



**FCC ID: BMTLPV1000
Confirmation # EA727851**

FCC TYPE ACCEPTANCE REPORT

For the

EMCEE LPV-1000 VHF Transmitter

1 October, 2009

**EMCEE Communications
1635 West 12th Place
Tempe, AZ 85281
480-315-1661**

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1.0 INTRODUCTION

This test report contains the required information for type acceptance of the EMCEE Model LPV-1000 VHF Transmitter. The data presented was taken from laboratory tests performed on a production transmitter system designed to transmit in the frequency range of 54-88 MHz and 174-216 MHz at up to 100.0 Watts average power in digital mode or 250 Watts peak sync power in analog mode and utilized for operation in the VHF bands under FCC Rule Parts 73 and 74. The transmitter system design and test data reflect operation and performance pursuant to the rules as prescribed in Part 73 and Part 74 of the Commission's Rules.

2.0 CERTIFICATION OF DATA

I certify that the testing procedures and the accumulated test data contained in this report have been personally supervised by me, and that the test results are true and correct to the best of my knowledge and belief.



James A. Yard, CEO
EMCEE Communications

3.0 TEST EQUIPMENT

The following is a list of major test equipment which was used in testing the LPV-300 transmitter.

Manufacturer	Model #	Serial Number	Description
HP/Agilent	89431A	US39312280	VSA RF Section
HP/Agilent	89441A	US39313875	Vector Signal Analyzer
HP/Agilent	8753ES	US39171643	Vector Network Analyzer
HP/Agilent	E4433B	US38080113	Signal Generator
HP/Agilent	E4402B	US39010125	Spectrum Analyzer
HP/Agilent	E7405A	US39440172	EMC/Spectrum Analyzer
Tektronix	VM-700A	B030893	Video Measurement Test Set
Tektronix	1450-1	B011060	Precision Demodulator
Tektronix	TSG95	B028349	Video Generator
EMCEE	LPSMF-100	32499	Output Band Pass Filter
Narda	3020A	20dB	Directional Coupler
Narda Microwave	768-10	10dB	Attenuator
HP/Agilent	8903B	3514A15172	Audio Analyzer

4.0 MEASUREMENTS

4.1 RF POWER MEASUREMENTS

4.1.1 Analog RF Power Measurement

Figure 4-1 shows the test equipment setup for the analog RF power measurements.

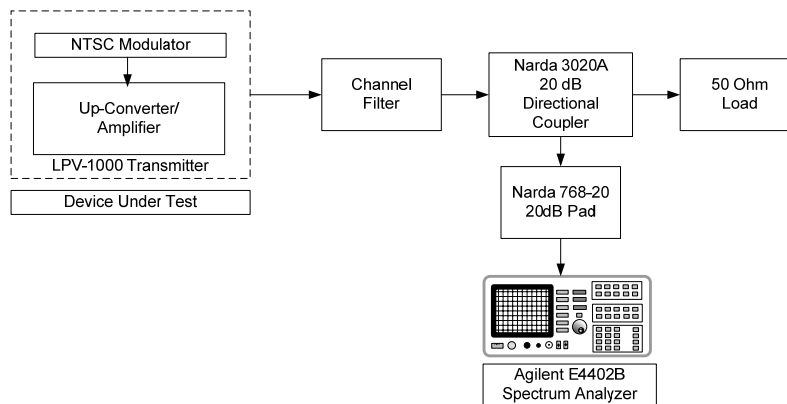


Figure 4-1: Test Setup for Analog Power Measurement

Method of Measurement:

The LPV-1000, modulated with color bars at 87.5%, was adjusted to obtain a 250 Watt Peak Visual (54dBm) and 12.5 Watt Aural (-13dB) measurement on the spectrum analyzer. The metering circuit was adjusted to obtain a 100% reading on the forward power meter. With the transmitter properly configured for analog operation and the peak visual power set to 100 Watts, all required tests were performed and the analog operation test data recorded in the following sections of the test report. The peak power measurement is shown in the spectrum analyzer plot in Figure 4-2.

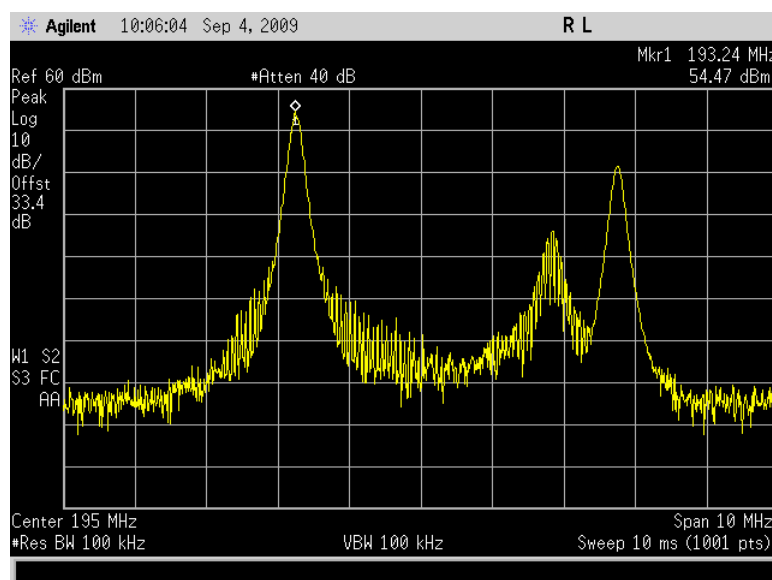


Figure 4-2: Analog Peak Power Measurement Plot

4.1.2 Digital RF Power Measurement

Figure 4-3 shows the test equipment setup for the digital RF power measurements.

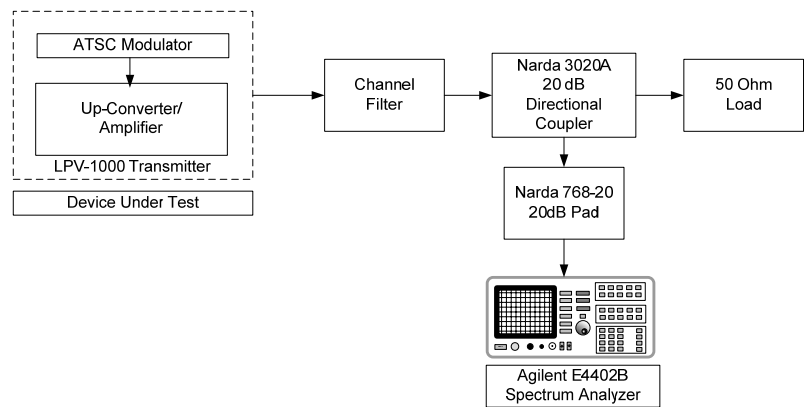


Figure 4-3: Test Setup for Digital Power Measurement

Method of Measurement:

The LPV-1000, modulated with a ATSC compliant 8VSB modulator, was adjusted to obtain a 100 Watt average channel power (50 dBm) measurement on the spectrum analyzer at the output of the mask filter. The metering circuit was adjusted to obtain a 100% reading on the forward power meter. With the transmitter properly configured for digital operation and the average power set to 100 Watts, all required tests were performed and the digital operation test data recorded in the following sections of the test report. The results of the digital power measurement test are shown in Figure 4-4.

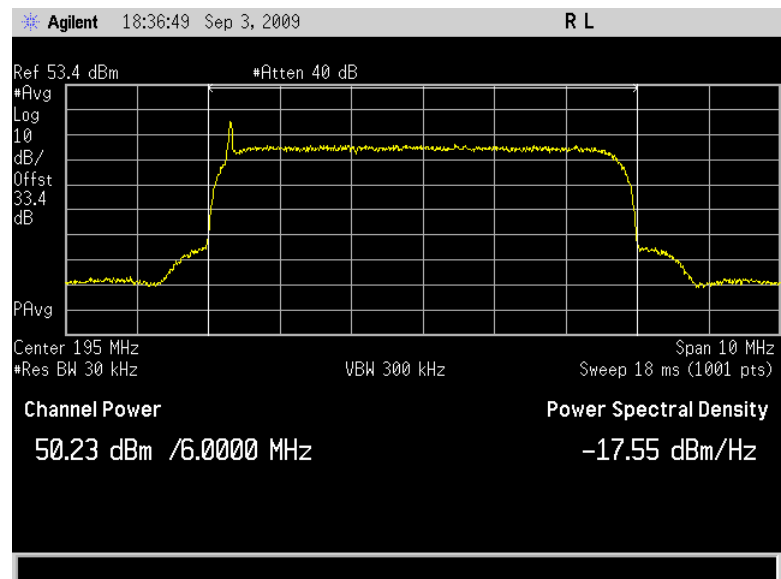


Figure 4-4: Digital Power Measurement Test

4.2 MODULATION CHARACTERISTICS

4.2.1.1 Analog Modulation Characteristics

Figure 4-5 shows the test equipment setup for the analog modulation characteristics measurements.

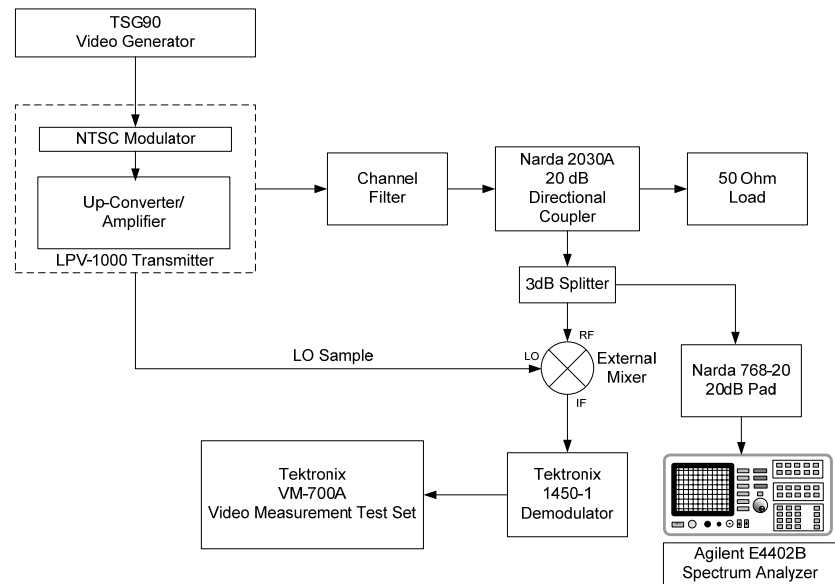


Figure 4-5: Test Setup for Analog Modulation Characteristics

The video signal generator shown in the setup depicted in Figure 4-5 was set to generate NTC color bars at a depth of modulation of 87.5%. Figure 4-6 shows the substantially linear frequency response characteristics of the transmitter in the demodulated video waveform shown on the VM700A measurement plot.

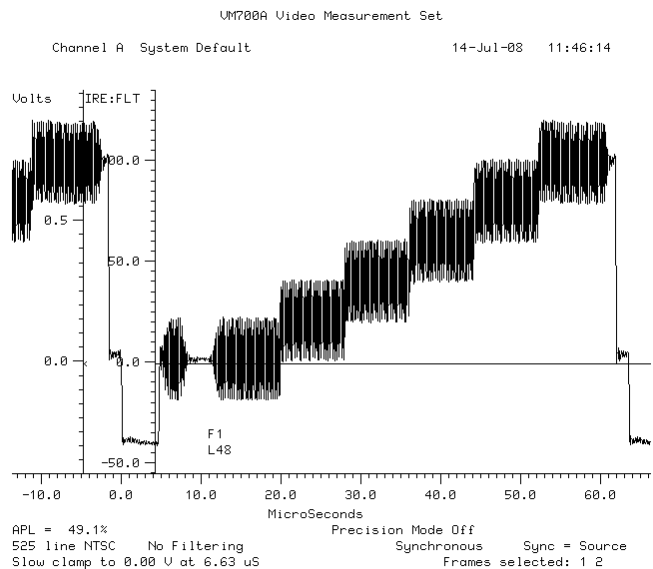


Figure 4-6: Substantially Linear Demodulated Video Waveform Plot

4.2.1.2 Video Envelope Delay

The video signal generator shown in the setup depicted in Figure 4-5 was set to generate a SinX/X test signal so that automated measurements can be made using the VM-700A. Figure 4-7 shows the group delay and gain characteristics of the transmitter in the demodulated video waveform shown on the VM700A measurement plot.

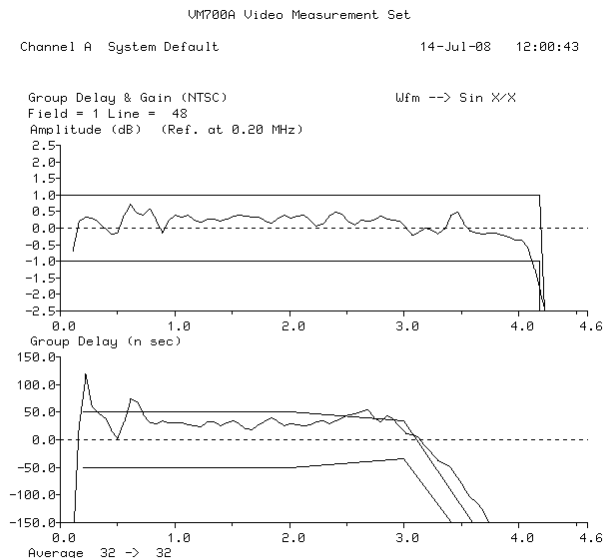


Figure 4-7 Group Delay & Gain Measurement Plot

4.2.1.3 Video Noise

The test setup in Figure 4-5 was used to measure the NTSC video noise spectrum on the VM700A. The noise level was observed to be -58.6 dB RMS as shown in Figure 4-8.

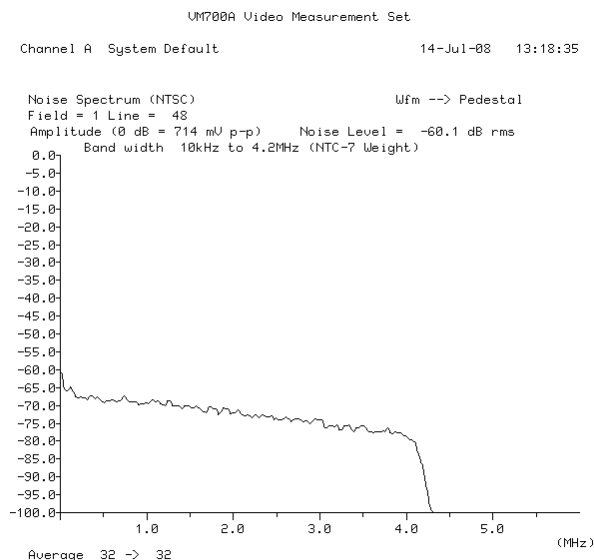


Figure 4-8: NTSC Noise Spectrum Plot

4.2.1.4 Differential Gain & Phase

Using the test setup shown in Figure 4-5 the differential gain and differential phase were measured and recorded. The differential gain was observed to be a maximum of 2.05% peak to peak as shown in Figure 4-9. The differential phase was observed to be a maximum of .97 degrees as shown in Figure 4-9.

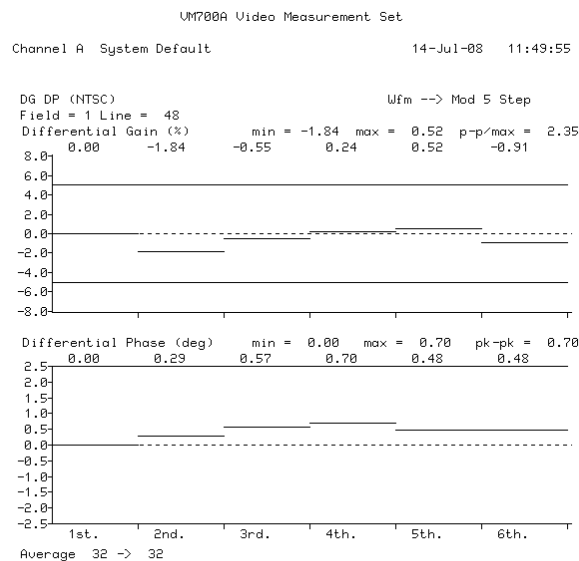


Figure 4-9: Differential Gain & Phase Plot

4.2.1.5 Audio Modulation

The FM audio response and distortion was measured using the test setup shown in Figure 4-10.

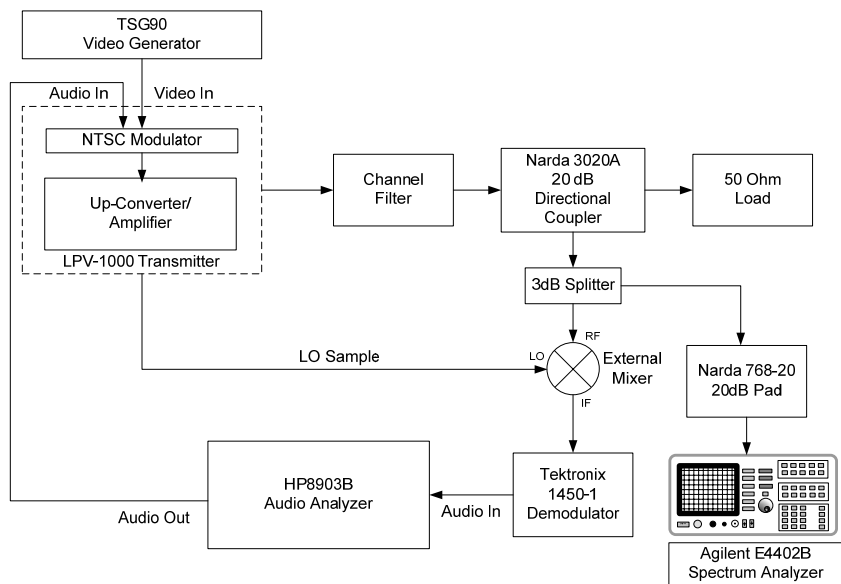


Figure 4-10: Test Setup for Measuring FM Response and Distortion

The transmitter and test equipment was set up to obtain a ± 25 KHz deviation with a 15 KHz tone. The audio frequency of the generator was then varied and the resultant measurements were recorded. The results are shown in Table 4-1.

Table 4-1: Audio Distortion Test Data

<i>Frequency</i>	<i>Distortion</i>
50Hz	.7%
100Hz	.8%
500Hz	.7%
1 KHz	.6%
5 KHz	.5%
10 KHz	.5%
15 KHz (Reference)	.5%

While maintaining a ± 25 KHz deviation, a reference tone of 1 KHz was established, then the audio input frequency and level were varied and the resultant measurements were recorded. The results are shown in Table 4-2.

Table 4-2: Audio Frequency Response Data

<i>Frequency</i>	<i>Response (Relative to 1 KHz)</i>
50Hz	-1.1dB
100Hz	-.7dB
500Hz	-.8dB
1 KHz	0dB (Reference)
2 KHz	+.7dB
3 KHz	+2.6dB
4 KHz	+5.4dB
5 KHz	+6.7dB
7 KHz	+9.4dB
10 KHz	+11.6dB
12 KHz	+13.7dB
15 KHz	+15.4dB

4.2.1.6 FM Noise

Using the test setup in Figure 4-10, the FM Noise was measured and found to be -60dB.

4.2.2 Digital Modulation Characteristics

4.2.2.1 Description of 8-VSB Digital Modulation

8-VSB is the RF modulation format utilized by the ATSC digital television standard to transmit digital bits over the airways to the home consumer. Since any terrestrial TV system must overcome numerous channel impairments such as ghosts, noise bursts, signal fades, and interference in order to reach the home viewer, the selection of the right RF modulation format is critical. Being one of the most crucial aspects of the DTV system, the 8-VSB format has received a great deal of attention and scrutiny recently. There are two fundamental technologies when describing the complete DTV system: 8-VSB and MPEG-2.

8-VSB is the RF modulation format and MPEG-2 is the video compression/packetization format. To convert high definition video into a form suitable for over-the-air broadcast, according to ATSC standards, two stages of processing are needed: MPEG-2 encoding and 8-VSB modulation. Accordingly, two major pieces of equipment are required: an MPEG-2 encoder and an 8-VSB modulator.

The MPEG-2 encoder accepts the baseband digital video and performs bit rate compression using the techniques of discrete cosine transform, run length coding and bi-directional motion prediction. The MPEG-2 encoder then multiplexes this compressed video information together with pre-coded Dolby Digital (AC-3) audio and any ancillary data that will be transmitted. The result is a stream of highly compressed MPEG-2 data packets with a data rate of only 19.39 Mbps. This 19.39 Mbps data stream is known as the DTV Transport Layer. It is output from the MPEG-2 encoder and input to the 8-VSB modulator.

The 8-VSB modulator receives the incoming MPEG-2 data packets and utilizes its own internal circuits to synchronize to the incoming signal. Before any signal processing can occur, the 8-VSB modulator must correctly identify the start and end points of each MPEG-2 data packet. This is accomplished using the MPEG-2 sync byte. MPEG-2 packets are 188 bytes in length with the first byte in each packet always being the sync byte. The MPEG-2 sync byte is then discarded; it will ultimately be replaced by the ATSC segment sync in a later stage of processing.

With the exception of the segment and field syncs, the 8-VSB bit stream must have a completely random, noise-like nature. This is because the transmitted signal frequency response must have a flat noise-like spectrum in order to use the allotted channel space with maximum efficiency. If the data contained repetitious patterns, the recurring rhythm of these patterns would cause the RF energy content of the output signal to "lump" together at certain discrete points of the frequency spectrum and thereby leaving gaps in other parts. This implies that certain parts of the six MHz channel would be over-used while other parts would be under-used. Also, the large concentrations of RF energy at certain modulating frequencies would be more likely to create discernible beat patterns in an NTSC television set when DTV-to-NTSC interference is experienced.

The modulator also incorporates a data randomizer and Reed-Solomon Encoder. In the data randomizer, each byte value is changed according to known pattern of pseudo-random number generation. This process is reversed in the receiver in order to recover the proper data values. Reed-Solomon encoding is a Forward Error Correction (FEC) scheme applied to the incoming data stream. Forward Error Correction is a general term used to describe a variety of techniques that can be used to correct bit errors that occur during transmission. Atmospheric noise, multipath propagation, signal fades, and transmitter nonlinearities may all create received bit errors. Forward Error Correction can detect and correct these errors, up to a reasonable limit. The Reed-Solomon encoder takes all 187 bytes of an incoming MPEG-2 data packet (the packet sync byte has been removed) and mathematically manipulates them as a block to create a sort of "digital sketch" of the block contents. This "sketch" occupies 20 additional bytes which are then tacked onto the end of the original 187 byte packet. These 20 bytes are known as Reed-Solomon parity bytes. The receiver will compare the received 187 byte block to the 20 parity bytes in order to determine the validity of the recovered data. If errors are detected, the receiver can use the parity "digital sketch" to locate the exact location of the errors, modify the disrupted bytes, and reconstruct the original information. Up to 10 byte errors per packet can be corrected

this way. If too many byte errors are present in a given packet, the parity "digital sketch" no longer resembles the received data block, the validity of the data can no longer be confirmed, and the entire MPEG-2 packet must be discarded.

The modulator also employs data interleaving and Trellis coding. The data interleaver disturbs the sequential order of the data stream and disperses the data throughout time (over a range of about 4.5 mSec through the use of memory buffers) in order to minimize the transmitted signal's sensitivity to burst-type interference. If a noise burst creates a hole in the signal during propagation and several milliseconds of data are lost, many different segments lose very few bits instead of one data segment losing all of its bits. This is known as time diversity. Data interleaving is done according to a known pattern; the process is reversed in the receiver in order to recover the proper data order.

Trellis coding is another form of Forward Error Correction. Unlike Reed-Solomon coding, which treats the entire MPEG-2 packet simultaneously as a block, trellis coding is an evolving code that tracks the progressing stream of bits as it develops through time. Accordingly, Reed-Solomon coding is known as a form of block code, while trellis coding is a convolutional code. For trellis coding, each 8-bit byte is split up into a stream of four, 2-bit words. In the trellis coder, each 2-bit word that arrives is compared to the past history of previous 2-bit words. A 3-bit binary code is mathematically generated to describe the transition from the previous 2-bit word to the current one. These 3-bit codes are substituted for the original 2-bit words and transmitted over-the-air as the eight level symbols of 8-VSB (3 bits = $2^3 = 8$ combinations or levels). For every two bits that go into the trellis coder, three bits come out. For this reason, the trellis coder in the 8-VSB system is said to be a 2/3 rate coder. The trellis decoder in the receiver uses the received 3-bit transition codes to reconstruct the evolution of the data stream from one 2-bit word to the next. In this way, the trellis coder follows a "trail" as the signal moves from one word to the next through time. The power of trellis coding lies in its ability to track a signal's history through time and discard potentially faulty information (errors) based on a signal's past and future behavior. This is somewhat like following one person's footsteps through the snow on a busy sidewalk. When the trail becomes confused with other tracks (i.e., errors are received), the trellis decoder has the ability to follow several possible "trails" for a few footprints and make a decision as to which prints are the correct ones.

The next step in the signal processing chain is the insertion of the various "helper" signals that aid the 8-VSB receiver in accurately locating and demodulating the transmitted RF signal. These are the ATSC pilot, segment sync, and frame sync. The pilot and sync signals are inserted after the data randomization, Reed-Solomon coding, data interleaving and trellis coding stages so as not to destroy the fixed time and amplitude relationships that these signals must possess in order to be effective. Recovering a clock signal in order to decode a received waveform has always been a tricky proposition in digital RF communications. If we derive the receiver clock from the recovered data, we have a sort of "chicken and egg" dilemma. The data must be sampled by the receiver clock in order to be accurately recovered. The receiver clock itself must be generated from accurately recovered data. The resulting clocking system quickly "crashes" when the noise or interference level rises to a point that significant data errors are received.

8-VSB employs sync pulses and residual carriers that allows the receiver to "lock" onto the incoming signal and begin decoding, even in the presence of heavy ghosting and high noise levels. The first "helper" signal is the ATSC pilot. Just before modulation, a small DC

shift is applied to the 8-VSB baseband signal (which was previously centered about zero volts with no DC component). This causes a small residual carrier to appear at the zero frequency point of the resulting modulated spectrum. This is the ATSC pilot. This gives the RF PLL circuits in the 8-VSB receiver something to lock onto that is independent of the data being transmitted. Although similar in nature to the visual carrier in an NTSC signal, the ATSC pilot is much smaller than the NTSC visual carrier, consuming only 0.3 dB or 7 percent of the transmitted power.

The other "helper" signals are the ATSC segment and frame syncs. An ATSC data segment is comprised of the 187 bytes of the original MPEG-2 data packet plus the 20 parity bytes added by the Reed-Solomon encoder. After trellis coding, our 207 byte segment has been stretched out into a stream of 828 8-level symbols. The ATSC segment sync is a repetitive four symbol (one byte) pulse that is added to the front of the data segment and replaces the missing first byte (packet sync byte) of the original MPEG-2 data packet. Correlation circuits in the 8-VSB receiver home in on the repetitive nature of the segment sync, which is easily contrasted against the background of completely random data. The recovered sync signal is used to generate the receiver clock and recover the data. Because of their repetitive nature and extended duration, the segment syncs are easy for the receiver to spot. The result is that accurate clock recovery can be had at noise and interference levels well above those where accurate data recovery is impossible (up to 0 dB SNR: data recovery requires at least 15 dB SNR). This allows for quick data recovery during channel changes and other transient conditions. An ATSC data segment is roughly analogous to an NTSC line; ATSC segment sync is somewhat like NTSC horizontal sync. Their duration and frequencies of repetition are, of course, completely different. Each ATSC segment sync lasts 0.37 msec.; NTSC sync lasts 4.7 msec. An ATSC data segment lasts 77.3 msec.; an NTSC line 63.6 msec. A careful inspection of the numbers involved reveals that the ATSC segment sync is somewhat more "slender" when compared to its NTSC counterpart. This is done to maximize the active data payload and minimize the time committed to sync "overhead." Three hundred and thirteen consecutive data segments are combined to make a data frame. The ATSC frame sync is an entire data segment that is repeated once per frame (24.2 msec.) and is roughly analogous to the NTSC vertical interval. (FYI: The NTSC vertical interval occurs once every 16.7 msec.). The ATSC frame sync has a known data symbol pattern and is used to "train" the adaptive ghost-canceling equalizer in the receiver. This is done by comparing the received signal with errors against the known reference of the frame sync. The resulting error vectors are used to adjust the taps of the receiver ghost canceling equalizer. Like the segment sync, the repetitive nature of the frame sync, and correlation techniques used in the 8-VSB receiver, allow frame sync recovery at very high noise and interference levels (up to 0 dB SNR). The robustness of the segment and frame sync signals permits accurate clock recovery and ghost-canceling operation in the 8-VSB receiver--even when the active data is completely corrupted by the presence of strong multipath distortion. This allows the adaptive ghost-canceling equalizer "to keep its head" and "hunt around in the mud" in order to recover a useable signal--even during the presence of strong signal echoes.

The eight-level baseband signal, with syncs and DC pilot shift added, is then amplitude modulated on an intermediate frequency (IF) carrier which is then fed to the transmitter up-converter. With traditional amplitude modulation, we generate a double sideband RF spectrum about the carrier frequency, with each RF sideband being the mirror image of the other. This represents redundant information and one sideband can be discarded without any net information loss. This strategy was employed to some degree in creating the

vestigial lower sideband in traditional NTSC analog television. In 8-VSB, this concept is taken to greater extremes with the lower RF sideband being almost completely removed. (Note: 8-VSB = 8 level-- Vestigial Side Band.)

(There are several different ways to implement the AM modulation, VSB filtering, and pilot insertion stages of the 8-VSB exciter, some of which are completely digital and involve direct digital synthesis of the required waveforms. All methods aim to achieve the same results at the exciter output. This particular arrangement was chosen in the interest of providing a clear, easily understandable, signal flow diagram.)

As a result of the data overhead added to the signal in the form of forward error correction coding and sync insertion, the data rate has gone from 19.39 Mbps at the exciter input to 32.28 Mbps at the output of the trellis coder. Since 3 bits are transmitted in each symbol of the 8-level 8-VSB constellation, the resulting symbol rate is $32\text{Mb}/3=10.76$ Million symbols/sec. By virtue of the Nyquist Theorem, we know that 10.76 Million symbols/sec can be transmitted in a VSB signal with a minimum frequency bandwidth of $1/2 \times 10.76 \text{ MHz} = 5.38 \text{ MHz}$. Since we are allotted a channel bandwidth of 6 MHz, we can relax the steepness of our VSB filter skirts slightly and still fall within the 6 MHz channel. This permissible excess bandwidth is 11.5 percent for the ATSC 8-VSB system. That is, $5.38 \text{ MHz (minimum bandwidth per Nyquist)} + 620 \text{ kHz (11.5 percent excess bandwidth)} = 6.00 \text{ MHz (channel bandwidth used)}$. This virtual elimination of the lower sideband, along with the narrowband filtering of the upper sideband, creates very significant changes in the RF waveform that is ultimately transmitted.

Following is a description of the 8-VSB Signal Constellation. In 8-VSB, the digital information is transmitted exclusively in the amplitude of the RF envelope and not in the phase. This is unlike other digital modulation formats such as 8-VSB, where each point in the signal constellation is a certain vector combination of carrier amplitude and phase. This is not possible in 8-VSB since the carrier phase is no longer an independent variable, as it is lost in suppressing the vestigial lower sideband. The resulting 8-VSB signal constellation is shown in figure 4-11.

The eight modulation levels are recovered by sampling an in-phase (I channel) synchronous detector. Nothing would be gained by sampling a quadrature channel detector since no useful information is contained in this channel. The signal constellation diagram is therefore a series eight vertical lines that correspond to the eight transmitted amplitude levels. By eliminating any dependence on the Q-channel, the 8-VSB receiver need only process the I channel, thereby cutting in half the number of DSP circuits required in certain stages. The result is greater simplicity, and ultimately cost savings, in the receiver design.

After the Nyquist VSB filter, the 8-VSB IF signal is then up-converted in the transmitter up-converter, by traditional PLL oscillator-mixer-filter circuits, to the assigned channel frequency in the VHF band. The on-channel RF output of the up-converter is then supplied to the power amplifiers for amplification to the specified output power. A transmitter output filter (mask filter), filters the transmitter output signal and suppresses any spurious out-of-band signals caused by transmitter nonlinearities.

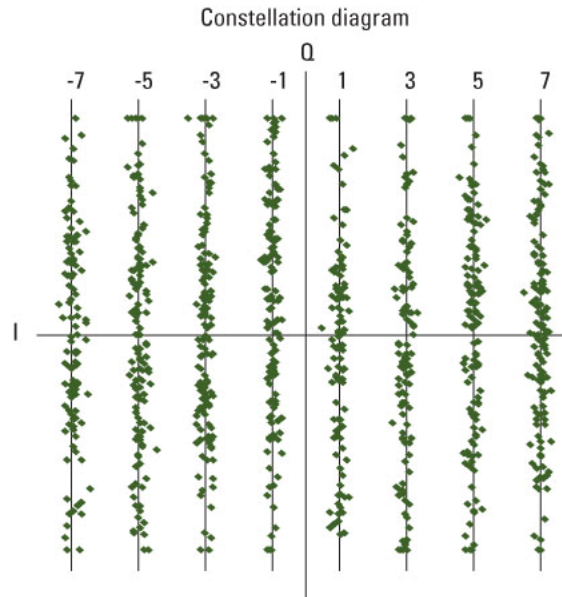


Figure 4-11: 8-VSB Constellation Diagram

4.2.2.2 Demodulated Digital Performance Characteristics

Method of Measurement:

Using the test setup shown in Figure 4-12, tests were performed to measure the performance linearity of the transmitter in digital mode. The results of the test are shown in the vector signal analyzer plot as shown in Figure 4-13. The tests revealed that the transmitter operates with very low distortion (<2% RMS EVM) and with a very high SNR, >35dB.

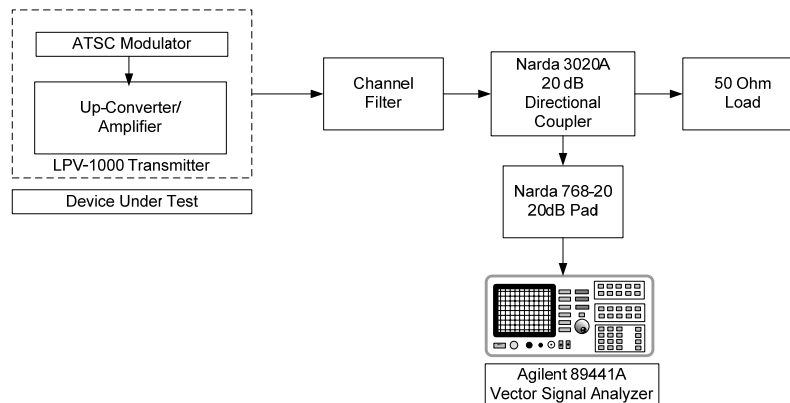


Figure 4-12: Digital Demodulation Test Setup

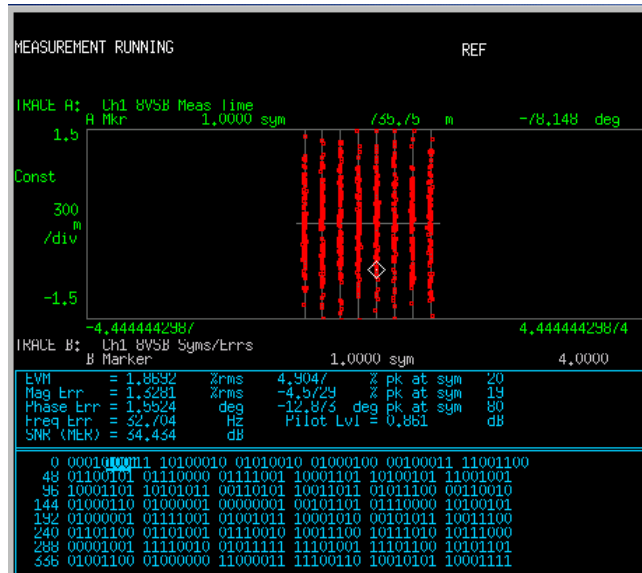


Figure 4-13: Digital Demodulation Test Results

4.3 OCCUPIED BANDWIDTH

4.3.1 Modulation Channel Occupancy

4.3.1.1 Digital Operation vs. Analog (NTSC) Operation:

The digital modulation occupancy of 8-VSB is 5.38 MHz measured at the -3 dB roll-off points. This is shown below as compared to a standard NTSC vestigial sideband signal in a standard 6 MHz channel. The 8-VSB signal employs a suppressed carrier modulation with a uniform power spectral density as opposed to the usual system M/N (NTSC) signal with separate analog visual, chroma, and aural carriers. A comparison between Analog and Digital occupied bandwidth is shown in Figure 4-12.

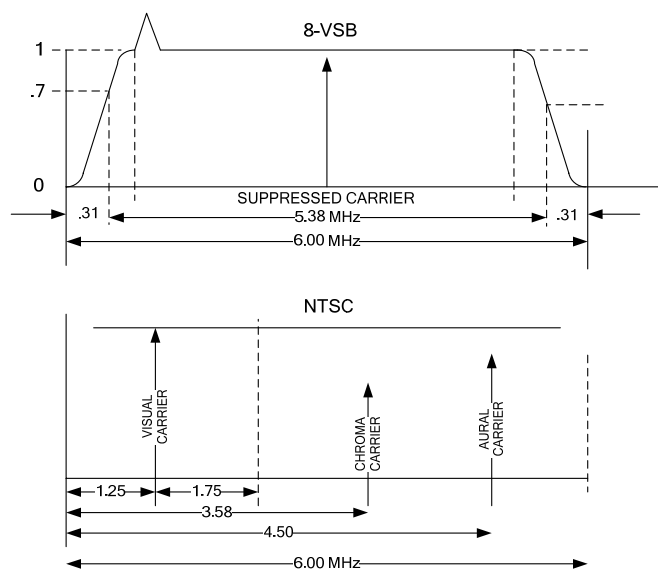


Figure 4-12: Digital & Analog modulation occupancy

4.3.2 Occupied Bandwidth in Analog Operation

Using the test setup in Figure 4-1, the spectrum analyzer was used to capture the occupied bandwidth spectrum of the transmitter in analog operation. The results of the test are shown in Figure 4-13.

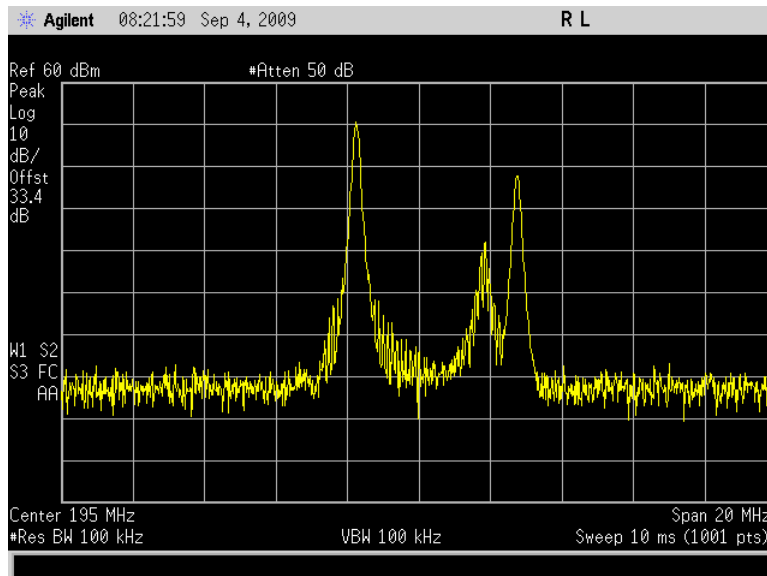


Figure 4-13: Occupied Bandwidth Plot in Analog Operation

4.3.3 Occupied Bandwidth in Digital Operation

Using the test setup in Figure 4-3, the spectrum analyzer was used to capture the occupied bandwidth spectrum of the transmitter in digital operation. The results of the test are shown in Figure 4-14.

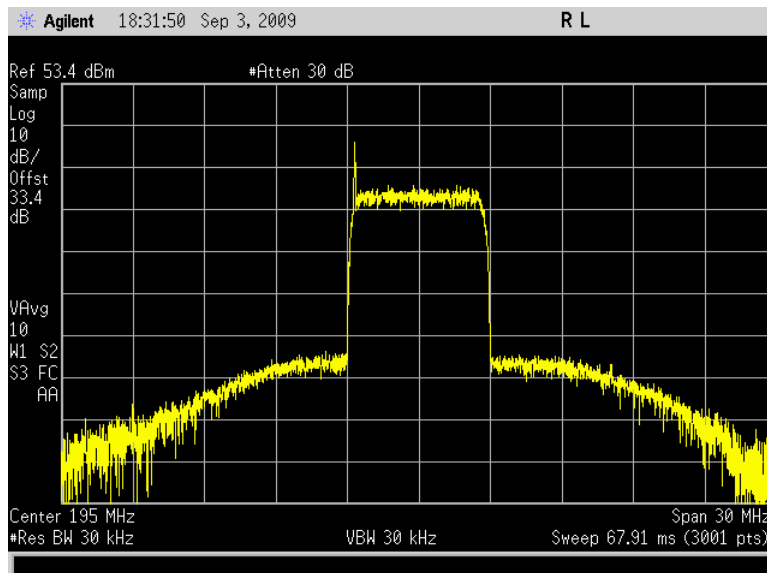


Figure 4-14: Occupied Bandwidth Plot in Digital Operation

4.4 SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Method of Measurement:

Using the test setup in Figure 4-3, the spectrum outside the desired channel was observed and the data was recorded on all spurious above the -60 dB noise floor of the spectrum analyzer as shown in Figure 4-15. The spurious emissions were observed on the analyzer at a span of 2 GHz. With the average in band signal of the desired channel of 617 MHz set as the reference, the spurious emissions were observed. The measured data is shown in the table 4-3 for 100 Watts average output power.

Table 4-3 Products above the -60dB Analyzer Noise Floor

FREQUENCY (MHz)	SOURCE	PEAK LEVEL (dB)
195	Reference Channel	0dB Reference
10	10 MHz Reference	None Observed
44	IF Frequency	None Observed
422	1 st LO	None Observed
466	1 st Conversion Output	None Observed
1688	2 nd LO	None Observed
2154	2 nd Conversion Output	None Observed
2349	3 rd LO	None Observed
390	2 nd Harmonic	None Observed
585	3 rd Harmonic	None Observed
780	4 th Harmonic	None Observed
975	5 th Harmonic	None Observed
1170	6 th Harmonic	None Observed
1365	7 th Harmonic	None Observed
1560	8 th Harmonic	None Observed
1755	9 th Harmonic	None Observed
1950	10 th Harmonic	None Observed

Using the test setup in Figure 4-3, the spectrum analyzer was used to capture the spurious output spectrum of the transmitter in digital operation. The results of the test are shown in Figure 4-15.

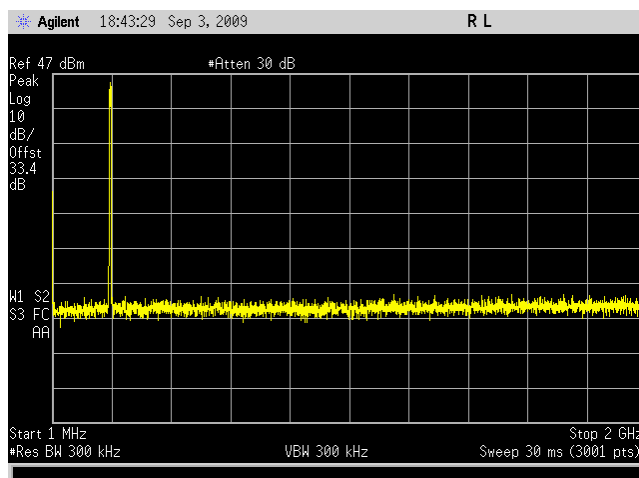


Figure 4-15: Spurious Emissions Spectrum Analyzer Plot

4.4.1 Spurious Emissions Tests with Digital Modulation

Part §74.794 of the Commission's Rules states:

§74.794 (a)(1) An applicant for a digital LPTV or TV translator station construction permit shall specify that the station will be constructed to confine out-of-channel emissions within one of the following emission masks: simple or stringent.

§74.794 (a)(2) The power level of emissions on frequencies outside the authorized channel of operation must be attenuated no less than following amounts below the average transmitted power within the authorized 6 MHz channel. In the mask specifications listed in § 74.794(a)(2) and (a)(3), A is the attenuation in dB and Δf is the frequency difference in MHz from the edge of the channel.

(i) Simple mask. At the channel edges, emissions must be attenuated no less than 46 dB. More than 6 MHz from the channel edges, emissions must be attenuated no less than 71 dB. At any frequency between 0 and 6 MHz from the channel edges, emissions must be attenuated no less than the value determined by the following formula: $A \text{ (dB)} = 46 + (\Delta f^2 / 1.44)$

(ii) Stringent mask. In the first 500 kHz from the channel edges, emissions must be attenuated no less than 47 dB. More than 3 MHz from the channel edges, emissions must be attenuated no less than 76 dB. At any frequency between 0.5 and 3 MHz from the channel edges, emissions must be attenuated no less than the value determined by the following formula: $A \text{ (dB)} = 47 + 11.5 (\Delta f - 0.5)$

§74.794(a)(3) The attenuation values for the simple and stringent emission masks are based on a measurement bandwidth of 500 kHz. Other measurement bandwidths may be used and converted to the reference 500 kHz value by the following formula:

$$A \text{ (dB)} = A_{\text{alternate}} + 10 \log (BW_{\text{alternate}} / 500)$$

where A(dB) is the measured or calculated attenuation value for the reference 500 kHz bandwidth, and $A_{\text{alternate}}$ is the measured or calculated attenuation for a bandwidth $BW_{\text{alternate}}$. Emissions include sidebands, spurious emissions and radio harmonics. Attenuation is to be measured at the output terminals of the transmitter (including any filters that may be employed). In the event of interference caused to any service by out-of-channel emissions, greater attenuation may be required.

(b) In addition to meeting the emission attenuation requirements of the simple or stringent mask (including attenuation of radio frequency harmonics), digital low power TV and TV translator stations authorized to operate on TV channels 22–24, (518–536 MHz), 32–36 (578–608 MHz), 38 (614–620 MHz), and 65–69 (776–806 MHz) must provide specific “out of band” protection to Radio Navigation Satellite Services in the bands: L5 (1164–1215 MHz); L2 (1215–1240 MHz) and L1 (1559–1610 MHz).

(1) An FCC-certificated transmitter specifically certified for use on one or more of the above channels must include filtering with an attenuation of not less than 85 dB in the GPS bands, which will have the effect of reducing harmonics in the GPS bands from what is produced by the digital transmitter, and this attenuation must be demonstrated as part of the certification application to the Commission.

Method of Measurement:

With regard to measurements specified by FCC §74.794(*et al.*), a 10 KHz resolution measurement bandwidth has been chosen so as to provide for the most accurate measurement of the out of band emissions. Frequencies out to 12 MHz above and below the desired channel were measured. The amount of out-of-band power in 10 KHz increments relative to the transmitter output power can be automatically measured by the channel power function of the 4402B Spectrum Analyzer integrated into a 10 KHz bandwidth. With an 8-VSB digital modulation, the out of band emissions were sampled at 10KHz increments inside and outside of the desired channel, and no emissions above either the simple or stringent emission masks relative to the average carrier power were observed.

The test setup in Figure 4-11 was used to obtain the measurements recorded into Table 4-4, Column 2.

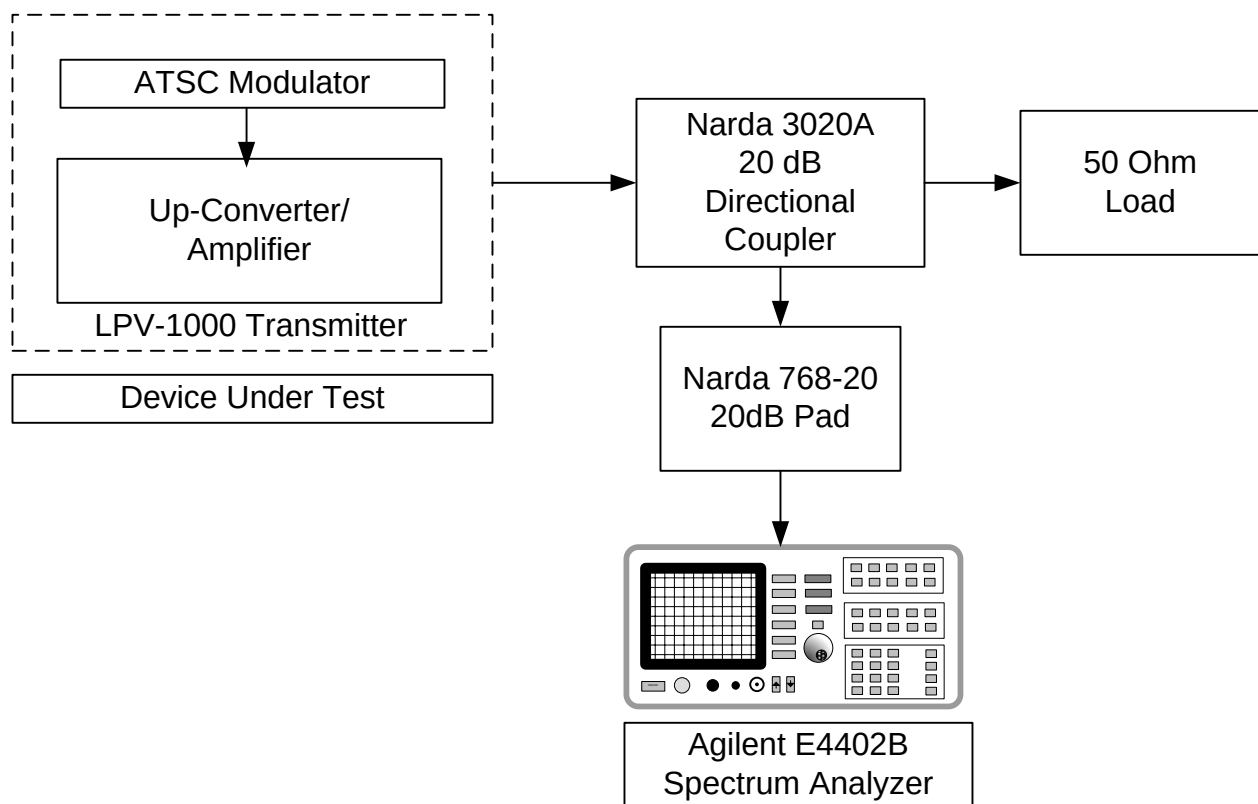


Figure 4-11: Spectral Output Measurement Setup

The performance of the mask (output) filter was also measured and the resultant data was recorded into Table 4-4, Column 3, for its attenuation vs. frequency. The test equipment setup for measuring the output filter is shown in Figure 4-12.

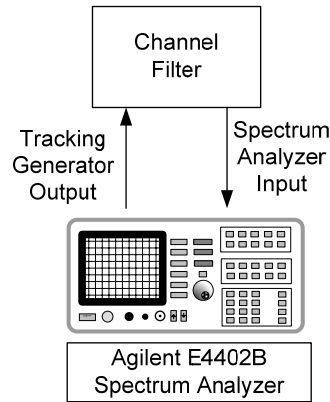


Figure 4-12: Output Filter Measurement Setup

Column 4 of Table 4-4 is the combined spectral power output of the transmitter and mask filter relative to the average in-band power of 50dBm as measured in a 10 KHz RBW. Column 5 is the spectral output of the combination of the transmitter and filter corrected to a 500 KHz resolution bandwidth (per §74.794(a)(3)). Columns 6 and 7 of Table 4-4 are the output simple and stringent mask boundaries as defined by §74.794 (a)(2) (i) and (ii) respectively.

When the data in Columns 5, 6, and 7 are plotted, the transmitter spectral performance may be observed (see Figure 4-13) against the simple mask (green line) and stringent mask (red line). It is apparent that in no case does the transmitter exceed either output mask.

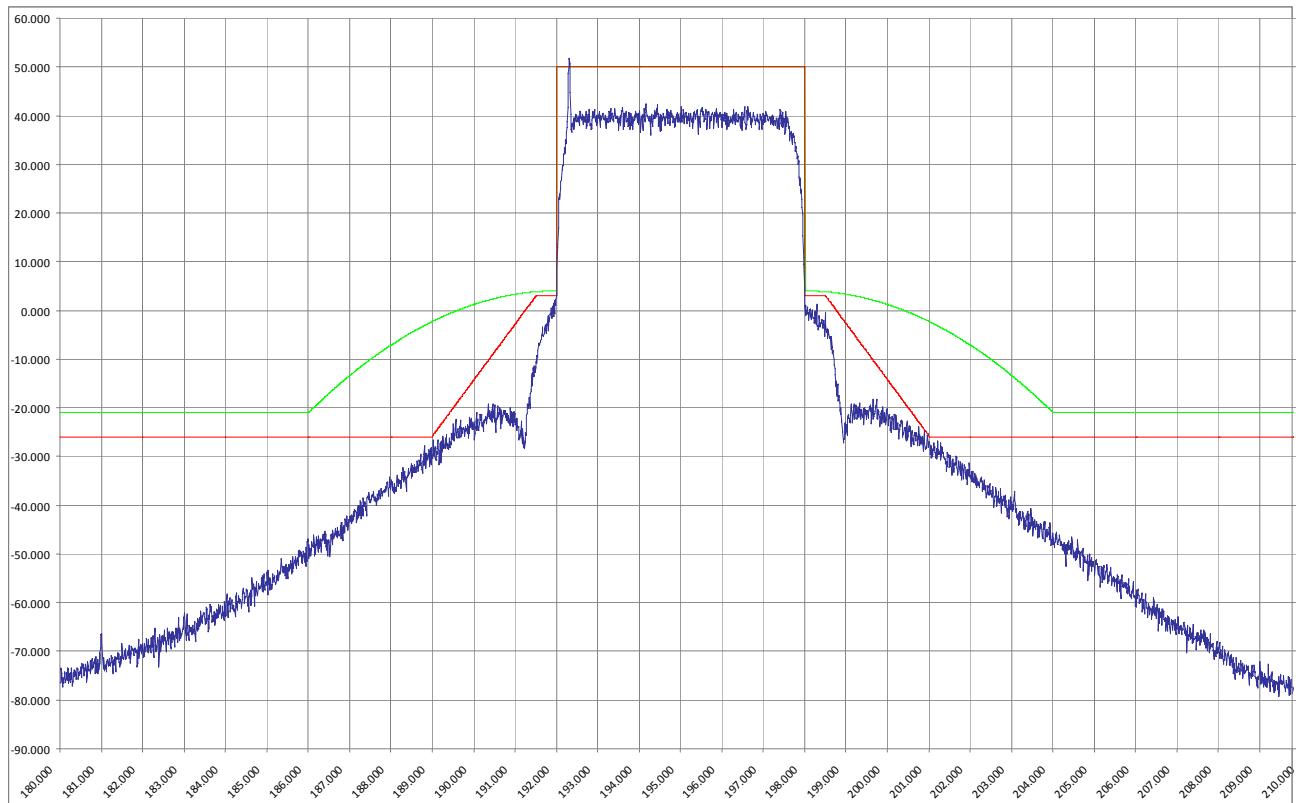


Figure 4-13: Spectral Output Compared To Mask Boundaries

Table 4-4: Spurious Emissions for Digital Operations

Measurement Center Frequency (MHz)	TX Output No Filter	Band-Pass Filter Response	Combined Transmitter + Filter Output	TX Output Corrected to 500KHz Res BW	Simple Mask Boundary	Stringent Mask Boundary
-12 Mhz From Channel Edge						
180.000	-29.69	-59.053	-88.740	-76.530	-20.998	-25.998
180.010	-29.35	-59.133	-88.484	-76.274	-20.998	-25.998
180.020	-26.58	-59.001	-85.580	-73.370	-20.998	-25.998
180.030	-27.65	-59.126	-86.776	-74.566	-20.998	-25.998
180.040	-28.85	-59.080	-87.932	-75.722	-20.998	-25.998
180.050	-29.31	-58.583	-87.892	-75.682	-20.998	-25.998
180.060	-30.98	-58.604	-89.580	-77.370	-20.998	-25.998
180.070	-28.74	-58.939	-87.675	-75.465	-20.998	-25.998
180.080	-29.73	-58.934	-88.659	-76.449	-20.998	-25.998
180.090	-29.33	-59.141	-88.466	-76.256	-20.998	-25.998
180.100	-27.79	-59.001	-86.792	-74.582	-20.998	-25.998
180.110	-28.08	-58.800	-86.883	-74.673	-20.998	-25.998
180.120	-27.57	-58.806	-86.378	-74.168	-20.998	-25.998
180.130	-29.60	-58.863	-88.463	-76.253	-20.998	-25.998
180.140	-29.52	-58.809	-88.325	-76.115	-20.998	-25.998
180.150	-29.21	-58.705	-87.919	-75.709	-20.998	-25.998
180.160	-27.82	-58.716	-86.532	-74.322	-20.998	-25.998
180.170	-28.62	-58.748	-87.372	-75.162	-20.998	-25.998
180.180	-29.59	-58.644	-88.229	-76.019	-20.998	-25.998
180.190	-26.96	-58.640	-85.598	-73.388	-20.998	-25.998
180.200	-27.32	-58.569	-85.888	-73.678	-20.998	-25.998
180.210	-30.01	-58.716	-88.729	-76.519	-20.998	-25.998
180.220	-28.79	-58.603	-87.388	-75.178	-20.998	-25.998
180.230	-28.13	-58.610	-86.740	-74.530	-20.998	-25.998
180.240	-29.87	-58.707	-88.578	-76.368	-20.998	-25.998
180.250	-28.09	-58.612	-86.699	-74.489	-20.998	-25.998
180.260	-29.14	-58.372	-87.507	-75.297	-20.998	-25.998
180.270	-29.57	-58.373	-87.945	-75.735	-20.998	-25.998
180.280	-27.22	-58.431	-85.654	-73.444	-20.998	-25.998
180.290	-30.66	-58.360	-89.021	-76.811	-20.998	-25.998
180.300	-30.98	-58.453	-89.431	-77.221	-20.998	-25.998
180.310	-29.70	-58.573	-88.274	-76.064	-20.998	-25.998
180.320	-28.26	-58.305	-86.569	-74.359	-20.998	-25.998
180.330	-28.80	-58.185	-86.984	-74.774	-20.998	-25.998
180.340	-27.62	-58.373	-85.989	-73.779	-20.998	-25.998
180.350	-29.03	-58.282	-87.307	-75.097	-20.998	-25.998
180.360	-28.90	-58.366	-87.262	-75.052	-20.998	-25.998
180.370	-27.92	-58.286	-86.203	-73.993	-20.998	-25.998
180.380	-28.78	-58.284	-87.061	-74.851	-20.998	-25.998

180.390	-29.68	-58.235	-87.912	-75.702	-20.998	-25.998
180.400	-27.44	-58.262	-85.701	-73.491	-20.998	-25.998
180.410	-27.48	-58.328	-85.811	-73.601	-20.998	-25.998
180.420	-27.60	-58.233	-85.831	-73.621	-20.998	-25.998
180.430	-28.95	-58.281	-87.234	-75.024	-20.998	-25.998
180.440	-29.82	-58.240	-88.060	-75.850	-20.998	-25.998
180.450	-28.54	-58.112	-86.652	-74.442	-20.998	-25.998
180.460	-29.11	-58.110	-87.224	-75.014	-20.998	-25.998
180.470	-28.29	-58.067	-86.361	-74.151	-20.998	-25.998
180.480	-28.69	-58.074	-86.759	-74.549	-20.998	-25.998
180.490	-27.15	-58.221	-85.366	-73.156	-20.998	-25.998
180.500	-28.39	-57.973	-86.362	-74.152	-20.998	-25.998
180.510	-28.32	-58.138	-86.460	-74.250	-20.998	-25.998
180.520	-29.53	-57.989	-87.514	-75.304	-20.998	-25.998
180.530	-26.99	-57.739	-84.727	-72.517	-20.998	-25.998
180.540	-27.42	-57.909	-85.328	-73.118	-20.998	-25.998
180.550	-27.70	-57.995	-85.698	-73.488	-20.998	-25.998
180.560	-27.42	-57.734	-85.151	-72.941	-20.998	-25.998
180.570	-27.01	-57.830	-84.836	-72.626	-20.998	-25.998
180.580	-29.26	-57.954	-87.211	-75.001	-20.998	-25.998
180.590	-29.34	-57.895	-87.237	-75.027	-20.998	-25.998
180.600	-27.96	-57.688	-85.644	-73.434	-20.998	-25.998
180.610	-28.36	-57.762	-86.125	-73.915	-20.998	-25.998
180.620	-27.04	-57.753	-84.795	-72.585	-20.998	-25.998
180.630	-28.30	-57.666	-85.964	-73.754	-20.998	-25.998
180.640	-30.98	-57.600	-88.582	-76.372	-20.998	-25.998
180.650	-29.76	-57.619	-87.381	-75.171	-20.998	-25.998
180.660	-27.44	-57.491	-84.935	-72.725	-20.998	-25.998
180.670	-26.92	-57.429	-84.345	-72.135	-20.998	-25.998
180.680	-27.49	-57.718	-85.209	-72.999	-20.998	-25.998
180.690	-28.65	-57.652	-86.300	-74.090	-20.998	-25.998
180.700	-28.19	-57.773	-85.958	-73.748	-20.998	-25.998
180.710	-28.75	-57.538	-86.291	-74.081	-20.998	-25.998
180.720	-28.07	-57.684	-85.752	-73.542	-20.998	-25.998
180.730	-26.59	-57.482	-84.071	-71.861	-20.998	-25.998
180.740	-29.49	-57.347	-86.835	-74.625	-20.998	-25.998
180.750	-28.20	-57.450	-85.651	-73.441	-20.998	-25.998
180.760	-26.95	-57.237	-84.184	-71.974	-20.998	-25.998
180.770	-26.26	-57.329	-83.585	-71.375	-20.998	-25.998
180.780	-28.32	-57.479	-85.800	-73.590	-20.998	-25.998
180.790	-28.14	-57.240	-85.379	-73.169	-20.998	-25.998
180.800	-27.64	-57.440	-85.075	-72.865	-20.998	-25.998
180.810	-28.33	-57.203	-85.528	-73.318	-20.998	-25.998
180.820	-26.94	-57.331	-84.271	-72.061	-20.998	-25.998
180.830	-27.69	-56.958	-84.644	-72.434	-20.998	-25.998
180.840	-26.36	-57.228	-83.586	-71.376	-20.998	-25.998

180.850	-29.73	-57.062	-86.794	-74.584	-20.998	-25.998
180.860	-26.27	-57.114	-83.380	-71.170	-20.998	-25.998
180.870	-29.20	-57.119	-86.317	-74.107	-20.998	-25.998
180.880	-29.46	-57.063	-86.522	-74.312	-20.998	-25.998
180.890	-27.81	-57.233	-85.040	-72.830	-20.998	-25.998
180.900	-27.65	-57.025	-84.672	-72.462	-20.998	-25.998
180.910	-26.87	-56.922	-83.796	-71.586	-20.998	-25.998
180.920	-29.68	-57.057	-86.736	-74.526	-20.998	-25.998
180.930	-28.11	-56.813	-84.920	-72.710	-20.998	-25.998
180.940	-29.03	-56.934	-85.964	-73.754	-20.998	-25.998
180.950	-25.94	-56.767	-82.702	-70.492	-20.998	-25.998
180.960	-27.99	-56.853	-84.841	-72.631	-20.998	-25.998
180.970	-25.73	-56.686	-82.419	-70.209	-20.998	-25.998
180.980	-24.53	-57.003	-81.528	-69.318	-20.998	-25.998
180.990	-22.07	-56.762	-78.836	-66.626	-20.998	-25.998
181.000	-21.63	-56.963	-78.588	-66.378	-20.998	-25.998
181.010	-23.45	-56.700	-80.147	-67.937	-20.998	-25.998
181.020	-27.00	-56.647	-83.648	-71.438	-20.998	-25.998
181.030	-27.15	-56.538	-83.688	-71.478	-20.998	-25.998
181.040	-29.09	-56.804	-85.891	-73.681	-20.998	-25.998
181.050	-28.94	-56.703	-85.640	-73.430	-20.998	-25.998
181.060	-27.00	-56.580	-83.579	-71.369	-20.998	-25.998
181.070	-29.57	-56.652	-86.219	-74.009	-20.998	-25.998
181.080	-29.19	-56.595	-85.786	-73.576	-20.998	-25.998
181.090	-28.48	-56.551	-85.034	-72.824	-20.998	-25.998
181.100	-29.10	-56.634	-85.729	-73.519	-20.998	-25.998
181.110	-27.84	-56.631	-84.466	-72.256	-20.998	-25.998
181.120	-29.94	-56.528	-86.466	-74.256	-20.998	-25.998
181.130	-27.93	-56.535	-84.465	-72.255	-20.998	-25.998
181.140	-27.48	-56.399	-83.882	-71.672	-20.998	-25.998
181.150	-27.89	-56.390	-84.282	-72.072	-20.998	-25.998
181.160	-29.01	-56.211	-85.222	-73.012	-20.998	-25.998
181.170	-28.24	-56.334	-84.571	-72.361	-20.998	-25.998
181.180	-27.30	-56.302	-83.603	-71.393	-20.998	-25.998
181.190	-27.39	-56.220	-83.606	-71.396	-20.998	-25.998
181.200	-28.72	-56.291	-85.013	-72.803	-20.998	-25.998
181.210	-28.40	-56.173	-84.574	-72.364	-20.998	-25.998
181.220	-28.92	-56.277	-85.201	-72.991	-20.998	-25.998
181.230	-28.36	-56.074	-84.434	-72.224	-20.998	-25.998
181.240	-27.21	-55.906	-83.111	-70.901	-20.998	-25.998
181.250	-27.67	-55.895	-83.563	-71.353	-20.998	-25.998
181.260	-27.58	-56.155	-83.734	-71.524	-20.998	-25.998
181.270	-30.88	-55.980	-86.857	-74.647	-20.998	-25.998
181.280	-28.19	-55.996	-84.182	-71.972	-20.998	-25.998
181.290	-28.70	-56.161	-84.863	-72.653	-20.998	-25.998
181.300	-27.91	-55.946	-83.858	-71.648	-20.998	-25.998

181.310	-29.14	-55.943	-85.087	-72.877	-20.998	-25.998
181.320	-27.35	-55.952	-83.306	-71.096	-20.998	-25.998
181.330	-27.70	-55.883	-83.580	-71.370	-20.998	-25.998
181.340	-30.40	-56.020	-86.418	-74.208	-20.998	-25.998
181.350	-28.46	-55.822	-84.279	-72.069	-20.998	-25.998
181.360	-27.68	-55.797	-83.480	-71.270	-20.998	-25.998
181.370	-27.86	-55.694	-83.554	-71.344	-20.998	-25.998
181.380	-28.28	-55.676	-83.953	-71.743	-20.998	-25.998
181.390	-26.95	-55.802	-82.747	-70.537	-20.998	-25.998
181.400	-26.78	-55.712	-82.496	-70.286	-20.998	-25.998
181.410	-28.21	-55.732	-83.940	-71.730	-20.998	-25.998
181.420	-27.12	-55.573	-82.696	-70.486	-20.998	-25.998
181.430	-28.77	-55.671	-84.445	-72.235	-20.998	-25.998
181.440	-28.75	-55.646	-84.396	-72.186	-20.998	-25.998
181.450	-29.86	-55.586	-85.441	-73.231	-20.998	-25.998
181.460	-27.80	-55.508	-83.307	-71.097	-20.998	-25.998
181.470	-29.38	-55.500	-84.884	-72.674	-20.998	-25.998
181.480	-27.60	-55.458	-83.053	-70.843	-20.998	-25.998
181.490	-25.16	-55.426	-80.587	-68.377	-20.998	-25.998
181.500	-27.08	-55.441	-82.520	-70.310	-20.998	-25.998
181.510	-27.75	-55.533	-83.281	-71.071	-20.998	-25.998
181.520	-28.23	-55.450	-83.675	-71.465	-20.998	-25.998
181.530	-28.22	-55.301	-83.516	-71.306	-20.998	-25.998
181.540	-28.49	-55.365	-83.850	-71.640	-20.998	-25.998
181.550	-26.94	-55.405	-82.344	-70.134	-20.998	-25.998
181.560	-26.90	-55.252	-82.149	-69.939	-20.998	-25.998
181.570	-28.37	-55.223	-83.592	-71.382	-20.998	-25.998
181.580	-26.50	-55.221	-81.717	-69.507	-20.998	-25.998
181.590	-28.65	-55.322	-83.967	-71.757	-20.998	-25.998
181.600	-28.36	-55.178	-83.536	-71.326	-20.998	-25.998
181.610	-28.39	-55.211	-83.603	-71.393	-20.998	-25.998
181.620	-27.59	-55.105	-82.693	-70.483	-20.998	-25.998
181.630	-27.38	-55.155	-82.539	-70.329	-20.998	-25.998
181.640	-27.14	-55.071	-82.208	-69.998	-20.998	-25.998
181.650	-28.12	-55.057	-83.178	-70.968	-20.998	-25.998
181.660	-25.88	-55.127	-81.009	-68.799	-20.998	-25.998
181.670	-28.59	-55.080	-83.670	-71.460	-20.998	-25.998
181.680	-28.52	-54.964	-83.485	-71.275	-20.998	-25.998
181.690	-27.13	-55.004	-82.129	-69.919	-20.998	-25.998
181.700	-29.52	-55.043	-84.562	-72.352	-20.998	-25.998
181.710	-27.89	-54.750	-82.642	-70.432	-20.998	-25.998
181.720	-26.34	-54.849	-81.192	-68.982	-20.998	-25.998
181.730	-26.84	-54.991	-81.827	-69.617	-20.998	-25.998
181.740	-26.58	-55.035	-81.611	-69.401	-20.998	-25.998
181.750	-26.78	-54.797	-81.577	-69.367	-20.998	-25.998
181.760	-27.00	-54.837	-81.837	-69.627	-20.998	-25.998

181.770	-27.07	-54.849	-81.923	-69.713	-20.998	-25.998
181.780	-28.20	-54.816	-83.016	-70.806	-20.998	-25.998
181.790	-26.95	-54.702	-81.653	-69.443	-20.998	-25.998
181.800	-27.47	-54.629	-82.100	-69.890	-20.998	-25.998
181.810	-26.89	-54.700	-81.587	-69.377	-20.998	-25.998
181.820	-26.82	-54.757	-81.581	-69.371	-20.998	-25.998
181.830	-27.82	-54.679	-82.499	-70.289	-20.998	-25.998
181.840	-27.72	-54.619	-82.341	-70.131	-20.998	-25.998
181.850	-27.44	-54.564	-82.000	-69.790	-20.998	-25.998
181.860	-30.86	-54.559	-85.420	-73.210	-20.998	-25.998
181.870	-30.07	-54.631	-84.702	-72.492	-20.998	-25.998
181.880	-27.80	-54.603	-82.401	-70.191	-20.998	-25.998
181.890	-25.27	-54.589	-79.857	-67.647	-20.998	-25.998
181.900	-27.43	-54.456	-81.885	-69.675	-20.998	-25.998
181.910	-29.23	-54.536	-83.762	-71.552	-20.998	-25.998
181.920	-26.91	-54.496	-81.403	-69.193	-20.998	-25.998
181.930	-28.01	-54.327	-82.338	-70.128	-20.998	-25.998
181.940	-26.42	-54.314	-80.737	-68.527	-20.998	-25.998
181.950	-27.06	-54.371	-81.433	-69.223	-20.998	-25.998
181.960	-26.69	-54.228	-80.915	-68.705	-20.998	-25.998
181.970	-28.37	-54.341	-82.708	-70.498	-20.998	-25.998
181.980	-27.76	-54.274	-82.029	-69.819	-20.998	-25.998
181.990	-27.78	-54.371	-82.155	-69.945	-20.998	-25.998
182.000	-26.24	-54.265	-80.502	-68.292	-20.998	-25.998
182.010	-29.11	-54.325	-83.435	-71.225	-20.998	-25.998
182.020	-29.01	-54.294	-83.306	-71.096	-20.998	-25.998
182.030	-26.58	-53.991	-80.574	-68.364	-20.998	-25.998
182.040	-28.96	-54.263	-83.223	-71.013	-20.998	-25.998
182.050	-27.56	-54.085	-81.649	-69.439	-20.998	-25.998
182.060	-28.25	-54.110	-82.364	-70.154	-20.998	-25.998
182.070	-27.42	-54.058	-81.475	-69.265	-20.998	-25.998
182.080	-26.67	-54.052	-80.719	-68.509	-20.998	-25.998
182.090	-25.50	-54.098	-79.597	-67.387	-20.998	-25.998
182.100	-28.18	-54.076	-82.251	-70.041	-20.998	-25.998
182.110	-27.20	-54.049	-81.252	-69.042	-20.998	-25.998
182.120	-26.98	-53.966	-80.944	-68.734	-20.998	-25.998
182.130	-25.73	-54.015	-79.742	-67.532	-20.998	-25.998
182.140	-28.74	-53.805	-82.541	-70.331	-20.998	-25.998
182.150	-27.20	-53.956	-81.151	-68.941	-20.998	-25.998
182.160	-27.56	-53.840	-81.402	-69.192	-20.998	-25.998
182.170	-27.07	-53.861	-80.927	-68.717	-20.998	-25.998
182.180	-28.37	-53.828	-82.197	-69.987	-20.998	-25.998
182.190	-28.65	-53.840	-82.487	-70.277	-20.998	-25.998
182.200	-25.73	-53.716	-79.441	-67.231	-20.998	-25.998
182.210	-27.27	-53.746	-81.016	-68.806	-20.998	-25.998
182.220	-27.56	-53.697	-81.259	-69.049	-20.998	-25.998

182.230	-26.84	-53.623	-80.462	-68.252	-20.998	-25.998
182.240	-25.33	-53.679	-79.004	-66.794	-20.998	-25.998
182.250	-28.21	-53.623	-81.836	-69.626	-20.998	-25.998
182.260	-29.84	-53.629	-83.469	-71.259	-20.998	-25.998
182.270	-27.51	-53.519	-81.027	-68.817	-20.998	-25.998
182.280	-24.02	-53.481	-77.500	-65.290	-20.998	-25.998
182.290	-24.02	-53.523	-77.544	-65.334	-20.998	-25.998
182.300	-24.67	-53.436	-78.108	-65.898	-20.998	-25.998
182.310	-28.81	-53.460	-82.265	-70.055	-20.998	-25.998
182.320	-27.47	-53.401	-80.866	-68.656	-20.998	-25.998
182.330	-27.75	-53.408	-81.161	-68.951	-20.998	-25.998
182.340	-28.43	-53.481	-81.909	-69.699	-20.998	-25.998
182.350	-26.21	-53.254	-79.460	-67.250	-20.998	-25.998
182.360	-26.95	-53.266	-80.211	-68.001	-20.998	-25.998
182.370	-26.41	-53.277	-79.688	-67.478	-20.998	-25.998
182.380	-27.42	-53.408	-80.828	-68.618	-20.998	-25.998
182.390	-32.19	-53.282	-85.468	-73.258	-20.998	-25.998
182.400	-28.12	-53.142	-81.265	-69.055	-20.998	-25.998
182.410	-25.74	-53.117	-78.860	-66.650	-20.998	-25.998
182.420	-27.52	-53.225	-80.743	-68.533	-20.998	-25.998
182.430	-27.01	-53.136	-80.141	-67.931	-20.998	-25.998
182.440	-29.26	-53.103	-82.364	-70.154	-20.998	-25.998
182.450	-27.37	-53.113	-80.487	-68.277	-20.998	-25.998
182.460	-26.05	-53.134	-79.183	-66.973	-20.998	-25.998
182.470	-26.01	-53.073	-79.081	-66.871	-20.998	-25.998
182.480	-27.18	-52.963	-80.144	-67.934	-20.998	-25.998
182.490	-27.89	-52.863	-80.752	-68.542	-20.998	-25.998
182.500	-26.27	-52.944	-79.217	-67.007	-20.998	-25.998
182.510	-25.68	-52.915	-78.597	-66.387	-20.998	-25.998
182.520	-25.10	-52.783	-77.880	-65.670	-20.998	-25.998
182.530	-27.17	-52.727	-79.898	-67.688	-20.998	-25.998
182.540	-27.31	-52.889	-80.198	-67.988	-20.998	-25.998
182.550	-26.59	-52.859	-79.444	-67.234	-20.998	-25.998
182.560	-29.51	-52.772	-82.285	-70.075	-20.998	-25.998
182.570	-27.40	-52.838	-80.235	-68.025	-20.998	-25.998
182.580	-27.16	-52.817	-79.976	-67.766	-20.998	-25.998
182.590	-26.16	-52.782	-78.945	-66.735	-20.998	-25.998
182.600	-24.70	-52.644	-77.342	-65.132	-20.998	-25.998
182.610	-26.51	-52.580	-79.093	-66.883	-20.998	-25.998
182.620	-28.12	-52.591	-80.715	-68.505	-20.998	-25.998
182.630	-25.78	-52.504	-78.287	-66.077	-20.998	-25.998
182.640	-27.05	-52.610	-79.662	-67.452	-20.998	-25.998
182.650	-26.18	-52.595	-78.774	-66.564	-20.998	-25.998
182.660	-28.42	-52.592	-81.012	-68.802	-20.998	-25.998
182.670	-29.12	-52.541	-81.662	-69.452	-20.998	-25.998
182.680	-27.19	-52.395	-79.588	-67.378	-20.998	-25.998

182.690	-26.15	-52.413	-78.566	-66.356	-20.998	-25.998
182.700	-27.73	-52.543	-80.270	-68.060	-20.998	-25.998
182.710	-25.76	-52.466	-78.221	-66.011	-20.998	-25.998
182.720	-27.29	-52.416	-79.703	-67.493	-20.998	-25.998
182.730	-26.00	-52.241	-78.241	-66.031	-20.998	-25.998
182.740	-27.17	-52.228	-79.396	-67.186	-20.998	-25.998
182.750	-26.58	-52.310	-78.886	-66.676	-20.998	-25.998
182.760	-27.20	-52.236	-79.435	-67.225	-20.998	-25.998
182.770	-29.00	-52.331	-81.331	-69.121	-20.998	-25.998
182.780	-27.61	-52.199	-79.807	-67.597	-20.998	-25.998
182.790	-26.66	-52.199	-78.854	-66.644	-20.998	-25.998
182.800	-25.47	-52.061	-77.533	-65.323	-20.998	-25.998
182.810	-27.51	-52.085	-79.591	-67.381	-20.998	-25.998
182.820	-25.92	-51.971	-77.890	-65.680	-20.998	-25.998
182.830	-25.41	-51.941	-77.350	-65.140	-20.998	-25.998
182.840	-27.40	-52.031	-79.428	-67.218	-20.998	-25.998
182.850	-28.30	-52.006	-80.302	-68.092	-20.998	-25.998
182.860	-23.34	-52.039	-75.379	-63.169	-20.998	-25.998
182.870	-24.89	-51.929	-76.823	-64.613	-20.998	-25.998
182.880	-27.98	-51.964	-79.945	-67.735	-20.998	-25.998
182.890	-25.66	-51.837	-77.496	-65.286	-20.998	-25.998
182.900	-26.26	-51.929	-78.185	-65.975	-20.998	-25.998
182.910	-27.48	-51.904	-79.388	-67.178	-20.998	-25.998
182.920	-27.75	-51.814	-79.561	-67.351	-20.998	-25.998
182.930	-26.93	-51.738	-78.665	-66.455	-20.998	-25.998
182.940	-27.14	-51.770	-78.911	-66.701	-20.998	-25.998
182.950	-26.43	-51.639	-78.064	-65.854	-20.998	-25.998
182.960	-26.17	-51.668	-77.834	-65.624	-20.998	-25.998
182.970	-25.17	-51.692	-76.865	-64.655	-20.998	-25.998
182.980	-25.96	-51.679	-77.639	-65.429	-20.998	-25.998
182.990	-23.74	-51.611	-75.350	-63.140	-20.998	-25.998
183.000	-23.13	-51.606	-74.731	-62.521	-20.998	-25.998
183.010	-22.75	-51.518	-74.266	-62.056	-20.998	-25.998
183.020	-25.93	-51.609	-77.535	-65.325	-20.998	-25.998
183.030	-26.56	-51.495	-78.052	-65.842	-20.998	-25.998
183.040	-27.89	-51.426	-79.316	-67.106	-20.998	-25.998
183.050	-28.51	-51.463	-79.971	-67.761	-20.998	-25.998
183.060	-26.61	-51.340	-77.951	-65.741	-20.998	-25.998
183.070	-23.26	-51.295	-74.554	-62.344	-20.998	-25.998
183.080	-24.49	-51.374	-75.861	-63.651	-20.998	-25.998
183.090	-27.71	-51.354	-79.066	-66.856	-20.998	-25.998
183.100	-27.13	-51.308	-78.437	-66.227	-20.998	-25.998
183.110	-28.78	-51.233	-80.008	-67.798	-20.998	-25.998
183.120	-25.51	-51.259	-76.772	-64.562	-20.998	-25.998
183.130	-26.97	-51.304	-78.274	-66.064	-20.998	-25.998
183.140	-26.63	-51.121	-77.750	-65.540	-20.998	-25.998

183.150	-26.97	-51.132	-78.097	-65.887	-20.998	-25.998
183.160	-26.05	-51.126	-77.174	-64.964	-20.998	-25.998
183.170	-26.19	-51.208	-77.399	-65.189	-20.998	-25.998
183.180	-27.83	-51.005	-78.834	-66.624	-20.998	-25.998
183.190	-26.41	-51.045	-77.453	-65.243	-20.998	-25.998
183.200	-25.86	-50.957	-76.820	-64.610	-20.998	-25.998
183.210	-27.56	-50.962	-78.524	-66.314	-20.998	-25.998
183.220	-27.12	-50.919	-78.037	-65.827	-20.998	-25.998
183.230	-26.97	-50.948	-77.918	-65.708	-20.998	-25.998
183.240	-27.28	-50.866	-78.149	-65.939	-20.998	-25.998
183.250	-25.20	-50.841	-76.043	-63.833	-20.998	-25.998
183.260	-27.82	-50.810	-78.625	-66.415	-20.998	-25.998
183.270	-29.31	-50.790	-80.104	-67.894	-20.998	-25.998
183.280	-27.83	-50.753	-78.587	-66.377	-20.998	-25.998
183.290	-25.74	-50.722	-76.462	-64.252	-20.998	-25.998
183.300	-25.75	-50.704	-76.454	-64.244	-20.998	-25.998
183.310	-26.85	-50.683	-77.530	-65.320	-20.998	-25.998
183.320	-27.35	-50.675	-78.027	-65.817	-20.998	-25.998
183.330	-24.89	-50.652	-75.539	-63.329	-20.998	-25.998
183.340	-27.01	-50.570	-77.580	-65.370	-20.998	-25.998
183.350	-26.09	-50.563	-76.652	-64.442	-20.998	-25.998
183.360	-24.81	-50.546	-75.359	-63.149	-20.998	-25.998
183.370	-25.23	-50.508	-75.733	-63.523	-20.998	-25.998
183.380	-26.66	-50.474	-77.136	-64.926	-20.998	-25.998
183.390	-26.03	-50.429	-76.463	-64.253	-20.998	-25.998
183.400	-23.52	-50.371	-73.893	-61.683	-20.998	-25.998
183.410	-25.67	-50.355	-76.027	-63.817	-20.998	-25.998
183.420	-25.82	-50.342	-76.157	-63.947	-20.998	-25.998
183.430	-26.03	-50.362	-76.394	-64.184	-20.998	-25.998
183.440	-24.44	-50.446	-74.890	-62.680	-20.998	-25.998
183.450	-24.73	-50.300	-75.029	-62.819	-20.998	-25.998
183.460	-24.41	-50.179	-74.587	-62.377	-20.998	-25.998
183.470	-24.16	-50.199	-74.359	-62.149	-20.998	-25.998
183.480	-24.15	-50.166	-74.313	-62.103	-20.998	-25.998
183.490	-25.04	-50.089	-75.131	-62.921	-20.998	-25.998
183.500	-26.01	-50.071	-76.084	-63.874	-20.998	-25.998
183.510	-26.67	-50.017	-76.691	-64.481	-20.998	-25.998
183.520	-25.57	-50.013	-75.584	-63.374	-20.998	-25.998
183.530	-26.50	-50.054	-76.557	-64.347	-20.998	-25.998
183.540	-23.25	-49.973	-73.225	-61.015	-20.998	-25.998
183.550	-23.60	-49.964	-73.568	-61.358	-20.998	-25.998
183.560	-25.60	-49.895	-75.498	-63.288	-20.998	-25.998
183.570	-26.13	-49.968	-76.096	-63.886	-20.998	-25.998
183.580	-28.48	-49.836	-78.312	-66.102	-20.998	-25.998
183.590	-27.65	-49.848	-77.493	-65.283	-20.998	-25.998
183.600	-24.89	-49.861	-74.754	-62.544	-20.998	-25.998

183.610	-25.84	-49.794	-75.636	-63.426	-20.998	-25.998
183.620	-23.36	-49.769	-73.132	-60.922	-20.998	-25.998
183.630	-22.85	-49.738	-72.588	-60.378	-20.998	-25.998
183.640	-24.32	-49.761	-74.085	-61.875	-20.998	-25.998
183.650	-23.38	-49.654	-73.035	-60.825	-20.998	-25.998
183.660	-25.47	-49.627	-75.100	-62.890	-20.998	-25.998
183.670	-26.63	-49.607	-76.240	-64.030	-20.998	-25.998
183.680	-26.59	-49.575	-76.161	-63.951	-20.998	-25.998
183.690	-25.43	-49.649	-75.080	-62.870	-20.998	-25.998
183.700	-25.32	-49.580	-74.899	-62.689	-20.998	-25.998
183.710	-26.59	-49.542	-76.131	-63.921	-20.998	-25.998
183.720	-24.70	-49.445	-74.148	-61.938	-20.998	-25.998
183.730	-24.67	-49.480	-74.147	-61.937	-20.998	-25.998
183.740	-27.53	-49.396	-76.927	-64.717	-20.998	-25.998
183.750	-25.85	-49.318	-75.165	-62.955	-20.998	-25.998
183.760	-25.94	-49.355	-75.299	-63.089	-20.998	-25.998
183.770	-25.13	-49.352	-74.481	-62.271	-20.998	-25.998
183.780	-26.16	-49.262	-75.423	-63.213	-20.998	-25.998
183.790	-24.30	-49.257	-73.555	-61.345	-20.998	-25.998
183.800	-24.96	-49.184	-74.146	-61.936	-20.998	-25.998
183.810	-26.00	-49.226	-75.224	-63.014	-20.998	-25.998
183.820	-25.12	-49.214	-74.338	-62.128	-20.998	-25.998
183.830	-26.21	-49.132	-75.341	-63.131	-20.998	-25.998
183.840	-23.39	-49.126	-72.514	-60.304	-20.998	-25.998
183.850	-25.42	-49.055	-74.474	-62.264	-20.998	-25.998
183.860	-24.89	-49.065	-73.956	-61.746	-20.998	-25.998
183.870	-23.71	-48.994	-72.701	-60.491	-20.998	-25.998
183.880	-24.80	-49.040	-73.840	-61.630	-20.998	-25.998
183.890	-25.63	-49.061	-74.693	-62.483	-20.998	-25.998
183.900	-26.59	-48.896	-75.483	-63.273	-20.998	-25.998
183.910	-25.75	-48.880	-74.634	-62.424	-20.998	-25.998
183.920	-24.12	-48.829	-72.949	-60.739	-20.998	-25.998
183.930	-24.67	-48.815	-73.480	-61.270	-20.998	-25.998
183.940	-25.56	-48.763	-74.320	-62.110	-20.998	-25.998
183.950	-26.49	-48.783	-75.274	-63.064	-20.998	-25.998
183.960	-27.21	-48.720	-75.929	-63.719	-20.998	-25.998
183.970	-23.41	-48.620	-72.033	-59.823	-20.998	-25.998
183.980	-24.20	-48.617	-72.820	-60.610	-20.998	-25.998
183.990	-26.45	-48.656	-75.104	-62.894	-20.998	-25.998
184.000	-24.53	-48.651	-73.178	-60.968	-20.998	-25.998
184.010	-26.27	-48.646	-74.917	-62.707	-20.998	-25.998
184.020	-23.61	-48.569	-72.183	-59.973	-20.998	-25.998
184.030	-21.84	-48.495	-70.339	-58.129	-20.998	-25.998
184.040	-22.67	-48.539	-71.210	-59.000	-20.998	-25.998
184.050	-26.75	-48.461	-75.208	-62.998	-20.998	-25.998
184.060	-24.06	-48.347	-72.409	-60.199	-20.998	-25.998

184.070	-24.44	-48.283	-72.721	-60.511	-20.998	-25.998
184.080	-23.49	-48.358	-71.845	-59.635	-20.998	-25.998
184.090	-24.23	-48.350	-72.579	-60.369	-20.998	-25.998
184.100	-22.75	-48.367	-71.115	-58.905	-20.998	-25.998
184.110	-25.92	-48.202	-74.123	-61.913	-20.998	-25.998
184.120	-25.12	-48.152	-73.272	-61.062	-20.998	-25.998
184.130	-23.99	-48.213	-72.207	-59.997	-20.998	-25.998
184.140	-23.62	-48.121	-71.743	-59.533	-20.998	-25.998
184.150	-23.35	-48.148	-71.496	-59.286	-20.998	-25.998
184.160	-23.86	-48.137	-71.995	-59.785	-20.998	-25.998
184.170	-25.32	-48.123	-73.439	-61.229	-20.998	-25.998
184.180	-24.94	-47.999	-72.940	-60.730	-20.998	-25.998
184.190	-24.68	-47.992	-72.668	-60.458	-20.998	-25.998
184.200	-25.95	-47.942	-73.895	-61.685	-20.998	-25.998
184.210	-25.55	-47.974	-73.525	-61.315	-20.998	-25.998
184.220	-25.65	-47.940	-73.586	-61.376	-20.998	-25.998
184.230	-25.98	-47.904	-73.884	-61.674	-20.998	-25.998
184.240	-27.09	-47.932	-75.024	-62.814	-20.998	-25.998
184.250	-23.12	-47.875	-70.993	-58.783	-20.998	-25.998
184.260	-22.46	-47.733	-70.190	-57.980	-20.998	-25.998
184.270	-25.53	-47.697	-73.222	-61.012	-20.998	-25.998
184.280	-26.07	-47.689	-73.757	-61.547	-20.998	-25.998
184.290	-24.31	-47.708	-72.022	-59.812	-20.998	-25.998
184.300	-24.77	-47.660	-72.428	-60.218	-20.998	-25.998
184.310	-24.50	-47.730	-72.231	-60.021	-20.998	-25.998
184.320	-23.19	-47.660	-70.849	-58.639	-20.998	-25.998
184.330	-24.82	-47.542	-72.364	-60.154	-20.998	-25.998
184.340	-23.92	-47.531	-71.450	-59.240	-20.998	-25.998
184.350	-24.57	-47.499	-72.073	-59.863	-20.998	-25.998
184.360	-24.02	-47.497	-71.515	-59.305	-20.998	-25.998
184.370	-25.21	-47.455	-72.667	-60.457	-20.998	-25.998
184.380	-25.47	-47.388	-72.855	-60.645	-20.998	-25.998
184.390	-26.05	-47.372	-73.425	-61.215	-20.998	-25.998
184.400	-24.32	-47.262	-71.578	-59.368	-20.998	-25.998
184.410	-23.26	-47.232	-70.494	-58.284	-20.998	-25.998
184.420	-22.01	-47.257	-69.263	-57.053	-20.998	-25.998
184.430	-23.02	-47.243	-70.267	-58.057	-20.998	-25.998
184.440	-23.13	-47.170	-70.299	-58.089	-20.998	-25.998
184.450	-25.07	-47.132	-72.202	-59.992	-20.998	-25.998
184.460	-25.27	-47.159	-72.428	-60.218	-20.998	-25.998
184.470	-23.99	-47.108	-71.097	-58.887	-20.998	-25.998
184.480	-24.05	-47.091	-71.144	-58.934	-20.998	-25.998
184.490	-24.06	-46.980	-71.035	-58.825	-20.998	-25.998
184.500	-22.41	-47.018	-69.427	-57.217	-20.998	-25.998
184.510	-22.69	-46.992	-69.681	-57.471	-20.998	-25.998
184.520	-22.93	-46.974	-69.899	-57.689	-20.998	-25.998

184.530	-23.97	-46.922	-70.891	-58.681	-20.998	-25.998
184.540	-26.15	-46.847	-72.994	-60.784	-20.998	-25.998
184.550	-24.30	-46.826	-71.128	-58.918	-20.998	-25.998
184.560	-27.29	-46.808	-74.096	-61.886	-20.998	-25.998
184.570	-24.20	-46.725	-70.924	-58.714	-20.998	-25.998
184.580	-24.04	-46.720	-70.761	-58.551	-20.998	-25.998
184.590	-23.58	-46.730	-70.310	-58.100	-20.998	-25.998
184.600	-26.12	-46.619	-72.740	-60.530	-20.998	-25.998
184.610	-22.94	-46.636	-69.572	-57.362	-20.998	-25.998
184.620	-26.07	-46.650	-72.720	-60.510	-20.998	-25.998
184.630	-24.14	-46.581	-70.717	-58.507	-20.998	-25.998
184.640	-20.64	-46.526	-67.167	-54.957	-20.998	-25.998
184.650	-22.90	-46.512	-69.412	-57.202	-20.998	-25.998
184.660	-21.83	-46.504	-68.336	-56.126	-20.998	-25.998
184.670	-22.01	-46.468	-68.478	-56.268	-20.998	-25.998
184.680	-22.10	-46.335	-68.433	-56.223	-20.998	-25.998
184.690	-22.53	-46.359	-68.889	-56.679	-20.998	-25.998
184.700	-26.54	-46.320	-72.864	-60.654	-20.998	-25.998
184.710	-22.76	-46.289	-69.049	-56.839	-20.998	-25.998
184.720	-24.37	-46.352	-70.723	-58.513	-20.998	-25.998
184.730	-23.54	-46.251	-69.787	-57.577	-20.998	-25.998
184.740	-21.76	-46.165	-67.920	-55.710	-20.998	-25.998
184.750	-23.52	-46.219	-69.734	-57.524	-20.998	-25.998
184.760	-24.64	-46.181	-70.818	-58.608	-20.998	-25.998
184.770	-24.12	-46.109	-70.231	-58.021	-20.998	-25.998
184.780	-24.25	-46.083	-70.334	-58.124	-20.998	-25.998
184.790	-23.05	-46.049	-69.101	-56.891	-20.998	-25.998
184.800	-22.21	-46.021	-68.234	-56.024	-20.998	-25.998
184.810	-23.37	-46.007	-69.377	-57.167	-20.998	-25.998
184.820	-22.87	-45.963	-68.833	-56.623	-20.998	-25.998
184.830	-22.83	-45.946	-68.771	-56.561	-20.998	-25.998
184.840	-23.52	-45.809	-69.327	-57.117	-20.998	-25.998
184.850	-23.24	-45.920	-69.160	-56.950	-20.998	-25.998
184.860	-22.52	-45.803	-68.326	-56.116	-20.998	-25.998
184.870	-21.27	-45.773	-67.040	-54.830	-20.998	-25.998
184.880	-24.24	-45.682	-69.922	-57.712	-20.998	-25.998
184.890	-21.00	-45.741	-66.739	-54.529	-20.998	-25.998
184.900	-22.31	-45.641	-67.955	-55.745	-20.998	-25.998
184.910	-24.39	-45.643	-70.028	-57.818	-20.998	-25.998
184.920	-22.64	-45.612	-68.254	-56.044	-20.998	-25.998
184.930	-20.83	-45.552	-66.382	-54.172	-20.998	-25.998
184.940	-23.75	-45.492	-69.246	-57.036	-20.998	-25.998
184.950	-24.27	-45.452	-69.717	-57.507	-20.998	-25.998
184.960	-23.20	-45.451	-68.650	-56.440	-20.998	-25.998
184.970	-22.40	-45.414	-67.816	-55.606	-20.998	-25.998
184.980	-22.77	-45.443	-68.213	-56.003	-20.998	-25.998

184.990	-22.81	-45.420	-68.225	-56.015	-20.998	-25.998
185.000	-23.35	-45.355	-68.707	-56.497	-20.998	-25.998
185.010	-20.58	-45.283	-65.864	-53.654	-20.998	-25.998
185.020	-25.29	-45.264	-70.558	-58.348	-20.998	-25.998
185.030	-20.34	-45.206	-65.541	-53.331	-20.998	-25.998
185.040	-23.22	-45.257	-68.472	-56.262	-20.998	-25.998
185.050	-22.81	-45.211	-68.020	-55.810	-20.998	-25.998
185.060	-23.94	-45.106	-69.044	-56.834	-20.998	-25.998
185.070	-24.43	-45.125	-69.551	-57.341	-20.998	-25.998
185.080	-22.06	-45.072	-67.129	-54.919	-20.998	-25.998
185.090	-23.87	-45.035	-68.906	-56.696	-20.998	-25.998
185.100	-24.50	-44.982	-69.477	-57.267	-20.998	-25.998
185.110	-23.50	-44.999	-68.494	-56.284	-20.998	-25.998
185.120	-24.57	-44.963	-69.534	-57.324	-20.998	-25.998
185.130	-21.48	-44.898	-66.375	-54.165	-20.998	-25.998
185.140	-23.13	-44.857	-67.990	-55.780	-20.998	-25.998
185.150	-22.30	-44.760	-67.056	-54.846	-20.998	-25.998
185.160	-22.39	-44.788	-67.173	-54.963	-20.998	-25.998
185.170	-22.59	-44.731	-67.325	-55.115	-20.998	-25.998
185.180	-21.98	-44.686	-66.661	-54.451	-20.998	-25.998
185.190	-23.15	-44.674	-67.821	-55.611	-20.998	-25.998
185.200	-23.57	-44.631	-68.202	-55.992	-20.998	-25.998
185.210	-23.82	-44.553	-68.372	-56.162	-20.998	-25.998
185.220	-23.26	-44.514	-67.769	-55.559	-20.998	-25.998
185.230	-22.12	-44.510	-66.626	-54.416	-20.998	-25.998
185.240	-23.43	-44.498	-67.930	-55.720	-20.998	-25.998
185.250	-22.69	-44.467	-67.157	-54.947	-20.998	-25.998
185.260	-21.05	-44.452	-65.503	-53.293	-20.998	-25.998
185.270	-22.24	-44.414	-66.650	-54.440	-20.998	-25.998
185.280	-23.30	-44.322	-67.620	-55.410	-20.998	-25.998
185.290	-22.06	-44.272	-66.334	-54.124	-20.998	-25.998
185.300	-21.69	-44.236	-65.928	-53.718	-20.998	-25.998
185.310	-21.69	-44.278	-65.968	-53.758	-20.998	-25.998
185.320	-22.15	-44.215	-66.361	-54.151	-20.998	-25.998
185.330	-21.75	-44.215	-65.960	-53.750	-20.998	-25.998
185.340	-19.21	-44.155	-63.368	-51.158	-20.998	-25.998
185.350	-19.19	-44.085	-63.276	-51.066	-20.998	-25.998
185.360	-21.52	-44.058	-65.580	-53.370	-20.998	-25.998
185.370	-21.77	-44.026	-65.793	-53.583	-20.998	-25.998
185.380	-21.80	-44.029	-65.824	-53.614	-20.998	-25.998
185.390	-22.17	-43.974	-66.144	-53.934	-20.998	-25.998
185.400	-20.91	-43.907	-64.819	-52.609	-20.998	-25.998
185.410	-22.03	-43.875	-65.906	-53.696	-20.998	-25.998
185.420	-21.43	-43.830	-65.263	-53.053	-20.998	-25.998
185.430	-20.91	-43.802	-64.707	-52.497	-20.998	-25.998
185.440	-22.87	-43.779	-66.652	-54.442	-20.998	-25.998

185.450	-20.56	-43.760	-64.316	-52.106	-20.998	-25.998
185.460	-21.02	-43.772	-64.796	-52.586	-20.998	-25.998
185.470	-23.57	-43.697	-67.262	-55.052	-20.998	-25.998
185.480	-22.96	-43.660	-66.618	-54.408	-20.998	-25.998
185.490	-21.29	-43.578	-64.872	-52.662	-20.998	-25.998
185.500	-23.69	-43.581	-67.268	-55.058	-20.998	-25.998
185.510	-22.61	-43.548	-66.157	-53.947	-20.998	-25.998
185.520	-20.81	-43.490	-64.301	-52.091	-20.998	-25.998
185.530	-22.33	-43.416	-65.748	-53.538	-20.998	-25.998
185.540	-22.23	-43.402	-65.630	-53.420	-20.998	-25.998
185.550	-21.62	-43.386	-65.010	-52.800	-20.998	-25.998
185.560	-21.84	-43.382	-65.226	-53.016	-20.998	-25.998
185.570	-20.18	-43.316	-63.493	-51.283	-20.998	-25.998
185.580	-21.56	-43.293	-64.855	-52.645	-20.998	-25.998
185.590	-23.00	-43.229	-66.224	-54.014	-20.998	-25.998
185.600	-20.96	-43.204	-64.168	-51.958	-20.998	-25.998
185.610	-22.79	-43.175	-65.962	-53.752	-20.998	-25.998
185.620	-19.63	-43.185	-62.813	-50.603	-20.998	-25.998
185.630	-20.63	-43.074	-63.707	-51.497	-20.998	-25.998
185.640	-21.99	-43.069	-65.057	-52.847	-20.998	-25.998
185.650	-21.35	-43.056	-64.406	-52.196	-20.998	-25.998
185.660	-21.07	-42.987	-64.060	-51.850	-20.998	-25.998
185.670	-20.57	-42.933	-63.505	-51.295	-20.998	-25.998
185.680	-20.38	-42.913	-63.292	-51.082	-20.998	-25.998
185.690	-21.70	-42.901	-64.605	-52.395	-20.998	-25.998
185.700	-20.03	-42.864	-62.890	-50.680	-20.998	-25.998
185.710	-22.36	-42.826	-65.190	-52.980	-20.998	-25.998
185.720	-21.34	-42.740	-64.076	-51.866	-20.998	-25.998
185.730	-20.29	-42.756	-63.041	-50.831	-20.998	-25.998
185.740	-20.39	-42.723	-63.110	-50.900	-20.998	-25.998
185.750	-21.80	-42.675	-64.478	-52.268	-20.998	-25.998
185.760	-19.06	-42.594	-61.654	-49.444	-20.998	-25.998
185.770	-18.85	-42.559	-61.404	-49.194	-20.998	-25.998
185.780	-20.29	-42.553	-62.843	-50.633	-20.998	-25.998
185.790	-20.15	-42.526	-62.672	-50.462	-20.998	-25.998
185.800	-20.10	-42.517	-62.612	-50.402	-20.998	-25.998
185.810	-19.16	-42.449	-61.612	-49.402	-20.998	-25.998
185.820	-19.96	-42.403	-62.364	-50.154	-20.998	-25.998
185.830	-19.45	-42.361	-61.807	-49.597	-20.998	-25.998
185.840	-21.72	-42.320	-64.035	-51.825	-20.998	-25.998
185.850	-20.20	-42.281	-62.481	-50.271	-20.998	-25.998
185.860	-21.81	-42.276	-64.090	-51.880	-20.998	-25.998
185.870	-20.55	-42.219	-62.772	-50.562	-20.998	-25.998
185.880	-19.42	-42.139	-61.560	-49.350	-20.998	-25.998
185.890	-20.09	-42.150	-62.243	-50.033	-20.998	-25.998
185.900	-20.09	-42.122	-62.209	-49.999	-20.998	-25.998

185.910	-21.96	-42.078	-64.034	-51.824	-20.998	-25.998
185.920	-20.99	-42.009	-63.001	-50.791	-20.998	-25.998
185.930	-20.10	-41.971	-62.074	-49.864	-20.998	-25.998
185.940	-22.79	-41.962	-64.752	-52.542	-20.998	-25.998
185.950	-18.92	-41.957	-60.874	-48.664	-20.998	-25.998
185.960	-21.85	-41.868	-63.715	-51.505	-20.998	-25.998
185.970	-17.80	-41.863	-59.662	-47.452	-20.998	-25.998
185.980	-17.99	-41.770	-59.755	-47.545	-20.998	-25.998
185.990	-17.35	-41.770	-59.122	-46.912	-20.998	-25.998
186.000	-21.55	-41.724	-63.273	-51.063	-20.998	-25.998
186.010	-20.54	-41.720	-62.256	-50.046	-20.914	-25.998
186.020	-18.57	-41.626	-60.197	-47.987	-20.831	-25.998
186.030	-20.96	-41.611	-62.575	-50.365	-20.748	-25.998
186.040	-19.56	-41.597	-61.153	-48.943	-20.666	-25.998
186.050	-19.51	-41.539	-61.049	-48.839	-20.583	-25.998
186.060	-21.13	-41.484	-62.614	-50.404	-20.500	-25.998
186.070	-19.45	-41.465	-60.913	-48.703	-20.418	-25.998
186.080	-19.44	-41.431	-60.867	-48.657	-20.336	-25.998
186.090	-18.39	-41.390	-59.783	-47.573	-20.253	-25.998
186.100	-19.21	-41.382	-60.595	-48.385	-20.171	-25.998
186.110	-19.08	-41.311	-60.395	-48.185	-20.089	-25.998
186.120	-19.60	-41.291	-60.894	-48.684	-20.008	-25.998
186.130	-17.16	-41.223	-58.385	-46.175	-19.926	-25.998
186.140	-19.05	-41.216	-60.268	-48.058	-19.845	-25.998
186.150	-20.32	-41.155	-61.472	-49.262	-19.763	-25.998
186.160	-21.46	-41.125	-62.589	-50.379	-19.682	-25.998
186.170	-19.10	-41.090	-60.189	-47.979	-19.601	-25.998
186.180	-21.22	-41.034	-62.250	-50.040	-19.520	-25.998
186.190	-17.71	-41.027	-58.732	-46.522	-19.439	-25.998
186.200	-19.49	-40.988	-60.480	-48.270	-19.359	-25.998
186.210	-18.24	-40.965	-59.201	-46.991	-19.278	-25.998
186.220	-19.29	-40.908	-60.202	-47.992	-19.198	-25.998
186.230	-20.90	-40.875	-61.779	-49.569	-19.118	-25.998
186.240	-18.53	-40.817	-59.349	-47.139	-19.038	-25.998
186.250	-17.82	-40.795	-58.613	-46.403	-18.958	-25.998
186.260	-20.39	-40.732	-61.125	-48.915	-18.878	-25.998
186.270	-20.22	-40.709	-60.931	-48.721	-18.798	-25.998
186.280	-18.45	-40.703	-59.148	-46.938	-18.719	-25.998
186.290	-19.84	-40.628	-60.469	-48.259	-18.639	-25.998
186.300	-19.99	-40.615	-60.605	-48.395	-18.560	-25.998
186.310	-21.27	-40.527	-61.798	-49.588	-18.481	-25.998
186.320	-20.26	-40.493	-60.757	-48.547	-18.402	-25.998
186.330	-18.65	-40.476	-59.130	-46.920	-18.323	-25.998
186.340	-19.12	-40.401	-59.517	-47.307	-18.245	-25.998
186.350	-17.73	-40.364	-58.096	-45.886	-18.166	-25.998
186.360	-18.87	-40.377	-59.246	-47.036	-18.088	-25.998

186.370	-18.10	-40.330	-58.434	-46.224	-18.009	-25.998
186.380	-19.02	-40.299	-59.321	-47.111	-17.931	-25.998
186.390	-19.46	-40.223	-59.684	-47.474	-17.853	-25.998
186.400	-17.45	-40.184	-57.629	-45.419	-17.776	-25.998
186.410	-19.84	-40.146	-59.982	-47.772	-17.698	-25.998
186.420	-17.92	-40.140	-58.063	-45.853	-17.620	-25.998
186.430	-20.54	-40.111	-60.654	-48.444	-17.543	-25.998
186.440	-21.49	-40.023	-61.516	-49.306	-17.466	-25.998
186.450	-19.33	-39.962	-59.295	-47.085	-17.388	-25.998
186.460	-19.83	-39.938	-59.770	-47.560	-17.311	-25.998
186.470	-22.71	-39.914	-62.623	-50.413	-17.234	-25.998
186.480	-19.58	-39.906	-59.488	-47.278	-17.158	-25.998
186.490	-20.08	-39.849	-59.926	-47.716	-17.081	-25.998
186.500	-19.45	-39.781	-59.233	-47.023	-17.005	-25.998
186.510	-21.29	-39.722	-61.007	-48.797	-16.928	-25.998
186.520	-23.06	-39.746	-62.805	-50.595	-16.852	-25.998
186.530	-20.85	-39.683	-60.537	-48.327	-16.776	-25.998
186.540	-18.91	-39.654	-58.559	-46.349	-16.700	-25.998
186.550	-18.77	-39.608	-58.373	-46.163	-16.624	-25.998
186.560	-18.56	-39.557	-58.121	-45.911	-16.549	-25.998
186.570	-19.44	-39.515	-58.958	-46.748	-16.473	-25.998
186.580	-20.73	-39.452	-60.185	-47.975	-16.398	-25.998
186.590	-17.88	-39.434	-57.318	-45.108	-16.323	-25.998
186.600	-19.36	-39.390	-58.745	-46.535	-16.248	-25.998
186.610	-19.68	-39.347	-59.026	-46.816	-16.173	-25.998
186.620	-19.25	-39.317	-58.564	-46.354	-16.098	-25.998
186.630	-18.87	-39.302	-58.175	-45.965	-16.023	-25.998
186.640	-19.29	-39.238	-58.527	-46.317	-15.949	-25.998
186.650	-17.82	-39.219	-57.042	-44.832	-15.874	-25.998
186.660	-18.98	-39.156	-58.134	-45.924	-15.800	-25.998
186.670	-19.34	-39.138	-58.480	-46.270	-15.726	-25.998
186.680	-18.37	-39.102	-57.475	-45.265	-15.652	-25.998
186.690	-19.85	-39.054	-58.902	-46.692	-15.578	-25.998
186.700	-17.83	-38.997	-56.827	-44.617	-15.505	-25.998
186.710	-18.81	-38.975	-57.787	-45.577	-15.431	-25.998
186.720	-18.66	-38.889	-57.544	-45.334	-15.358	-25.998
186.730	-19.06	-38.889	-57.945	-45.735	-15.284	-25.998
186.740	-19.59	-38.841	-58.431	-46.221	-15.211	-25.998
186.750	-19.47	-38.771	-58.244	-46.034	-15.138	-25.998
186.760	-19.46	-38.731	-58.195	-45.985	-15.066	-25.998
186.770	-18.74	-38.721	-57.458	-45.248	-14.993	-25.998
186.780	-17.69	-38.690	-56.377	-44.167	-14.920	-25.998
186.790	-20.42	-38.635	-59.058	-46.848	-14.848	-25.998
186.800	-17.18	-38.579	-55.760	-43.550	-14.776	-25.998
186.810	-17.22	-38.554	-55.772	-43.562	-14.703	-25.998
186.820	-18.49	-38.517	-57.005	-44.795	-14.631	-25.998

186.830	-20.96	-38.464	-59.419	-47.209	-14.559	-25.998
186.840	-18.43	-38.414	-56.848	-44.638	-14.488	-25.998
186.850	-17.94	-38.388	-56.324	-44.114	-14.416	-25.998
186.860	-18.10	-38.357	-56.455	-44.245	-14.345	-25.998
186.870	-19.52	-38.328	-57.846	-45.636	-14.273	-25.998
186.880	-19.42	-38.268	-57.685	-45.475	-14.202	-25.998
186.890	-16.73	-38.213	-54.942	-42.732	-14.131	-25.998
186.900	-17.56	-38.184	-55.742	-43.532	-14.060	-25.998
186.910	-18.01	-38.156	-56.164	-43.954	-13.989	-25.998
186.920	-18.43	-38.097	-56.530	-44.320	-13.919	-25.998
186.930	-16.45	-38.026	-54.477	-42.267	-13.848	-25.998
186.940	-18.16	-38.015	-56.179	-43.969	-13.778	-25.998
186.950	-17.81	-37.961	-55.770	-43.560	-13.708	-25.998
186.960	-19.38	-37.913	-57.288	-45.078	-13.638	-25.998
186.970	-17.27	-37.880	-55.154	-42.944	-13.568	-25.998
186.980	-17.99	-37.833	-55.823	-43.613	-13.498	-25.998
186.990	-16.81	-37.806	-54.616	-42.406	-13.428	-25.998
187.000	-16.80	-37.770	-54.572	-42.362	-13.359	-25.998
187.010	-16.77	-37.733	-54.506	-42.296	-13.289	-25.998
187.020	-17.83	-37.674	-55.502	-43.292	-13.220	-25.998
187.030	-17.21	-37.611	-54.821	-42.611	-13.151	-25.998
187.040	-18.49	-37.571	-56.061	-43.851	-13.082	-25.998
187.050	-16.58	-37.588	-54.170	-41.960	-13.013	-25.998
187.060	-17.41	-37.534	-54.945	-42.735	-12.945	-25.998
187.070	-18.08	-37.488	-55.567	-43.357	-12.876	-25.998
187.080	-16.04	-37.408	-53.450	-41.240	-12.808	-25.998
187.090	-17.92	-37.338	-55.253	-43.043	-12.739	-25.998
187.100	-17.27	-37.335	-54.608	-42.398	-12.671	-25.998
187.110	-17.16	-37.299	-54.459	-42.249	-12.603	-25.998
187.120	-15.86	-37.220	-53.078	-40.868	-12.536	-25.998
187.130	-16.26	-37.217	-53.476	-41.266	-12.468	-25.998
187.140	-16.05	-37.186	-53.231	-41.021	-12.400	-25.998
187.150	-16.77	-37.096	-53.862	-41.652	-12.333	-25.998
187.160	-16.74	-37.076	-53.815	-41.605	-12.266	-25.998
187.170	-18.73	-37.033	-55.760	-43.550	-12.198	-25.998
187.180	-17.96	-37.016	-54.972	-42.762	-12.131	-25.998
187.190	-16.51	-36.957	-53.469	-41.259	-12.064	-25.998
187.200	-15.39	-36.923	-52.317	-40.107	-11.998	-25.998
187.210	-17.87	-36.887	-54.752	-42.542	-11.931	-25.998
187.220	-17.32	-36.817	-54.132	-41.922	-11.865	-25.998
187.230	-15.41	-36.782	-52.189	-39.979	-11.798	-25.998
187.240	-16.66	-36.735	-53.391	-41.181	-11.732	-25.998
187.250	-17.47	-36.695	-54.160	-41.950	-11.666	-25.998
187.260	-14.56	-36.671	-51.226	-39.016	-11.600	-25.998
187.270	-15.11	-36.607	-51.720	-39.510	-11.534	-25.998
187.280	-18.54	-36.565	-55.100	-42.890	-11.469	-25.998

187.290	-16.23	-36.540	-52.769	-40.559	-11.403	-25.998
187.300	-15.85	-36.491	-52.343	-40.133	-11.338	-25.998
187.310	-16.62	-36.458	-53.077	-40.867	-11.273	-25.998
187.320	-18.01	-36.402	-54.411	-42.201	-11.208	-25.998
187.330	-14.36	-36.374	-50.736	-38.526	-11.143	-25.998
187.340	-16.02	-36.341	-52.361	-40.151	-11.078	-25.998
187.350	-16.21	-36.267	-52.481	-40.271	-11.013	-25.998
187.360	-15.63	-36.236	-51.865	-39.655	-10.949	-25.998
187.370	-15.23	-36.176	-51.404	-39.194	-10.884	-25.998
187.380	-17.10	-36.132	-53.235	-41.025	-10.820	-25.998
187.390	-16.35	-36.086	-52.435	-40.225	-10.756	-25.998
187.400	-18.34	-36.086	-54.424	-42.214	-10.692	-25.998
187.410	-16.98	-36.001	-52.976	-40.766	-10.628	-25.998
187.420	-14.66	-35.975	-50.634	-38.424	-10.565	-25.998
187.430	-14.35	-35.927	-50.276	-38.066	-10.501	-25.998
187.440	-14.51	-35.884	-50.391	-38.181	-10.438	-25.998
187.450	-15.18	-35.839	-51.023	-38.813	-10.374	-25.998
187.460	-13.70	-35.834	-49.532	-37.322	-10.311	-25.998
187.470	-15.47	-35.768	-51.237	-39.027	-10.248	-25.998
187.480	-14.88	-35.724	-50.607	-38.397	-10.186	-25.998
187.490	-15.94	-35.652	-51.593	-39.383	-10.123	-25.998
187.500	-15.52	-35.613	-51.137	-38.927	-10.060	-25.998
187.510	-16.10	-35.588	-51.684	-39.474	-9.998	-25.998
187.520	-15.33	-35.515	-50.841	-38.631	-9.936	-25.998
187.530	-14.90	-35.517	-50.415	-38.205	-9.873	-25.998
187.540	-14.43	-35.427	-49.859	-37.649	-9.811	-25.998
187.550	-15.19	-35.403	-50.593	-38.383	-9.749	-25.998
187.560	-15.17	-35.373	-50.540	-38.330	-9.688	-25.998
187.570	-15.12	-35.335	-50.452	-38.242	-9.626	-25.998
187.580	-14.06	-35.281	-49.341	-37.131	-9.565	-25.998
187.590	-16.09	-35.233	-51.325	-39.115	-9.503	-25.998
187.600	-15.61	-35.185	-50.790	-38.580	-9.442	-25.998
187.610	-15.40	-35.158	-50.559	-38.349	-9.381	-25.998
187.620	-16.45	-35.125	-51.579	-39.369	-9.320	-25.998
187.630	-15.79	-35.060	-50.846	-38.636	-9.259	-25.998
187.640	-16.42	-35.009	-51.429	-39.219	-9.199	-25.998
187.650	-17.37	-34.969	-52.335	-40.125	-9.138	-25.998
187.660	-16.22	-34.896	-51.116	-38.906	-9.078	-25.998
187.670	-14.98	-34.883	-49.862	-37.652	-9.018	-25.998
187.680	-16.20	-34.820	-51.019	-38.809	-8.958	-25.998
187.690	-15.08	-34.779	-49.855	-37.645	-8.898	-25.998
187.700	-14.34	-34.732	-49.076	-36.866	-8.838	-25.998
187.710	-15.38	-34.715	-50.092	-37.882	-8.778	-25.998
187.720	-15.18	-34.655	-49.834	-37.624	-8.719	-25.998
187.730	-16.00	-34.585	-50.581	-38.371	-8.659	-25.998
187.740	-16.30	-34.549	-50.853	-38.643	-8.600	-25.998

187.750	-14.17	-34.524	-48.695	-36.485	-8.541	-25.998
187.760	-14.41	-34.483	-48.897	-36.687	-8.482	-25.998
187.770	-15.34	-34.441	-49.783	-37.573	-8.423	-25.998
187.780	-15.20	-34.388	-49.588	-37.378	-8.365	-25.998
187.790	-15.96	-34.324	-50.282	-38.072	-8.306	-25.998
187.800	-15.14	-34.313	-49.453	-37.243	-8.248	-25.998
187.810	-15.16	-34.250	-49.406	-37.196	-8.189	-25.998
187.820	-15.02	-34.195	-49.213	-37.003	-8.131	-25.998
187.830	-15.17	-34.147	-49.312	-37.102	-8.073	-25.998
187.840	-14.90	-34.123	-49.018	-36.808	-8.016	-25.998
187.850	-15.40	-34.068	-49.472	-37.262	-7.958	-25.998
187.860	-14.27	-34.021	-48.289	-36.079	-7.900	-25.998
187.870	-15.39	-33.970	-49.364	-37.154	-7.843	-25.998
187.880	-15.33	-33.915	-49.248	-37.038	-7.786	-25.998
187.890	-14.70	-33.890	-48.589	-36.379	-7.728	-25.998
187.900	-13.74	-33.847	-47.589	-35.379	-7.671	-25.998
187.910	-13.83	-33.784	-47.617	-35.407	-7.614	-25.998
187.920	-13.65	-33.758	-47.408	-35.198	-7.558	-25.998
187.930	-16.56	-33.712	-50.275	-38.065	-7.501	-25.998
187.940	-15.05	-33.653	-48.704	-36.494	-7.445	-25.998
187.950	-15.08	-33.599	-48.678	-36.468	-7.388	-25.998
187.960	-14.94	-33.581	-48.524	-36.314	-7.332	-25.998
187.970	-12.89	-33.535	-46.424	-34.214	-7.276	-25.998
187.980	-14.79	-33.477	-48.269	-36.059	-7.220	-25.998
187.990	-15.55	-33.439	-48.991	-36.781	-7.164	-25.998
188.000	-13.55	-33.396	-46.948	-34.738	-7.109	-25.998
188.010	-14.35	-33.332	-47.677	-35.467	-7.053	-25.998
188.020	-15.43	-33.285	-48.716	-36.506	-6.998	-25.998
188.030	-15.99	-33.231	-49.223	-37.013	-6.943	-25.998
188.040	-14.18	-33.219	-47.396	-35.186	-6.888	-25.998
188.050	-16.26	-33.186	-49.448	-37.238	-6.833	-25.998
188.060	-15.37	-33.105	-48.472	-36.262	-6.778	-25.998
188.070	-16.65	-33.062	-49.716	-37.506	-6.723	-25.998
188.080	-14.72	-33.011	-47.730	-35.520	-6.669	-25.998
188.090	-16.42	-32.972	-49.395	-37.185	-6.614	-25.998
188.100	-15.57	-32.939	-48.509	-36.299	-6.560	-25.998
188.110	-16.16	-32.886	-49.050	-36.840	-6.506	-25.998
188.120	-16.05	-32.842	-48.889	-36.679	-6.452	-25.998
188.130	-16.50	-32.799	-49.299	-37.089	-6.398	-25.998
188.140	-13.31	-32.727	-46.040	-33.830	-6.345	-25.998
188.150	-14.88	-32.692	-47.572	-35.362	-6.291	-25.998
188.160	-14.27	-32.631	-46.897	-34.687	-6.238	-25.998
188.170	-15.71	-32.593	-48.306	-36.096	-6.184	-25.998
188.180	-15.47	-32.550	-48.022	-35.812	-6.131	-25.998
188.190	-14.51	-32.524	-47.038	-34.828	-6.078	-25.998
188.200	-14.84	-32.461	-47.299	-35.089	-6.026	-25.998

188.210	-15.47	-32.410	-47.878	-35.668	-5.973	-25.998
188.220	-14.87	-32.358	-47.231	-35.021	-5.920	-25.998
188.230	-14.93	-32.329	-47.261	-35.051	-5.868	-25.998
188.240	-16.47	-32.284	-48.754	-36.544	-5.816	-25.998
188.250	-13.31	-32.225	-45.533	-33.323	-5.763	-25.998
188.260	-14.77	-32.185	-46.955	-34.745	-5.711	-25.998
188.270	-14.23	-32.142	-46.376	-34.166	-5.659	-25.998
188.280	-13.98	-32.073	-46.057	-33.847	-5.608	-25.998
188.290	-12.55	-32.014	-44.561	-32.351	-5.556	-25.998
188.300	-13.66	-32.004	-45.663	-33.453	-5.505	-25.998
188.310	-15.43	-31.978	-47.410	-35.200	-5.453	-25.998
188.320	-13.33	-31.908	-45.234	-33.024	-5.402	-25.998
188.330	-14.54	-31.830	-46.366	-34.156	-5.351	-25.998
188.340	-14.97	-31.784	-46.749	-34.539	-5.300	-25.998
188.350	-14.45	-31.747	-46.198	-33.988	-5.249	-25.998
188.360	-15.84	-31.682	-47.521	-35.311	-5.199	-25.998
188.370	-17.72	-31.635	-49.351	-37.141	-5.148	-25.998
188.380	-15.10	-31.597	-46.700	-34.490	-5.098	-25.998
188.390	-14.70	-31.564	-46.259	-34.049	-5.048	-25.998
188.400	-14.96	-31.493	-46.450	-34.240	-4.998	-25.998
188.410	-14.93	-31.444	-46.375	-34.165	-4.948	-25.998
188.420	-13.35	-31.397	-44.743	-32.533	-4.898	-25.998
188.430	-14.76	-31.359	-46.114	-33.904	-4.848	-25.998
188.440	-14.15	-31.305	-45.453	-33.243	-4.799	-25.998
188.450	-14.32	-31.256	-45.571	-33.361	-4.749	-25.998
188.460	-13.79	-31.235	-45.020	-32.810	-4.700	-25.998
188.470	-13.70	-31.166	-44.863	-32.653	-4.651	-25.998
188.480	-12.49	-31.115	-43.606	-31.396	-4.602	-25.998
188.490	-15.49	-31.040	-46.532	-34.322	-4.553	-25.998
188.500	-14.34	-31.009	-45.347	-33.137	-4.505	-25.998
188.510	-15.21	-30.970	-46.180	-33.970	-4.456	-25.998
188.520	-13.09	-30.952	-44.044	-31.834	-4.408	-25.998
188.530	-14.51	-30.886	-45.391	-33.181	-4.359	-25.998
188.540	-13.62	-30.833	-44.449	-32.239	-4.311	-25.998
188.550	-14.69	-30.779	-45.472	-33.262	-4.263	-25.998
188.560	-13.17	-30.724	-43.894	-31.684	-4.216	-25.998
188.570	-14.56	-30.682	-45.246	-33.036	-4.168	-25.998
188.580	-14.81	-30.666	-45.479	-33.269	-4.120	-25.998
188.590	-14.60	-30.591	-45.191	-32.981	-4.073	-25.998
188.600	-13.71	-30.536	-44.243	-32.033	-4.026	-25.998
188.610	-15.06	-30.479	-45.536	-33.326	-3.978	-25.998
188.620	-12.89	-30.424	-43.316	-31.106	-3.931	-25.998
188.630	-12.80	-30.395	-43.198	-30.988	-3.884	-25.998
188.640	-14.24	-30.332	-44.574	-32.364	-3.838	-25.998
188.650	-13.74	-30.285	-44.024	-31.814	-3.791	-25.998
188.660	-15.06	-30.237	-45.293	-33.083	-3.745	-25.998

188.670	-13.69	-30.198	-43.890	-31.680	-3.698	-25.998
188.680	-12.81	-30.143	-42.955	-30.745	-3.652	-25.998
188.690	-13.50	-30.105	-43.600	-31.390	-3.606	-25.998
188.700	-13.97	-30.070	-44.044	-31.834	-3.560	-25.998
188.710	-11.71	-30.006	-41.717	-29.507	-3.514	-25.998
188.720	-13.74	-29.949	-43.692	-31.482	-3.469	-25.998
188.730	-13.53	-29.920	-43.451	-31.241	-3.423	-25.998
188.740	-14.63	-29.868	-44.495	-32.285	-3.378	-25.998
188.750	-14.99	-29.805	-44.798	-32.588	-3.333	-25.998
188.760	-15.98	-29.754	-45.735	-33.525	-3.288	-25.998
188.770	-13.61	-29.720	-43.325	-31.115	-3.243	-25.998
188.780	-12.91	-29.648	-42.553	-30.343	-3.198	-25.998
188.790	-14.42	-29.606	-44.029	-31.819	-3.153	-25.998
188.800	-12.27	-29.564	-41.829	-29.619	-3.109	-25.998
188.810	-10.40	-29.514	-39.912	-27.702	-3.064	-25.998
188.820	-14.36	-29.470	-43.828	-31.618	-3.020	-25.998
188.830	-12.18	-29.406	-41.590	-29.380	-2.976	-25.998
188.840	-15.38	-29.365	-44.749	-32.539	-2.932	-25.998
188.850	-12.27	-29.310	-41.575	-29.365	-2.888	-25.998
188.860	-12.54	-29.261	-41.804	-29.594	-2.845	-25.998
188.870	-12.97	-29.222	-42.193	-29.983	-2.801	-25.998
188.880	-13.60	-29.179	-42.781	-30.571	-2.758	-25.998
188.890	-13.71	-29.112	-42.824	-30.614	-2.714	-25.998
188.900	-12.87	-29.050	-41.920	-29.710	-2.671	-25.998
188.910	-11.82	-29.015	-40.831	-28.621	-2.628	-25.998
188.920	-12.17	-28.961	-41.127	-28.917	-2.586	-25.998
188.930	-15.39	-28.939	-44.324	-32.114	-2.543	-25.998
188.940	-13.50	-28.867	-42.366	-30.156	-2.500	-25.998
188.950	-12.95	-28.827	-41.778	-29.568	-2.458	-25.998
188.960	-11.76	-28.780	-40.543	-28.333	-2.416	-25.998
188.970	-15.17	-28.723	-43.889	-31.679	-2.373	-25.998
188.980	-11.70	-28.697	-40.401	-28.191	-2.331	-25.998
188.990	-13.84	-28.644	-42.488	-30.278	-2.289	-25.998
189.000	-13.99	-28.586	-42.574	-30.364	-2.248	-25.998
189.010	-13.37	-28.533	-41.907	-29.697	-2.206	-25.633
189.020	-10.34	-28.487	-38.829	-26.619	-2.165	-25.518
189.030	-12.61	-28.444	-41.053	-28.843	-2.123	-25.403
189.040	-12.25	-28.403	-40.650	-28.440	-2.082	-25.288
189.050	-13.73	-28.335	-42.068	-29.858	-2.041	-25.173
189.060	-11.83	-28.281	-40.110	-27.900	-2.000	-25.058
189.070	-14.27	-28.249	-42.517	-30.307	-1.959	-24.943
189.080	-14.76	-28.210	-42.969	-30.759	-1.919	-24.828
189.090	-14.73	-28.167	-42.896	-30.686	-1.878	-24.713
189.100	-13.14	-28.087	-41.230	-29.020	-1.838	-24.598
189.110	-13.71	-28.049	-41.757	-29.547	-1.798	-24.483
189.120	-12.58	-27.994	-40.569	-28.359	-1.758	-24.368

189.130	-10.87	-27.952	-38.823	-26.613	-1.718	-24.253
189.140	-12.24	-27.919	-40.159	-27.949	-1.678	-24.138
189.150	-13.68	-27.886	-41.570	-29.360	-1.638	-24.023
189.160	-16.10	-27.840	-43.940	-31.730	-1.599	-23.908
189.170	-13.22	-27.759	-40.983	-28.773	-1.559	-23.793
189.180	-12.36	-27.699	-40.063	-27.853	-1.520	-23.678
189.190	-11.97	-27.650	-39.620	-27.410	-1.481	-23.563
189.200	-11.52	-27.606	-39.122	-26.912	-1.442	-23.448
189.210	-15.96	-27.575	-43.533	-31.323	-1.403	-23.333
189.220	-11.49	-27.518	-39.010	-26.800	-1.365	-23.218
189.230	-13.84	-27.464	-41.302	-29.092	-1.326	-23.103
189.240	-12.61	-27.402	-40.012	-27.802	-1.288	-22.988
189.250	-10.69	-27.360	-38.046	-25.836	-1.249	-22.873
189.260	-13.14	-27.317	-40.457	-28.247	-1.211	-22.758
189.270	-12.45	-27.263	-39.709	-27.499	-1.173	-22.643
189.280	-13.41	-27.219	-40.626	-28.416	-1.136	-22.528
189.290	-12.82	-27.174	-39.992	-27.782	-1.098	-22.413
189.300	-12.86	-27.124	-39.987	-27.777	-1.060	-22.298
189.310	-11.43	-27.060	-38.494	-26.284	-1.023	-22.183
189.320	-13.49	-27.004	-40.498	-28.288	-0.986	-22.068
189.330	-11.63	-26.952	-38.578	-26.368	-0.948	-21.953
189.340	-10.71	-26.916	-37.630	-25.420	-0.911	-21.838
189.350	-12.28	-26.886	-39.168	-26.958	-0.874	-21.723
189.360	-13.79	-26.824	-40.614	-28.404	-0.838	-21.608
189.370	-12.83	-26.760	-39.592	-27.382	-0.801	-21.493
189.380	-12.98	-26.717	-39.697	-27.487	-0.765	-21.378
189.390	-14.08	-26.678	-40.757	-28.547	-0.728	-21.263
189.400	-12.31	-26.628	-38.938	-26.728	-0.692	-21.148
189.410	-11.77	-26.580	-38.354	-26.144	-0.656	-21.033
189.420	-13.78	-26.533	-40.312	-28.102	-0.620	-20.918
189.430	-13.99	-26.463	-40.448	-28.238	-0.584	-20.803
189.440	-12.84	-26.427	-39.270	-27.060	-0.549	-20.688
189.450	-13.37	-26.379	-39.749	-27.539	-0.513	-20.573
189.460	-11.16	-26.322	-37.482	-25.272	-0.478	-20.458
189.470	-12.43	-26.277	-38.702	-26.492	-0.443	-20.343
189.480	-12.13	-26.222	-38.348	-26.138	-0.408	-20.228
189.490	-10.75	-26.193	-36.946	-24.736	-0.373	-20.113
189.500	-9.44	-26.148	-35.591	-23.381	-0.338	-19.998
189.510	-12.71	-26.082	-38.789	-26.579	-0.303	-19.883
189.520	-11.37	-26.020	-37.385	-25.175	-0.269	-19.768
189.530	-13.02	-25.988	-39.009	-26.799	-0.234	-19.653
189.540	-10.83	-25.927	-36.760	-24.550	-0.200	-19.538
189.550	-10.61	-25.899	-36.512	-24.302	-0.166	-19.423
189.560	-8.78	-25.845	-34.621	-22.411	-0.132	-19.308
189.570	-10.22	-25.786	-36.006	-23.796	-0.098	-19.193
189.580	-12.17	-25.738	-37.911	-25.701	-0.065	-19.078

189.590	-12.83	-25.698	-38.523	-26.313	-0.031	-18.963
189.600	-11.57	-25.646	-37.217	-25.007	0.002	-18.848
189.610	-10.82	-25.585	-36.400	-24.190	0.036	-18.733
189.620	-11.53	-25.541	-37.074	-24.864	0.069	-18.618
189.630	-12.33	-25.497	-37.828	-25.618	0.102	-18.503
189.640	-12.30	-25.454	-37.752	-25.542	0.134	-18.388
189.650	-13.11	-25.386	-38.496	-26.286	0.167	-18.273
189.660	-10.80	-25.350	-36.148	-23.938	0.200	-18.158
189.670	-11.16	-25.291	-36.455	-24.245	0.232	-18.043
189.680	-9.50	-25.243	-34.742	-22.532	0.264	-17.928
189.690	-13.03	-25.204	-38.235	-26.025	0.297	-17.813
189.700	-12.67	-25.145	-37.814	-25.604	0.329	-17.698
189.710	-11.11	-25.083	-36.195	-23.985	0.361	-17.583
189.720	-11.96	-25.051	-37.008	-24.798	0.392	-17.468
189.730	-12.40	-25.006	-37.409	-25.199	0.424	-17.353
189.740	-11.52	-24.968	-36.487	-24.277	0.455	-17.238
189.750	-11.75	-24.895	-36.645	-24.435	0.487	-17.123
189.760	-11.52	-24.857	-36.375	-24.165	0.518	-17.008
189.770	-12.17	-24.813	-36.980	-24.770	0.549	-16.893
189.780	-13.27	-24.760	-38.025	-25.815	0.580	-16.778
189.790	-11.28	-24.713	-35.995	-23.785	0.611	-16.663
189.800	-11.41	-24.665	-36.077	-23.867	0.641	-16.548
189.810	-12.51	-24.632	-37.143	-24.933	0.672	-16.433
189.820	-11.93	-24.590	-36.516	-24.306	0.702	-16.318
189.830	-12.02	-24.521	-36.539	-24.329	0.732	-16.203
189.840	-12.90	-24.477	-37.379	-25.169	0.762	-16.088
189.850	-11.34	-24.439	-35.781	-23.571	0.792	-15.973
189.860	-11.77	-24.404	-36.177	-23.967	0.822	-15.858
189.870	-14.11	-24.350	-38.456	-26.246	0.852	-15.743
189.880	-12.13	-24.310	-36.444	-24.234	0.881	-15.628
189.890	-13.19	-24.246	-37.433	-25.223	0.911	-15.513
189.900	-9.92	-24.199	-34.117	-21.907	0.940	-15.398
189.910	-11.13	-24.166	-35.291	-23.081	0.969	-15.283
189.920	-12.21	-24.126	-36.333	-24.123	0.998	-15.168
189.930	-10.19	-24.078	-34.269	-22.059	1.027	-15.053
189.940	-11.41	-24.046	-35.453	-23.243	1.055	-14.938
189.950	-12.58	-23.998	-36.575	-24.365	1.084	-14.823
189.960	-11.66	-23.938	-35.600	-23.390	1.112	-14.708
189.970	-11.17	-23.907	-35.078	-22.868	1.141	-14.593
189.980	-12.65	-23.866	-36.512	-24.302	1.169	-14.478
189.990	-12.78	-23.802	-36.581	-24.371	1.197	-14.363
190.000	-11.42	-23.770	-35.189	-22.979	1.224	-14.248
190.010	-15.18	-23.723	-38.899	-26.689	1.252	-14.133
190.020	-13.86	-23.679	-37.541	-25.331	1.280	-14.018
190.030	-13.37	-23.642	-37.011	-24.801	1.307	-13.903
190.040	-12.42	-23.601	-36.017	-23.807	1.334	-13.788

190.050	-12.83	-23.562	-36.389	-24.179	1.362	-13.673
190.060	-11.33	-23.512	-34.841	-22.631	1.389	-13.558
190.070	-9.78	-23.476	-33.255	-21.045	1.416	-13.443
190.080	-13.48	-23.429	-36.908	-24.698	1.442	-13.328
190.090	-11.14	-23.388	-34.523	-22.313	1.469	-13.213
190.100	-13.12	-23.347	-36.464	-24.254	1.495	-13.098
190.110	-13.64	-23.296	-36.931	-24.721	1.522	-12.983
190.120	-13.03	-23.262	-36.296	-24.086	1.548	-12.868
190.130	-13.08	-23.240	-36.321	-24.111	1.574	-12.753
190.140	-12.04	-23.191	-35.228	-23.018	1.600	-12.638
190.150	-10.35	-23.152	-33.501	-21.291	1.626	-12.523
190.160	-10.48	-23.111	-33.595	-21.385	1.651	-12.408
190.170	-11.64	-23.082	-34.723	-22.513	1.677	-12.293
190.180	-10.56	-23.041	-33.600	-21.390	1.702	-12.178
190.190	-11.42	-23.008	-34.430	-22.220	1.727	-12.063
190.200	-12.85	-22.969	-35.821	-23.611	1.752	-11.948
190.210	-13.19	-22.918	-36.111	-23.901	1.777	-11.833
190.220	-12.33	-22.879	-35.213	-23.003	1.802	-11.718
190.230	-14.18	-22.860	-37.038	-24.828	1.827	-11.603
190.240	-12.13	-22.804	-34.938	-22.728	1.851	-11.488
190.250	-11.69	-22.792	-34.477	-22.267	1.876	-11.373
190.260	-12.62	-22.757	-35.381	-23.171	1.900	-11.258
190.270	-11.99	-22.710	-34.702	-22.492	1.924	-11.143
190.280	-11.99	-22.673	-34.666	-22.456	1.948	-11.028
190.290	-11.26	-22.648	-33.905	-21.695	1.972	-10.913
190.300	-11.90	-22.616	-34.515	-22.305	1.995	-10.798
190.310	-12.85	-22.588	-35.441	-23.231	2.019	-10.683
190.320	-10.80	-22.548	-33.350	-21.140	2.042	-10.568
190.330	-11.79	-22.509	-34.301	-22.091	2.066	-10.453
190.340	-8.94	-22.479	-31.419	-19.209	2.089	-10.338
190.350	-10.35	-22.450	-32.797	-20.587	2.112	-10.223
190.360	-11.60	-22.407	-34.004	-21.794	2.134	-10.108
190.370	-10.39	-22.395	-32.782	-20.572	2.157	-9.993
190.380	-11.88	-22.369	-34.245	-22.035	2.180	-9.878
190.390	-11.59	-22.340	-33.928	-21.718	2.202	-9.763
190.400	-12.28	-22.309	-34.587	-22.377	2.224	-9.648
190.410	-10.69	-22.272	-32.963	-20.753	2.247	-9.533
190.420	-12.46	-22.257	-34.712	-22.502	2.269	-9.418
190.430	-11.56	-22.225	-33.788	-21.578	2.291	-9.303
190.440	-12.92	-22.217	-35.138	-22.928	2.312	-9.188
190.450	-10.42	-22.201	-32.623	-20.413	2.334	-9.073
190.460	-9.27	-22.174	-31.439	-19.229	2.355	-8.958
190.470	-12.01	-22.142	-34.152	-21.942	2.377	-8.843
190.480	-12.14	-22.125	-34.267	-22.057	2.398	-8.728
190.490	-10.82	-22.107	-32.930	-20.720	2.419	-8.613
190.500	-9.45	-22.079	-31.533	-19.323	2.440	-8.498

190.510	-12.96	-22.071	-35.034	-22.824	2.461	-8.383
190.520	-12.22	-22.048	-34.270	-22.060	2.481	-8.268
190.530	-15.18	-22.050	-37.229	-25.019	2.502	-8.153
190.540	-13.62	-22.022	-35.637	-23.427	2.522	-8.038
190.550	-12.33	-21.997	-34.322	-22.112	2.542	-7.923
190.560	-12.46	-21.987	-34.446	-22.236	2.562	-7.808
190.570	-9.70	-21.996	-31.697	-19.487	2.582	-7.693
190.580	-12.19	-21.998	-34.183	-21.973	2.602	-7.578
190.590	-11.90	-21.976	-33.876	-21.666	2.622	-7.463
190.600	-11.24	-21.959	-33.197	-20.987	2.641	-7.348
190.610	-11.60	-21.943	-33.540	-21.330	2.661	-7.233
190.620	-11.65	-21.945	-33.594	-21.384	2.680	-7.118
190.630	-10.31	-21.948	-32.254	-20.044	2.699	-7.003
190.640	-14.43	-21.952	-36.378	-24.168	2.718	-6.888
190.650	-11.98	-21.953	-33.936	-21.726	2.737	-6.773
190.660	-10.63	-21.952	-32.580	-20.370	2.755	-6.658
190.670	-11.14	-21.955	-33.091	-20.881	2.774	-6.543
190.680	-13.59	-21.953	-35.541	-23.331	2.792	-6.428
190.690	-11.77	-21.983	-33.757	-21.547	2.811	-6.313
190.700	-12.22	-21.970	-34.188	-21.978	2.829	-6.198
190.710	-11.21	-21.972	-33.186	-20.976	2.847	-6.083
190.720	-10.86	-21.998	-32.854	-20.644	2.864	-5.968
190.730	-11.61	-22.021	-33.627	-21.417	2.882	-5.853
190.740	-10.71	-22.027	-32.734	-20.524	2.900	-5.738
190.750	-11.51	-22.033	-33.543	-21.333	2.917	-5.623
190.760	-10.64	-22.058	-32.699	-20.489	2.934	-5.508
190.770	-11.99	-22.081	-34.074	-21.864	2.952	-5.393
190.780	-11.21	-22.120	-33.326	-21.116	2.969	-5.278
190.790	-12.64	-22.165	-34.803	-22.593	2.986	-5.163
190.800	-12.55	-22.186	-34.736	-22.526	3.002	-5.048
190.810	-11.87	-22.205	-34.074	-21.864	3.019	-4.933
190.820	-11.18	-22.244	-33.428	-21.218	3.035	-4.818
190.830	-13.07	-22.273	-35.343	-23.133	3.052	-4.703
190.840	-11.52	-22.320	-33.836	-21.626	3.068	-4.588
190.850	-12.97	-22.368	-35.337	-23.127	3.084	-4.473
190.860	-12.13	-22.435	-34.562	-22.352	3.100	-4.358
190.870	-13.40	-22.496	-35.891	-23.681	3.116	-4.243
190.880	-9.69	-22.542	-32.230	-20.020	3.131	-4.128
190.890	-12.76	-22.572	-35.333	-23.123	3.147	-4.013
190.900	-12.24	-22.647	-34.886	-22.676	3.162	-3.898
190.910	-10.28	-22.723	-33.003	-20.793	3.177	-3.783
190.920	-10.63	-22.818	-33.450	-21.240	3.192	-3.668
190.930	-10.77	-22.905	-33.677	-21.467	3.207	-3.553
190.940	-13.08	-22.979	-36.058	-23.848	3.222	-3.438
190.950	-10.10	-23.054	-33.151	-20.941	3.237	-3.323
190.960	-11.97	-23.162	-35.136	-22.926	3.251	-3.208

190.970	-9.61	-23.272	-32.881	-20.671	3.266	-3.093
190.980	-10.67	-23.383	-34.048	-21.838	3.280	-2.978
190.990	-9.83	-23.480	-33.306	-21.096	3.294	-2.863
191.000	-12.05	-23.598	-35.644	-23.434	3.308	-2.748
191.010	-11.93	-23.739	-35.666	-23.456	3.322	-2.633
191.020	-10.76	-23.854	-34.611	-22.401	3.335	-2.518
191.030	-12.88	-24.004	-36.880	-24.670	3.349	-2.403
191.040	-10.13	-24.177	-34.310	-22.100	3.362	-2.288
191.050	-11.44	-24.352	-35.793	-23.583	3.376	-2.173
191.060	-11.85	-24.516	-36.370	-24.160	3.389	-2.058
191.070	-11.31	-24.687	-35.998	-23.788	3.402	-1.943
191.080	-11.25	-24.895	-36.148	-23.938	3.414	-1.828
191.090	-13.69	-25.084	-38.776	-26.566	3.427	-1.713
191.100	-12.33	-25.295	-37.624	-25.414	3.440	-1.598
191.110	-12.92	-25.508	-38.432	-26.222	3.452	-1.483
191.120	-11.21	-25.754	-36.960	-24.750	3.464	-1.368
191.130	-11.19	-26.002	-37.194	-24.984	3.477	-1.253
191.140	-11.12	-26.237	-37.359	-25.149	3.489	-1.138
191.150	-8.46	-26.501	-34.963	-22.753	3.501	-1.023
191.160	-10.99	-26.757	-37.751	-25.541	3.512	-0.908
191.170	-12.53	-27.034	-39.563	-27.353	3.524	-0.793
191.180	-9.22	-27.291	-36.508	-24.298	3.535	-0.678
191.190	-11.42	-27.571	-38.992	-26.782	3.547	-0.563
191.200	-12.51	-27.806	-40.320	-28.110	3.558	-0.448
191.210	-10.38	-28.053	-38.428	-26.218	3.569	-0.333
191.220	-11.17	-28.274	-39.443	-27.233	3.580	-0.218
191.230	-12.13	-28.461	-40.592	-28.382	3.591	-0.103
191.240	-10.61	-28.601	-39.213	-27.003	3.601	0.012
191.250	-8.67	-28.677	-37.351	-25.141	3.612	0.127
191.260	-10.18	-27.674	-37.850	-25.640	3.622	0.242
191.270	-11.35	-26.580	-37.927	-25.717	3.632	0.357
191.280	-10.33	-23.394	-33.728	-21.518	3.642	0.472
191.290	-11.24	-22.140	-33.375	-21.165	3.652	0.587
191.300	-10.57	-20.794	-31.362	-19.152	3.662	0.702
191.310	-11.18	-20.409	-31.590	-19.380	3.672	0.817
191.320	-12.44	-19.963	-32.401	-20.191	3.681	0.932
191.330	-10.61	-19.487	-30.092	-17.882	3.691	1.047
191.340	-11.19	-18.985	-30.177	-17.967	3.700	1.162
191.350	-13.99	-18.443	-32.430	-20.220	3.709	1.277
191.360	-11.67	-17.922	-29.591	-17.381	3.718	1.392
191.370	-11.90	-17.372	-29.276	-17.066	3.727	1.507
191.380	-12.08	-16.836	-28.914	-16.704	3.735	1.622
191.390	-12.27	-16.303	-28.573	-16.363	3.744	1.737
191.400	-9.40	-15.792	-25.188	-12.978	3.752	1.852
191.410	-12.34	-15.260	-27.603	-15.393	3.761	1.967
191.420	-10.29	-14.742	-25.030	-12.820	3.769	2.082

191.430	-11.23	-14.252	-25.482	-13.272	3.777	2.197
191.440	-10.27	-13.777	-24.048	-11.838	3.784	2.312
191.450	-12.44	-13.318	-25.755	-13.545	3.792	2.427
191.460	-10.74	-12.874	-23.616	-11.406	3.800	2.542
191.470	-11.38	-12.421	-23.797	-11.587	3.807	2.657
191.480	-12.89	-11.992	-24.881	-12.671	3.814	2.772
191.490	-12.49	-11.590	-24.084	-11.874	3.822	2.887
191.500	-11.64	-11.169	-22.806	-10.596	3.829	3.002
191.510	-11.25	-10.783	-22.032	-9.822	3.836	3.002
191.520	-12.54	-10.399	-22.940	-10.730	3.842	3.002
191.530	-11.39	-10.014	-21.403	-9.193	3.849	3.002
191.540	-12.12	-9.665	-21.782	-9.572	3.855	3.002
191.550	-11.26	-9.302	-20.566	-8.356	3.862	3.002
191.560	-10.44	-8.950	-19.387	-7.177	3.868	3.002
191.570	-10.31	-8.619	-18.930	-6.720	3.874	3.002
191.580	-10.81	-8.294	-19.101	-6.891	3.880	3.002
191.590	-11.33	-7.994	-19.325	-7.115	3.886	3.002
191.600	-11.27	-7.674	-18.947	-6.737	3.891	3.002
191.610	-11.37	-7.370	-18.742	-6.532	3.897	3.002
191.620	-11.31	-7.073	-18.383	-6.173	3.902	3.002
191.630	-11.36	-6.811	-18.175	-5.965	3.907	3.002
191.640	-10.74	-6.545	-17.280	-5.070	3.912	3.002
191.650	-10.26	-6.276	-16.531	-4.321	3.917	3.002
191.660	-9.54	-6.042	-15.577	-3.367	3.922	3.002
191.670	-11.59	-5.795	-17.389	-5.179	3.927	3.002
191.680	-11.90	-5.568	-17.472	-5.262	3.931	3.002
191.690	-11.99	-5.339	-17.326	-5.116	3.936	3.002
191.700	-11.80	-5.103	-16.904	-4.694	3.940	3.002
191.710	-11.12	-4.892	-16.013	-3.803	3.944	3.002
191.720	-10.58	-4.714	-15.297	-3.087	3.948	3.002
191.730	-11.46	-4.509	-15.971	-3.761	3.952	3.002
191.740	-12.59	-4.312	-16.906	-4.696	3.955	3.002
191.750	-10.86	-4.118	-14.973	-2.763	3.959	3.002
191.760	-12.42	-3.950	-16.369	-4.159	4.002	3.002
191.770	-11.01	-3.780	-14.794	-2.584	4.002	3.002
191.780	-11.62	-3.626	-15.241	-3.031	4.002	3.002
191.790	-9.80	-3.474	-13.277	-1.067	4.002	3.002
191.800	-13.06	-3.318	-16.378	-4.168	4.002	3.002
191.810	-10.49	-3.186	-13.671	-1.461	4.002	3.002
191.820	-10.78	-3.051	-13.827	-1.617	4.002	3.002
191.830	-11.49	-2.928	-14.422	-2.212	4.002	3.002
191.840	-9.97	-2.817	-12.783	-0.573	4.002	3.002
191.850	-10.46	-2.696	-13.158	-0.948	4.002	3.002
191.860	-9.62	-2.597	-12.219	-0.009	4.002	3.002
191.870	-9.12	-2.503	-11.624	0.586	4.002	3.002
191.880	-11.05	-2.411	-13.457	-1.247	4.002	3.002

191.890	-11.52	-2.301	-13.822	-1.612	4.002	3.002
191.900	-11.23	-2.217	-13.443	-1.233	4.002	3.002
191.910	-9.16	-2.140	-11.300	0.910	4.002	3.002
191.920	-9.55	-2.057	-11.606	0.604	4.002	3.002
191.930	-11.40	-2.007	-13.406	-1.196	4.002	3.002
191.940	-8.83	-1.940	-10.765	1.445	4.002	3.002
191.950	-11.08	-1.881	-12.963	-0.753	4.002	3.002
191.960	-8.38	-1.818	-10.194	2.016	4.002	3.002
191.970	-9.30	-1.754	-11.052	1.158	4.002	3.002
191.980	-8.84	-1.699	-10.539	1.671	4.002	3.002
191.990	-8.37	-1.666	-10.036	2.174	4.002	3.002
Lower Band Edge						
192.000	-7.62	-1.622	-9.242	2.968	4.002	3.002
192.010	-1.95	-1.575	-3.529	8.681	50.002	50.002
192.020	2.24	-1.545	0.690	12.900	50.002	50.002
192.030	2.93	-1.514	1.413	13.623	50.002	50.002
192.040	6.12	-1.467	4.656	16.866	50.002	50.002
192.050	8.80	-1.432	7.371	19.581	50.002	50.002
192.060	12.06	-1.398	10.660	22.870	50.002	50.002
192.070	12.99	-1.378	11.615	23.825	50.002	50.002
192.080	11.82	-1.345	10.471	22.681	50.002	50.002
192.090	14.16	-1.328	12.827	25.037	50.002	50.002
192.100	15.52	-1.289	14.228	26.438	50.002	50.002
192.110	15.92	-1.265	14.656	26.866	50.002	50.002
192.120	16.23	-1.247	14.987	27.197	50.002	50.002
192.130	18.87	-1.239	17.626	29.836	50.002	50.002
192.140	17.72	-1.224	16.494	28.704	50.002	50.002
192.150	18.49	-1.196	17.291	29.501	50.002	50.002
192.160	18.70	-1.188	17.508	29.718	50.002	50.002
192.170	21.04	-1.177	19.861	32.071	50.002	50.002
192.180	21.00	-1.151	19.846	32.056	50.002	50.002
192.190	22.45	-1.149	21.297	33.507	50.002	50.002
192.200	21.21	-1.128	20.085	32.295	50.002	50.002
192.210	23.91	-1.121	22.789	34.999	50.002	50.002
192.220	23.92	-1.110	22.812	35.022	50.002	50.002
192.230	23.11	-1.090	22.019	34.229	50.002	50.002
192.240	25.46	-1.073	24.386	36.596	50.002	50.002
192.250	26.44	-1.059	25.378	37.588	50.002	50.002
192.260	27.67	-1.064	26.601	38.811	50.002	50.002
192.270	30.49	-1.063	29.424	41.634	50.002	50.002
192.280	36.67	-1.061	35.611	47.821	50.002	50.002
192.290	37.59	-1.041	36.550	48.760	50.002	50.002
192.300	38.91	-1.018	37.892	50.102	50.002	50.002
192.310	40.51	-1.007	39.505	51.715	50.002	50.002
192.320	39.48	-1.016	38.466	50.676	50.002	50.002
192.330	33.59	-0.989	32.602	44.812	50.002	50.002

192.340	29.16	-1.007	28.153	40.363	50.002	50.002
192.350	26.03	-0.995	25.037	37.247	50.002	50.002
192.360	25.33	-0.991	24.334	36.544	50.002	50.002
192.370	25.50	-0.984	24.517	36.727	50.002	50.002
192.380	27.13	-0.972	26.158	38.368	50.002	50.002
192.390	26.44	-0.965	25.475	37.685	50.002	50.002
192.400	27.08	-0.969	26.110	38.320	50.002	50.002
192.410	28.29	-0.972	27.315	39.525	50.002	50.002
192.420	25.89	-0.964	24.923	37.133	50.002	50.002
192.430	28.26	-0.950	27.311	39.521	50.002	50.002
192.440	27.53	-0.935	26.593	38.803	50.002	50.002
192.450	27.82	-0.935	26.881	39.091	50.002	50.002
192.460	28.95	-0.927	28.022	40.232	50.002	50.002
192.470	28.43	-0.928	27.503	39.713	50.002	50.002
192.480	28.78	-0.930	27.846	40.056	50.002	50.002
192.490	27.37	-0.895	26.478	38.688	50.002	50.002
192.500	28.04	-0.901	27.142	39.352	50.002	50.002
192.510	28.18	-0.904	27.273	39.483	50.002	50.002
192.520	27.56	-0.912	26.644	38.854	50.002	50.002
192.530	28.66	-0.908	27.754	39.964	50.002	50.002
192.540	27.58	-0.879	26.705	38.915	50.002	50.002
192.550	26.67	-0.878	25.788	37.998	50.002	50.002
192.560	29.53	-0.890	28.643	40.853	50.002	50.002
192.570	29.54	-0.891	28.651	40.861	50.002	50.002
192.580	28.11	-0.887	27.218	39.428	50.002	50.002
192.590	28.26	-0.897	27.367	39.577	50.002	50.002
192.600	27.71	-0.878	26.831	39.041	50.002	50.002
192.610	28.33	-0.851	27.476	39.686	50.002	50.002
192.620	28.02	-0.842	27.182	39.392	50.002	50.002
192.630	28.96	-0.847	28.112	40.322	50.002	50.002
192.640	26.89	-0.859	26.031	38.241	50.002	50.002
192.650	28.61	-0.845	27.764	39.974	50.002	50.002
192.660	28.44	-0.851	27.593	39.803	50.002	50.002
192.670	27.85	-0.838	27.010	39.220	50.002	50.002
192.680	27.33	-0.841	26.490	38.700	50.002	50.002
192.690	27.97	-0.856	27.110	39.320	50.002	50.002
192.700	27.36	-0.842	26.517	38.727	50.002	50.002
192.710	29.58	-0.834	28.749	40.959	50.002	50.002
192.720	26.04	-0.843	25.195	37.405	50.002	50.002
192.730	26.51	-0.834	25.674	37.884	50.002	50.002
192.740	27.79	-0.817	26.977	39.187	50.002	50.002
192.750	28.37	-0.822	27.551	39.761	50.002	50.002
192.760	28.82	-0.816	28.005	40.215	50.002	50.002
192.770	27.20	-0.813	26.386	38.596	50.002	50.002
192.780	27.80	-0.808	26.994	39.204	50.002	50.002
192.790	29.91	-0.809	29.099	41.309	50.002	50.002

192.800	26.84	-0.811	26.033	38.243	50.002	50.002
192.810	26.48	-0.802	25.681	37.891	50.002	50.002
192.820	26.90	-0.793	26.110	38.320	50.002	50.002
192.830	26.85	-0.796	26.054	38.264	50.002	50.002
192.840	25.82	-0.775	25.041	37.251	50.002	50.002
192.850	25.95	-0.785	25.164	37.374	50.002	50.002
192.860	27.81	-0.792	27.015	39.225	50.002	50.002
192.870	29.39	-0.781	28.608	40.818	50.002	50.002
192.880	28.01	-0.776	27.235	39.445	50.002	50.002
192.890	28.75	-0.780	27.970	40.180	50.002	50.002
192.900	29.02	-0.779	28.243	40.453	50.002	50.002
192.910	28.95	-0.774	28.178	40.388	50.002	50.002
192.920	29.86	-0.769	29.090	41.300	50.002	50.002
192.930	28.33	-0.760	27.571	39.781	50.002	50.002
192.940	27.35	-0.753	26.597	38.807	50.002	50.002
192.950	28.29	-0.760	27.526	39.736	50.002	50.002
192.960	26.50	-0.773	25.729	37.939	50.002	50.002
192.970	28.63	-0.757	27.868	40.078	50.002	50.002
192.980	26.96	-0.757	26.198	38.408	50.002	50.002
192.990	26.96	-0.748	26.209	38.419	50.002	50.002
193.000	28.51	-0.728	27.784	39.994	50.002	50.002
193.010	28.64	-0.739	27.902	40.112	50.002	50.002
193.020	28.06	-0.754	27.307	39.517	50.002	50.002
193.030	29.52	-0.750	28.768	40.978	50.002	50.002
193.040	28.02	-0.742	27.273	39.483	50.002	50.002
193.050	26.07	-0.726	25.347	37.557	50.002	50.002
193.060	28.62	-0.723	27.900	40.110	50.002	50.002
193.070	28.39	-0.731	27.658	39.868	50.002	50.002
193.080	28.22	-0.724	27.494	39.704	50.002	50.002
193.090	27.62	-0.709	26.913	39.123	50.002	50.002
193.100	28.68	-0.728	27.947	40.157	50.002	50.002
193.110	28.79	-0.723	28.070	40.280	50.002	50.002
193.120	28.94	-0.708	28.234	40.444	50.002	50.002
193.130	28.83	-0.716	28.118	40.328	50.002	50.002
193.140	27.86	-0.710	27.145	39.355	50.002	50.002
193.150	27.84	-0.698	27.145	39.355	50.002	50.002
193.160	27.99	-0.693	27.301	39.511	50.002	50.002
193.170	27.43	-0.693	26.739	38.949	50.002	50.002
193.180	28.55	-0.716	27.831	40.041	50.002	50.002
193.190	25.79	-0.709	25.084	37.294	50.002	50.002
193.200	27.93	-0.709	27.219	39.429	50.002	50.002
193.210	27.28	-0.692	26.590	38.800	50.002	50.002
193.220	28.01	-0.670	27.337	39.547	50.002	50.002
193.230	27.60	-0.683	26.915	39.125	50.002	50.002
193.240	26.98	-0.701	26.280	38.490	50.002	50.002
193.250	27.15	-0.696	26.452	38.662	50.002	50.002

193.260	29.45	-0.692	28.754	40.964	50.002	50.002
193.270	29.39	-0.672	28.721	40.931	50.002	50.002
193.280	28.36	-0.661	27.696	39.906	50.002	50.002
193.290	27.29	-0.684	26.609	38.819	50.002	50.002
193.300	28.68	-0.688	27.990	40.200	50.002	50.002
193.310	29.86	-0.672	29.192	41.402	50.002	50.002
193.320	27.83	-0.673	27.154	39.364	50.002	50.002
193.330	28.95	-0.673	28.279	40.489	50.002	50.002
193.340	29.01	-0.666	28.348	40.558	50.002	50.002
193.350	28.93	-0.662	28.270	40.480	50.002	50.002
193.360	27.57	-0.654	26.915	39.125	50.002	50.002
193.370	27.17	-0.654	26.519	38.729	50.002	50.002
193.380	27.48	-0.664	26.816	39.026	50.002	50.002
193.390	28.27	-0.671	27.597	39.807	50.002	50.002
193.400	28.76	-0.662	28.094	40.304	50.002	50.002
193.410	29.91	-0.654	29.258	41.468	50.002	50.002
193.420	27.90	-0.638	27.259	39.469	50.002	50.002
193.430	28.04	-0.648	27.392	39.602	50.002	50.002
193.440	28.45	-0.655	27.790	40.000	50.002	50.002
193.450	28.38	-0.650	27.729	39.939	50.002	50.002
193.460	27.93	-0.639	27.290	39.500	50.002	50.002
193.470	28.40	-0.638	27.766	39.976	50.002	50.002
193.480	26.94	-0.641	26.295	38.505	50.002	50.002
193.490	27.86	-0.638	27.225	39.435	50.002	50.002
193.500	25.42	-0.648	24.769	36.979	50.002	50.002
193.510	27.88	-0.650	27.226	39.436	50.002	50.002
193.520	27.84	-0.644	27.198	39.408	50.002	50.002
193.530	27.05	-0.620	26.430	38.640	50.002	50.002
193.540	28.56	-0.621	27.936	40.146	50.002	50.002
193.550	26.43	-0.628	25.799	38.009	50.002	50.002
193.560	28.74	-0.634	28.101	40.311	50.002	50.002
193.570	29.57	-0.632	28.941	41.151	50.002	50.002
193.580	29.29	-0.623	28.663	40.873	50.002	50.002
193.590	30.00	-0.623	29.373	41.583	50.002	50.002
193.600	28.47	-0.634	27.831	40.041	50.002	50.002
193.610	25.54	-0.638	24.905	37.115	50.002	50.002
193.620	28.12	-0.647	27.472	39.682	50.002	50.002
193.630	28.96	-0.628	28.332	40.542	50.002	50.002
193.640	26.19	-0.625	25.563	37.773	50.002	50.002
193.650	28.41	-0.609	27.797	40.007	50.002	50.002
193.660	28.46	-0.618	27.840	40.050	50.002	50.002
193.670	29.37	-0.629	28.742	40.952	50.002	50.002
193.680	27.89	-0.618	27.274	39.484	50.002	50.002
193.690	27.07	-0.610	26.459	38.669	50.002	50.002
193.700	27.26	-0.610	26.645	38.855	50.002	50.002
193.710	27.29	-0.597	26.689	38.899	50.002	50.002

193.720	27.99	-0.597	27.393	39.603	50.002	50.002
193.730	26.18	-0.603	25.578	37.788	50.002	50.002
193.740	26.28	-0.605	25.676	37.886	50.002	50.002
193.750	28.16	-0.605	27.556	39.766	50.002	50.002
193.760	29.17	-0.601	28.572	40.782	50.002	50.002
193.770	26.83	-0.596	26.236	38.446	50.002	50.002
193.780	25.46	-0.588	24.872	37.082	50.002	50.002
193.790	26.51	-0.582	25.932	38.142	50.002	50.002
193.800	28.96	-0.598	28.361	40.571	50.002	50.002
193.810	26.41	-0.603	25.809	38.019	50.002	50.002
193.820	27.28	-0.606	26.676	38.886	50.002	50.002
193.830	28.03	-0.602	27.430	39.640	50.002	50.002
193.840	25.52	-0.591	24.926	37.136	50.002	50.002
193.850	26.64	-0.560	26.080	38.290	50.002	50.002
193.860	27.55	-0.569	26.981	39.191	50.002	50.002
193.870	27.35	-0.589	26.758	38.968	50.002	50.002
193.880	28.44	-0.594	27.844	40.054	50.002	50.002
193.890	27.44	-0.582	26.860	39.070	50.002	50.002
193.900	29.33	-0.570	28.758	40.968	50.002	50.002
193.910	28.32	-0.570	27.751	39.961	50.002	50.002
193.920	28.16	-0.581	27.576	39.786	50.002	50.002
193.930	28.40	-0.579	27.819	40.029	50.002	50.002
193.940	28.89	-0.573	28.317	40.527	50.002	50.002
193.950	27.01	-0.580	26.429	38.639	50.002	50.002
193.960	28.65	-0.580	28.074	40.284	50.002	50.002
193.970	28.89	-0.572	28.318	40.528	50.002	50.002
193.980	26.53	-0.578	25.955	38.165	50.002	50.002
193.990	27.77	-0.566	27.205	39.415	50.002	50.002
194.000	27.70	-0.564	27.133	39.343	50.002	50.002
194.010	29.42	-0.573	28.844	41.054	50.002	50.002
194.020	26.16	-0.591	25.571	37.781	50.002	50.002
194.030	25.01	-0.597	24.414	36.624	50.002	50.002
194.040	27.69	-0.580	27.111	39.321	50.002	50.002
194.050	28.10	-0.570	27.531	39.741	50.002	50.002
194.060	28.54	-0.563	27.976	40.186	50.002	50.002
194.070	28.56	-0.577	27.981	40.191	50.002	50.002
194.080	27.56	-0.582	26.977	39.187	50.002	50.002
194.090	25.30	-0.574	24.723	36.933	50.002	50.002
194.100	28.69	-0.570	28.120	40.330	50.002	50.002
194.110	28.13	-0.554	27.576	39.786	50.002	50.002
194.120	29.80	-0.575	29.222	41.432	50.002	50.002
194.130	27.19	-0.578	26.611	38.821	50.002	50.002
194.140	27.54	-0.563	26.978	39.188	50.002	50.002
194.150	29.01	-0.556	28.457	40.667	50.002	50.002
194.160	30.77	-0.548	30.224	42.434	50.002	50.002
194.170	30.06	-0.554	29.506	41.716	50.002	50.002

194.180	28.46	-0.571	27.893	40.103	50.002	50.002
194.190	28.28	-0.565	27.716	39.926	50.002	50.002
194.200	28.28	-0.557	27.718	39.928	50.002	50.002
194.210	27.76	-0.540	27.217	39.427	50.002	50.002
194.220	27.71	-0.526	27.183	39.393	50.002	50.002
194.230	27.27	-0.553	26.714	38.924	50.002	50.002
194.240	27.92	-0.551	27.368	39.578	50.002	50.002
194.250	27.31	-0.551	26.756	38.966	50.002	50.002
194.260	28.18	-0.557	27.618	39.828	50.002	50.002
194.270	24.44	-0.562	23.880	36.090	50.002	50.002
194.280	27.02	-0.549	26.472	38.682	50.002	50.002
194.290	27.76	-0.559	27.203	39.413	50.002	50.002
194.300	28.61	-0.535	28.073	40.283	50.002	50.002
194.310	27.24	-0.532	26.706	38.916	50.002	50.002
194.320	26.11	-0.552	25.555	37.765	50.002	50.002
194.330	26.85	-0.551	26.302	38.512	50.002	50.002
194.340	28.39	-0.541	27.844	40.054	50.002	50.002
194.350	27.82	-0.545	27.279	39.489	50.002	50.002
194.360	27.88	-0.537	27.343	39.553	50.002	50.002
194.370	28.32	-0.536	27.779	39.989	50.002	50.002
194.380	29.44	-0.542	28.893	41.103	50.002	50.002
194.390	28.13	-0.533	27.597	39.807	50.002	50.002
194.400	27.88	-0.528	27.351	39.561	50.002	50.002
194.410	29.75	-0.528	29.217	41.427	50.002	50.002
194.420	28.21	-0.533	27.673	39.883	50.002	50.002
194.430	30.65	-0.548	30.102	42.312	50.002	50.002
194.440	28.63	-0.551	28.082	40.292	50.002	50.002
194.450	28.72	-0.528	28.196	40.406	50.002	50.002
194.460	27.04	-0.516	26.524	38.734	50.002	50.002
194.470	26.03	-0.534	25.491	37.701	50.002	50.002
194.480	28.04	-0.535	27.508	39.718	50.002	50.002
194.490	27.42	-0.541	26.875	39.085	50.002	50.002
194.500	25.19	-0.539	24.653	36.863	50.002	50.002
194.510	28.66	-0.522	28.136	40.346	50.002	50.002
194.520	25.28	-0.529	24.748	36.958	50.002	50.002
194.530	26.85	-0.540	26.310	38.520	50.002	50.002
194.540	28.33	-0.533	27.798	40.008	50.002	50.002
194.550	27.27	-0.537	26.733	38.943	50.002	50.002
194.560	27.88	-0.541	27.340	39.550	50.002	50.002
194.570	28.12	-0.527	27.592	39.802	50.002	50.002
194.580	28.86	-0.527	28.328	40.538	50.002	50.002
194.590	27.73	-0.529	27.199	39.409	50.002	50.002
194.600	27.61	-0.529	27.077	39.287	50.002	50.002
194.610	27.36	-0.517	26.844	39.054	50.002	50.002
194.620	26.27	-0.533	25.737	37.947	50.002	50.002
194.630	28.05	-0.538	27.516	39.726	50.002	50.002

194.640	27.73	-0.518	27.215	39.425	50.002	50.002
194.650	28.03	-0.528	27.504	39.714	50.002	50.002
194.660	29.58	-0.523	29.056	41.266	50.002	50.002
194.670	29.48	-0.536	28.940	41.150	50.002	50.002
194.680	26.72	-0.520	26.195	38.405	50.002	50.002
194.690	27.40	-0.534	26.867	39.077	50.002	50.002
194.700	29.19	-0.534	28.656	40.866	50.002	50.002
194.710	27.77	-0.522	27.248	39.458	50.002	50.002
194.720	29.04	-0.527	28.516	40.726	50.002	50.002
194.730	27.97	-0.527	27.439	39.649	50.002	50.002
194.740	26.31	-0.531	25.777	37.987	50.002	50.002
194.750	28.58	-0.514	28.066	40.276	50.002	50.002
194.760	29.31	-0.507	28.807	41.017	50.002	50.002
194.770	28.26	-0.509	27.754	39.964	50.002	50.002
194.780	28.86	-0.529	28.334	40.544	50.002	50.002
194.790	27.99	-0.534	27.452	39.662	50.002	50.002
194.800	28.39	-0.527	27.861	40.071	50.002	50.002
194.810	26.87	-0.522	26.351	38.561	50.002	50.002
194.820	27.18	-0.498	26.686	38.896	50.002	50.002
194.830	28.00	-0.504	27.495	39.705	50.002	50.002
194.840	26.40	-0.533	25.862	38.072	50.002	50.002
194.850	25.98	-0.529	25.447	37.657	50.002	50.002
194.860	27.72	-0.521	27.203	39.413	50.002	50.002
194.870	26.11	-0.498	25.609	37.819	50.002	50.002
194.880	27.79	-0.520	27.268	39.478	50.002	50.002
194.890	27.83	-0.526	27.303	39.513	50.002	50.002
194.900	28.60	-0.533	28.063	40.273	50.002	50.002
194.910	27.14	-0.542	26.595	38.805	50.002	50.002
194.920	28.98	-0.539	28.444	40.654	50.002	50.002
194.930	27.74	-0.538	27.197	39.407	50.002	50.002
194.940	27.04	-0.526	26.515	38.725	50.002	50.002
194.950	28.61	-0.528	28.085	40.295	50.002	50.002
194.960	27.72	-0.513	27.205	39.415	50.002	50.002
194.970	27.61	-0.529	27.077	39.287	50.002	50.002
194.980	26.78	-0.545	26.238	38.448	50.002	50.002
194.990	28.83	-0.533	28.293	40.503	50.002	50.002
195.000	27.06	-0.533	26.530	38.740	50.002	50.002
195.010	30.26	-0.527	29.736	41.946	50.002	50.002
195.020	27.69	-0.517	27.171	39.381	50.002	50.002
195.030	27.07	-0.517	26.549	38.759	50.002	50.002
195.040	28.34	-0.542	27.797	40.007	50.002	50.002
195.050	27.83	-0.527	27.300	39.510	50.002	50.002
195.060	29.55	-0.505	29.047	41.257	50.002	50.002
195.070	27.96	-0.505	27.456	39.666	50.002	50.002
195.080	26.59	-0.527	26.064	38.274	50.002	50.002
195.090	27.66	-0.531	27.131	39.341	50.002	50.002

195.100	28.09	-0.526	27.563	39.773	50.002	50.002
195.110	28.76	-0.522	28.239	40.449	50.002	50.002
195.120	28.87	-0.523	28.346	40.556	50.002	50.002
195.130	28.95	-0.522	28.423	40.633	50.002	50.002
195.140	26.59	-0.526	26.067	38.277	50.002	50.002
195.150	26.87	-0.533	26.334	38.544	50.002	50.002
195.160	28.25	-0.527	27.719	39.929	50.002	50.002
195.170	27.52	-0.514	27.001	39.211	50.002	50.002
195.180	28.28	-0.518	27.763	39.973	50.002	50.002
195.190	27.45	-0.526	26.926	39.136	50.002	50.002
195.200	28.85	-0.544	28.309	40.519	50.002	50.002
195.210	26.06	-0.544	25.520	37.730	50.002	50.002
195.220	26.82	-0.532	26.292	38.502	50.002	50.002
195.230	28.24	-0.541	27.702	39.912	50.002	50.002
195.240	28.84	-0.530	28.313	40.523	50.002	50.002
195.250	28.24	-0.520	27.721	39.931	50.002	50.002
195.260	27.41	-0.525	26.889	39.099	50.002	50.002
195.270	27.11	-0.524	26.586	38.796	50.002	50.002
195.280	27.81	-0.527	27.279	39.489	50.002	50.002
195.290	25.66	-0.531	25.127	37.337	50.002	50.002
195.300	28.98	-0.546	28.437	40.647	50.002	50.002
195.310	27.14	-0.540	26.603	38.813	50.002	50.002
195.320	26.80	-0.554	26.249	38.459	50.002	50.002
195.330	29.18	-0.552	28.627	40.837	50.002	50.002
195.340	28.91	-0.549	28.358	40.568	50.002	50.002
195.350	28.35	-0.554	27.798	40.008	50.002	50.002
195.360	27.65	-0.550	27.102	39.312	50.002	50.002
195.370	28.90	-0.572	28.331	40.541	50.002	50.002
195.380	28.83	-0.577	28.251	40.461	50.002	50.002
195.390	29.17	-0.564	28.610	40.820	50.002	50.002
195.400	29.61	-0.535	29.078	41.288	50.002	50.002
195.410	29.25	-0.543	28.702	40.912	50.002	50.002
195.420	24.65	-0.577	24.075	36.285	50.002	50.002
195.430	28.33	-0.583	27.751	39.961	50.002	50.002
195.440	28.09	-0.575	27.512	39.722	50.002	50.002
195.450	27.75	-0.562	27.186	39.396	50.002	50.002
195.460	25.93	-0.570	25.356	37.566	50.002	50.002
195.470	27.55	-0.574	26.976	39.186	50.002	50.002
195.480	28.59	-0.570	28.022	40.232	50.002	50.002
195.490	29.55	-0.571	28.981	41.191	50.002	50.002
195.500	29.17	-0.584	28.585	40.795	50.002	50.002
195.510	29.97	-0.576	29.397	41.607	50.002	50.002
195.520	29.62	-0.580	29.044	41.254	50.002	50.002
195.530	28.54	-0.576	27.961	40.171	50.002	50.002
195.540	29.16	-0.571	28.593	40.803	50.002	50.002
195.550	28.57	-0.582	27.989	40.199	50.002	50.002

195.560	28.60	-0.590	28.006	40.216	50.002	50.002
195.570	27.03	-0.590	26.440	38.650	50.002	50.002
195.580	27.65	-0.584	27.070	39.280	50.002	50.002
195.590	27.76	-0.582	27.179	39.389	50.002	50.002
195.600	29.57	-0.583	28.990	41.200	50.002	50.002
195.610	29.11	-0.582	28.523	40.733	50.002	50.002
195.620	29.20	-0.588	28.610	40.820	50.002	50.002
195.630	28.48	-0.588	27.888	40.098	50.002	50.002
195.640	25.56	-0.590	24.972	37.182	50.002	50.002
195.650	28.60	-0.593	28.002	40.212	50.002	50.002
195.660	29.14	-0.592	28.549	40.759	50.002	50.002
195.670	28.92	-0.588	28.331	40.541	50.002	50.002
195.680	29.25	-0.600	28.654	40.864	50.002	50.002
195.690	27.08	-0.587	26.496	38.706	50.002	50.002
195.700	25.76	-0.596	25.159	37.369	50.002	50.002
195.710	26.69	-0.618	26.073	38.283	50.002	50.002
195.720	28.39	-0.630	27.764	39.974	50.002	50.002
195.730	27.25	-0.603	26.649	38.859	50.002	50.002
195.740	27.50	-0.602	26.897	39.107	50.002	50.002
195.750	28.64	-0.607	28.037	40.247	50.002	50.002
195.760	29.13	-0.609	28.521	40.731	50.002	50.002
195.770	28.66	-0.604	28.052	40.262	50.002	50.002
195.780	28.74	-0.607	28.130	40.340	50.002	50.002
195.790	28.46	-0.622	27.839	40.049	50.002	50.002
195.800	25.78	-0.625	25.150	37.360	50.002	50.002
195.810	28.09	-0.625	27.465	39.675	50.002	50.002
195.820	29.13	-0.609	28.521	40.731	50.002	50.002
195.830	28.26	-0.625	27.636	39.846	50.002	50.002
195.840	28.38	-0.632	27.750	39.960	50.002	50.002
195.850	29.87	-0.632	29.238	41.448	50.002	50.002
195.860	27.02	-0.654	26.369	38.579	50.002	50.002
195.870	29.51	-0.646	28.859	41.069	50.002	50.002
195.880	28.69	-0.665	28.025	40.235	50.002	50.002
195.890	28.28	-0.654	27.626	39.836	50.002	50.002
195.900	26.01	-0.648	25.363	37.573	50.002	50.002
195.910	28.13	-0.645	27.482	39.692	50.002	50.002
195.920	28.80	-0.640	28.159	40.369	50.002	50.002
195.930	28.51	-0.665	27.841	40.051	50.002	50.002
195.940	28.24	-0.680	27.562	39.772	50.002	50.002
195.950	29.20	-0.665	28.538	40.748	50.002	50.002
195.960	28.47	-0.651	27.816	40.026	50.002	50.002
195.970	28.09	-0.660	27.426	39.636	50.002	50.002
195.980	27.58	-0.662	26.915	39.125	50.002	50.002
195.990	28.78	-0.662	28.120	40.330	50.002	50.002
196.000	25.94	-0.665	25.276	37.486	50.002	50.002
196.010	28.28	-0.678	27.601	39.811	50.002	50.002

196.020	28.86	-0.684	28.177	40.387	50.002	50.002
196.030	28.49	-0.674	27.820	40.030	50.002	50.002
196.040	27.34	-0.673	26.668	38.878	50.002	50.002
196.050	27.34	-0.672	26.670	38.880	50.002	50.002
196.060	29.22	-0.686	28.537	40.747	50.002	50.002
196.070	27.92	-0.690	27.231	39.441	50.002	50.002
196.080	28.75	-0.678	28.070	40.280	50.002	50.002
196.090	27.84	-0.681	27.161	39.371	50.002	50.002
196.100	26.59	-0.686	25.908	38.118	50.002	50.002
196.110	29.05	-0.696	28.355	40.565	50.002	50.002
196.120	25.61	-0.692	24.918	37.128	50.002	50.002
196.130	27.69	-0.696	26.991	39.201	50.002	50.002
196.140	28.43	-0.701	27.730	39.940	50.002	50.002
196.150	28.12	-0.695	27.424	39.634	50.002	50.002
196.160	26.75	-0.704	26.048	38.258	50.002	50.002
196.170	26.19	-0.709	25.477	37.687	50.002	50.002
196.180	27.35	-0.720	26.631	38.841	50.002	50.002
196.190	27.00	-0.709	26.295	38.505	50.002	50.002
196.200	28.15	-0.700	27.447	39.657	50.002	50.002
196.210	27.08	-0.717	26.364	38.574	50.002	50.002
196.220	27.70	-0.728	26.972	39.182	50.002	50.002
196.230	27.39	-0.727	26.659	38.869	50.002	50.002
196.240	28.66	-0.713	27.946	40.156	50.002	50.002
196.250	27.83	-0.719	27.106	39.316	50.002	50.002
196.260	26.81	-0.718	26.095	38.305	50.002	50.002
196.270	27.76	-0.730	27.025	39.235	50.002	50.002
196.280	29.86	-0.740	29.117	41.327	50.002	50.002
196.290	27.58	-0.727	26.850	39.060	50.002	50.002
196.300	28.61	-0.718	27.889	40.099	50.002	50.002
196.310	26.73	-0.732	25.996	38.206	50.002	50.002
196.320	28.62	-0.735	27.883	40.093	50.002	50.002
196.330	28.56	-0.743	27.812	40.022	50.002	50.002
196.340	29.17	-0.748	28.424	40.634	50.002	50.002
196.350	27.69	-0.748	26.944	39.154	50.002	50.002
196.360	27.36	-0.745	26.613	38.823	50.002	50.002
196.370	27.39	-0.746	26.646	38.856	50.002	50.002
196.380	27.28	-0.750	26.532	38.742	50.002	50.002
196.390	28.91	-0.754	28.155	40.365	50.002	50.002
196.400	27.41	-0.755	26.651	38.861	50.002	50.002
196.410	28.07	-0.746	27.323	39.533	50.002	50.002
196.420	28.39	-0.754	27.631	39.841	50.002	50.002
196.430	28.36	-0.768	27.587	39.797	50.002	50.002
196.440	26.57	-0.752	25.817	38.027	50.002	50.002
196.450	25.84	-0.752	25.090	37.300	50.002	50.002
196.460	28.28	-0.742	27.534	39.744	50.002	50.002
196.470	29.16	-0.751	28.410	40.620	50.002	50.002

196.480	27.15	-0.768	26.385	38.595	50.002	50.002
196.490	25.60	-0.758	24.843	37.053	50.002	50.002
196.500	28.22	-0.750	27.467	39.677	50.002	50.002
196.510	27.62	-0.758	26.866	39.076	50.002	50.002
196.520	28.52	-0.764	27.755	39.965	50.002	50.002
196.530	28.80	-0.763	28.035	40.245	50.002	50.002
196.540	30.39	-0.762	29.632	41.842	50.002	50.002
196.550	28.91	-0.754	28.157	40.367	50.002	50.002
196.560	27.10	-0.750	26.349	38.559	50.002	50.002
196.570	26.79	-0.763	26.028	38.238	50.002	50.002
196.580	25.86	-0.795	25.061	37.271	50.002	50.002
196.590	26.73	-0.770	25.956	38.166	50.002	50.002
196.600	29.73	-0.764	28.964	41.174	50.002	50.002
196.610	28.30	-0.767	27.531	39.741	50.002	50.002
196.620	27.71	-0.766	26.948	39.158	50.002	50.002
196.630	30.39	-0.782	29.604	41.814	50.002	50.002
196.640	28.61	-0.786	27.824	40.034	50.002	50.002
196.650	29.28	-0.778	28.500	40.710	50.002	50.002
196.660	28.37	-0.786	27.584	39.794	50.002	50.002
196.670	28.57	-0.784	27.781	39.991	50.002	50.002
196.680	29.30	-0.778	28.525	40.735	50.002	50.002
196.690	26.68	-0.784	25.891	38.101	50.002	50.002
196.700	28.08	-0.789	27.286	39.496	50.002	50.002
196.710	26.23	-0.795	25.435	37.645	50.002	50.002
196.720	27.15	-0.775	26.379	38.589	50.002	50.002
196.730	27.74	-0.782	26.962	39.172	50.002	50.002
196.740	27.38	-0.802	26.579	38.789	50.002	50.002
196.750	29.37	-0.802	28.571	40.781	50.002	50.002
196.760	28.60	-0.809	27.790	40.000	50.002	50.002
196.770	28.38	-0.775	27.609	39.819	50.002	50.002
196.780	28.00	-0.778	27.223	39.433	50.002	50.002
196.790	27.77	-0.788	26.984	39.194	50.002	50.002
196.800	27.55	-0.822	26.724	38.934	50.002	50.002
196.810	26.80	-0.806	25.997	38.207	50.002	50.002
196.820	28.08	-0.792	27.290	39.500	50.002	50.002
196.830	27.65	-0.788	26.857	39.067	50.002	50.002
196.840	27.42	-0.786	26.631	38.841	50.002	50.002
196.850	28.85	-0.800	28.052	40.262	50.002	50.002
196.860	27.36	-0.801	26.562	38.772	50.002	50.002
196.870	27.69	-0.794	26.892	39.102	50.002	50.002
196.880	27.74	-0.797	26.946	39.156	50.002	50.002
196.890	26.95	-0.800	26.148	38.358	50.002	50.002
196.900	25.85	-0.810	25.040	37.250	50.002	50.002
196.910	28.32	-0.817	27.501	39.711	50.002	50.002
196.920	28.95	-0.807	28.143	40.353	50.002	50.002
196.930	27.81	-0.800	27.005	39.215	50.002	50.002

196.940	27.68	-0.789	26.886	39.096	50.002	50.002
196.950	28.45	-0.798	27.656	39.866	50.002	50.002
196.960	25.82	-0.798	25.026	37.236	50.002	50.002
196.970	27.68	-0.810	26.868	39.078	50.002	50.002
196.980	26.73	-0.797	25.936	38.146	50.002	50.002
196.990	29.14	-0.788	28.353	40.563	50.002	50.002
197.000	27.37	-0.785	26.584	38.794	50.002	50.002
197.010	27.16	-0.794	26.365	38.575	50.002	50.002
197.020	28.07	-0.801	27.268	39.478	50.002	50.002
197.030	27.65	-0.808	26.846	39.056	50.002	50.002
197.040	28.67	-0.797	27.873	40.083	50.002	50.002
197.050	27.34	-0.788	26.550	38.760	50.002	50.002
197.060	29.41	-0.801	28.606	40.816	50.002	50.002
197.070	28.60	-0.799	27.798	40.008	50.002	50.002
197.080	28.72	-0.792	27.926	40.136	50.002	50.002
197.090	28.39	-0.817	27.572	39.782	50.002	50.002
197.100	28.61	-0.823	27.788	39.998	50.002	50.002
197.110	27.80	-0.796	27.006	39.216	50.002	50.002
197.120	27.64	-0.790	26.852	39.062	50.002	50.002
197.130	27.50	-0.795	26.706	38.916	50.002	50.002
197.140	28.30	-0.815	27.482	39.692	50.002	50.002
197.150	28.10	-0.832	27.267	39.477	50.002	50.002
197.160	28.37	-0.819	27.546	39.756	50.002	50.002
197.170	27.74	-0.796	26.940	39.150	50.002	50.002
197.180	26.83	-0.803	26.028	38.238	50.002	50.002
197.190	27.56	-0.801	26.757	38.967	50.002	50.002
197.200	28.53	-0.830	27.703	39.913	50.002	50.002
197.210	26.84	-0.836	26.000	38.210	50.002	50.002
197.220	28.66	-0.820	27.843	40.053	50.002	50.002
197.230	26.48	-0.821	25.658	37.868	50.002	50.002
197.240	28.44	-0.818	27.623	39.833	50.002	50.002
197.250	27.74	-0.830	26.909	39.119	50.002	50.002
197.260	27.55	-0.821	26.726	38.936	50.002	50.002
197.270	27.47	-0.806	26.664	38.874	50.002	50.002
197.280	26.49	-0.814	25.675	37.885	50.002	50.002
197.290	27.03	-0.812	26.222	38.432	50.002	50.002
197.300	27.80	-0.838	26.961	39.171	50.002	50.002
197.310	28.13	-0.835	27.298	39.508	50.002	50.002
197.320	27.28	-0.828	26.455	38.665	50.002	50.002
197.330	25.93	-0.825	25.109	37.319	50.002	50.002
197.340	27.09	-0.823	26.269	38.479	50.002	50.002
197.350	26.61	-0.831	25.774	37.984	50.002	50.002
197.360	28.07	-0.828	27.240	39.450	50.002	50.002
197.370	25.85	-0.825	25.022	37.232	50.002	50.002
197.380	27.00	-0.834	26.162	38.372	50.002	50.002
197.390	28.80	-0.838	27.966	40.176	50.002	50.002

197.400	28.16	-0.838	27.323	39.533	50.002	50.002
197.410	29.87	-0.840	29.030	41.240	50.002	50.002
197.420	29.42	-0.829	28.592	40.802	50.002	50.002
197.430	27.05	-0.838	26.207	38.417	50.002	50.002
197.440	26.33	-0.848	25.481	37.691	50.002	50.002
197.450	28.51	-0.863	27.646	39.856	50.002	50.002
197.460	29.25	-0.864	28.384	40.594	50.002	50.002
197.470	26.25	-0.857	25.389	37.599	50.002	50.002
197.480	27.38	-0.855	26.522	38.732	50.002	50.002
197.490	27.71	-0.866	26.843	39.053	50.002	50.002
197.500	28.21	-0.871	27.343	39.553	50.002	50.002
197.510	27.91	-0.868	27.041	39.251	50.002	50.002
197.520	24.84	-0.876	23.968	36.178	50.002	50.002
197.530	25.74	-0.872	24.863	37.073	50.002	50.002
197.540	29.47	-0.880	28.592	40.802	50.002	50.002
197.550	26.41	-0.895	25.518	37.728	50.002	50.002
197.560	26.57	-0.901	25.667	37.877	50.002	50.002
197.570	28.30	-0.895	27.409	39.619	50.002	50.002
197.580	27.26	-0.900	26.360	38.570	50.002	50.002
197.590	28.17	-0.895	27.275	39.485	50.002	50.002
197.600	26.78	-0.909	25.869	38.079	50.002	50.002
197.610	26.12	-0.917	25.204	37.414	50.002	50.002
197.620	26.49	-0.924	25.562	37.772	50.002	50.002
197.630	25.11	-0.939	24.171	36.381	50.002	50.002
197.640	23.62	-0.929	22.694	34.904	50.002	50.002
197.650	25.07	-0.931	24.138	36.348	50.002	50.002
197.660	25.32	-0.936	24.382	36.592	50.002	50.002
197.670	25.55	-0.957	24.596	36.806	50.002	50.002
197.680	24.27	-0.946	23.324	35.534	50.002	50.002
197.690	22.77	-0.961	21.809	34.019	50.002	50.002
197.700	24.97	-0.974	23.998	36.208	50.002	50.002
197.710	25.10	-0.984	24.119	36.329	50.002	50.002
197.720	24.45	-1.007	23.440	35.650	50.002	50.002
197.730	24.78	-1.002	23.779	35.989	50.002	50.002
197.740	24.55	-1.011	23.536	35.746	50.002	50.002
197.750	23.34	-1.010	22.330	34.540	50.002	50.002
197.760	23.28	-1.035	22.247	34.457	50.002	50.002
197.770	21.59	-1.053	20.537	32.747	50.002	50.002
197.780	22.50	-1.056	21.440	33.650	50.002	50.002
197.790	22.15	-1.055	21.097	33.307	50.002	50.002
197.800	21.52	-1.092	20.424	32.634	50.002	50.002
197.810	20.97	-1.095	19.871	32.081	50.002	50.002
197.820	19.94	-1.093	18.845	31.055	50.002	50.002
197.830	20.57	-1.095	19.472	31.682	50.002	50.002
197.840	18.79	-1.102	17.691	29.901	50.002	50.002
197.850	19.67	-1.115	18.555	30.765	50.002	50.002

197.860	16.65	-1.145	15.509	27.719	50.002	50.002
197.870	16.39	-1.171	15.217	27.427	50.002	50.002
197.880	14.68	-1.177	13.500	25.710	50.002	50.002
197.890	16.11	-1.149	14.957	27.167	50.002	50.002
197.900	13.15	-1.164	11.987	24.197	50.002	50.002
197.910	13.78	-1.198	12.586	24.796	50.002	50.002
197.920	11.73	-1.241	10.493	22.703	50.002	50.002
197.930	10.27	-1.237	9.032	21.242	50.002	50.002
197.940	8.75	-1.236	7.517	19.727	50.002	50.002
197.950	5.83	-1.254	4.572	16.782	50.002	50.002
197.960	4.31	-1.272	3.042	15.252	50.002	50.002
197.970	-0.14	-1.283	-1.426	10.784	50.002	50.002
197.980	-1.45	-1.310	-2.761	9.449	50.002	50.002
197.990	-6.58	-1.328	-7.903	4.307	50.002	50.002
198.000	-10.01	-1.331	-11.342	0.868	50.002	3.002
Upper Band Edge						
198.010	-11.82	-1.354	-13.172	-0.962	4.002	3.002
198.020	-9.65	-1.390	-11.043	1.167	4.002	3.002
198.030	-11.69	-1.403	-13.096	-0.886	4.002	3.002
198.040	-10.95	-1.416	-12.362	-0.152	4.002	3.002
198.050	-11.66	-1.425	-13.084	-0.874	4.002	3.002
198.060	-10.12	-1.451	-11.567	0.643	4.002	3.002
198.070	-11.30	-1.488	-12.783	-0.573	4.002	3.002
198.080	-11.11	-1.508	-12.614	-0.404	4.002	3.002
198.090	-12.68	-1.521	-14.204	-1.994	4.002	3.002
198.100	-10.74	-1.542	-12.279	-0.069	4.002	3.002
198.110	-10.81	-1.560	-12.367	-0.157	4.002	3.002
198.120	-10.56	-1.582	-12.140	0.070	4.002	3.002
198.130	-10.19	-1.610	-11.803	0.407	4.002	3.002
198.140	-11.52	-1.636	-13.157	-0.947	4.002	3.002
198.150	-12.34	-1.677	-14.012	-1.802	4.002	3.002
198.160	-11.70	-1.684	-13.387	-1.177	4.002	3.002
198.170	-10.47	-1.717	-12.189	0.021	4.002	3.002
198.180	-10.41	-1.756	-12.163	0.047	4.002	3.002
198.190	-11.27	-1.779	-13.044	-0.834	4.002	3.002
198.200	-12.02	-1.804	-13.819	-1.609	4.002	3.002
198.210	-11.74	-1.834	-13.574	-1.364	4.002	3.002
198.220	-11.92	-1.876	-13.792	-1.582	4.002	3.002
198.230	-12.86	-1.908	-14.766	-2.556	4.002	3.002
198.240	-10.34	-1.942	-12.283	-0.073	4.002	3.002
198.250	-10.99	-1.982	-12.971	-0.761	3.959	3.002
198.260	-10.61	-2.021	-12.635	-0.425	3.955	3.002
198.270	-12.89	-2.057	-14.947	-2.737	3.952	3.002
198.280	-12.48	-2.108	-14.583	-2.373	3.948	3.002
198.290	-8.68	-2.149	-10.833	1.377	3.944	3.002
198.300	-13.20	-2.199	-15.397	-3.187	3.940	3.002

198.310	-13.24	-2.241	-15.481	-3.271	3.936	3.002
198.320	-13.84	-2.318	-16.162	-3.952	3.931	3.002
198.330	-12.64	-2.363	-15.006	-2.796	3.927	3.002
198.340	-11.21	-2.412	-13.621	-1.411	3.922	3.002
198.350	-10.68	-2.493	-13.172	-0.962	3.917	3.002
198.360	-12.81	-2.557	-15.363	-3.153	3.912	3.002
198.370	-12.89	-2.624	-15.514	-3.304	3.907	3.002
198.380	-12.03	-2.708	-14.741	-2.531	3.902	3.002
198.390	-12.03	-2.772	-14.797	-2.587	3.897	3.002
198.400	-11.46	-2.852	-14.312	-2.102	3.891	3.002
198.410	-11.21	-2.943	-14.151	-1.941	3.886	3.002
198.420	-10.95	-3.042	-13.992	-1.782	3.880	3.002
198.430	-12.63	-3.159	-15.792	-3.582	3.874	3.002
198.440	-12.51	-3.264	-15.770	-3.560	3.868	3.002
198.450	-10.79	-3.369	-14.162	-1.952	3.862	3.002
198.460	-11.34	-3.513	-14.857	-2.647	3.855	3.002
198.470	-12.33	-3.649	-15.975	-3.765	3.849	3.002
198.480	-13.69	-3.787	-17.474	-5.264	3.842	3.002
198.490	-12.69	-3.934	-16.619	-4.409	3.836	3.002
198.500	-8.63	-4.124	-12.752	-0.542	3.829	3.002
198.510	-10.69	-4.289	-14.978	-2.768	3.822	2.887
198.520	-12.20	-4.480	-16.683	-4.473	3.814	2.772
198.530	-11.55	-4.684	-16.237	-4.027	3.807	2.657
198.540	-11.10	-4.900	-15.995	-3.785	3.800	2.542
198.550	-12.83	-5.150	-17.984	-5.774	3.792	2.427
198.560	-10.88	-5.392	-16.270	-4.060	3.784	2.312
198.570	-11.11	-5.658	-16.770	-4.560	3.777	2.197
198.580	-10.70	-5.917	-16.612	-4.402	3.769	2.082
198.590	-11.62	-6.223	-17.845	-5.635	3.761	1.967
198.600	-11.41	-6.539	-17.952	-5.742	3.752	1.852
198.610	-10.86	-6.874	-17.738	-5.528	3.744	1.737
198.620	-10.31	-7.227	-17.533	-5.323	3.735	1.622
198.630	-12.34	-7.605	-19.947	-7.737	3.727	1.507
198.640	-12.36	-8.010	-20.373	-8.163	3.718	1.392
198.650	-9.14	-8.449	-17.586	-5.376	3.709	1.277
198.660	-10.82	-8.907	-19.728	-7.518	3.700	1.162
198.670	-11.64	-9.371	-21.015	-8.805	3.691	1.047
198.680	-10.60	-9.847	-20.442	-8.232	3.681	0.932
198.690	-11.00	-10.352	-21.350	-9.140	3.672	0.817
198.700	-11.40	-10.878	-22.279	-10.069	3.662	0.702
198.710	-11.95	-11.424	-23.372	-11.162	3.652	0.587
198.720	-12.23	-11.992	-24.221	-12.011	3.642	0.472
198.730	-12.05	-12.562	-24.609	-12.399	3.632	0.357
198.740	-12.19	-13.166	-25.356	-13.146	3.622	0.242
198.750	-14.08	-13.790	-27.870	-15.660	3.612	0.127
198.760	-12.26	-14.427	-26.687	-14.477	3.601	0.012

198.770	-14.69	-15.097	-29.785	-17.575	3.591	-0.103
198.780	-12.41	-15.784	-28.196	-15.986	3.580	-0.218
198.790	-10.81	-16.471	-27.280	-15.070	3.569	-0.333
198.800	-13.09	-17.167	-30.257	-18.047	3.558	-0.448
198.810	-12.96	-17.887	-30.843	-18.633	3.547	-0.563
198.820	-11.10	-18.606	-29.708	-17.498	3.535	-0.678
198.830	-10.80	-19.301	-30.096	-17.886	3.524	-0.793
198.840	-11.21	-19.974	-31.179	-18.969	3.512	-0.908
198.850	-12.21	-20.622	-32.828	-20.618	3.501	-1.023
198.860	-12.24	-21.216	-33.460	-21.250	3.489	-1.138
198.870	-10.50	-21.735	-32.238	-20.028	3.477	-1.253
198.880	-10.89	-22.174	-33.062	-20.852	3.464	-1.368
198.890	-11.20	-23.533	-34.731	-22.521	3.452	-1.483
198.900	-10.33	-24.785	-35.113	-22.903	3.440	-1.598
198.910	-11.07	-25.947	-37.015	-24.805	3.427	-1.713
198.920	-11.35	-25.973	-37.322	-25.112	3.414	-1.828
198.930	-13.49	-25.899	-39.388	-27.178	3.402	-1.943
198.940	-12.95	-25.764	-38.709	-26.499	3.389	-2.058
198.950	-13.02	-25.583	-38.604	-26.394	3.376	-2.173
198.960	-11.02	-25.383	-36.405	-24.195	3.362	-2.288
198.970	-10.40	-25.156	-35.555	-23.345	3.349	-2.403
198.980	-10.13	-24.922	-35.054	-22.844	3.335	-2.518
198.990	-12.98	-24.695	-37.672	-25.462	3.322	-2.633
199.000	-11.22	-24.480	-35.703	-23.493	3.308	-2.748
199.010	-12.41	-24.258	-36.669	-24.459	3.294	-2.863
199.020	-13.72	-24.033	-37.750	-25.540	3.280	-2.978
199.030	-11.37	-23.843	-35.212	-23.002	3.266	-3.093
199.040	-10.42	-23.655	-34.074	-21.864	3.251	-3.208
199.050	-10.07	-23.436	-33.507	-21.297	3.237	-3.323
199.060	-11.11	-23.249	-34.360	-22.150	3.222	-3.438
199.070	-11.21	-23.081	-34.293	-22.083	3.207	-3.553
199.080	-12.25	-22.935	-35.181	-22.971	3.192	-3.668
199.090	-12.13	-22.784	-34.917	-22.707	3.177	-3.783
199.100	-12.66	-22.648	-35.308	-23.098	3.162	-3.898
199.110	-11.27	-22.525	-33.793	-21.583	3.147	-4.013
199.120	-8.99	-22.389	-31.382	-19.172	3.131	-4.128
199.130	-10.10	-22.274	-32.376	-20.166	3.116	-4.243
199.140	-11.64	-22.180	-33.816	-21.606	3.100	-4.358
199.150	-13.22	-22.063	-35.278	-23.068	3.084	-4.473
199.160	-11.43	-21.946	-33.372	-21.162	3.068	-4.588
199.170	-10.94	-21.848	-32.784	-20.574	3.052	-4.703
199.180	-9.62	-21.775	-31.394	-19.184	3.035	-4.818
199.190	-12.87	-21.697	-34.564	-22.354	3.019	-4.933
199.200	-12.90	-21.635	-34.531	-22.321	3.002	-5.048
199.210	-12.86	-21.554	-34.412	-22.202	2.986	-5.163
199.220	-11.79	-21.473	-33.261	-21.051	2.969	-5.278

199.230	-10.21	-21.420	-31.630	-19.420	2.952	-5.393
199.240	-12.03	-21.378	-33.403	-21.193	2.934	-5.508
199.250	-11.93	-21.332	-33.258	-21.048	2.917	-5.623
199.260	-10.62	-21.292	-31.915	-19.705	2.900	-5.738
199.270	-13.22	-21.236	-34.455	-22.245	2.882	-5.853
199.280	-12.56	-21.202	-33.759	-21.549	2.864	-5.968
199.290	-11.97	-21.164	-33.131	-20.921	2.847	-6.083
199.300	-10.82	-21.118	-31.937	-19.727	2.829	-6.198
199.310	-13.05	-21.111	-34.157	-21.947	2.811	-6.313
199.320	-10.09	-21.090	-31.180	-18.970	2.792	-6.428
199.330	-11.55	-21.075	-32.624	-20.414	2.774	-6.543
199.340	-11.53	-21.052	-32.577	-20.367	2.755	-6.658
199.350	-13.53	-21.018	-34.552	-22.342	2.737	-6.773
199.360	-11.49	-21.022	-32.513	-20.303	2.718	-6.888
199.370	-11.56	-21.009	-32.564	-20.354	2.699	-7.003
199.380	-12.53	-21.005	-33.539	-21.329	2.680	-7.118
199.390	-13.19	-21.002	-34.187	-21.977	2.661	-7.233
199.400	-13.17	-20.988	-34.157	-21.947	2.641	-7.348
199.410	-11.45	-20.983	-32.434	-20.224	2.622	-7.463
199.420	-11.52	-20.982	-32.505	-20.295	2.602	-7.578
199.430	-14.65	-20.985	-35.631	-23.421	2.582	-7.693
199.440	-11.22	-20.998	-32.218	-20.008	2.562	-7.808
199.450	-12.15	-20.998	-33.146	-20.936	2.542	-7.923
199.460	-12.57	-21.004	-33.577	-21.367	2.522	-8.038
199.470	-11.53	-21.022	-32.550	-20.340	2.502	-8.153
199.480	-13.41	-21.030	-34.436	-22.226	2.481	-8.268
199.490	-13.16	-21.048	-34.212	-22.002	2.461	-8.383
199.500	-11.64	-21.055	-32.699	-20.489	2.440	-8.498
199.510	-11.66	-21.068	-32.731	-20.521	2.419	-8.613
199.520	-12.32	-21.072	-33.393	-21.183	2.398	-8.728
199.530	-13.27	-21.093	-34.361	-22.151	2.377	-8.843
199.540	-11.77	-21.111	-32.881	-20.671	2.355	-8.958
199.550	-11.30	-21.139	-32.437	-20.227	2.334	-9.073
199.560	-10.75	-21.160	-31.908	-19.698	2.312	-9.188
199.570	-11.69	-21.183	-32.868	-20.658	2.291	-9.303
199.580	-11.52	-21.198	-32.714	-20.504	2.269	-9.418
199.590	-10.36	-21.227	-31.587	-19.377	2.247	-9.533
199.600	-11.71	-21.244	-32.958	-20.748	2.224	-9.648
199.610	-14.28	-21.283	-35.558	-23.348	2.202	-9.763
199.620	-12.02	-21.311	-33.330	-21.120	2.180	-9.878
199.630	-10.85	-21.338	-32.190	-19.980	2.157	-9.993
199.640	-12.15	-21.374	-33.528	-21.318	2.134	-10.108
199.650	-9.00	-21.391	-30.386	-18.176	2.112	-10.223
199.660	-13.01	-21.427	-34.435	-22.225	2.089	-10.338
199.670	-12.44	-21.448	-33.885	-21.675	2.066	-10.453
199.680	-12.11	-21.488	-33.595	-21.385	2.042	-10.568

199.690	-11.92	-21.508	-33.426	-21.216	2.019	-10.683
199.700	-11.34	-21.542	-32.886	-20.676	1.995	-10.798
199.710	-10.23	-21.573	-31.802	-19.592	1.972	-10.913
199.720	-10.40	-21.621	-32.022	-19.812	1.948	-11.028
199.730	-8.70	-21.657	-30.360	-18.150	1.924	-11.143
199.740	-10.62	-21.704	-32.322	-20.112	1.900	-11.258
199.750	-12.60	-21.726	-34.325	-22.115	1.876	-11.373
199.760	-12.78	-21.772	-34.555	-22.345	1.851	-11.488
199.770	-10.84	-21.806	-32.648	-20.438	1.827	-11.603
199.780	-11.10	-21.846	-32.941	-20.731	1.802	-11.718
199.790	-11.60	-21.885	-33.486	-21.276	1.777	-11.833
199.800	-12.17	-21.921	-34.095	-21.885	1.752	-11.948
199.810	-12.33	-21.972	-34.298	-22.088	1.727	-12.063
199.820	-14.10	-22.011	-36.113	-23.903	1.702	-12.178
199.830	-12.03	-22.048	-34.074	-21.864	1.677	-12.293
199.840	-11.22	-22.079	-33.301	-21.091	1.651	-12.408
199.850	-10.61	-22.122	-32.735	-20.525	1.626	-12.523
199.860	-13.35	-22.162	-35.509	-23.299	1.600	-12.638
199.870	-11.53	-22.215	-33.744	-21.534	1.574	-12.753
199.880	-9.97	-22.259	-32.226	-20.016	1.548	-12.868
199.890	-9.65	-22.291	-31.941	-19.731	1.522	-12.983
199.900	-12.12	-22.328	-34.446	-22.236	1.495	-13.098
199.910	-12.76	-22.368	-35.127	-22.917	1.469	-13.213
199.920	-12.69	-22.422	-35.111	-22.901	1.442	-13.328
199.930	-10.68	-22.480	-33.164	-20.954	1.416	-13.443
199.940	-12.19	-22.515	-34.702	-22.492	1.389	-13.558
199.950	-13.11	-22.568	-35.674	-23.464	1.362	-13.673
199.960	-12.14	-22.606	-34.744	-22.534	1.334	-13.788
199.970	-11.41	-22.643	-34.056	-21.846	1.307	-13.903
199.980	-9.79	-22.687	-32.477	-20.267	1.280	-14.018
199.990	-9.61	-22.728	-32.336	-20.126	1.252	-14.133
200.000	-10.61	-22.782	-33.389	-21.179	1.224	-14.248
200.010	-11.04	-22.831	-33.869	-21.659	1.197	-14.363
200.020	-12.95	-22.868	-35.819	-23.609	1.169	-14.478
200.030	-10.68	-22.914	-33.589	-21.379	1.141	-14.593
200.040	-10.53	-22.966	-33.491	-21.281	1.112	-14.708
200.050	-11.35	-23.006	-34.358	-22.148	1.084	-14.823
200.060	-11.14	-23.068	-34.205	-21.995	1.055	-14.938
200.070	-13.77	-23.095	-36.867	-24.657	1.027	-15.053
200.080	-11.93	-23.152	-35.082	-22.872	0.998	-15.168
200.090	-13.95	-23.206	-37.159	-24.949	0.969	-15.283
200.100	-10.74	-23.255	-33.994	-21.784	0.940	-15.398
200.110	-11.19	-23.298	-34.488	-22.278	0.911	-15.513
200.120	-11.14	-23.343	-34.483	-22.273	0.881	-15.628
200.130	-11.01	-23.381	-34.387	-22.177	0.852	-15.743
200.140	-12.94	-23.445	-36.384	-24.174	0.822	-15.858

200.150	-13.19	-23.506	-36.698	-24.488	0.792	-15.973
200.160	-9.92	-23.547	-33.464	-21.254	0.762	-16.088
200.170	-10.02	-23.591	-33.615	-21.405	0.732	-16.203
200.180	-10.05	-23.651	-33.702	-21.492	0.702	-16.318
200.190	-13.01	-23.682	-36.687	-24.477	0.672	-16.433
200.200	-10.10	-23.726	-33.828	-21.618	0.641	-16.548
200.210	-10.52	-23.784	-34.302	-22.092	0.611	-16.663
200.220	-12.20	-23.844	-36.041	-23.831	0.580	-16.778
200.230	-12.87	-23.885	-36.753	-24.543	0.549	-16.893
200.240	-11.40	-23.934	-35.331	-23.121	0.518	-17.008
200.250	-12.23	-23.998	-36.231	-24.021	0.487	-17.123
200.260	-12.72	-24.039	-36.759	-24.549	0.455	-17.238
200.270	-14.58	-24.086	-38.666	-26.456	0.424	-17.353
200.280	-13.09	-24.129	-37.216	-25.006	0.392	-17.468
200.290	-12.47	-24.189	-36.663	-24.453	0.361	-17.583
200.300	-11.48	-24.245	-35.729	-23.519	0.329	-17.698
200.310	-11.82	-24.291	-36.111	-23.901	0.297	-17.813
200.320	-10.57	-24.349	-34.921	-22.711	0.264	-17.928
200.330	-10.35	-24.384	-34.733	-22.523	0.232	-18.043
200.340	-11.04	-24.433	-35.468	-23.258	0.200	-18.158
200.350	-10.69	-24.476	-35.164	-22.954	0.167	-18.273
200.360	-10.29	-24.541	-34.829	-22.619	0.134	-18.388
200.370	-13.70	-24.592	-38.292	-26.082	0.102	-18.503
200.380	-12.63	-24.643	-37.270	-25.060	0.069	-18.618
200.390	-12.88	-24.692	-37.574	-25.364	0.036	-18.733
200.400	-11.45	-24.749	-36.194	-23.984	0.002	-18.848
200.410	-11.58	-24.797	-36.377	-24.167	-0.031	-18.963
200.420	-11.99	-24.818	-36.811	-24.601	-0.065	-19.078
200.430	-11.39	-24.896	-36.284	-24.074	-0.098	-19.193
200.440	-13.21	-24.938	-38.143	-25.933	-0.132	-19.308
200.450	-13.94	-24.996	-38.934	-26.724	-0.166	-19.423
200.460	-11.06	-25.045	-36.109	-23.899	-0.200	-19.538
200.470	-9.86	-25.096	-34.952	-22.742	-0.234	-19.653
200.480	-13.73	-25.122	-38.847	-26.637	-0.269	-19.768
200.490	-12.91	-25.176	-38.086	-25.876	-0.303	-19.883
200.500	-12.25	-25.251	-37.505	-25.295	-0.338	-19.998
200.510	-11.73	-25.304	-37.030	-24.820	-0.373	-20.113
200.520	-10.55	-25.356	-35.903	-23.693	-0.408	-20.228
200.530	-11.62	-25.404	-37.019	-24.809	-0.443	-20.343
200.540	-11.24	-25.437	-36.675	-24.465	-0.478	-20.458
200.550	-10.50	-25.498	-36.000	-23.790	-0.513	-20.573
200.560	-14.70	-25.566	-40.269	-28.059	-0.549	-20.688
200.570	-12.94	-25.614	-38.549	-26.339	-0.584	-20.803
200.580	-11.27	-25.673	-36.946	-24.736	-0.620	-20.918
200.590	-13.29	-25.706	-38.993	-26.783	-0.656	-21.033
200.600	-12.81	-25.770	-38.575	-26.365	-0.692	-21.148

200.610	-12.66	-25.822	-38.484	-26.274	-0.728	-21.263
200.620	-13.76	-25.882	-39.643	-27.433	-0.765	-21.378
200.630	-13.80	-25.923	-39.723	-27.513	-0.801	-21.493
200.640	-11.87	-25.975	-37.841	-25.631	-0.838	-21.608
200.650	-11.30	-26.042	-37.342	-25.132	-0.874	-21.723
200.660	-11.54	-26.073	-37.612	-25.402	-0.911	-21.838
200.670	-11.23	-26.132	-37.362	-25.152	-0.948	-21.953
200.680	-12.79	-26.193	-38.983	-26.773	-0.986	-22.068
200.690	-11.02	-26.250	-37.274	-25.064	-1.023	-22.183
200.700	-11.13	-26.290	-37.418	-25.208	-1.060	-22.298
200.710	-11.68	-26.349	-38.031	-25.821	-1.098	-22.413
200.720	-11.69	-26.412	-38.103	-25.893	-1.136	-22.528
200.730	-13.58	-26.449	-40.028	-27.818	-1.173	-22.643
200.740	-11.47	-26.501	-37.966	-25.756	-1.211	-22.758
200.750	-12.03	-26.547	-38.577	-26.367	-1.249	-22.873
200.760	-9.49	-26.602	-36.094	-23.884	-1.288	-22.988
200.770	-13.32	-26.665	-39.983	-27.773	-1.326	-23.103
200.780	-10.91	-26.702	-37.611	-25.401	-1.365	-23.218
200.790	-12.90	-26.744	-39.648	-27.438	-1.403	-23.333
200.800	-11.34	-26.815	-38.157	-25.947	-1.442	-23.448
200.810	-12.66	-26.883	-39.544	-27.334	-1.481	-23.563
200.820	-11.27	-26.915	-38.181	-25.971	-1.520	-23.678
200.830	-12.70	-26.958	-39.654	-27.444	-1.559	-23.793
200.840	-10.97	-27.014	-37.983	-25.773	-1.599	-23.908
200.850	-12.05	-27.071	-39.116	-26.906	-1.638	-24.023
200.860	-13.99	-27.136	-41.121	-28.911	-1.678	-24.138
200.870	-12.06	-27.185	-39.248	-27.038	-1.718	-24.253
200.880	-9.99	-27.235	-37.223	-25.013	-1.758	-24.368
200.890	-9.68	-27.275	-36.955	-24.745	-1.798	-24.483
200.900	-12.06	-27.340	-39.404	-27.194	-1.838	-24.598
200.910	-13.47	-27.395	-40.862	-28.652	-1.878	-24.713
200.920	-13.21	-27.446	-40.651	-28.441	-1.919	-24.828
200.930	-12.69	-27.503	-40.191	-27.981	-1.959	-24.943
200.940	-13.08	-27.568	-40.652	-28.442	-2.000	-25.058
200.950	-10.31	-27.601	-37.907	-25.697	-2.041	-25.173
200.960	-10.19	-27.656	-37.845	-25.635	-2.082	-25.288
200.970	-11.77	-27.692	-39.458	-27.248	-2.123	-25.403
200.980	-12.55	-27.757	-40.303	-28.093	-2.165	-25.518
200.990	-11.64	-27.824	-39.464	-27.254	-2.206	-25.633
201.000	-11.42	-27.860	-39.280	-27.070	-2.248	-25.998
201.010	-11.46	-27.921	-39.378	-27.168	-2.289	-25.998
201.020	-11.93	-27.971	-39.900	-27.690	-2.331	-25.998
201.030	-13.62	-28.040	-41.658	-29.448	-2.373	-25.998
201.040	-13.68	-28.076	-41.751	-29.541	-2.416	-25.998
201.050	-11.85	-28.139	-39.985	-27.775	-2.458	-25.998
201.060	-14.32	-28.190	-42.512	-30.302	-2.500	-25.998

201.070	-12.43	-28.232	-40.659	-28.449	-2.543	-25.998
201.080	-13.98	-28.277	-42.261	-30.051	-2.586	-25.998
201.090	-13.36	-28.346	-41.709	-29.499	-2.628	-25.998
201.100	-12.40	-28.386	-40.790	-28.580	-2.671	-25.998
201.110	-12.36	-28.445	-40.807	-28.597	-2.714	-25.998
201.120	-11.01	-28.480	-39.487	-27.277	-2.758	-25.998
201.130	-12.40	-28.548	-40.946	-28.736	-2.801	-25.998
201.140	-11.64	-28.606	-40.249	-28.039	-2.845	-25.998
201.150	-12.64	-28.655	-41.294	-29.084	-2.888	-25.998
201.160	-12.76	-28.700	-41.459	-29.249	-2.932	-25.998
201.170	-13.80	-28.763	-42.565	-30.355	-2.976	-25.998
201.180	-11.75	-28.812	-40.566	-28.356	-3.020	-25.998
201.190	-13.90	-28.875	-42.778	-30.568	-3.064	-25.998
201.200	-12.68	-28.926	-41.610	-29.400	-3.109	-25.998
201.210	-10.02	-28.973	-38.991	-26.781	-3.153	-25.998
201.220	-12.70	-29.015	-41.719	-29.509	-3.198	-25.998
201.230	-11.69	-29.055	-40.741	-28.531	-3.243	-25.998
201.240	-12.70	-29.126	-41.829	-29.619	-3.288	-25.998
201.250	-11.95	-29.175	-41.127	-28.917	-3.333	-25.998
201.260	-12.48	-29.235	-41.719	-29.509	-3.378	-25.998
201.270	-12.59	-29.275	-41.863	-29.653	-3.423	-25.998
201.280	-10.12	-29.314	-39.432	-27.222	-3.469	-25.998
201.290	-13.46	-29.371	-42.830	-30.620	-3.514	-25.998
201.300	-12.26	-29.403	-41.661	-29.451	-3.560	-25.998
201.310	-10.79	-29.454	-40.247	-28.037	-3.606	-25.998
201.320	-10.89	-29.535	-40.428	-28.218	-3.652	-25.998
201.330	-11.92	-29.580	-41.497	-29.287	-3.698	-25.998
201.340	-11.74	-29.633	-41.376	-29.166	-3.745	-25.998
201.350	-12.75	-29.664	-42.417	-30.207	-3.791	-25.998
201.360	-12.45	-29.704	-42.153	-29.943	-3.838	-25.998
201.370	-12.91	-29.768	-42.680	-30.470	-3.884	-25.998
201.380	-12.66	-29.833	-42.488	-30.278	-3.931	-25.998
201.390	-12.88	-29.891	-42.766	-30.556	-3.978	-25.998
201.400	-13.84	-29.927	-43.763	-31.553	-4.026	-25.998
201.410	-13.40	-29.956	-43.356	-31.146	-4.073	-25.998
201.420	-15.25	-30.015	-45.267	-33.057	-4.120	-25.998
201.430	-13.30	-30.083	-43.383	-31.173	-4.168	-25.998
201.440	-14.11	-30.121	-44.231	-32.021	-4.216	-25.998
201.450	-11.12	-30.170	-41.288	-29.078	-4.263	-25.998
201.460	-12.14	-30.238	-42.374	-30.164	-4.311	-25.998
201.470	-11.49	-30.263	-41.751	-29.541	-4.359	-25.998
201.480	-11.83	-30.327	-42.159	-29.949	-4.408	-25.998
201.490	-14.07	-30.382	-44.453	-32.243	-4.456	-25.998
201.500	-13.91	-30.413	-44.327	-32.117	-4.505	-25.998
201.510	-13.29	-30.453	-43.739	-31.529	-4.553	-25.998
201.520	-11.40	-30.511	-41.912	-29.702	-4.602	-25.998

201.530	-12.76	-30.577	-43.338	-31.128	-4.651	-25.998
201.540	-13.17	-30.597	-43.766	-31.556	-4.700	-25.998
201.550	-14.69	-30.680	-45.370	-33.160	-4.749	-25.998
201.560	-15.37	-30.742	-46.110	-33.900	-4.799	-25.998
201.570	-11.95	-30.768	-42.718	-30.508	-4.848	-25.998
201.580	-13.03	-30.811	-43.838	-31.628	-4.898	-25.998
201.590	-13.84	-30.882	-44.719	-32.509	-4.948	-25.998
201.600	-14.48	-30.922	-45.401	-33.191	-4.998	-25.998
201.610	-12.76	-30.978	-43.734	-31.524	-5.048	-25.998
201.620	-13.09	-31.026	-44.115	-31.905	-5.098	-25.998
201.630	-12.46	-31.078	-43.537	-31.327	-5.148	-25.998
201.640	-12.70	-31.116	-43.813	-31.603	-5.199	-25.998
201.650	-10.88	-31.191	-42.070	-29.860	-5.249	-25.998
201.660	-11.24	-31.246	-42.490	-30.280	-5.300	-25.998
201.670	-10.95	-31.292	-42.241	-30.031	-5.351	-25.998
201.680	-13.09	-31.329	-44.415	-32.205	-5.402	-25.998
201.690	-13.83	-31.349	-45.177	-32.967	-5.453	-25.998
201.700	-14.62	-31.419	-46.037	-33.827	-5.505	-25.998
201.710	-11.99	-31.478	-43.471	-31.261	-5.556	-25.998
201.720	-11.54	-31.509	-43.049	-30.839	-5.608	-25.998
201.730	-13.14	-31.550	-44.688	-32.478	-5.659	-25.998
201.740	-13.01	-31.634	-44.648	-32.438	-5.711	-25.998
201.750	-13.16	-31.659	-44.821	-32.611	-5.763	-25.998
201.760	-14.39	-31.719	-46.104	-33.894	-5.816	-25.998
201.770	-11.48	-31.763	-43.241	-31.031	-5.868	-25.998
201.780	-14.14	-31.815	-45.953	-33.743	-5.920	-25.998
201.790	-15.07	-31.854	-46.926	-34.716	-5.973	-25.998
201.800	-11.79	-31.886	-43.673	-31.463	-6.026	-25.998
201.810	-12.47	-31.939	-44.411	-32.201	-6.078	-25.998
201.820	-13.14	-32.001	-45.141	-32.931	-6.131	-25.998
201.830	-13.98	-32.073	-46.056	-33.846	-6.184	-25.998
201.840	-14.79	-32.120	-46.909	-34.699	-6.238	-25.998
201.850	-11.75	-32.153	-43.902	-31.692	-6.291	-25.998
201.860	-11.94	-32.197	-44.138	-31.928	-6.345	-25.998
201.870	-12.31	-32.242	-44.553	-32.343	-6.398	-25.998
201.880	-13.16	-32.288	-45.448	-33.238	-6.452	-25.998
201.890	-14.41	-32.333	-46.744	-34.534	-6.506	-25.998
201.900	-13.13	-32.382	-45.513	-33.303	-6.560	-25.998
201.910	-13.04	-32.431	-45.468	-33.258	-6.614	-25.998
201.920	-12.40	-32.507	-44.902	-32.692	-6.669	-25.998
201.930	-15.43	-32.546	-47.972	-35.762	-6.723	-25.998
201.940	-12.22	-32.609	-44.833	-32.623	-6.778	-25.998
201.950	-12.95	-32.627	-45.578	-33.368	-6.833	-25.998
201.960	-13.54	-32.676	-46.212	-34.002	-6.888	-25.998
201.970	-13.22	-32.740	-45.962	-33.752	-6.943	-25.998
201.980	-10.81	-32.780	-43.586	-31.376	-6.998	-25.998

201.990	-13.50	-32.835	-46.331	-34.121	-7.053	-25.998
202.000	-13.11	-32.859	-45.971	-33.761	-7.109	-25.998
202.010	-13.36	-32.921	-46.283	-34.073	-7.164	-25.998
202.020	-13.90	-32.983	-46.883	-34.673	-7.220	-25.998
202.030	-12.29	-33.018	-45.306	-33.096	-7.276	-25.998
202.040	-14.40	-33.076	-47.477	-35.267	-7.332	-25.998
202.050	-12.21	-33.137	-45.344	-33.134	-7.388	-25.998
202.060	-13.09	-33.169	-46.262	-34.052	-7.445	-25.998
202.070	-13.84	-33.196	-47.040	-34.830	-7.501	-25.998
202.080	-14.38	-33.227	-47.605	-35.395	-7.558	-25.998
202.090	-13.48	-33.288	-46.769	-34.559	-7.614	-25.998
202.100	-12.30	-33.374	-45.672	-33.462	-7.671	-25.998
202.110	-14.11	-33.416	-47.524	-35.314	-7.728	-25.998
202.120	-14.13	-33.441	-47.572	-35.362	-7.786	-25.998
202.130	-12.54	-33.471	-46.014	-33.804	-7.843	-25.998
202.140	-14.46	-33.510	-47.966	-35.756	-7.900	-25.998
202.150	-14.95	-33.588	-48.538	-36.328	-7.958	-25.998
202.160	-12.94	-33.645	-46.584	-34.374	-8.016	-25.998
202.170	-14.44	-33.661	-48.097	-35.887	-8.073	-25.998
202.180	-14.40	-33.727	-48.122	-35.912	-8.131	-25.998
202.190	-14.12	-33.773	-47.890	-35.680	-8.189	-25.998
202.200	-13.59	-33.802	-47.393	-35.183	-8.248	-25.998
202.210	-14.63	-33.858	-48.484	-36.274	-8.306	-25.998
202.220	-14.25	-33.912	-48.161	-35.951	-8.365	-25.998
202.230	-14.07	-33.951	-48.018	-35.808	-8.423	-25.998
202.240	-12.75	-33.995	-46.749	-34.539	-8.482	-25.998
202.250	-13.11	-34.033	-47.142	-34.932	-8.541	-25.998
202.260	-12.25	-34.087	-46.334	-34.124	-8.600	-25.998
202.270	-13.19	-34.139	-47.326	-35.116	-8.659	-25.998
202.280	-13.01	-34.175	-47.183	-34.973	-8.719	-25.998
202.290	-15.16	-34.240	-49.396	-37.186	-8.778	-25.998
202.300	-14.27	-34.276	-48.545	-36.335	-8.838	-25.998
202.310	-13.52	-34.311	-47.827	-35.617	-8.898	-25.998
202.320	-14.67	-34.375	-49.047	-36.837	-8.958	-25.998
202.330	-12.60	-34.438	-47.038	-34.828	-9.018	-25.998
202.340	-14.02	-34.461	-48.478	-36.268	-9.078	-25.998
202.350	-14.60	-34.509	-49.108	-36.898	-9.138	-25.998
202.360	-13.62	-34.577	-48.194	-35.984	-9.199	-25.998
202.370	-13.94	-34.620	-48.564	-36.354	-9.259	-25.998
202.380	-15.90	-34.683	-50.582	-38.372	-9.320	-25.998
202.390	-15.96	-34.746	-50.701	-38.491	-9.381	-25.998
202.400	-14.78	-34.768	-49.551	-37.341	-9.442	-25.998
202.410	-13.44	-34.801	-48.245	-36.035	-9.503	-25.998
202.420	-15.05	-34.855	-49.909	-37.699	-9.565	-25.998
202.430	-14.61	-34.887	-49.495	-37.285	-9.626	-25.998
202.440	-15.12	-34.958	-50.078	-37.868	-9.688	-25.998

202.450	-13.11	-34.991	-48.096	-35.886	-9.749	-25.998
202.460	-13.47	-35.049	-48.518	-36.308	-9.811	-25.998
202.470	-12.73	-35.089	-47.820	-35.610	-9.873	-25.998
202.480	-14.89	-35.125	-50.019	-37.809	-9.936	-25.998
202.490	-14.09	-35.152	-49.240	-37.030	-9.998	-25.998
202.500	-14.47	-35.203	-49.677	-37.467	-10.060	-25.998
202.510	-15.28	-35.240	-50.517	-38.307	-10.123	-25.998
202.520	-14.68	-35.309	-49.988	-37.778	-10.186	-25.998
202.530	-15.13	-35.356	-50.484	-38.274	-10.248	-25.998
202.540	-14.24	-35.414	-49.651	-37.441	-10.311	-25.998
202.550	-12.92	-35.448	-48.371	-36.161	-10.374	-25.998
202.560	-17.25	-35.496	-52.747	-40.537	-10.438	-25.998
202.570	-16.91	-35.557	-52.465	-40.255	-10.501	-25.998
202.580	-15.75	-35.578	-51.325	-39.115	-10.565	-25.998
202.590	-15.26	-35.623	-50.878	-38.668	-10.628	-25.998
202.600	-14.62	-35.656	-50.279	-38.069	-10.692	-25.998
202.610	-14.78	-35.699	-50.479	-38.269	-10.756	-25.998
202.620	-12.89	-35.724	-48.610	-36.400	-10.820	-25.998
202.630	-13.81	-35.793	-49.601	-37.391	-10.884	-25.998
202.640	-16.65	-35.849	-52.503	-40.293	-10.949	-25.998
202.650	-15.12	-35.896	-51.020	-38.810	-11.013	-25.998
202.660	-14.44	-35.934	-50.370	-38.160	-11.078	-25.998
202.670	-14.75	-35.987	-50.737	-38.527	-11.143	-25.998
202.680	-13.26	-36.018	-49.276	-37.066	-11.208	-25.998
202.690	-15.52	-36.053	-51.574	-39.364	-11.273	-25.998
202.700	-15.83	-36.123	-51.949	-39.739	-11.338	-25.998
202.710	-14.69	-36.146	-50.838	-38.628	-11.403	-25.998
202.720	-15.32	-36.208	-51.529	-39.319	-11.469	-25.998
202.730	-12.60	-36.258	-48.858	-36.648	-11.534	-25.998
202.740	-17.63	-36.290	-53.916	-41.706	-11.600	-25.998
202.750	-14.50	-36.331	-50.829	-38.619	-11.666	-25.998
202.760	-14.12	-36.390	-50.513	-38.303	-11.732	-25.998
202.770	-15.81	-36.438	-52.245	-40.035	-11.798	-25.998
202.780	-14.64	-36.488	-51.126	-38.916	-11.865	-25.998
202.790	-14.77	-36.521	-51.293	-39.083	-11.931	-25.998
202.800	-13.74	-36.563	-50.306	-38.096	-11.998	-25.998
202.810	-13.95	-36.618	-50.569	-38.359	-12.064	-25.998
202.820	-15.65	-36.625	-52.271	-40.061	-12.131	-25.998
202.830	-13.41	-36.707	-50.121	-37.911	-12.198	-25.998
202.840	-15.91	-36.727	-52.639	-40.429	-12.266	-25.998
202.850	-14.68	-36.777	-51.458	-39.248	-12.333	-25.998
202.860	-14.42	-36.859	-51.282	-39.072	-12.400	-25.998
202.870	-15.49	-36.859	-52.345	-40.135	-12.468	-25.998
202.880	-17.19	-36.902	-54.091	-41.881	-12.536	-25.998
202.890	-17.57	-36.959	-54.531	-42.321	-12.603	-25.998
202.900	-16.21	-36.996	-53.207	-40.997	-12.671	-25.998

202.910	-15.79	-37.028	-52.814	-40.604	-12.739	-25.998
202.920	-15.92	-37.143	-53.058	-40.848	-12.808	-25.998
202.930	-13.88	-37.138	-51.014	-38.804	-12.876	-25.998
202.940	-17.91	-37.174	-55.079	-42.869	-12.945	-25.998
202.950	-15.34	-37.216	-52.556	-40.346	-13.013	-25.998
202.960	-15.54	-37.289	-52.832	-40.622	-13.082	-25.998
202.970	-13.21	-37.302	-50.509	-38.299	-13.151	-25.998
202.980	-14.26	-37.369	-51.632	-39.422	-13.220	-25.998
202.990	-15.64	-37.389	-53.028	-40.818	-13.289	-25.998
203.000	-13.98	-37.470	-51.450	-39.240	-13.359	-25.998
203.010	-15.55	-37.491	-53.036	-40.826	-13.428	-25.998
203.020	-15.96	-37.511	-53.468	-41.258	-13.498	-25.998
203.030	-14.50	-37.596	-52.098	-39.888	-13.568	-25.998
203.040	-15.43	-37.591	-53.022	-40.812	-13.638	-25.998
203.050	-13.71	-37.642	-51.348	-39.138	-13.708	-25.998
203.060	-11.72	-37.714	-49.438	-37.228	-13.778	-25.998
203.070	-11.78	-37.751	-49.527	-37.317	-13.848	-25.998
203.080	-13.30	-37.765	-51.069	-38.859	-13.919	-25.998
203.090	-14.31	-37.825	-52.139	-39.929	-13.989	-25.998
203.100	-15.84	-37.872	-53.711	-41.501	-14.060	-25.998
203.110	-15.02	-37.930	-52.946	-40.736	-14.131	-25.998
203.120	-16.56	-37.984	-54.542	-42.332	-14.202	-25.998
203.130	-16.99	-38.007	-55.000	-42.790	-14.273	-25.998
203.140	-16.15	-38.053	-54.198	-41.988	-14.345	-25.998
203.150	-16.99	-38.108	-55.098	-42.888	-14.416	-25.998
203.160	-15.66	-38.124	-53.788	-41.578	-14.488	-25.998
203.170	-18.27	-38.165	-56.436	-44.226	-14.559	-25.998
203.180	-15.35	-38.196	-53.541	-41.331	-14.631	-25.998
203.190	-18.04	-38.224	-56.266	-44.056	-14.703	-25.998
203.200	-15.23	-38.298	-53.532	-41.322	-14.776	-25.998
203.210	-16.44	-38.364	-54.801	-42.591	-14.848	-25.998
203.220	-16.30	-38.377	-54.673	-42.463	-14.920	-25.998
203.230	-16.67	-38.408	-55.082	-42.872	-14.993	-25.998
203.240	-17.03	-38.455	-55.487	-43.277	-15.066	-25.998
203.250	-15.84	-38.487	-54.324	-42.114	-15.138	-25.998
203.260	-14.92	-38.541	-53.458	-41.248	-15.211	-25.998
203.270	-15.26	-38.539	-53.801	-41.591	-15.284	-25.998
203.280	-15.74	-38.649	-54.388	-42.178	-15.358	-25.998
203.290	-18.40	-38.711	-57.113	-44.903	-15.431	-25.998
203.300	-16.90	-38.728	-55.632	-43.422	-15.505	-25.998
203.310	-16.08	-38.791	-54.875	-42.665	-15.578	-25.998
203.320	-18.42	-38.819	-57.242	-45.032	-15.652	-25.998
203.330	-16.55	-38.824	-55.369	-43.159	-15.726	-25.998
203.340	-17.70	-38.904	-56.608	-44.398	-15.800	-25.998
203.350	-15.47	-38.939	-54.407	-42.197	-15.874	-25.998
203.360	-15.86	-38.972	-54.828	-42.618	-15.949	-25.998

203.370	-16.15	-39.007	-55.158	-42.948	-16.023	-25.998
203.380	-15.04	-39.059	-54.097	-41.887	-16.098	-25.998
203.390	-14.29	-39.065	-53.351	-41.141	-16.173	-25.998
203.400	-18.64	-39.135	-57.771	-45.561	-16.248	-25.998
203.410	-14.87	-39.147	-54.013	-41.803	-16.323	-25.998
203.420	-18.02	-39.250	-57.274	-45.064	-16.398	-25.998
203.430	-16.51	-39.277	-55.786	-43.576	-16.473	-25.998
203.440	-17.86	-39.306	-57.163	-44.953	-16.549	-25.998
203.450	-17.30	-39.345	-56.644	-44.434	-16.624	-25.998
203.460	-16.12	-39.421	-55.543	-43.333	-16.700	-25.998
203.470	-13.43	-39.418	-52.843	-40.633	-16.776	-25.998
203.480	-16.85	-39.474	-56.328	-44.118	-16.852	-25.998
203.490	-15.22	-39.531	-54.749	-42.539	-16.928	-25.998
203.500	-15.34	-39.559	-54.902	-42.692	-17.005	-25.998
203.510	-18.95	-39.603	-58.555	-46.345	-17.081	-25.998
203.520	-16.25	-39.615	-55.868	-43.658	-17.158	-25.998
203.530	-16.89	-39.692	-56.586	-44.376	-17.234	-25.998
203.540	-15.80	-39.699	-55.496	-43.286	-17.311	-25.998
203.550	-17.10	-39.734	-56.833	-44.623	-17.388	-25.998
203.560	-15.51	-39.766	-55.279	-43.069	-17.466	-25.998
203.570	-17.23	-39.835	-57.061	-44.851	-17.543	-25.998
203.580	-16.63	-39.898	-56.527	-44.317	-17.620	-25.998
203.590	-16.57	-39.904	-56.475	-44.265	-17.698	-25.998
203.600	-15.60	-39.963	-55.560	-43.350	-17.776	-25.998
203.610	-15.84	-40.002	-55.838	-43.628	-17.853	-25.998
203.620	-16.28	-40.036	-56.318	-44.108	-17.931	-25.998
203.630	-18.93	-40.046	-58.978	-46.768	-18.009	-25.998
203.640	-16.03	-40.159	-56.188	-43.978	-18.088	-25.998
203.650	-18.59	-40.110	-58.704	-46.494	-18.166	-25.998
203.660	-16.30	-40.171	-56.469	-44.259	-18.245	-25.998
203.670	-18.45	-40.196	-58.644	-46.434	-18.323	-25.998
203.680	-16.09	-40.286	-56.374	-44.164	-18.402	-25.998
203.690	-15.69	-40.279	-55.969	-43.759	-18.481	-25.998
203.700	-16.59	-40.356	-56.945	-44.735	-18.560	-25.998
203.710	-16.10	-40.435	-56.538	-44.328	-18.639	-25.998
203.720	-15.64	-40.448	-56.088	-43.878	-18.719	-25.998
203.730	-17.91	-40.475	-58.384	-46.174	-18.798	-25.998
203.740	-18.19	-40.511	-58.697	-46.487	-18.878	-25.998
203.750	-18.55	-40.602	-59.156	-46.946	-18.958	-25.998
203.760	-17.27	-40.680	-57.949	-45.739	-19.038	-25.998
203.770	-16.44	-40.679	-57.123	-44.913	-19.118	-25.998
203.780	-14.95	-40.658	-55.605	-43.395	-19.198	-25.998
203.790	-16.52	-40.728	-57.248	-45.038	-19.278	-25.998
203.800	-14.82	-40.694	-55.517	-43.307	-19.359	-25.998
203.810	-18.99	-40.762	-59.756	-47.546	-19.439	-25.998
203.820	-16.50	-40.863	-57.360	-45.150	-19.520	-25.998

203.830	-17.68	-40.922	-58.604	-46.394	-19.601	-25.998
203.840	-16.29	-40.932	-57.223	-45.013	-19.682	-25.998
203.850	-17.36	-40.955	-58.310	-46.100	-19.763	-25.998
203.860	-17.72	-40.986	-58.708	-46.498	-19.845	-25.998
203.870	-17.13	-41.079	-58.213	-46.003	-19.926	-25.998
203.880	-16.68	-41.088	-57.767	-45.557	-20.008	-25.998
203.890	-17.12	-41.171	-58.291	-46.081	-20.089	-25.998
203.900	-15.61	-41.214	-56.826	-44.616	-20.171	-25.998
203.910	-15.58	-41.145	-56.721	-44.511	-20.253	-25.998
203.920	-18.03	-41.281	-59.306	-47.096	-20.336	-25.998
203.930	-14.56	-41.312	-55.871	-43.661	-20.418	-25.998
203.940	-17.29	-41.374	-58.667	-46.457	-20.500	-25.998
203.950	-19.12	-41.356	-60.478	-48.268	-20.583	-25.998
203.960	-18.83	-41.404	-60.237	-48.027	-20.666	-25.998
203.970	-17.91	-41.465	-59.370	-47.160	-20.748	-25.998
203.980	-18.42	-41.503	-59.918	-47.708	-20.831	-25.998
203.990	-16.36	-41.557	-57.921	-45.711	-20.914	-25.998
204.000	-18.59	-41.607	-60.198	-47.988	-20.998	-25.998
204.010	-18.69	-41.591	-60.276	-48.066	-20.998	-25.998
204.020	-17.25	-41.637	-58.885	-46.675	-20.998	-25.998
204.030	-19.12	-41.665	-60.787	-48.577	-20.998	-25.998
204.040	-18.43	-41.724	-60.150	-47.940	-20.998	-25.998
204.050	-17.96	-41.795	-59.756	-47.546	-20.998	-25.998
204.060	-16.29	-41.810	-58.097	-45.887	-20.998	-25.998
204.070	-17.23	-41.832	-59.061	-46.851	-20.998	-25.998
204.080	-16.77	-41.875	-58.645	-46.435	-20.998	-25.998
204.090	-15.78	-41.927	-57.705	-45.495	-20.998	-25.998
204.100	-18.21	-41.970	-60.183	-47.973	-20.998	-25.998
204.110	-18.26	-41.952	-60.213	-48.003	-20.998	-25.998
204.120	-17.80	-41.984	-59.783	-47.573	-20.998	-25.998
204.130	-17.35	-42.070	-59.418	-47.208	-20.998	-25.998
204.140	-17.06	-42.120	-59.177	-46.967	-20.998	-25.998
204.150	-17.08	-42.140	-59.219	-47.009	-20.998	-25.998
204.160	-16.18	-42.163	-58.346	-46.136	-20.998	-25.998
204.170	-17.48	-42.212	-59.690	-47.480	-20.998	-25.998
204.180	-18.15	-42.285	-60.435	-48.225	-20.998	-25.998
204.190	-18.12	-42.314	-60.429	-48.219	-20.998	-25.998
204.200	-17.37	-42.345	-59.713	-47.503	-20.998	-25.998
204.210	-18.13	-42.312	-60.438	-48.228	-20.998	-25.998
204.220	-18.94	-42.388	-61.327	-49.117	-20.998	-25.998
204.230	-18.72	-42.490	-61.213	-49.003	-20.998	-25.998
204.240	-18.98	-42.504	-61.485	-49.275	-20.998	-25.998
204.250	-17.65	-42.593	-60.242	-48.032	-20.998	-25.998
204.260	-19.01	-42.628	-61.642	-49.432	-20.998	-25.998
204.270	-17.22	-42.659	-59.875	-47.665	-20.998	-25.998
204.280	-19.52	-42.668	-62.187	-49.977	-20.998	-25.998

204.290	-17.73	-42.735	-60.464	-48.254	-20.998	-25.998
204.300	-22.06	-42.728	-64.789	-52.579	-20.998	-25.998
204.310	-20.80	-42.712	-63.510	-51.300	-20.998	-25.998
204.320	-17.57	-42.772	-60.342	-48.132	-20.998	-25.998
204.330	-19.43	-42.819	-62.249	-50.039	-20.998	-25.998
204.340	-17.65	-42.886	-60.535	-48.325	-20.998	-25.998
204.350	-16.99	-42.894	-59.888	-47.678	-20.998	-25.998
204.360	-18.47	-42.943	-61.409	-49.199	-20.998	-25.998
204.370	-16.49	-42.992	-59.481	-47.271	-20.998	-25.998
204.380	-18.22	-43.036	-61.259	-49.049	-20.998	-25.998
204.390	-17.47	-43.057	-60.522	-48.312	-20.998	-25.998
204.400	-17.74	-43.040	-60.781	-48.571	-20.998	-25.998
204.410	-18.06	-43.149	-61.205	-48.995	-20.998	-25.998
204.420	-16.85	-43.151	-60.000	-47.790	-20.998	-25.998
204.430	-18.80	-43.183	-61.984	-49.774	-20.998	-25.998
204.440	-18.91	-43.260	-62.171	-49.961	-20.998	-25.998
204.450	-15.44	-43.284	-58.725	-46.515	-20.998	-25.998
204.460	-16.60	-43.318	-59.917	-47.707	-20.998	-25.998
204.470	-17.53	-43.332	-60.866	-48.656	-20.998	-25.998
204.480	-17.12	-43.446	-60.570	-48.360	-20.998	-25.998
204.490	-19.56	-43.510	-63.071	-50.861	-20.998	-25.998
204.500	-17.86	-43.529	-61.389	-49.179	-20.998	-25.998
204.510	-19.28	-43.469	-62.748	-50.538	-20.998	-25.998
204.520	-18.49	-43.528	-62.019	-49.809	-20.998	-25.998
204.530	-20.06	-43.582	-63.641	-51.431	-20.998	-25.998
204.540	-18.12	-43.660	-61.779	-49.569	-20.998	-25.998
204.550	-18.02	-43.649	-61.667	-49.457	-20.998	-25.998
204.560	-19.61	-43.717	-63.331	-51.121	-20.998	-25.998
204.570	-17.35	-43.770	-61.119	-48.909	-20.998	-25.998
204.580	-19.27	-43.764	-63.034	-50.824	-20.998	-25.998
204.590	-15.58	-43.794	-59.369	-47.159	-20.998	-25.998
204.600	-17.68	-43.828	-61.503	-49.293	-20.998	-25.998
204.610	-17.95	-43.898	-61.847	-49.637	-20.998	-25.998
204.620	-18.09	-43.949	-62.036	-49.826	-20.998	-25.998
204.630	-18.09	-43.938	-62.026	-49.816	-20.998	-25.998
204.640	-17.72	-43.970	-61.688	-49.478	-20.998	-25.998
204.650	-20.93	-44.089	-65.015	-52.805	-20.998	-25.998
204.660	-17.95	-44.089	-62.036	-49.826	-20.998	-25.998
204.670	-17.84	-44.088	-61.928	-49.718	-20.998	-25.998
204.680	-17.56	-44.170	-61.734	-49.524	-20.998	-25.998
204.690	-17.53	-44.193	-61.720	-49.510	-20.998	-25.998
204.700	-18.36	-44.183	-62.546	-50.336	-20.998	-25.998
204.710	-17.92	-44.207	-62.131	-49.921	-20.998	-25.998
204.720	-16.78	-44.273	-61.049	-48.839	-20.998	-25.998
204.730	-21.35	-44.324	-65.674	-53.464	-20.998	-25.998
204.740	-18.15	-44.370	-62.516	-50.306	-20.998	-25.998

204.750	-19.67	-44.404	-64.071	-51.861	-20.998	-25.998
204.760	-18.30	-44.491	-62.795	-50.585	-20.998	-25.998
204.770	-18.99	-44.444	-63.434	-51.224	-20.998	-25.998
204.780	-18.90	-44.520	-63.418	-51.208	-20.998	-25.998
204.790	-19.31	-44.532	-63.845	-51.635	-20.998	-25.998
204.800	-19.42	-44.539	-63.963	-51.753	-20.998	-25.998
204.810	-19.46	-44.725	-64.187	-51.977	-20.998	-25.998
204.820	-19.18	-44.707	-63.887	-51.677	-20.998	-25.998
204.830	-17.70	-44.661	-62.357	-50.147	-20.998	-25.998
204.840	-21.21	-44.752	-65.957	-53.747	-20.998	-25.998
204.850	-22.84	-44.888	-67.723	-55.513	-20.998	-25.998
204.860	-18.94	-44.800	-63.736	-51.526	-20.998	-25.998
204.870	-21.76	-44.850	-66.611	-54.401	-20.998	-25.998
204.880	-17.35	-44.969	-62.318	-50.108	-20.998	-25.998
204.890	-19.85	-44.910	-64.764	-52.554	-20.998	-25.998
204.900	-19.62	-44.891	-64.512	-52.302	-20.998	-25.998
204.910	-18.57	-45.046	-63.612	-51.402	-20.998	-25.998
204.920	-17.99	-45.045	-63.036	-50.826	-20.998	-25.998
204.930	-20.70	-45.112	-65.808	-53.598	-20.998	-25.998
204.940	-19.33	-45.210	-64.542	-52.332	-20.998	-25.998
204.950	-18.63	-45.193	-63.825	-51.615	-20.998	-25.998
204.960	-19.59	-45.206	-64.793	-52.583	-20.998	-25.998
204.970	-18.50	-45.297	-63.798	-51.588	-20.998	-25.998
204.980	-19.22	-45.266	-64.484	-52.274	-20.998	-25.998
204.990	-19.88	-45.313	-65.193	-52.983	-20.998	-25.998
205.000	-20.32	-45.328	-65.643	-53.433	-20.998	-25.998
205.010	-21.33	-45.394	-66.725	-54.515	-20.998	-25.998
205.020	-18.72	-45.437	-64.155	-51.945	-20.998	-25.998
205.030	-18.24	-45.341	-63.576	-51.366	-20.998	-25.998
205.040	-17.96	-45.440	-63.398	-51.188	-20.998	-25.998
205.050	-18.80	-45.495	-64.293	-52.083	-20.998	-25.998
205.060	-18.71	-45.531	-64.242	-52.032	-20.998	-25.998
205.070	-18.91	-45.521	-64.428	-52.218	-20.998	-25.998
205.080	-20.77	-45.656	-66.429	-54.219	-20.998	-25.998
205.090	-20.39	-45.622	-66.007	-53.797	-20.998	-25.998
205.100	-19.02	-45.668	-64.689	-52.479	-20.998	-25.998
205.110	-19.06	-45.719	-64.775	-52.565	-20.998	-25.998
205.120	-20.82	-45.724	-66.544	-54.334	-20.998	-25.998
205.130	-21.25	-45.767	-67.012	-54.802	-20.998	-25.998
205.140	-23.29	-45.790	-69.082	-56.872	-20.998	-25.998
205.150	-20.25	-45.879	-66.124	-53.914	-20.998	-25.998
205.160	-19.94	-45.869	-65.811	-53.601	-20.998	-25.998
205.170	-18.89	-45.873	-64.762	-52.552	-20.998	-25.998
205.180	-18.94	-45.990	-64.933	-52.723	-20.998	-25.998
205.190	-22.09	-46.030	-68.123	-55.913	-20.998	-25.998
205.200	-21.28	-46.003	-67.283	-55.073	-20.998	-25.998

205.210	-18.99	-46.074	-65.061	-52.851	-20.998	-25.998
205.220	-18.89	-46.140	-65.034	-52.824	-20.998	-25.998
205.230	-18.37	-46.173	-64.547	-52.337	-20.998	-25.998
205.240	-21.37	-46.141	-67.514	-55.304	-20.998	-25.998
205.250	-21.14	-46.092	-67.230	-55.020	-20.998	-25.998
205.260	-20.73	-46.110	-66.835	-54.625	-20.998	-25.998
205.270	-19.72	-46.241	-65.962	-53.752	-20.998	-25.998
205.280	-19.53	-46.266	-65.792	-53.582	-20.998	-25.998
205.290	-19.01	-46.346	-65.351	-53.141	-20.998	-25.998
205.300	-17.92	-46.384	-64.306	-52.096	-20.998	-25.998
205.310	-21.75	-46.480	-68.226	-56.016	-20.998	-25.998
205.320	-21.00	-46.430	-67.428	-55.218	-20.998	-25.998
205.330	-19.97	-46.493	-66.466	-54.256	-20.998	-25.998
205.340	-21.16	-46.541	-67.702	-55.492	-20.998	-25.998
205.350	-21.24	-46.594	-67.838	-55.628	-20.998	-25.998
205.360	-19.46	-46.495	-65.957	-53.747	-20.998	-25.998
205.370	-20.15	-46.627	-66.774	-54.564	-20.998	-25.998
205.380	-19.63	-46.721	-66.346	-54.136	-20.998	-25.998
205.390	-18.25	-46.648	-64.902	-52.692	-20.998	-25.998
205.400	-19.45	-46.694	-66.148	-53.938	-20.998	-25.998
205.410	-20.16	-46.735	-66.899	-54.689	-20.998	-25.998
205.420	-21.87	-46.845	-68.711	-56.501	-20.998	-25.998
205.430	-20.46	-46.844	-67.303	-55.093	-20.998	-25.998
205.440	-20.46	-46.912	-67.369	-55.159	-20.998	-25.998
205.450	-19.97	-46.878	-66.848	-54.638	-20.998	-25.998
205.460	-20.96	-47.000	-67.964	-55.754	-20.998	-25.998
205.470	-20.88	-46.999	-67.878	-55.668	-20.998	-25.998
205.480	-20.08	-46.999	-67.079	-54.869	-20.998	-25.998
205.490	-21.79	-47.004	-68.796	-56.586	-20.998	-25.998
205.500	-20.45	-47.107	-67.559	-55.349	-20.998	-25.998
205.510	-20.74	-47.103	-67.843	-55.633	-20.998	-25.998
205.520	-20.18	-47.068	-67.252	-55.042	-20.998	-25.998
205.530	-20.39	-47.101	-67.489	-55.279	-20.998	-25.998
205.540	-22.99	-47.094	-70.084	-57.874	-20.998	-25.998
205.550	-19.84	-47.302	-67.141	-54.931	-20.998	-25.998
205.560	-19.20	-47.256	-66.459	-54.249	-20.998	-25.998
205.570	-19.49	-47.316	-66.808	-54.598	-20.998	-25.998
205.580	-20.92	-47.306	-68.229	-56.019	-20.998	-25.998
205.590	-20.48	-47.364	-67.847	-55.637	-20.998	-25.998
205.600	-20.55	-47.364	-67.913	-55.703	-20.998	-25.998
205.610	-22.68	-47.397	-70.073	-57.863	-20.998	-25.998
205.620	-20.06	-47.449	-67.506	-55.296	-20.998	-25.998
205.630	-21.44	-47.522	-68.966	-56.756	-20.998	-25.998
205.640	-23.79	-47.590	-71.384	-59.174	-20.998	-25.998
205.650	-21.21	-47.618	-68.826	-56.616	-20.998	-25.998
205.660	-18.93	-47.520	-66.449	-54.239	-20.998	-25.998

205.670	-20.10	-47.556	-67.652	-55.442	-20.998	-25.998
205.680	-21.37	-47.589	-68.955	-56.745	-20.998	-25.998
205.690	-20.93	-47.669	-68.599	-56.389	-20.998	-25.998
205.700	-20.72	-47.655	-68.370	-56.160	-20.998	-25.998
205.710	-21.15	-47.811	-68.960	-56.750	-20.998	-25.998
205.720	-20.23	-47.839	-68.068	-55.858	-20.998	-25.998
205.730	-20.54	-47.841	-68.383	-56.173	-20.998	-25.998
205.740	-21.02	-47.884	-68.899	-56.689	-20.998	-25.998
205.750	-20.43	-47.731	-68.163	-55.953	-20.998	-25.998
205.760	-21.28	-47.921	-69.197	-56.987	-20.998	-25.998
205.770	-20.57	-47.873	-68.446	-56.236	-20.998	-25.998
205.780	-20.24	-47.994	-68.235	-56.025	-20.998	-25.998
205.790	-22.11	-48.024	-70.136	-57.926	-20.998	-25.998
205.800	-21.20	-48.008	-69.210	-57.000	-20.998	-25.998
205.810	-22.29	-48.089	-70.378	-58.168	-20.998	-25.998
205.820	-19.08	-48.149	-67.230	-55.020	-20.998	-25.998
205.830	-20.26	-48.308	-68.563	-56.353	-20.998	-25.998
205.840	-22.46	-48.097	-70.559	-58.349	-20.998	-25.998
205.850	-20.70	-48.234	-68.929	-56.719	-20.998	-25.998
205.860	-22.54	-48.194	-70.734	-58.524	-20.998	-25.998
205.870	-22.10	-48.417	-70.521	-58.311	-20.998	-25.998
205.880	-22.40	-48.386	-70.785	-58.575	-20.998	-25.998
205.890	-22.99	-48.384	-71.373	-59.163	-20.998	-25.998
205.900	-21.67	-48.318	-69.991	-57.781	-20.998	-25.998
205.910	-21.13	-48.421	-69.549	-57.339	-20.998	-25.998
205.920	-21.67	-48.463	-70.136	-57.926	-20.998	-25.998
205.930	-19.30	-48.574	-67.877	-55.667	-20.998	-25.998
205.940	-22.25	-48.644	-70.889	-58.679	-20.998	-25.998
205.950	-22.19	-48.646	-70.832	-58.622	-20.998	-25.998
205.960	-22.64	-48.643	-71.285	-59.075	-20.998	-25.998
205.970	-22.26	-48.587	-70.843	-58.633	-20.998	-25.998
205.980	-22.33	-48.749	-71.077	-58.867	-20.998	-25.998
205.990	-24.18	-48.783	-72.963	-60.753	-20.998	-25.998
206.000	-21.71	-48.707	-70.412	-58.202	-20.998	-25.998
206.010	-24.42	-48.727	-73.147	-60.937	-20.998	-25.998
206.020	-20.72	-48.917	-69.635	-57.425	-20.998	-25.998
206.030	-22.56	-48.922	-71.485	-59.275	-20.998	-25.998
206.040	-21.13	-48.917	-70.049	-57.839	-20.998	-25.998
206.050	-20.66	-48.872	-69.527	-57.317	-20.998	-25.998
206.060	-21.72	-48.895	-70.619	-58.409	-20.998	-25.998
206.070	-21.73	-48.999	-70.725	-58.515	-20.998	-25.998
206.080	-21.94	-48.992	-70.936	-58.726	-20.998	-25.998
206.090	-23.34	-49.027	-72.371	-60.161	-20.998	-25.998
206.100	-22.38	-49.117	-71.498	-59.288	-20.998	-25.998
206.110	-23.00	-49.139	-72.142	-59.932	-20.998	-25.998
206.120	-22.21	-49.191	-71.398	-59.188	-20.998	-25.998

206.130	-22.42	-49.225	-71.649	-59.439	-20.998	-25.998
206.140	-21.06	-49.187	-70.243	-58.033	-20.998	-25.998
206.150	-24.87	-49.225	-74.097	-61.887	-20.998	-25.998
206.160	-23.86	-49.279	-73.141	-60.931	-20.998	-25.998
206.170	-22.24	-49.280	-71.524	-59.314	-20.998	-25.998
206.180	-22.94	-49.308	-72.252	-60.042	-20.998	-25.998
206.190	-22.30	-49.354	-71.650	-59.440	-20.998	-25.998
206.200	-23.86	-49.404	-73.268	-61.058	-20.998	-25.998
206.210	-25.07	-49.319	-74.387	-62.177	-20.998	-25.998
206.220	-25.10	-49.490	-74.590	-62.380	-20.998	-25.998
206.230	-20.98	-49.528	-70.512	-58.302	-20.998	-25.998
206.240	-21.25	-49.605	-70.854	-58.644	-20.998	-25.998
206.250	-22.54	-49.458	-71.994	-59.784	-20.998	-25.998
206.260	-22.64	-49.549	-72.193	-59.983	-20.998	-25.998
206.270	-23.83	-49.529	-73.356	-61.146	-20.998	-25.998
206.280	-23.58	-49.685	-73.261	-61.051	-20.998	-25.998
206.290	-25.53	-49.676	-75.205	-62.995	-20.998	-25.998
206.300	-22.82	-49.551	-72.366	-60.156	-20.998	-25.998
206.310	-23.41	-49.774	-73.184	-60.974	-20.998	-25.998
206.320	-23.81	-49.800	-73.610	-61.400	-20.998	-25.998
206.330	-23.09	-49.808	-72.901	-60.691	-20.998	-25.998
206.340	-24.77	-49.853	-74.627	-62.417	-20.998	-25.998
206.350	-23.66	-49.737	-73.401	-61.191	-20.998	-25.998
206.360	-23.89	-49.726	-73.620	-61.410	-20.998	-25.998
206.370	-23.80	-49.750	-73.554	-61.344	-20.998	-25.998
206.380	-25.78	-49.862	-75.639	-63.429	-20.998	-25.998
206.390	-23.28	-49.944	-73.220	-61.010	-20.998	-25.998
206.400	-23.00	-49.930	-72.929	-60.719	-20.998	-25.998
206.410	-24.73	-49.901	-74.626	-62.416	-20.998	-25.998
206.420	-23.96	-50.069	-74.026	-61.816	-20.998	-25.998
206.430	-21.22	-50.067	-71.291	-59.081	-20.998	-25.998
206.440	-21.97	-49.995	-71.963	-59.753	-20.998	-25.998
206.450	-24.42	-50.087	-74.504	-62.294	-20.998	-25.998
206.460	-24.74	-50.193	-74.936	-62.726	-20.998	-25.998
206.470	-24.55	-50.207	-74.754	-62.544	-20.998	-25.998
206.480	-23.44	-50.187	-73.628	-61.418	-20.998	-25.998
206.490	-22.84	-50.274	-73.111	-60.901	-20.998	-25.998
206.500	-25.09	-50.331	-75.421	-63.211	-20.998	-25.998
206.510	-22.27	-50.366	-72.637	-60.427	-20.998	-25.998
206.520	-22.37	-50.334	-72.703	-60.493	-20.998	-25.998
206.530	-24.05	-50.428	-74.477	-62.267	-20.998	-25.998
206.540	-27.44	-50.523	-77.960	-65.750	-20.998	-25.998
206.550	-22.90	-50.489	-73.390	-61.180	-20.998	-25.998
206.560	-25.89	-50.491	-76.376	-64.166	-20.998	-25.998
206.570	-24.41	-50.468	-74.876	-62.666	-20.998	-25.998
206.580	-23.79	-50.557	-74.343	-62.133	-20.998	-25.998

206.590	-23.77	-50.664	-74.429	-62.219	-20.998	-25.998
206.600	-24.85	-50.526	-75.375	-63.165	-20.998	-25.998
206.610	-23.61	-50.572	-74.181	-61.971	-20.998	-25.998
206.620	-23.55	-50.524	-74.073	-61.863	-20.998	-25.998
206.630	-26.12	-50.699	-76.817	-64.607	-20.998	-25.998
206.640	-22.89	-50.692	-73.584	-61.374	-20.998	-25.998
206.650	-22.91	-50.610	-73.517	-61.307	-20.998	-25.998
206.660	-24.33	-50.686	-75.014	-62.804	-20.998	-25.998
206.670	-23.12	-50.826	-73.942	-61.732	-20.998	-25.998
206.680	-24.76	-50.885	-75.645	-63.435	-20.998	-25.998
206.690	-24.77	-50.874	-75.647	-63.437	-20.998	-25.998
206.700	-25.22	-50.837	-76.052	-63.842	-20.998	-25.998
206.710	-24.64	-50.826	-75.468	-63.258	-20.998	-25.998
206.720	-24.38	-50.970	-75.350	-63.140	-20.998	-25.998
206.730	-26.93	-51.014	-77.940	-65.730	-20.998	-25.998
206.740	-25.01	-50.928	-75.937	-63.727	-20.998	-25.998
206.750	-24.46	-50.999	-75.462	-63.252	-20.998	-25.998
206.760	-26.87	-51.102	-77.973	-65.763	-20.998	-25.998
206.770	-23.74	-51.099	-74.838	-62.628	-20.998	-25.998
206.780	-25.55	-51.154	-76.707	-64.497	-20.998	-25.998
206.790	-24.79	-51.099	-75.889	-63.679	-20.998	-25.998
206.800	-23.87	-51.304	-75.174	-62.964	-20.998	-25.998
206.810	-24.21	-51.213	-75.419	-63.209	-20.998	-25.998
206.820	-25.96	-51.239	-77.196	-64.986	-20.998	-25.998
206.830	-27.35	-51.183	-78.537	-66.327	-20.998	-25.998
206.840	-26.33	-51.318	-77.652	-65.442	-20.998	-25.998
206.850	-24.28	-51.316	-75.592	-63.382	-20.998	-25.998
206.860	-25.31	-51.410	-76.721	-64.511	-20.998	-25.998
206.870	-25.19	-51.512	-76.704	-64.494	-20.998	-25.998
206.880	-24.42	-51.406	-75.823	-63.613	-20.998	-25.998
206.890	-26.37	-51.492	-77.862	-65.652	-20.998	-25.998
206.900	-24.43	-51.606	-76.038	-63.828	-20.998	-25.998
206.910	-24.27	-51.600	-75.865	-63.655	-20.998	-25.998
206.920	-25.29	-51.575	-76.864	-64.654	-20.998	-25.998
206.930	-26.32	-51.563	-77.885	-65.675	-20.998	-25.998
206.940	-25.09	-51.570	-76.656	-64.446	-20.998	-25.998
206.950	-24.01	-51.705	-75.712	-63.502	-20.998	-25.998
206.960	-25.45	-51.730	-77.175	-64.965	-20.998	-25.998
206.970	-27.05	-51.725	-78.776	-66.566	-20.998	-25.998
206.980	-24.91	-51.702	-76.615	-64.405	-20.998	-25.998
206.990	-26.01	-51.599	-77.604	-65.394	-20.998	-25.998
207.000	-24.70	-51.673	-76.370	-64.160	-20.998	-25.998
207.010	-25.10	-51.823	-76.918	-64.708	-20.998	-25.998
207.020	-23.43	-51.728	-75.153	-62.943	-20.998	-25.998
207.030	-24.13	-51.909	-76.040	-63.830	-20.998	-25.998
207.040	-26.58	-52.066	-78.644	-66.434	-20.998	-25.998

207.050	-26.05	-52.019	-78.068	-65.858	-20.998	-25.998
207.060	-24.88	-52.172	-77.055	-64.845	-20.998	-25.998
207.070	-25.12	-52.123	-77.240	-65.030	-20.998	-25.998
207.080	-25.40	-52.128	-77.531	-65.321	-20.998	-25.998
207.090	-25.75	-52.082	-77.833	-65.623	-20.998	-25.998
207.100	-24.59	-52.227	-76.815	-64.605	-20.998	-25.998
207.110	-26.68	-52.182	-78.862	-66.652	-20.998	-25.998
207.120	-25.36	-52.139	-77.499	-65.289	-20.998	-25.998
207.130	-25.30	-52.243	-77.544	-65.334	-20.998	-25.998
207.140	-25.50	-52.396	-77.896	-65.686	-20.998	-25.998
207.150	-23.82	-52.501	-76.322	-64.112	-20.998	-25.998
207.160	-24.05	-52.273	-76.322	-64.112	-20.998	-25.998
207.170	-24.62	-52.350	-76.968	-64.758	-20.998	-25.998
207.180	-25.81	-52.459	-78.265	-66.055	-20.998	-25.998
207.190	-26.04	-52.590	-78.634	-66.424	-20.998	-25.998
207.200	-24.90	-52.513	-77.412	-65.202	-20.998	-25.998
207.210	-26.70	-52.347	-79.050	-66.840	-20.998	-25.998
207.220	-25.47	-52.461	-77.927	-65.717	-20.998	-25.998
207.230	-29.74	-52.728	-82.466	-70.256	-20.998	-25.998
207.240	-24.10	-52.807	-76.902	-64.692	-20.998	-25.998
207.250	-26.75	-52.492	-79.244	-67.034	-20.998	-25.998
207.260	-26.59	-52.666	-79.256	-67.046	-20.998	-25.998
207.270	-27.21	-52.700	-79.913	-67.703	-20.998	-25.998
207.280	-26.14	-52.659	-78.799	-66.589	-20.998	-25.998
207.290	-26.40	-52.870	-79.269	-67.059	-20.998	-25.998
207.300	-24.52	-52.701	-77.218	-65.008	-20.998	-25.998
207.310	-24.62	-52.965	-77.588	-65.378	-20.998	-25.998
207.320	-27.01	-52.830	-79.843	-67.633	-20.998	-25.998
207.330	-24.76	-52.921	-77.677	-65.467	-20.998	-25.998
207.340	-26.41	-53.075	-79.488	-67.278	-20.998	-25.998
207.350	-25.75	-52.887	-78.641	-66.431	-20.998	-25.998
207.360	-25.69	-52.752	-78.440	-66.230	-20.998	-25.998
207.370	-27.78	-52.874	-80.651	-68.441	-20.998	-25.998
207.380	-23.65	-52.935	-76.589	-64.379	-20.998	-25.998
207.390	-27.20	-53.126	-80.322	-68.112	-20.998	-25.998
207.400	-26.59	-53.028	-79.617	-67.407	-20.998	-25.998
207.410	-26.93	-52.885	-79.811	-67.601	-20.998	-25.998
207.420	-26.50	-53.042	-79.541	-67.331	-20.998	-25.998
207.430	-26.53	-53.044	-79.569	-67.359	-20.998	-25.998
207.440	-25.84	-53.315	-79.153	-66.943	-20.998	-25.998
207.450	-26.20	-53.335	-79.535	-67.325	-20.998	-25.998
207.460	-28.73	-53.198	-81.926	-69.716	-20.998	-25.998
207.470	-25.13	-53.194	-78.325	-66.115	-20.998	-25.998
207.480	-26.24	-53.351	-79.586	-67.376	-20.998	-25.998
207.490	-26.96	-53.290	-80.246	-68.036	-20.998	-25.998
207.500	-25.24	-53.253	-78.495	-66.285	-20.998	-25.998

207.510	-25.55	-53.440	-78.989	-66.779	-20.998	-25.998
207.520	-26.63	-53.408	-80.033	-67.823	-20.998	-25.998
207.530	-26.49	-53.496	-79.983	-67.773	-20.998	-25.998
207.540	-25.56	-53.346	-78.903	-66.693	-20.998	-25.998
207.550	-27.28	-53.674	-80.953	-68.743	-20.998	-25.998
207.560	-24.33	-53.572	-77.901	-65.691	-20.998	-25.998
207.570	-26.16	-53.610	-79.771	-67.561	-20.998	-25.998
207.580	-26.63	-53.776	-80.408	-68.198	-20.998	-25.998
207.590	-25.59	-53.585	-79.176	-66.966	-20.998	-25.998
207.600	-25.13	-53.503	-78.635	-66.425	-20.998	-25.998
207.610	-25.67	-53.866	-79.539	-67.329	-20.998	-25.998
207.620	-25.09	-53.884	-78.974	-66.764	-20.998	-25.998
207.630	-26.52	-53.556	-80.080	-67.870	-20.998	-25.998
207.640	-24.04	-53.775	-77.816	-65.606	-20.998	-25.998
207.650	-24.51	-53.619	-78.131	-65.921	-20.998	-25.998
207.660	-27.15	-53.658	-80.812	-68.602	-20.998	-25.998
207.670	-24.48	-53.697	-78.179	-65.969	-20.998	-25.998
207.680	-25.54	-53.912	-79.450	-67.240	-20.998	-25.998
207.690	-27.58	-54.031	-81.614	-69.404	-20.998	-25.998
207.700	-25.31	-53.982	-79.292	-67.082	-20.998	-25.998
207.710	-26.39	-53.833	-80.222	-68.012	-20.998	-25.998
207.720	-26.59	-54.098	-80.689	-68.479	-20.998	-25.998
207.730	-28.04	-54.005	-82.045	-69.835	-20.998	-25.998
207.740	-25.39	-54.053	-79.439	-67.229	-20.998	-25.998
207.750	-25.86	-54.229	-80.087	-67.877	-20.998	-25.998
207.760	-25.58	-54.148	-79.725	-67.515	-20.998	-25.998
207.770	-28.41	-54.050	-82.462	-70.252	-20.998	-25.998
207.780	-26.19	-54.208	-80.394	-68.184	-20.998	-25.998
207.790	-27.08	-54.203	-81.282	-69.072	-20.998	-25.998
207.800	-24.45	-54.098	-78.548	-66.338	-20.998	-25.998
207.810	-27.43	-54.297	-81.727	-69.517	-20.998	-25.998
207.820	-26.41	-54.296	-80.705	-68.495	-20.998	-25.998
207.830	-26.51	-54.283	-80.796	-68.586	-20.998	-25.998
207.840	-26.89	-54.485	-81.374	-69.164	-20.998	-25.998
207.850	-26.42	-54.429	-80.844	-68.634	-20.998	-25.998
207.860	-26.02	-54.612	-80.632	-68.422	-20.998	-25.998
207.870	-27.55	-54.527	-82.079	-69.869	-20.998	-25.998
207.880	-27.49	-54.392	-81.881	-69.671	-20.998	-25.998
207.890	-29.54	-54.339	-83.874	-71.664	-20.998	-25.998
207.900	-27.56	-54.474	-82.038	-69.828	-20.998	-25.998
207.910	-27.65	-54.420	-82.074	-69.864	-20.998	-25.998
207.920	-28.22	-54.615	-82.831	-70.621	-20.998	-25.998
207.930	-28.77	-54.583	-83.351	-71.141	-20.998	-25.998
207.940	-26.75	-54.691	-81.444	-69.234	-20.998	-25.998
207.950	-25.26	-54.822	-80.081	-67.871	-20.998	-25.998
207.960	-26.43	-54.684	-81.118	-68.908	-20.998	-25.998

207.970	-28.33	-54.347	-82.680	-70.470	-20.998	-25.998
207.980	-26.90	-54.624	-81.527	-69.317	-20.998	-25.998
207.990	-27.76	-54.712	-82.467	-70.257	-20.998	-25.998
208.000	-26.63	-54.813	-81.439	-69.229	-20.998	-25.998
208.010	-26.51	-54.798	-81.308	-69.098	-20.998	-25.998
208.020	-25.61	-54.772	-80.386	-68.176	-20.998	-25.998
208.030	-28.60	-55.076	-83.677	-71.467	-20.998	-25.998
208.040	-27.58	-54.883	-82.460	-70.250	-20.998	-25.998
208.050	-27.00	-54.885	-81.888	-69.678	-20.998	-25.998
208.060	-28.10	-54.719	-82.818	-70.608	-20.998	-25.998
208.070	-28.24	-54.811	-83.047	-70.837	-20.998	-25.998
208.080	-28.68	-55.027	-83.705	-71.495	-20.998	-25.998
208.090	-26.20	-55.012	-81.215	-69.005	-20.998	-25.998
208.100	-28.24	-55.019	-83.257	-71.047	-20.998	-25.998
208.110	-27.75	-55.367	-83.115	-70.905	-20.998	-25.998
208.120	-29.58	-55.243	-84.820	-72.610	-20.998	-25.998
208.130	-28.69	-55.243	-83.934	-71.724	-20.998	-25.998
208.140	-28.82	-55.310	-84.131	-71.921	-20.998	-25.998
208.150	-26.81	-55.065	-81.871	-69.661	-20.998	-25.998
208.160	-28.00	-55.114	-83.112	-70.902	-20.998	-25.998
208.170	-27.57	-55.155	-82.721	-70.511	-20.998	-25.998
208.180	-29.18	-55.345	-84.525	-72.315	-20.998	-25.998
208.190	-28.42	-55.346	-83.763	-71.553	-20.998	-25.998
208.200	-29.70	-55.264	-84.968	-72.758	-20.998	-25.998
208.210	-27.32	-55.365	-82.680	-70.470	-20.998	-25.998
208.220	-27.68	-55.507	-83.185	-70.975	-20.998	-25.998
208.230	-26.96	-55.430	-82.393	-70.183	-20.998	-25.998
208.240	-27.57	-55.341	-82.910	-70.700	-20.998	-25.998
208.250	-28.70	-55.351	-84.046	-71.836	-20.998	-25.998
208.260	-29.65	-55.494	-85.142	-72.932	-20.998	-25.998
208.270	-29.31	-55.584	-84.889	-72.679	-20.998	-25.998
208.280	-27.66	-55.413	-83.072	-70.862	-20.998	-25.998
208.290	-29.43	-55.587	-85.017	-72.807	-20.998	-25.998
208.300	-27.31	-55.536	-82.841	-70.631	-20.998	-25.998
208.310	-28.83	-55.596	-84.426	-72.216	-20.998	-25.998
208.320	-28.41	-55.595	-84.008	-71.798	-20.998	-25.998
208.330	-29.74	-55.631	-85.366	-73.156	-20.998	-25.998
208.340	-29.25	-55.595	-84.840	-72.630	-20.998	-25.998
208.350	-27.83	-55.692	-83.525	-71.315	-20.998	-25.998
208.360	-31.26	-55.635	-86.895	-74.685	-20.998	-25.998
208.370	-28.85	-55.776	-84.622	-72.412	-20.998	-25.998
208.380	-29.91	-55.965	-85.872	-73.662	-20.998	-25.998
208.390	-32.03	-55.978	-88.005	-75.795	-20.998	-25.998
208.400	-29.91	-56.021	-85.931	-73.721	-20.998	-25.998
208.410	-30.41	-55.929	-86.342	-74.132	-20.998	-25.998
208.420	-30.29	-56.003	-86.291	-74.081	-20.998	-25.998

208.430	-27.71	-55.812	-83.520	-71.310	-20.998	-25.998
208.440	-30.92	-55.743	-86.666	-74.456	-20.998	-25.998
208.450	-30.05	-56.267	-86.312	-74.102	-20.998	-25.998
208.460	-29.62	-55.966	-85.586	-73.376	-20.998	-25.998
208.470	-29.46	-55.975	-85.436	-73.226	-20.998	-25.998
208.480	-28.93	-56.008	-84.942	-72.732	-20.998	-25.998
208.490	-28.75	-55.928	-84.675	-72.465	-20.998	-25.998
208.500	-30.26	-56.158	-86.416	-74.206	-20.998	-25.998
208.510	-29.26	-56.484	-85.740	-73.530	-20.998	-25.998
208.520	-30.58	-56.353	-86.928	-74.718	-20.998	-25.998
208.530	-27.93	-56.215	-84.143	-71.933	-20.998	-25.998
208.540	-28.42	-56.281	-84.701	-72.491	-20.998	-25.998
208.550	-28.71	-56.243	-84.950	-72.740	-20.998	-25.998
208.560	-29.94	-56.217	-86.157	-73.947	-20.998	-25.998
208.570	-29.88	-56.539	-86.419	-74.209	-20.998	-25.998
208.580	-28.27	-56.366	-84.634	-72.424	-20.998	-25.998
208.590	-31.02	-56.738	-87.759	-75.549	-20.998	-25.998
208.600	-29.27	-56.480	-85.745	-73.535	-20.998	-25.998
208.610	-29.11	-56.429	-85.542	-73.332	-20.998	-25.998
208.620	-28.43	-56.556	-84.985	-72.775	-20.998	-25.998
208.630	-30.57	-56.260	-86.834	-74.624	-20.998	-25.998
208.640	-29.83	-56.333	-86.164	-73.954	-20.998	-25.998
208.650	-29.83	-56.642	-86.470	-74.260	-20.998	-25.998
208.660	-30.03	-56.372	-86.398	-74.188	-20.998	-25.998
208.670	-29.82	-56.168	-85.983	-73.773	-20.998	-25.998
208.680	-28.68	-56.312	-84.990	-72.780	-20.998	-25.998
208.690	-29.27	-56.683	-85.956	-73.746	-20.998	-25.998
208.700	-28.66	-56.773	-85.432	-73.222	-20.998	-25.998
208.710	-29.48	-56.486	-85.966	-73.756	-20.998	-25.998
208.720	-28.43	-56.736	-85.169	-72.959	-20.998	-25.998
208.730	-29.90	-56.616	-86.520	-74.310	-20.998	-25.998
208.740	-32.46	-56.733	-89.195	-76.985	-20.998	-25.998
208.750	-29.33	-57.207	-86.534	-74.324	-20.998	-25.998
208.760	-29.87	-56.909	-86.782	-74.572	-20.998	-25.998
208.770	-30.20	-56.528	-86.729	-74.519	-20.998	-25.998
208.780	-31.00	-56.821	-87.821	-75.611	-20.998	-25.998
208.790	-29.71	-56.744	-86.454	-74.244	-20.998	-25.998
208.800	-28.11	-56.873	-84.978	-72.768	-20.998	-25.998
208.810	-29.81	-56.913	-86.725	-74.515	-20.998	-25.998
208.820	-30.48	-56.944	-87.428	-75.218	-20.998	-25.998
208.830	-30.45	-56.778	-87.228	-75.018	-20.998	-25.998
208.840	-29.34	-56.984	-86.323	-74.113	-20.998	-25.998
208.850	-28.58	-57.238	-85.814	-73.604	-20.998	-25.998
208.860	-27.82	-57.276	-85.093	-72.883	-20.998	-25.998
208.870	-29.32	-57.223	-86.543	-74.333	-20.998	-25.998
208.880	-29.20	-57.193	-86.388	-74.178	-20.998	-25.998

208.890	-30.34	-57.106	-87.444	-75.234	-20.998	-25.998
208.900	-30.48	-57.204	-87.679	-75.469	-20.998	-25.998
208.910	-30.02	-57.526	-87.550	-75.340	-20.998	-25.998
208.920	-31.82	-57.582	-89.405	-77.195	-20.998	-25.998
208.930	-30.32	-57.294	-87.617	-75.407	-20.998	-25.998
208.940	-32.44	-57.286	-89.728	-77.518	-20.998	-25.998
208.950	-31.91	-57.256	-89.163	-76.953	-20.998	-25.998
208.960	-30.04	-57.296	-87.335	-75.125	-20.998	-25.998
208.970	-30.57	-57.378	-87.943	-75.733	-20.998	-25.998
208.980	-29.93	-57.420	-87.347	-75.137	-20.998	-25.998
208.990	-28.84	-57.520	-86.357	-74.147	-20.998	-25.998
209.000	-27.08	-57.279	-84.361	-72.151	-20.998	-25.998
209.010	-31.20	-57.762	-88.960	-76.750	-20.998	-25.998
209.020	-28.94	-57.742	-86.682	-74.472	-20.998	-25.998
209.030	-28.96	-57.694	-86.655	-74.445	-20.998	-25.998
209.040	-31.21	-57.513	-88.723	-76.513	-20.998	-25.998
209.050	-28.99	-57.444	-86.432	-74.222	-20.998	-25.998
209.060	-29.75	-57.301	-87.054	-74.844	-20.998	-25.998
209.070	-30.26	-57.616	-87.872	-75.662	-20.998	-25.998
209.080	-31.85	-57.757	-89.610	-77.400	-20.998	-25.998
209.090	-29.62	-57.958	-87.573	-75.363	-20.998	-25.998
209.100	-29.88	-57.859	-87.741	-75.531	-20.998	-25.998
209.110	-28.81	-58.059	-86.866	-74.656	-20.998	-25.998
209.120	-31.15	-57.892	-89.038	-76.828	-20.998	-25.998
209.130	-31.43	-57.843	-89.269	-77.059	-20.998	-25.998
209.140	-29.55	-57.743	-87.295	-75.085	-20.998	-25.998
209.150	-31.71	-57.739	-89.451	-77.241	-20.998	-25.998
209.160	-29.73	-58.009	-87.735	-75.525	-20.998	-25.998
209.170	-31.49	-58.095	-89.584	-77.374	-20.998	-25.998
209.180	-30.07	-58.083	-88.150	-75.940	-20.998	-25.998
209.190	-29.36	-58.110	-87.470	-75.260	-20.998	-25.998
209.200	-26.69	-58.093	-84.782	-72.572	-20.998	-25.998
209.210	-28.75	-58.088	-86.839	-74.629	-20.998	-25.998
209.220	-30.72	-58.112	-88.833	-76.623	-20.998	-25.998
209.230	-29.27	-58.184	-87.455	-75.245	-20.998	-25.998
209.240	-32.47	-57.990	-90.463	-78.253	-20.998	-25.998
209.250	-30.19	-57.949	-88.134	-75.924	-20.998	-25.998
209.260	-30.34	-58.003	-88.339	-76.129	-20.998	-25.998
209.270	-28.49	-58.413	-86.900	-74.690	-20.998	-25.998
209.280	-30.06	-58.236	-88.299	-76.089	-20.998	-25.998
209.290	-28.50	-57.834	-86.330	-74.120	-20.998	-25.998
209.300	-29.86	-58.106	-87.970	-75.760	-20.998	-25.998
209.310	-31.33	-58.205	-89.539	-77.329	-20.998	-25.998
209.320	-31.02	-58.204	-89.223	-77.013	-20.998	-25.998
209.330	-32.00	-58.111	-90.113	-77.903	-20.998	-25.998
209.340	-29.99	-58.231	-88.221	-76.011	-20.998	-25.998

209.350	-32.42	-58.338	-90.757	-78.547	-20.998	-25.998
209.360	-30.39	-58.281	-88.672	-76.462	-20.998	-25.998
209.370	-31.86	-58.386	-90.242	-78.032	-20.998	-25.998
209.380	-30.18	-58.299	-88.475	-76.265	-20.998	-25.998
209.390	-30.10	-58.245	-88.342	-76.132	-20.998	-25.998
209.400	-30.34	-58.352	-88.689	-76.479	-20.998	-25.998
209.410	-30.48	-58.547	-89.030	-76.820	-20.998	-25.998
209.420	-30.03	-58.447	-88.475	-76.265	-20.998	-25.998
209.430	-31.63	-58.548	-90.176	-77.966	-20.998	-25.998
209.440	-31.31	-58.386	-89.696	-77.486	-20.998	-25.998
209.450	-29.00	-58.420	-87.417	-75.207	-20.998	-25.998
209.460	-32.94	-58.598	-91.536	-79.326	-20.998	-25.998
209.470	-29.92	-58.403	-88.324	-76.114	-20.998	-25.998
209.480	-30.30	-58.552	-88.855	-76.645	-20.998	-25.998
209.490	-28.49	-58.432	-86.919	-74.709	-20.998	-25.998
209.500	-28.73	-58.780	-87.508	-75.298	-20.998	-25.998
209.510	-30.04	-58.404	-88.445	-76.235	-20.998	-25.998
209.520	-30.35	-58.518	-88.869	-76.659	-20.998	-25.998
209.530	-29.45	-58.713	-88.167	-75.957	-20.998	-25.998
209.540	-30.12	-58.846	-88.970	-76.760	-20.998	-25.998
209.550	-30.10	-58.496	-88.598	-76.388	-20.998	-25.998
209.560	-30.16	-58.631	-88.790	-76.580	-20.998	-25.998
209.570	-29.92	-58.831	-88.747	-76.537	-20.998	-25.998
209.580	-28.69	-58.566	-87.260	-75.050	-20.998	-25.998
209.590	-31.05	-58.552	-89.603	-77.393	-20.998	-25.998
209.600	-30.14	-59.155	-89.294	-77.084	-20.998	-25.998
209.610	-31.38	-58.676	-90.057	-77.847	-20.998	-25.998
209.620	-31.88	-58.722	-90.599	-78.389	-20.998	-25.998
209.630	-29.16	-58.994	-88.151	-75.941	-20.998	-25.998
209.640	-29.46	-59.013	-88.477	-76.267	-20.998	-25.998
209.650	-30.71	-59.114	-89.819	-77.609	-20.998	-25.998
209.660	-30.08	-58.950	-89.031	-76.821	-20.998	-25.998
209.670	-30.44	-58.775	-89.214	-77.004	-20.998	-25.998
209.680	-30.58	-58.925	-89.506	-77.296	-20.998	-25.998
209.690	-28.67	-58.812	-87.477	-75.267	-20.998	-25.998
209.700	-32.36	-58.899	-91.256	-79.046	-20.998	-25.998
209.710	-28.62	-58.898	-87.513	-75.303	-20.998	-25.998
209.720	-31.91	-59.255	-91.162	-78.952	-20.998	-25.998
209.730	-31.47	-59.076	-90.541	-78.331	-20.998	-25.998
209.740	-31.52	-58.967	-90.486	-78.276	-20.998	-25.998
209.750	-29.14	-58.918	-88.055	-75.845	-20.998	-25.998
209.760	-30.62	-58.844	-89.465	-77.255	-20.998	-25.998
209.770	-30.47	-59.018	-89.488	-77.278	-20.998	-25.998
209.780	-31.91	-59.072	-90.982	-78.772	-20.998	-25.998
209.790	-30.97	-59.246	-90.213	-78.003	-20.998	-25.998
209.800	-30.58	-59.319	-89.895	-77.685	-20.998	-25.998

209.810	-30.60	-59.018	-89.620	-77.410	-20.998	-25.998
209.820	-30.36	-59.121	-89.481	-77.271	-20.998	-25.998
209.830	-30.68	-58.913	-89.596	-77.386	-20.998	-25.998
209.840	-30.26	-58.946	-89.209	-76.999	-20.998	-25.998
209.850	-30.30	-59.079	-89.379	-77.169	-20.998	-25.998
209.860	-32.82	-59.508	-92.323	-80.113	-20.998	-25.998
209.870	-31.59	-59.209	-90.800	-78.590	-20.998	-25.998
209.880	-31.18	-59.212	-90.392	-78.182	-20.998	-25.998
209.890	-29.85	-59.359	-89.204	-76.994	-20.998	-25.998
209.900	-31.59	-59.316	-90.904	-78.694	-20.998	-25.998
209.910	-31.36	-59.652	-91.012	-78.802	-20.998	-25.998
209.920	-30.47	-59.137	-89.608	-77.398	-20.998	-25.998
209.930	-31.47	-59.284	-90.754	-78.544	-20.998	-25.998
209.940	-30.14	-59.565	-89.706	-77.496	-20.998	-25.998
209.950	-32.59	-59.829	-92.420	-80.210	-20.998	-25.998
209.960	-30.81	-59.759	-90.572	-78.362	-20.998	-25.998
209.970	-28.45	-59.615	-88.062	-75.852	-20.998	-25.998
209.980	-31.22	-59.740	-90.956	-78.746	-20.998	-25.998
209.990	-31.82	-59.509	-91.331	-79.121	-20.998	-25.998
210.000	-30.11	-59.550	-89.661	-77.451	-20.998	-25.998
+12 MHz From Channel Edge						

4.4.2 Protection to Radio Navigation Satellite Services

Method of Measurement:

Tests were performed to ensure compliance with FCC Rule §74.794(a)(3)(b)(1), as listed above, that spurious output in the GPS band must be attenuated at least 85dB. To confirm compliance with this rule section the test setup depicted in Figure 4-3 was used. The LPV-1000, modulated with a ATSC compliant 8-VSB modulator, was adjusted to obtain a 100 Watt average channel power (50dBm) measurement on the spectrum analyzer at the output of the mask filter. The metering circuit was adjusted to obtain a 100% reading on the forward power meter. With the transmitter properly configured for digital operation and the average power set to 100 Watts, spurious emissions into the GPS band were measured. Results of the measurements are shown in the spectrum analyzer plot displayed in Figure 4-13. In no case were spurious emissions observed above the -85dB threshold.

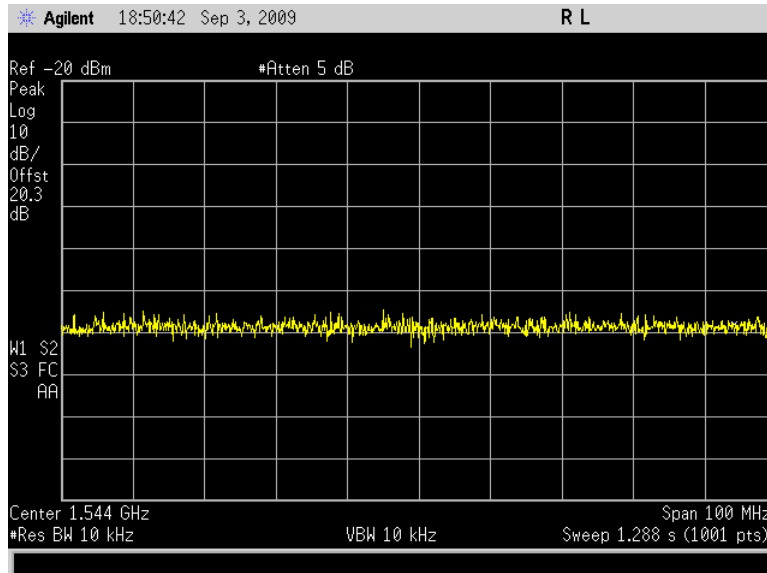


Figure 4-13: Spurious Emissions in GPS Band

4.4.3 Spurious Emissions Tests with Analog Modulation

Part 74.736 of the Rules states:

§ 74.736 Emissions and bandwidth.

(a) The license of a low power TV, TV translator, or TV booster station authorizes the transmission of the visual signal by amplitude modulation (A5) and the accompanying aural signal by frequency modulation (F3).

(b) Standard width television channels will be assigned and the transmitting apparatus shall be operated so as to limit spurious emissions to the lowest practicable value. Any emissions including intermodulation products and radio frequency harmonics which are not essential for the transmission of the desired picture and sound information shall be considered to be spurious emissions.

(c) Any emissions appearing on frequencies more than 3 MHz above or below the upper and lower edges, respectively, of the assigned channel shall be attenuated no less than:

- (1) 30 dB for transmitters rated at no more than 1 watt power output.*
- (2) 50 dB for transmitters rated at more than 1 watt power output.*
- (3) 60 dB for transmitters rated at more than 100 watts power output.*

(d) Greater attenuation than that specified in paragraph (c) of this section may be required if interference results from emissions outside the assigned channel.

Method of Measurement:

To confirm compliance with the above rule for analog television operations, tests were then run on the separate visual and aural carriers at their rated output levels using the test setup in Figure 4-1. Measurements were taken after the output filter. The transmitter was modulated with color bars at 87.5% and at a peak sync visual output of 250 watts (54dBm). The results of the test are displayed on the spectrum analyzer plot labeled Figure 4-14. In no case are the out of band emissions attenuated less than -60dB relative to the peak carrier level.

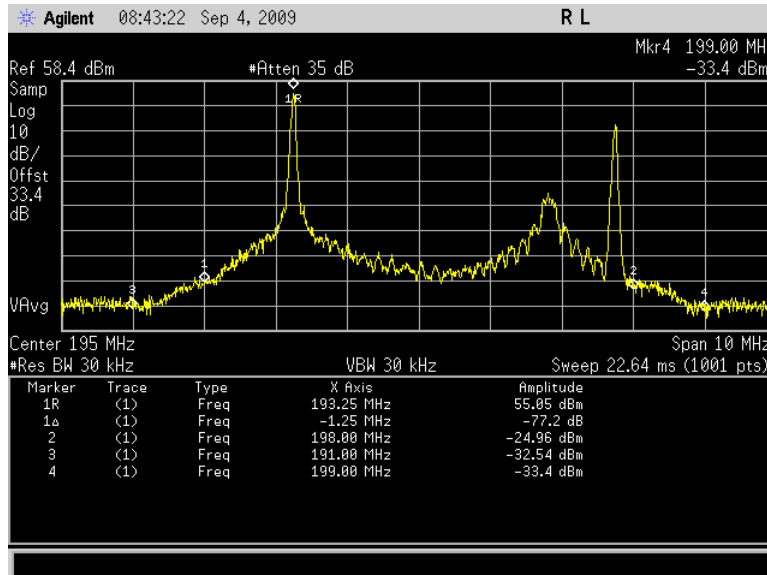


Figure 4-14: Out of Band Attenuation for Analog Operations

4.5 FREQUENCY STABILITY

The LPV transmitter series utilizes a triple conversion architecture to generate the output channel frequency from the 44 MHz IF input. The first conversion mixes the 44 MHz signal with the first Local Oscillator (LO1) and creates a second IF (IF2) centered at 466 MHz. The IF2 signal is then mixed with a second local oscillator (LO2) to produce the third IF (IF3) centered at 2154 MHz. The IF3 signal is then mixed with the third local oscillator to produce the desired output channel. The local oscillators are locked to a 10 MHz ovenized crystal oscillator (F_{ref}) which provides the required frequency stability.

The first converter, first local oscillator frequency is 422 MHz and is generated in the following way. The 10 MHz oscillator reference input is divided by 5 and is used as the reference for a phase locked loop. The divide ratio of the loop is 844, so when locked the VCO output is at 1688 MHz which is fed to the 2nd mixer in the first converter and also divided by 4 and fed to the 1st mixer in the first converter. The resultant mix at the second mixer provides a 2154 MHz output. The output frequency is derived at the output of the output converter by mixing the 2154 MHz input from the first converter with a 1 MHz step tuned PLL tuned LO (LO3) which has an output of between 2211 and 2367 MHz. The resultant high side mix produces a desired output frequency of between 57 to 213 MHz in 1 MHz steps.

The equation for the output frequency of LO1= $((F_{ref}/5)*844)/4 = F_{ref}*42.2$.

Therefore, LO1= 42.2* F_{ref}

The equation for the output frequency of LO2= $((F_{ref}/5**844) = F_{ref}*168.8$.

The third local oscillator (LO3) is variable and generates frequencies between 2211 and 2367MHz in the following way. The 10 MHz oscillator is divided by 10 and used as the reference in a phase locked loop circuit. The VCO output is divided by N with N variable between 2211 and 2367 MHz and this is fed to the phase detector. The frequency of the VCO will be N MHz.

The equation for the output frequency of LO3= $(F_{ref}/10)*N = F_{ref}*(N/10)$.

The transmitter output frequency (F_{out}) is determined by the following equations:

$$IF2 = LO1 + IF$$

$$IF3 = LO2 + IF2$$

$$F_{out} = LO3 - IF3$$

$$F_{out} = LO3 - LO2 - LO1 - IF$$

$$F_{out} = F_{ref}*((N/10) - 168.8 - 42.2) - IF$$

$$F_{out} = F_{ref}*((N/10) - 211) - IF \quad N = 2211 \text{ to } 2367$$

$F_{ref} = 10\text{MHz} \pm dF$, where dF is frequency Variance of 10 MHz oscillator.

So for the frequency stability term of the output is $dF_{out} = \pm dF*((N/10) - 211)$.

The frequency stability of the 10 MHz oscillator over temperature is $\pm 2e-7$ so for the 10 MHz oscillator $dF = 2 \text{ Hz}$. The worst case frequency is when $N = 2367$ so worst case stability is:

$$dF_{out} = \pm 2*((N/10) - 211) = \pm 51.4 \text{ Hz}.$$

Alternatively, the 10MHz reference oscillator may be locked to an external precision 10 MHz reference source such as a GPS or LORAN receiver to provide an even higher stability.

4.6 FIELD STRENGTH OF SPURIOUS EMISSIONS

Visual Carrier or 8-VSB Output Power: 250 Watts Peak or 100 Watts Average Power

Modulation: NTSC Composite Television Signals or 8-VSB Modulated Carriers

Spectrum Analyzer Settings:

Frequency Span:	1 MHz/Division
Center Frequency:	Adjusted Continuously from 10 MHz to 26 GHz
Resolution Bandwidth:	100 KHz
Video Bandwidth:	100 KHz
Analyzer Noise Floor	<-89dBm

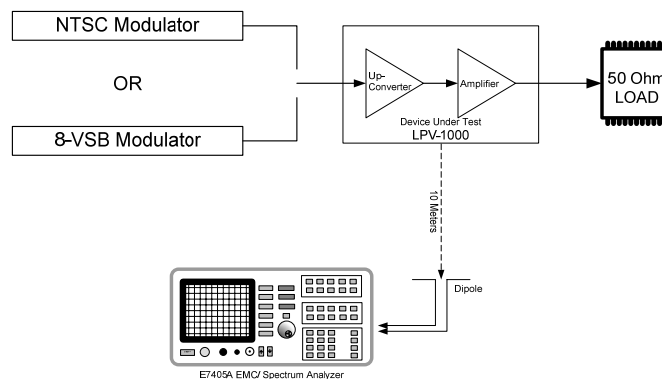


Figure 4-15: Test Setup for Measuring Radiated Emissions

Method of Measurement:

Using the test setup in Figure 4-15, the transmitter was driven to full power (50dBm) with analog visual and aural modulation. The test was repeated using 8-VSB modulation at an average power of 45dBm on the channel, and no difference was noted. A center frequency of 195 MHz was used as a reference. The spectrum analyzer was moved 10 meters from the unit under test. A dipole antenna was cut to the 10 MHz reference oscillator frequency and oriented to maximize the received level and the data was recorded into Table 4-8. Then the dipole was cut to the 44 MHz IF frequency, then the 1st, 2nd, and 3rd LO frequencies, where each time the antenna was oriented to achieve the maximum signal and the data then recorded. Then the antenna was cut to the 617 MHz output reference frequency and then the 2nd through 10th harmonic frequencies where each time the antenna was connected to the spectrum analyzer and oriented to achieve a maximum receive level and the data recorded.

Table 4-5: Radiated Emissions Data

FREQUENCY (MHz)	SOURCE	PEAK LEVEL (dB)
10	10 MHz Reference	None Observed
44	IF Frequency	None Observed
422	1 st LO	None Observed
1688	2 nd LO	None Observed
2349	3 rd LO	
195	Reference Channel	None Observed
390	2 nd Harmonic	None Observed
585	3 rd Harmonic	None Observed
780	4 th Harmonic	None Observed
975	5 th Harmonic	None Observed
1170	6 th Harmonic	None Observed
1365	7 th Harmonic	None Observed
1560	8 th Harmonic	None Observed
1755	9 th Harmonic	None Observed
1950	10 th Harmonic	None Observed

Spurious Radiation:

The transmitter system is comprised of fully enclosed modules, encapsulated in a doubly enclosed casing. Due to the design techniques employed for the very high gain of the system and the mitigation of signal leakage, no radiated signals were detected to the threshold of the Spectrum Analyzer of -89dB.

5.0 SUMMARY

This report demonstrates that the LPV-1000 transmitter system meets or exceeds the FCC Type Acceptance Criteria for devices utilized under FCC Rule Parts 73 and 74. Peak and average power outputs were verified with direct power measurements at VHF. Measurements of spurious emissions at the RF output indicated no emissions above that specified in the applicable rules. Field strength measurements of spurious emissions revealed no detectable emissions down to the measurement equipment threshold of <-89 dBm.