

Non-Compliant Antenna §25.220

Riverside 2.4m Seatel 9797 Fixed Earth Stations

Fixed Satellite Service

C-Band 3700-4200 MHz Receive and 5926 – 6425MHz Transmit

The proposed antenna Seatel 9797 does not strictly comply with §25.209 of the FCC Rules and Regulations. In the Part 25 Earth Station Fifth Report and Order, the Federal Communications Commission (Commission) adopted streamlined procedures for reviewing non-routine earth station license applications. As part of that Report and Order, the Commission directed the International Bureau to create a list of approved non-routine earth station antennas to be posted on the Commission's website. The Commission concluded that a website listing approved non-routine antennas, including antenna gain patterns and the conditions placed on the use of each antenna, would help applicants in preparing applications for non-routine earth station licenses and expedite review of these applications. Earth station applicants proposing to use an antenna that is on this list will no longer need to attach antenna radiation plots as an exhibit to their applications, as required by Section 25.132(b)(3) of the Commission's rules. Rather, they need only to provide an attachment to their applications citing the particular non-routine earth station antenna they plan to use, and an application file number and call sign of a license in which that type of non-routine antenna has been approved, and an application file number and call sign of a license in which that type of non-routine antenna has been approved.

For the 2.4m Seatel 9797 the application file number and call sign is:

File #: SES-LIC-20070216-00237

Call Sign: E070030,

Licensee: CapRock Communications, Inc.

Specified EIRP Density is 30.6 dBW/4kHz

Date of Grant: 04/25/2007

The KVH Riverside earth will operate with a maximum input spectral power density into the antenna not to exceed 24.2 dBW/4kHz which is 6 dB less than the above reference earth station. Frequency Coordination has been performed for the power density, satellite arc, and appropriate antenna horizon gain.

The applicant to agree to accept any adjacent satellite interference in the 11/12 GHz receive band as a result of the performance of the antenna. The applicant to agree to accept any adjacent satellite interference in the 4 GHz receive band as a result of the performance of the antenna. The applicant understands that adjacent satellite interference protection applies only to the extent of the criteria set forth in §25.209. Should the use of this antenna cause interference to other systems; the applicant agrees to terminate transmission upon notice from the Commission. Should the use of this antenna cause interference to other systems; the applicant agrees to terminate transmission upon notice from the Commission.

The minimum elevation angle of the proposed earth station will not exceed the minimum elevation angle of the previously licensed 2.4meter under Call Sign E070030, therefore the antenna gains for the

proposed will not exceed those of that previously licensed with respect to any transmit power limitations.

Per §25.115(h)(4) the earth station applicant certifies that it will limit its pointing error to 0.5.

KVH V11 1.0m Compliance with §25.220

Riverside 1.0 m KVH V11

C-band ESV Antenna Pattern and Off-Axis EIRP Analysis

The V11 will transmit using CRMA spreading over a 18 MHz channel bandwidth. The small diameter C-band antenna does not meet the FCC §25.209 antenna pattern, see antenna gain patterns in Figures 1 and 2 below, however, KVH certifies that the aggregate EIRP levels do not exceed the limits specified for C-band ESVs in Section §25.220 of the Commission’s rules, which is the combined levels of §25.209 and §25.212. The co-pol off-axis EIRP spectral density levels of the KVH ESV terminal are shown in Figures 3 and 4 below. Note that a calculated worst case aggregate EIRP would occur when N=8 users for an 18 MHz channel. Table 1 below summarizes the channel power and off-axis EIRP calculations. Figure 5 shows the Cross-pol EIRP patterns compared to the 25.220 mask. The details of all these charts are included in Tables 2 and 3 below. The worst case exceedance is 11.33 dB at -5.47 degrees. The worst case RF power density is -24.1 dBW/4kHz which is 21.4 dB below FCC §25.212 requirement of -2.7 dBW/kHz. This antenna will be used as part of an ESV network where there will be a maximum of 8 simultaneous users. The combination of N=8 (9.03 dB) and exceedance (11.33 dB) is 20.36 dB which is still below the RF 21.4 dB RF power density relaxation over FCC §25.212.

Table 1 - KVH V11 18 MHz Channel Calculations	Value	Units
Power a feed Flange	17.46	W
Power a feed Flange	12.42	dBW
Channel; Bandwidth	18	MHz
RF Power Density at Flange	-24.1	dBW/4 kHz
RF Power Density at Flange	-0.1	dBW/ MHz
Maximum Horizon EIRP Density	-15.73	dBW/4kHz
At Angle	12.81	deg
Maximum Number Simultaneous Users N	1	Network N=8
Worst Case Antenna Gain Exceedance	-11.33	dB
At Angle	-5.47	deg.
For Antenna Pattern	6.425 GHz E	
EIRP Exceedance Limited by Pattern	6.425 GHz E	
# Network Simultaneous Users N - worst case exceedance between -7 and +7 deg	8	

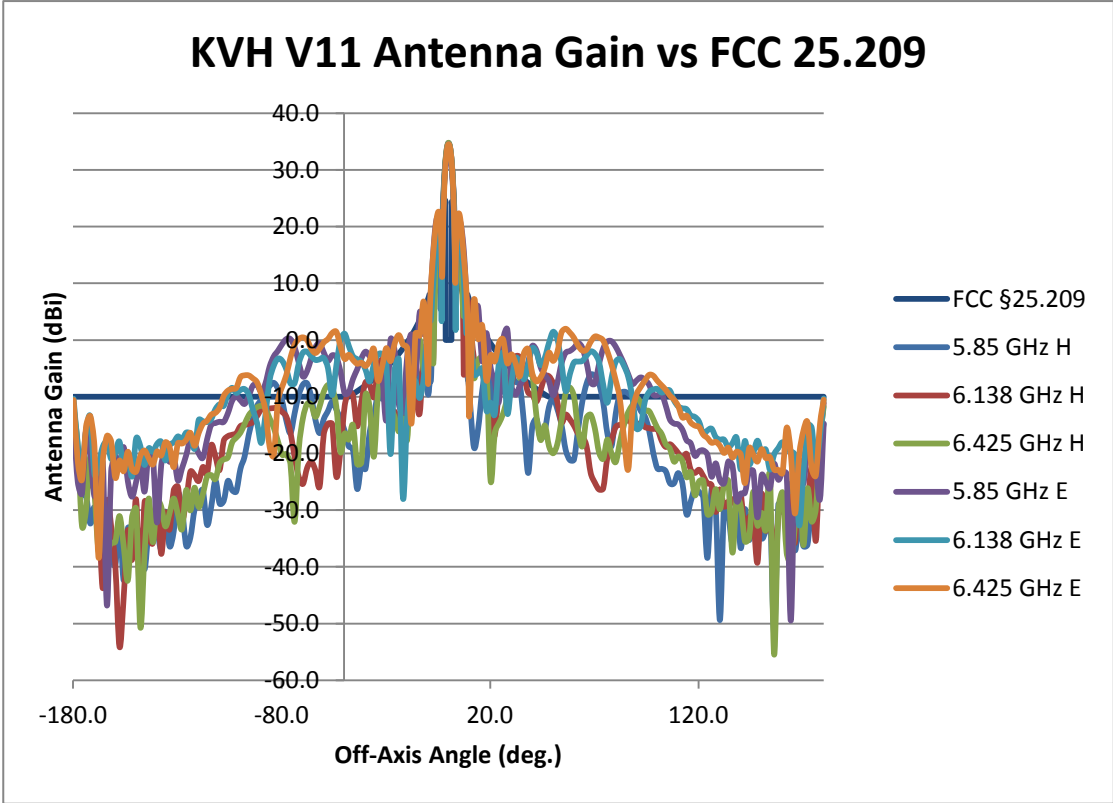


Figure 1 – C-Band V11 Antenna Pattern vs 25.209 mask , +/- 180 degrees

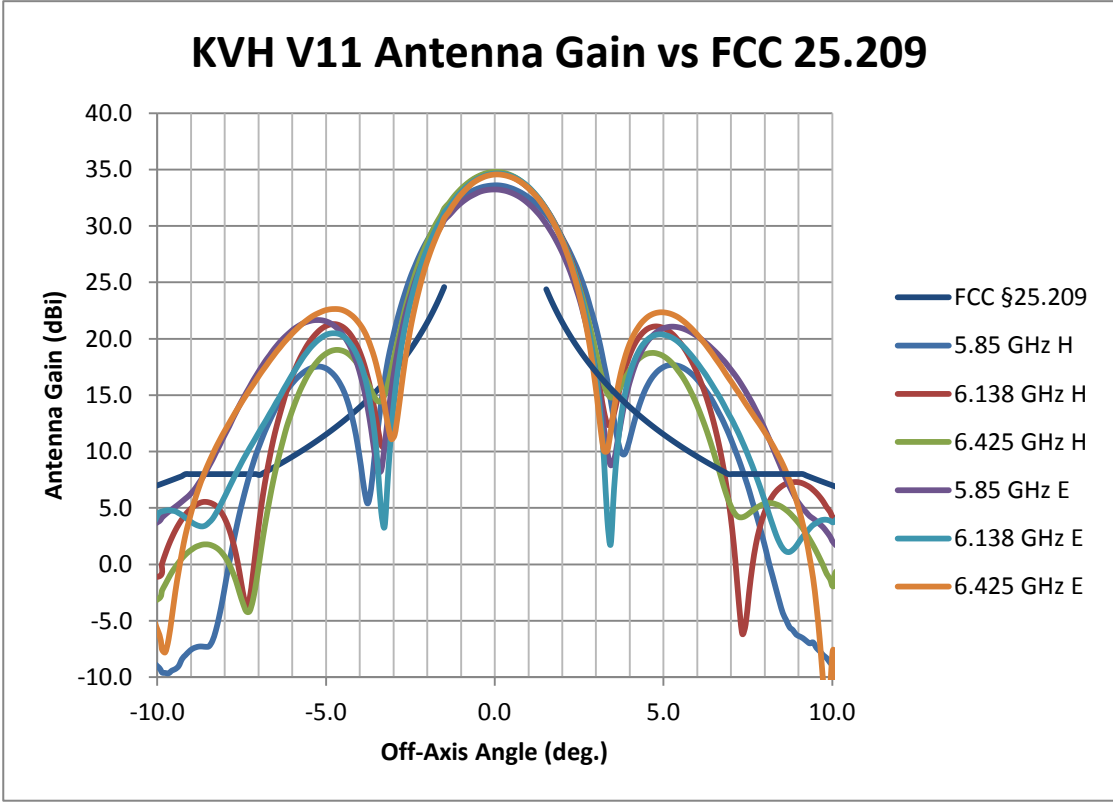


Figure 2– C-band ESV Antenna Pattern vs 25.209 mask , +/- 10 degrees

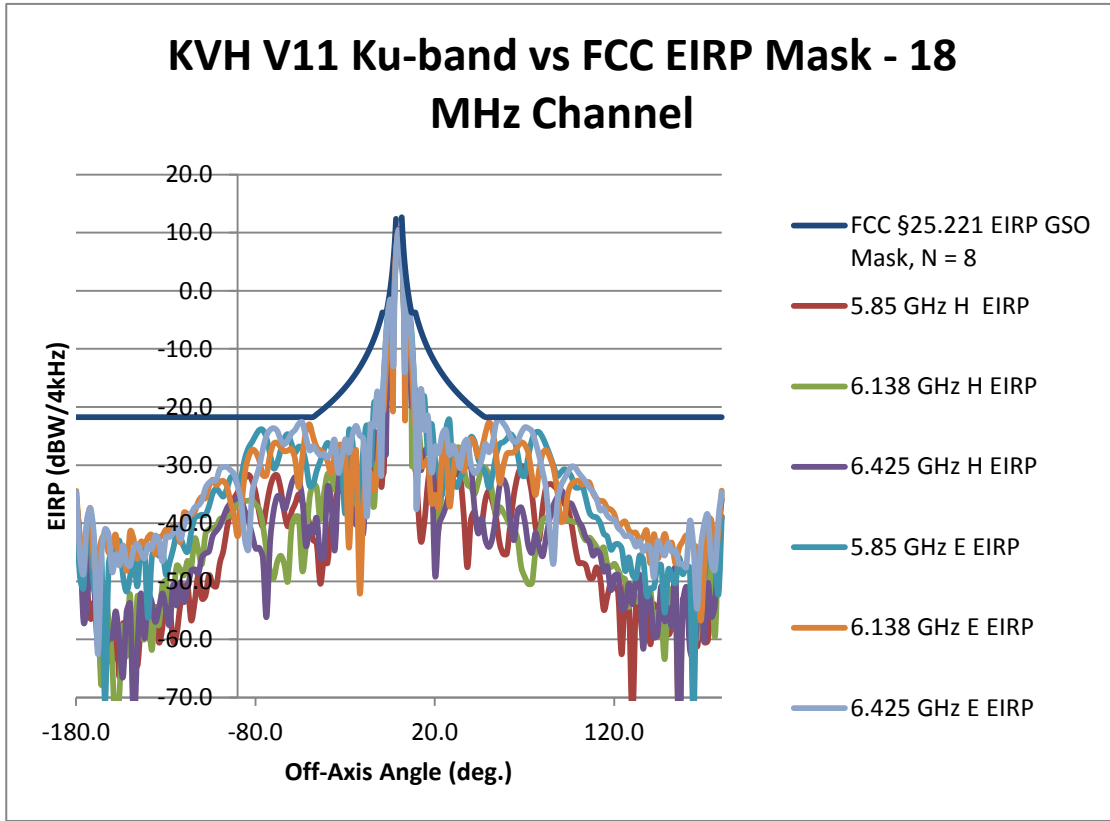


Figure 3 – C-band V11 Antenna EIRP vs 25.220 mask , +/- 180 degrees

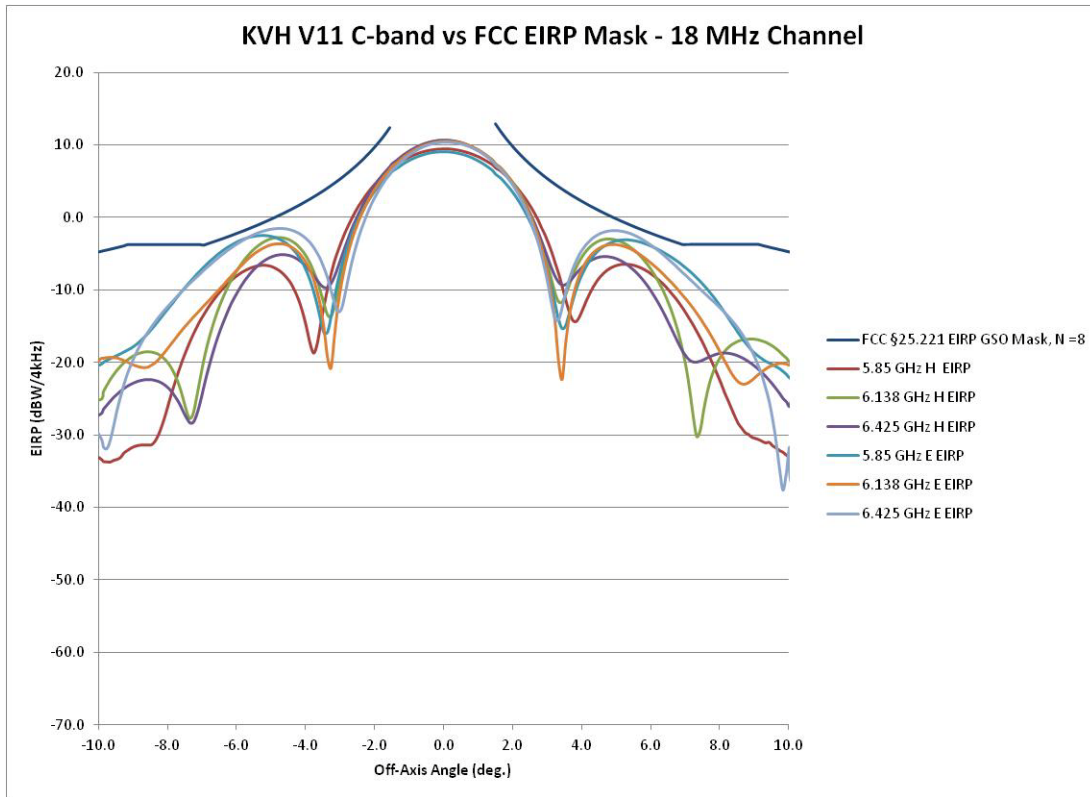


Figure 4 – C-band V11 Antenna EIRP vs 25.220 mask , +/- 10 degrees

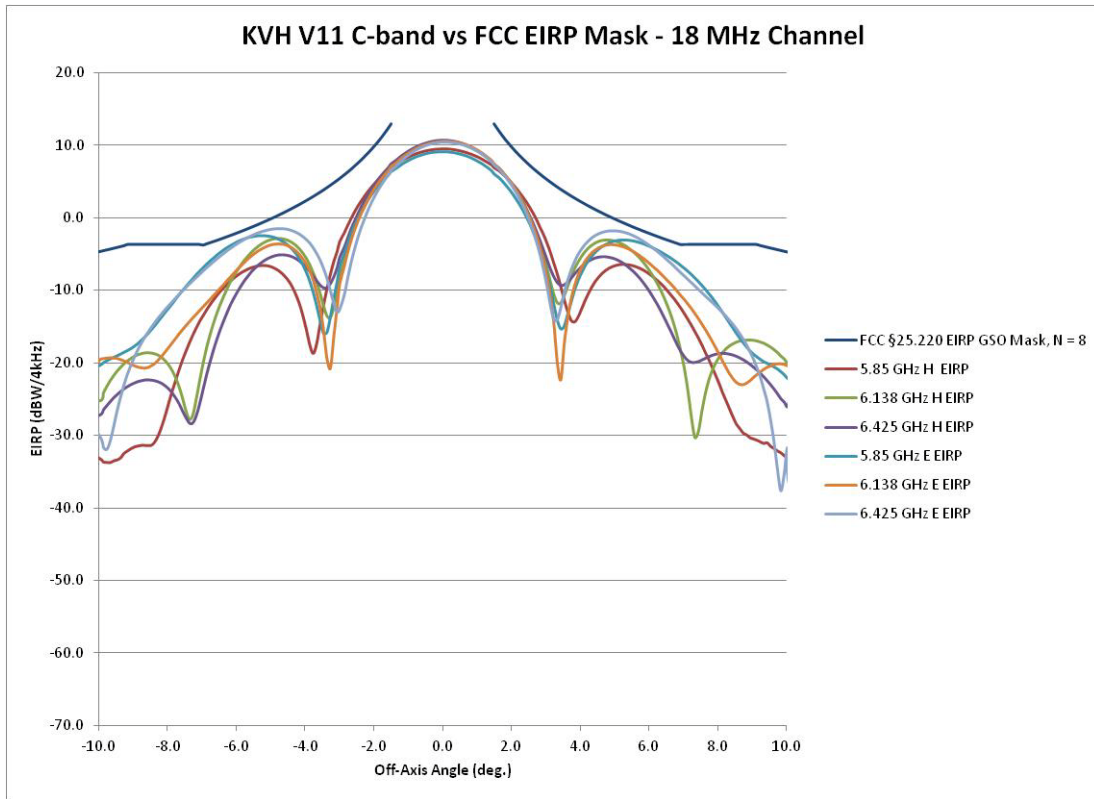


Figure 5 – C-band V11 Antenna EIRP vs 25.220 X-pol mask , +/-10 degrees

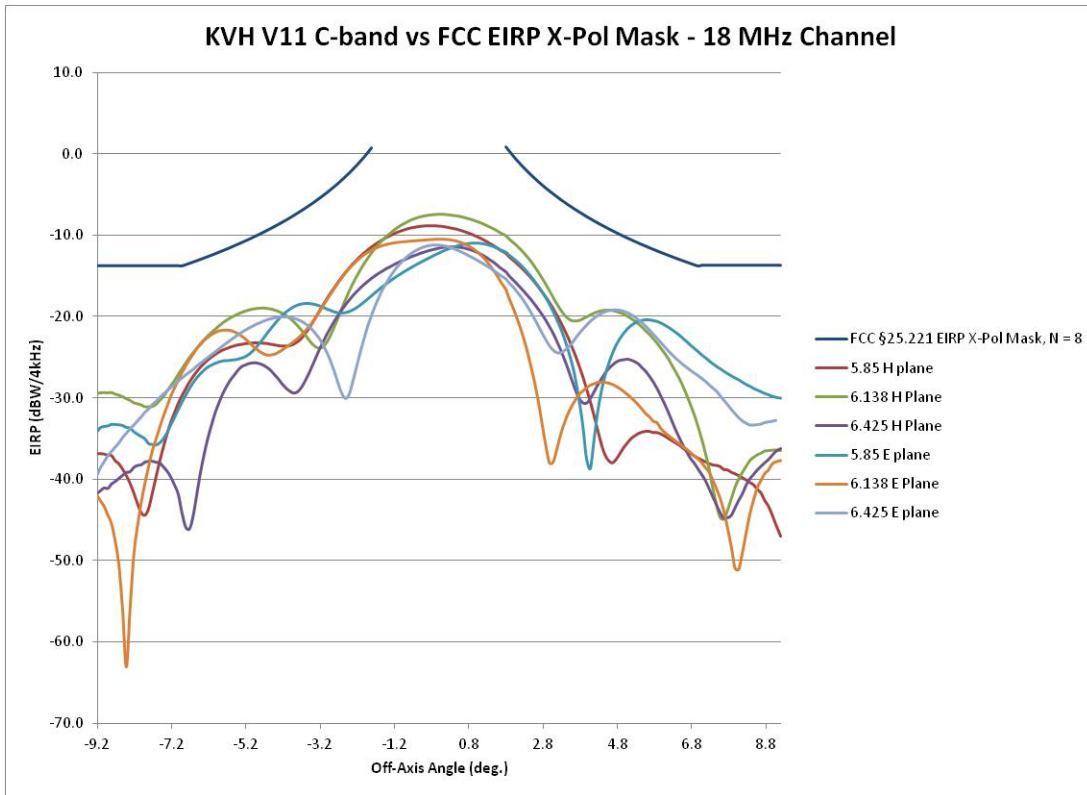


Table 2	Co-Pol Antenna Gain (dBi)									Co-Pol ESV EIRP (dBW/4 kHz)							
Off Axis Angle (degree)	5.85 GHz H	6.138 GHz H	6.425 GHz H	5.85 GHz E	6.138 GHz E	6.425 GHz E	Off Axis Angle (degree)	FCC §25.209	FCC §25.221 EIRP GSO Mask, N = 8	FCC §25.221 EIRP Elevation Mask, N = 8	5.85 GHz H EIRP	6.138 GHz H EIRP	6.425 GHz H EIRP	5.85 GHz E EIRP	6.138 GHz E EIRP	6.425 GHz E EIRP	Meets Mask
-179.8	-14.9	-11.3	-11.9	-14.8	-10.3	-10.6	-179.8	-10.0	-21.7	-21.7	-42.0	-38.4	-39.0	-41.9	-37.5	-37.7	Y
-177.8	-22.2	-23.3	-18.7	-25.1	-18.5	-21.5	-177.8	-10.0	-21.7	-21.7	-49.3	-50.5	-45.8	-52.2	-45.7	-48.6	Y
-175.8	-27.1	-26.3	-32.8	-27.0	-22.1	-24.7	-175.8	-10.0	-21.7	-21.7	-54.2	-53.5	-59.9	-54.1	-49.2	-51.8	Y
-173.8	-27.6	-21.3	-29.8	-15.8	-15.8	-15.2	-173.8	-10.0	-21.7	-21.7	-54.7	-48.4	-56.9	-42.9	-42.9	-42.3	Y
-171.8	-32.4	-25.0	-20.5	-20.0	-13.5	-13.4	-171.8	-10.0	-21.7	-21.7	-59.5	-52.1	-47.7	-47.1	-40.7	-40.5	Y
-169.8	-29.5	-26.5	-27.0	-27.5	-23.7	-18.8	-169.8	-10.0	-21.7	-21.7	-56.6	-53.7	-54.1	-54.7	-50.8	-46.0	Y
-167.8	-34.5	-30.1	-37.3	-24.5	-21.8	-38.5	-167.8	-10.0	-21.7	-21.7	-61.6	-57.2	-64.4	-51.6	-48.9	-65.6	Y
-165.8	-32.4	-43.8	-32.1	-21.6	-18.8	-21.3	-165.8	-10.0	-21.7	-21.7	-59.5	-70.9	-59.2	-48.7	-45.9	-48.4	Y
-163.8	-30.0	-28.6	-36.9	-46.8	-18.0	-16.9	-163.8	-10.0	-21.7	-21.7	-57.2	-55.7	-64.0	-73.9	-45.1	-44.0	Y
-161.8	-37.1	-32.9	-35.7	-23.1	-21.0	-17.9	-161.8	-10.0	-21.7	-21.7	-64.3	-60.0	-62.9	-50.2	-48.1	-45.0	Y
-159.8	-39.7	-39.8	-35.6	-20.5	-19.8	-24.3	-159.8	-10.0	-21.7	-21.7	-66.8	-67.0	-62.7	-47.6	-47.0	-51.4	Y
-157.8	-31.5	-54.1	-31.0	-22.4	-17.9	-21.3	-157.8	-10.0	-21.7	-21.7	-58.6	-81.2	-58.2	-49.6	-45.0	-48.4	Y
-155.8	-42.4	-45.4	-36.3	-18.9	-22.7	-23.2	-155.8	-10.0	-21.7	-21.7	-69.5	-72.5	-63.4	-46.0	-49.8	-50.3	Y
-153.8	-33.2	-33.6	-42.4	-24.9	-20.0	-19.7	-153.8	-10.0	-21.7	-21.7	-60.4	-60.7	-69.5	-52.0	-47.1	-46.8	Y
-151.8	-35.6	-38.8	-31.2	-27.6	-24.1	-22.8	-151.8	-10.0	-21.7	-21.7	-62.8	-65.9	-58.3	-54.8	-51.2	-49.9	Y
-149.8	-33.1	-28.2	-29.8	-25.0	-17.4	-23.2	-149.8	-10.0	-21.7	-21.7	-60.2	-55.3	-56.9	-52.1	-44.5	-50.3	Y
-147.8	-34.5	-46.8	-50.7	-21.4	-18.7	-20.4	-147.8	-10.0	-21.7	-21.7	-61.6	-73.9	-77.8	-48.5	-45.8	-47.5	Y
-145.8	-40.5	-28.7	-37.6	-26.7	-22.0	-19.5	-145.8	-10.0	-21.7	-21.7	-67.6	-55.8	-64.8	-53.9	-49.2	-46.6	Y
-143.8	-33.9	-34.6	-27.9	-19.7	-19.1	-20.9	-143.8	-10.0	-21.7	-21.7	-61.0	-61.8	-55.1	-46.9	-46.2	-48.0	Y
-141.8	-35.2	-35.8	-35.7	-20.5	-19.7	-22.0	-141.8	-10.0	-21.7	-21.7	-62.3	-62.9	-62.8	-47.7	-46.8	-49.1	Y
-139.8	-33.6	-28.0	-28.3	-32.2	-18.3	-19.7	-139.8	-10.0	-21.7	-21.7	-60.7	-55.1	-55.4	-59.3	-45.4	-46.8	Y
-137.8	-36.8	-37.7	-29.4	-22.1	-17.9	-20.4	-137.8	-10.0	-21.7	-21.7	-63.9	-64.8	-56.5	-49.2	-45.1	-47.5	Y
-135.8	-30.3	-30.4	-32.9	-19.6	-21.2	-18.0	-135.8	-10.0	-21.7	-21.7	-57.4	-57.6	-60.0	-46.7	-48.4	-45.2	Y
-133.8	-36.4	-33.4	-30.5	-21.5	-18.6	-18.8	-133.8	-10.0	-21.7	-21.7	-63.5	-60.6	-57.7	-48.6	-45.7	-46.0	Y
-131.8	-33.8	-26.5	-27.9	-20.5	-18.0	-22.4	-131.8	-10.0	-21.7	-21.7	-60.9	-53.6	-55.1	-47.6	-45.1	-49.6	Y

-129.8	-27.1	-25.9	-30.7	-24.8	-17.0	-18.2	-129.8	-10.0	-21.7	-21.7	-54.2	-53.0	-57.8	-51.9	-44.1	-45.4	Y
-127.8	-29.9	-31.7	-33.3	-22.6	-17.5	-18.3	-127.8	-10.0	-21.7	-21.7	-57.0	-58.8	-60.5	-49.7	-44.6	-45.4	Y
-125.8	-36.3	-28.3	-26.5	-20.3	-16.3	-17.6	-125.8	-10.0	-21.7	-21.7	-63.4	-55.4	-53.6	-47.4	-43.4	-44.7	Y
-123.8	-34.9	-23.2	-30.1	-17.5	-16.6	-16.4	-123.8	-10.0	-21.7	-21.7	-62.0	-50.4	-57.2	-44.7	-43.7	-43.5	Y
-121.8	-29.9	-23.8	-26.0	-18.3	-19.2	-18.7	-121.8	-10.0	-21.7	-21.7	-57.1	-51.0	-53.2	-45.4	-46.3	-45.8	Y
-119.8	-28.1	-24.9	-29.5	-20.0	-14.1	-16.4	-119.8	-10.0	-21.7	-21.7	-55.2	-52.0	-56.6	-47.1	-41.2	-43.5	Y
-117.8	-26.6	-22.4	-27.2	-20.8	-14.3	-14.8	-117.8	-10.0	-21.7	-21.7	-53.7	-49.5	-54.3	-47.9	-41.4	-41.9	Y
-115.8	-32.6	-23.6	-24.1	-17.5	-14.5	-14.2	-115.8	-10.0	-21.7	-21.7	-59.7	-50.7	-51.2	-44.7	-41.6	-41.3	Y
-113.8	-29.4	-18.5	-23.8	-15.0	-13.9	-13.2	-113.8	-10.0	-21.7	-21.7	-56.6	-45.7	-50.9	-42.1	-41.0	-40.3	Y
-111.8	-24.8	-20.5	-24.5	-14.7	-12.2	-12.9	-111.8	-10.0	-21.7	-21.7	-51.9	-47.6	-51.6	-41.8	-39.3	-40.0	Y
-109.8	-28.8	-22.9	-21.8	-14.4	-11.3	-11.9	-109.8	-10.0	-21.7	-21.7	-56.0	-50.1	-48.9	-41.5	-38.5	-39.1	Y
-107.8	-28.4	-17.8	-21.1	-14.4	-11.6	-9.9	-107.8	-10.0	-21.7	-21.7	-55.5	-44.9	-48.2	-41.6	-38.7	-37.0	Y
-105.8	-24.9	-17.0	-20.7	-12.9	-9.5	-8.9	-105.8	-10.0	-21.7	-21.7	-52.0	-44.1	-47.8	-40.0	-36.6	-36.1	Y
-103.8	-26.5	-16.7	-18.1	-10.7	-8.4	-8.6	-103.8	-10.0	-21.7	-21.7	-53.6	-43.8	-45.2	-37.9	-35.5	-35.8	Y
-101.8	-26.7	-16.4	-17.2	-9.9	-9.3	-8.5	-101.8	-10.0	-21.7	-21.7	-53.8	-43.6	-44.3	-37.1	-36.5	-35.6	Y
-99.8	-22.7	-15.2	-16.4	-10.6	-8.8	-6.6	-99.8	-10.0	-21.7	-21.7	-49.9	-42.3	-43.5	-37.8	-35.9	-33.7	Y
-97.8	-20.6	-15.0	-14.8	-11.3	-8.6	-6.2	-97.8	-10.0	-21.7	-21.7	-47.7	-42.1	-41.9	-38.4	-35.8	-33.4	Y
-95.8	-16.7	-14.8	-13.3	-9.9	-9.6	-6.3	-95.8	-10.0	-21.7	-21.7	-43.8	-41.9	-40.4	-37.0	-36.7	-33.4	Y
-93.8	-13.9	-14.5	-12.4	-8.0	-12.3	-6.8	-93.8	-10.0	-21.7	-21.7	-41.0	-41.6	-39.5	-35.2	-39.4	-33.9	Y
-91.8	-11.6	-13.4	-11.8	-7.9	-14.6	-7.5	-91.8	-10.0	-21.7	-21.7	-38.8	-40.6	-39.0	-35.0	-41.7	-34.6	Y
-89.8	-10.5	-12.3	-11.6	-9.1	-18.1	-9.6	-89.8	-10.0	-21.7	-21.7	-37.6	-39.4	-38.7	-36.2	-45.3	-36.7	Y
-87.8	-9.0	-12.2	-12.0	-7.6	-13.2	-12.4	-87.8	-10.0	-21.7	-21.7	-36.2	-39.4	-39.1	-34.8	-40.3	-39.6	Y
-85.8	-8.1	-12.1	-13.8	-4.7	-7.1	-18.8	-85.8	-10.0	-21.7	-21.7	-35.2	-39.2	-40.9	-31.8	-34.2	-46.0	Y
-83.8	-7.6	-12.0	-15.5	-2.9	-4.5	-20.4	-83.8	-10.0	-21.7	-21.7	-34.7	-39.1	-42.6	-30.0	-31.6	-47.5	Y
-81.8	-8.6	-12.0	-17.9	-1.9	-3.3	-10.8	-81.8	-10.0	-21.7	-21.7	-35.7	-39.1	-45.0	-29.0	-30.4	-37.9	Y
-79.8	-10.7	-12.7	-20.2	-0.8	-3.6	-8.3	-79.8	-10.0	-21.7	-21.7	-37.8	-39.8	-47.4	-27.9	-30.8	-35.4	Y
-77.8	-14.2	-13.5	-20.1	0.2	-5.1	-6.2	-77.8	-10.0	-21.7	-21.7	-41.3	-40.6	-47.3	-27.0	-32.3	-33.3	Y
-75.8	-16.4	-16.3	-21.9	0.2	-7.6	-3.1	-75.8	-10.0	-21.7	-21.7	-43.6	-43.4	-49.0	-27.0	-34.8	-30.3	Y
-73.8	-13.0	-20.6	-32.1	-1.2	-7.6	-0.9	-73.8	-10.0	-21.7	-21.7	-40.1	-47.8	-59.2	-28.4	-34.7	-28.0	Y
-71.8	-9.7	-24.2	-19.2	-4.0	-4.1	0.2	-71.8	-10.0	-21.7	-21.7	-36.8	-51.3	-46.3	-31.2	-31.2	-27.0	Y
-69.8	-7.9	-25.4	-13.8	-6.5	-2.2	0.5	-69.8	-10.0	-21.7	-21.7	-35.0	-52.5	-40.9	-33.6	-29.3	-26.7	Y
-67.8	-7.7	-22.6	-11.3	-5.5	-2.1	0.0	-67.8	-10.0	-21.7	-21.7	-34.8	-49.7	-38.4	-32.6	-29.2	-27.1	Y

-65.8	-10.1	-21.5	-11.4	-3.2	-2.9	-1.6	-65.8	-10.0	-21.7	-21.7	-37.2	-48.6	-38.6	-30.3	-30.0	-28.7	Y
-63.8	-14.1	-23.0	-13.6	-1.3	-3.5	-2.3	-63.8	-10.0	-21.7	-21.7	-41.2	-50.1	-40.7	-28.4	-30.6	-29.4	Y
-61.8	-16.4	-25.8	-11.7	-0.6	-3.4	-1.5	-61.8	-10.0	-21.7	-21.7	-43.6	-53.0	-38.8	-27.7	-30.5	-28.6	Y
-59.8	-14.0	-16.6	-9.1	-2.2	-3.1	-0.4	-59.8	-10.0	-21.7	-21.7	-41.1	-43.7	-36.2	-29.3	-30.3	-27.5	Y
-57.8	-12.5	-14.8	-7.9	-3.7	-5.0	0.2	-57.8	-10.0	-21.7	-21.7	-39.7	-41.9	-35.0	-30.8	-32.1	-26.9	Y
-55.8	-10.9	-14.8	-8.3	-2.7	-9.7	1.2	-55.8	-10.0	-21.7	-21.7	-38.0	-42.0	-35.5	-29.8	-36.8	-25.9	Y
-53.8	-12.3	-24.1	-11.7	-3.0	-4.5	1.5	-53.8	-10.0	-21.7	-21.7	-39.4	-51.2	-38.9	-30.1	-31.6	-25.7	Y
-51.8	-14.0	-19.5	-19.8	-5.6	0.0	-1.1	-51.8	-10.0	-21.7	-21.7	-41.1	-46.6	-46.9	-32.7	-27.1	-28.3	Y
-49.8	-16.0	-11.6	-16.5	-9.4	1.1	-3.4	-49.8	-10.0	-21.7	-21.7	-43.1	-38.8	-43.6	-36.6	-26.0	-30.5	Y
-47.8	-18.8	-9.2	-17.6	-9.2	-1.0	-2.6	-47.8	-10.0	-21.7	-21.7	-45.9	-36.3	-44.7	-36.4	-28.2	-29.7	Y
-45.8	-19.3	-9.8	-15.0	-6.9	-2.8	-3.5	-45.8	-9.5	-21.3	-21.3	-46.5	-36.9	-42.1	-34.0	-30.0	-30.6	Y
-43.8	-26.3	-15.2	-21.9	-5.2	-3.4	-4.2	-43.8	-9.0	-20.8	-20.8	-53.4	-42.4	-49.0	-32.3	-30.5	-31.3	Y
-41.8	-22.1	-10.9	-21.6	-3.3	-3.8	-4.0	-41.8	-8.5	-20.3	-20.3	-49.2	-38.0	-48.8	-30.4	-31.0	-31.1	Y
-39.8	-22.7	-7.5	-9.7	-2.1	-5.2	-4.6	-39.8	-8.0	-19.7	-19.7	-49.9	-34.6	-36.8	-29.2	-32.3	-31.7	Y
-37.8	-16.3	-7.9	-11.9	-2.9	-7.3	-3.6	-37.8	-7.4	-19.2	-19.2	-43.4	-35.1	-39.0	-30.0	-34.4	-30.7	Y
-35.8	-13.4	-10.1	-20.6	-3.9	-4.3	-1.6	-35.8	-6.8	-18.6	-18.6	-40.6	-37.2	-47.7	-31.0	-31.4	-28.7	Y
-33.8	-9.6	-5.2	-9.3	-5.0	-2.6	-7.2	-33.8	-6.2	-18.0	-18.0	-36.7	-32.3	-36.4	-32.1	-29.7	-34.3	Y
-31.8	-10.4	-3.5	-5.3	-6.5	-2.5	-4.6	-31.8	-5.6	-17.3	-17.3	-37.5	-30.6	-32.5	-33.6	-29.6	-31.7	Y
-29.8	-9.5	-7.4	-4.9	-14.1	-4.2	-1.4	-29.8	-4.9	-16.6	-16.6	-36.6	-34.6	-32.0	-41.3	-31.3	-28.6	Y
-27.8	-9.1	-13.6	-11.6	0.0	-20.1	-3.8	-27.8	-4.1	-15.8	-15.8	-36.2	-40.7	-38.7	-27.1	-47.2	-30.9	Y
-25.8	-9.0	-12.6	-13.6	-1.9	-5.2	-0.6	-25.8	-3.3	-15.0	-15.0	-36.1	-39.7	-40.7	-29.0	-32.3	-27.7	Y
-23.8	-9.3	-15.2	-16.2	-11.4	-3.5	0.9	-23.8	-2.4	-14.1	-14.1	-36.4	-42.4	-43.3	-38.5	-30.6	-26.3	Y
-21.8	-15.2	-12.7	-13.9	-12.7	-27.9	-0.8	-21.8	-1.5	-13.2	-13.2	-42.4	-39.8	-41.0	-39.8	-55.0	-28.0	Y
-19.8	-6.7	-7.7	-17.5	-2.9	-13.2	-1.4	-19.8	-0.4	-12.1	-12.1	-33.8	-34.8	-44.6	-30.0	-40.3	-28.5	Y
-17.8	-3.7	-11.1	-4.2	0.9	-7.0	-14.8	-17.8	0.7	-11.0	-11.0	-30.9	-38.2	-31.3	-26.2	-34.1	-41.9	Y
-15.8	-5.2	-9.7	-0.4	-6.0	-7.3	1.2	-15.8	2.0	-9.7	-9.7	-32.3	-36.8	-27.5	-33.1	-34.4	-26.0	Y
-13.8	-7.8	-12.9	0.0	4.9	-10.2	0.7	-13.8	3.5	-8.2	-8.2	-35.0	-40.0	-27.1	-22.3	-37.4	-26.4	Y
-11.8	-4.5	-1.4	-5.5	1.0	-6.4	6.7	-11.8	5.2	-6.5	-6.5	-31.6	-28.5	-32.6	-26.1	-33.5	-20.5	Y
-10.0	-9.1	-1.1	-3.1	3.8	4.5	-6.0	-10.0	7.0	-4.7	-4.7	-36.2	-28.2	-30.2	-23.3	-22.6	-33.1	Y
-9.9	-9.6	0.0	-2.3	4.1	4.7	-7.5	-9.9	7.1	-4.6	-4.6	-36.7	-27.1	-29.5	-23.0	-22.4	-34.6	Y
-9.8	-9.6	0.9	-1.8	4.4	4.8	-7.8	-9.8	7.3	-4.5	-4.5	-36.8	-26.2	-28.9	-22.7	-22.4	-34.9	Y
-9.7	-9.7	1.7	-1.2	4.7	4.8	-6.6	-9.7	7.4	-4.4	-4.4	-36.8	-25.4	-28.3	-22.5	-22.3	-33.8	Y

-9.6	-9.4	2.4	-0.7	4.9	4.8	-4.6	-9.6	7.5	-4.3	-4.3	-36.5	-24.7	-27.8	-22.2	-22.4	-31.7	Y
-9.5	-9.3	3.0	-0.2	5.1	4.7	-2.4	-9.5	7.6	-4.1	-4.1	-36.4	-24.1	-27.4	-22.0	-22.4	-29.6	Y
-9.4	-9.0	3.5	0.2	5.3	4.5	-0.6	-9.4	7.7	-4.0	-4.0	-36.1	-23.6	-26.9	-21.8	-22.6	-27.7	Y
-9.3	-8.4	4.0	0.5	5.6	4.4	1.1	-9.3	7.8	-3.9	-3.9	-35.5	-23.1	-26.6	-21.5	-22.8	-26.0	Y
-9.2	-8.1	4.4	0.9	5.8	4.1	2.6	-9.2	8.0	-3.7	-3.8	-35.2	-22.7	-26.3	-21.3	-23.0	-24.5	Y
-9.1	-7.8	4.8	1.1	6.1	3.9	3.8	-9.1	8.0	-3.7	-3.7	-34.9	-22.4	-26.0	-21.0	-23.2	-23.3	Y
-9.0	-7.5	5.0	1.3	6.4	3.7	4.9	-9.0	8.0	-3.7	-3.6	-34.6	-22.1	-25.8	-20.7	-23.4	-22.2	Y
-8.9	-7.4	5.3	1.5	6.8	3.5	5.9	-8.9	8.0	-3.7	-3.4	-34.5	-21.9	-25.6	-20.4	-23.6	-21.2	Y
-8.8	-7.3	5.4	1.7	7.2	3.4	6.8	-8.8	8.0	-3.7	-3.3	-34.4	-21.7	-25.5	-19.9	-23.7	-20.3	Y
-8.7	-7.3	5.5	1.8	7.7	3.4	7.6	-8.7	8.0	-3.7	-3.2	-34.4	-21.6	-25.4	-19.5	-23.8	-19.5	Y
-8.6	-7.3	5.5	1.8	8.2	3.5	8.4	-8.6	8.0	-3.7	-3.1	-34.4	-21.6	-25.3	-18.9	-23.7	-18.7	Y
-8.5	-7.3	5.5	1.8	8.7	3.7	9.1	-8.5	8.0	-3.7	-2.9	-34.4	-21.6	-25.4	-18.4	-23.4	-18.0	Y
-8.4	-6.8	5.4	1.7	9.3	4.0	9.7	-8.4	8.0	-3.7	-2.8	-33.9	-21.7	-25.5	-17.8	-23.1	-17.4	Y
-8.3	-5.9	5.2	1.5	9.9	4.5	10.4	-8.3	8.0	-3.7	-2.7	-33.0	-21.9	-25.6	-17.2	-22.6	-16.8	Y
-8.2	-4.6	4.9	1.3	10.5	5.0	10.9	-8.2	8.0	-3.7	-2.5	-31.7	-22.3	-25.8	-16.6	-22.1	-16.2	Y
-8.1	-3.1	4.4	1.0	11.1	5.6	11.5	-8.1	8.0	-3.7	-2.4	-30.3	-22.7	-26.2	-16.0	-21.5	-15.6	Y
-8.0	-1.5	3.8	0.5	11.7	6.2	12.0	-8.0	8.0	-3.7	-2.3	-28.6	-23.3	-26.6	-15.4	-20.9	-15.1	Y
-7.9	0.2	3.1	0.0	12.3	6.8	12.6	-7.9	8.0	-3.7	-2.1	-26.9	-24.1	-27.1	-14.9	-20.3	-14.6	Y
-7.8	1.7	2.1	-0.7	12.9	7.5	13.1	-7.8	8.0	-3.7	-2.0	-25.5	-25.0	-27.8	-14.2	-19.7	-14.1	Y
-7.7	3.1	0.9	-1.5	13.5	8.1	13.6	-7.7	8.0	-3.7	-1.9	-24.0	-26.3	-28.6	-13.6	-19.0	-13.5	Y
-7.6	4.5	-0.7	-2.5	14.1	8.6	14.1	-7.6	8.0	-3.7	-1.7	-22.7	-27.8	-29.6	-13.0	-18.5	-13.1	Y
-7.5	5.7	-2.5	-3.4	14.7	9.2	14.5	-7.5	8.0	-3.7	-1.6	-21.4	-29.6	-30.5	-12.5	-17.9	-12.6	Y
-7.4	6.8	-3.7	-4.2	15.2	9.8	15.0	-7.4	8.0	-3.7	-1.4	-20.3	-30.8	-31.3	-11.9	-17.4	-12.1	Y
-7.3	7.9	-3.1	-4.2	15.7	10.3	15.5	-7.3	8.0	-3.7	-1.3	-19.2	-30.2	-31.3	-11.4	-16.8	-11.6	Y
-7.2	8.9	-0.9	-3.2	16.3	10.8	15.9	-7.2	8.0	-3.7	-1.1	-18.2	-28.0	-30.3	-10.9	-16.3	-11.2	Y
-7.1	9.8	1.7	-1.5	16.8	11.3	16.4	-7.1	8.0	-3.7	-1.0	-17.3	-25.4	-28.6	-10.4	-15.8	-10.8	Y
-7.0	10.6	4.1	0.5	17.2	11.8	16.8	-7.0	7.9	-3.8	-0.8	-16.5	-23.0	-26.6	-9.9	-15.3	-10.3	Y
-6.9	11.4	6.2	2.5	17.7	12.3	17.2	-6.9	8.1	-3.7	-0.7	-15.7	-20.9	-24.6	-9.4	-14.8	-9.9	Y
-6.8	12.1	8.0	4.2	18.2	12.8	17.7	-6.8	8.2	-3.5	-0.5	-15.0	-19.1	-22.9	-9.0	-14.3	-9.5	Y
-6.7	12.8	9.6	5.9	18.6	13.4	18.1	-6.7	8.4	-3.3	-0.3	-14.4	-17.6	-21.3	-8.6	-13.8	-9.0	Y
-6.6	13.4	11.0	7.4	19.0	13.9	18.5	-6.6	8.6	-3.2	-0.2	-13.7	-16.1	-19.7	-8.1	-13.3	-8.6	Y
-6.5	14.0	12.2	8.7	19.4	14.4	18.9	-6.5	8.7	-3.0	0.0	-13.2	-14.9	-18.4	-7.8	-12.7	-8.3	Y

-6.4	14.5	13.3	9.9	19.7	14.9	19.2	-6.4	8.9	-2.8	0.2	-12.7	-13.8	-17.2	-7.4	-12.2	-7.9	Y
-6.3	14.9	14.4	11.1	20.0	15.5	19.6	-6.3	9.1	-2.7	0.3	-12.2	-12.7	-16.0	-7.1	-11.7	-7.5	Y
-6.2	15.4	15.4	12.2	20.3	16.0	19.9	-6.2	9.2	-2.5	0.5	-11.7	-11.7	-14.9	-6.8	-11.2	-7.2	Y
-6.1	15.8	16.2	13.1	20.6	16.5	20.3	-6.1	9.4	-2.3	0.7	-11.3	-10.9	-14.0	-6.5	-10.6	-6.9	Y
-6.0	16.2	17.0	13.9	20.8	17.0	20.6	-6.0	9.6	-2.1	0.9	-11.0	-10.2	-13.2	-6.3	-10.1	-6.5	Y
-5.9	16.5	17.7	14.7	21.0	17.5	20.9	-5.9	9.8	-1.9	1.1	-10.6	-9.5	-12.4	-6.1	-9.7	-6.2	Y
-5.8	16.8	18.3	15.4	21.2	17.9	21.2	-5.8	10.0	-1.8	1.2	-10.4	-8.8	-11.7	-5.9	-9.2	-6.0	Y
-5.7	17.0	18.9	16.1	21.4	18.4	21.4	-5.7	10.2	-1.6	1.4	-10.1	-8.3	-11.1	-5.7	-8.7	-5.7	Y
-5.6	17.2	19.4	16.7	21.5	18.8	21.7	-5.6	10.4	-1.4	1.6	-9.9	-7.7	-10.5	-5.6	-8.3	-5.5	Y
-5.5	17.4	19.8	17.1	21.6	19.2	21.9	-5.5	10.6	-1.2	1.8	-9.8	-7.3	-10.0	-5.5	-7.9	-5.2	Y
-5.4	17.5	20.2	17.6	21.6	19.5	22.1	-5.4	10.8	-1.0	2.0	-9.7	-6.9	-9.5	-5.5	-7.6	-5.1	Y
-5.3	17.5	20.5	18.0	21.7	19.8	22.2	-5.3	11.0	-0.8	2.2	-9.6	-6.6	-9.2	-5.5	-7.3	-4.9	Y
-5.2	17.5	20.8	18.3	21.7	20.0	22.4	-5.2	11.2	-0.6	2.4	-9.6	-6.3	-8.8	-5.5	-7.1	-4.8	Y
-5.1	17.4	21.0	18.5	21.6	20.2	22.5	-5.1	11.4	-0.4	2.6	-9.7	-6.1	-8.6	-5.5	-6.9	-4.6	Y
-5.0	17.3	21.2	18.8	21.5	20.4	22.6	-5.0	11.6	-0.1	2.9	-9.8	-5.9	-8.4	-5.6	-6.7	-4.6	Y
-4.9	17.1	21.3	18.9	21.4	20.5	22.6	-4.9	11.8	0.1	3.1	-10.0	-5.8	-8.2	-5.8	-6.7	-4.5	Y
-4.8	16.8	21.3	19.0	21.2	20.5	22.6	-4.8	12.0	0.3	3.3	-10.3	-5.8	-8.1	-6.0	-6.6	-4.5	Y
-4.7	16.4	21.3	19.0	20.9	20.5	22.6	-4.7	12.3	0.5	3.5	-10.7	-5.9	-8.1	-6.2	-6.7	-4.5	Y
-4.6	15.9	21.1	19.0	20.6	20.4	22.6	-4.6	12.5	0.8	3.8	-11.2	-6.0	-8.1	-6.5	-6.8	-4.5	Y
-4.5	15.3	21.0	18.9	20.2	20.2	22.5	-4.5	12.7	1.0	4.0	-11.8	-6.2	-8.2	-6.9	-7.0	-4.6	Y
-4.4	14.5	20.7	18.7	19.7	19.9	22.3	-4.4	13.0	1.3	4.3	-12.6	-6.4	-8.4	-7.4	-7.2	-4.8	Y
-4.3	13.5	20.3	18.5	19.2	19.5	22.1	-4.3	13.2	1.5	4.5	-13.7	-6.8	-8.6	-7.9	-7.6	-5.0	Y
-4.2	12.2	19.9	18.2	18.5	19.0	21.9	-4.2	13.5	1.8	4.8	-14.9	-7.3	-9.0	-8.6	-8.1	-5.2	Y
-4.1	10.6	19.3	17.8	17.7	18.4	21.5	-4.1	13.8	2.0	5.0	-16.5	-7.8	-9.3	-9.5	-8.7	-5.6	Y
-4.0	8.7	18.6	17.3	16.6	17.7	21.2	-4.0	14.0	2.3	5.3	-18.4	-8.6	-9.8	-10.5	-9.4	-6.0	Y
-3.9	6.6	17.7	16.7	15.4	16.7	20.7	-3.9	14.3	2.6	5.6	-20.5	-9.5	-10.4	-11.7	-10.4	-6.5	Y
-3.8	5.4	16.6	16.1	13.9	15.5	20.0	-3.8	14.6	2.9	5.9	-21.7	-10.5	-11.0	-13.3	-11.6	-7.1	Y
-3.7	6.7	15.3	15.4	12.0	13.8	19.2	-3.7	14.9	3.2	6.2	-20.4	-11.8	-11.7	-15.1	-13.3	-7.9	Y
-3.6	9.4	13.8	14.8	10.0	11.7	18.3	-3.6	15.2	3.5	6.5	-17.7	-13.4	-12.3	-17.2	-15.4	-8.8	Y
-3.5	12.0	12.0	14.5	8.2	8.6	17.2	-3.5	15.5	3.8	6.8	-15.1	-15.1	-12.7	-18.9	-18.5	-10.0	Y
-3.4	14.3	10.6	14.5	8.3	4.7	15.8	-3.4	15.8	4.1	7.1	-12.8	-16.5	-12.6	-18.8	-22.4	-11.3	Y
-3.3	16.3	10.4	15.0	10.4	3.3	14.1	-3.3	16.1	4.4	7.4	-10.9	-16.7	-12.1	-16.7	-23.8	-13.0	Y

-3.2	18.1	11.8	16.0	13.1	7.7	12.3	-3.2	16.5	4.7	7.7	-9.0	-15.3	-11.1	-14.0	-19.4	-14.8	Y
-3.1	19.5	14.0	17.3	15.4	11.9	11.1	-3.1	16.8	5.1	8.1	-7.6	-13.2	-9.8	-11.7	-15.2	-16.0	Y
-3.0	20.8	16.1	18.6	17.4	14.9	11.5	-3.0	17.2	5.5		-6.3	-11.0	-8.5	-9.7	-12.2	-15.6	Y
-2.9	22.0	18.1	20.0	19.1	17.3	13.4	-2.9	17.6	5.8		-5.2	-9.1	-7.1	-8.0	-9.8	-13.7	Y
-2.8	23.0	19.7	21.3	20.5	19.3	15.7	-2.8	17.9	6.2		-4.1	-7.4	-5.8	-6.6	-7.8	-11.4	Y
-2.7	24.0	21.3	22.6	21.9	21.0	17.9	-2.7	18.3	6.6		-3.2	-5.8	-4.6	-5.2	-6.2	-9.2	Y
-2.6	24.9	22.6	23.6	23.1	22.4	19.8	-2.6	18.8	7.0		-2.2	-4.5	-3.5	-4.1	-4.8	-7.3	Y
-2.5	25.7	23.8	24.7	24.0	23.6	21.4	-2.5	19.2	7.5		-1.4	-3.3	-2.5	-3.1	-3.5	-5.7	Y
-2.4	26.4	24.9	25.6	25.0	24.7	22.8	-2.4	19.6	7.9		-0.7	-2.2	-1.5	-2.1	-2.4	-4.3	Y
-2.3	27.1	25.9	26.6	25.8	25.7	24.1	-2.3	20.1	8.4		0.0	-1.2	-0.6	-1.3	-1.4	-3.0	Y
-2.2	27.8	26.8	27.4	26.6	26.6	25.3	-2.2	20.6	8.9		0.6	-0.3	0.2	-0.5	-0.5	-1.9	Y
-2.1	28.3	27.6	28.1	27.3	27.5	26.3	-2.1	21.1	9.4		1.2	0.5	1.0	0.2	0.4	-0.8	Y
-2.0	28.9	28.4	28.8	28.0	28.2	27.2	-2.0	21.6	9.9		1.8	1.2	1.7	0.9	1.1	0.1	Y
-1.9	29.4	29.1	29.5	28.6	28.9	28.0	-1.9	22.2	10.5		2.3	1.9	2.3	1.5	1.8	0.9	Y
-1.8	29.9	29.7	30.1	29.1	29.6	28.8	-1.8	22.8	11.1		2.8	2.6	2.9	2.0	2.4	1.7	Y
-1.7	30.3	30.3	30.6	29.6	30.1	29.5	-1.7	23.4	11.7		3.2	3.2	3.5	2.5	3.0	2.4	Y
-1.6	30.7	30.8	31.1	30.1	30.7	30.1	-1.6	24.1	12.4		3.6	3.7	4.0	3.0	3.6	3.0	Y
-1.5	31.1	31.3	31.6	30.5	31.2	30.7	-1.5				4.0	4.2	4.4	3.4	4.1	3.6	Y
-1.4	31.4	31.8	32.0	30.9	31.6	31.2	-1.4				4.3	4.7	4.9	3.8	4.5	4.1	Y
-1.3	31.8	32.2	32.4	31.2	32.0	31.7	-1.3				4.6	5.1	5.3	4.1	4.9	4.6	Y
-1.2	32.1	32.6	32.8	31.6	32.4	32.1	-1.2				4.9	5.5	5.6	4.5	5.3	5.0	Y
-1.1	32.3	33.0	33.1	31.9	32.8	32.6	-1.1				5.2	5.9	6.0	4.7	5.7	5.4	Y
-1.0	32.5	33.3	33.4	32.1	33.1	32.9	-1.0				5.4	6.2	6.3	5.0	6.0	5.8	Y
-0.9	32.7	33.6	33.7	32.3	33.4	33.2	-0.9				5.6	6.5	6.5	5.2	6.3	6.1	Y
-0.8	32.9	33.8	33.9	32.6	33.6	33.5	-0.8				5.8	6.7	6.8	5.4	6.5	6.4	Y
-0.7	33.1	34.0	34.1	32.7	33.9	33.8	-0.7				6.0	6.9	7.0	5.6	6.8	6.6	Y
-0.6	33.2	34.2	34.3	32.9	34.1	34.0	-0.6				6.1	7.1	7.2	5.7	6.9	6.9	Y
-0.5	33.3	34.4	34.4	33.0	34.2	34.1	-0.5				6.2	7.3	7.3	5.9	7.1	7.0	Y
-0.4	33.4	34.5	34.6	33.1	34.4	34.3	-0.4				6.3	7.4	7.4	6.0	7.2	7.2	Y
-0.3	33.5	34.6	34.7	33.2	34.5	34.4	-0.3				6.4	7.5	7.6	6.1	7.3	7.3	Y
-0.2	33.5	34.7	34.7	33.2	34.6	34.5	-0.2				6.4	7.5	7.6	6.1	7.4	7.4	Y
-0.1	33.6	34.7	34.8	33.2	34.6	34.5	-0.1				6.5	7.6	7.7	6.1	7.5	7.4	Y

0.0	33.6	34.7	34.8	33.2	34.6	34.6	0.0				6.5	7.6	7.7	6.1	7.5	7.4	Y
0.1	33.6	34.7	34.8	33.2	34.6	34.6	0.1				6.5	7.6	7.7	6.1	7.5	7.4	Y
0.2	33.5	34.6	34.7	33.2	34.6	34.5	0.2				6.4	7.5	7.6	6.0	7.5	7.4	Y
0.3	33.5	34.6	34.7	33.1	34.5	34.5	0.3				6.4	7.4	7.5	6.0	7.4	7.3	Y
0.4	33.4	34.5	34.6	33.0	34.5	34.4	0.4				6.3	7.3	7.4	5.9	7.3	7.3	Y
0.5	33.3	34.3	34.4	32.9	34.4	34.3	0.5				6.2	7.2	7.3	5.8	7.2	7.2	Y
0.6	33.2	34.2	34.3	32.7	34.2	34.1	0.6				6.0	7.1	7.1	5.6	7.1	7.0	Y
0.7	33.0	34.0	34.1	32.6	34.1	34.0	0.7				5.9	6.9	6.9	5.5	6.9	6.8	Y
0.8	32.8	33.8	33.8	32.4	33.8	33.8	0.8				5.7	6.7	6.7	5.3	6.7	6.6	Y
0.9	32.6	33.5	33.6	32.1	33.6	33.5	0.9				5.5	6.4	6.5	5.0	6.5	6.4	Y
1.0	32.4	33.3	33.3	31.9	33.3	33.3	1.0				5.3	6.1	6.2	4.8	6.2	6.1	Y
1.1	32.2	33.0	33.0	31.6	33.0	32.9	1.1				5.1	5.8	5.9	4.5	5.9	5.8	Y
1.2	31.9	32.6	32.6	31.3	32.7	32.6	1.2				4.8	5.5	5.5	4.2	5.6	5.5	Y
1.3	31.6	32.3	32.3	31.0	32.3	32.2	1.3				4.5	5.2	5.2	3.8	5.2	5.1	Y
1.4	31.3	31.9	31.9	30.6	31.9	31.8	1.4				4.2	4.8	4.7	3.4	4.8	4.7	Y
1.5	31.0	31.5	31.4	30.1	31.5	31.4	1.5	24.4	12.7		3.8	4.3	4.3	3.0	4.3	4.2	Y
1.6	30.6	31.0	30.9	29.7	31.0	30.9	1.6	23.7	12.0		3.5	3.9	3.8	2.5	3.8	3.8	Y
1.7	30.2	30.5	30.4	29.2	30.4	30.3	1.7	23.0	11.3		3.1	3.4	3.3	2.1	3.3	3.2	Y
1.8	29.7	29.9	29.8	28.6	29.9	29.8	1.8	22.4	10.7		2.6	2.8	2.7	1.5	2.7	2.6	Y
1.9	29.3	29.3	29.2	28.1	29.2	29.1	1.9	21.9	10.1		2.2	2.2	2.1	0.9	2.1	2.0	Y
2.0	28.7	28.7	28.5	27.4	28.6	28.4	2.0	21.3	9.6		1.6	1.6	1.4	0.3	1.5	1.3	Y
2.1	28.2	28.0	27.8	26.7	27.8	27.6	2.1	20.8	9.1		1.1	0.8	0.7	-0.4	0.7	0.5	Y
2.2	27.6	27.2	27.0	26.0	27.0	26.8	2.2	20.3	8.6		0.5	0.1	-0.1	-1.1	-0.1	-0.4	Y
2.3	26.9	26.3	26.2	25.1	26.1	25.8	2.3	19.8	8.1		-0.2	-0.8	-0.9	-2.0	-1.0	-1.3	Y
2.4	26.3	25.4	25.3	24.2	25.1	24.7	2.4	19.4	7.6		-0.9	-1.7	-1.9	-2.9	-2.0	-2.4	Y
2.5	25.5	24.4	24.3	23.3	24.0	23.6	2.5	18.9	7.2		-1.6	-2.8	-2.8	-3.9	-3.1	-3.6	Y
2.6	24.7	23.3	23.3	22.1	22.8	22.2	2.6	18.5	6.8		-2.4	-3.9	-3.8	-5.0	-4.3	-4.9	Y
2.7	23.8	22.0	22.1	20.9	21.5	20.7	2.7	18.1	6.4		-3.3	-5.1	-5.0	-6.2	-5.6	-6.4	Y
2.8	22.7	20.5	20.9	19.6	19.9	19.0	2.8	17.7	6.0		-4.4	-6.6	-6.2	-7.6	-7.2	-8.1	Y
2.9	21.7	19.0	19.6	18.1	18.0	16.9	2.9	17.3	5.6		-5.4	-8.2	-7.5	-9.0	-9.1	-10.2	Y
3.0	20.6	17.2	18.3	16.3	15.9	14.7	3.0	17.0	5.2	8.2	-6.6	-9.9	-8.8	-10.8	-11.2	-12.4	Y
3.1	19.3	15.3	17.0	14.4	13.1	12.1	3.1	16.6	4.9	7.9	-7.9	-11.9	-10.1	-12.7	-14.0	-15.1	Y

3.2	17.8	13.6	16.0	12.1	9.4	10.1	3.2	16.3	4.5	7.5	-9.4	-13.6	-11.2	-15.0	-17.8	-17.0	Y
3.3	16.3	12.4	15.2	10.0	4.0	10.1	3.3	15.9	4.2	7.2	-10.8	-14.7	-11.9	-17.1	-23.1	-17.0	Y
3.4	14.6	12.4	14.8	8.8	1.8	11.8	3.4	15.6	3.9	6.9	-12.5	-14.7	-12.3	-18.3	-25.4	-15.4	Y
3.5	12.8	13.4	14.9	9.2	6.7	13.8	3.5	15.3	3.6	6.6	-14.3	-13.7	-12.2	-17.9	-20.4	-13.3	Y
3.6	11.1	14.7	15.2	10.8	10.3	15.5	3.6	15.0	3.3	6.3	-16.0	-12.4	-11.9	-16.3	-16.8	-11.6	Y
3.7	10.0	15.9	15.8	12.5	12.9	17.0	3.7	14.7	3.0	6.0	-17.2	-11.2	-11.3	-14.6	-14.2	-10.2	Y
3.8	9.7	17.2	16.4	14.1	14.7	18.1	3.8	14.4	2.7	5.7	-17.4	-10.0	-10.7	-13.0	-12.4	-9.0	Y
3.9	10.4	18.0	16.9	15.5	16.1	19.1	3.9	14.1	2.4	5.4	-16.7	-9.1	-10.2	-11.7	-11.0	-8.1	Y
4.0	11.5	18.8	17.4	16.5	17.2	19.8	4.0	13.9	2.1	5.1	-15.6	-8.3	-9.7	-10.6	-9.9	-7.3	Y
4.1	12.6	19.5	17.8	17.5	18.1	20.5	4.1	13.6	1.9	4.9	-14.5	-7.7	-9.3	-9.7	-9.1	-6.7	Y
4.2	13.6	20.0	18.1	18.2	18.7	20.9	4.2	13.3	1.6	4.6	-13.5	-7.1	-9.0	-8.9	-8.4	-6.2	Y
4.3	14.5	20.4	18.4	18.8	19.2	21.4	4.3	13.1	1.4	4.4	-12.6	-6.8	-8.7	-8.3	-7.9	-5.8	Y
4.4	15.3	20.7	18.6	19.4	19.6	21.7	4.4	12.8	1.1	4.1	-11.8	-6.4	-8.5	-7.8	-7.5	-5.4	Y
4.5	15.9	20.9	18.7	19.8	19.9	21.9	4.5	12.6	0.9	3.9	-11.2	-6.2	-8.4	-7.3	-7.2	-5.2	Y
4.6	16.4	21.0	18.7	20.1	20.2	22.1	4.6	12.4	0.6	3.6	-10.7	-6.1	-8.4	-7.0	-7.0	-5.0	Y
4.7	16.8	21.1	18.7	20.4	20.3	22.3	4.7	12.1	0.4	3.4	-10.3	-6.0	-8.4	-6.7	-6.8	-4.9	Y
4.8	17.1	21.1	18.7	20.7	20.4	22.3	4.8	11.9	0.2	3.2	-10.0	-6.0	-8.5	-6.5	-6.8	-4.8	Y
4.9	17.4	21.0	18.6	20.8	20.4	22.4	4.9	11.7	-0.1	2.9	-9.8	-6.1	-8.6	-6.3	-6.7	-4.8	Y
5.0	17.5	20.9	18.4	21.0	20.3	22.3	5.0	11.5	-0.3	2.7	-9.6	-6.2	-8.7	-6.2	-6.8	-4.8	Y
5.1	17.6	20.7	18.2	21.0	20.2	22.3	5.1	11.2	-0.5	2.5	-9.5	-6.4	-8.9	-6.1	-6.9	-4.8	Y
5.2	17.7	20.5	17.9	21.1	20.1	22.2	5.2	11.0	-0.7	2.3	-9.5	-6.6	-9.2	-6.0	-7.0	-4.9	Y
5.3	17.6	20.2	17.6	21.1	19.9	22.1	5.3	10.8	-0.9	2.1	-9.5	-6.9	-9.6	-6.1	-7.2	-5.1	Y
5.4	17.6	19.9	17.2	21.0	19.7	21.9	5.4	10.6	-1.1	1.9	-9.5	-7.3	-10.0	-6.1	-7.4	-5.2	Y
5.5	17.5	19.5	16.8	20.9	19.5	21.7	5.5	10.4	-1.3	1.7	-9.6	-7.6	-10.4	-6.2	-7.7	-5.4	Y
5.6	17.3	19.1	16.3	20.8	19.2	21.5	5.6	10.2	-1.5	1.5	-9.8	-8.1	-10.8	-6.3	-8.0	-5.7	Y
5.7	17.1	18.6	15.8	20.7	18.8	21.2	5.7	10.0	-1.7	1.3	-10.0	-8.6	-11.4	-6.4	-8.3	-5.9	Y
5.8	16.9	18.0	15.2	20.5	18.5	20.9	5.8	9.9	-1.9	1.1	-10.2	-9.1	-12.0	-6.6	-8.6	-6.2	Y
5.9	16.6	17.4	14.5	20.4	18.1	20.6	5.9	9.7	-2.1	0.9	-10.5	-9.7	-12.6	-6.8	-9.0	-6.5	Y
6.0	16.2	16.7	13.8	20.2	17.7	20.3	6.0	9.5	-2.2	0.8	-10.9	-10.4	-13.3	-7.0	-9.4	-6.9	Y
6.1	15.9	15.9	13.0	19.9	17.3	19.9	6.1	9.3	-2.4	0.6	-11.2	-11.2	-14.1	-7.2	-9.8	-7.2	Y
6.2	15.5	15.1	12.2	19.7	16.9	19.5	6.2	9.1	-2.6	0.4	-11.7	-12.0	-14.9	-7.4	-10.2	-7.6	Y
6.3	15.1	14.2	11.4	19.4	16.4	19.1	6.3	9.0	-2.8	0.2	-12.1	-12.9	-15.8	-7.7	-10.7	-8.0	Y

6.4	14.6	13.2	10.4	19.2	15.9	18.7	6.4	8.8	-2.9	0.1	-12.5	-13.9	-16.7	-8.0	-11.2	-8.4	Y
6.5	14.0	12.0	9.4	18.9	15.4	18.3	6.5	8.6	-3.1	-0.1	-13.1	-15.1	-17.7	-8.3	-11.7	-8.8	Y
6.6	13.5	10.7	8.5	18.6	15.0	17.9	6.6	8.5	-3.3	-0.3	-13.7	-16.4	-18.7	-8.6	-12.2	-9.3	Y
6.7	12.9	9.2	7.4	18.2	14.4	17.4	6.7	8.3	-3.4	-0.4	-14.2	-17.9	-19.7	-8.9	-12.7	-9.7	Y
6.8	12.2	7.5	6.5	17.9	13.9	17.0	6.8	8.1	-3.6	-0.6	-14.9	-19.6	-20.7	-9.2	-13.3	-10.2	Y
6.9	11.6	5.5	5.6	17.5	13.3	16.5	6.9	8.0	-3.7	-0.7	-15.6	-21.6	-21.5	-9.6	-13.8	-10.6	Y
7.0	10.8	3.1	4.9	17.1	12.8	16.1	7.0	8.0	-3.7	-0.9	-16.3	-24.0	-22.2	-10.0	-14.4	-11.0	Y
7.1	10.0	0.1	4.4	16.7	12.2	15.6	7.1	8.0	-3.7	-1.1	-17.1	-27.0	-22.7	-10.4	-15.0	-11.5	Y
7.2	9.2	-3.5	4.2	16.3	11.5	15.2	7.2	8.0	-3.7	-1.2	-17.9	-30.6	-22.9	-10.8	-15.6	-11.9	Y
7.3	8.4	-6.2	4.2	15.8	10.9	14.7	7.3	8.0	-3.7	-1.4	-18.7	-33.3	-22.9	-11.3	-16.3	-12.4	Y
7.4	7.5	-5.3	4.3	15.3	10.2	14.3	7.4	8.0	-3.7	-1.5	-19.6	-32.4	-22.8	-11.8	-16.9	-12.9	Y
7.5	6.6	-2.6	4.5	14.8	9.4	13.8	7.5	8.0	-3.7	-1.7	-20.5	-29.7	-22.6	-12.3	-17.7	-13.3	Y
7.6	5.5	-0.1	4.8	14.3	8.7	13.4	7.6	8.0	-3.7	-1.8	-21.6	-27.3	-22.4	-12.8	-18.4	-13.8	Y
7.7	4.6	1.7	5.0	13.7	7.9	12.9	7.7	8.0	-3.7	-1.9	-22.6	-25.4	-22.2	-13.4	-19.2	-14.2	Y
7.8	3.5	3.0	5.2	13.1	7.1	12.5	7.8	8.0	-3.7	-2.1	-23.6	-24.1	-22.0	-14.0	-20.0	-14.6	Y
7.9	2.4	4.1	5.3	12.5	6.2	12.0	7.9	8.0	-3.7	-2.2	-24.7	-23.0	-21.8	-14.7	-20.9	-15.1	Y
8.0	1.3	4.9	5.4	11.8	5.3	11.6	8.0	8.0	-3.7	-2.3	-25.9	-22.2	-21.7	-15.3	-21.8	-15.6	Y
8.1	0.0	5.6	5.4	11.1	4.4	11.1	8.1	8.0	-3.7	-2.5	-27.1	-21.6	-21.7	-16.0	-22.8	-16.1	Y
8.2	-1.1	6.1	5.4	10.4	3.5	10.6	8.2	8.0	-3.7	-2.6	-28.2	-21.0	-21.7	-16.7	-23.6	-16.5	Y
8.3	-2.2	6.5	5.3	9.7	2.6	10.0	8.3	8.0	-3.7	-2.7	-29.3	-20.7	-21.8	-17.5	-24.5	-17.1	Y
8.4	-3.3	6.8	5.2	9.0	1.9	9.5	8.4	8.0	-3.7	-2.9	-30.4	-20.4	-21.9	-18.2	-25.2	-17.7	Y
8.5	-4.3	7.0	5.0	8.2	1.4	8.9	8.5	8.0	-3.7	-3.0	-31.4	-20.1	-22.1	-18.9	-25.7	-18.3	Y
8.6	-4.9	7.1	4.8	7.6	1.1	8.2	8.6	8.0	-3.7	-3.1	-32.1	-20.0	-22.3	-19.6	-26.0	-18.9	Y
8.7	-5.6	7.2	4.6	6.9	1.1	7.4	8.7	8.0	-3.7	-3.3	-32.7	-19.9	-22.6	-20.2	-26.0	-19.7	Y
8.8	-5.8	7.3	4.3	6.3	1.3	6.6	8.8	8.0	-3.7	-3.4	-33.0	-19.8	-22.9	-20.8	-25.8	-20.5	Y
8.9	-6.2	7.3	3.9	5.8	1.6	5.7	8.9	8.0	-3.7	-3.5	-33.4	-19.8	-23.2	-21.4	-25.5	-21.4	Y
9.0	-6.4	7.3	3.6	5.3	2.1	4.7	9.0	8.0	-3.7	-3.6	-33.5	-19.9	-23.6	-21.8	-25.1	-22.5	Y
9.1	-6.6	7.2	3.1	4.9	2.5	3.5	9.1	8.0	-3.7	-3.7	-33.7	-20.0	-24.0	-22.2	-24.6	-23.6	Y
9.2	-6.8	7.0	2.7	4.6	2.8	2.2	9.2	7.9	-3.9	-3.9	-33.9	-20.1	-24.4	-22.5	-24.3	-24.9	Y
9.3	-7.0	6.8	2.2	4.3	3.2	0.5	9.3	7.8	-4.0	-4.0	-34.1	-20.3	-24.9	-22.8	-23.9	-26.6	Y
9.4	-6.9	6.6	1.7	4.1	3.5	-1.2	9.4	7.6	-4.1	-4.1	-34.0	-20.5	-25.4	-23.1	-23.6	-28.4	Y
9.5	-7.4	6.3	1.1	3.8	3.7	-3.7	9.5	7.5	-4.2	-4.2	-34.5	-20.8	-26.0	-23.3	-23.5	-30.9	Y

9.6	-7.7	6.0	0.5	3.5	3.9	-6.8	9.6	7.4	-4.3	-4.3	-34.8	-21.2	-26.6	-23.6	-23.3	-33.9	Y
9.7	-8.1	5.6	-0.1	3.3	3.9	-10.6	9.7	7.3	-4.4	-4.4	-35.2	-21.6	-27.2	-23.8	-23.2	-37.7	Y
9.8	-8.3	5.1	-0.8	2.9	3.9	-13.5	9.8	7.2	-4.5	-4.5	-35.4	-22.1	-27.9	-24.2	-23.2	-40.6	Y
9.9	-8.7	4.7	-1.3	2.5	3.9	-11.0	9.9	7.1	-4.7	-4.7	-35.8	-22.5	-28.4	-24.6	-23.3	-38.2	Y
10.0	-9.1	4.1	-1.9	1.9	3.7	-7.6	10.0	7.0	-4.8	-4.8	-36.2	-23.0	-29.1	-25.2	-23.4	-34.7	Y
10.2	-10.3	4.0	-0.7	1.6	4.0	-12.2	10.2	6.8	-4.9	-4.9	-37.4	-23.2	-27.8	-25.5	-23.1	-39.3	Y
12.2	-18.9	-3.2	-6.7	4.1	-6.1	6.9	12.2	4.8	-6.9	-6.9	-46.1	-30.3	-33.8	-23.0	-33.2	-20.2	Y
14.2	-15.7	-5.2	-3.6	5.8	-5.8	0.2	14.2	3.2	-8.5	-8.5	-42.9	-32.4	-30.7	-21.3	-33.0	-26.9	Y
16.2	-8.9	-5.8	-3.0	-3.8	-5.0	2.5	16.2	1.8	-10.0	-10.0	-36.0	-32.9	-30.2	-30.9	-32.2	-24.6	Y
18.2	-4.9	-9.6	-4.7	1.2	-12.5	-7.1	18.2	0.5	-11.2	-11.2	-32.1	-36.8	-31.9	-25.9	-39.6	-34.2	Y
20.2	-5.7	-13.7	-24.8	-4.8	-11.0	-2.7	20.2	-0.6	-12.4	-12.4	-32.8	-40.8	-51.9	-32.0	-38.1	-29.8	Y
22.2	-13.5	-16.8	-16.4	-7.3	-13.1	-3.8	22.2	-1.7	-13.4	-13.4	-40.6	-43.9	-43.5	-34.5	-40.2	-30.9	Y
24.2	-9.9	-8.2	-14.7	-10.8	-3.8	-0.6	24.2	-2.6	-14.3	-14.3	-37.0	-35.3	-41.8	-38.0	-30.9	-27.7	Y
26.2	-8.6	-6.9	-13.0	0.0	-2.4	0.1	26.2	-3.5	-15.2	-15.2	-35.7	-34.0	-40.1	-27.1	-29.5	-27.0	Y
28.2	-7.6	-9.2	-10.0	1.9	-13.0	-4.1	28.2	-4.3	-16.0	-16.0	-34.8	-36.3	-37.1	-25.2	-40.1	-31.2	Y
30.2	-6.5	-8.1	-4.5	-8.1	-7.5	-2.5	30.2	-5.0	-16.7	-16.7	-33.6	-35.3	-31.6	-35.2	-34.7	-29.6	Y
32.2	-7.4	-3.0	-4.3	-9.7	-3.2	-4.1	32.2	-5.7	-17.4	-17.4	-34.5	-30.1	-31.4	-36.8	-30.3	-31.2	Y
34.2	-7.9	-3.0	-6.7	-8.1	-4.2	-6.4	34.2	-6.4	-18.1	-18.1	-35.0	-30.2	-33.9	-35.2	-31.4	-33.5	Y
36.2	-14.6	-6.3	-6.3	-6.6	-6.9	-2.3	36.2	-7.0	-18.7	-18.7	-41.7	-33.5	-33.4	-33.7	-34.0	-29.4	Y
38.2	-23.5	-9.3	-5.9	-4.0	-4.3	-1.6	38.2	-7.6	-19.3	-19.3	-50.6	-36.4	-33.1	-31.1	-31.4	-28.7	Y
40.2	-15.2	-9.7	-6.2	-1.1	-1.4	-5.9	40.2	-8.1	-19.8	-19.8	-42.4	-36.8	-33.3	-28.2	-28.5	-33.0	Y
42.2	-13.9	-10.9	-13.4	-1.9	-2.2	-7.3	42.2	-8.6	-20.4	-20.4	-41.0	-38.0	-40.5	-29.0	-29.3	-34.4	Y
44.2	-17.4	-8.8	-17.6	-4.8	-4.4	-6.6	44.2	-9.1	-20.9	-20.9	-44.5	-36.0	-44.8	-31.9	-31.5	-33.7	Y
46.2	-15.9	-6.5	-15.1	-6.1	-3.1	-4.9	46.2	-9.6	-21.3	-21.3	-43.1	-33.6	-42.2	-33.3	-30.2	-32.0	Y
48.2	-11.8	-6.4	-18.7	-7.3	-0.5	-2.2	48.2	-10.0	-21.7	-21.7	-39.0	-33.5	-45.8	-34.4	-27.6	-29.3	Y
50.2	-10.3	-7.7	-20.0	-9.8	1.5	-3.7	50.2	-10.0	-21.7	-21.7	-37.4	-34.9	-47.1	-36.9	-25.6	-30.8	Y
52.2	-12.2	-10.9	-18.4	-7.6	0.3	-2.1	52.2	-10.0	-21.7	-21.7	-39.3	-38.0	-45.5	-34.7	-26.9	-29.3	Y
54.2	-15.0	-14.5	-14.2	-4.2	-4.1	1.3	54.2	-10.0	-21.7	-21.7	-42.1	-41.7	-41.3	-31.3	-31.2	-25.8	Y
56.2	-19.4	-13.2	-9.4	-2.3	-9.0	2.0	56.2	-10.0	-21.7	-21.7	-46.5	-40.3	-36.5	-29.4	-36.1	-25.1	Y
58.2	-21.2	-14.0	-8.4	-1.9	-6.0	1.3	58.2	-10.0	-21.7	-21.7	-48.3	-41.1	-35.5	-29.1	-33.2	-25.8	Y
60.2	-21.1	-15.1	-9.9	-1.4	-3.9	0.4	60.2	-10.0	-21.7	-21.7	-48.2	-42.2	-37.0	-28.5	-31.1	-26.7	Y
62.2	-15.7	-16.5	-16.0	-0.5	-3.8	-1.0	62.2	-10.0	-21.7	-21.7	-42.8	-43.7	-43.1	-27.7	-30.9	-28.1	Y

64.2	-10.9	-17.0	-18.8	-1.4	-3.7	-1.9	64.2	-10.0	-21.7	-21.7	-38.0	-44.1	-45.9	-28.5	-30.8	-29.0	Y
66.2	-7.7	-18.7	-13.8	-3.9	-2.8	-1.7	66.2	-10.0	-21.7	-21.7	-34.9	-45.8	-40.9	-31.1	-29.9	-28.8	Y
68.2	-6.1	-23.4	-13.2	-7.5	-2.0	-0.3	68.2	-10.0	-21.7	-21.7	-33.2	-50.6	-40.3	-34.6	-29.1	-27.5	Y
70.2	-6.4	-25.2	-15.6	-7.7	-2.4	0.6	70.2	-10.0	-21.7	-21.7	-33.5	-52.3	-42.7	-34.8	-29.5	-26.5	Y
72.2	-7.7	-26.4	-19.8	-4.3	-3.9	0.4	72.2	-10.0	-21.7	-21.7	-34.8	-53.5	-46.9	-31.4	-31.0	-26.7	Y
74.2	-11.0	-26.2	-21.0	-1.5	-7.8	-0.1	74.2	-10.0	-21.7	-21.7	-38.1	-53.3	-48.1	-28.6	-35.0	-27.2	Y
76.2	-16.5	-20.7	-17.6	-0.3	-11.1	-2.0	76.2	-10.0	-21.7	-21.7	-43.6	-47.8	-44.7	-27.4	-38.2	-29.1	Y
78.2	-18.7	-17.7	-20.0	-0.2	-6.7	-4.3	78.2	-10.0	-21.7	-21.7	-45.9	-44.9	-47.1	-27.3	-33.8	-31.4	Y
80.2	-13.0	-15.4	-21.5	-1.2	-3.8	-7.1	80.2	-10.0	-21.7	-21.7	-40.1	-42.5	-48.7	-28.3	-31.0	-34.2	Y
82.2	-9.6	-15.0	-18.1	-2.6	-3.3	-10.3	82.2	-10.0	-21.7	-21.7	-36.7	-42.1	-45.2	-29.7	-30.4	-37.5	Y
84.2	-9.1	-14.7	-14.9	-4.2	-4.6	-17.4	84.2	-10.0	-21.7	-21.7	-36.2	-41.8	-42.1	-31.3	-31.7	-44.5	Y
86.2	-9.4	-13.9	-12.7	-6.0	-6.5	-22.9	86.2	-10.0	-21.7	-21.7	-36.5	-41.0	-39.8	-33.2	-33.6	-50.0	Y
88.2	-10.1	-15.0	-11.5	-7.8	-10.1	-12.7	88.2	-10.0	-21.7	-21.7	-37.2	-42.1	-38.6	-34.9	-37.2	-39.8	Y
90.2	-10.9	-15.5	-10.2	-7.1	-15.6	-9.6	90.2	-10.0	-21.7	-21.7	-38.0	-42.7	-37.3	-34.3	-42.7	-36.7	Y
92.2	-12.5	-14.6	-11.0	-6.6	-15.2	-8.3	92.2	-10.0	-21.7	-21.7	-39.6	-41.7	-38.1	-33.7	-42.3	-35.4	Y
94.2	-13.5	-15.4	-12.4	-7.0	-10.8	-7.2	94.2	-10.0	-21.7	-21.7	-40.6	-42.5	-39.5	-34.1	-37.9	-34.3	Y
96.2	-15.9	-15.6	-12.5	-7.9	-9.2	-6.2	96.2	-10.0	-21.7	-21.7	-43.0	-42.7	-39.7	-35.0	-36.3	-33.3	Y
98.2	-19.8	-15.7	-13.9	-9.6	-8.7	-6.3	98.2	-10.0	-21.7	-21.7	-47.0	-42.8	-41.0	-36.8	-35.8	-33.4	Y
100.2	-22.7	-15.7	-15.5	-9.8	-8.6	-7.2	100.2	-10.0	-21.7	-21.7	-49.8	-42.8	-42.6	-36.9	-35.7	-34.3	Y
102.2	-22.7	-17.7	-16.5	-9.4	-9.3	-8.0	102.2	-10.0	-21.7	-21.7	-49.9	-44.9	-43.7	-36.5	-36.4	-35.1	Y
104.2	-23.1	-18.9	-18.3	-11.6	-8.9	-8.8	104.2	-10.0	-21.7	-21.7	-50.3	-46.0	-45.5	-38.7	-36.1	-35.9	Y
106.2	-25.3	-18.4	-19.2	-14.0	-8.9	-9.8	106.2	-10.0	-21.7	-21.7	-52.4	-45.5	-46.3	-41.2	-36.0	-36.9	Y
108.2	-25.3	-19.0	-21.4	-14.7	-10.7	-10.5	108.2	-10.0	-21.7	-21.7	-52.4	-46.2	-48.6	-41.9	-37.8	-37.7	Y
110.2	-23.5	-19.9	-20.5	-14.9	-11.7	-11.7	110.2	-10.0	-21.7	-21.7	-50.6	-47.1	-47.7	-42.0	-38.8	-38.8	Y
112.2	-25.3	-21.0	-21.3	-15.8	-12.0	-13.7	112.2	-10.0	-21.7	-21.7	-52.4	-48.1	-48.4	-42.9	-39.1	-40.8	Y
114.2	-30.8	-20.1	-24.2	-17.7	-12.2	-13.3	114.2	-10.0	-21.7	-21.7	-57.9	-47.2	-51.3	-44.8	-39.3	-40.5	Y
116.2	-28.5	-22.9	-23.3	-18.2	-13.3	-14.6	116.2	-10.0	-21.7	-21.7	-55.6	-50.0	-50.5	-45.3	-40.4	-41.7	Y
118.2	-26.1	-23.5	-27.4	-20.4	-13.6	-15.1	118.2	-10.0	-21.7	-21.7	-53.3	-50.6	-54.5	-47.6	-40.7	-42.2	Y
120.2	-26.8	-22.9	-24.9	-19.6	-14.4	-15.3	120.2	-10.0	-21.7	-21.7	-53.9	-50.0	-52.0	-46.7	-41.5	-42.5	Y
122.2	-27.8	-24.0	-24.8	-19.5	-16.5	-16.7	122.2	-10.0	-21.7	-21.7	-54.9	-51.1	-52.0	-46.6	-43.6	-43.8	Y
124.2	-38.5	-25.3	-30.7	-20.2	-15.9	-17.3	124.2	-10.0	-21.7	-21.7	-65.6	-52.4	-57.8	-47.4	-43.1	-44.4	Y
126.2	-26.3	-25.6	-30.3	-24.1	-15.6	-18.1	126.2	-10.0	-21.7	-21.7	-53.4	-52.7	-57.4	-51.2	-42.7	-45.3	Y

128.2	-29.7	-30.3	-26.3	-21.7	-17.1	-18.0	128.2	-10.0	-21.7	-21.7	-56.8	-57.5	-53.4	-48.9	-44.2	-45.1	Y
130.2	-49.4	-26.3	-29.8	-24.7	-17.6	-18.7	130.2	-10.0	-21.7	-21.7	-76.5	-53.5	-57.0	-51.8	-44.7	-45.8	Y
132.2	-29.1	-29.4	-25.6	-25.2	-17.6	-19.9	132.2	-10.0	-21.7	-21.7	-56.3	-56.5	-52.7	-52.4	-44.7	-47.1	Y
134.2	-30.7	-28.5	-24.8	-21.4	-18.9	-19.0	134.2	-10.0	-21.7	-21.7	-57.9	-55.6	-51.9	-48.6	-46.0	-46.1	Y
136.2	-35.7	-28.1	-37.5	-22.1	-18.2	-20.7	136.2	-10.0	-21.7	-21.7	-62.8	-55.2	-64.6	-49.3	-45.3	-47.8	Y
138.2	-28.2	-29.3	-27.9	-28.4	-17.2	-19.7	138.2	-10.0	-21.7	-21.7	-55.3	-56.5	-55.0	-55.5	-44.3	-46.8	Y
140.2	-36.7	-27.4	-29.3	-27.1	-22.8	-20.2	140.2	-10.0	-21.7	-21.7	-63.9	-54.5	-56.4	-54.2	-50.0	-47.3	Y
142.2	-29.8	-33.7	-35.5	-26.9	-17.8	-25.3	142.2	-10.0	-21.7	-21.7	-56.9	-60.8	-62.6	-54.1	-44.9	-52.4	Y
144.2	-35.3	-31.2	-34.9	-23.1	-21.9	-19.1	144.2	-10.0	-21.7	-21.7	-62.4	-58.3	-62.0	-50.2	-49.1	-46.2	Y
146.2	-30.6	-31.6	-26.7	-23.1	-19.9	-20.2	146.2	-10.0	-21.7	-21.7	-57.7	-58.7	-53.9	-50.2	-47.1	-47.4	Y
148.2	-26.9	-39.3	-32.7	-31.3	-17.7	-21.5	148.2	-10.0	-21.7	-21.7	-54.0	-66.4	-59.8	-58.4	-44.9	-48.6	Y
150.2	-34.9	-27.2	-30.5	-23.8	-19.9	-19.3	150.2	-10.0	-21.7	-21.7	-62.0	-54.3	-57.6	-51.0	-47.0	-46.4	Y
152.2	-33.5	-33.7	-33.5	-25.0	-19.3	-20.8	152.2	-10.0	-21.7	-21.7	-60.7	-60.8	-60.6	-52.2	-46.4	-48.0	Y
154.2	-29.8	-30.0	-24.1	-26.1	-22.8	-20.7	154.2	-10.0	-21.7	-21.7	-56.9	-57.1	-51.2	-53.2	-50.0	-47.8	Y
156.2	-51.8	-40.4	-55.5	-21.8	-20.2	-22.9	156.2	-10.0	-21.7	-21.7	-78.9	-67.5	-82.6	-48.9	-47.3	-50.0	Y
158.2	-29.0	-31.3	-30.1	-24.6	-19.0	-22.9	158.2	-10.0	-21.7	-21.7	-56.2	-58.4	-57.2	-51.8	-46.2	-50.0	Y
160.2	-30.3	-27.3	-26.9	-23.2	-18.0	-23.5	160.2	-10.0	-21.7	-21.7	-57.4	-54.5	-54.0	-50.3	-45.1	-50.6	Y
162.2	-30.6	-32.6	-37.5	-23.6	-19.2	-15.5	162.2	-10.0	-21.7	-21.7	-57.7	-59.7	-64.7	-50.7	-46.3	-42.6	Y
164.2	-25.5	-27.7	-39.2	-49.5	-19.6	-20.0	164.2	-10.0	-21.7	-21.7	-52.6	-54.8	-66.4	-76.6	-46.7	-47.1	Y
166.2	-37.0	-35.8	-32.6	-21.7	-20.3	-30.6	166.2	-10.0	-21.7	-21.7	-64.2	-62.9	-59.7	-48.8	-47.4	-57.7	Y
168.2	-31.4	-21.2	-22.0	-23.5	-32.7	-20.4	168.2	-10.0	-21.7	-21.7	-58.5	-48.3	-49.1	-50.7	-59.8	-47.5	Y
170.2	-36.4	-29.5	-36.1	-25.4	-23.4	-16.1	170.2	-10.0	-21.7	-21.7	-63.5	-56.6	-63.3	-52.5	-50.5	-43.2	Y
172.2	-36.1	-29.4	-26.2	-19.7	-15.0	-14.5	172.2	-10.0	-21.7	-21.7	-63.2	-56.5	-53.3	-46.9	-42.1	-41.6	Y
174.2	-29.4	-22.7	-32.0	-19.4	-15.4	-22.7	174.2	-10.0	-21.7	-21.7	-56.5	-49.8	-59.1	-46.5	-42.5	-49.8	Y
176.2	-30.3	-35.4	-29.9	-22.6	-21.7	-23.9	176.2	-10.0	-21.7	-21.7	-57.5	-62.6	-57.0	-49.7	-48.8	-51.0	Y
178.2	-19.2	-18.5	-17.9	-28.0	-17.0	-14.9	178.2	-10.0	-21.7	-21.7	-46.3	-45.6	-45.1	-55.2	-44.2	-42.0	Y
180.0	-14.8	-11.1	-11.7	-14.8	-10.3	-10.5	180.0	-10.0	-21.7	-21.7	-41.9	-38.2	-38.9	-41.9	-37.4	-37.7	Y

Table 5 - V11 ESV X-Pol EIRP – 18 MHz Channel

Table 3 - 18 MHz XPOL		Antenna Gain X-Pol									ESV EIRP X-Pol						
Off Axis Angle (degree)	5.85 H plane	6.138 H Plane	6.425 H Plane	5.85 E plane	6.138 E Plane	6.425 E plane	Off Axis Angle (degree)	FCC 25.209(b)(1)	FCC \$25.221 EIRP X-Pol Mask, N = 8	5.85 H plane	6.138 H Plane	6.425 H Plane	5.85 E plane	6.138 E Plane	6.425 E plane	Meets Mask	
-9.2	-12.8	-5.3	-17.6	-10.0	-18.0	-15.2	-9.2	9.3	-13.7	-36.9	-29.4	-41.7	-34.1	-42.1	-39.3	Y	
-9.1	-12.8	-5.3	-17.3	-9.6	-18.5	-14.4	-9.1	9.3	-13.7	-36.9	-29.4	-41.4	-33.7	-42.7	-38.5	Y	
-9.0	-12.8	-5.3	-16.9	-9.4	-19.2	-13.7	-9.0	9.3	-13.7	-36.9	-29.4	-41.1	-33.5	-43.3	-37.8	Y	
-8.9	-13.0	-5.3	-17.0	-9.4	-20.3	-12.9	-8.9	9.3	-13.7	-37.1	-29.4	-41.1	-33.5	-44.4	-37.1	Y	
-8.8	-13.0	-5.2	-16.5	-9.2	-21.4	-12.4	-8.8	9.3	-13.7	-37.1	-29.4	-40.6	-33.3	-45.5	-36.5	Y	
-8.7	-13.7	-5.4	-16.2	-9.2	-23.5	-11.9	-8.7	9.3	-13.7	-37.8	-29.6	-40.3	-33.3	-47.6	-36.0	Y	
-8.6	-14.0	-5.6	-15.8	-9.2	-26.5	-11.4	-8.6	9.3	-13.7	-38.1	-29.7	-39.9	-33.3	-50.6	-35.5	Y	
-8.5	-14.7	-5.8	-15.4	-9.3	-32.0	-10.7	-8.5	9.3	-13.7	-38.8	-29.9	-39.5	-33.4	-56.1	-34.8	Y	
-8.4	-15.5	-6.0	-15.0	-9.5	-39.0	-10.2	-8.4	9.3	-13.7	-39.6	-30.1	-39.2	-33.7	-63.1	-34.3	Y	
-8.3	-16.4	-6.2	-15.0	-9.6	-31.9	-9.7	-8.3	9.3	-13.7	-40.5	-30.3	-39.1	-33.7	-56.0	-33.8	Y	
-8.2	-17.6	-6.5	-14.4	-10.1	-25.3	-9.2	-8.2	9.3	-13.7	-41.7	-30.6	-38.6	-34.2	-49.4	-33.3	Y	
-8.1	-18.9	-6.6	-14.2	-10.4	-21.7	-8.6	-8.1	9.3	-13.7	-43.0	-30.7	-38.3	-34.5	-45.8	-32.8	Y	
-8.0	-20.0	-6.8	-14.1	-10.7	-18.8	-8.2	-8.0	9.3	-13.7	-44.1	-30.9	-38.2	-34.8	-42.9	-32.3	Y	
-7.9	-20.4	-7.0	-13.8	-10.9	-16.4	-7.6	-7.9	9.3	-13.7	-44.5	-31.1	-37.9	-35.1	-40.5	-31.7	Y	
-7.8	-19.5	-7.0	-13.7	-11.5	-14.3	-7.2	-7.8	9.3	-13.7	-43.7	-31.1	-37.8	-35.6	-38.5	-31.3	Y	
-7.7	-17.7	-7.0	-13.7	-11.6	-12.4	-6.7	-7.7	9.3	-13.7	-41.8	-31.1	-37.8	-35.7	-36.5	-30.8	Y	
-7.6	-15.7	-6.7	-13.8	-11.7	-11.0	-6.3	-7.6	9.3	-13.7	-39.8	-30.8	-37.9	-35.8	-35.1	-30.4	Y	
-7.5	-13.7	-6.2	-13.9	-11.4	-9.5	-5.8	-7.5	9.3	-13.7	-37.8	-30.3	-38.0	-35.5	-33.6	-29.9	Y	
-7.4	-11.9	-5.7	-14.4	-10.9	-8.1	-5.3	-7.4	9.3	-13.7	-36.1	-29.8	-38.5	-35.0	-32.2	-29.5	Y	
-7.3	-10.3	-5.0	-14.9	-10.2	-6.9	-4.9	-7.3	9.3	-13.7	-34.4	-29.1	-39.0	-34.3	-31.0	-29.1	Y	
-7.2	-8.9	-4.4	-15.6	-9.2	-5.6	-4.5	-7.2	9.3	-13.7	-33.0	-28.5	-39.7	-33.3	-29.8	-28.6	Y	
-7.1	-7.7	-3.8	-16.6	-8.3	-4.7	-4.1	-7.1	9.3	-13.7	-31.9	-27.9	-40.7	-32.4	-28.8	-28.3	Y	
-7.0	-6.6	-3.0	-17.7	-7.3	-3.7	-3.7	-7.0	9.3	-13.7	-30.7	-27.1	-41.8	-31.4	-27.8	-27.8	Y	
-6.9	-5.7	-2.3	-20.0	-6.4	-2.8	-3.4	-6.9	9.3	-13.7	-29.8	-26.4	-44.1	-30.5	-26.9	-27.5	Y	
-6.8	-4.8	-1.6	-21.8	-5.6	-1.9	-3.0	-6.8	9.4	-13.6	-28.9	-25.7	-45.9	-29.7	-26.1	-27.1	Y	
-6.7	-4.0	-0.9	-22.0	-4.7	-1.2	-2.7	-6.7	9.6	-13.4	-28.1	-25.0	-46.1	-28.9	-25.3	-26.8	Y	
-6.6	-3.3	-0.3	-20.4	-4.0	-0.5	-2.3	-6.6	9.8	-13.3	-27.4	-24.5	-44.5	-28.1	-24.6	-26.4	Y	

-6.5	-2.7	0.2	-17.7	-3.4	0.2	-1.9	-6.5	9.9	-13.1	-26.8	-23.9	-41.8	-27.5	-23.9	-26.0	Y
-6.4	-2.1	0.8	-15.0	-2.9	0.7	-1.6	-6.4	10.1	-12.9	-26.2	-23.3	-39.1	-27.0	-23.4	-25.7	Y
-6.3	-1.7	1.3	-12.7	-2.5	1.2	-1.2	-6.3	10.3	-12.8	-25.8	-22.8	-36.9	-26.6	-22.9	-25.3	Y
-6.2	-1.2	1.8	-10.8	-2.1	1.6	-0.8	-6.2	10.4	-12.6	-25.4	-22.3	-34.9	-26.2	-22.5	-25.0	Y
-6.1	-0.9	2.2	-9.1	-1.9	1.9	-0.5	-6.1	10.6	-12.4	-25.0	-21.9	-33.2	-26.0	-22.2	-24.6	Y
-6.0	-0.6	2.6	-7.6	-1.6	2.2	-0.2	-6.0	10.8	-12.2	-24.7	-21.5	-31.8	-25.7	-21.9	-24.3	Y
-5.9	-0.3	3.0	-6.5	-1.5	2.4	0.2	-5.9	11.0	-12.1	-24.4	-21.1	-30.6	-25.6	-21.8	-23.9	Y
-5.8	0.0	3.3	-5.4	-1.3	2.4	0.6	-5.8	11.2	-11.9	-24.1	-20.8	-29.5	-25.5	-21.7	-23.5	Y
-5.7	0.1	3.7	-4.5	-1.3	2.5	0.9	-5.7	11.3	-11.7	-24.0	-20.4	-28.6	-25.4	-21.7	-23.2	Y
-5.6	0.3	4.0	-3.7	-1.3	2.4	1.2	-5.6	11.5	-11.5	-23.8	-20.2	-27.8	-25.4	-21.7	-22.9	Y
-5.5	0.5	4.2	-3.1	-1.2	2.3	1.6	-5.5	11.7	-11.3	-23.6	-19.9	-27.3	-25.3	-21.9	-22.5	Y
-5.4	0.6	4.4	-2.5	-1.2	2.0	1.9	-5.4	11.9	-11.1	-23.5	-19.7	-26.7	-25.3	-22.1	-22.2	Y
-5.3	0.7	4.6	-2.1	-1.0	1.7	2.2	-5.3	12.1	-10.9	-23.5	-19.5	-26.2	-25.1	-22.4	-21.9	Y
-5.2	0.7	4.8	-1.9	-0.8	1.4	2.5	-5.2	12.3	-10.7	-23.4	-19.3	-26.0	-25.0	-22.7	-21.6	Y
-5.1	0.8	4.9	-1.7	-0.6	1.0	2.8	-5.1	12.5	-10.5	-23.3	-19.2	-25.8	-24.7	-23.1	-21.4	Y
-5.0	0.8	5.0	-1.6	-0.2	0.5	3.0	-5.0	12.8	-10.3	-23.3	-19.1	-25.7	-24.3	-23.6	-21.1	Y
-4.9	0.8	5.1	-1.6	0.3	0.1	3.2	-4.9	13.0	-10.1	-23.3	-19.0	-25.7	-23.8	-24.0	-20.9	Y
-4.8	0.8	5.1	-1.7	0.9	-0.2	3.4	-4.8	13.2	-9.8	-23.3	-19.0	-25.8	-23.2	-24.3	-20.7	Y
-4.7	0.8	5.2	-1.9	1.5	-0.5	3.6	-4.7	13.4	-9.6	-23.3	-18.9	-26.0	-22.7	-24.6	-20.5	Y
-4.6	0.8	5.1	-2.2	2.1	-0.6	3.8	-4.6	13.7	-9.4	-23.4	-19.0	-26.3	-22.0	-24.7	-20.3	Y
-4.5	0.7	5.0	-2.6	2.7	-0.6	3.9	-4.5	13.9	-9.1	-23.4	-19.1	-26.7	-21.4	-24.7	-20.2	Y
-4.4	0.6	4.9	-3.1	3.2	-0.5	4.0	-4.4	14.1	-8.9	-23.5	-19.2	-27.2	-20.9	-24.6	-20.1	Y
-4.3	0.5	4.8	-3.6	3.8	-0.3	4.1	-4.3	14.4	-8.6	-23.6	-19.4	-27.7	-20.4	-24.4	-20.0	Y
-4.2	0.4	4.5	-4.2	4.2	0.0	4.1	-4.2	14.6	-8.4	-23.7	-19.6	-28.3	-19.9	-24.1	-20.0	Y
-4.1	0.4	4.2	-4.7	4.6	0.3	4.1	-4.1	14.9	-8.1	-23.7	-19.9	-28.8	-19.5	-23.8	-20.0	Y
-4.0	0.5	3.9	-5.1	5.0	0.7	4.1	-4.0	15.2	-7.8	-23.6	-20.2	-29.2	-19.1	-23.4	-20.0	Y
-3.9	0.7	3.5	-5.3	5.3	1.0	4.0	-3.9	15.4	-7.6	-23.4	-20.6	-29.4	-18.8	-23.1	-20.1	Y
-3.8	0.9	3.1	-5.2	5.5	1.4	3.8	-3.8	15.7	-7.3	-23.2	-21.1	-29.3	-18.6	-22.7	-20.3	Y
-3.7	1.3	2.5	-4.7	5.6	1.8	3.6	-3.7	16.0	-7.0	-22.8	-21.6	-28.8	-18.5	-22.4	-20.5	Y
-3.6	1.9	2.0	-4.0	5.7	2.2	3.4	-3.6	16.3	-6.7	-22.2	-22.1	-28.1	-18.4	-21.9	-20.7	Y
-3.5	2.5	1.4	-3.1	5.7	2.8	3.0	-3.5	16.6	-6.4	-21.6	-22.7	-27.2	-18.4	-21.4	-21.1	Y
-3.4	3.2	0.8	-2.1	5.7	3.3	2.6	-3.4	16.9	-6.1	-20.9	-23.3	-26.2	-18.4	-20.8	-21.5	Y
-3.3	4.0	0.4	-1.0	5.6	4.0	2.1	-3.3	17.2	-5.8	-20.1	-23.7	-25.1	-18.5	-20.1	-22.1	Y
-3.2	4.7	0.2	0.0	5.4	4.7	1.5	-3.2	17.6	-5.5	-19.4	-23.9	-24.1	-18.7	-19.4	-22.6	Y
-3.1	5.5	0.4	1.0	5.2	5.4	0.7	-3.1	17.9	-5.1	-18.6	-23.7	-23.2	-18.9	-18.7	-23.4	Y

-3.0	6.2	0.9	1.9	5.0	6.1	-0.2	-3.0	18.3	-4.8	-17.9	-23.2	-22.2	-19.1	-18.0	-24.3	Y
-2.9	7.0	1.8	2.7	4.9	6.8	-1.3	-2.9	18.6	-4.4	-17.2	-22.3	-21.4	-19.3	-17.3	-25.4	Y
-2.8	7.6	2.8	3.5	4.7	7.6	-2.5	-2.8	19.0	-4.0	-16.5	-21.3	-20.6	-19.4	-16.6	-26.7	Y
-2.7	8.3	3.9	4.2	4.6	8.2	-4.0	-2.7	19.4	-3.6	-15.8	-20.2	-19.9	-19.5	-15.9	-28.1	Y
-2.6	8.9	5.1	4.9	4.5	8.9	-5.2	-2.6	19.8	-3.2	-15.2	-19.0	-19.2	-19.6	-15.3	-29.3	Y
-2.5	9.5	6.1	5.5	4.6	9.5	-5.9	-2.5	20.2	-2.8	-14.6	-18.0	-18.6	-19.5	-14.7	-30.0	Y
-2.4	10.0	7.2	6.1	4.7	10.0	-5.4	-2.4	20.7	-2.4	-14.1	-16.9	-18.0	-19.4	-14.1	-29.5	Y
-2.3	10.5	8.2	6.6	4.9	10.5	-3.9	-2.3	21.1	-1.9	-13.6	-16.0	-17.5	-19.2	-13.6	-28.0	Y
-2.2	11.0	9.0	7.1	5.2	10.9	-2.1	-2.2	21.6	-1.4	-13.1	-15.1	-17.0	-18.9	-13.2	-26.2	Y
-2.1	11.5	9.8	7.6	5.5	11.3	-0.3	-2.1	22.1	-0.9	-12.7	-14.3	-16.5	-18.6	-12.8	-24.4	Y
-2.0	11.9	10.6	8.0	5.9	11.7	1.4	-2.0	22.6	-0.4	-12.2	-13.5	-16.1	-18.2	-12.4	-22.7	Y
-1.9	12.2	11.3	8.4	6.2	12.0	2.9	-1.9	23.2	0.1	-11.9	-12.8	-15.7	-17.9	-12.1	-21.2	Y
-1.8	12.6	11.9	8.8	6.6	12.3	4.3	-1.8	23.7	0.7	-11.5	-12.2	-15.3	-17.5	-11.8	-19.9	Y
-1.7	12.9	12.5	9.1	7.0	12.5	5.5	-1.7			-11.2	-11.6	-15.0	-17.1	-11.6	-18.7	Y
-1.6	13.2	13.0	9.4	7.4	12.7	6.5	-1.6			-10.9	-11.1	-14.7	-16.7	-11.4	-17.6	Y
-1.5	13.5	13.5	9.7	7.8	12.8	7.5	-1.5			-10.6	-10.6	-14.4	-16.3	-11.3	-16.6	Y
-1.4	13.8	14.0	10.0	8.1	13.0	8.3	-1.4			-10.3	-10.1	-14.2	-16.0	-11.1	-15.9	Y
-1.3	14.0	14.3	10.2	8.5	13.1	9.0	-1.3			-10.1	-9.8	-13.9	-15.7	-11.0	-15.1	Y
-1.2	14.2	14.7	10.4	8.8	13.2	9.7	-1.2			-9.9	-9.4	-13.7	-15.3	-10.9	-14.4	Y
-1.1	14.4	15.1	10.7	9.1	13.2	10.3	-1.1			-9.7	-9.0	-13.4	-15.0	-10.9	-13.8	Y
-1.0	14.6	15.4	10.9	9.4	13.3	10.8	-1.0			-9.5	-8.7	-13.2	-14.7	-10.8	-13.3	Y
-0.9	14.8	15.6	11.1	9.7	13.3	11.3	-0.9			-9.4	-8.5	-13.0	-14.4	-10.8	-12.8	Y
-0.8	14.9	15.9	11.3	9.9	13.4	11.7	-0.8			-9.2	-8.2	-12.8	-14.2	-10.7	-12.4	Y
-0.7	15.0	16.1	11.5	10.2	13.4	12.0	-0.7			-9.1	-8.0	-12.6	-13.9	-10.7	-12.1	Y
-0.6	15.1	16.2	11.6	10.5	13.4	12.3	-0.6			-9.0	-7.9	-12.5	-13.7	-10.7	-11.8	Y
-0.5	15.2	16.4	11.8	10.7	13.5	12.5	-0.5			-8.9	-7.7	-12.3	-13.4	-10.6	-11.6	Y
-0.4	15.2	16.5	12.0	10.9	13.5	12.7	-0.4			-8.9	-7.6	-12.1	-13.2	-10.6	-11.4	Y
-0.3	15.2	16.6	12.1	11.2	13.5	12.8	-0.3			-8.9	-7.5	-12.0	-12.9	-10.6	-11.3	Y
-0.2	15.2	16.6	12.2	11.4	13.6	12.9	-0.2			-8.9	-7.5	-11.9	-12.7	-10.5	-11.2	Y
-0.1	15.2	16.7	12.4	11.6	13.6	13.0	-0.1			-8.9	-7.4	-11.8	-12.5	-10.5	-11.1	Y
0.0	15.2	16.7	12.5	11.9	13.6	13.0	0.0			-8.9	-7.4	-11.6	-12.3	-10.5	-11.1	Y
0.1	15.2	16.7	12.6	12.1	13.6	12.9	0.1			-8.9	-7.4	-11.5	-12.0	-10.5	-11.2	Y
0.2	15.1	16.7	12.6	12.3	13.6	12.8	0.2			-9.0	-7.4	-11.5	-11.8	-10.5	-11.3	Y
0.3	15.0	16.6	12.6	12.5	13.6	12.7	0.3			-9.1	-7.5	-11.5	-11.6	-10.5	-11.4	Y
0.4	14.9	16.6	12.6	12.6	13.5	12.6	0.4			-9.2	-7.5	-11.5	-11.5	-10.6	-11.6	Y

0.5	14.8	16.5	12.6	12.8	13.4	12.4	0.5			-9.3	-7.6	-11.5	-11.3	-10.7	-11.7	Y
0.6	14.7	16.4	12.6	12.9	13.2	12.2	0.6			-9.4	-7.7	-11.5	-11.2	-10.9	-11.9	Y
0.7	14.5	16.3	12.5	13.0	13.1	11.9	0.7			-9.6	-7.8	-11.6	-11.1	-11.0	-12.2	Y
0.8	14.4	16.2	12.4	13.1	12.8	11.7	0.8			-9.7	-7.9	-11.7	-11.0	-11.3	-12.4	Y
0.9	14.2	16.1	12.3	13.1	12.6	11.5	0.9			-9.9	-8.0	-11.9	-11.0	-11.5	-12.6	Y
1.0	14.0	15.9	12.1	13.1	12.3	11.2	1.0			-10.1	-8.2	-12.0	-11.0	-11.8	-12.9	Y
1.1	13.8	15.7	11.9	13.1	11.9	11.0	1.1			-10.3	-8.4	-12.2	-11.0	-12.2	-13.1	Y
1.2	13.6	15.6	11.6	13.1	11.5	10.7	1.2			-10.5	-8.5	-12.5	-11.0	-12.6	-13.4	Y
1.3	13.3	15.3	11.4	13.0	11.0	10.4	1.3			-10.8	-8.8	-12.8	-11.1	-13.2	-13.7	Y
1.4	13.1	15.1	11.0	12.8	10.4	10.1	1.4			-11.1	-9.0	-13.1	-11.3	-13.7	-14.0	Y
1.5	12.8	14.9	10.8	12.7	9.7	9.8	1.5			-11.3	-9.2	-13.4	-11.4	-14.4	-14.3	Y
1.6	12.5	14.6	10.4	12.5	9.1	9.5	1.6			-11.6	-9.5	-13.7	-11.6	-15.0	-14.6	Y
1.7	12.2	14.4	10.0	12.3	8.3	9.2	1.7			-11.9	-9.7	-14.1	-11.8	-15.8	-14.9	Y
1.8	11.8	14.1	9.6	12.0	7.4	8.8	1.8	23.9	0.9	-12.3	-10.0	-14.5	-12.1	-16.7	-15.3	Y
1.9	11.5	13.7	9.2	11.7	6.5	8.4	1.9	23.5	0.5	-12.6	-10.4	-15.0	-12.4	-17.6	-15.8	Y
2.0	11.1	13.3	8.7	11.4	5.4	7.9	2.0	22.9	-0.1	-13.0	-10.8	-15.4	-12.8	-18.7	-16.2	Y
2.1	10.7	12.9	8.2	11.0	4.2	7.4	2.1	22.4	-0.6	-13.4	-11.2	-15.9	-13.1	-19.9	-16.7	Y
2.2	10.3	12.5	7.7	10.6	3.0	6.8	2.2	21.9	-1.1	-13.8	-11.6	-16.4	-13.6	-21.2	-17.3	Y
2.3	9.8	12.0	7.2	10.1	1.5	6.2	2.3	21.4	-1.6	-14.3	-12.1	-16.9	-14.0	-22.6	-17.9	Y
2.4	9.4	11.5	6.7	9.6	-0.1	5.5	2.4	20.9	-2.1	-14.8	-12.6	-17.4	-14.5	-24.2	-18.7	Y
2.5	8.9	10.9	6.2	9.0	-2.0	4.7	2.5	20.5	-2.5	-15.3	-13.2	-17.9	-15.1	-26.1	-19.4	Y
2.6	8.3	10.3	5.6	8.5	-4.0	3.9	2.6	20.1	-3.0	-15.8	-13.8	-18.5	-15.7	-28.1	-20.2	Y
2.7	7.7	9.6	5.0	7.8	-6.3	3.0	2.7	19.6	-3.4	-16.4	-14.5	-19.1	-16.3	-30.4	-21.1	Y
2.8	7.1	8.9	4.3	7.2	-9.0	2.1	2.8	19.2	-3.8	-17.0	-15.3	-19.8	-17.0	-33.1	-22.0	Y
2.9	6.5	8.1	3.7	6.4	-11.7	1.3	2.9	18.9	-4.2	-17.6	-16.0	-20.5	-17.7	-35.8	-22.8	Y
3.0	5.8	7.3	2.8	5.6	-13.9	0.6	3.0	18.5	-4.5	-18.3	-16.8	-21.3	-18.5	-38.0	-23.5	Y
3.1	5.1	6.5	2.0	4.7	-13.8	0.0	3.1	18.1	-4.9	-19.0	-17.6	-22.1	-19.4	-37.9	-24.1	Y
3.2	4.2	5.7	1.1	3.7	-12.2	-0.3	3.2	17.8	-5.3	-19.9	-18.4	-23.1	-20.4	-36.3	-24.4	Y
3.3	3.4	5.0	0.0	2.7	-10.4	-0.3	3.3	17.4	-5.6	-20.7	-19.1	-24.1	-21.4	-34.5	-24.4	Y
3.4	2.5	4.3	-1.1	1.5	-9.0	0.0	3.4	17.1	-5.9	-21.6	-19.8	-25.2	-22.7	-33.1	-24.1	Y
3.5	1.5	3.9	-2.3	0.0	-7.8	0.4	3.5	16.8	-6.2	-22.6	-20.2	-26.4	-24.1	-31.9	-23.7	Y
3.6	0.4	3.6	-3.7	-1.6	-6.9	0.9	3.6	16.5	-6.5	-23.7	-20.5	-27.8	-25.7	-31.0	-23.3	Y
3.7	-0.7	3.6	-4.9	-3.6	-6.1	1.5	3.7	16.2	-6.8	-24.8	-20.6	-29.0	-27.7	-30.3	-22.6	Y
3.8	-2.0	3.6	-5.9	-6.2	-5.5	2.1	3.8	15.9	-7.1	-26.1	-20.5	-30.1	-30.3	-29.6	-22.0	Y
3.9	-3.3	3.8	-6.5	-9.4	-5.0	2.6	3.9	15.6	-7.4	-27.4	-20.3	-30.6	-33.5	-29.2	-21.5	Y

4.0	-4.8	4.1	-6.5	-13.4	-4.6	3.1	4.0	15.3	-7.7	-28.9	-20.0	-30.7	-37.5	-28.7	-21.0	Y
4.1	-6.4	4.3	-6.0	-14.6	-4.3	3.6	4.1	15.1	-8.0	-30.5	-19.8	-30.1	-38.7	-28.4	-20.5	Y
4.2	-8.1	4.5	-5.2	-11.1	-4.2	4.0	4.2	14.8	-8.2	-32.2	-19.6	-29.3	-35.2	-28.3	-20.1	Y
4.3	-9.9	4.7	-4.3	-7.6	-4.0	4.3	4.3	14.5	-8.5	-34.0	-19.4	-28.4	-31.7	-28.1	-19.8	Y
4.4	-11.6	4.8	-3.5	-5.1	-4.0	4.6	4.4	14.3	-8.7	-35.7	-19.3	-27.7	-29.2	-28.1	-19.5	Y
4.5	-13.0	4.9	-2.9	-3.1	-4.0	4.8	4.5	14.0	-9.0	-37.1	-19.2	-27.0	-27.2	-28.1	-19.4	Y
4.6	-13.7	4.9	-2.3	-1.6	-4.1	4.9	4.6	13.8	-9.2	-37.8	-19.2	-26.4	-25.8	-28.2	-19.2	Y
4.7	-13.9	4.9	-1.9	-0.4	-4.2	5.0	4.7	13.6	-9.5	-38.0	-19.3	-26.0	-24.5	-28.3	-19.1	Y
4.8	-13.5	4.8	-1.5	0.6	-4.5	5.0	4.8	13.3	-9.7	-37.6	-19.4	-25.6	-23.5	-28.6	-19.1	Y
4.9	-12.8	4.6	-1.3	1.4	-4.8	4.9	4.9	13.1	-9.9	-36.9	-19.5	-25.4	-22.7	-28.9	-19.2	Y
5.0	-12.0	4.4	-1.2	2.0	-5.1	4.8	5.0	12.9	-10.1	-36.2	-19.7	-25.3	-22.1	-29.2	-19.3	Y
5.1	-11.5	4.2	-1.1	2.6	-5.5	4.7	5.1	12.7	-10.4	-35.6	-19.9	-25.3	-21.5	-29.6	-19.5	Y
5.2	-10.9	3.9	-1.3	3.0	-5.9	4.4	5.2	12.5	-10.6	-35.0	-20.2	-25.4	-21.1	-30.0	-19.7	Y
5.3	-10.6	3.6	-1.5	3.3	-6.3	4.1	5.3	12.3	-10.8	-34.7	-20.6	-25.6	-20.8	-30.4	-20.0	Y
5.4	-10.3	3.2	-1.7	3.5	-6.8	3.7	5.4	12.1	-11.0	-34.4	-20.9	-25.8	-20.6	-30.9	-20.4	Y
5.5	-10.1	2.8	-2.2	3.6	-7.3	3.4	5.5	11.9	-11.2	-34.2	-21.3	-26.3	-20.5	-31.4	-20.7	Y
5.6	-10.0	2.3	-2.7	3.7	-7.8	3.0	5.6	11.7	-11.4	-34.1	-21.8	-26.8	-20.4	-32.0	-21.2	Y
5.7	-10.1	1.9	-3.3	3.7	-8.2	2.5	5.7	11.5	-11.6	-34.2	-22.2	-27.4	-20.4	-32.3	-21.6	Y
5.8	-10.2	1.4	-4.0	3.6	-8.8	2.0	5.8	11.3	-11.8	-34.3	-22.7	-28.1	-20.5	-32.9	-22.1	Y
5.9	-10.2	0.8	-4.8	3.5	-9.0	1.5	5.9	11.1	-11.9	-34.3	-23.3	-28.9	-20.6	-33.1	-22.6	Y
6.0	-10.4	0.2	-5.7	3.3	-9.7	1.0	6.0	10.9	-12.1	-34.5	-23.9	-29.8	-20.8	-33.8	-23.1	Y
6.1	-10.6	-0.4	-6.6	3.1	-10.1	0.5	6.1	10.7	-12.3	-34.7	-24.5	-30.7	-21.0	-34.2	-23.6	Y
6.2	-10.9	-1.1	-7.6	2.8	-10.5	0.0	6.2	10.5	-12.5	-35.0	-25.2	-31.7	-21.3	-34.6	-24.1	Y
6.3	-11.2	-1.9	-8.7	2.5	-10.9	-0.5	6.3	10.4	-12.7	-35.3	-26.0	-32.8	-21.6	-35.0	-24.6	Y
6.4	-11.5	-2.7	-9.8	2.2	-11.2	-0.9	6.4	10.2	-12.8	-35.6	-26.8	-33.9	-22.0	-35.3	-25.1	Y
6.5	-11.7	-3.5	-10.8	1.8	-11.5	-1.4	6.5	10.0	-13.0	-35.9	-27.7	-34.9	-22.3	-35.6	-25.5	Y
6.6	-12.1	-4.5	-11.7	1.4	-11.9	-1.7	6.6	9.9	-13.2	-36.2	-28.6	-35.9	-22.7	-36.0	-25.9	Y
6.7	-12.5	-5.6	-12.5	1.0	-12.2	-2.1	6.7	9.7	-13.3	-36.6	-29.7	-36.6	-23.1	-36.3	-26.2	Y
6.8	-12.7	-6.7	-13.3	0.6	-12.6	-2.4	6.8	9.5	-13.5	-36.8	-30.9	-37.4	-23.5	-36.7	-26.6	Y
6.9	-13.1	-8.0	-13.9	0.2	-13.0	-2.8	6.9	9.4	-13.7	-37.2	-32.1	-38.0	-23.9	-37.1	-26.9	Y
7.0	-13.3	-9.4	-14.6	-0.2	-13.4	-3.1	7.0	9.2	-13.8	-37.4	-33.5	-38.7	-24.3	-37.5	-27.2	Y
7.1	-13.6	-10.9	-15.3	-0.6	-13.9	-3.4	7.1	9.3	-13.7	-37.7	-35.1	-39.4	-24.7	-38.0	-27.5	Y
7.2	-13.8	-12.7	-16.0	-1.0	-14.4	-3.8	7.2	9.3	-13.7	-37.9	-36.8	-40.1	-25.1	-38.6	-27.9	Y
7.3	-14.0	-14.6	-17.0	-1.3	-15.0	-4.2	7.3	9.3	-13.7	-38.1	-38.7	-41.1	-25.5	-39.1	-28.3	Y
7.4	-14.2	-17.0	-18.0	-1.7	-16.0	-4.6	7.4	9.3	-13.7	-38.3	-41.1	-42.1	-25.8	-40.1	-28.7	Y

7.5	-14.2	-19.1	-19.0	-2.0	-17.1	-5.0	7.5	9.3	-13.7	-38.3	-43.2	-43.1	-26.1	-41.2	-29.1	Y
7.6	-14.4	-20.6	-20.0	-2.3	-18.3	-5.6	7.6	9.3	-13.7	-38.5	-44.7	-44.1	-26.4	-42.4	-29.7	Y
7.7	-14.7	-20.8	-20.7	-2.6	-19.8	-6.1	7.7	9.3	-13.7	-38.8	-44.9	-44.8	-26.7	-44.0	-30.2	Y
7.8	-14.8	-19.7	-20.6	-2.9	-21.9	-6.7	7.8	9.3	-13.7	-38.9	-43.9	-44.7	-27.0	-46.0	-30.8	Y
7.9	-15.1	-18.3	-20.3	-3.2	-24.2	-7.3	7.9	9.3	-13.7	-39.2	-42.4	-44.4	-27.3	-48.3	-31.4	Y
8.0	-15.3	-16.9	-19.4	-3.4	-26.8	-7.8	8.0	9.3	-13.7	-39.4	-41.0	-43.5	-27.6	-51.0	-31.9	Y
8.1	-15.5	-15.9	-18.5	-3.7	-27.0	-8.3	8.1	9.3	-13.7	-39.6	-40.0	-42.6	-27.8	-51.1	-32.4	Y
8.2	-15.7	-15.1	-17.7	-4.0	-24.9	-8.7	8.2	9.3	-13.7	-39.9	-39.2	-41.8	-28.1	-49.0	-32.8	Y
8.3	-16.0	-14.3	-16.6	-4.2	-22.5	-8.9	8.3	9.3	-13.7	-40.1	-38.4	-40.7	-28.4	-46.6	-33.1	Y
8.4	-16.3	-13.6	-15.8	-4.5	-20.2	-9.2	8.4	9.3	-13.7	-40.4	-37.7	-39.9	-28.6	-44.3	-33.3	Y
8.5	-16.6	-13.2	-15.3	-4.7	-18.5	-9.2	8.5	9.3	-13.7	-40.7	-37.3	-39.4	-28.8	-42.6	-33.3	Y
8.6	-17.2	-12.9	-14.7	-4.9	-17.0	-9.1	8.6	9.3	-13.7	-41.3	-37.0	-38.8	-29.1	-41.1	-33.2	Y
8.7	-17.6	-12.7	-14.3	-5.1	-16.0	-9.0	8.7	9.3	-13.7	-41.7	-36.8	-38.4	-29.2	-40.1	-33.2	Y
8.8	-18.5	-12.4	-13.9	-5.4	-15.2	-8.9	8.8	9.3	-13.7	-42.7	-36.6	-38.0	-29.5	-39.3	-33.0	Y
8.9	-19.2	-12.4	-13.5	-5.5	-14.8	-8.8	8.9	9.3	-13.7	-43.3	-36.5	-37.6	-29.6	-38.9	-32.9	Y
9.0	-20.3	-12.3	-13.0	-5.7	-14.0	-8.7	9.0	9.3	-13.7	-44.4	-36.4	-37.1	-29.8	-38.1	-32.8	Y
9.1	-21.5	-12.3	-12.5	-5.8	-13.7	-8.6	9.1	9.3	-13.7	-45.6	-36.4	-36.6	-29.9	-37.9	-32.7	Y
9.2	-22.9	-12.4	-12.1	-5.9	-13.6	-8.5	9.2	9.3	-13.7	-47.1	-36.5	-36.2	-30.0	-37.7	-32.7	Y