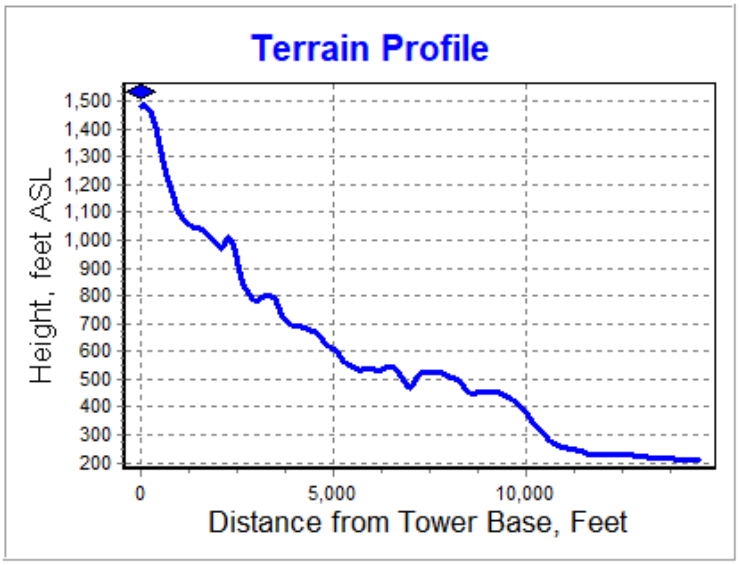
Freq. = 14.1 MHz
Max. Gain: 12.8 dBi
AD7L-1-260.00.PRO
50 ft
2-Ele.
Fig. of Merit: 8.5

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

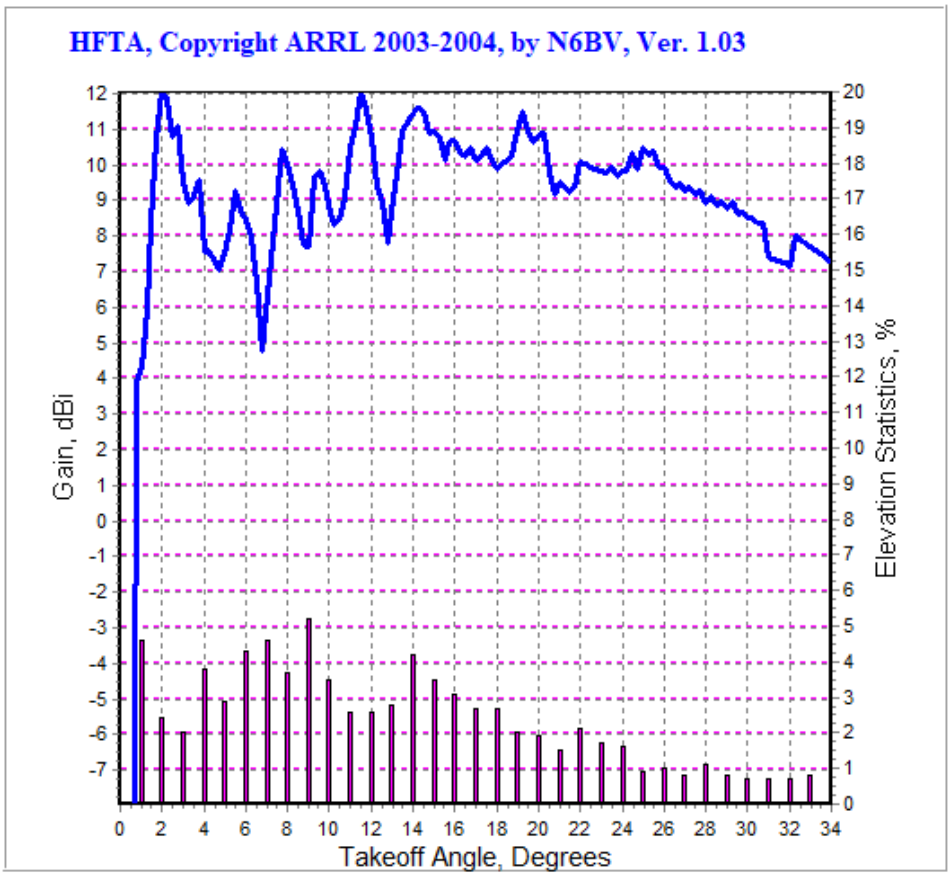


AD7L-1-260.00.PRO
50 ft

Print

Close

Output Graph, HFTA



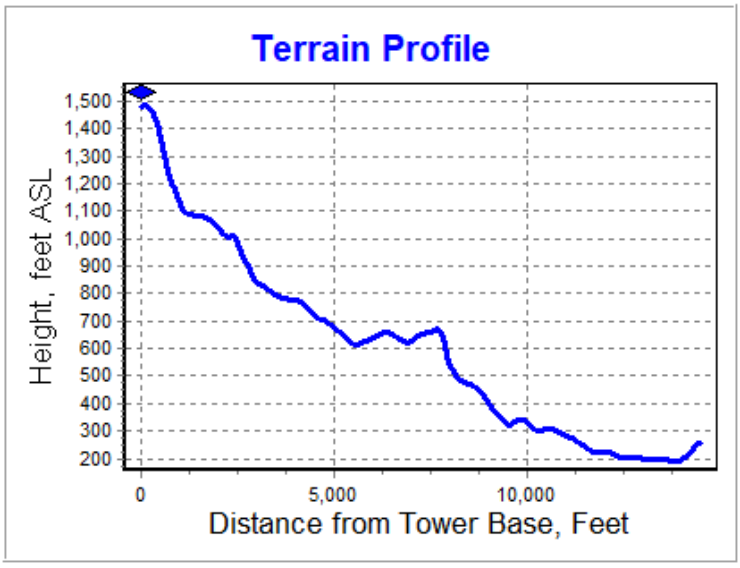
Freq. = 14.1 MHz
Max. Gain: 12.1 dBi
AD7L-1-270.00.PRO
50 ft
2-Ele.
Fig. of Merit: 8.5

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

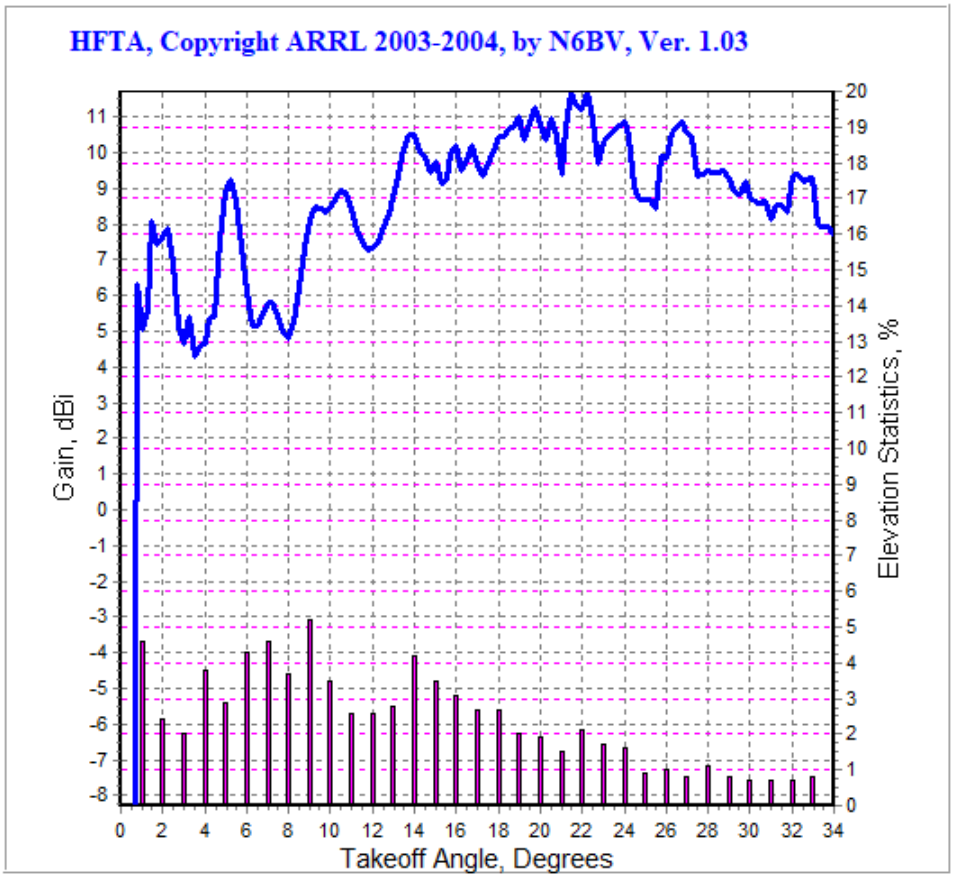


AD7L-1-270.00.PRO
50 ft

Print

Close

Output Graph, HFTA



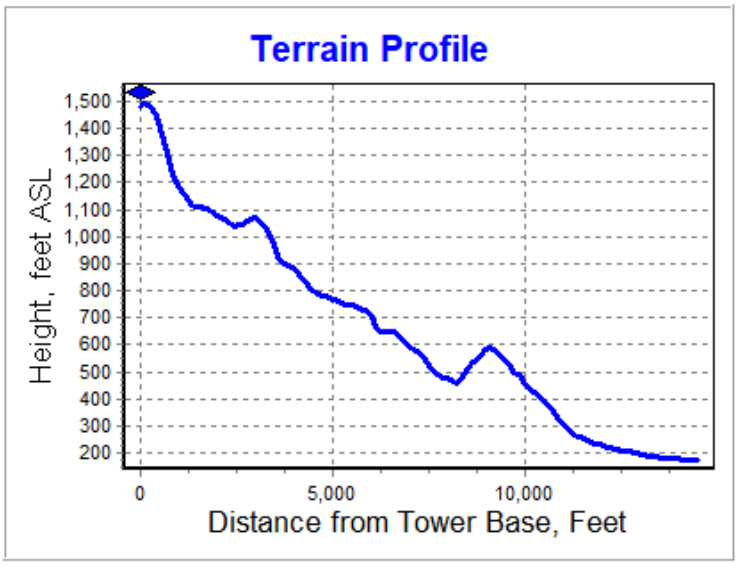
Freq. = 14.1 MHz
Max. Gain: 11.7 dBi
AD7L-1-280.00.PRO
50 ft
2-Ele.
Fig. of Merit: 7.7

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

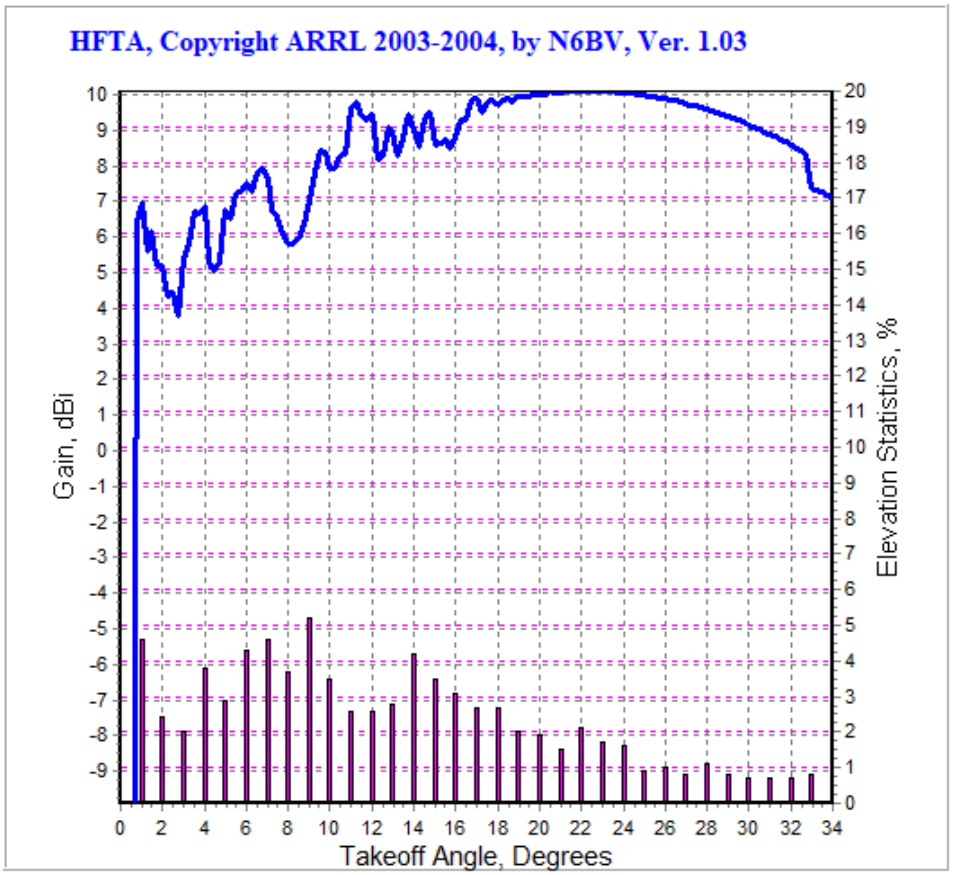


AD7L-1-280.00.PRC
50 ft

Print

Close

Output Graph, HFTA



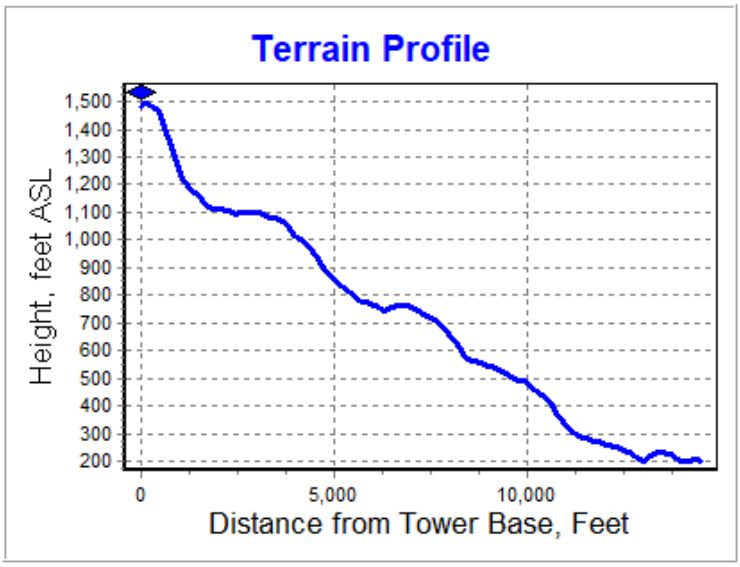
Freq. = 14.1 MHz
Max. Gain: 10.1 dBi
AD7L-1-290.00.PRO
50 ft
2-Ele.
Fig. of Merit: 7.5

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

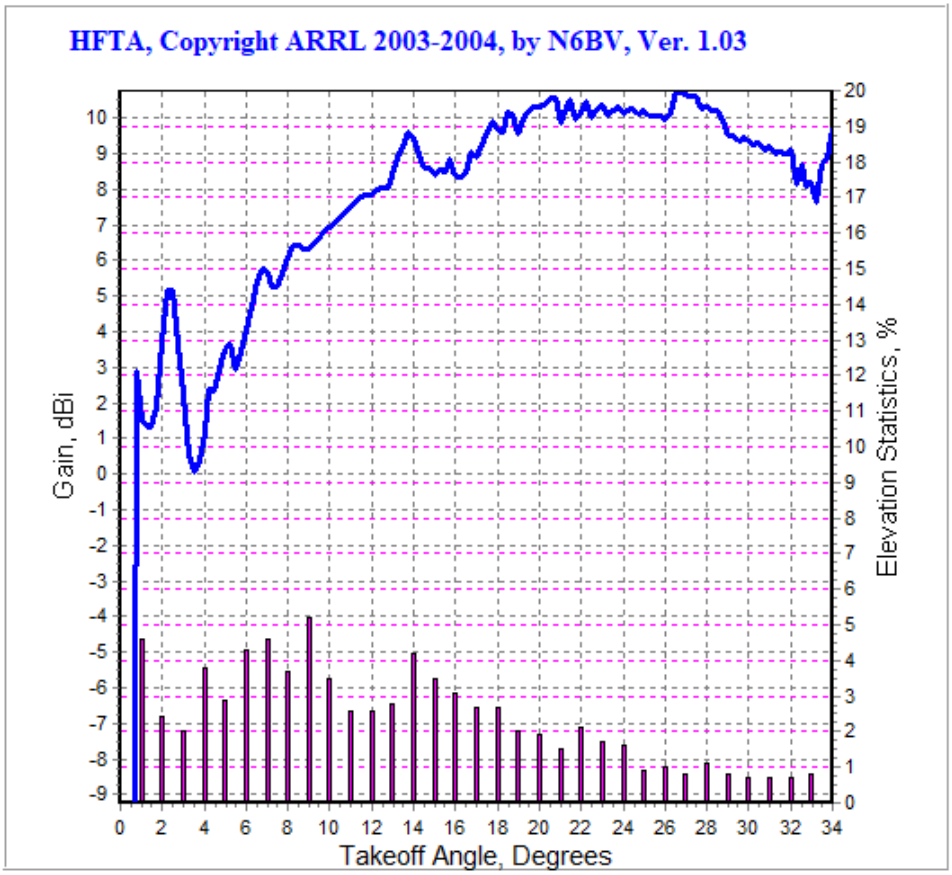


AD7L-1-290.00.PRO
50 ft

Print

Close

Output Graph, HFTA



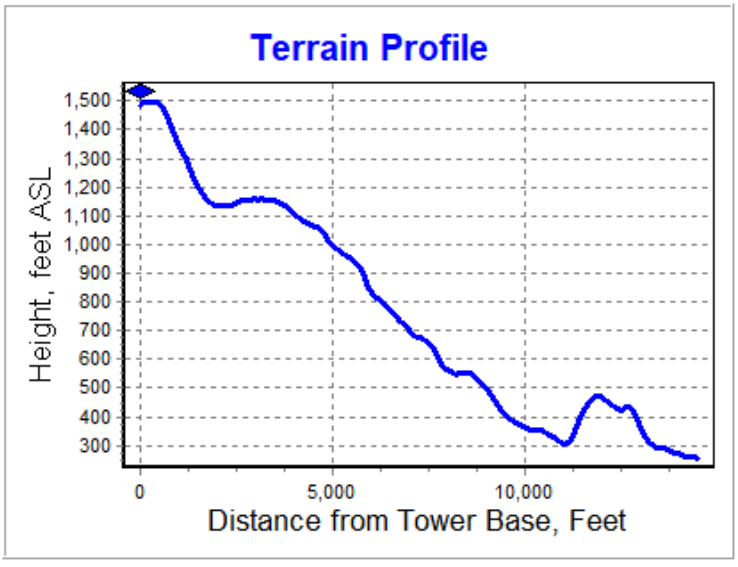
Freq. = 14.1 MHz
Max. Gain: 10.8 dBi
AD7L-1-300.00.PRO
50 ft
2-Ele.
Fig. of Merit: 6.8

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

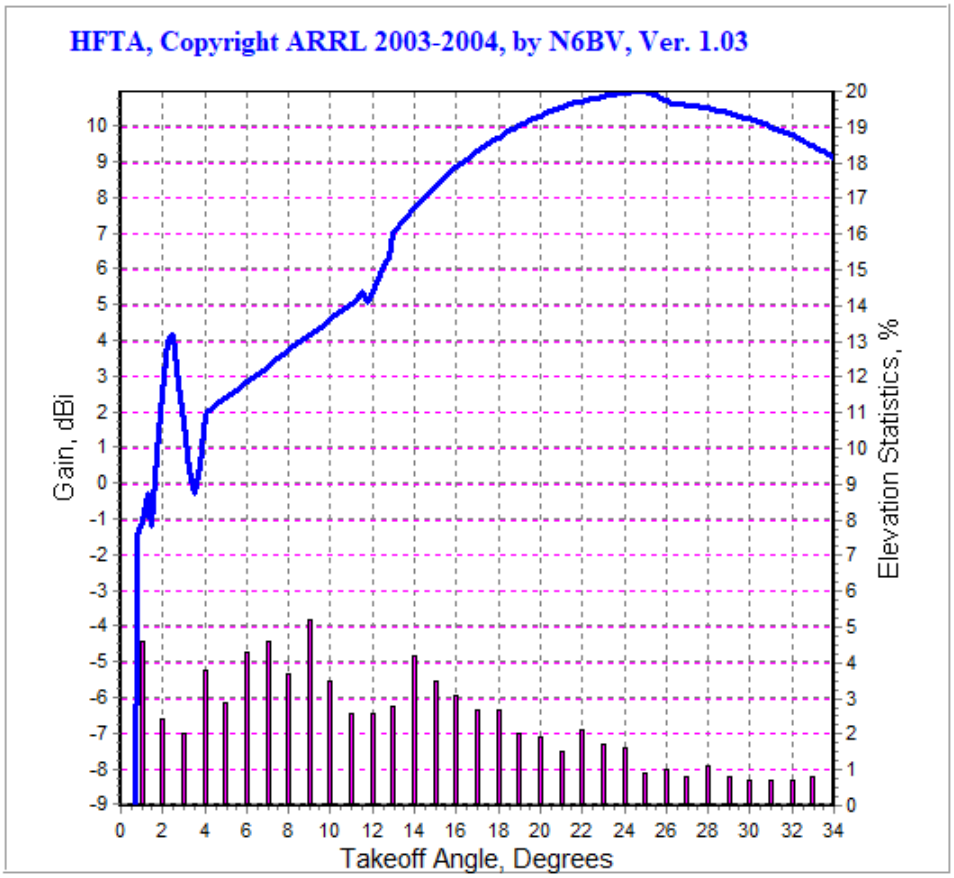


AD7L-1-300.00.PRO
50 ft

Print

Close

Output Graph, HFTA



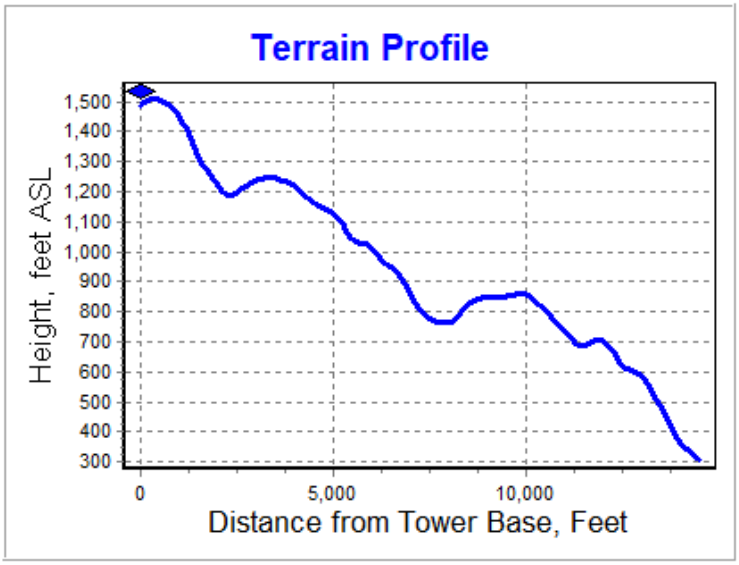
Freq. = 14.1 MHz
Max. Gain: 11.0 dBi
AD7L-1-310.00.PRO
50 ft
2-Ele.
Fig. of Merit: 6.4

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

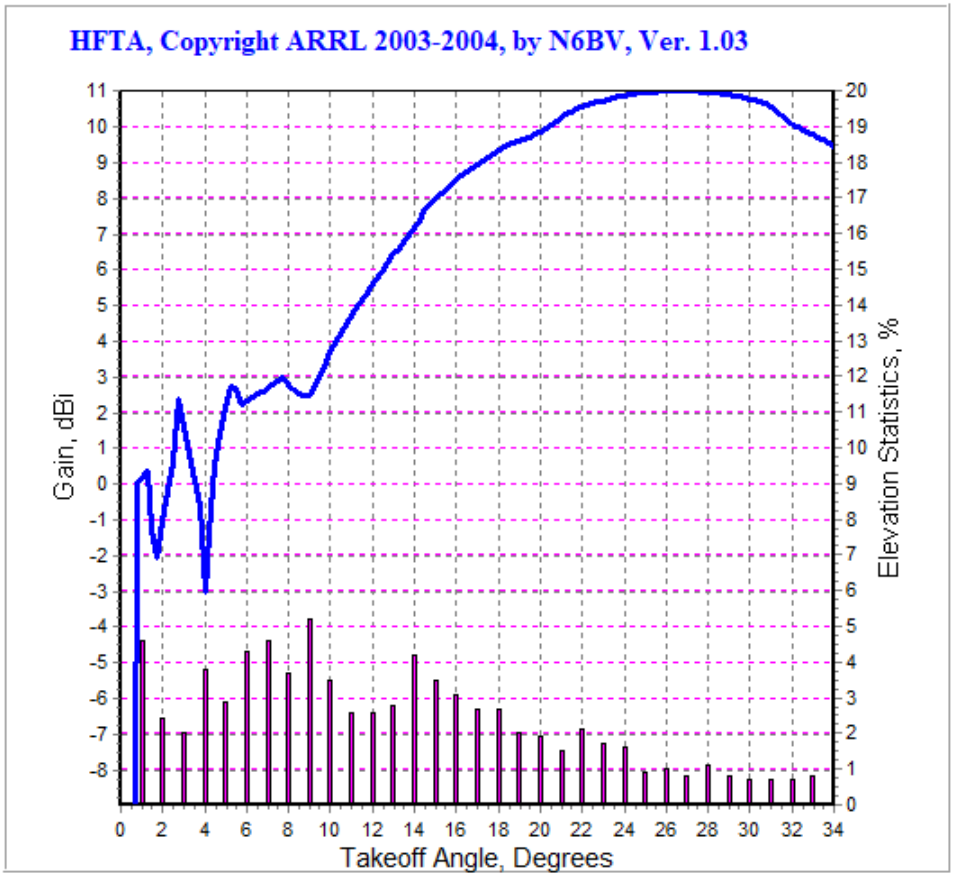


AD7L-1-310.00.PRC
50 ft

Print

Close

Output Graph, HFTA



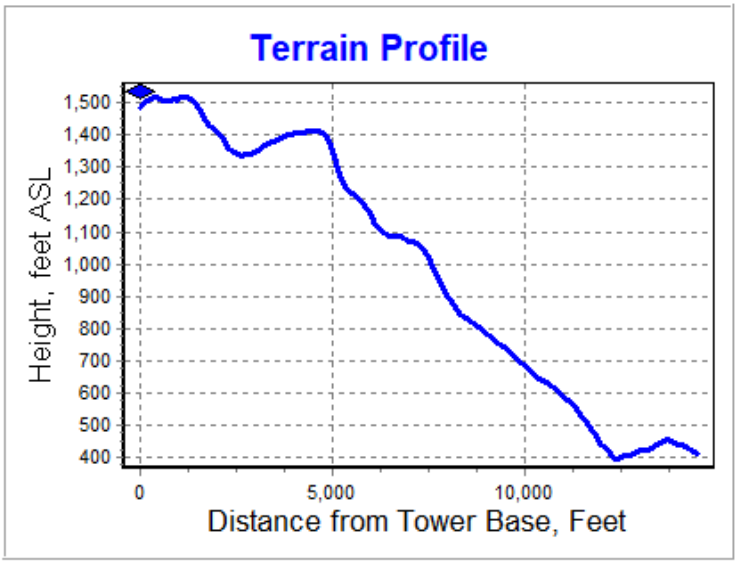
Freq. = 14.1 MHz
Max. Gain: 11.0 dBi
AD7L-1-320.00.PRO
50 ft
2-Ele.
Fig. of Merit: 6.1

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

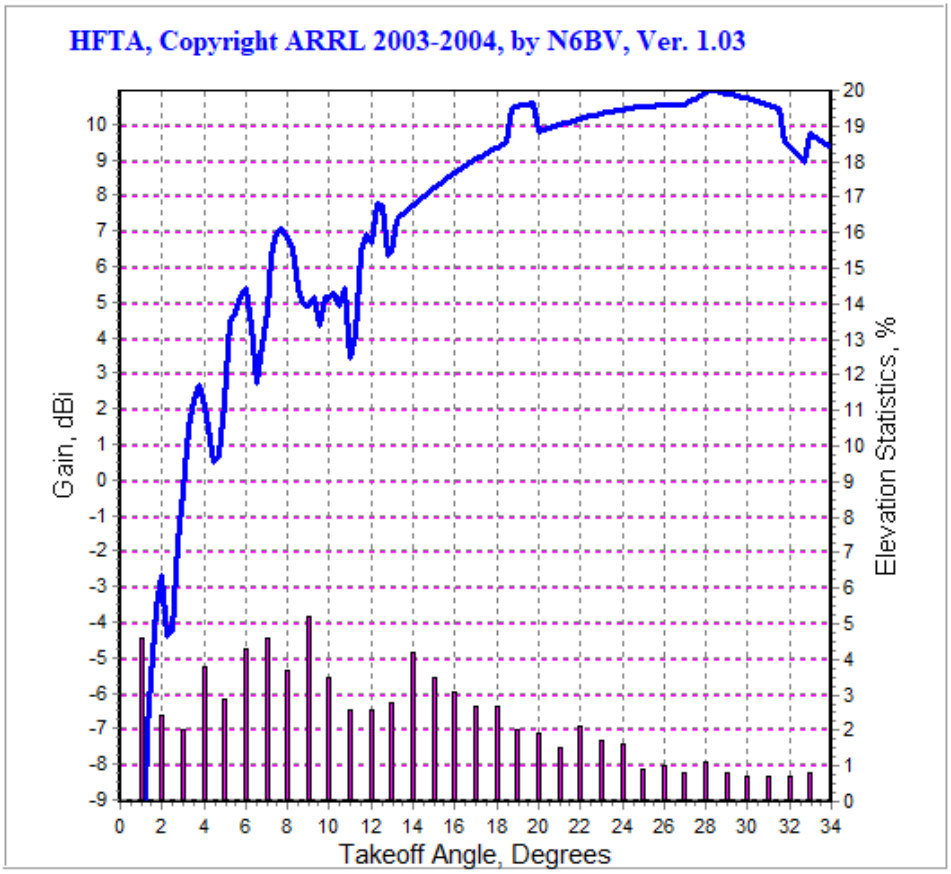


AD7L-1-320.00.PRO
50 ft

Print

Close

Output Graph, HFTA



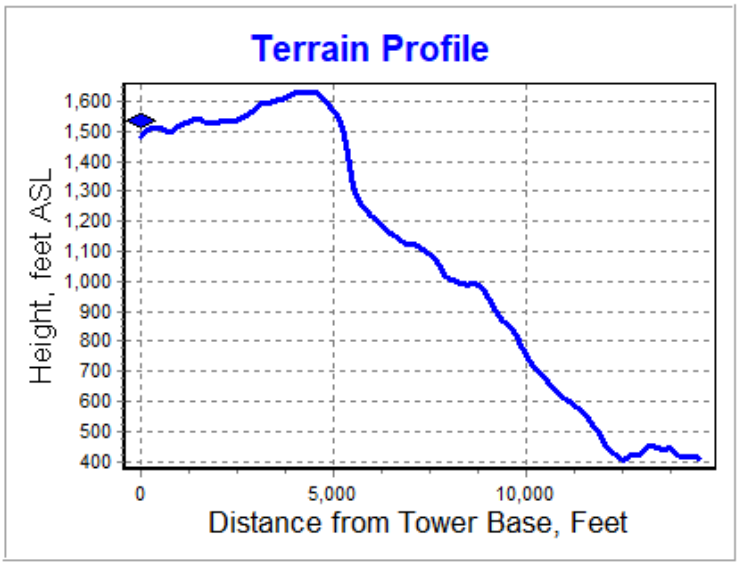
Freq. = 14.1 MHz
Max. Gain: 11.0 dBi
AD7L-1-330.00.PRO
50 ft
2-Ele.
Fig. of Merit: 6.4

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

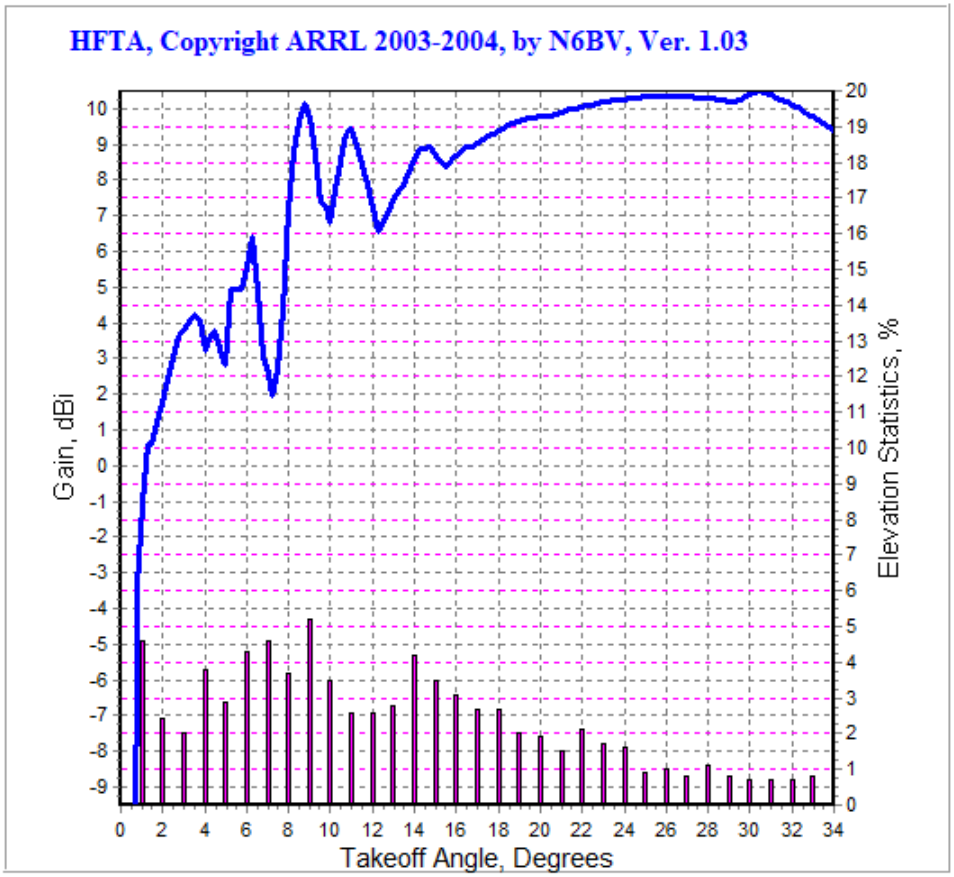


AD7L-1-330.00.PRO
50 ft

Print

Close

Output Graph, HFTA



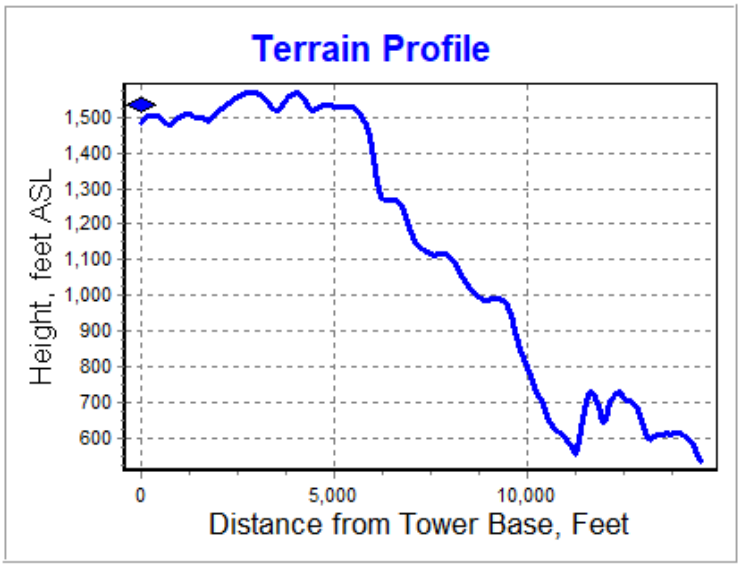
Freq. = 14.1 MHz
Max. Gain: 10.5 dBi
AD7L-1-340.00.PRO
50 ft
2-Ele.
Fig. of Merit: 7.1

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA

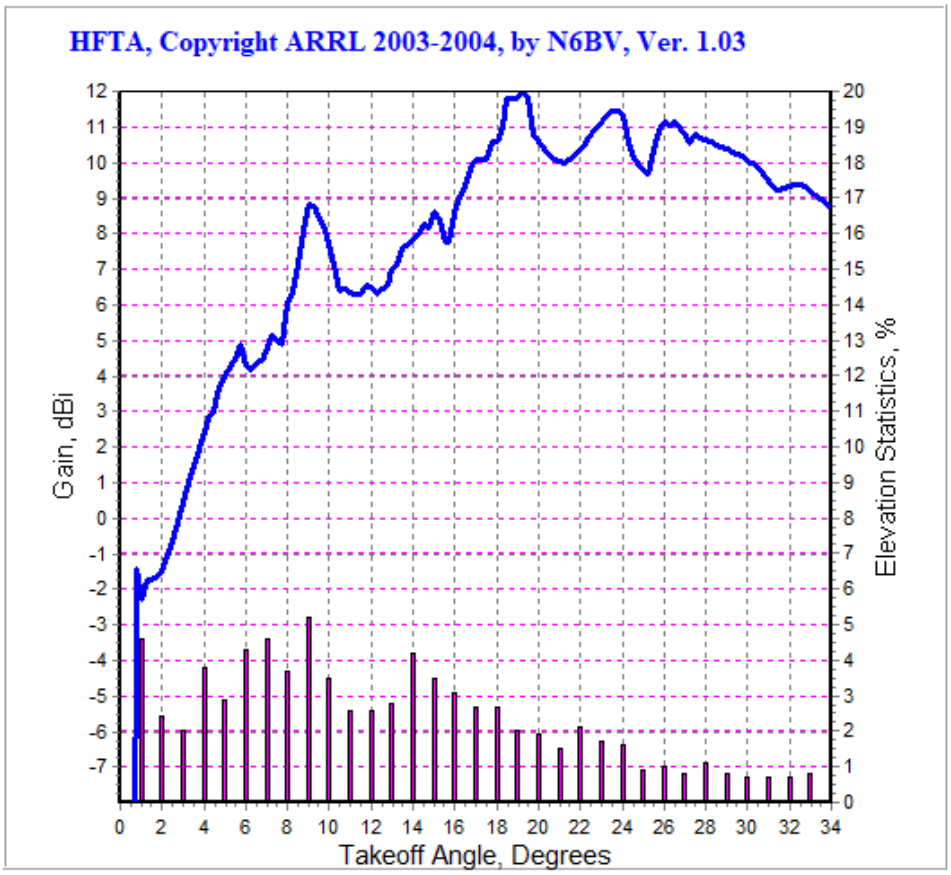


AD7L-1-340.00.PRO
50 ft

Print

Close

Output Graph, HFTA



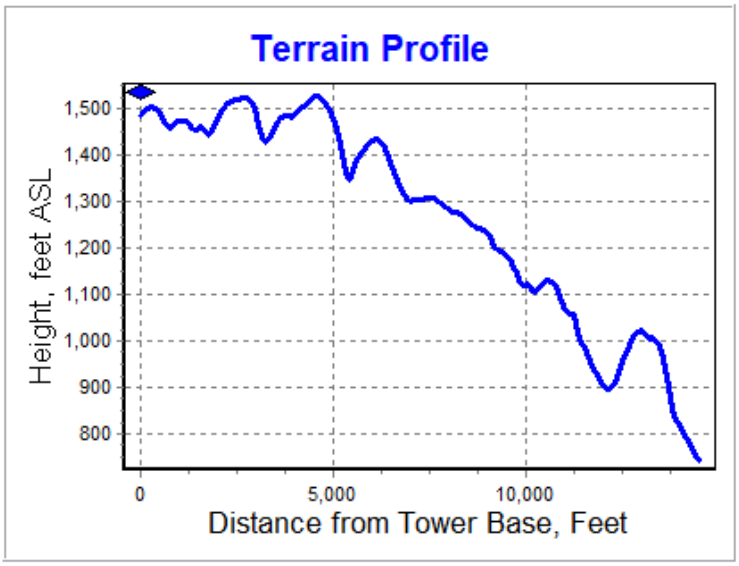
Freq. = 14.1 MHz
Max. Gain: 12.0 dBi
AD7L-1-350.00.PRO
50 ft
2-Ele.
Fig. of Merit: 7.1

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Terrain Plot, HFTA



AD7L-1-350.00.PRO
50 ft

Print

Close

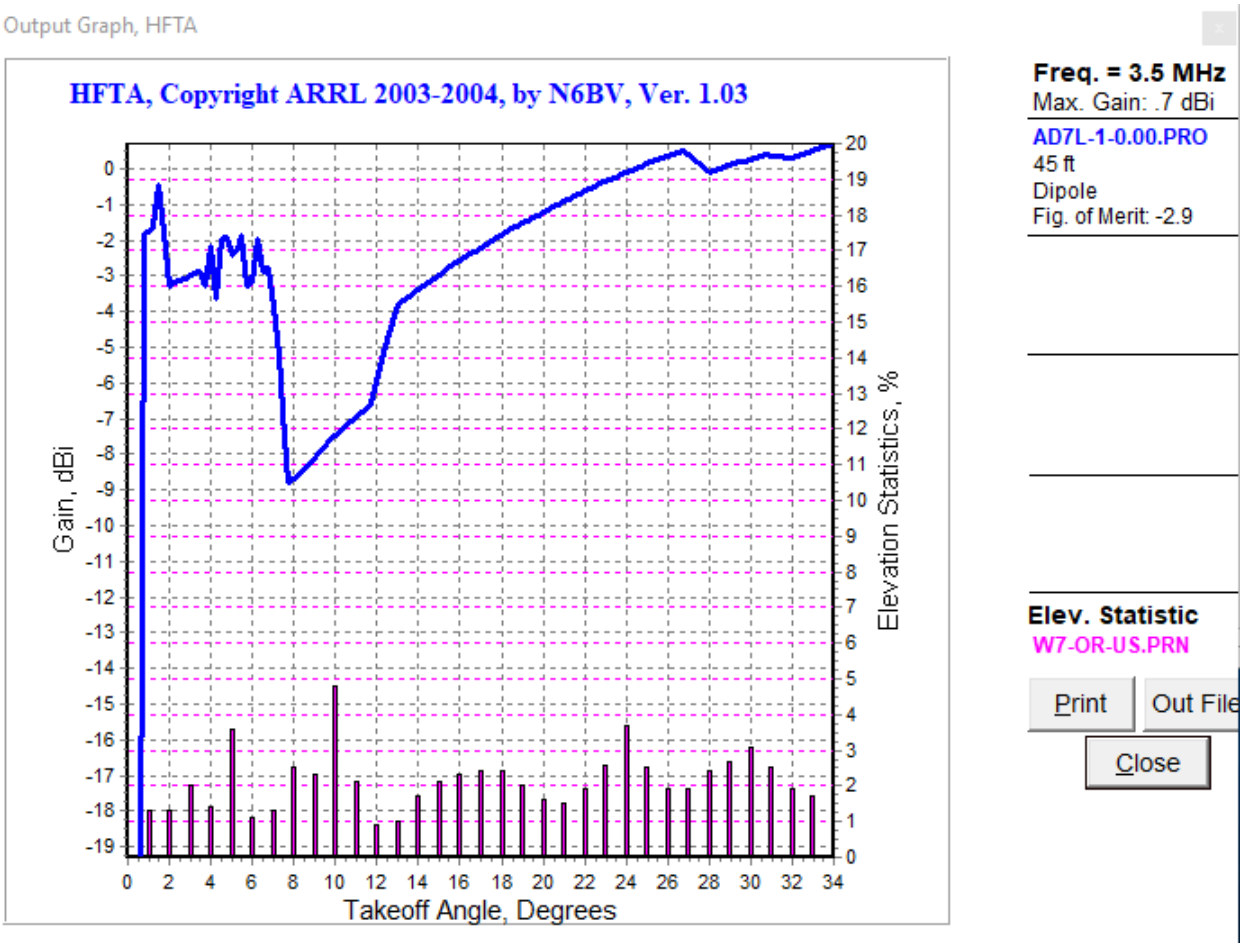
HFTA Analysis for USA

From AD7L QTH

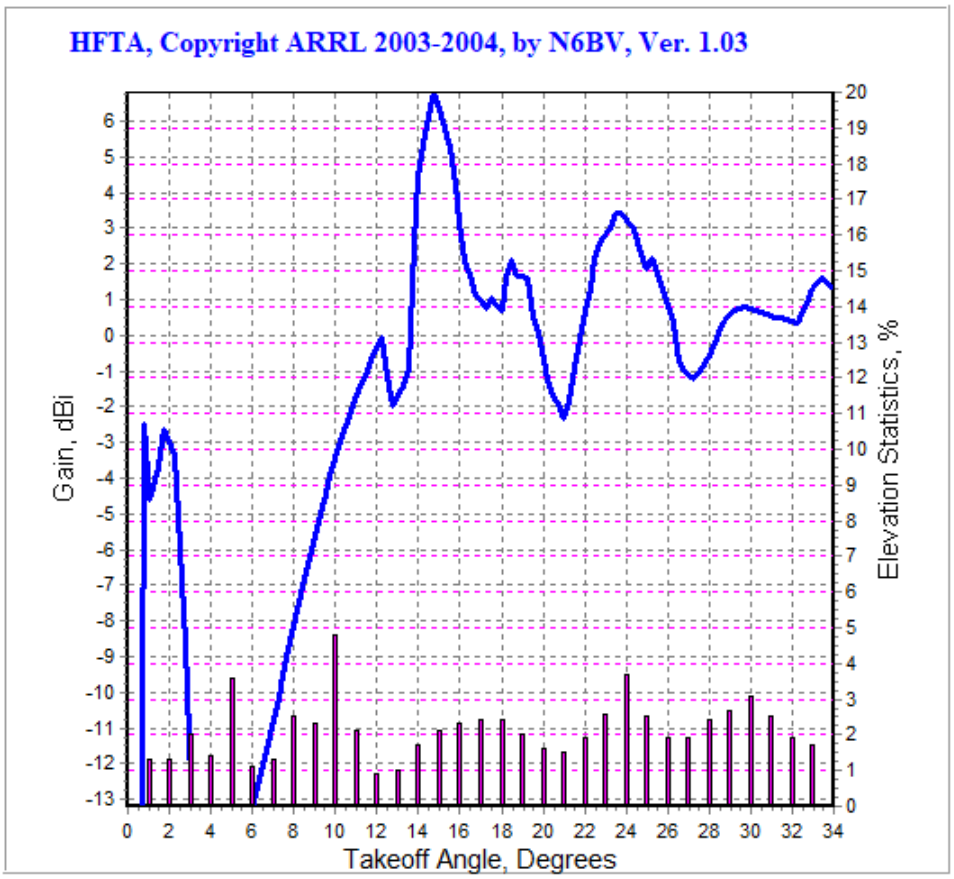
For **80 Meters**

Antenna = Dipole (Inverted-Vee) with Apex at 45 feet

Terrain is the same as shown for the 20 Meters Analysis



Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 6.8 dBi

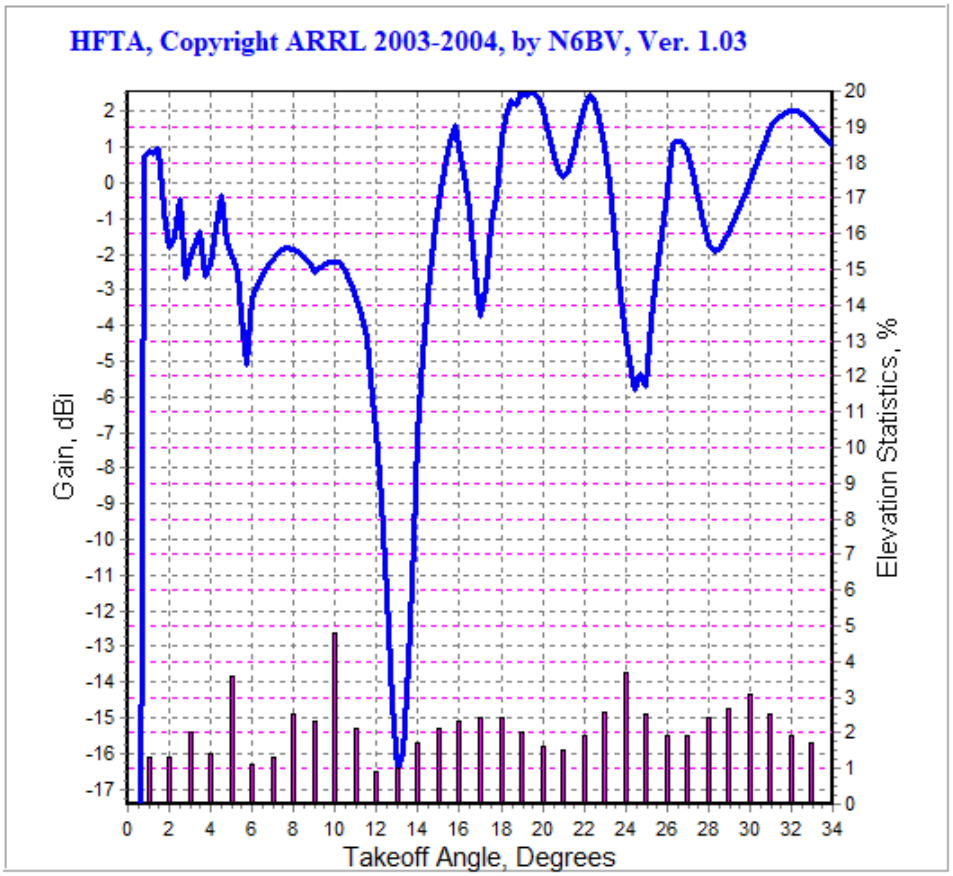
AD7L-1-10.00.PRO
45 ft
Dipole
Fig. of Merit: -1

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Output Graph, HFTA



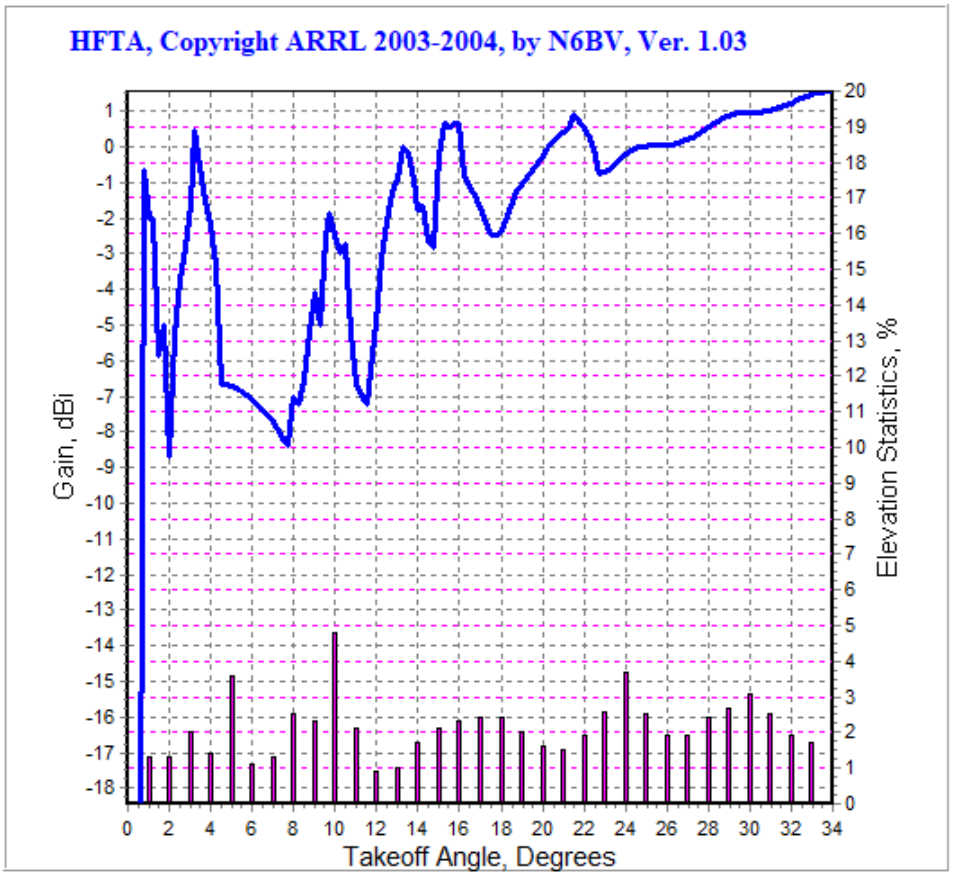
Freq. = 3.5 MHz
Max. Gain: 2.6 dBi
AD7L-1-20.00.PRO
45 ft
Dipole
Fig. of Merit: -2

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 1.6 dBi

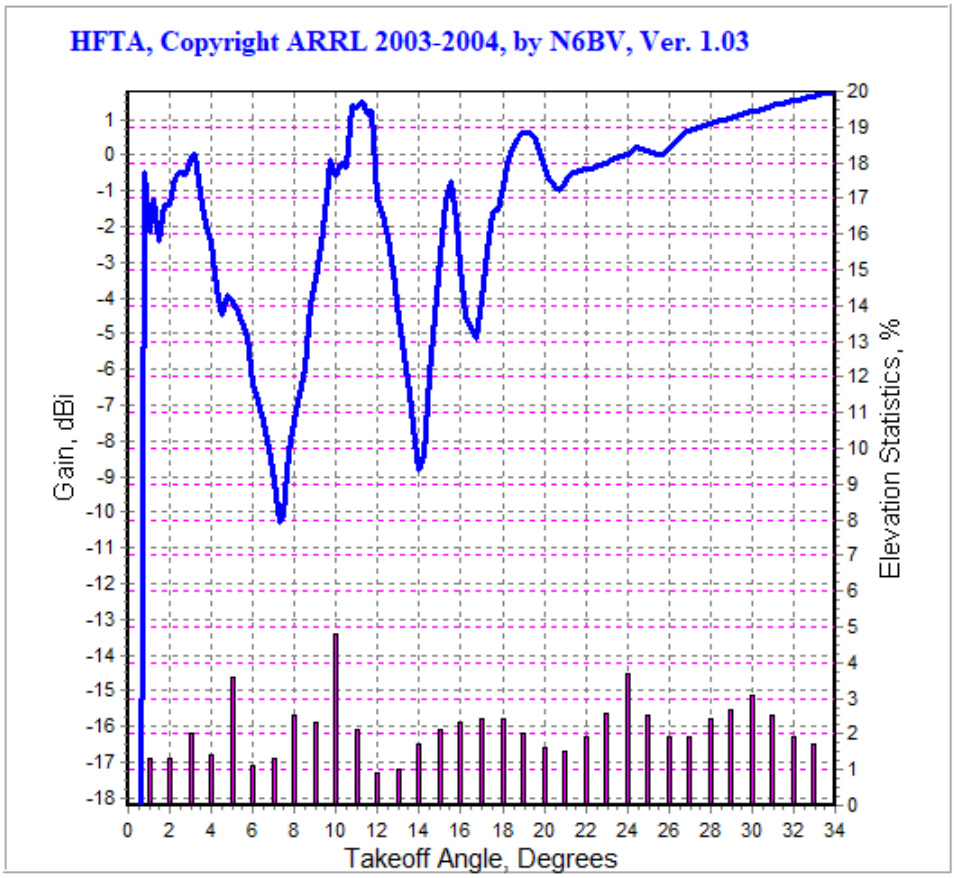
AD7L-1-30.00.PRO
45 ft
Dipole
Fig. of Merit: -2.3

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 1.8 dBi

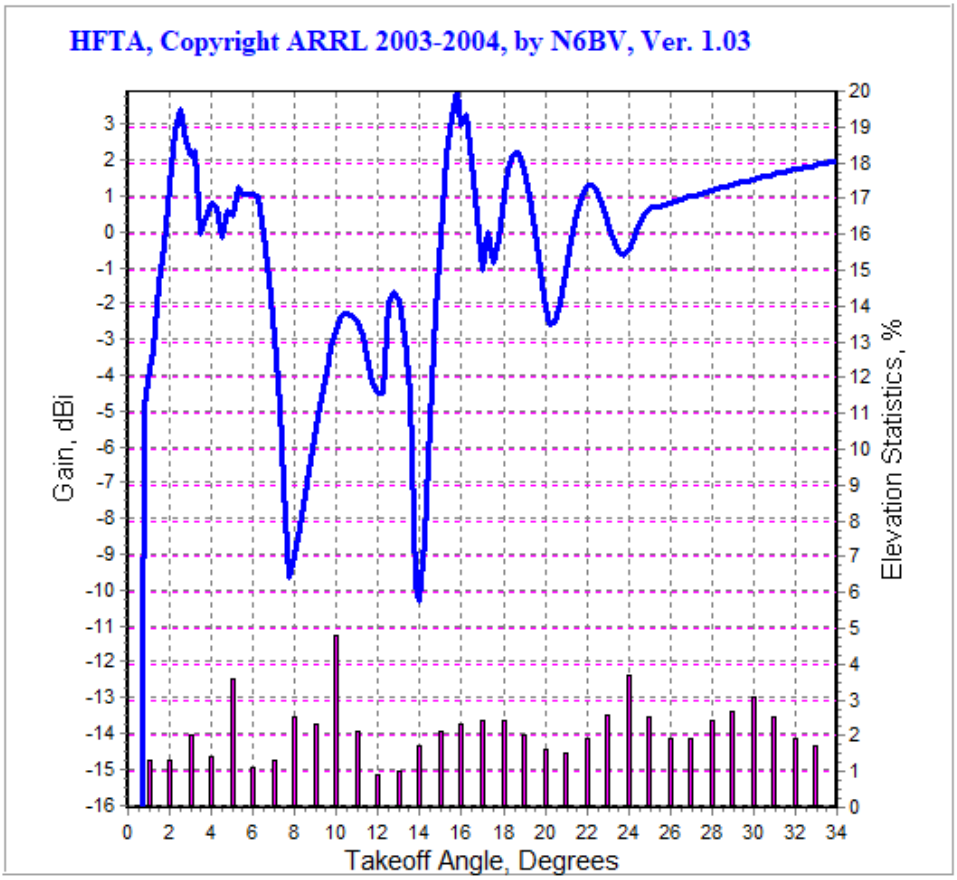
AD7L-1-40.00.PRO
45 ft
Dipole
Fig. of Merit: -2

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Output Graph, HFTA



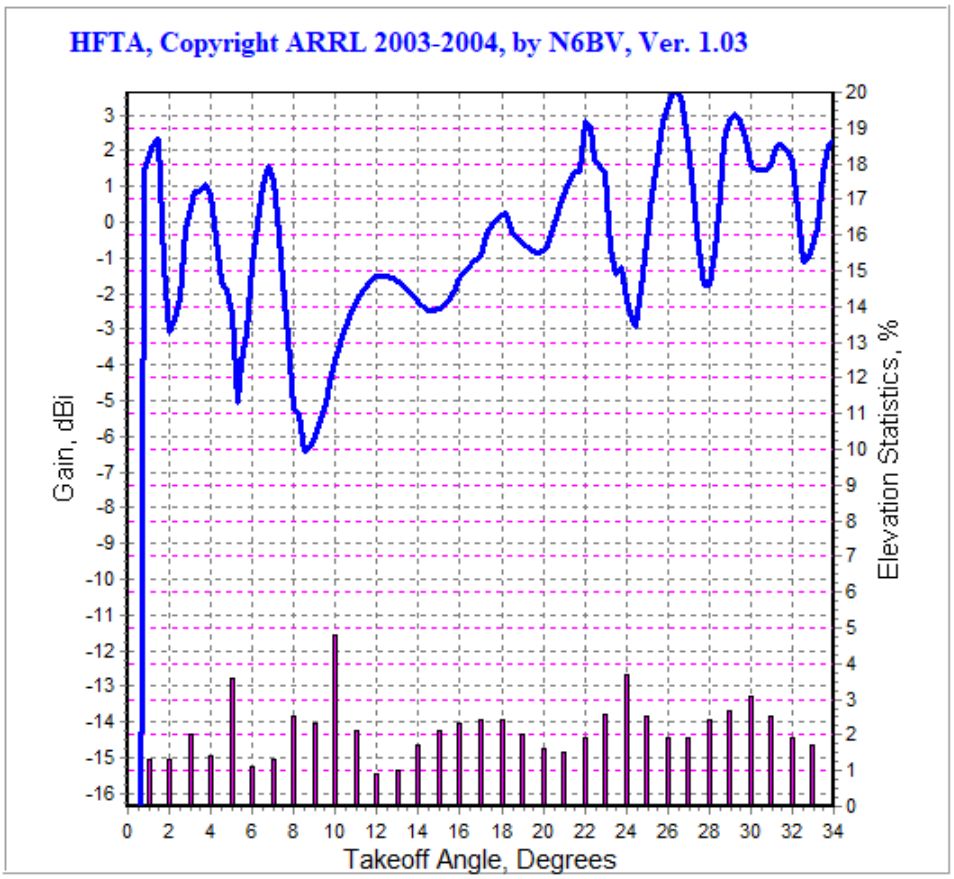
Freq. = 3.5 MHz
Max. Gain: 3.9 dBi
AD7L-1-50.00.PRO
45 ft
Dipole
Fig. of Merit: -1.2

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 3.6 dBi

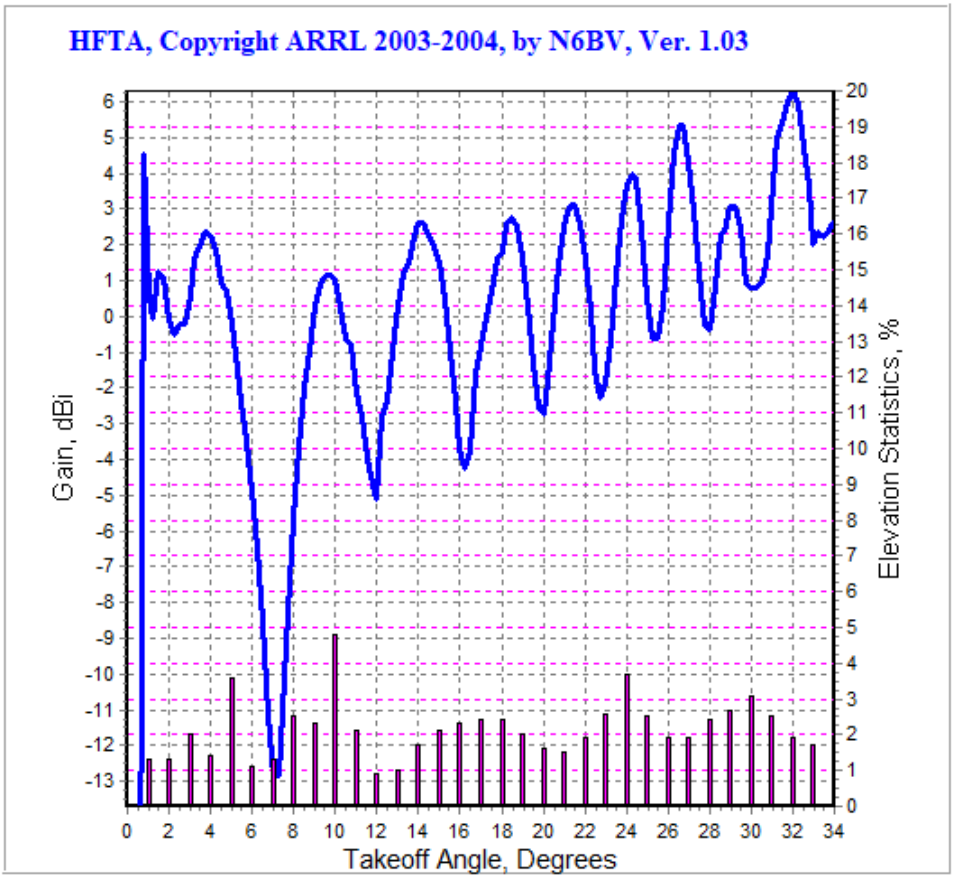
AD7L-1-60.00.PRO
45 ft
Dipole
Fig. of Merit: -1.4

Elev. Statistic
W7-OR-US.PRN

Print | Out File

Close

Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 6.3 dBi
AD7L-1-70.00.PRO
45 ft
Dipole
Fig. of Merit: -.1

Elev. Statistic
W7-OR-US.PRN

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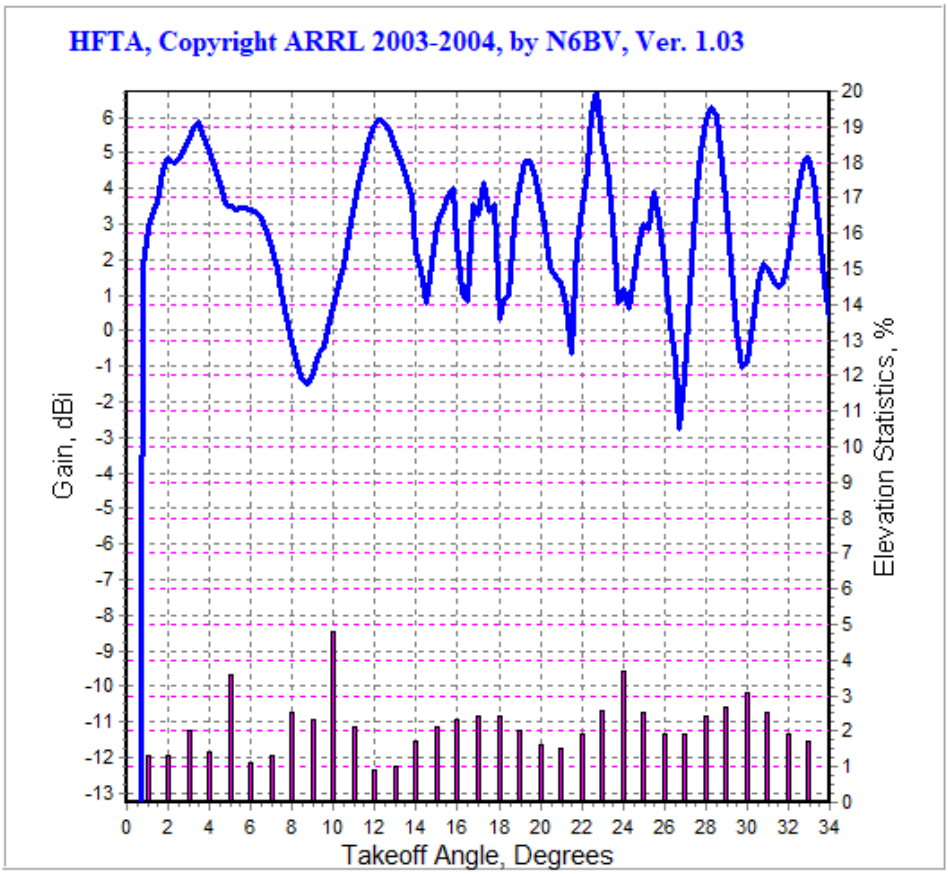
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 6.7 dBi
AD7L-1-80.00.PRO
45 ft
Dipole
Fig. of Merit: 1.5

Elev. Statistic
W7-OR-US.PRN

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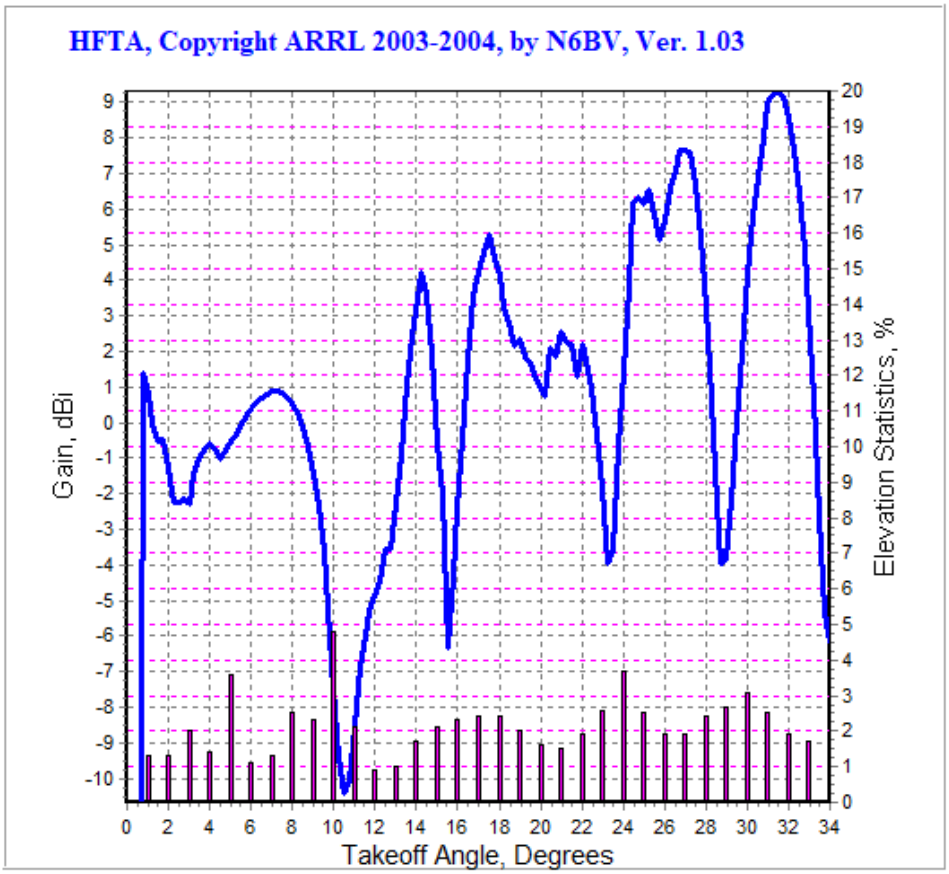
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 9.3 dBi
AD7L-1-90.00.PRO
45 ft
Dipole
Fig. of Merit: 1.3

Elev. Statistic
W7-OR-US.PRN

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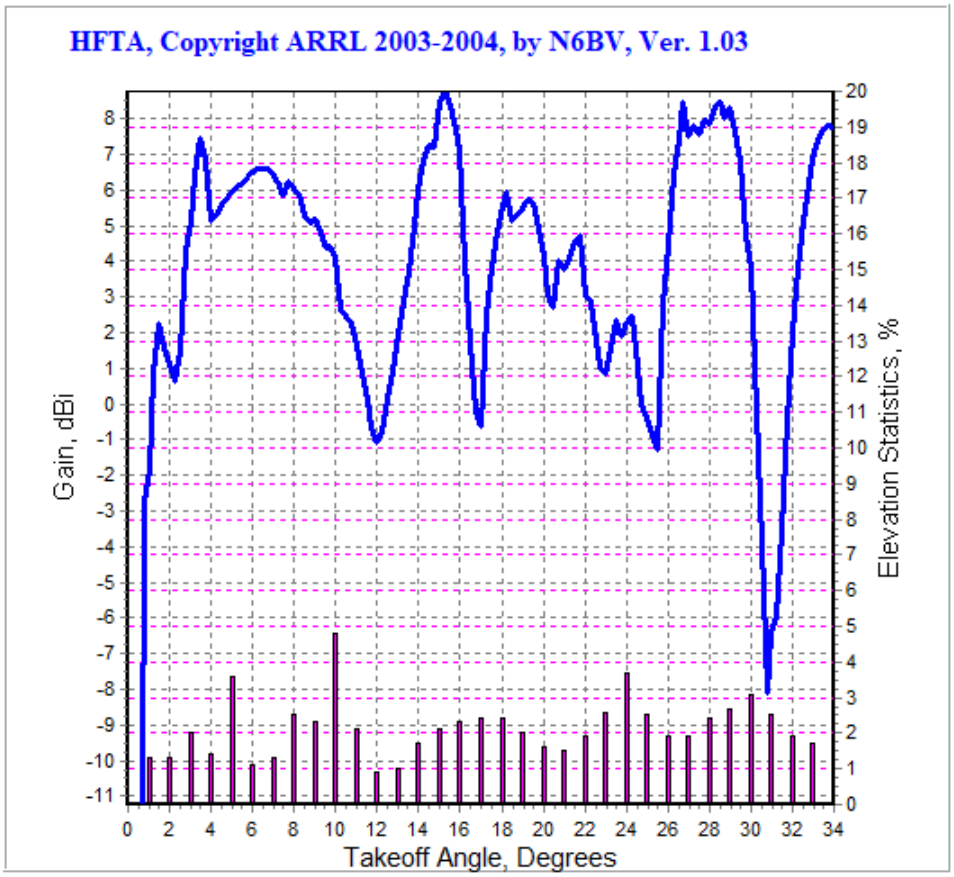
Close

Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 8.8 dBi
AD7L-1-100.00.PRO
45 ft
Dipole
Fig. of Merit: 3.6

Elev. Statistic
W7-OR-US.PRN

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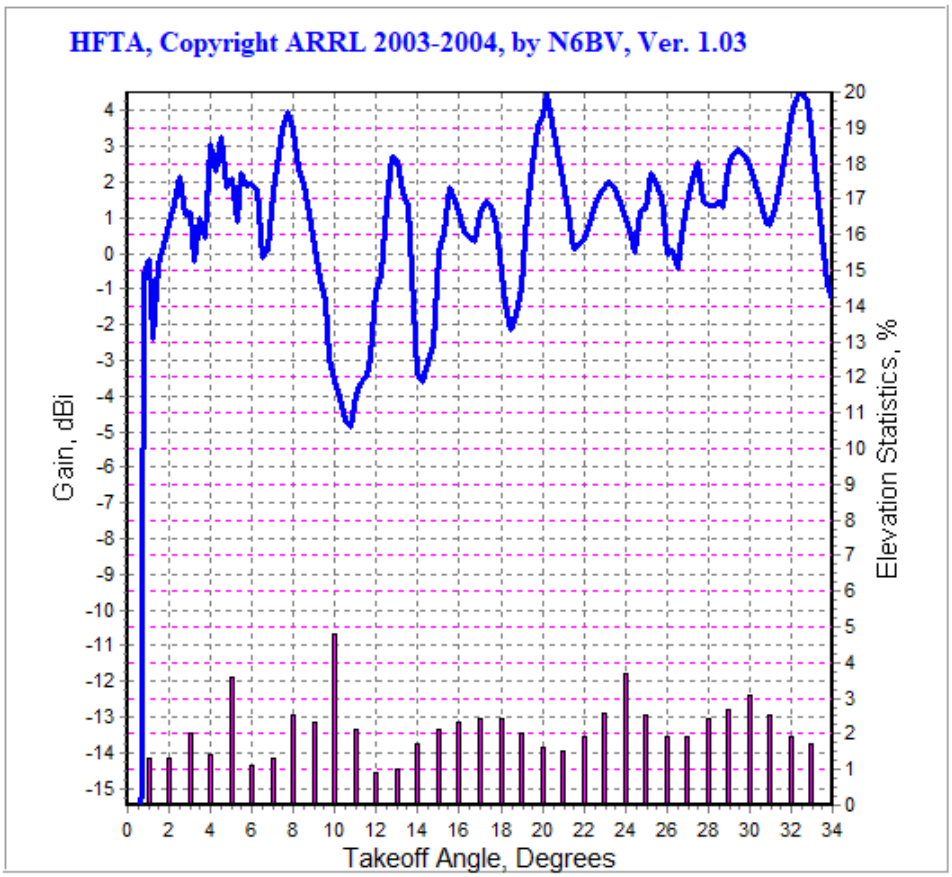
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 4.5 dBi
AD7L-1-110.00.PRO
45 ft
Dipole
Fig. of Merit: -.2

Elev. Statistic
W7-OR-US.PRN

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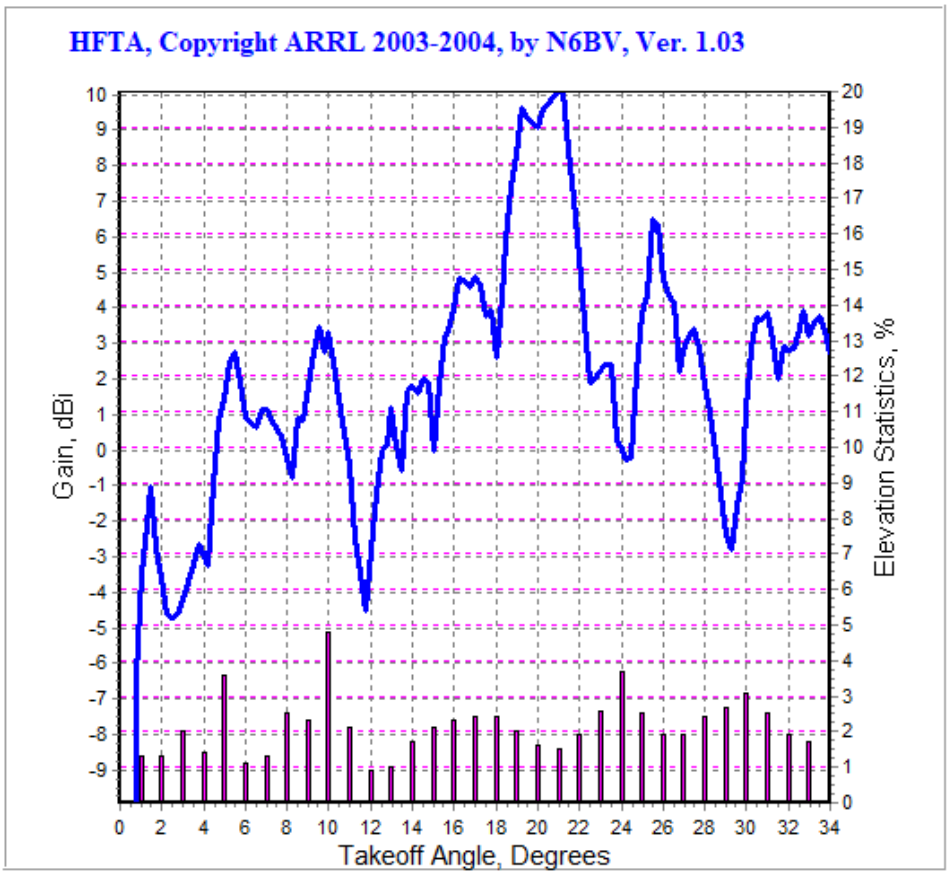
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 10.1 dBi
AD7L-1-120.00.PRO
45 ft
Dipole
Fig. of Merit: 1.8

Elev. Statistic
W7-OR-US.PRN

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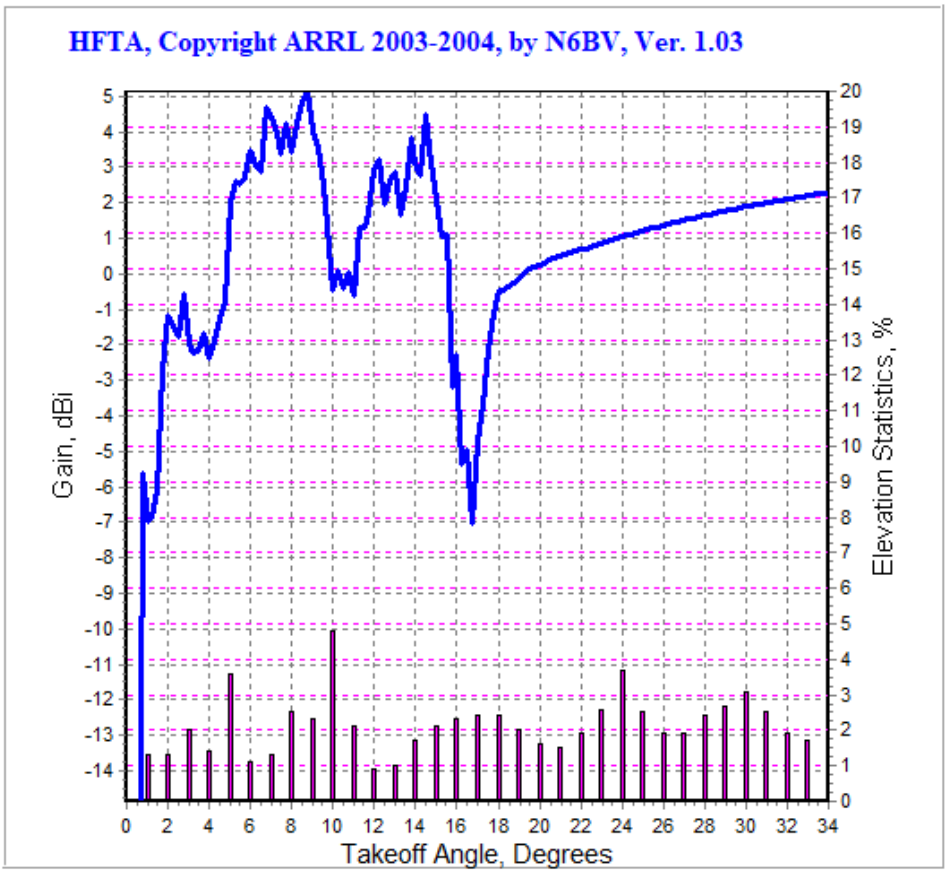
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 5.1 dBi
AD7L-1-130.00.PRO
45 ft
Dipole
Fig. of Merit: -.1

Elev. Statistic
W7-OR-US.PRN

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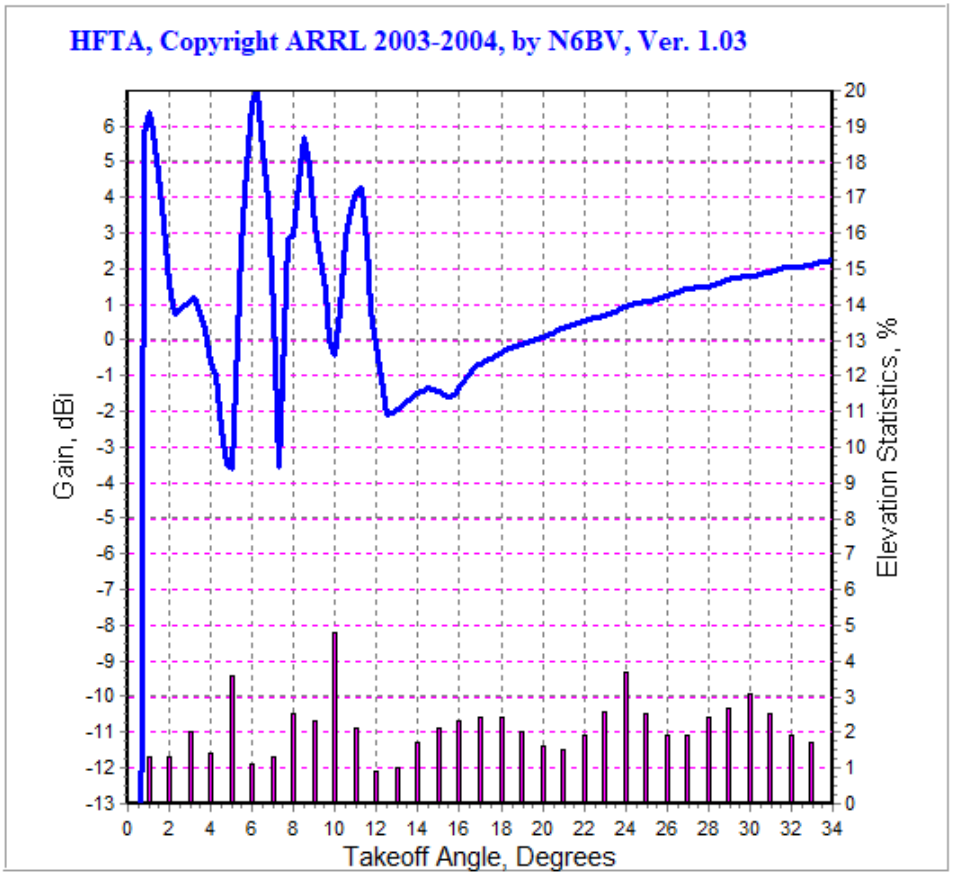
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 7.0 dBi
AD7L-1-140.00.PRO
45 ft
Dipole
Fig. of Merit: -.1

Elev. Statistic
W7-OR-US.PRN

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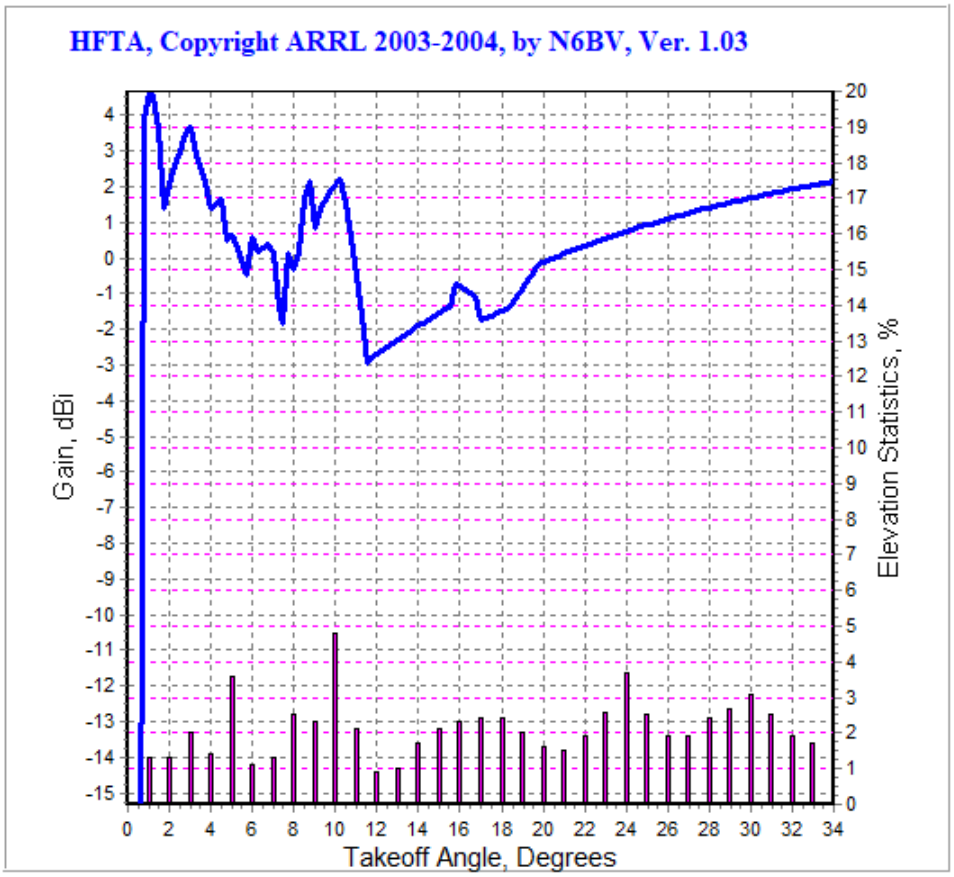
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 4.7 dBi
AD7L-1-150.00.PRO
45 ft
Dipole
Fig. of Merit: -.5

Elev. Statistic
W7-OR-US.PRN

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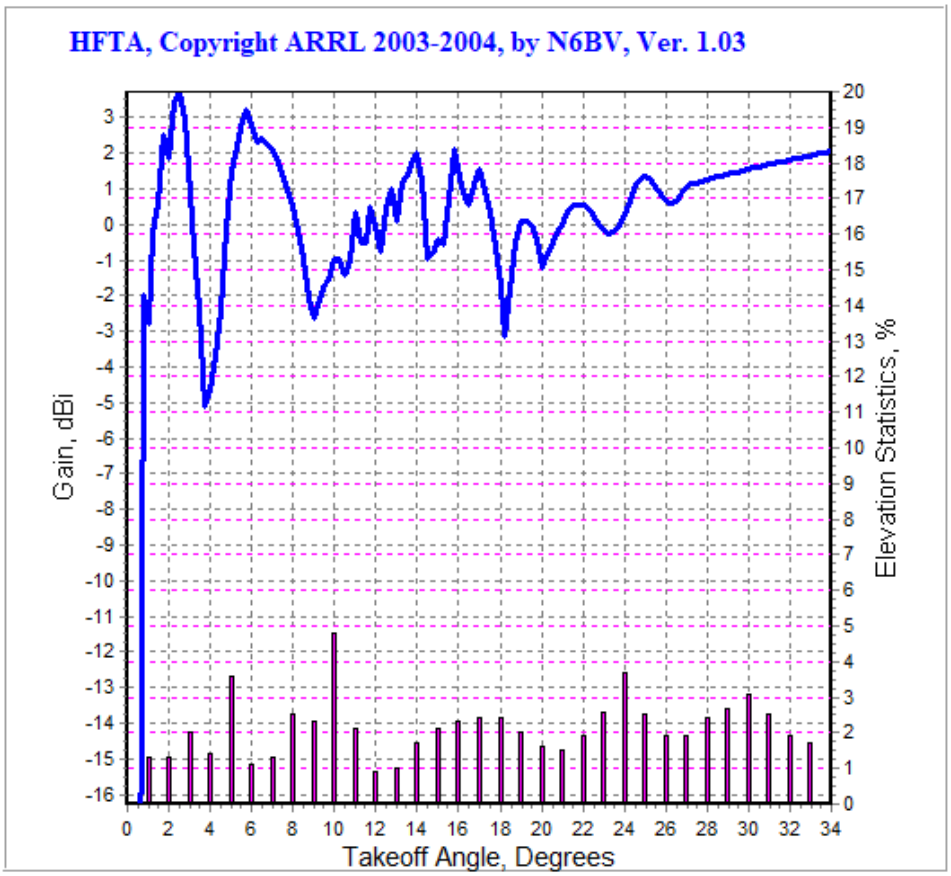
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 3.7 dBi
AD7L-1-160.00.PRO
45 ft
Dipole
Fig. of Merit: -.7

Elev. Statistic
W7-OR-US.PRN

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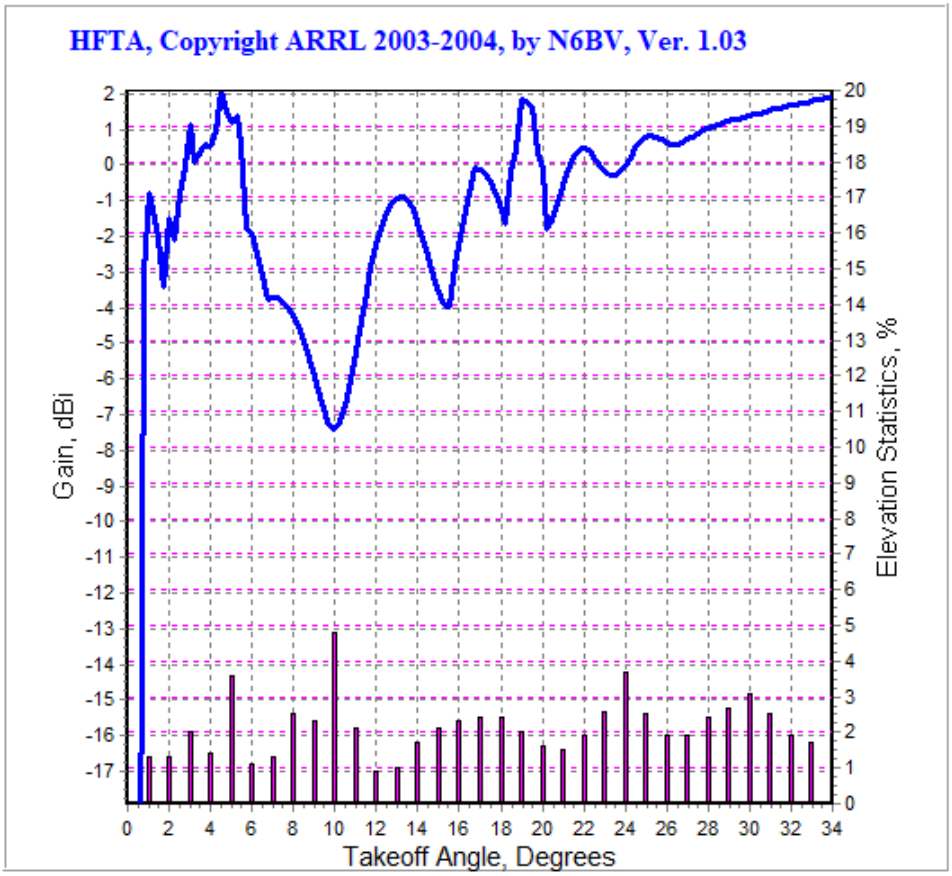
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 2.1 dBi
AD7L-1-170.00.PRO
45 ft
Dipole
Fig. of Merit: -1.6

Elev. Statistic
W7-OR-US.PRN

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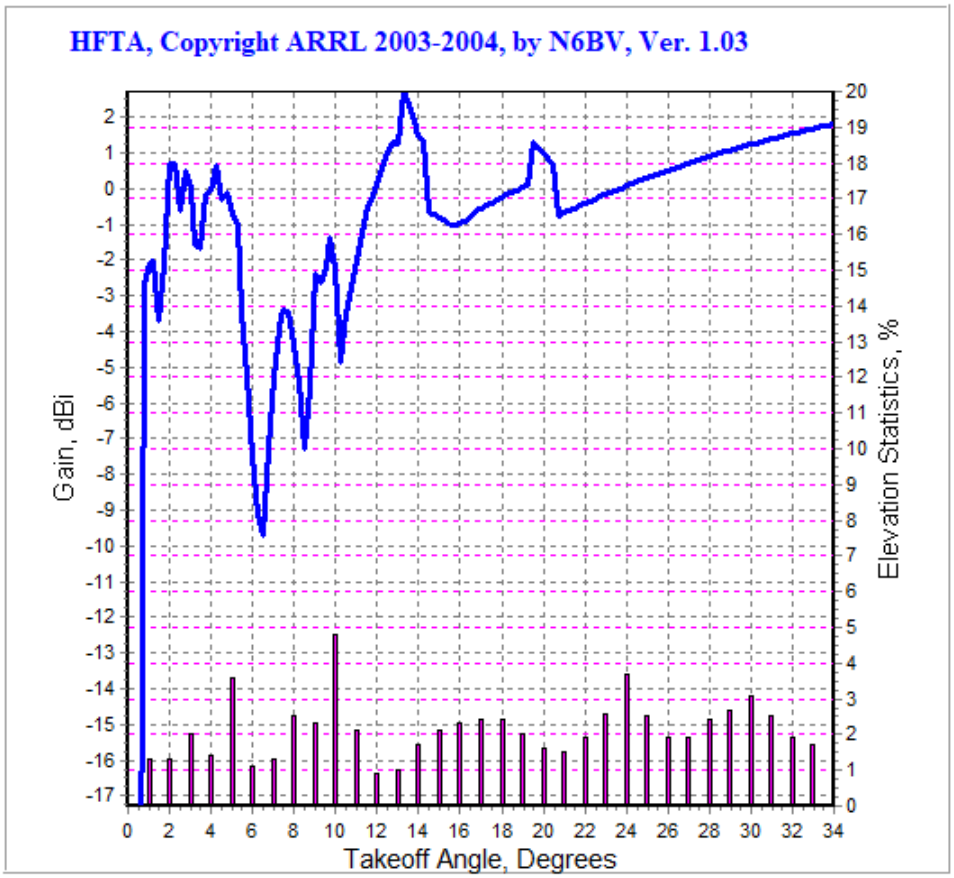
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 2.7 dBi
AD7L-1-180.00.PRO
45 ft
Dipole
Fig. of Merit: -1.5

Elev. Statistic
W7-OR-US.PRN

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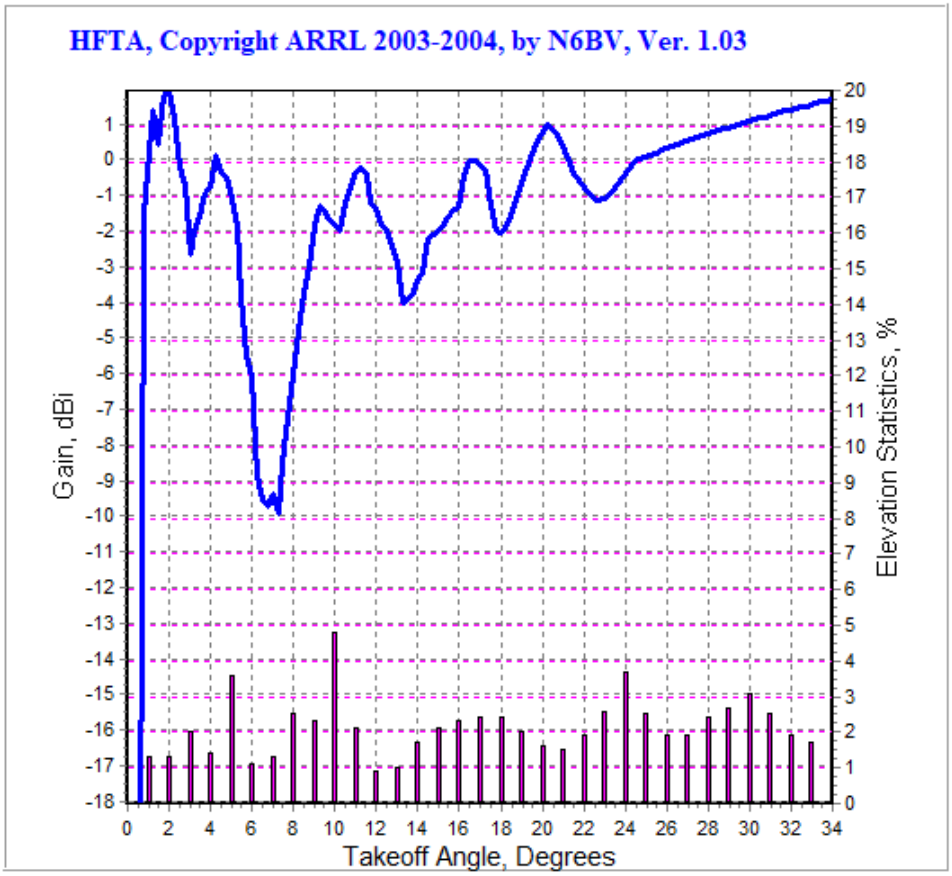
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 1.9 dBi
AD7L-1-190.00.PRO
45 ft
Dipole
Fig. of Merit: -1.8

Elev. Statistic
W7-OR-US.PRN

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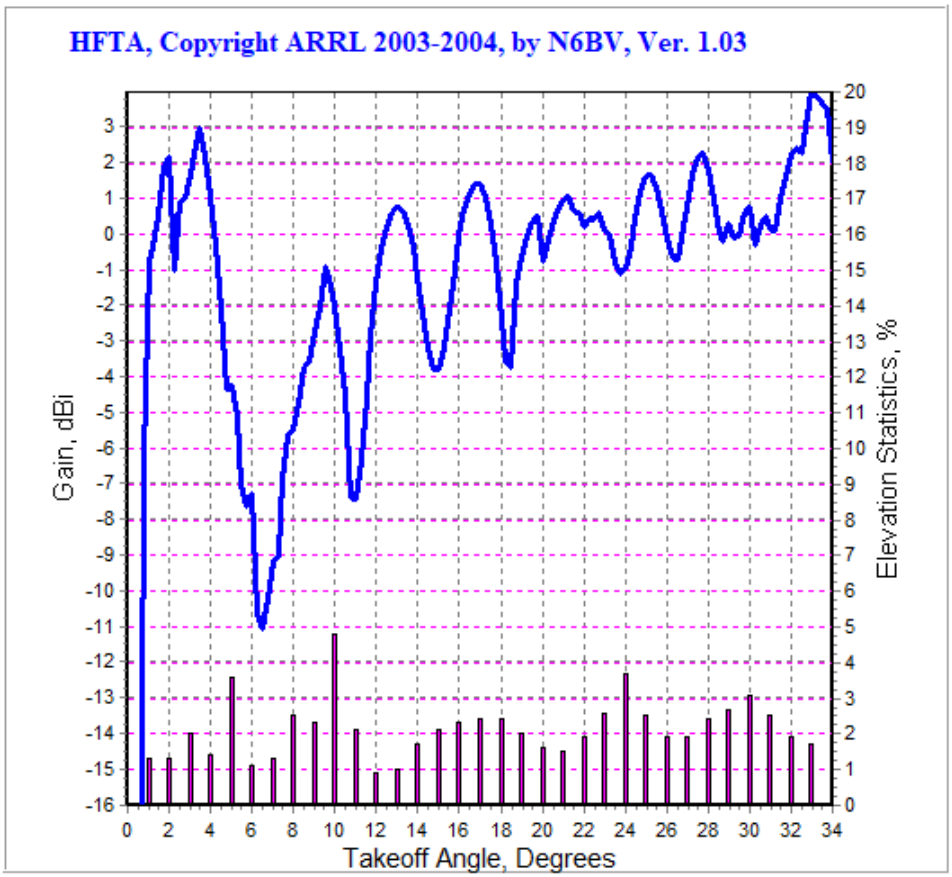
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 4.0 dBi
AD7L-1-200.00.PRO
45 ft
Dipole
Fig. of Merit: -1.6

Elev. Statistic
W7-OR-US.PRN

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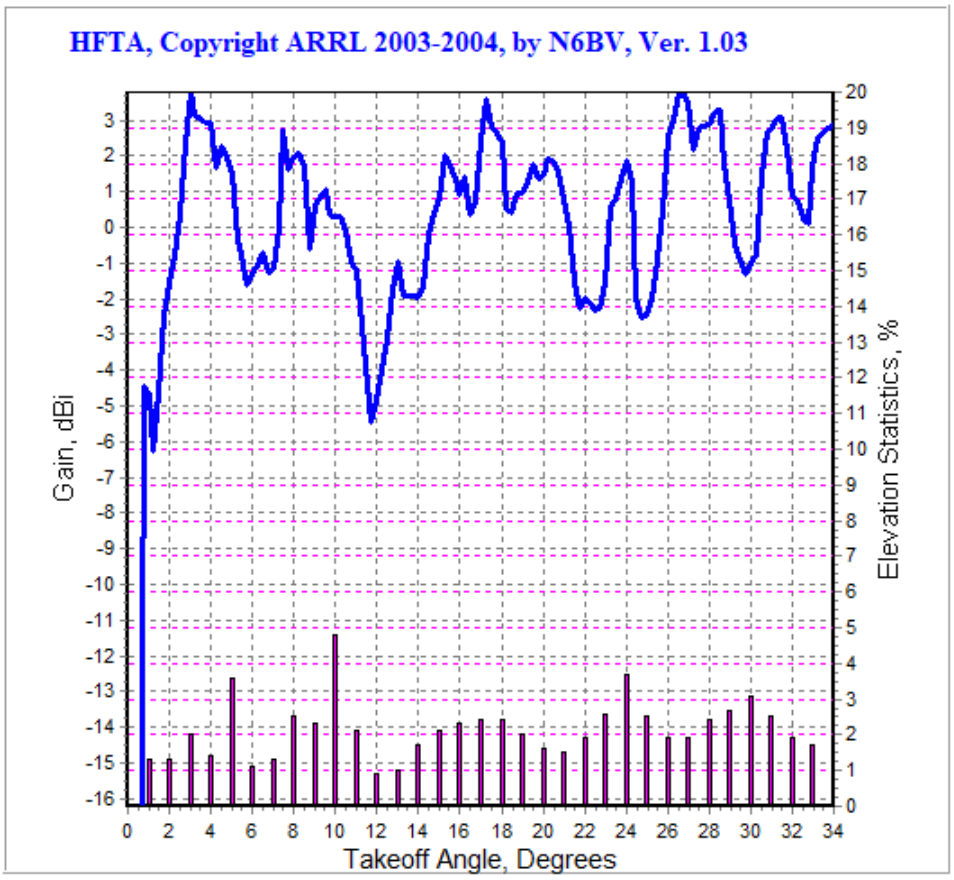
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 3.8 dBi

AD7L-1-210.00.PRO
45 ft
Dipole
Fig. of Merit: -.3

Elev. Statistic
W7-OR-US.PRN

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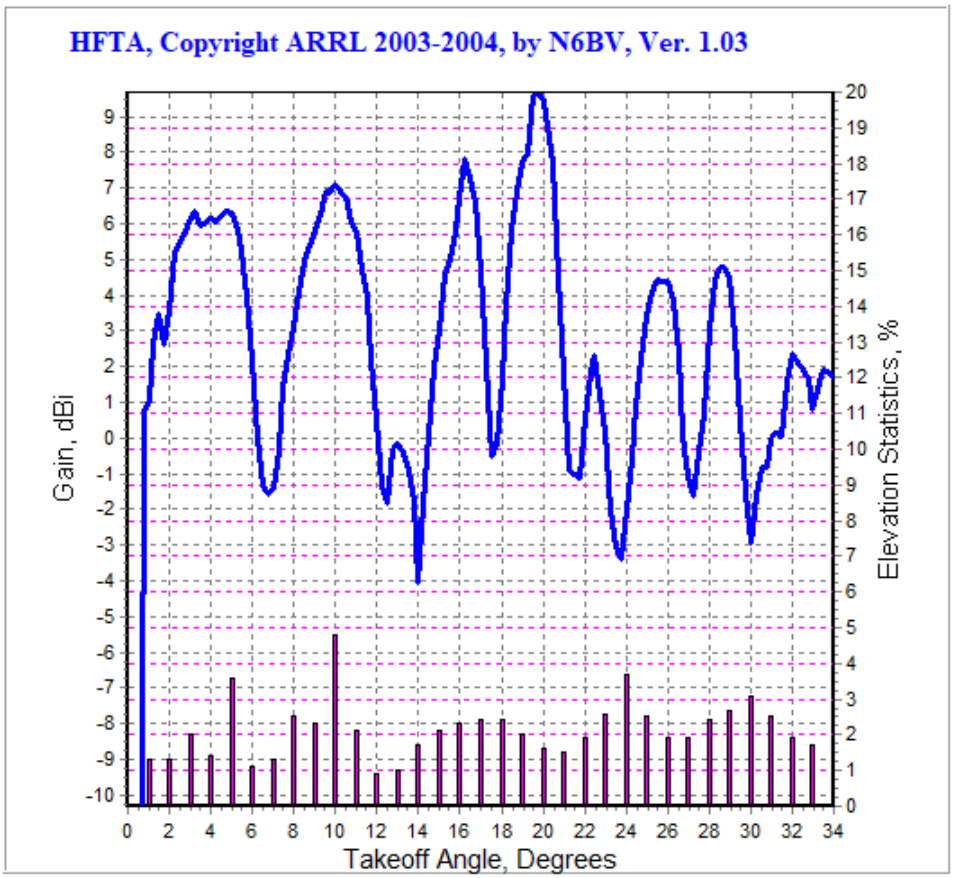
Close

Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 9.7 dBi
AD7L-1-220.00.PRO
45 ft
Dipole
Fig. of Merit: 2.7

Elev. Statistic
W7-OR-US.PRN

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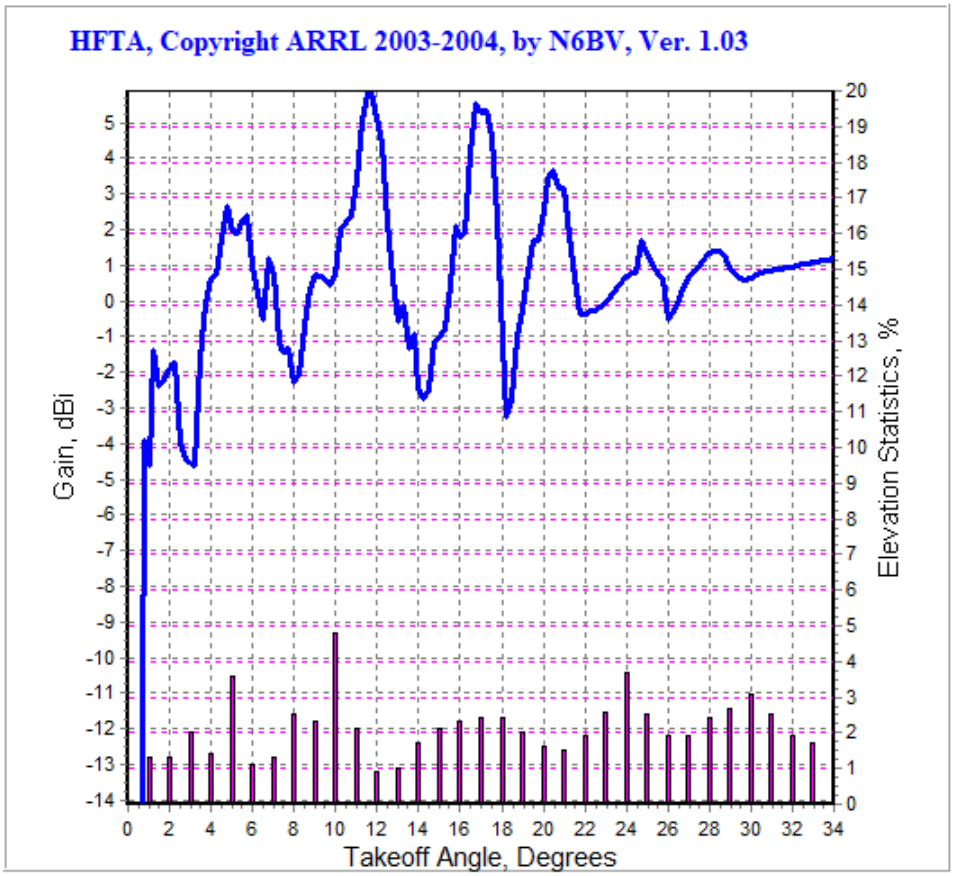
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 5.9 dBi
AD7L-1-230.00.PRO
45 ft
Dipole
Fig. of Merit: -.4

Elev. Statistic
W7-OR-US.PRN

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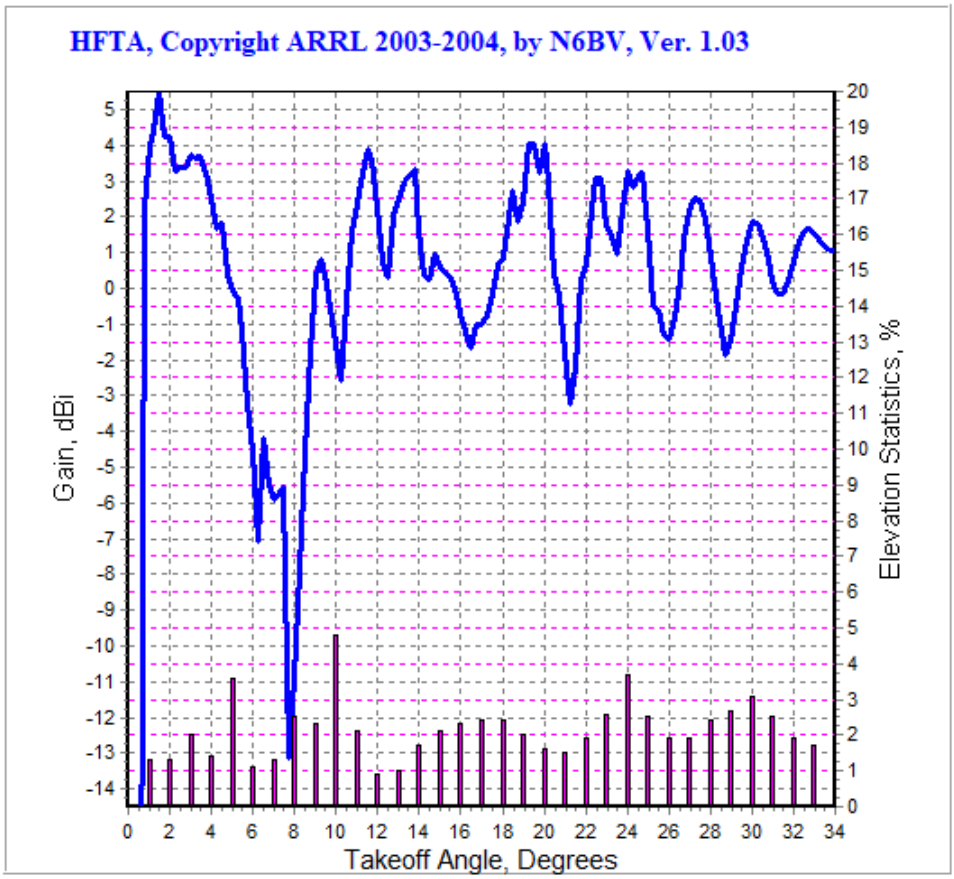
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 5.5 dBi

AD7L-1-240.00.PRO
45 ft
Dipole
Fig. of Merit: -.3

Elev. Statistic
W7-OR-US.PRN

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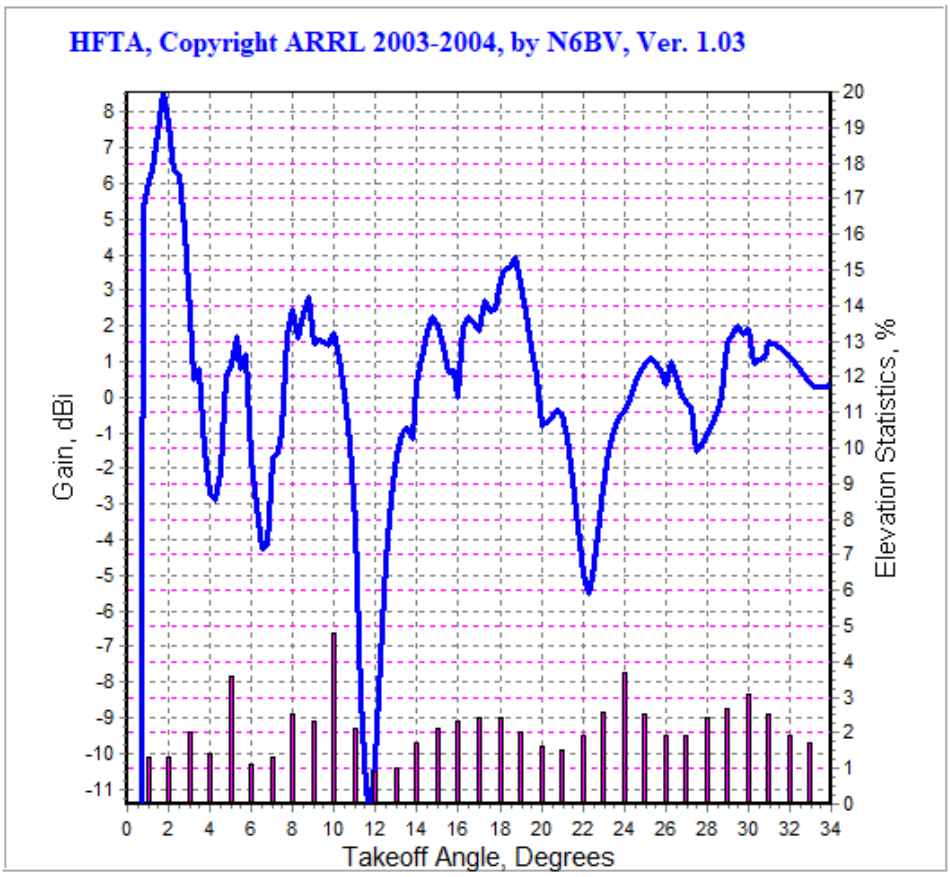
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 8.6 dBi
AD7L-1-250.00.PRO
45 ft
Dipole
Fig. of Merit: -.1

Elev. Statistic
W7-OR-US.PRN

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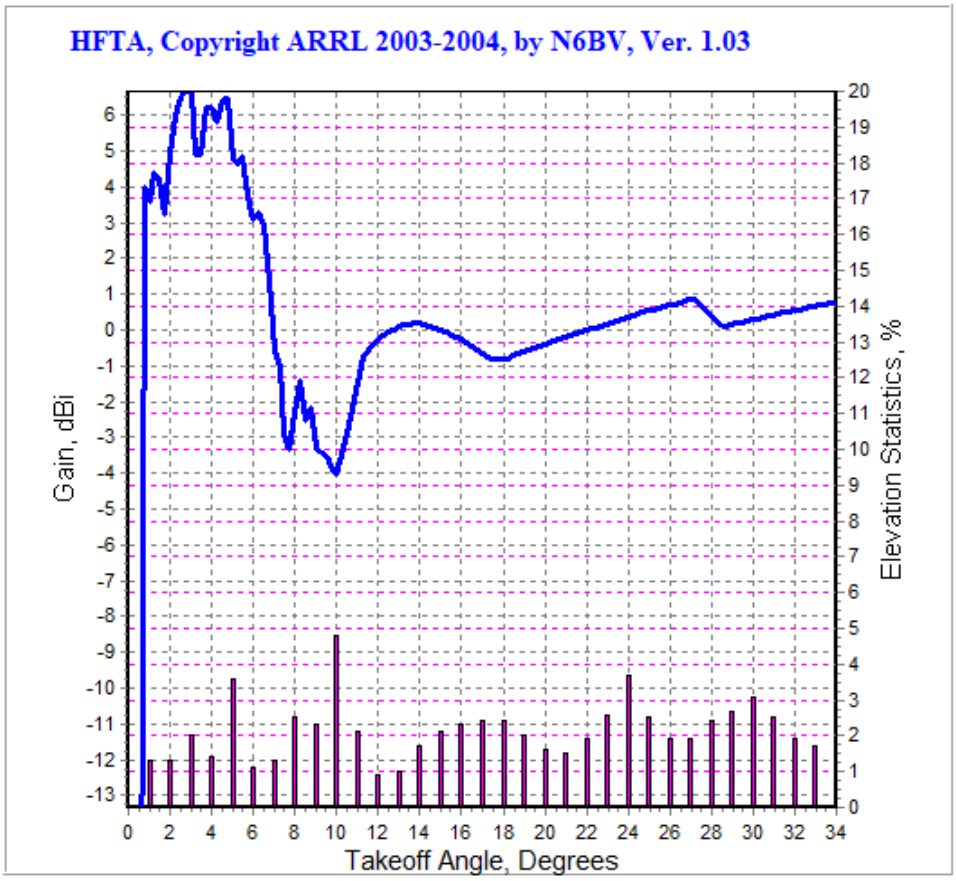
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 6.7 dBi

AD7L-1-260.00.PRO
45 ft
Dipole
Fig. of Merit: -.3

Elev. Statistic
W7-OR-US.PRN

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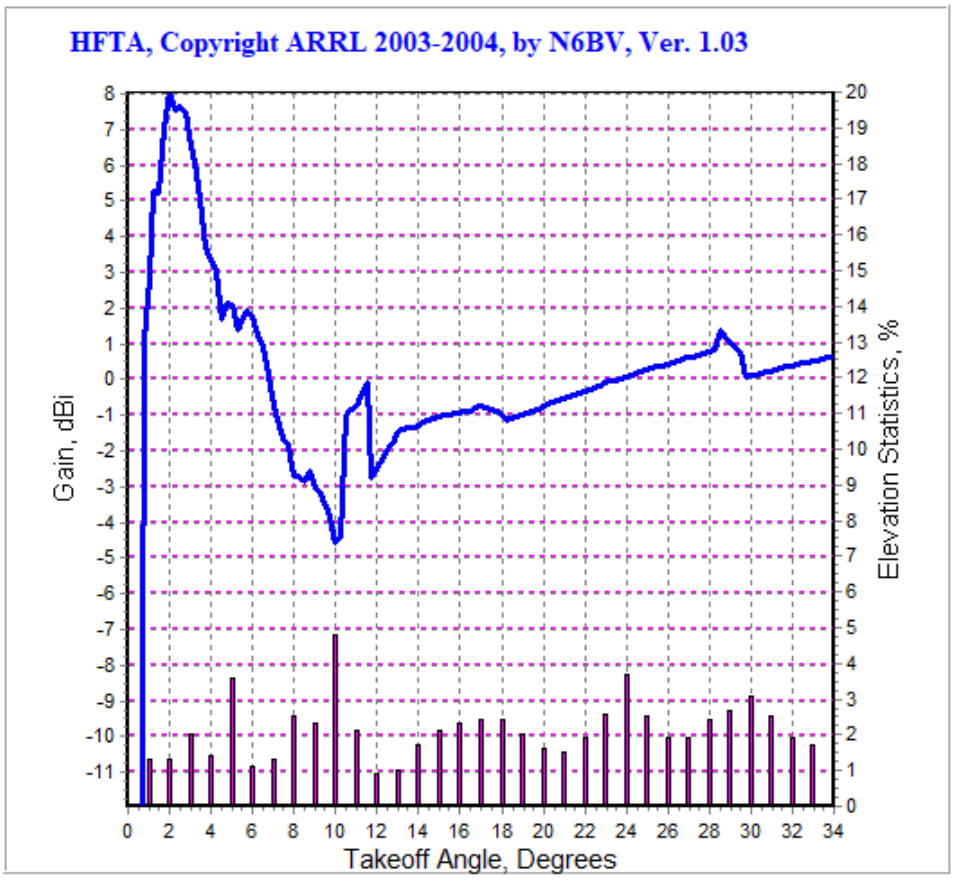
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 8.0 dBi
AD7L-1-270.00.PRO
45 ft
Dipole
Fig. of Merit: -.7

Elev. Statistic
W7-OR-US.PRN

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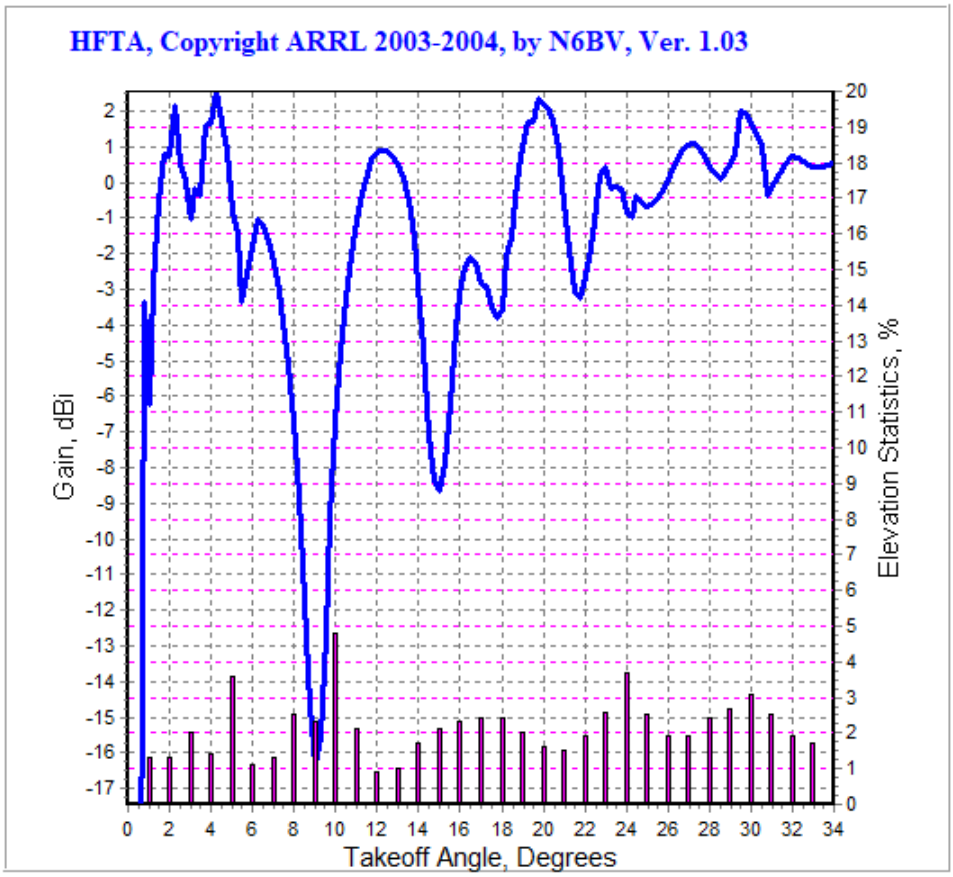
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 2.6 dBi
AD7L-1-280.00.PRO
45 ft
Dipole
Fig. of Merit: -2.3

Elev. Statistic
W7-OR-US.PRN

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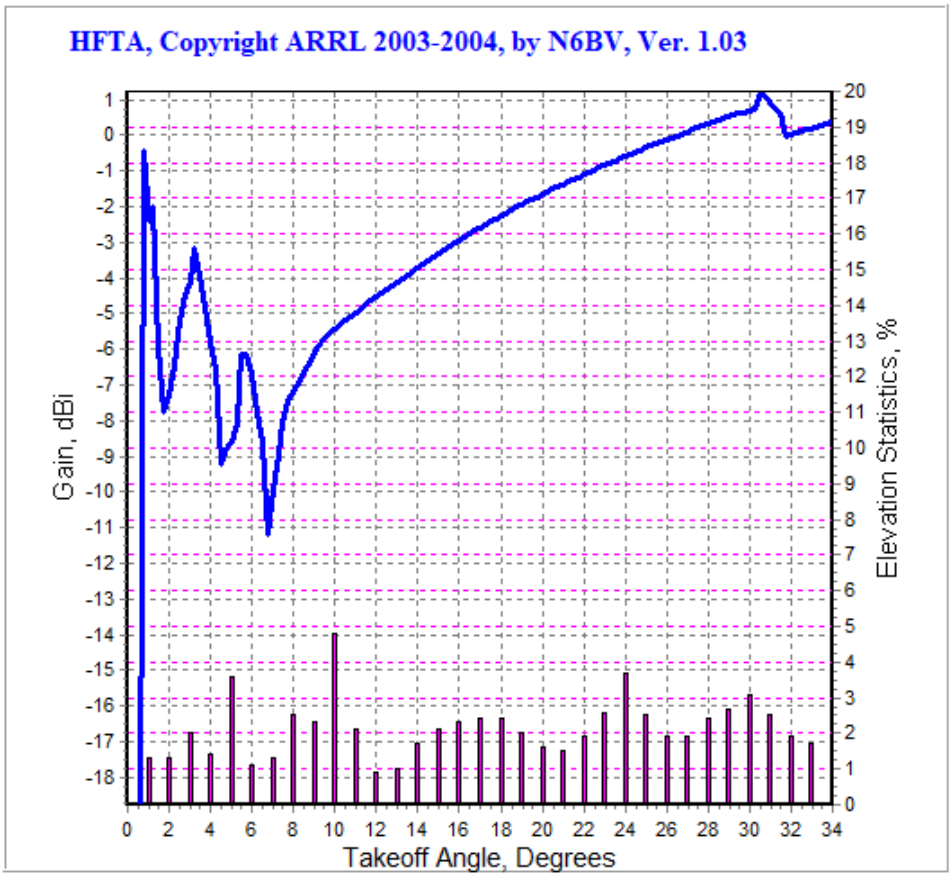
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 1.2 dBi
AD7L-1-290.00.PRO
45 ft
Dipole
Fig. of Merit: -3.2

Elev. Statistic
W7-OR-US.PRN

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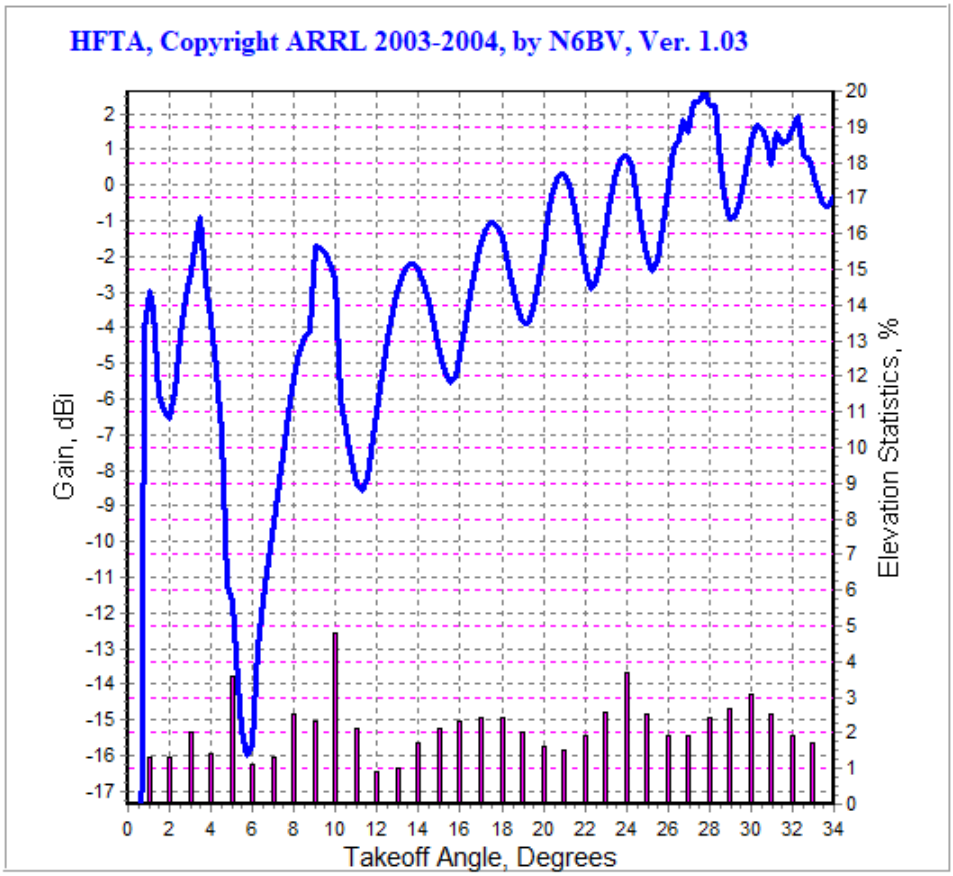
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 2.6 dBi
AD7L-1-300.00.PRO
45 ft
Dipole
Fig. of Merit: -2.8

Elev. Statistic
W7-OR-US.PRN

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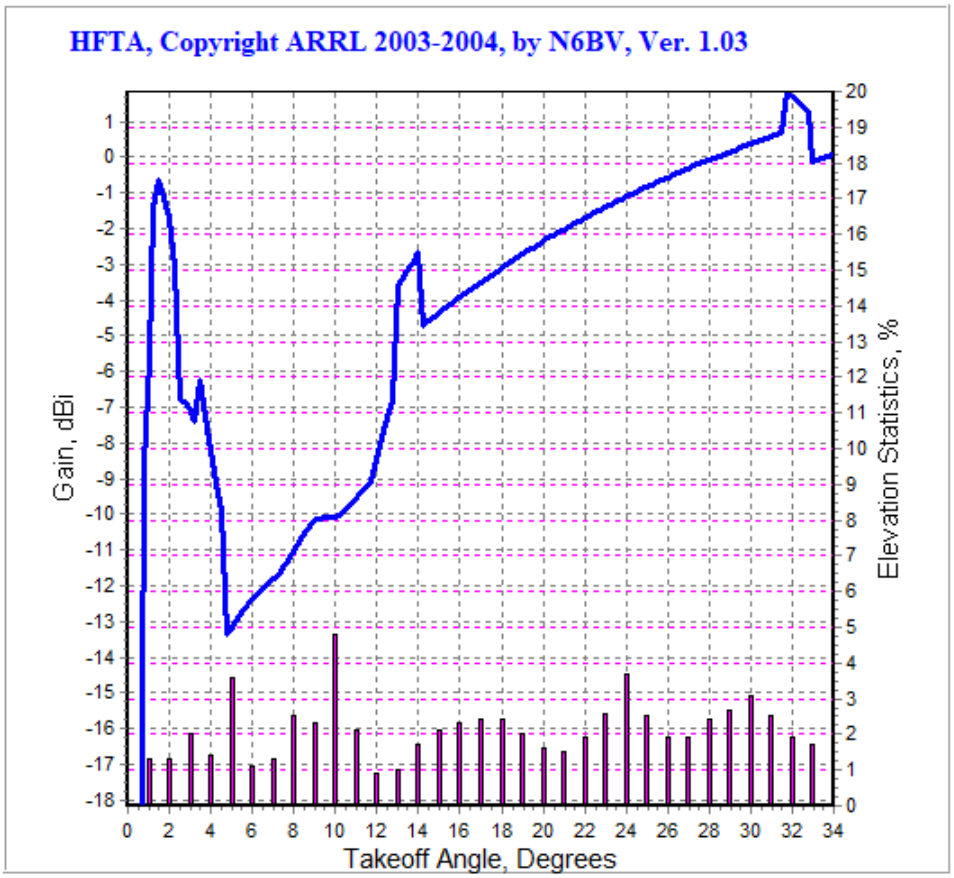
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 1.8 dBi
AD7L-1-310.00.PRO
45 ft
Dipole
Fig. of Merit: -3.8

Elev. Statistic
W7-OR-US.PRN

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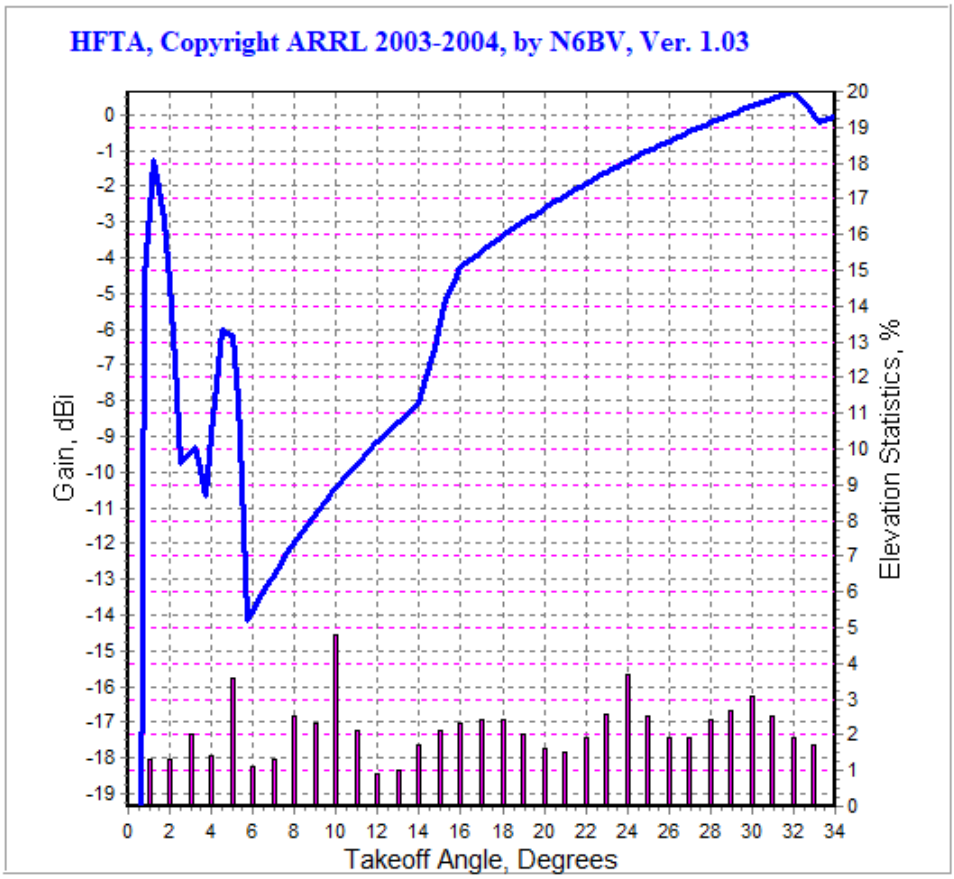
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: .6 dBi
AD7L-1-320.00.PRO
45 ft
Dipole
Fig. of Merit: -4.1

Elev. Statistic
W7-OR-US.PRN

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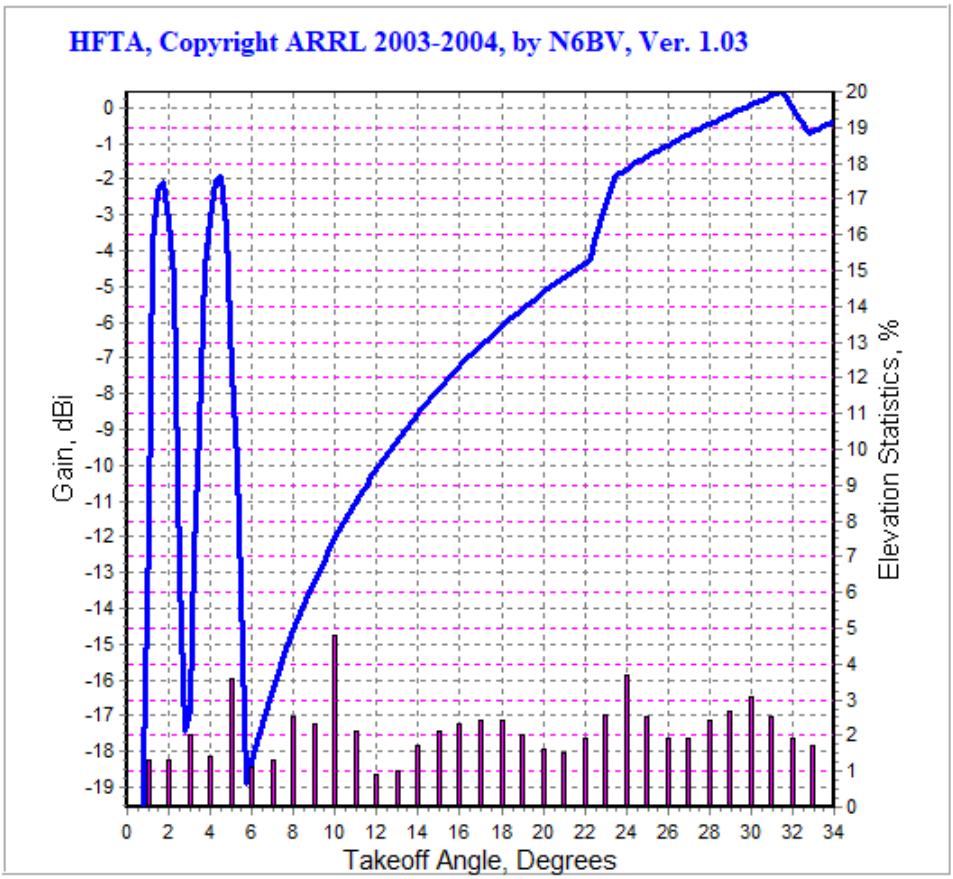
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: .4 dBi
AD7L-1-330.00.PRO
45 ft
Dipole
Fig. of Merit: -4.9

Elev. Statistic
W7-OR-US.PRN

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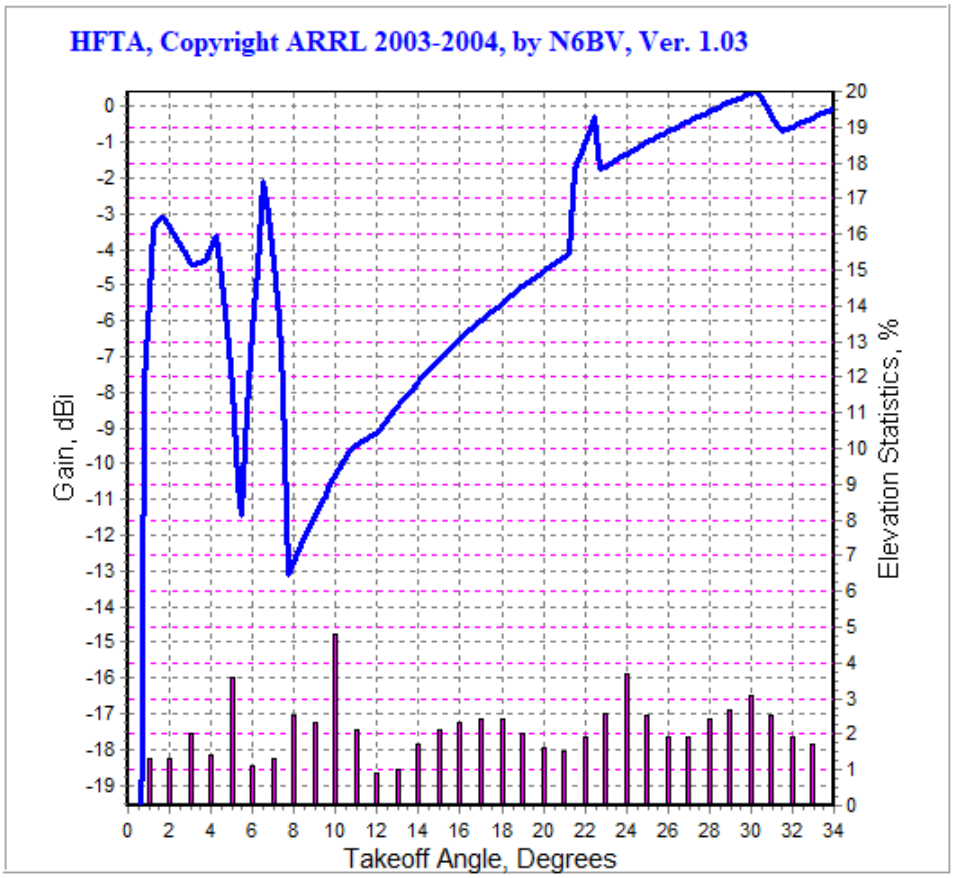
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: .4 dBi
AD7L-1-340.00.PRO
45 ft
Dipole
Fig. of Merit: -4.3

Elev. Statistic
W7-OR-US.PRN

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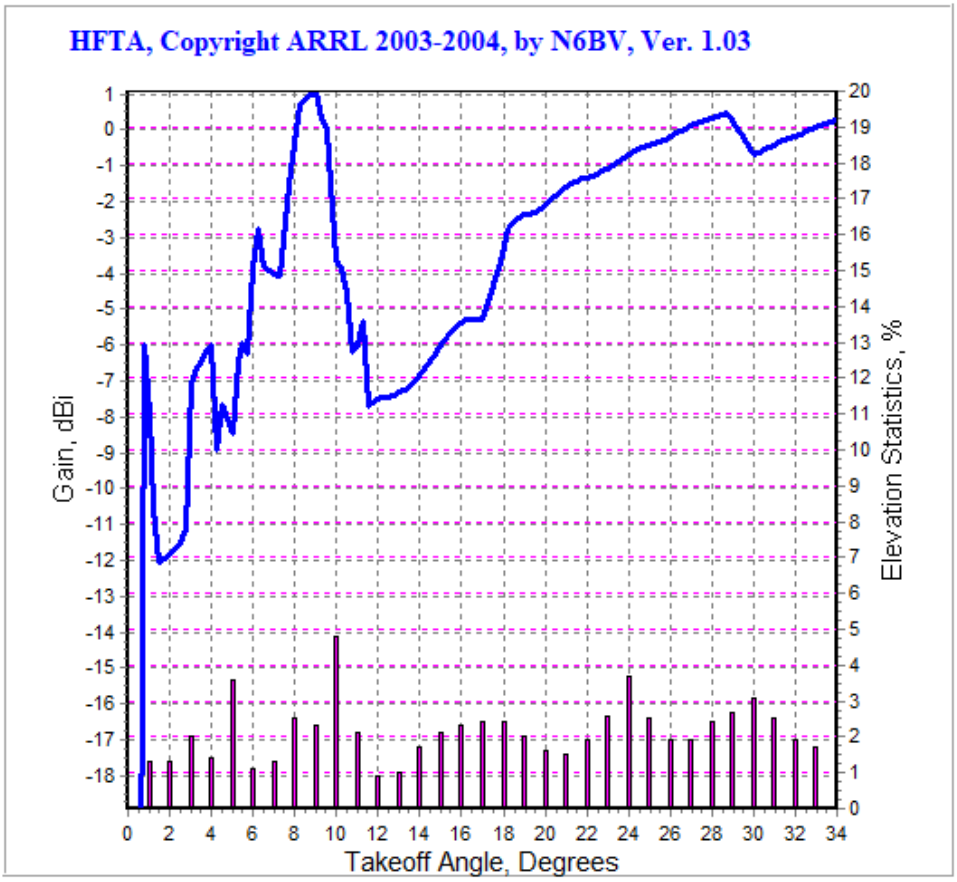
Output Graph, HFTA



Freq. = 3.5 MHz
Max. Gain: 1.1 dBi
AD7L-1-350.00.PRO
45 ft
Dipole
Fig. of Merit: -3.3

Elev. Statistic
W7-OR-US.PRN

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