

ENGINEERING STATEMENT
REGARDING CIRCULARITY OF VERTICAL
RADIATION PATTERN OF SHUNT FED ANTENNA
RADIO STATION WSRQ
SARASOTA, FLORIDA
1220 KHZ 770 W-D, 15 W-N U ND

Engineering Statement

This engineering statement has been prepared on behalf of radio station WSRQ, Sarasota, Florida, to supplement the station's pending application for modification of construction permit, file number BMP-20160825ABY, with information regarding the vertical pattern radiation characteristics of the proposed slant-wire shunt fed antenna. The engineering portion of the application was prepared by this firm.

The slant-wire shunt feed design was developed for the new WSRQ antenna to deal with the need to avoid interference between the AM antenna feed system and the cables for the multitude of communications antennas that run near ground level to a large building on the opposite side of the tower from the proposed feed wire. Circumstances at the site make it impossible to have a feed skirt with wires that run upward from ground level symmetrically beside each tower leg. The area on the side of the tower where the proposed slant wire will be connected to it provides an unobstructed path for the slant wire to run to a transmitter enclosure at ground level on the property.

A similar slant-wire shunt feed arrangement was successfully employed for operation by WSRQ using this tower under an STA that began in approximately the year 2000, and it is believed to be the most practical means of shunt feeding the tower for WSRQ. The

transmitter enclosure that was used for the previous STA operation remains on the property and the modeling included herein is based on resuming its use by WSRQ.

An unpublished FCC policy of unknown origin has for many years prohibited the use of slant-wire shunt fed antennas by AM stations with licensed nighttime facilities. It is questionable whether it should apply to licensed daytime facilities with low power secondary nighttime operation such as is proposed by WSRQ, or only to stations with high enough nighttime power to meet the requirements for fulltime licensing, as daytime stations with slant-wire shunt fed antennas have historically received *pro forma* authorizations for low power secondary operation at night without the characteristics of their antennas being considered.

The stated reason for the policy is that “it is difficult to evaluate the vertical characteristics” of such antennas.¹ Modern methods of antenna analysis involving Method of Moments modeling make such evaluations less difficult and permit conclusions to be drawn about the effects of slant-wire shunt feeding on their vertical radiation characteristics.² Since the policy in question was adopted, it has become generally understood that slant-wire shunt fed antennas on the order of one quarter wavelength tall do not exhibit the significant non-circularity at high vertical angles that is the case with towers on the order of one half wavelength tall.³ The proposed WSRQ antenna is slightly less than one quarter wavelength tall at carrier frequency and high angle non-circularity is not expected to be a problem.

Details of a Method of Moments study of the proposed WSRQ antenna to evaluate its vertical radiation characteristics appear on the following pages. The self-supporting tower and its slanted feed wire were modeled with NEC-4 software so as to allow

¹ Nguyen, Son, FCC letter to Liberty Broadcasting System LLP, dated April 21 2017, regarding applications BP-20160206AC and BL-20161206ACA of radio station KFIO, Dishman, Washington.

² Trainotti, V. and W. G. Fano, Slanted Wire Fed Grounded Monopole Characteristics, IEEE Transactions on Broadcasting, December, 2015.

³ Dawson, B., The Slant Wire Fed Monopole, a Neglected but Invaluable Technique, paper presented at the 60th Annual Institute of Electrical and Electronic Engineers Broadcast Symposium, October, 2010.

detailed consideration of the effects of the slant wire on the vertical radiation characteristics of the antenna.

The non-circularity due to the slant-wire shunt feeding arrangement is no greater than 1.5 dB for vertical angles up to 70 degrees, and vertical angles of greater than 67 degrees are not considered in skywave propagation analysis using 47 CFR 73.190 Figure 6a. The departure from circularity is well below the +/- 2 dB limit for an omnidirectional antenna, as defined in 47 CFR 1.30002(a), for all vertical angles of interest in nighttime allocation studies.


NEC-4 modeling of the slant-wire shunt fed antenna was performed for perfectly conducting earth, so as to have its $f(\theta)$ calculations use the same assumptions as those calculated pursuant to the formula of 47 CFR 73.160. The vertical radiation characteristics for the two cases, therefore, are directly comparable.

The original application presents the NEC-4 modeling information that was used to determine the horizontal plane radiation efficiency of the proposed antenna taking into account its ground system at the new transmitter site. That information, and the radiation efficiency of the proposed WSRQ antenna, remain unchanged.

It is noted that the proposed WSRQ antenna has been analyzed using the same methodology as was used to evaluate the non-circularity of the vertical radiation pattern of the antenna that was approved when the license application of radio station KFIO, Dishman, Washington, file number BL-20161206ACA, was granted. The proposed WSRQ antenna meets the same criteria that were cited in the FCC letter that explained the rationale behind the grant of that application.⁴

It is requested that the policy regarding nighttime operation with slant-wire shunt fed antennas be waived, if a waiver is required for the unpublished policy. The WSRQ

CP may be granted, it appears, in accordance with the principles that were applied in the KFIO case.

A handwritten signature in black ink, reading "Ronald D. Rackley". The signature is fluid and cursive, with the first name "Ronald" and last name "Rackley" being more prominent than the middle initial "D".

Ronald D. Rackley

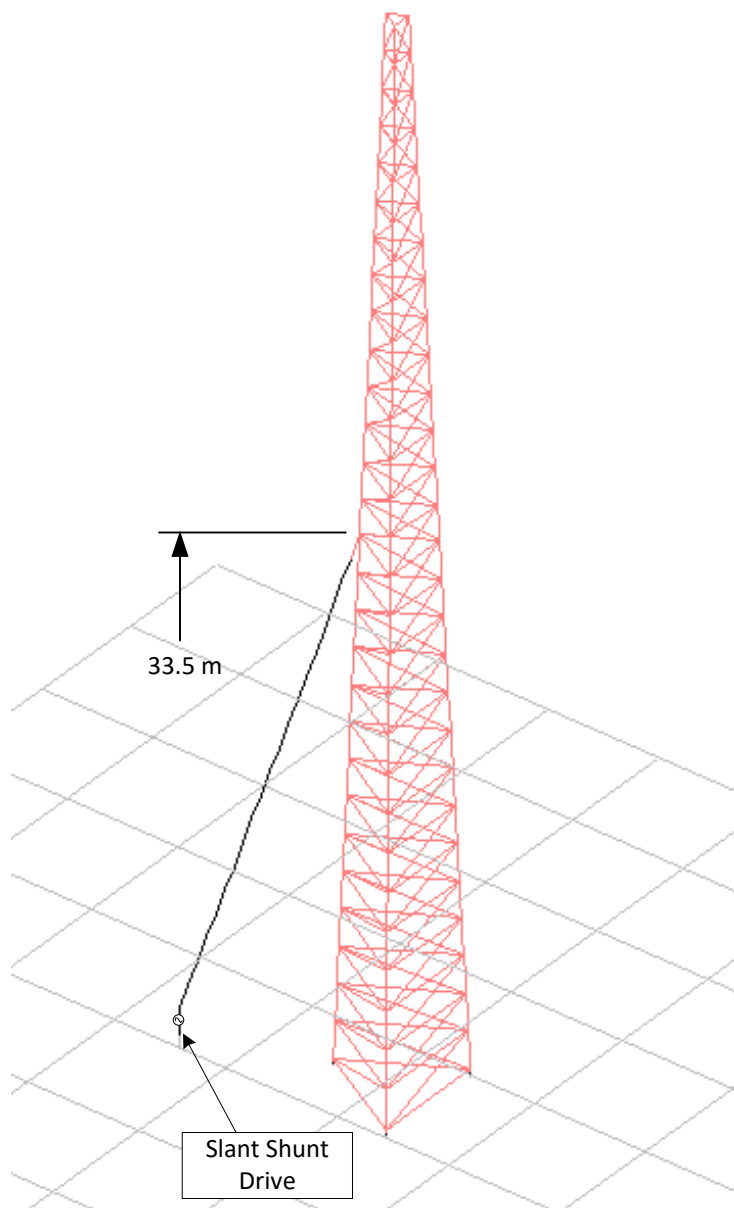
du Treil, Lundin & Rackley, Inc.
3135 Southgate Circle
Sarasota, FL 34239
(941) 329-6008

December 29, 2017

⁴ Nguyen. [Attached for reference.]

WSRQ Slant Wire Shunt Fed Analysis - Tabulation of Results

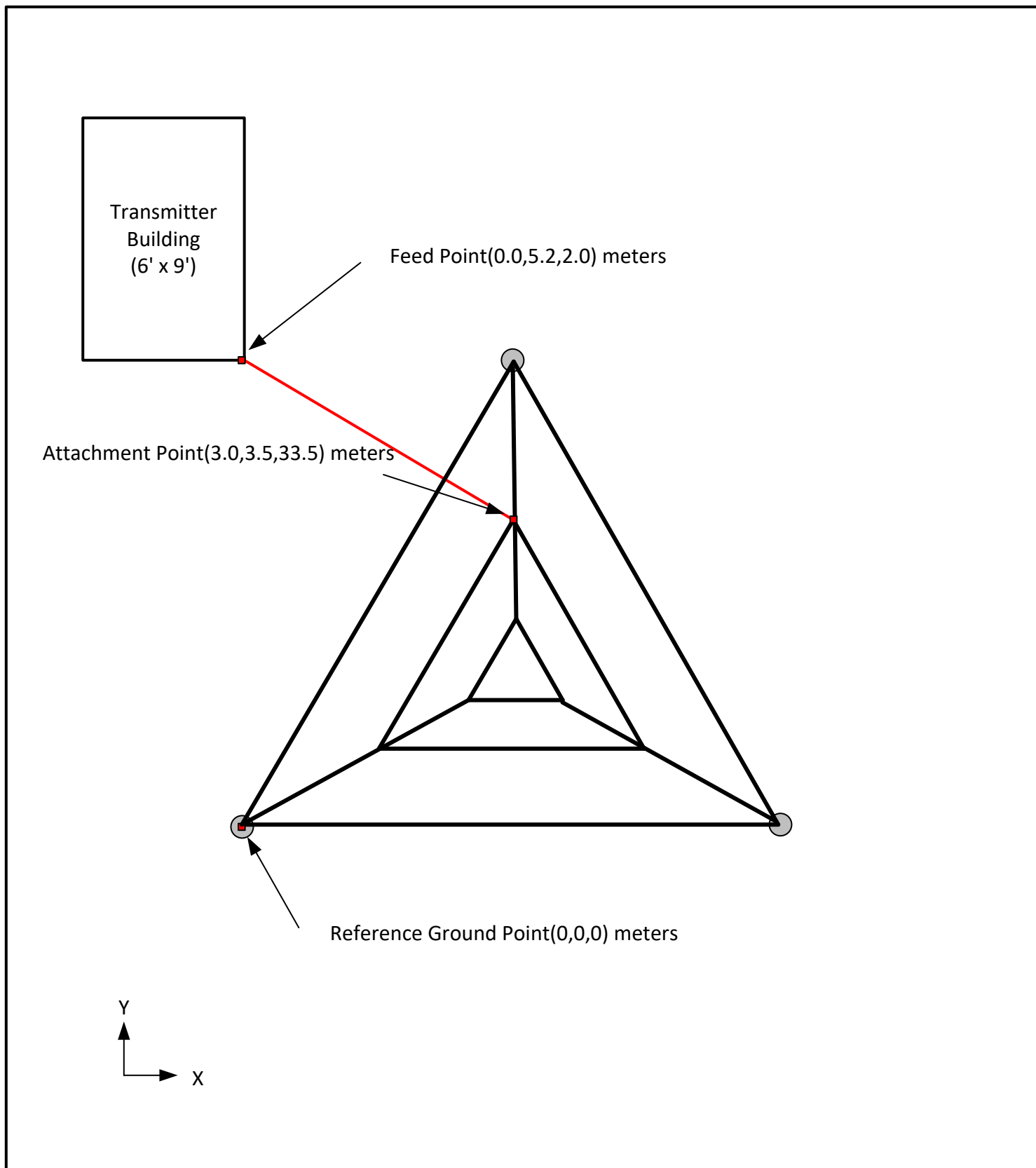
Theta(Θ)	f(Θ)FCC	Shunt Fed Radiation Pattern(mV/m) - rms				Normalized				Average of Azimuths	f(Θ)Shunt/ f(Θ)FCC	f(Θ)Shunt/ f(Θ)FCC(dB)	Shunt Non-Circularity(dB)
	82.5 deg	az 0	az90	az180	az270	az 0	az90	az180	az270				
0	1.000	319.0	307.1	309.8	321.7	1.000	1.000	1.000	1.000	1.000	1.000	0.0000	0.402
5	0.995	317.3	305.4	308.1	320.0	0.995	0.995	0.995	0.995	0.995	1.000	-0.0003	0.404
10	0.979	312.4	300.5	303.1	315.1	0.979	0.978	0.979	0.979	0.979	1.000	-0.0012	0.411
15	0.954	304.3	292.4	295.0	307.0	0.954	0.952	0.952	0.954	0.953	1.000	-0.0028	0.423
20	0.919	293.3	281.4	284.0	296.0	0.920	0.916	0.917	0.920	0.918	0.999	-0.0049	0.440
25	0.876	279.7	267.7	270.4	282.4	0.877	0.872	0.873	0.878	0.875	0.999	-0.0075	0.463
30	0.825	263.8	251.8	254.4	266.5	0.827	0.820	0.821	0.828	0.824	0.999	-0.0105	0.492
35	0.769	246.0	233.9	236.5	248.6	0.771	0.762	0.764	0.773	0.767	0.998	-0.0139	0.530
40	0.707	226.6	214.5	217.1	229.2	0.710	0.698	0.701	0.713	0.706	0.998	-0.0177	0.579
45	0.642	206.0	193.8	196.4	208.6	0.646	0.631	0.634	0.649	0.640	0.998	-0.0216	0.640
50	0.573	184.6	172.3	174.9	187.2	0.579	0.561	0.565	0.582	0.572	0.997	-0.0257	0.719
55	0.503	162.5	150.2	152.8	165.1	0.509	0.489	0.493	0.513	0.501	0.997	-0.0299	0.822
60	0.432	140.1	127.8	130.3	142.7	0.439	0.416	0.421	0.444	0.430	0.996	-0.0342	0.961
65	0.360	117.6	105.2	107.7	120.2	0.369	0.342	0.348	0.374	0.358	0.996	-0.0386	1.157
70	0.287	95.0	82.5	85.1	97.5	0.298	0.269	0.275	0.303	0.286	0.995	-0.0434	1.452



GEOMETRIC DISPLAY OF MODEL(SLANT)

RADIO STATION WSRQ
SARASOTA, FLORIDA
1220 KHZ 770 W-D 15 W-N U ND

du Treil, Lundin & Rackley, Inc. Sarasota, Florida



PLAN VIEW – SLANT SHUNT FED SYSTEM

RADIO STATION WSRQ

SARASOTA, FLORIDA

1220 KHZ 770 W-D 15 W-N U ND

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

NEC4 Input File

CM WSRQ Slant Wire Shunt Fed Model 24
CM
CM
CM
CE
GW 1 3 0 5.2 0 0 5.2 2 0.001632
GW 2 20 0 5.2 2 3 3.52 33.49 0.001632
GW 3 2 0 0 0 0 0 2 0.005
GW 4 2 6 0 0 6 0 2 0.005
GW 5 2 3 5.2 0 3 5.2 2 0.005
GW 6 2 0 0 2 6 0 2 0.005
GW 7 2 6 0 2 3 5.2 2 0.005
GW 8 2 3 5.2 2 0 0 2 0.005
GW 9 3 0 0 2 0.13 0.08 4.86 0.005
GW 10 3 6 0 2 5.87 0.08 4.86 0.005
GW 11 3 3 5.2 2 3 5.04 4.86 0.005
GW 12 3 0 0 2 5.87 0.08 4.86 0.005
GW 13 3 6 0 2 3 5.04 4.86 0.005
GW 14 3 3 5.2 2 0.13 0.08 4.86 0.005
GW 15 1 0.13 0.08 4.86 5.87 0.08 4.86 0.005
GW 16 1 5.87 0.08 4.86 3 5.04 4.86 0.005
GW 17 1 3 5.04 4.86 0.13 0.08 4.86 0.005
GW 18 3 0.13 0.08 4.86 0.26 0.15 7.73 0.005
GW 19 3 5.87 0.08 4.86 5.74 0.15 7.73 0.005
GW 20 3 3 5.04 4.86 3 4.89 7.73 0.005
GW 21 3 0.13 0.08 4.86 5.74 0.15 7.73 0.005
GW 22 3 5.87 0.08 4.86 3 4.89 7.73 0.005
GW 23 3 3 5.04 4.86 0.26 0.15 7.73 0.005
GW 24 1 0.26 0.15 7.73 5.74 0.15 7.73 0.005
GW 25 1 5.74 0.15 7.73 3 4.89 7.73 0.005
GW 26 1 3 4.89 7.73 0.26 0.15 7.73 0.005
GW 27 3 0.26 0.15 7.73 0.39 0.23 10.59 0.005
GW 28 3 5.74 0.15 7.73 5.61 0.23 10.59 0.005
GW 29 3 3 4.89 7.73 3 4.74 10.59 0.005
GW 30 3 0.26 0.15 7.73 5.61 0.23 10.59 0.005
GW 31 3 5.74 0.15 7.73 3 4.74 10.59 0.005
GW 32 3 3 4.89 7.73 0.39 0.23 10.59 0.005
GW 33 1 0.39 0.23 10.59 5.61 0.23 10.59 0.005
GW 34 1 5.61 0.23 10.59 3 4.74 10.59 0.005
GW 35 1 3 4.74 10.59 0.39 0.23 10.59 0.005
GW 36 3 0.39 0.23 10.59 0.53 0.3 13.45 0.005
GW 37 3 5.61 0.23 10.59 5.47 0.3 13.45 0.005
GW 38 3 3 4.74 10.59 3 4.59 13.45 0.005
GW 39 3 0.39 0.23 10.59 5.47 0.3 13.45 0.005
GW 40 3 5.61 0.23 10.59 3 4.59 13.45 0.005
GW 41 3 3 4.74 10.59 0.53 0.3 13.45 0.005
GW 42 1 0.53 0.3 13.45 5.47 0.3 13.45 0.005
GW 43 1 5.47 0.3 13.45 3 4.59 13.45 0.005
GW 44 1 3 4.59 13.45 0.53 0.3 13.45 0.005
GW 45 3 0.53 0.3 13.45 0.66 0.38 16.32 0.005
GW 46 3 5.47 0.3 13.45 5.34 0.38 16.32 0.005
GW 47 3 3 4.59 13.45 3 4.44 16.32 0.005

GW	48	3	0.53	0.3	13.45	5.34	0.38	16.32	0.005
GW	49	3	5.47	0.3	13.45	3	4.44	16.32	0.005
GW	50	3	3	4.59	13.45	0.66	0.38	16.32	0.005
GW	51	1	0.66	0.38	16.32	5.34	0.38	16.32	0.005
GW	52	1	5.34	0.38	16.32	3	4.44	16.32	0.005
GW	53	1	3	4.44	16.32	0.66	0.38	16.32	0.005
GW	54	3	0.66	0.38	16.32	0.79	0.46	19.18	0.005
GW	55	3	5.34	0.38	16.32	5.21	0.46	19.18	0.005
GW	56	3	3	4.44	16.32	3	4.28	19.18	0.005
GW	57	3	0.66	0.38	16.32	5.21	0.46	19.18	0.005
GW	58	3	5.34	0.38	16.32	3	4.28	19.18	0.005
GW	59	3	3	4.44	16.32	0.79	0.46	19.18	0.005
GW	60	1	0.79	0.46	19.18	5.21	0.46	19.18	0.005
GW	61	1	5.21	0.46	19.18	3	4.28	19.18	0.005
GW	62	1	3	4.28	19.18	0.79	0.46	19.18	0.005
GW	63	4	0.79	0.46	19.18	0.92	0.53	22.04	0.005
GW	64	4	5.21	0.46	19.18	5.08	0.53	22.04	0.005
GW	65	4	3	4.28	19.18	3	4.13	22.04	0.005
GW	66	4	0.79	0.46	19.18	5.08	0.53	22.04	0.005
GW	67	4	5.21	0.46	19.18	3	4.13	22.04	0.005
GW	68	4	3	4.28	19.18	0.92	0.53	22.04	0.005
GW	69	1	0.92	0.53	22.04	5.08	0.53	22.04	0.005
GW	70	1	5.08	0.53	22.04	3	4.13	22.04	0.005
GW	71	1	3	4.13	22.04	0.92	0.53	22.04	0.005
GW	72	5	0.92	0.53	22.04	1.05	0.61	24.91	0.005
GW	73	5	5.08	0.53	22.04	4.95	0.61	24.91	0.005
GW	74	5	3	4.13	22.04	3	3.98	24.91	0.005
GW	75	5	0.92	0.53	22.04	4.95	0.61	24.91	0.005
GW	76	5	5.08	0.53	22.04	3	3.98	24.91	0.005
GW	77	5	3	4.13	22.04	1.05	0.61	24.91	0.005
GW	78	1	1.05	0.61	24.91	4.95	0.61	24.91	0.005
GW	79	1	4.95	0.61	24.91	3	3.98	24.91	0.005
GW	80	1	3	3.98	24.91	1.05	0.61	24.91	0.005
GW	81	5	1.05	0.61	24.91	1.18	0.68	27.77	0.005
GW	82	5	4.95	0.61	24.91	4.82	0.68	27.77	0.005
GW	83	5	3	3.98	24.91	3	3.83	27.77	0.005
GW	84	5	1.05	0.61	24.91	4.82	0.68	27.77	0.005
GW	85	5	4.95	0.61	24.91	3	3.83	27.77	0.005
GW	86	5	3	3.98	24.91	1.18	0.68	27.77	0.005
GW	87	1	1.18	0.68	27.77	4.82	0.68	27.77	0.005
GW	88	1	4.82	0.68	27.77	3	3.83	27.77	0.005
GW	89	1	3	3.83	27.77	1.18	0.68	27.77	0.005
GW	90	5	1.18	0.68	27.77	1.32	0.76	30.63	0.005
GW	91	5	4.82	0.68	27.77	4.68	0.76	30.63	0.005
GW	92	5	3	3.83	27.77	3	3.68	30.63	0.005
GW	93	5	1.18	0.68	27.77	4.68	0.76	30.63	0.005
GW	94	5	4.82	0.68	27.77	3	3.68	30.63	0.005
GW	95	5	3	3.83	27.77	1.32	0.76	30.63	0.005
GW	96	1	1.32	0.76	30.63	4.68	0.76	30.63	0.005
GW	97	1	4.68	0.76	30.63	3	3.68	30.63	0.005
GW	98	1	3	3.68	30.63	1.32	0.76	30.63	0.005
GW	99	5	1.32	0.76	30.63	1.45	0.84	33.49	0.01
GW	100	5	4.68	0.76	30.63	4.55	0.84	33.49	0.01
GW	101	5	3	3.68	30.63	3	3.52	33.49	0.01

GW	102	5	1.32	0.76	30.63	4.55	0.84	33.49	0.005
GW	103	5	4.68	0.76	30.63	3	3.52	33.49	0.005
GW	104	5	3	3.68	30.63	1.45	0.84	33.49	0.005
GW	105	1	1.45	0.84	33.49	4.55	0.84	33.49	0.005
GW	106	1	4.55	0.84	33.49	3	3.52	33.49	0.005
GW	107	1	3	3.52	33.49	1.45	0.84	33.49	0.005
GW	108	5	1.45	0.84	33.49	1.58	0.91	36.36	0.01
GW	109	5	4.55	0.84	33.49	4.42	0.91	36.36	0.01
GW	110	5	3	3.52	33.49	3	3.37	36.36	0.01
GW	111	5	1.45	0.84	33.49	4.42	0.91	36.36	0.005
GW	112	5	4.55	0.84	33.49	3	3.37	36.36	0.005
GW	113	5	3	3.52	33.49	1.58	0.91	36.36	0.005
GW	114	1	1.58	0.91	36.36	4.42	0.91	36.36	0.005
GW	115	1	4.42	0.91	36.36	3	3.37	36.36	0.005
GW	116	1	3	3.37	36.36	1.58	0.91	36.36	0.005
GW	117	5	1.58	0.91	36.36	1.71	0.99	39.22	0.01
GW	118	5	4.42	0.91	36.36	4.29	0.99	39.22	0.01
GW	119	5	3	3.37	36.36	3	3.22	39.22	0.01
GW	120	5	1.58	0.91	36.36	4.29	0.99	39.22	0.005
GW	121	5	4.42	0.91	36.36	3	3.22	39.22	0.005
GW	122	5	3	3.37	36.36	1.71	0.99	39.22	0.005
GW	123	1	1.71	0.99	39.22	4.29	0.99	39.22	0.005
GW	124	1	4.29	0.99	39.22	3	3.22	39.22	0.005
GW	125	1	3	3.22	39.22	1.71	0.99	39.22	0.005
GW	126	5	1.71	0.99	39.22	1.84	1.06	42.08	0.01
GW	127	5	4.29	0.99	39.22	4.16	1.06	42.08	0.01
GW	128	5	3	3.22	39.22	3	3.07	42.08	0.01
GW	129	5	1.71	0.99	39.22	4.16	1.06	42.08	0.005
GW	130	5	4.29	0.99	39.22	3	3.07	42.08	0.005
GW	131	5	3	3.22	39.22	1.84	1.06	42.08	0.005
GW	132	1	1.84	1.06	42.08	4.16	1.06	42.08	0.005
GW	133	1	4.16	1.06	42.08	3	3.07	42.08	0.005
GW	134	1	3	3.07	42.08	1.84	1.06	42.08	0.005
GW	135	5	1.84	1.06	42.08	1.97	1.14	44.95	0.01
GW	136	5	4.16	1.06	42.08	4.03	1.14	44.95	0.01
GW	137	5	3	3.07	42.08	3	2.92	44.95	0.01
GW	138	5	1.84	1.06	42.08	4.03	1.14	44.95	0.005
GW	139	5	4.16	1.06	42.08	3	2.92	44.95	0.005
GW	140	5	3	3.07	42.08	1.97	1.14	44.95	0.005
GW	141	1	1.97	1.14	44.95	4.03	1.14	44.95	0.005
GW	142	1	4.03	1.14	44.95	3	2.92	44.95	0.005
GW	143	1	3	2.92	44.95	1.97	1.14	44.95	0.005
GW	144	5	1.97	1.14	44.95	2.11	1.22	47.81	0.01
GW	145	5	4.03	1.14	44.95	3.89	1.22	47.81	0.01
GW	146	5	3	2.92	44.95	3	2.76	47.81	0.01
GW	147	5	1.97	1.14	44.95	3.89	1.22	47.81	0.005
GW	148	5	4.03	1.14	44.95	3	2.76	47.81	0.005
GW	149	5	3	2.92	44.95	2.11	1.22	47.81	0.005
GW	150	1	2.11	1.22	47.81	3.89	1.22	47.81	0.005
GW	151	1	3.89	1.22	47.81	3	2.76	47.81	0.005
GW	152	1	3	2.76	47.81	2.11	1.22	47.81	0.005
GW	153	5	2.11	1.22	47.81	2.24	1.29	50.67	0.01
GW	154	5	3.89	1.22	47.81	3.76	1.29	50.67	0.01
GW	155	5	3	2.76	47.81	3	2.61	50.67	0.01

GW 156 5 2.11 1.22 47.81 3.76 1.29 50.67 0.005
GW 157 5 3.89 1.22 47.81 3 2.61 50.67 0.005
GW 158 5 3 2.76 47.81 2.24 1.29 50.67 0.005
GW 159 1 2.24 1.29 50.67 3.76 1.29 50.67 0.005
GW 160 1 3.76 1.29 50.67 3 2.61 50.67 0.005
GW 161 1 3 2.61 50.67 2.24 1.29 50.67 0.005
GW 162 5 2.24 1.29 50.67 2.37 1.37 53.54 0.01
GW 163 5 3.76 1.29 50.67 3.63 1.37 53.54 0.01
GW 164 5 3 2.61 50.67 3 2.46 53.54 0.01
GW 165 5 2.24 1.29 50.67 3.63 1.37 53.54 0.005
GW 166 5 3.76 1.29 50.67 3 2.46 53.54 0.005
GW 167 5 3 2.61 50.67 2.37 1.37 53.54 0.005
GW 168 1 2.37 1.37 53.54 3.63 1.37 53.54 0.005
GW 169 1 3.63 1.37 53.54 3 2.46 53.54 0.005
GW 170 1 3 2.46 53.54 2.37 1.37 53.54 0.005
GW 171 5 2.37 1.37 53.54 2.5 1.44 56.4 0.01
GW 172 5 3.63 1.37 53.54 3.5 1.44 56.4 0.01
GW 173 5 3 2.46 53.54 3 2.31 56.4 0.01
GW 174 5 2.37 1.37 53.54 3.5 1.44 56.4 0.005
GW 175 5 3.63 1.37 53.54 3 2.31 56.4 0.005
GW 176 5 3 2.46 53.54 2.5 1.44 56.4 0.005
GW 177 1 2.5 1.44 56.4 3.5 1.44 56.4 0.005
GW 178 1 3.5 1.44 56.4 3 2.31 56.4 0.005
GW 179 1 3 2.31 56.4 2.5 1.44 56.4 0.005
GS 0 0 1
GE 1
GN 1
EX 0 1 2 0 1866.77 0
FR 0 1 0 0 1.22 1
RP 0 15 5 1000 -90 0 5 90 1000
EN

NEC4 Output File

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*****
*
*   NUMERICAL ELECTROMAGNETICS CODE (NEC-4.1)
*   Enhanced version 4.23NA copyright
*   1997-2003 Nittany Scientific
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WSRQ Slant Wire Shunt Fed Model 24

- - - STRUCTURE SPECIFICATION - - -

COORDINATES MUST BE INPUT IN
METERS OR BE SCALED TO METERS
BEFORE STRUCTURE INPUT IS ENDED

WIRE NO.	X1	Y1	Z1	X2	Y2	Z2	RADIUS	NO. OF SEG.	FIRST SEG.	LAST SEG.	TAG NO.
1	0.00000	5.20000	0.00000	0.00000	5.20000	2.00000	0.00163	3	1	3	1
2	0.00000	5.20000	2.00000	3.00000	3.52000	33.49000	0.00163	20	4	23	2
3	0.00000	0.00000	0.00000	0.00000	0.00000	2.00000	0.00500	2	24	25	3
4	6.00000	0.00000	0.00000	6.00000	0.00000	2.00000	0.00500	2	26	27	4
5	3.00000	5.20000	0.00000	3.00000	5.20000	2.00000	0.00500	2	28	29	5
6	0.00000	0.00000	2.00000	6.00000	0.00000	2.00000	0.00500	2	30	31	6
7	6.00000	0.00000	2.00000	3.00000	5.20000	2.00000	0.00500	2	32	33	7
8	3.00000	5.20000	2.00000	0.00000	0.00000	2.00000	0.00500	2	34	35	8
9	0.00000	0.00000	2.00000	0.13000	0.08000	4.86000	0.00500	3	36	38	9
10	6.00000	0.00000	2.00000	5.87000	0.08000	4.86000	0.00500	3	39	41	10
11	3.00000	5.20000	2.00000	3.00000	5.04000	4.86000	0.00500	3	42	44	11
12	0.00000	0.00000	2.00000	5.87000	0.08000	4.86000	0.00500	3	45	47	12
13	6.00000	0.00000	2.00000	3.00000	5.04000	4.86000	0.00500	3	48	50	13
14	3.00000	5.20000	2.00000	0.13000	0.08000	4.86000	0.00500	3	51	53	14
15	0.13000	0.08000	4.86000	5.87000	0.08000	4.86000	0.00500	1	54	54	15
16	5.87000	0.08000	4.86000	3.00000	5.04000	4.86000	0.00500	1	55	55	16
17	3.00000	5.04000	4.86000	0.13000	0.08000	4.86000	0.00500	1	56	56	17
18	0.13000	0.08000	4.86000	0.26000	0.15000	7.73000	0.00500	3	57	59	18
19	5.87000	0.08000	4.86000	5.74000	0.15000	7.73000	0.00500	3	60	62	19
20	3.00000	5.04000	4.86000	3.00000	4.89000	7.73000	0.00500	3	63	65	20
21	0.13000	0.08000	4.86000	5.74000	0.15000	7.73000	0.00500	3	66	68	21
22	5.87000	0.08000	4.86000	3.00000	4.89000	7.73000	0.00500	3	69	71	22
23	3.00000	5.04000	4.86000	0.26000	0.15000	7.73000	0.00500	3	72	74	23
24	0.26000	0.15000	7.73000	5.74000	0.15000	7.73000	0.00500	1	75	75	24
25	5.74000	0.15000	7.73000	3.00000	4.89000	7.73000	0.00500	1	76	76	25
26	3.00000	4.89000	7.73000	0.26000	0.15000	7.73000	0.00500	1	77	77	26
27	0.26000	0.15000	7.73000	0.39000	0.23000	10.59000	0.00500	3	78	80	27
28	5.74000	0.15000	7.73000	5.61000	0.23000	10.59000	0.00500	3	81	83	28
29	3.00000	4.89000	7.73000	3.00000	4.74000	10.59000	0.00500	3	84	86	29
30	0.26000	0.15000	7.73000	5.61000	0.23000	10.59000	0.00500	3	87	89	30
31	5.74000	0.15000	7.73000	3.00000	4.74000	10.59000	0.00500	3	90	92	31
32	3.00000	4.89000	7.73000	0.39000	0.23000	10.59000	0.00500	3	93	95	32
33	0.39000	0.23000	10.59000	5.61000	0.23000	10.59000	0.00500	1	96	96	33
34	5.61000	0.23000	10.59000	3.00000	4.74000	10.59000	0.00500	1	97	97	34
35	3.00000	4.74000	10.59000	0.39000	0.23000	10.59000	0.00500	1	98	98	35
36	0.39000	0.23000	10.59000	0.53000	0.30000	13.45000	0.00500	3	99	101	36
37	5.61000	0.23000	10.59000	5.47000	0.30000	13.45000	0.00500	3	102	104	37
38	3.00000	4.74000	10.59000	3.00000	4.59000	13.45000	0.00500	3	105	107	38
39	0.39000	0.23000	10.59000	5.47000	0.30000	13.45000	0.00500	3	108	110	39
40	5.61000	0.23000	10.59000	3.00000	4.59000	13.45000	0.00500	3	111	113	40
41	3.00000	4.74000	10.59000	0.53000	0.30000	13.45000	0.00500	3	114	116	41
42	0.53000	0.30000	13.45000	5.47000	0.30000	13.45000	0.00500	1	117	117	42
43	5.47000	0.30000	13.45000	3.00000	4.59000	13.45000	0.00500	1	118	118	43
44	3.00000	4.59000	13.45000	0.53000	0.30000	13.45000	0.00500	1	119	119	44
45	0.53000	0.30000	13.45000	0.66000	0.38000	16.32000	0.00500	3	120	122	45
46	5.47000	0.30000	13.45000	5.34000	0.38000	16.32000	0.00500	3	123	125	46
47	3.00000	4.59000	13.45000	3.00000	4.44000	16.32000	0.00500	3	126	128	47
48	0.53000	0.30000	13.45000	5.34000	0.38000	16.32000	0.00500	3	129	131	48
49	5.47000	0.30000	13.45000	3.00000	4.44000	16.32000	0.00500	3	132	134	49
50	3.00000	4.59000	13.45000	0.66000	0.38000	16.32000	0.00500	3	135	137	50

51	0.66000	0.38000	16.32000	5.34000	0.38000	16.32000	0.00500	1	138	138	51
52	5.34000	0.38000	16.32000	3.00000	4.44000	16.32000	0.00500	1	139	139	52
53	3.00000	4.44000	16.32000	0.66000	0.38000	16.32000	0.00500	1	140	140	53
54	0.66000	0.38000	16.32000	0.79000	0.46000	19.18000	0.00500	3	141	143	54
55	5.34000	0.38000	16.32000	5.21000	0.46000	19.18000	0.00500	3	144	146	55
56	3.00000	4.44000	16.32000	3.00000	4.28000	19.18000	0.00500	3	147	149	56
57	0.66000	0.38000	16.32000	5.21000	0.46000	19.18000	0.00500	3	150	152	57
58	5.34000	0.38000	16.32000	3.00000	4.28000	19.18000	0.00500	3	153	155	58
59	3.00000	4.44000	16.32000	0.79000	0.46000	19.18000	0.00500	3	156	158	59
60	0.79000	0.46000	19.18000	5.21000	0.46000	19.18000	0.00500	1	159	159	60
61	5.21000	0.46000	19.18000	3.00000	4.28000	19.18000	0.00500	1	160	160	61
62	3.00000	4.28000	19.18000	0.79000	0.46000	19.18000	0.00500	1	161	161	62
63	0.79000	0.46000	19.18000	0.92000	0.53000	22.04000	0.00500	4	162	165	63
64	5.21000	0.46000	19.18000	5.08000	0.53000	22.04000	0.00500	4	166	169	64
65	3.00000	4.28000	19.18000	3.00000	4.13000	22.04000	0.00500	4	170	173	65
66	0.79000	0.46000	19.18000	5.08000	0.53000	22.04000	0.00500	4	174	177	66
67	5.21000	0.46000	19.18000	3.00000	4.13000	22.04000	0.00500	4	178	181	67
68	3.00000	4.28000	19.18000	0.92000	0.53000	22.04000	0.00500	4	182	185	68
69	0.92000	0.53000	22.04000	5.08000	0.53000	22.04000	0.00500	1	186	186	69
70	5.08000	0.53000	22.04000	3.00000	4.13000	22.04000	0.00500	1	187	187	70
71	3.00000	4.13000	22.04000	0.92000	0.53000	22.04000	0.00500	1	188	188	71
72	0.92000	0.53000	22.04000	1.05000	0.61000	24.91000	0.00500	5	189	193	72
73	5.08000	0.53000	22.04000	4.95000	0.61000	24.91000	0.00500	5	194	198	73
74	3.00000	4.13000	22.04000	3.00000	3.98000	24.91000	0.00500	5	199	203	74
75	0.92000	0.53000	22.04000	4.95000	0.61000	24.91000	0.00500	5	204	208	75
76	5.08000	0.53000	22.04000	3.00000	3.98000	24.91000	0.00500	5	209	213	76
77	3.00000	4.13000	22.04000	1.05000	0.61000	24.91000	0.00500	5	214	218	77
78	1.05000	0.61000	24.91000	4.95000	0.61000	24.91000	0.00500	1	219	219	78
79	4.95000	0.61000	24.91000	3.00000	3.98000	24.91000	0.00500	1	220	220	79
80	3.00000	3.98000	24.91000	1.05000	0.61000	24.91000	0.00500	1	221	221	80
81	1.05000	0.61000	24.91000	1.18000	0.68000	27.77000	0.00500	5	222	226	81
82	4.95000	0.61000	24.91000	4.82000	0.68000	27.77000	0.00500	5	227	231	82
83	3.00000	3.98000	24.91000	3.00000	3.83000	27.77000	0.00500	5	232	236	83
84	1.05000	0.61000	24.91000	4.82000	0.68000	27.77000	0.00500	5	237	241	84
85	4.95000	0.61000	24.91000	3.00000	3.83000	27.77000	0.00500	5	242	246	85
86	3.00000	3.98000	24.91000	1.18000	0.68000	27.77000	0.00500	5	247	251	86
87	1.18000	0.68000	27.77000	4.82000	0.68000	27.77000	0.00500	1	252	252	87
88	4.82000	0.68000	27.77000	3.00000	3.83000	27.77000	0.00500	1	253	253	88
89	3.00000	3.83000	27.77000	1.18000	0.68000	27.77000	0.00500	1	254	254	89
90	1.18000	0.68000	27.77000	1.32000	0.76000	30.63000	0.00500	5	255	259	90
91	4.82000	0.68000	27.77000	4.68000	0.76000	30.63000	0.00500	5	260	264	91
92	3.00000	3.83000	27.77000	3.00000	3.68000	30.63000	0.00500	5	265	269	92
93	1.18000	0.68000	27.77000	4.68000	0.76000	30.63000	0.00500	5	270	274	93
94	4.82000	0.68000	27.77000	3.00000	3.68000	30.63000	0.00500	5	275	279	94
95	3.00000	3.83000	27.77000	1.32000	0.76000	30.63000	0.00500	5	280	284	95
96	1.32000	0.76000	30.63000	4.68000	0.76000	30.63000	0.00500	1	285	285	96
97	4.68000	0.76000	30.63000	3.00000	3.68000	30.63000	0.00500	1	286	286	97
98	3.00000	3.68000	30.63000	1.32000	0.76000	30.63000	0.00500	1	287	287	98
99	1.32000	0.76000	30.63000	1.45000	0.84000	33.49000	0.01000	5	288	292	99
100	4.68000	0.76000	30.63000	4.55000	0.84000	33.49000	0.01000	5	293	297	100
101	3.00000	3.68000	30.63000	3.00000	3.52000	33.49000	0.01000	5	298	302	101
102	1.32000	0.76000	30.63000	4.55000	0.84000	33.49000	0.00500	5	303	307	102
103	4.68000	0.76000	30.63000	3.00000	3.52000	33.49000	0.00500	5	308	312	103
104	3.00000	3.68000	30.63000	1.45000	0.84000	33.49000	0.00500	5	313	317	104
105	1.45000	0.84000	33.49000	4.55000	0.84000	33.49000	0.00500	1	318	318	105
106	4.55000	0.84000	33.49000	3.00000	3.52000	33.49000	0.00500	1	319	319	106
107	3.00000	3.52000	33.49000	1.45000	0.84000	33.49000	0.00500	1	320	320	107
108	1.45000	0.84000	33.49000	1.58000	0.91000	36.36000	0.01000	5	321	325	108
109	4.55000	0.84000	33.49000	4.42000	0.91000	36.36000	0.01000	5	326	330	109
110	3.00000	3.52000	33.49000	3.00000	3.37000	36.36000	0.01000	5	331	335	110
111	1.45000	0.84000	33.49000	4.42000	0.91000	36.36000	0.00500	5	336	340	111
112	4.55000	0.84000	33.49000	3.00000	3.37000	36.36000	0.00500	5	341	345	112
113	3.00000	3.52000	33.49000	1.58000	0.91000	36.36000	0.00500	5	346	350	113
114	1.58000	0.91000	36.36000	4.42000	0.91000	36.36000	0.00500	1	351	351	114
115	4.42000	0.91000	36.36000	3.00000	3.37000	36.36000	0.00500	1	352	352	115
116	3.00000	3.37000	36.36000	1.58000	0.91000	36.36000	0.00500	1	353	353	116
117	1.58000	0.91000	36.36000	1.71000	0.99000	39.22000	0.01000	5	354	358	117
118	4.42000	0.91000	36.36000	4.29000	0.99000	39.22000	0.01000	5	359	363	118
119	3.00000	3.37000	36.36000	3.00000	3.22000	39.22000	0.01000	5	364	368	119
120	1.58000	0.91000	36.36000	4.29000	0.99000	39.22000	0.00500	5	369	373	120
121	4.42000	0.91000	36.36000	3.00000	3.22000	39.22000	0.00500	5	374	378	121
122	3.00000	3.37000	36.36000	1.71000	0.99000	39.22000	0.00500	5	379	383	122
123	1.71000	0.99000	39.22000	4.29000	0.99000	39.22000	0.00500	1	384	384	123
124	4.29000	0.99000	39.22000	3.00000	3.22000	39.22000	0.00500	1	385	385	124
125	3.00000	3.22000	39.22000	1.71000	0.99000	39.22000	0.00500	1	386	386	125
126	1.71000	0.99000	39.22000	1.84000	1.06000	42.08000	0.01000	5	387	391	126
127	4.29000	0.99000	39.22000	4.16000	1.06000	42.08000	0.01000	5	392	396	127
128	3.00000	3.22000	39.22000	3.00000	3.07000	42.08000	0.01000	5	397	401	128
129	1.71000	0.99000	39.22000	4.16000	1.06000	42.08000	0.00500	5	402	406	129
130	4.29000	0.99000	39.22000	3.00000	3.07000	42.08000	0.00500	5	407	411	130
131	3.00000	3.22000	39.22000	1.84000	1.06000	42.08000	0.00500	5	412	416	131
132	1.84000	1.06000	42.08000	4.16000	1.06000	42.08000	0.00500	1	417	417	132
133	4.16000	1.06000	42.08000	3.00000	3.07000	42.08000	0.00500	1	418	418	133
134	3.00000	3.07000	42.08000	1.84000	1.06000	42.08000	0.00500	1	419	419	134
135	1.84000	1.06000	42.08000	1.97000	1.14000	44.95000	0.01000	5	420	424	135
136	4.16000	1.06000	42.08000	4.03000	1.14000	44.95000	0.01000	5	425	429	136
137	3.00000	3.07000	42.08000	3.00000	2.92000	44.95000	0.01000	5	430	434	137
138	1.84000	1.06000	42.08000	4.03000	1.14000	44.95000	0.00500	5	435	439	138
139	4.16000	1.06000	42.08000	3.00000	2.92000	44.95000	0.00500	5	440	444	139
140	3.00000	3.07000	42.08000	1.97000	1.14000	44.95000	0.00500	5	445	449	140
141	1.97000	1.14000	44.95000	4.03000	1.14000	44.95000	0.00500	1	450	450	141
142	4.03000	1.14000	44.95000	3.00000	2.92000	44.95000	0.00500	1	451	451	142

143	3.00000	2.92000	44.95000	1.97000	1.14000	44.95000	0.00500	1	452	452	143
144	1.97000	1.14000	44.95000	2.11000	1.22000	47.81000	0.01000	5	453	457	144
145	4.03000	1.14000	44.95000	3.89000	1.22000	47.81000	0.01000	5	458	462	145
146	3.00000	2.92000	44.95000	3.00000	2.76000	47.81000	0.01000	5	463	467	146
147	1.97000	1.14000	44.95000	3.89000	1.22000	47.81000	0.00500	5	468	472	147
148	4.03000	1.14000	44.95000	3.00000	2.76000	47.81000	0.00500	5	473	477	148
149	3.00000	2.92000	44.95000	2.11000	1.22000	47.81000	0.00500	5	478	482	149
150	2.11000	1.22000	47.81000	3.89000	1.22000	47.81000	0.00500	1	483	483	150
151	3.89000	1.22000	47.81000	3.00000	2.76000	47.81000	0.00500	1	484	484	151
152	3.00000	2.76000	47.81000	2.11000	1.22000	47.81000	0.00500	1	485	485	152
153	2.11000	1.22000	47.81000	2.24000	1.29000	50.67000	0.01000	5	486	490	153
154	3.89000	1.22000	47.81000	3.76000	1.29000	50.67000	0.01000	5	491	495	154
155	3.00000	2.76000	47.81000	3.00000	2.61000	50.67000	0.01000	5	496	500	155
156	2.11000	1.22000	47.81000	3.76000	1.29000	50.67000	0.00500	5	501	505	156
157	3.89000	1.22000	47.81000	3.00000	2.61000	50.67000	0.00500	5	506	510	157
158	3.00000	2.76000	47.81000	2.24000	1.29000	50.67000	0.00500	5	511	515	158
159	2.24000	1.29000	50.67000	3.76000	1.29000	50.67000	0.00500	1	516	516	159
160	3.76000	1.29000	50.67000	3.00000	2.61000	50.67000	0.00500	1	517	517	160
161	3.00000	2.61000	50.67000	2.24000	1.29000	50.67000	0.00500	1	518	518	161
162	2.24000	1.29000	50.67000	2.37000	1.37000	53.54000	0.01000	5	519	523	162
163	3.76000	1.29000	50.67000	3.63000	1.37000	53.54000	0.01000	5	524	528	163
164	3.00000	2.61000	50.67000	3.00000	2.46000	53.54000	0.01000	5	529	533	164
165	2.24000	1.29000	50.67000	3.63000	1.37000	53.54000	0.00500	5	534	538	165
166	3.76000	1.29000	50.67000	3.00000	2.46000	53.54000	0.00500	5	539	543	166
167	3.00000	2.61000	50.67000	2.37000	1.37000	53.54000	0.00500	5	544	548	167
168	2.37000	1.37000	53.54000	3.63000	1.37000	53.54000	0.00500	1	549	549	168
169	3.63000	1.37000	53.54000	3.00000	2.46000	53.54000	0.00500	1	550	550	169
170	3.00000	2.46000	53.54000	2.37000	1.37000	53.54000	0.00500	1	551	551	170
171	2.37000	1.37000	53.54000	2.50000	1.44000	56.40000	0.01000	5	552	556	171
172	3.63000	1.37000	53.54000	3.50000	1.44000	56.40000	0.01000	5	557	561	172
173	3.00000	2.46000	53.54000	3.00000	2.31000	56.40000	0.01000	5	562	566	173
174	2.37000	1.37000	53.54000	3.50000	1.44000	56.40000	0.00500	5	567	571	174
175	3.63000	1.37000	53.54000	3.00000	2.31000	56.40000	0.00500	5	572	576	175
176	3.00000	2.46000	53.54000	2.50000	1.44000	56.40000	0.00500	5	577	581	176
177	2.50000	1.44000	56.40000	3.50000	1.44000	56.40000	0.00500	1	582	582	177
178	3.50000	1.44000	56.40000	3.00000	2.31000	56.40000	0.00500	1	583	583	178
179	3.00000	2.31000	56.40000	2.50000	1.44000	56.40000	0.00500	1	584	584	179

STRUCTURE SCALED BY FACTOR 1.00000

GROUND PLANE SPECIFIED.

WHERE WIRE ENDS TOUCH GROUND, CURRENT WILL BE INTERPOLATED TO IMAGE IN GROUND PLANE.

TOTAL SEGMENTS USED= 584 NO. SEG. IN A SYMMETRIC CELL= 584 SYMMETRY FLAG= 0

- MULTIPLE WIRE JUNCTIONS -

JUNCTION	SEGMENTS	(- FOR END 1, + FOR END 2)
1	23 302 312 319 -320 -331 -346	
2	25 -30 35 -36 -45	
3	27 31 -32 -39 -48	
4	29 33 -34 -42 -51	
5	38 53 -54 56 -57 -66	
6	41 47 54 -55 -60 -69	
7	44 50 55 -56 -63 -72	
8	59 74 -75 77 -78 -87	
9	62 68 75 -76 -81 -90	
10	65 71 76 -77 -84 -93	
11	80 95 -96 98 -99 -108	
12	83 89 96 -97 -102 -111	
13	86 92 97 -98 -105 -114	
14	101 116 -117 119 -120 -129	
15	104 110 117 -118 -123 -132	
16	107 113 118 -119 -126 -135	
17	122 137 -138 140 -141 -150	
18	125 131 138 -139 -144 -153	
19	128 134 139 -140 -147 -156	
20	143 158 -159 161 -162 -174	
21	146 152 159 -160 -166 -178	
22	149 155 160 -161 -170 -182	
23	165 185 -186 188 -189 -204	
24	169 177 186 -187 -194 -209	
25	173 181 187 -188 -199 -214	
26	193 218 -219 221 -222 -237	
27	198 208 219 -220 -227 -242	
28	203 213 220 -221 -232 -247	
29	226 251 -252 254 -255 -270	
30	231 241 252 -253 -260 -275	
31	236 246 253 -254 -265 -280	
32	259 284 -285 287 -288 -303	
33	264 274 285 -286 -293 -308	
34	269 279 286 -287 -298 -313	
35	292 317 -318 320 -321 -336	
36	297 307 318 -319 -326 -341	
37	325 350 -351 353 -354 -369	
38	330 340 351 -352 -359 -374	
39	335 345 352 -353 -364 -379	
40	358 383 -384 386 -387 -402	
41	363 373 384 -385 -392 -407	
42	368 378 385 -386 -397 -412	
43	391 416 -417 419 -420 -435	

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44      396  406  417 -418 -425 -440
45      401  411  418 -419 -430 -445
46      424  449 -450  452 -453 -468
47      429  439  450 -451 -458 -473
48      434  444  451 -452 -463 -478
49      457  482 -483  485 -486 -501
50      462  472  483 -484 -491 -506
51      467  477  484 -485 -496 -511
52      490  515 -516  518 -519 -534
53      495  505  516 -517 -524 -539
54      500  510  517 -518 -529 -544
55      523  548 -549  551 -552 -567
56      528  538  549 -550 -557 -572
57      533  543  550 -551 -562 -577
58      556  581 -582  584
59      561  571  582 -583
60      566  576  583 -584

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- - - - SEGMENTATION DATA - - - -

COORDINATES IN METERS

I+ AND I- INDICATE THE SEGMENTS BEFORE AND AFTER I

SEG. NO.	COORDINATES OF SEG. CENTER			SEG. LENGTH	ORIENTATION ANGLES		WIRE RADIUS	CONNECTION DATA			TAG NO.
	X	Y	Z		ALPHA	BETA		I-	I	I+	
1	0.00000	5.20000	0.33333	0.66667	90.00000	0.00000	0.00163	1	1	2	1
2	0.00000	5.20000	1.00000	0.66667	90.00000	0.00000	0.00163	1	2	3	1
3	0.00000	5.20000	1.66667	0.66667	90.00000	0.00000	0.00163	2	3	4	1
4	0.07500	5.15800	2.78725	1.58386	83.76860	-29.24883	0.00163	3	4	5	2
5	0.22500	5.07400	4.36175	1.58386	83.76860	-29.24883	0.00163	4	5	6	2
6	0.37500	4.99000	5.93625	1.58386	83.76860	-29.24883	0.00163	5	6	7	2
7	0.52500	4.90600	7.51075	1.58386	83.76860	-29.24883	0.00163	6	7	8	2
8	0.67500	4.82200	9.08525	1.58386	83.76860	-29.24883	0.00163	7	8	9	2
9	0.82500	4.73800	10.65975	1.58386	83.76860	-29.24883	0.00163	8	9	10	2
10	0.97500	4.65400	12.23425	1.58386	83.76860	-29.24883	0.00163	9	10	11	2
11	1.12500	4.57000	13.80875	1.58386	83.76860	-29.24883	0.00163	10	11	12	2
12	1.27500	4.48600	15.38325	1.58386	83.76860	-29.24883	0.00163	11	12	13	2
13	1.42500	4.40200	16.95775	1.58386	83.76860	-29.24883	0.00163	12	13	14	2
14	1.57500	4.31800	18.53225	1.58386	83.76860	-29.24883	0.00163	13	14	15	2
15	1.72500	4.23400	20.10675	1.58386	83.76860	-29.24883	0.00163	14	15	16	2
16	1.87500	4.15000	21.68125	1.58386	83.76860	-29.24883	0.00163	15	16	17	2
17	2.02500	4.06600	23.25575	1.58386	83.76860	-29.24883	0.00163	16	17	18	2
18	2.17500	3.98200	24.83025	1.58386	83.76860	-29.24883	0.00163	17	18	19	2
19	2.32500	3.89800	26.40475	1.58386	83.76860	-29.24883	0.00163	18	19	20	2
20	2.47500	3.81400	27.97925	1.58386	83.76860	-29.24883	0.00163	19	20	21	2
21	2.62500	3.73000	29.55375	1.58386	83.76860	-29.24883	0.00163	20	21	22	2
22	2.77500	3.64600	31.12825	1.58386	83.76860	-29.24883	0.00163	21	22	23	2
23	2.92500	3.56200	32.70275	1.58386	83.76860	-29.24883	0.00163	22	23	-302	2
24	0.00000	0.00000	0.50000	1.00000	90.00000	0.00000	0.00500	24	24	25	3
25	0.00000	0.00000	1.50000	1.00000	90.00000	0.00000	0.00500	24	25	30	3
26	6.00000	0.00000	0.50000	1.00000	90.00000	0.00000	0.00500	26	26	27	4
27	6.00000	0.00000	1.50000	1.00000	90.00000	0.00000	0.00500	26	27	-31	4
28	3.00000	5.20000	0.50000	1.00000	90.00000	0.00000	0.00500	28	28	29	5
29	3.00000	5.20000	1.50000	1.00000	90.00000	0.00000	0.00500	28	29	-33	5
30	1.50000	0.00000	2.00000	3.00000	0.00000	0.00000	0.00500	35	30	31	6
31	4.50000	0.00000	2.00000	3.00000	0.00000	0.00000	0.00500	30	31	32	6
32	5.25000	1.30000	2.00000	3.00167	0.00000	119.98164	0.00500	-39	32	33	7
33	3.75000	3.90000	2.00000	3.00167	0.00000	119.98164	0.00500	32	33	34	7
34	2.25000	3.90000	2.00000	3.00167	0.00000	-119.98164	0.00500	-42	34	35	8
35	0.75000	1.30000	2.00000	3.00167	0.00000	-119.98164	0.00500	34	35	36	8
36	0.02167	0.01333	2.47667	0.95469	86.94492	31.60750	0.00500	-45	36	37	9
37	0.06500	0.04000	3.43000	0.95469	86.94492	31.60750	0.00500	36	37	38	9
38	0.10833	0.06667	4.38333	0.95469	86.94492	31.60750	0.00500	37	38	-53	9
39	5.97833	0.01333	2.47667	0.95469	86.94492	148.39250	0.00500	-48	39	40	10
40	5.93500	0.04000	3.43000	0.95469	86.94492	148.39250	0.00500	39	40	41	10
41	5.89167	0.06667	4.38333	0.95469	86.94492	148.39250	0.00500	40	41	-47	10
42	3.00000	5.17333	2.47667	0.95482	86.79798	-90.00000	0.00500	-51	42	43	11
43	3.00000	5.12000	3.43000	0.95482	86.79798	-90.00000	0.00500	42	43	44	11
44	3.00000	5.06667	4.38333	0.95482	86.79798	-90.00000	0.00500	43	44	-50	11
45	0.97833	0.01333	2.47667	2.17672	25.97432	0.78081	0.00500	25	45	46	12
46	2.93500	0.04000	3.43000	2.17672	25.97432	0.78081	0.00500	45	46	47	12
47	4.89167	0.06667	4.38333	2.17672	25.97432	0.78081	0.00500	46	47	-54	12
48	5.50000	0.84000	2.47667	2.17514	25.99454	120.76272	0.00500	27	48	49	13
49	4.50000	2.52000	3.43000	2.17514	25.99454	120.76272	0.00500	48	49	50	13
50	3.50000	4.20000	4.38333	2.17514	25.99454	120.76272	0.00500	49	50	-55	13
51	2.52167	4.34667	2.47667	2.17641	25.97825	-119.27267	0.00500	29	51	52	14
52	1.56500	2.64000	3.43000	2.17641	25.97825	-119.27267	0.00500	51	52	53	14
53	0.60833	0.93333	4.38333	2.17641	25.97825	-119.27267	0.00500	52	53	54	14
54	3.00000	0.08000	4.86000	5.74000	0.00000	0.00000	0.00500	56	54	55	15
55	4.43500	2.56000	4.86000	5.73049	0.00000	120.05492	0.00500	-60	55	56	16
56	1.56500	2.56000	4.86000	5.73049	0.00000	-120.05492	0.00500	-63	56	57	17
57	0.15167	0.09167	5.33833	0.95793	87.05499	28.30076	0.00500	-66	57	58	18
58	0.19500	0.11500	6.29500	0.95793	87.05499	28.30076	0.00500	57	58	59	18
59	0.23833	0.13833	7.25167	0.95793	87.05499	28.30076	0.00500	58	59	-74	18
60	5.84833	0.09167	5.33833	0.95793	87.05499	151.69924	0.00500	-69	60	61	19
61	5.80500	0.11500	6.29500	0.95793	87.05499	151.69924	0.00500	60	61	62	19
62	5.76167	0.13833	7.25167	0.95793	87.05499	151.69924	0.00500	61	62	-68	19

63	3.00000	5.01500	5.33833	0.95797	87.00817	-90.00000	0.00500	-72	63	64	20
64	3.00000	4.96500	6.29500	0.95797	87.00817	-90.00000	0.00500	63	64	65	20
65	3.00000	4.91500	7.25167	0.95797	87.00817	-90.00000	0.00500	64	65	-71	20
66	1.06500	0.09167	5.33833	2.10063	27.09186	0.71488	0.00500	38	66	67	21
67	2.93500	0.11500	6.29500	2.10063	27.09186	0.71488	0.00500	66	67	68	21
68	4.80500	0.13833	7.25167	2.10063	27.09186	0.71488	0.00500	67	68	-75	21
69	5.39167	0.88167	5.33833	2.09788	27.13032	120.82341	0.00500	41	69	70	22
70	4.43500	2.48500	6.29500	2.09788	27.13032	120.82341	0.00500	69	70	71	22
71	3.47833	4.08833	7.25167	2.09788	27.13032	120.82341	0.00500	70	71	-76	22
72	2.54333	4.22500	5.33833	2.09912	27.11303	-119.26310	0.00500	44	72	73	23
73	1.63000	2.59500	6.29500	2.09912	27.11303	-119.26310	0.00500	72	73	74	23
74	0.71667	0.96500	7.25167	2.09912	27.11303	-119.26310	0.00500	73	74	75	23
75	3.00000	0.15000	7.73000	5.48000	0.00000	0.00000	0.00500	77	75	76	24
76	4.37000	2.52000	7.73000	5.47496	0.00000	120.03045	0.00500	-81	76	77	25
77	1.63000	2.52000	7.73000	5.47496	0.00000	-120.03045	0.00500	-84	77	78	26
78	0.28167	0.16333	8.20667	0.95469	86.94492	31.60750	0.00500	-87	78	79	27
79	0.32500	0.19000	9.16000	0.95469	86.94492	31.60750	0.00500	78	79	80	27
80	0.36833	0.21667	10.11333	0.95469	86.94492	31.60750	0.00500	79	80	-95	27
81	5.71833	0.16333	8.20667	0.95469	86.94492	148.39250	0.00500	-90	81	82	28
82	5.67500	0.19000	9.16000	0.95469	86.94492	148.39250	0.00500	81	82	83	28
83	5.63167	0.21667	10.11333	0.95469	86.94492	148.39250	0.00500	82	83	-89	28
84	3.00000	4.86500	8.20667	0.95464	86.99773	-90.00000	0.00500	-93	84	85	29
85	3.00000	4.81500	9.16000	0.95464	86.99773	-90.00000	0.00500	84	85	86	29
86	3.00000	4.76500	10.11333	0.95464	86.99773	-90.00000	0.00500	85	86	-92	29
87	1.15167	0.16333	8.20667	2.02233	28.12538	0.85670	0.00500	59	87	88	30
88	2.93500	0.19000	9.16000	2.02233	28.12538	0.85670	0.00500	87	88	89	30
89	4.71833	0.21667	10.11333	2.02233	28.12538	0.85670	0.00500	88	89	-96	30
90	5.28333	0.91500	8.20667	2.02087	28.14754	120.83508	0.00500	62	90	91	31
91	4.37000	2.44500	9.16000	2.02087	28.14754	120.83508	0.00500	90	91	92	31
92	3.45667	3.97500	10.11333	2.02087	28.14754	120.83508	0.00500	91	92	-97	31
93	2.56500	4.11333	8.20667	2.01955	28.16758	-119.25257	0.00500	65	93	94	32
94	1.69500	2.56000	9.16000	2.01955	28.16758	-119.25257	0.00500	93	94	95	32
95	0.82500	1.00667	10.11333	2.01955	28.16758	-119.25257	0.00500	94	95	96	32
96	3.00000	0.23000	10.59000	5.22000	0.00000	0.00000	0.00500	98	96	97	33
97	4.30500	2.48500	10.59000	5.21078	0.00000	120.05857	0.00500	-102	97	98	34
98	1.69500	2.48500	10.59000	5.21078	0.00000	-120.05857	0.00500	-105	98	99	35
99	0.41333	0.24167	11.06667	0.95476	86.86739	26.56505	0.00500	-108	99	100	36
100	0.46000	0.26500	12.02000	0.95476	86.86739	26.56505	0.00500	99	100	101	36
101	0.50667	0.28833	12.97333	0.95476	86.86739	26.56505	0.00500	100	101	-116	36
102	5.58667	0.24167	11.06667	0.95476	86.86739	153.43495	0.00500	-111	102	103	37
103	5.54000	0.26500	12.02000	0.95476	86.86739	153.43495	0.00500	102	103	104	37
104	5.49333	0.28833	12.97333	0.95476	86.86739	153.43495	0.00500	103	104	-110	37
105	3.00000	4.71500	11.06667	0.95464	86.99773	-90.00000	0.00500	-114	105	106	38
106	3.00000	4.66500	12.02000	0.95464	86.99773	-90.00000	0.00500	105	106	107	38
107	3.00000	4.61500	12.97333	0.95464	86.99773	-90.00000	0.00500	106	107	-113	38
108	1.23667	0.24167	11.06667	1.94339	29.37684	0.78946	0.00500	80	108	109	39
109	2.93000	0.26500	12.02000	1.94339	29.37684	0.78946	0.00500	108	109	110	39
110	4.62333	0.28833	12.97333	1.94339	29.37684	0.78946	0.00500	109	110	-117	39
111	5.17500	0.95667	11.06667	1.94369	29.37191	120.90575	0.00500	83	111	112	40
112	4.30500	2.41000	12.02000	1.94369	29.37191	120.90575	0.00500	111	112	113	40
113	3.43500	3.86333	12.97333	1.94369	29.37191	120.90575	0.00500	112	113	-118	40
114	2.58833	4.00000	11.06667	1.94348	29.37533	-119.08746	0.00500	86	114	115	41
115	1.76500	2.52000	12.02000	1.94348	29.37533	-119.08746	0.00500	114	115	116	41
116	0.94167	1.04000	12.97333	1.94348	29.37533	-119.08746	0.00500	115	116	117	41
117	3.00000	0.30000	13.45000	4.94000	0.00000	0.00000	0.00500	119	117	118	42
118	4.23500	2.44500	13.45000	4.95025	0.00000	119.93151	0.00500	-123	118	119	43
119	1.76500	2.44500	13.45000	4.95025	0.00000	-119.93151	0.00500	-126	119	120	44
120	0.55167	0.31333	13.92833	0.95802	86.95554	31.60750	0.00500	-129	120	121	45
121	0.59500	0.34000	14.88500	0.95802	86.95554	31.60750	0.00500	120	121	122	45
122	0.63833	0.36667	15.84167	0.95802	86.95554	31.60750	0.00500	121	122	-137	45
123	5.44833	0.31333	13.92833	0.95802	86.95554	148.39250	0.00500	-132	123	124	46
124	5.40500	0.34000	14.88500	0.95802	86.95554	148.39250	0.00500	123	124	125	46
125	5.36167	0.36667	15.84167	0.95802	86.95554	148.39250	0.00500	124	125	-131	46
126	3.00000	4.56500	13.92833	0.95797	87.00817	-90.00000	0.00500	-135	126	127	47
127	3.00000	4.51500	14.88500	0.95797	87.00817	-90.00000	0.00500	126	127	128	47
128	3.00000	4.46500	15.84167	0.95797	87.00817	-90.00000	0.00500	127	128	-134	47
129	1.33167	0.31333	13.92833	1.86724	30.81993	0.95286	0.00500	101	129	130	48
130	2.93500	0.34000	14.88500	1.86724	30.81993	0.95286	0.00500	129	130	131	48
131	4.53833	0.36667	15.84167	1.86724	30.81993	0.95286	0.00500	130	131	-138	48
132	5.05833	0.99000	13.92833	1.87016	30.76669	120.82108	0.00500	104	132	133	49
133	4.23500	2.37000	14.88500	1.87016	30.76669	120.82108	0.00500	132	133	134	49
134	3.41167	3.75000	15.84167	1.87016	30.76669	120.82108	0.00500	133	134	-139	49
135	2.61000	3.88833	13.92833	1.86895	30.78882	-119.06616	0.00500	107	135	136	50
136	1.83000	2.48500	14.88500	1.86895	30.78882	-119.06616	0.00500	135	136	137	50
137	1.05000	1.08167	15.84167	1.86895	30.78882	-119.06616	0.00500	136	137	138	50
138	3.00000	0.38000	16.32000	4.68000	0.00000	0.00000	0.00500	140	138	139	51
139	4.17000	2.41000	16.32000	4.68606	0.00000	119.95720	0.00500	-144	139	140	52
140	1.83000	2.41000	16.32000	4.68606	0.00000	-119.95720	0.00500	-147	140	141	53
141	0.68167	0.39333	16.79667	0.95469	86.94492	31.60750	0.00500	-150	141	142	54
142	0.72500	0.42000	17.75000	0.95469	86.94492	31.60750	0.00500	141	142	143	54
143	0.76833	0.44667	18.70333	0.95469	86.94492	31.60750	0.00500	142	143	-158	54
144	5.31833	0.39333	16.79667	0.95469	86.94492	148.39250	0.00500	-153	144	145	55
145	5.27500	0.42000	17.75000	0.95469	86.94492	148.39250	0.00500	144	145	146	55
146	5.23167	0.44667	18.70333	0.95469	86.94492	148.39250	0.00500	145	146	-152	55
147	3.00000	4.41333	16.79667	0.95482	86.79798	-90.00000	0.00500	-156	147	148	56
148	3.00000	4.36000	17.75000	0.95482	86.79798	-90.00000	0.00500	147	148	149	56
149	3.00000	4.30667	18.70333	0.95482	86.79798	-90.00000	0.00500	148	149	-155	56
150	1.41833	0.39333	16.79667	1.79160	32.14831	1.00729	0.00500	122	150	151	57
151	2.93500	0.42000	17.75000	1.79160	32.14831	1.00729	0.00500	150	151	152	57
152	4.45167	0.44667	18.70333	1.79160	32.14831	1.00729	0.00500	151	152	-159	57
153	4.95000	1.03000	16.79667	1.79088	32.16284	120.96376	0.00500	125	153	154	58
154	4.17000	2.33000	17.75000	1.79088	32.16284	120.96376	0.00500	153	154	155	58

155	3.39000	3.63000	18.70333	1.79088	32.16284	120.96376	0.00500	154	155	-160	58
156	2.63167	3.77667	16.79667	1.79208	32.13859	-119.04238	0.00500	128	156	157	59
157	1.89500	2.45000	17.75000	1.79208	32.13859	-119.04238	0.00500	156	157	158	59
158	1.15833	1.12333	18.70333	1.79208	32.13859	-119.04238	0.00500	157	158	159	59
159	3.00000	0.46000	19.18000	4.42000	0.00000	0.00000	0.00500	161	159	160	60
160	4.10500	2.37000	19.18000	4.41322	0.00000	120.05084	0.00500	-166	160	161	61
161	1.89500	2.37000	19.18000	4.41322	0.00000	-120.05084	0.00500	-170	161	162	62
162	0.80625	0.46875	19.53750	0.71595	87.04471	28.30076	0.00500	-174	162	163	63
163	0.83875	0.48625	20.25250	0.71595	87.04471	28.30076	0.00500	162	163	164	63
164	0.87125	0.50375	20.96750	0.71595	87.04471	28.30076	0.00500	163	164	165	63
165	0.90375	0.52125	21.68250	0.71595	87.04471	28.30076	0.00500	164	165	-185	63
166	5.19375	0.46875	19.53750	0.71595	87.04471	151.69924	0.00500	-178	166	167	64
167	5.16125	0.48625	20.25250	0.71595	87.04471	151.69924	0.00500	166	167	168	64
168	5.12875	0.50375	20.96750	0.71595	87.04471	151.69924	0.00500	167	168	169	64
169	5.09625	0.52125	21.68250	0.71595	87.04471	151.69924	0.00500	168	169	-177	64
170	3.00000	4.26125	19.53750	0.71598	86.99773	-90.00000	0.00500	-182	170	171	65
171	3.00000	4.22375	20.25250	0.71598	86.99773	-90.00000	0.00500	170	171	172	65
172	3.00000	4.18625	20.96750	0.71598	86.99773	-90.00000	0.00500	171	172	173	65
173	3.00000	4.14875	21.68250	0.71598	86.99773	-90.00000	0.00500	172	173	-181	65
174	1.32625	0.46875	19.53750	1.28910	33.68655	0.93481	0.00500	143	174	175	66
175	2.39875	0.48625	20.25250	1.28910	33.68655	0.93481	0.00500	174	175	176	66
176	3.47125	0.50375	20.96750	1.28910	33.68655	0.93481	0.00500	175	176	177	66
177	4.54375	0.52125	21.68250	1.28910	33.68655	0.93481	0.00500	176	177	-186	66
178	4.93375	0.91875	19.53750	1.28775	33.72684	121.05550	0.00500	146	178	179	67
179	4.38125	1.83625	20.25250	1.28775	33.72684	121.05550	0.00500	178	179	180	67
180	3.82875	2.75375	20.96750	1.28775	33.72684	121.05550	0.00500	179	180	181	67
181	3.27625	3.67125	21.68250	1.28775	33.72684	121.05550	0.00500	180	181	-187	67
182	2.74000	3.81125	19.53750	1.28862	33.70099	-119.01567	0.00500	149	182	183	68
183	2.22000	2.87375	20.25250	1.28862	33.70099	-119.01567	0.00500	182	183	184	68
184	1.70000	1.93625	20.96750	1.28862	33.70099	-119.01567	0.00500	183	184	185	68
185	1.18000	0.99875	21.68250	1.28862	33.70099	-119.01567	0.00500	184	185	186	68
186	3.00000	0.53000	22.04000	4.16000	0.00000	0.00000	0.00500	188	186	187	69
187	4.04000	2.33000	22.04000	4.15769	0.00000	120.01837	0.00500	-194	187	188	70
188	1.96000	2.33000	22.04000	4.15769	0.00000	-120.01837	0.00500	-199	188	189	71
189	0.93300	0.53800	22.32700	0.57481	86.95554	31.60750	0.00500	-204	189	190	72
190	0.95900	0.55400	22.90100	0.57481	86.95554	31.60750	0.00500	189	190	191	72
191	0.98500	0.57000	23.47500	0.57481	86.95554	31.60750	0.00500	190	191	192	72
192	1.01100	0.58600	24.04900	0.57481	86.95554	31.60750	0.00500	191	192	193	72
193	1.03700	0.60200	24.62300	0.57481	86.95554	31.60750	0.00500	192	193	-218	72
194	5.06700	0.53800	22.32700	0.57481	86.95554	148.39250	0.00500	-209	194	195	73
195	5.04100	0.55400	22.90100	0.57481	86.95554	148.39250	0.00500	194	195	196	73
196	5.01500	0.57000	23.47500	0.57481	86.95554	148.39250	0.00500	195	196	197	73
197	4.98900	0.58600	24.04900	0.57481	86.95554	148.39250	0.00500	196	197	198	73
198	4.96300	0.60200	24.62300	0.57481	86.95554	148.39250	0.00500	197	198	-208	73
199	3.00000	4.11500	22.32700	0.57478	87.00817	-90.00000	0.00500	-214	199	200	74
200	3.00000	4.08500	22.90100	0.57478	87.00817	-90.00000	0.00500	199	200	201	74
201	3.00000	4.05500	23.47500	0.57478	87.00817	-90.00000	0.00500	200	201	202	74
202	3.00000	4.02500	24.04900	0.57478	87.00817	-90.00000	0.00500	201	202	203	74
203	3.00000	3.99500	24.62300	0.57478	87.00817	-90.00000	0.00500	202	203	-213	74
204	1.32300	0.53800	22.32700	0.98963	35.45157	1.13724	0.00500	165	204	205	75
205	2.12900	0.55400	22.90100	0.98963	35.45157	1.13724	0.00500	204	205	206	75
206	2.93500	0.57000	23.47500	0.98963	35.45157	1.13724	0.00500	205	206	207	75
207	3.74100	0.58600	24.04900	0.98963	35.45157	1.13724	0.00500	206	207	208	75
208	4.54700	0.60200	24.62300	0.98963	35.45157	1.13724	0.00500	207	208	-219	75
209	4.87200	0.87500	22.32700	0.98926	35.46691	121.08571	0.00500	169	209	210	76
210	4.45600	1.56500	22.90100	0.98926	35.46691	121.08571	0.00500	209	210	211	76
211	4.04000	2.25500	23.47500	0.98926	35.46691	121.08571	0.00500	210	211	212	76
212	3.62400	2.94500	24.04900	0.98926	35.46691	121.08571	0.00500	211	212	213	76
213	3.20800	3.63500	24.62300	0.98926	35.46691	121.08571	0.00500	212	213	-220	76
214	2.80500	3.77800	22.32700	0.98853	35.49698	-118.98546	0.00500	173	214	215	77
215	2.41500	3.07400	22.90100	0.98853	35.49698	-118.98546	0.00500	214	215	216	77
216	2.02500	2.37000	23.47500	0.98853	35.49698	-118.98546	0.00500	215	216	217	77
217	1.63500	1.66600	24.04900	0.98853	35.49698	-118.98546	0.00500	216	217	218	77
218	1.24500	0.96200	24.62300	0.98853	35.49698	-118.98546	0.00500	217	218	219	77
219	3.00000	0.61000	24.91000	3.90000	0.00000	0.00000	0.00500	221	219	220	78
220	3.97500	2.29500	24.91000	3.89351	0.00000	120.05518	0.00500	-227	220	221	79
221	2.02500	2.29500	24.91000	3.89351	0.00000	-120.05518	0.00500	-232	221	222	80
222	1.06300	0.61700	25.19600	0.57276	87.04471	28.30076	0.00500	-237	222	223	81
223	1.08900	0.63100	25.76800	0.57276	87.04471	28.30076	0.00500	222	223	224	81
224	1.11500	0.64500	26.34000	0.57276	87.04471	28.30076	0.00500	223	224	225	81
225	1.14100	0.65900	26.91200	0.57276	87.04471	28.30076	0.00500	224	225	226	81
226	1.16700	0.67300	27.48400	0.57276	87.04471	28.30076	0.00500	225	226	-251	81
227	4.93700	0.61700	25.19600	0.57276	87.04471	151.69924	0.00500	-242	227	228	82
228	4.91100	0.63100	25.76800	0.57276	87.04471	151.69924	0.00500	227	228	229	82
229	4.88500	0.64500	26.34000	0.57276	87.04471	151.69924	0.00500	228	229	230	82
230	4.85900	0.65900	26.91200	0.57276	87.04471	151.69924	0.00500	229	230	231	82
231	4.83300	0.67300	27.48400	0.57276	87.04471	151.69924	0.00500	230	231	-241	82
232	3.00000	3.96500	25.19600	0.57279	86.99773	-90.00000	0.00500	-247	232	233	83
233	3.00000	3.93500	25.76800	0.57279	86.99773	-90.00000	0.00500	232	233	234	83
234	3.00000	3.90500	26.34000	0.57279	86.99773	-90.00000	0.00500	233	234	235	83
235	3.00000	3.87500	26.91200	0.57279	86.99773	-90.00000	0.00500	234	235	236	83
236	3.00000	3.84500	27.48400	0.57279	86.99773	-90.00000	0.00500	235	236	-246	83
237	1.42700	0.61700	25.19600	0.94652	37.17995	1.06373	0.00500	193	237	238	84
238	2.18100	0.63100	25.76800	0.94652	37.17995	1.06373	0.00500	237	238	239	84
239	2.93500	0.64500	26.34000	0.94652	37.17995	1.06373	0.00500	238	239	240	84
240	3.68900	0.65900	26.91200	0.94652	37.17995	1.06373	0.00500	239	240	241	84
241	4.44300	0.67300	27.48400	0.94652	37.17995	1.06373	0.00500	240	241	-252	84
242	4.75500	0.93200	25.19600	0.94553	37.22554	121.19868	0.00500	198	242	243	85
243	4.36500	1.57600	25.76800	0.94553	37.22554	121.19868	0.00500	242	243	244	85
244	3.97500	2.22000	26.34000	0.94553	37.22554	121.19868	0.00500	243	244	245	85
245	3.58500	2.86400	26.91200	0.94553	37.22554	121.19868	0.00500	244	245	246	85
246	3.19500	3.50800	27.48400	0.94553	37.22554	121.19868	0.00500	245	246	-253	85

247	2.81800	3.65000	25.19600	0.94619	37.19490-118.87740	0.00500	203	247	248	86
248	2.45400	2.99000	25.76800	0.94619	37.19490-118.87740	0.00500	247	248	249	86
249	2.09000	2.33000	26.34000	0.94619	37.19490-118.87740	0.00500	248	249	250	86
250	1.72600	1.67000	26.91200	0.94619	37.19490-118.87740	0.00500	249	250	251	86
251	1.36200	1.01000	27.48400	0.94619	37.19490-118.87740	0.00500	250	251	252	86
252	3.00000	0.68000	27.77000	3.64000	0.00000 0.00000	0.00500	254	252	253	87
253	3.91000	2.25500	27.77000	3.63798	0.00000 120.01837	0.00500	-260	253	254	88
254	2.09000	2.25500	27.77000	3.63798	0.00000-120.01837	0.00500	-265	254	255	89
255	1.19400	0.68800	28.05600	0.57291	86.77311 29.74488	0.00500	-270	255	256	90
256	1.22200	0.70400	28.62800	0.57291	86.77311 29.74488	0.00500	255	256	257	90
257	1.25000	0.72000	29.20000	0.57291	86.77311 29.74488	0.00500	256	257	258	90
258	1.27800	0.73600	29.77200	0.57291	86.77311 29.74488	0.00500	257	258	259	90
259	1.30600	0.75200	30.34400	0.57291	86.77311 29.74488	0.00500	258	259	-284	90
260	4.80600	0.68800	28.05600	0.57291	86.77311 150.25512	0.00500	-275	260	261	91
261	4.77800	0.70400	28.62800	0.57291	86.77311 150.25512	0.00500	260	261	262	91
262	4.75000	0.72000	29.20000	0.57291	86.77311 150.25512	0.00500	261	262	263	91
263	4.72200	0.73600	29.77200	0.57291	86.77311 150.25512	0.00500	262	263	264	91
264	4.69400	0.75200	30.34400	0.57291	86.77311 150.25512	0.00500	263	264	-274	91
265	3.00000	3.81500	28.05600	0.57279	86.99773 -90.00000	0.00500	-280	265	266	92
266	3.00000	3.78500	28.62800	0.57279	86.99773 -90.00000	0.00500	265	266	267	92
267	3.00000	3.75500	29.20000	0.57279	86.99773 -90.00000	0.00500	266	267	268	92
268	3.00000	3.72500	29.77200	0.57279	86.99773 -90.00000	0.00500	267	268	269	92
269	3.00000	3.69500	30.34400	0.57279	86.99773 -90.00000	0.00500	268	269	-279	92
270	1.53000	0.68800	28.05600	0.90412	39.24640 1.30939	0.00500	226	270	271	93
271	2.23000	0.70400	28.62800	0.90412	39.24640 1.30939	0.00500	270	271	272	93
272	2.93000	0.72000	29.20000	0.90412	39.24640 1.30939	0.00500	271	272	273	93
273	3.63000	0.73600	29.77200	0.90412	39.24640 1.30939	0.00500	272	273	274	93
274	4.33000	0.75200	30.34400	0.90412	39.24640 1.30939	0.00500	273	274	-285	93
275	4.63800	0.98000	28.05600	0.90536	39.18243 121.24379	0.00500	231	275	276	94
276	4.27400	1.58000	28.62800	0.90536	39.18243 121.24379	0.00500	275	276	277	94
277	3.91000	2.18000	29.20000	0.90536	39.18243 121.24379	0.00500	276	277	278	94
278	3.54600	2.78000	29.77200	0.90536	39.18243 121.24379	0.00500	277	278	279	94
279	3.18200	3.38000	30.34400	0.90536	39.18243 121.24379	0.00500	278	279	-286	94
280	2.83200	3.52300	28.05600	0.90392	39.25682-118.68886	0.00500	236	280	281	95
281	2.49600	2.90900	28.62800	0.90392	39.25682-118.68886	0.00500	280	281	282	95
282	2.16000	2.29500	29.20000	0.90392	39.25682-118.68886	0.00500	281	282	283	95
283	1.82400	1.68100	29.77200	0.90392	39.25682-118.68886	0.00500	282	283	284	95
284	1.48800	1.06700	30.34400	0.90392	39.25682-118.68886	0.00500	283	284	285	95
285	3.00000	0.76000	30.63000	3.36000	0.00000 0.00000	0.00500	287	285	286	96
286	3.84000	2.22000	30.63000	3.36880	0.00000 119.91365	0.00500	-293	286	287	97
287	2.16000	2.22000	30.63000	3.36880	0.00000-119.91365	0.00500	-298	287	288	98
288	1.33300	0.76800	30.91600	0.57281	86.94492 31.60750	0.01000	-303	288	289	99
289	1.35900	0.78400	31.48800	0.57281	86.94492 31.60750	0.01000	288	289	290	99
290	1.38500	0.80000	32.06000	0.57281	86.94492 31.60750	0.01000	289	290	291	99
291	1.41100	0.81600	32.63200	0.57281	86.94492 31.60750	0.01000	290	291	292	99
292	1.43700	0.83200	33.20400	0.57281	86.94492 31.60750	0.01000	291	292	-317	99
293	4.66700	0.76800	30.91600	0.57281	86.94492 148.39250	0.01000	-308	293	294	100
294	4.64100	0.78400	31.48800	0.57281	86.94492 148.39250	0.01000	293	294	295	100
295	4.61500	0.80000	32.06000	0.57281	86.94492 148.39250	0.01000	294	295	296	100
296	4.58900	0.81600	32.63200	0.57281	86.94492 148.39250	0.01000	295	296	297	100
297	4.56300	0.83200	33.20400	0.57281	86.94492 148.39250	0.01000	296	297	-307	100
298	3.00000	3.66400	30.91600	0.57289	86.79798 -90.00000	0.01000	-313	298	299	101
299	3.00000	3.63200	31.48800	0.57289	86.79798 -90.00000	0.01000	298	299	300	101
300	3.00000	3.60000	32.06000	0.57289	86.79798 -90.00000	0.01000	299	300	301	101
301	3.00000	3.56800	32.63200	0.57289	86.79798 -90.00000	0.01000	300	301	302	101
302	3.00000	3.53600	33.20400	0.57289	86.79798 -90.00000	0.01000	301	302	-312	101
303	1.64300	0.76800	30.91600	0.86299	41.51453 1.41880	0.00500	259	303	304	102
304	2.28900	0.78400	31.48800	0.86299	41.51453 1.41880	0.00500	303	304	305	102
305	2.93500	0.80000	32.06000	0.86299	41.51453 1.41880	0.00500	304	305	306	102
306	3.58100	0.81600	32.63200	0.86299	41.51453 1.41880	0.00500	305	306	307	102
307	4.22700	0.83200	33.20400	0.86299	41.51453 1.41880	0.00500	306	307	-318	102
308	4.51200	1.03600	30.91600	0.86301	41.51358 121.32869	0.00500	264	308	309	103
309	4.17600	1.58800	31.48800	0.86301	41.51358 121.32869	0.00500	308	309	310	103
310	3.84000	2.14000	32.06000	0.86301	41.51358 121.32869	0.00500	309	310	311	103
311	3.50400	2.69200	32.63200	0.86301	41.51358 121.32869	0.00500	310	311	312	103
312	3.16800	3.24400	33.20400	0.86301	41.51358 121.32869	0.00500	311	312	-319	103
313	2.84500	3.39600	30.91600	0.86366	41.47536-118.62459	0.00500	269	313	314	104
314	2.53500	2.82800	31.48800	0.86366	41.47536-118.62459	0.00500	313	314	315	104
315	2.22500	2.26000	32.06000	0.86366	41.47536-118.62459	0.00500	314	315	316	104
316	1.91500	1.69200	32.63200	0.86366	41.47536-118.62459	0.00500	315	316	317	104
317	1.60500	1.12400	33.20400	0.86366	41.47536-118.62459	0.00500	316	317	318	104
318	3.00000	0.84000	33.49000	3.10000	0.00000 0.00000	0.00500	320	318	319	105
319	3.77500	2.18000	33.49000	3.09595	0.00000 120.04329	0.00500	-326	319	320	106
320	2.22500	2.18000	33.49000	3.09595	0.00000-120.04329	0.00500	-331	320	321	107
321	1.46300	0.84700	33.77700	0.57476	87.05499 28.30076	0.01000	-336	321	322	108
322	1.48900	0.86100	34.35100	0.57476	87.05499 28.30076	0.01000	321	322	323	108
323	1.51500	0.87500	34.92500	0.57476	87.05499 28.30076	0.01000	322	323	324	108
324	1.54100	0.88900	35.49900	0.57476	87.05499 28.30076	0.01000	323	324	325	108
325	1.56700	0.90300	36.07300	0.57476	87.05499 28.30076	0.01000	324	325	-350	108
326	4.53700	0.84700	33.77700	0.57476	87.05499 151.69924	0.01000	-341	326	327	109
327	4.51100	0.86100	34.35100	0.57476	87.05499 151.69924	0.01000	326	327	328	109
328	4.48500	0.87500	34.92500	0.57476	87.05499 151.69924	0.01000	327	328	329	109
329	4.45900	0.88900	35.49900	0.57476	87.05499 151.69924	0.01000	328	329	330	109
330	4.43300	0.90300	36.07300	0.57476	87.05499 151.69924	0.01000	329	330	-340	109
331	3.00000	3.50500	33.77700	0.57478	87.00817 -90.00000	0.01000	-346	331	332	110
332	3.00000	3.47500	34.35100	0.57478	87.00817 -90.00000	0.01000	331	332	333	110
333	3.00000	3.44500	34.92500	0.57478	87.00817 -90.00000	0.01000	332	333	334	110
334	3.00000	3.41500	35.49900	0.57478	87.00817 -90.00000	0.01000	333	334	335	110
335	3.00000	3.38500	36.07300	0.57478	87.00817 -90.00000	0.01000	334	335	-345	110
336	1.74700	0.84700	33.77700	0.82614	44.01105 1.35016	0.00500	292	336	337	111
337	2.34100	0.86100	34.35100	0.82614	44.01105 1.35016	0.00500	336	337	338	111
338	2.93500	0.87500	34.92500	0.82614	44.01105 1.35016	0.00500	337	338	339	111

339	3.52900	0.88900	35.49900	0.82614	44.01105	1.35016	0.00500	338	339	340	111
340	4.12300	0.90300	36.07300	0.82614	44.01105	1.35016	0.00500	339	340	-351	111
341	4.39500	1.09300	33.77700	0.82560	44.04743	121.49364	0.00500	297	341	342	112
342	4.08500	1.59900	34.35100	0.82560	44.04743	121.49364	0.00500	341	342	343	112
343	3.77500	2.10500	34.92500	0.82560	44.04743	121.49364	0.00500	342	343	344	112
344	3.46500	2.61100	35.49900	0.82560	44.04743	121.49364	0.00500	343	344	345	112
345	3.15500	3.11700	36.07300	0.82560	44.04743	121.49364	0.00500	344	345	-352	112
346	2.85800	3.25900	33.77700	0.82621	44.00668	-118.54890	0.00500	23	346	347	113
347	2.57400	2.73700	34.35100	0.82621	44.00668	-118.54890	0.00500	346	347	348	113
348	2.29000	2.21500	34.92500	0.82621	44.00668	-118.54890	0.00500	347	348	349	113
349	2.00600	1.69300	35.49900	0.82621	44.00668	-118.54890	0.00500	348	349	350	113
350	1.72200	1.17100	36.07300	0.82621	44.00668	-118.54890	0.00500	349	350	351	113
351	3.00000	0.91000	36.36000	2.84000	0.00000	0.00000	0.00500	353	351	352	114
352	3.71000	2.14000	36.36000	2.84042	0.00000	119.99508	0.00500	-359	352	353	115
353	2.29000	2.14000	36.36000	2.84042	0.00000	-119.99508	0.00500	-364	353	354	116
354	1.59300	0.91800	36.64600	0.57281	86.94492	31.60750	0.01000	-369	354	355	117
355	1.61900	0.93400	37.21800	0.57281	86.94492	31.60750	0.01000	354	355	356	117
356	1.64500	0.95000	37.79000	0.57281	86.94492	31.60750	0.01000	355	356	357	117
357	1.67100	0.96600	38.36200	0.57281	86.94492	31.60750	0.01000	356	357	358	117
358	1.69700	0.98200	38.93400	0.57281	86.94492	31.60750	0.01000	357	358	-383	117
359	4.40700	0.91800	36.64600	0.57281	86.94492	148.39250	0.01000	-374	359	360	118
360	4.38100	0.93400	37.21800	0.57281	86.94492	148.39250	0.01000	359	360	361	118
361	4.35500	0.95000	37.79000	0.57281	86.94492	148.39250	0.01000	360	361	362	118
362	4.32900	0.96600	38.36200	0.57281	86.94492	148.39250	0.01000	361	362	363	118
363	4.30300	0.98200	38.93400	0.57281	86.94492	148.39250	0.01000	362	363	-373	118
364	3.00000	3.35500	36.64600	0.57279	86.99773	-90.00000	0.01000	-379	364	365	119
365	3.00000	3.32500	37.21800	0.57279	86.99773	-90.00000	0.01000	364	365	366	119
366	3.00000	3.29500	37.79000	0.57279	86.99773	-90.00000	0.01000	365	366	367	119
367	3.00000	3.26500	38.36200	0.57279	86.99773	-90.00000	0.01000	366	367	368	119
368	3.00000	3.23500	38.93400	0.57279	86.99773	-90.00000	0.01000	367	368	-378	119
369	1.85100	0.91800	36.64600	0.78816	46.53014	1.69090	0.00500	325	369	370	120
370	2.39300	0.93400	37.21800	0.78816	46.53014	1.69090	0.00500	369	370	371	120
371	2.93500	0.95000	37.79000	0.78816	46.53014	1.69090	0.00500	370	371	372	120
372	3.47700	0.96600	38.36200	0.78816	46.53014	1.69090	0.00500	371	372	373	120
373	4.01900	0.98200	38.93400	0.78816	46.53014	1.69090	0.00500	372	373	-384	120
374	4.27800	1.14100	36.64600	0.78822	46.52625	121.57982	0.00500	330	374	375	121
375	3.99400	1.60300	37.21800	0.78822	46.52625	121.57982	0.00500	374	375	376	121
376	3.71000	2.06500	37.79000	0.78822	46.52625	121.57982	0.00500	375	376	377	121
377	3.42600	2.52700	38.36200	0.78822	46.52625	121.57982	0.00500	376	377	378	121
378	3.14200	2.98900	38.93400	0.78822	46.52625	121.57982	0.00500	377	378	-385	121
379	2.87100	3.13200	36.64600	0.78761	46.57302	-118.45844	0.00500	335	379	380	122
380	2.61300	2.65600	37.21800	0.78761	46.57302	-118.45844	0.00500	379	380	381	122
381	2.35500	2.18000	37.79000	0.78761	46.57302	-118.45844	0.00500	380	381	382	122
382	2.09700	1.70400	38.36200	0.78761	46.57302	-118.45844	0.00500	381	382	383	122
383	1.83900	1.22800	38.93400	0.78761	46.57302	-118.45844	0.00500	382	383	384	122
384	3.00000	0.99000	39.22000	2.58000	0.00000	0.00000	0.00500	386	384	385	123
385	3.64500	2.10500	39.22000	2.57624	0.00000	120.04832	0.00500	-392	385	386	124
386	2.35500	2.10500	39.22000	2.57624	0.00000	-120.04832	0.00500	-397	386	387	125
387	1.72300	0.99700	39.50600	0.57276	87.04471	28.30076	0.01000	-402	387	388	126
388	1.74900	1.01100	40.07800	0.57276	87.04471	28.30076	0.01000	387	388	389	126
389	1.77500	1.02500	40.65000	0.57276	87.04471	28.30076	0.01000	388	389	390	126
390	1.80100	1.03900	41.22200	0.57276	87.04471	28.30076	0.01000	389	390	391	126
391	1.82700	1.05300	41.79400	0.57276	87.04471	28.30076	0.01000	390	391	-416	126
392	4.27700	0.99700	39.50600	0.57276	87.04471	151.69924	0.01000	-407	392	393	127
393	4.25100	1.01100	40.07800	0.57276	87.04471	151.69924	0.01000	392	393	394	127
394	4.22500	1.02500	40.65000	0.57276	87.04471	151.69924	0.01000	393	394	395	127
395	4.19900	1.03900	41.22200	0.57276	87.04471	151.69924	0.01000	394	395	396	127
396	4.17300	1.05300	41.79400	0.57276	87.04471	151.69924	0.01000	395	396	-406	127
397	3.00000	3.20500	39.50600	0.57279	86.99773	-90.00000	0.01000	-412	397	398	128
398	3.00000	3.17500	40.07800	0.57279	86.99773	-90.00000	0.01000	397	398	399	128
399	3.00000	3.14500	40.65000	0.57279	86.99773	-90.00000	0.01000	398	399	400	128
400	3.00000	3.11500	41.22200	0.57279	86.99773	-90.00000	0.01000	399	400	401	128
401	3.00000	3.08500	41.79400	0.57279	86.99773	-90.00000	0.01000	400	401	-411	128
402	1.95500	0.99700	39.50600	0.75331	49.40366	1.63658	0.00500	358	402	403	129
403	2.44500	1.01100	40.07800	0.75331	49.40366	1.63658	0.00500	402	403	404	129
404	2.93500	1.02500	40.65000	0.75331	49.40366	1.63658	0.00500	403	404	405	129
405	3.42500	1.03900	41.22200	0.75331	49.40366	1.63658	0.00500	404	405	406	129
406	3.91500	1.05300	41.79400	0.75331	49.40366	1.63658	0.00500	405	406	-417	129
407	4.16100	1.19800	39.50600	0.75286	49.44353	121.80687	0.00500	363	407	408	130
408	3.90300	1.61400	40.07800	0.75286	49.44353	121.80687	0.00500	407	408	409	130
409	3.64500	2.03000	40.65000	0.75286	49.44353	121.80687	0.00500	408	409	410	130
410	3.38700	2.44600	41.22200	0.75286	49.44353	121.80687	0.00500	409	410	411	130
411	3.12900	2.86200	41.79400	0.75286	49.44353	121.80687	0.00500	410	411	-418	130
412	2.88400	3.00400	39.50600	0.75341	49.39471	-118.23745	0.00500	368	412	413	131
413	2.65200	2.57200	40.07800	0.75341	49.39471	-118.23745	0.00500	412	413	414	131
414	2.42000	2.14000	40.65000	0.75341	49.39471	-118.23745	0.00500	413	414	415	131
415	2.18800	1.70800	41.22200	0.75341	49.39471	-118.23745	0.00500	414	415	416	131
416	1.95600	1.27600	41.79400	0.75341	49.39471	-118.23745	0.00500	415	416	417	131
417	3.00000	1.06000	42.08000	2.32000	0.00000	0.00000	0.00500	419	417	418	132
418	3.58000	2.06500	42.08000	2.32071	0.00000	119.98986	0.00500	-425	418	419	133
419	2.42000	2.06500	42.08000	2.32071	0.00000	-119.98986	0.00500	-430	419	420	134
420	1.85300	1.06800	42.36700	0.57481	86.95554	31.60750	0.01000	-435	420	421	135
421	1.87900	1.08400	42.94100	0.57481	86.95554	31.60750	0.01000	420	421	422	135
422	1.90500	1.10000	43.51500	0.57481	86.95554	31.60750	0.01000	421	422	423	135
423	1.93100	1.11600	44.08900	0.57481	86.95554	31.60750	0.01000	422	423	424	135
424	1.95700	1.13200	44.66300	0.57481	86.95554	31.60750	0.01000	423	424	-449	135
425	4.14700	1.06800	42.36700	0.57481	86.95554	148.39250	0.01000	-440	425	426	136
426	4.12100	1.08400	42.94100	0.57481	86.95554	148.39250	0.01000	425	426	427	136
427	4.09500	1.10000	43.51500	0.57481	86.95554	148.39250	0.01000	426	427	428	136
428	4.06900	1.11600	44.08900	0.57481	86.95554	148.39250	0.01000	427	428	429	136
429	4.04300	1.13200	44.66300	0.57481	86.95554	148.39250	0.01000	428	429	-439	136
430	3.00000	3.05500	42.36700	0.57478	87.00817	-90.00000	0.01000	-445	430	431	137

431	3.00000	3.02500	42.94100	0.57478	87.00817	-90.00000	0.01000	430	431	432	137
432	3.00000	2.99500	43.51500	0.57478	87.00817	-90.00000	0.01000	431	432	433	137
433	3.00000	2.96500	44.08900	0.57478	87.00817	-90.00000	0.01000	432	433	434	137
434	3.00000	2.93500	44.66300	0.57478	87.00817	-90.00000	0.01000	433	434	-444	137
435	2.05900	1.06800	42.36700	0.72220	52.63555	2.09207	0.00500	391	435	436	138
436	2.49700	1.08400	42.94100	0.72220	52.63555	2.09207	0.00500	435	436	437	138
437	2.93500	1.10000	43.51500	0.72220	52.63555	2.09207	0.00500	436	437	438	138
438	3.37300	1.11600	44.08900	0.72220	52.63555	2.09207	0.00500	437	438	439	138
439	3.81100	1.13200	44.66300	0.72220	52.63555	2.09207	0.00500	438	439	-450	138
440	4.04400	1.24600	42.36700	0.72228	52.62778	121.94997	0.00500	396	440	441	139
441	3.81200	1.61800	42.94100	0.72228	52.62778	121.94997	0.00500	440	441	442	139
442	3.58000	1.99000	43.51500	0.72228	52.62778	121.94997	0.00500	441	442	443	139
443	3.34800	2.36200	44.08900	0.72228	52.62778	121.94997	0.00500	442	443	444	139
444	3.11600	2.73400	44.66300	0.72228	52.62778	121.94997	0.00500	443	444	-451	139
445	2.89700	2.87700	42.36700	0.72174	52.68367	-118.08789	0.00500	401	445	446	140
446	2.69100	2.49100	42.94100	0.72174	52.68367	-118.08789	0.00500	445	446	447	140
447	2.48500	2.10500	43.51500	0.72174	52.68367	-118.08789	0.00500	446	447	448	140
448	2.27900	1.71900	44.08900	0.72174	52.68367	-118.08789	0.00500	447	448	449	140
449	2.07300	1.33300	44.66300	0.72174	52.68367	-118.08789	0.00500	448	449	450	140
450	3.00000	1.14000	44.95000	2.06000	0.00000	0.00000	0.00500	452	450	451	141
451	3.51500	2.03000	44.95000	2.05653	0.00000	120.05589	0.00500	-458	451	452	142
452	2.48500	2.03000	44.95000	2.05653	0.00000	-120.05589	0.00500	-463	452	453	143
453	1.98400	1.14800	45.23600	0.57291	86.77311	29.74488	0.01000	-468	453	454	144
454	2.01200	1.16400	45.80800	0.57291	86.77311	29.74488	0.01000	453	454	455	144
455	2.04000	1.18000	46.38000	0.57291	86.77311	29.74488	0.01000	454	455	456	144
456	2.06800	1.19600	46.95200	0.57291	86.77311	29.74488	0.01000	455	456	457	144
457	2.09600	1.21200	47.52400	0.57291	86.77311	29.74488	0.01000	456	457	-482	144
458	4.01600	1.14800	45.23600	0.57291	86.77311	150.25512	0.01000	-473	458	459	145
459	3.98800	1.16400	45.80800	0.57291	86.77311	150.25512	0.01000	458	459	460	145
460	3.96000	1.18000	46.38000	0.57291	86.77311	150.25512	0.01000	459	460	461	145
461	3.93200	1.19600	46.95200	0.57291	86.77311	150.25512	0.01000	460	461	462	145
462	3.90400	1.21200	47.52400	0.57291	86.77311	150.25512	0.01000	461	462	-472	145
463	3.00000	2.90400	45.23600	0.57289	86.79798	-90.00000	0.01000	-478	463	464	146
464	3.00000	2.87200	45.80800	0.57289	86.79798	-90.00000	0.01000	463	464	465	146
465	3.00000	2.84000	46.38000	0.57289	86.79798	-90.00000	0.01000	464	465	466	146
466	3.00000	2.80800	46.95200	0.57289	86.79798	-90.00000	0.01000	465	466	467	146
467	3.00000	2.77600	47.52400	0.57289	86.79798	-90.00000	0.01000	466	467	-477	146
468	2.16200	1.14800	45.23600	0.68913	56.10241	2.38594	0.00500	424	468	469	147
469	2.54600	1.16400	45.80800	0.68913	56.10241	2.38594	0.00500	468	469	470	147
470	2.93000	1.18000	46.38000	0.68913	56.10241	2.38594	0.00500	469	470	471	147
471	3.31400	1.19600	46.95200	0.68913	56.10241	2.38594	0.00500	470	471	472	147
472	3.69800	1.21200	47.52400	0.68913	56.10241	2.38594	0.00500	471	472	-483	147
473	3.92700	1.30200	45.23600	0.68891	56.12936	122.44830	0.00500	429	473	474	148
474	3.72100	1.62600	45.80800	0.68891	56.12936	122.44830	0.00500	473	474	475	148
475	3.51500	1.95000	46.38000	0.68891	56.12936	122.44830	0.00500	474	475	476	148
476	3.30900	2.27400	46.95200	0.68891	56.12936	122.44830	0.00500	475	476	477	148
477	3.10300	2.59800	47.52400	0.68891	56.12936	122.44830	0.00500	476	477	-484	148
478	2.91100	2.75000	45.23600	0.68882	56.14088	-117.63338	0.00500	434	478	479	149
479	2.73300	2.41000	45.80800	0.68882	56.14088	-117.63338	0.00500	478	479	480	149
480	2.55500	2.07000	46.38000	0.68882	56.14088	-117.63338	0.00500	479	480	481	149
481	2.37700	1.73000	46.95200	0.68882	56.14088	-117.63338	0.00500	480	481	482	149
482	2.19900	1.39000	47.52400	0.68882	56.14088	-117.63338	0.00500	481	482	483	149
483	3.00000	1.22000	47.81000	1.78000	0.00000	0.00000	0.00500	485	483	484	150
484	3.44500	1.99000	47.81000	1.77868	0.00000	120.02457	0.00500	-491	484	485	151
485	2.55500	1.99000	47.81000	1.77868	0.00000	-120.02457	0.00500	-496	485	486	152
486	2.12300	1.22700	48.09600	0.57276	87.04471	28.30076	0.01000	-501	486	487	153
487	2.14900	1.24100	48.66800	0.57276	87.04471	28.30076	0.01000	486	487	488	153
488	2.17500	1.25500	49.24000	0.57276	87.04471	28.30076	0.01000	487	488	489	153
489	2.20100	1.26900	49.81200	0.57276	87.04471	28.30076	0.01000	488	489	490	153
490	2.22700	1.28300	50.38400	0.57276	87.04471	28.30076	0.01000	489	490	-515	153
491	3.87700	1.22700	48.09600	0.57276	87.04471	151.69924	0.01000	-506	491	492	154
492	3.85100	1.24100	48.66800	0.57276	87.04471	151.69924	0.01000	491	492	493	154
493	3.82500	1.25500	49.24000	0.57276	87.04471	151.69924	0.01000	492	493	494	154
494	3.79900	1.26900	49.81200	0.57276	87.04471	151.69924	0.01000	493	494	495	154
495	3.77300	1.28300	50.38400	0.57276	87.04471	151.69924	0.01000	494	495	-505	154
496	3.00000	2.74500	48.09600	0.57279	86.99773	-90.00000	0.01000	-511	496	497	155
497	3.00000	2.71500	48.66800	0.57279	86.99773	-90.00000	0.01000	496	497	498	155
498	3.00000	2.68500	49.24000	0.57279	86.99773	-90.00000	0.01000	497	498	499	155
499	3.00000	2.65500	49.81200	0.57279	86.99773	-90.00000	0.01000	498	499	500	155
500	3.00000	2.62500	50.38400	0.57279	86.99773	-90.00000	0.01000	499	500	-510	155
501	2.27500	1.22700	48.09600	0.66051	59.99606	2.42927	0.00500	457	501	502	156
502	2.60500	1.24100	48.66800	0.66051	59.99606	2.42927	0.00500	501	502	503	156
503	2.93500	1.25500	49.24000	0.66051	59.99606	2.42927	0.00500	502	503	504	156
504	3.26500	1.26900	49.81200	0.66051	59.99606	2.42927	0.00500	503	504	505	156
505	3.59500	1.28300	50.38400	0.66051	59.99606	2.42927	0.00500	504	505	-516	156
506	3.80100	1.35900	48.09600	0.66042	60.01062	122.63094	0.00500	462	506	507	157
507	3.62300	1.63700	48.66800	0.66042	60.01062	122.63094	0.00500	506	507	508	157
508	3.44500	1.91500	49.24000	0.66042	60.01062	122.63094	0.00500	507	508	509	157
509	3.26700	2.19300	49.81200	0.66042	60.01062	122.63094	0.00500	508	509	510	157
510	3.08900	2.47100	50.38400	0.66042	60.01062	122.63094	0.00500	509	510	-517	157
511	2.92400	2.61300	48.09600	0.66085	59.94564	-117.33927	0.00500	467	511	512	158
512	2.77200	2.31900	48.66800	0.66085	59.94564	-117.33927	0.00500	511	512	513	158
513	2.62000	2.02500	49.24000	0.66085	59.94564	-117.33927	0.00500	512	513	514	158
514	2.46800	1.73100	49.81200	0.66085	59.94564	-117.33927	0.00500	513	514	515	158
515	2.31600	1.43700	50.38400	0.66085	59.94564	-117.33927	0.00500	514	515	516	158
516	3.00000	1.29000	50.67000	1.52000	0.00000	0.00000	0.00500	518	516	517	159
517	3.38000	1.95000	50.67000	1.52315	0.00000	119.93151	0.00500	-524	517	518	160
518	2.62000	1.95000	50.67000	1.52315	0.00000	-119.93151	0.00500	-529	518	519	161
519	2.25300	1.29800	50.95700	0.57481	86.95554	31.60750	0.01000	-534	519	520	162
520	2.27900	1.31400	51.53100	0.57481	86.95554	31.60750	0.01000	519	520	521	162
521	2.30500	1.33000	52.10500	0.57481	86.95554	31.60750	0.01000	520	521	522	162
522	2.33100	1.34600	52.67900	0.57481	86.95554	31.60750	0.01000	521	522	523	162

523	2.35700	1.36200	53.25300	0.57481	86.95554	31.60750	0.01000	522	523	-548	162
524	3.74700	1.29800	50.95700	0.57481	86.95554	148.39250	0.01000	-539	524	525	163
525	3.72100	1.31400	51.53100	0.57481	86.95554	148.39250	0.01000	524	525	526	163
526	3.69500	1.33000	52.10500	0.57481	86.95554	148.39250	0.01000	525	526	527	163
527	3.66900	1.34600	52.67900	0.57481	86.95554	148.39250	0.01000	526	527	528	163
528	3.64300	1.36200	53.25300	0.57481	86.95554	148.39250	0.01000	527	528	-538	163
529	3.00000	2.59500	50.95700	0.57478	87.00817	-90.00000	0.01000	-544	529	530	164
530	3.00000	2.56500	51.53100	0.57478	87.00817	-90.00000	0.01000	529	530	531	164
531	3.00000	2.53500	52.10500	0.57478	87.00817	-90.00000	0.01000	530	531	532	164
532	3.00000	2.50500	52.67900	0.57478	87.00817	-90.00000	0.01000	531	532	533	164
533	3.00000	2.47500	53.25300	0.57478	87.00817	-90.00000	0.01000	532	533	-543	164
534	2.37900	1.29800	50.95700	0.63798	64.12095	3.29396	0.00500	490	534	535	165
535	2.65700	1.31400	51.53100	0.63798	64.12095	3.29396	0.00500	534	535	536	165
536	2.93500	1.33000	52.10500	0.63798	64.12095	3.29396	0.00500	535	536	537	165
537	3.21300	1.34600	52.67900	0.63798	64.12095	3.29396	0.00500	536	537	538	165
538	3.49100	1.36200	53.25300	0.63798	64.12095	3.29396	0.00500	537	538	-549	165
539	3.68400	1.40700	50.95700	0.63823	64.07459	123.00665	0.00500	495	539	540	166
540	3.53200	1.64100	51.53100	0.63823	64.07459	123.00665	0.00500	539	540	541	166
541	3.38000	1.87500	52.10500	0.63823	64.07459	123.00665	0.00500	540	541	542	166
542	3.22800	2.10900	52.67900	0.63823	64.07459	123.00665	0.00500	541	542	543	166
543	3.07600	2.34300	53.25300	0.63823	64.07459	123.00665	0.00500	542	543	-550	166
544	2.93700	2.48600	50.95700	0.63785	64.14418	-116.93351	0.00500	500	544	545	167
545	2.81100	2.23800	51.53100	0.63785	64.14418	-116.93351	0.00500	544	545	546	167
546	2.68500	1.99000	52.10500	0.63785	64.14418	-116.93351	0.00500	545	546	547	167
547	2.55900	1.74200	52.67900	0.63785	64.14418	-116.93351	0.00500	546	547	548	167
548	2.43300	1.49400	53.25300	0.63785	64.14418	-116.93351	0.00500	547	548	549	167
549	3.00000	1.37000	53.54000	1.26000	0.00000	0.00000	0.00500	551	549	550	168
550	3.31500	1.91500	53.54000	1.25897	0.00000	120.02712	0.00500	-557	550	551	169
551	2.68500	1.91500	53.54000	1.25897	0.00000	-120.02712	0.00500	-562	551	552	170
552	2.38300	1.37700	53.82600	0.57276	87.04471	28.30076	0.01000	-567	552	553	171
553	2.40900	1.39100	54.39800	0.57276	87.04471	28.30076	0.01000	552	553	554	171
554	2.43500	1.40500	54.97000	0.57276	87.04471	28.30076	0.01000	553	554	555	171
555	2.46100	1.41900	55.54200	0.57276	87.04471	28.30076	0.01000	554	555	556	171
556	2.48700	1.43300	56.11400	0.57276	87.04471	28.30076	0.01000	555	556	-581	171
557	3.61700	1.37700	53.82600	0.57276	87.04471	151.69924	0.01000	-572	557	558	172
558	3.59100	1.39100	54.39800	0.57276	87.04471	151.69924	0.01000	557	558	559	172
559	3.56500	1.40500	54.97000	0.57276	87.04471	151.69924	0.01000	558	559	560	172
560	3.53900	1.41900	55.54200	0.57276	87.04471	151.69924	0.01000	559	560	561	172
561	3.51300	1.43300	56.11400	0.57276	87.04471	151.69924	0.01000	560	561	-571	172
562	3.00000	2.44500	53.82600	0.57279	86.99773	-90.00000	0.01000	-577	562	563	173
563	3.00000	2.41500	54.39800	0.57279	86.99773	-90.00000	0.01000	562	563	564	173
564	3.00000	2.38500	54.97000	0.57279	86.99773	-90.00000	0.01000	563	564	565	173
565	3.00000	2.35500	55.54200	0.57279	86.99773	-90.00000	0.01000	564	565	566	173
566	3.00000	2.32500	56.11400	0.57279	86.99773	-90.00000	0.01000	565	566	-576	173
567	2.48300	1.37700	53.82600	0.61519	68.40326	3.54477	0.00500	523	567	568	174
568	2.70900	1.39100	54.39800	0.61519	68.40326	3.54477	0.00500	567	568	569	174
569	2.93500	1.40500	54.97000	0.61519	68.40326	3.54477	0.00500	568	569	570	174
570	3.16100	1.41900	55.54200	0.61519	68.40326	3.54477	0.00500	569	570	571	174
571	3.38700	1.43300	56.11400	0.61519	68.40326	3.54477	0.00500	570	571	-582	174
572	3.56700	1.46400	53.82600	0.61515	68.41320	123.83050	0.00500	528	572	573	175
573	3.44100	1.65200	54.39800	0.61515	68.41320	123.83050	0.00500	572	573	574	175
574	3.31500	1.84000	54.97000	0.61515	68.41320	123.83050	0.00500	573	574	575	175
575	3.18900	2.02800	55.54200	0.61515	68.41320	123.83050	0.00500	574	575	576	175
576	3.06300	2.21600	56.11400	0.61515	68.41320	123.83050	0.00500	575	576	-583	175
577	2.95000	2.35800	53.82600	0.61547	68.33762	-116.11391	0.00500	533	577	578	176
578	2.85000	2.15400	54.39800	0.61547	68.33762	-116.11391	0.00500	577	578	579	176
579	2.75000	1.95000	54.97000	0.61547	68.33762	-116.11391	0.00500	578	579	580	176
580	2.65000	1.74600	55.54200	0.61547	68.33762	-116.11391	0.00500	579	580	581	176
581	2.55000	1.54200	56.11400	0.61547	68.33762	-116.11391	0.00500	580	581	582	176
582	3.00000	1.44000	56.40000	1.00000	0.00000	0.00000	0.00500	584	582	583	177
583	3.25000	1.87500	56.40000	1.00344	0.00000	119.88653	0.00500	561	583	584	178
584	2.75000	1.87500	56.40000	1.00344	0.00000	-119.88653	0.00500	566	584	-556	179

*****	INPUT LINE	1	GN	1	0	0	0	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
*****	INPUT LINE	2	EX	0	1	2	0	1.86677E+03	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
*****	INPUT LINE	3	FR	0	1	0	0	1.22000E+00	1.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00	0.00000E+00
*****	INPUT LINE	4	RP	0	19	5	1000	-9.00000E+01	0.00000E+00	5.00000E+00	9.00000E+01	1.00000E+03	0.00000E+00

- - - - - FREQUENCY - - - - -

FREQUENCY= 1.2200E+00 MHZ
WAVELENGTH= 2.4574E+02 METERS

- - - ANTENNA ENVIRONMENT - - -

PERFECT GROUND

- - - STRUCTURE IMPEDANCE LOADING - - -

THIS STRUCTURE IS NOT LOADED

- - - MATRIX TIMING - - -

FILL= 0.530 SEC., FACTOR= 0.190 SEC.

- - - ANTENNA INPUT PARAMETERS - - -

TAG NO.	SEG. NO.	VOLTAGE (VOLTS)		CURRENT (AMPS)		IMPEDANCE (OHMS)		ADMITTANCE (MHOS)		POWER (WATTS)
		REAL	IMAG.	REAL	IMAG.	REAL	IMAG.	REAL	IMAG.	
1	2	1.86677E+03	0.00000E+00	1.07137E+00	-2.83133E+00	2.18239E+02	5.76744E+02	5.73917E-04	-1.51670E-03	1.00000E+03

- - - CURRENTS AND LOCATION - - -

LENGTHS NORMALIZED BY WAVELENGTH (OR 2.*PI/CABS(K))

SEG. NO.	TAG NO.	COORD. OF SEG. CENTER			SEG. LENGTH	- - - CURRENT (AMPS) - - -			PHASE
		X	Y	Z		REAL	IMAG.	MAG.	
1	1	0.0000	0.0212	0.0014	0.00271	1.0716E+00	-2.8293E+00	3.0254E+00	-69.256
2	1	0.0000	0.0212	0.0041	0.00271	1.0714E+00	-2.8313E+00	3.0273E+00	-69.273
3	1	0.0000	0.0212	0.0068	0.00271	1.0710E+00	-2.8971E+00	3.0887E+00	-69.712
4	2	0.0003	0.0210	0.0113	0.00645	1.0698E+00	-3.0128E+00	3.1971E+00	-70.450
5	2	0.0009	0.0206	0.0177	0.00645	1.0673E+00	-3.1615E+00	3.3368E+00	-71.345
6	2	0.0015	0.0203	0.0242	0.00645	1.0638E+00	-3.2999E+00	3.4672E+00	-72.133
7	2	0.0021	0.0200	0.0306	0.00645	1.0592E+00	-3.4303E+00	3.5901E+00	-72.841
8	2	0.0027	0.0196	0.0370	0.00645	1.0536E+00	-3.5536E+00	3.7064E+00	-73.486
9	2	0.0034	0.0193	0.0434	0.00645	1.0470E+00	-3.6698E+00	3.8163E+00	-74.077
10	2	0.0040	0.0189	0.0498	0.00645	1.0395E+00	-3.7793E+00	3.9196E+00	-74.622
11	2	0.0046	0.0186	0.0562	0.00645	1.0310E+00	-3.8819E+00	4.0165E+00	-75.126
12	2	0.0052	0.0183	0.0626	0.00645	1.0217E+00	-3.9776E+00	4.1067E+00	-75.594
13	2	0.0058	0.0179	0.0690	0.00645	1.0117E+00	-4.0663E+00	4.1902E+00	-76.029
14	2	0.0064	0.0176	0.0754	0.00645	1.0007E+00	-4.1479E+00	4.2669E+00	-76.436
15	2	0.0070	0.0172	0.0818	0.00645	9.8941E-01	-4.2224E+00	4.3367E+00	-76.812
16	2	0.0076	0.0169	0.0882	0.00645	9.7725E-01	-4.2895E+00	4.3994E+00	-77.166
17	2	0.0082	0.0165	0.0946	0.00645	9.6518E-01	-4.3493E+00	4.4551E+00	-77.488
18	2	0.0089	0.0162	0.1010	0.00645	9.5222E-01	-4.4014E+00	4.5033E+00	-77.793
19	2	0.0095	0.0159	0.1075	0.00645	9.3990E-01	-4.4461E+00	4.5443E+00	-78.063
20	2	0.0101	0.0155	0.1139	0.00645	9.2695E-01	-4.4829E+00	4.5777E+00	-78.317
21	2	0.0107	0.0152	0.1203	0.00645	9.1363E-01	-4.5119E+00	4.6035E+00	-78.553
22	2	0.0113	0.0148	0.1267	0.00645	9.0060E-01	-4.5330E+00	4.6216E+00	-78.763
23	2	0.0119	0.0145	0.1331	0.00645	8.8442E-01	-4.5471E+00	4.6323E+00	-78.993
24	3	0.0000	0.0000	0.0020	0.00407	2.1995E+00	2.2334E+00	3.1346E+00	45.438
25	3	0.0000	0.0000	0.0061	0.00407	2.1987E+00	2.2334E+00	3.1341E+00	45.449
26	4	0.0244	0.0000	0.0020	0.00407	2.2565E+00	1.9043E+00	2.9527E+00	40.161
27	4	0.0244	0.0000	0.0061	0.00407	2.2557E+00	1.9039E+00	2.9518E+00	40.166
28	5	0.0122	0.0212	0.0020	0.00407	2.0891E+00	2.3250E+00	3.1257E+00	48.059
29	5	0.0122	0.0212	0.0061	0.00407	2.0884E+00	2.3265E+00	3.1263E+00	48.087
30	6	0.0061	0.0000	0.0081	0.01221	-8.0884E-02	-1.2383E-01	1.4791E-01	-123.152
31	6	0.0183	0.0000	0.0081	0.01221	-8.4648E-02	-1.2488E-01	1.5087E-01	-124.130
32	7	0.0214	0.0053	0.0081	0.01221	-7.6937E-02	-3.3389E-02	8.3869E-02	-156.540
33	7	0.0153	0.0159	0.0081	0.01221	-8.0649E-02	-3.3111E-02	8.7181E-02	-157.679
34	8	0.0092	0.0159	0.0081	0.01221	-6.2568E-02	-9.9284E-03	6.3351E-02	-170.983
35	8	0.0031	0.0053	0.0081	0.01221	-6.6119E-02	-2.5443E-03	6.6168E-02	-177.796
36	9	0.0001	0.0001	0.0101	0.00388	1.5995E+00	1.8112E+00	2.4164E+00	48.553
37	9	0.0003	0.0002	0.0140	0.00388	1.5973E+00	1.8114E+00	2.4151E+00	48.594
38	9	0.0004	0.0003	0.0178	0.00388	1.5947E+00	1.8115E+00	2.4135E+00	48.642
39	10	0.0243	0.0001	0.0101	0.00388	1.6488E+00	1.3802E+00	2.1502E+00	39.934
40	10	0.0242	0.0002	0.0140	0.00388	1.6466E+00	1.3793E+00	2.1480E+00	39.953
41	10	0.0240	0.0003	0.0178	0.00388	1.6440E+00	1.3783E+00	2.1453E+00	39.977
42	11	0.0122	0.0211	0.0101	0.00389	1.4766E+00	1.2612E+00	1.9419E+00	40.502
43	11	0.0122	0.0208	0.0140	0.00389	1.4746E+00	1.2654E+00	1.9431E+00	40.635
44	11	0.0122	0.0206	0.0178	0.00389	1.4722E+00	1.2705E+00	1.9446E+00	40.795
45	12	0.0040	0.0001	0.0101	0.00886	6.0816E-01	5.4451E-01	8.1631E-01	41.840
46	12	0.0119	0.0002	0.0140	0.00886	6.0482E-01	5.4453E-01	8.1383E-01	41.997
47	12	0.0199	0.0003	0.0178	0.00886	6.0090E-01	5.4376E-01	8.1040E-01	42.142
48	13	0.0224	0.0034	0.0101	0.00885	5.9331E-01	4.2984E-01	7.3265E-01	35.923
49	13	0.0183	0.0103	0.0140	0.00885	5.9006E-01	4.2983E-01	7.3002E-01	36.072
50	13	0.0142	0.0171	0.0178	0.00885	5.8636E-01	4.3267E-01	7.2871E-01	36.424
51	14	0.0103	0.0177	0.0101	0.00886	5.8809E-01	1.0523E+00	1.2055E+00	60.801
52	14	0.0064	0.0107	0.0140	0.00886	5.8498E-01	1.0628E+00	1.2131E+00	61.171
53	14	0.0025	0.0038	0.0178	0.00886	5.8123E-01	1.0692E+00	1.2170E+00	61.471
54	15	0.0122	0.0003	0.0198	0.02336	-1.7508E-01	-4.7861E-01	5.0963E-01	-110.093
55	16	0.0180	0.0104	0.0198	0.02332	-1.5824E-01	-2.6213E-01	3.0619E-01	-121.118
56	17	0.0064	0.0104	0.0198	0.02332	-1.6704E-01	-1.5260E+00	1.5351E+00	-96.247
57	18	0.0006	0.0004	0.0217	0.00390	1.5596E+00	1.4270E+00	2.1140E+00	42.459
58	18	0.0008	0.0005	0.0256	0.00390	1.5559E+00	1.4271E+00	2.1112E+00	42.527
59	18	0.0010	0.0006	0.0295	0.00390	1.5517E+00	1.4270E+00	2.1081E+00	42.602
60	19	0.0238	0.0004	0.0217	0.00390	1.6174E+00	1.3591E+00	2.1126E+00	40.039
61	19	0.0236	0.0005	0.0256	0.00390	1.6137E+00	1.3576E+00	2.1088E+00	40.076
62	19	0.0234	0.0006	0.0295	0.00390	1.6094E+00	1.3561E+00	2.1045E+00	40.117
63	20	0.0122	0.0204	0.0217	0.00390	1.4400E+00	1.6206E+00	2.1679E+00	48.378
64	20	0.0122	0.0202	0.0256	0.00390	1.4365E+00	1.6267E+00	2.1702E+00	48.552
65	20	0.0122	0.0200	0.0295	0.00390	1.4326E+00	1.6329E+00	2.1723E+00	48.738
66	21	0.0043	0.0004	0.0217	0.00855	6.0707E-01	4.0897E-01	7.3197E-01	33.967
67	21	0.0119	0.0005	0.0256	0.00855	6.0169E-01	4.0848E-01	7.2725E-01	34.172
68	21	0.0196	0.0006	0.0295	0.00855	5.9562E-01	4.0691E-01	7.2135E-01	34.340
69	22	0.0219	0.0036	0.0217	0.00854	5.9305E-01	3.4350E-01	6.8535E-01	30.080
70	22	0.0180	0.0101	0.0256	0.00854	5.8779E-01	3.4345E-01	6.8077E-01	30.299
71	22	0.0142	0.0166	0.0295	0.00854	5.8205E-01	3.4673E-01	6.7750E-01	30.782

72	23	0.0103	0.0172	0.0217	0.00854	6.1087E-01	1.3730E+00	1.5027E+00	66.015
73	23	0.0066	0.0106	0.0256	0.00854	6.0601E-01	1.3872E+00	1.5138E+00	66.401
74	23	0.0029	0.0039	0.0295	0.00854	6.0030E-01	1.3951E+00	1.5187E+00	66.718
75	24	0.0122	0.0006	0.0315	0.02230	-1.8983E-01	-5.0586E-01	5.4031E-01	-110.569
76	25	0.0178	0.0103	0.0315	0.02228	-1.6898E-01	-3.5835E-01	3.9620E-01	-115.246
77	26	0.0066	0.0103	0.0315	0.02228	-1.9588E-01	-1.5901E+00	1.6021E+00	-97.023
78	27	0.0011	0.0007	0.0334	0.00388	1.5149E+00	1.3426E+00	2.0242E+00	41.549
79	27	0.0013	0.0008	0.0373	0.00388	1.5096E+00	1.3421E+00	2.0199E+00	41.638
80	27	0.0015	0.0009	0.0412	0.00388	1.5038E+00	1.3414E+00	2.0152E+00	41.734
81	28	0.0233	0.0007	0.0334	0.00388	1.5716E+00	1.3015E+00	2.0405E+00	39.630
82	28	0.0231	0.0008	0.0373	0.00388	1.5661E+00	1.2995E+00	2.0351E+00	39.684
83	28	0.0229	0.0009	0.0412	0.00388	1.5602E+00	1.2973E+00	2.0291E+00	39.743
84	29	0.0122	0.0198	0.0334	0.00388	1.3870E+00	1.7500E+00	2.2330E+00	51.600
85	29	0.0122	0.0196	0.0373	0.00388	1.3821E+00	1.7560E+00	2.2347E+00	51.796
86	29	0.0122	0.0194	0.0412	0.00388	1.3767E+00	1.7621E+00	2.2361E+00	51.999
87	30	0.0047	0.0007	0.0334	0.00823	6.0570E-01	3.9633E-01	7.2385E-01	33.198
88	30	0.0119	0.0008	0.0373	0.00823	5.9820E-01	3.9518E-01	7.1695E-01	33.450
89	30	0.0192	0.0009	0.0412	0.00823	5.9000E-01	3.9287E-01	7.0883E-01	33.659
90	31	0.0215	0.0037	0.0334	0.00822	5.8695E-01	3.0841E-01	6.6305E-01	27.720
91	31	0.0178	0.0099	0.0373	0.00822	5.7958E-01	3.0773E-01	6.5621E-01	27.967
92	31	0.0141	0.0162	0.0412	0.00822	5.7181E-01	3.1036E-01	6.5061E-01	28.492
93	32	0.0104	0.0167	0.0334	0.00822	6.3059E-01	1.4888E+00	1.6168E+00	67.044
94	32	0.0069	0.0104	0.0373	0.00822	6.2386E-01	1.5024E+00	1.6268E+00	67.450
95	32	0.0034	0.0041	0.0412	0.00822	6.1617E-01	1.5093E+00	1.6303E+00	67.793
96	33	0.0122	0.0009	0.0431	0.02124	-1.9803E-01	-5.1453E-01	5.5132E-01	-111.051
97	34	0.0175	0.0101	0.0431	0.02120	-1.7287E-01	-4.0427E-01	4.3968E-01	-113.152
98	35	0.0069	0.0101	0.0431	0.02120	-2.2634E-01	-1.6827E+00	1.6979E+00	-97.661
99	36	0.0017	0.0010	0.0450	0.00389	1.4578E+00	1.2876E+00	1.9450E+00	41.451
100	36	0.0019	0.0011	0.0489	0.00389	1.4509E+00	1.2863E+00	1.9390E+00	41.560
101	36	0.0021	0.0012	0.0528	0.00389	1.4434E+00	1.2848E+00	1.9324E+00	41.673
102	37	0.0227	0.0010	0.0450	0.00389	1.5130E+00	1.2604E+00	1.9692E+00	39.797
103	37	0.0225	0.0011	0.0489	0.00389	1.5059E+00	1.2578E+00	1.9621E+00	39.870
104	37	0.0224	0.0012	0.0528	0.00389	1.4984E+00	1.2550E+00	1.9545E+00	39.948
105	38	0.0122	0.0192	0.0450	0.00388	1.3203E+00	1.8208E+00	2.2491E+00	54.054
106	38	0.0122	0.0190	0.0489	0.00388	1.3139E+00	1.8263E+00	2.2498E+00	54.268
107	38	0.0122	0.0188	0.0528	0.00388	1.3070E+00	1.8317E+00	2.2502E+00	54.490
108	39	0.0050	0.0010	0.0450	0.00791	6.0115E-01	3.9276E-01	7.1808E-01	33.158
109	39	0.0119	0.0011	0.0489	0.00791	5.9161E-01	3.9068E-01	7.0897E-01	33.440
110	39	0.0188	0.0012	0.0528	0.00791	5.8138E-01	3.8753E-01	6.9870E-01	33.686
111	40	0.0211	0.0039	0.0450	0.00791	5.7895E-01	3.1101E-01	6.5720E-01	28.244
112	40	0.0175	0.0098	0.0489	0.00791	5.6954E-01	3.0948E-01	6.4820E-01	28.519
113	40	0.0140	0.0157	0.0528	0.00791	5.5983E-01	3.1109E-01	6.4046E-01	29.061
114	41	0.0105	0.0163	0.0450	0.00791	6.5096E-01	1.5543E+00	1.6851E+00	67.275
115	41	0.0072	0.0103	0.0489	0.00791	6.4243E-01	1.5663E+00	1.6929E+00	67.699
116	41	0.0038	0.0042	0.0528	0.00791	6.3283E-01	1.5714E+00	1.6941E+00	68.065
117	42	0.0122	0.0012	0.0547	0.02010	-2.0547E-01	-5.1349E-01	5.5308E-01	-111.809
118	43	0.0172	0.0099	0.0547	0.02014	-1.7642E-01	-4.3646E-01	4.7077E-01	-112.009
119	44	0.0072	0.0099	0.0547	0.02014	-2.5892E-01	-1.7517E+00	1.7707E+00	-98.408
120	45	0.0022	0.0013	0.0567	0.00390	1.3902E+00	1.2225E+00	1.8512E+00	41.326
121	45	0.0024	0.0014	0.0606	0.00390	1.3816E+00	1.2203E+00	1.8434E+00	41.453
122	45	0.0026	0.0015	0.0645	0.00390	1.3725E+00	1.2179E+00	1.8349E+00	41.585
123	46	0.0222	0.0013	0.0567	0.00390	1.4435E+00	1.2161E+00	1.8874E+00	40.113
124	46	0.0220	0.0014	0.0606	0.00390	1.4348E+00	1.2128E+00	1.8787E+00	40.207
125	46	0.0218	0.0015	0.0645	0.00390	1.4255E+00	1.2093E+00	1.8693E+00	40.308
126	47	0.0122	0.0186	0.0567	0.00390	1.2414E+00	1.8898E+00	2.2610E+00	56.700
127	47	0.0122	0.0184	0.0606	0.00390	1.2335E+00	1.8945E+00	2.2607E+00	56.933
128	47	0.0122	0.0182	0.0645	0.00390	1.2252E+00	1.8990E+00	2.2599E+00	57.172
129	48	0.0054	0.0013	0.0567	0.00760	5.9320E-01	3.8928E-01	7.0953E-01	33.274
130	48	0.0119	0.0014	0.0606	0.00760	5.8171E-01	3.8616E-01	6.9822E-01	33.578
131	48	0.0185	0.0015	0.0645	0.00760	5.6957E-01	3.8211E-01	6.8586E-01	33.857
132	49	0.0206	0.0040	0.0567	0.00761	5.6733E-01	3.3788E-01	6.6032E-01	30.776
133	49	0.0172	0.0096	0.0606	0.00761	5.5600E-01	3.3540E-01	6.4933E-01	31.100
134	49	0.0139	0.0153	0.0645	0.00761	5.4448E-01	3.3580E-01	6.3970E-01	31.663
135	50	0.0106	0.0158	0.0567	0.00761	6.7100E-01	1.5877E+00	1.7237E+00	67.090
136	50	0.0074	0.0101	0.0606	0.00761	6.6076E-01	1.5976E+00	1.7289E+00	67.531
137	50	0.0043	0.0044	0.0645	0.00761	6.4932E-01	1.6008E+00	1.7275E+00	67.922
138	51	0.0122	0.0015	0.0664	0.01904	-2.1175E-01	-4.9756E-01	5.4075E-01	-113.053
139	52	0.0170	0.0098	0.0664	0.01907	-1.8153E-01	-4.6462E-01	4.9882E-01	-111.341
140	53	0.0074	0.0098	0.0664	0.01907	-2.9978E-01	-1.7931E+00	1.8180E+00	-99.491
141	54	0.0028	0.0016	0.0684	0.00388	1.3018E+00	1.1327E+00	1.7256E+00	41.027
142	54	0.0030	0.0017	0.0722	0.00388	1.2917E+00	1.1297E+00	1.7160E+00	41.173
143	54	0.0031	0.0018	0.0761	0.00388	1.2811E+00	1.1264E+00	1.7058E+00	41.323
144	55	0.0216	0.0016	0.0684	0.00388	1.3544E+00	1.1397E+00	1.7701E+00	40.080
145	55	0.0215	0.0017	0.0722	0.00388	1.3441E+00	1.1357E+00	1.7597E+00	40.197
146	55	0.0213	0.0018	0.0761	0.00388	1.3334E+00	1.1316E+00	1.7488E+00	40.321
147	56	0.0122	0.0180	0.0684	0.00389	1.1521E+00	2.0171E+00	2.3230E+00	60.268
148	56	0.0122	0.0177	0.0722	0.00389	1.1428E+00	2.0208E+00	2.3216E+00	60.510
149	56	0.0122	0.0175	0.0761	0.00389	1.1332E+00	2.0241E+00	2.3198E+00	60.757
150	57	0.0058	0.0016	0.0684	0.00729	5.8652E-01	3.7986E-01	6.9878E-01	32.929
151	57	0.0119	0.0017	0.0722	0.00729	5.7330E-01	3.7573E-01	6.8545E-01	33.240
152	57	0.0181	0.0018	0.0761	0.00729	5.5953E-01	3.7086E-01	6.7128E-01	33.537
153	58	0.0201	0.0042	0.0684	0.00729	5.6460E-01	4.0424E-01	6.9439E-01	35.601
154	58	0.0170	0.0095	0.0722	0.00729	5.5160E-01	4.0072E-01	6.8179E-01	35.997
155	58	0.0138	0.0148	0.0761	0.00729	5.3854E-01	3.9970E-01	6.7066E-01	36.582
156	59	0.0107	0.0154	0.0684	0.00729	6.9344E-01	1.5605E+00	1.7076E+00	66.040
157	59	0.0077	0.0100	0.0722	0.00729	6.8167E-01	1.5679E+00	1.7097E+00	66.503
158	59	0.0047	0.0046	0.0761	0.00729	6.6865E-01	1.5691E+00	1.7056E+00	66.919
159	60	0.0122	0.0019	0.0781	0.01799	-2.5410E-01	-4.7699E-01	5.4045E-01	-118.044
160	61	0.0167	0.0096	0.0781	0.01796	-2.1912E-01	-4.7504E-01	5.2314E-01	-114.762
161	62	0.0077	0.0096	0.0781	0.01796	-3.7150E-01	-1.7325E+00	1.7718E+00	-102.103
162	63	0.0033	0.0019	0.0795	0.00291	1.2095E+00	1.0301E+00	1.5887E+00	40.419
163	63	0.0034	0.0020	0.0824	0.00291	1.2008E+00	1.0271E+00	1.5802E+00	40.543

164	63	0.0035	0.0020	0.0853	0.00291	1.1910E+00	1.0238E+00	1.5705E+00	40.682
165	63	0.0037	0.0021	0.0882	0.00291	1.1818E+00	1.0205E+00	1.5614E+00	40.812
166	64	0.0211	0.0019	0.0795	0.00291	1.2682E+00	1.0868E+00	1.6702E+00	40.595
167	64	0.0210	0.0020	0.0824	0.00291	1.2594E+00	1.0834E+00	1.6613E+00	40.703
168	64	0.0209	0.0020	0.0853	0.00291	1.2495E+00	1.0795E+00	1.6512E+00	40.826
169	64	0.0207	0.0021	0.0882	0.00291	1.2402E+00	1.0759E+00	1.6418E+00	40.942
170	65	0.0122	0.0173	0.0795	0.00291	1.0627E+00	2.1364E+00	2.3861E+00	63.553
171	65	0.0122	0.0172	0.0824	0.00291	1.0548E+00	2.1382E+00	2.3843E+00	63.742
172	65	0.0122	0.0170	0.0853	0.00291	1.0460E+00	2.1400E+00	2.3820E+00	63.952
173	65	0.0122	0.0169	0.0882	0.00291	1.0377E+00	2.1415E+00	2.3797E+00	64.146
174	66	0.0054	0.0019	0.0795	0.00525	5.7518E-01	3.9644E-01	6.9857E-01	34.576
175	66	0.0098	0.0020	0.0824	0.00525	5.6375E-01	3.9256E-01	6.8697E-01	34.851
176	66	0.0141	0.0020	0.0853	0.00525	5.5138E-01	3.8815E-01	6.7430E-01	35.144
177	66	0.0185	0.0021	0.0882	0.00525	5.3938E-01	3.8362E-01	6.6189E-01	35.421
178	67	0.0201	0.0037	0.0795	0.00524	5.4173E-01	3.9761E-01	6.7199E-01	36.277
179	67	0.0178	0.0075	0.0824	0.00524	5.3040E-01	3.9380E-01	6.6060E-01	36.592
180	67	0.0156	0.0112	0.0853	0.00524	5.1842E-01	3.9081E-01	6.4923E-01	37.011
181	67	0.0133	0.0149	0.0882	0.00524	5.0719E-01	3.8958E-01	6.3954E-01	37.528
182	68	0.0112	0.0155	0.0795	0.00524	7.1733E-01	1.5525E+00	1.7102E+00	65.200
183	68	0.0090	0.0117	0.0824	0.00524	7.0732E-01	1.5573E+00	1.7104E+00	65.572
184	68	0.0069	0.0079	0.0853	0.00524	6.9591E-01	1.5587E+00	1.7070E+00	65.941
185	68	0.0048	0.0041	0.0882	0.00524	6.8435E-01	1.5569E+00	1.7006E+00	66.271
186	69	0.0122	0.0022	0.0897	0.01693	-2.4128E-01	-4.0124E-01	4.6820E-01	-121.020
187	70	0.0164	0.0095	0.0897	0.01692	-2.0722E-01	-4.5030E-01	4.9569E-01	-114.711
188	71	0.0080	0.0095	0.0897	0.01692	-3.8782E-01	-1.6013E+00	1.6476E+00	-103.615
189	72	0.0038	0.0022	0.0909	0.00234	1.1240E+00	9.3827E-01	1.4641E+00	39.855
190	72	0.0039	0.0023	0.0932	0.00234	1.1162E+00	9.3542E-01	1.4563E+00	39.965
191	72	0.0040	0.0023	0.0955	0.00234	1.1072E+00	9.3213E-01	1.4473E+00	40.093
192	72	0.0041	0.0024	0.0979	0.00234	1.0980E+00	9.2874E-01	1.4381E+00	40.225
193	72	0.0042	0.0024	0.1002	0.00234	1.0897E+00	9.2562E-01	1.4298E+00	40.344
194	73	0.0206	0.0022	0.0909	0.00234	1.1898E+00	1.0303E+00	1.5739E+00	40.890
195	73	0.0205	0.0023	0.0932	0.00234	1.1820E+00	1.0272E+00	1.5659E+00	40.992
196	73	0.0204	0.0023	0.0955	0.00234	1.1730E+00	1.0236E+00	1.5568E+00	41.111
197	73	0.0203	0.0024	0.0979	0.00234	1.1637E+00	1.0200E+00	1.5474E+00	41.233
198	73	0.0202	0.0024	0.1002	0.00234	1.1554E+00	1.0166E+00	1.5390E+00	41.345
199	74	0.0122	0.0167	0.0909	0.00234	9.7570E-01	2.2515E+00	2.4539E+00	66.570
200	74	0.0122	0.0166	0.0932	0.00234	9.6872E-01	2.2522E+00	2.4517E+00	66.726
201	74	0.0122	0.0165	0.0955	0.00234	9.6069E-01	2.2527E+00	2.4490E+00	66.904
202	74	0.0122	0.0164	0.0979	0.00234	9.5250E-01	2.2532E+00	2.4462E+00	67.084
203	74	0.0122	0.0163	0.1002	0.00234	9.4510E-01	2.2534E+00	2.4436E+00	67.246
204	75	0.0054	0.0022	0.0909	0.00403	5.4944E-01	4.2417E-01	6.9412E-01	37.668
205	75	0.0087	0.0023	0.0932	0.00403	5.3929E-01	4.2047E-01	6.8383E-01	37.942
206	75	0.0119	0.0023	0.0955	0.00403	5.2816E-01	4.1634E-01	6.7253E-01	38.248
207	75	0.0152	0.0024	0.0979	0.00403	5.1683E-01	4.1202E-01	6.6097E-01	38.562
208	75	0.0185	0.0024	0.1002	0.00403	5.0611E-01	4.0783E-01	6.4998E-01	38.862
209	76	0.0198	0.0036	0.0909	0.00403	5.0923E-01	4.6191E-01	6.8751E-01	42.210
210	76	0.0181	0.0064	0.0932	0.00403	4.9913E-01	4.5815E-01	6.7752E-01	42.549
211	76	0.0164	0.0092	0.0955	0.00403	4.8823E-01	4.5452E-01	6.6705E-01	42.952
212	76	0.0147	0.0120	0.0979	0.00403	4.7738E-01	4.5158E-01	6.5713E-01	43.409
213	76	0.0131	0.0148	0.1002	0.00403	4.6740E-01	4.4985E-01	6.4871E-01	43.903
214	77	0.0114	0.0154	0.0909	0.00402	7.0718E-01	1.4321E+00	1.5972E+00	63.720
215	77	0.0098	0.0125	0.0932	0.00402	6.9837E-01	1.4348E+00	1.5957E+00	64.045
216	77	0.0082	0.0096	0.0955	0.00402	6.8826E-01	1.4354E+00	1.5919E+00	64.383
217	77	0.0067	0.0068	0.0979	0.00402	6.7751E-01	1.4339E+00	1.5859E+00	64.709
218	77	0.0051	0.0039	0.1002	0.00402	6.6705E-01	1.4309E+00	1.5788E+00	65.006
219	78	0.0122	0.0025	0.1014	0.01587	-1.9705E-01	-2.7483E-01	3.3817E-01	-125.640
220	79	0.0162	0.0093	0.1014	0.01584	-1.8485E-01	-4.3325E-01	4.7103E-01	-113.106
221	80	0.0082	0.0093	0.1014	0.01584	-3.5568E-01	-1.3050E+00	1.3526E+00	-105.246
222	81	0.0043	0.0025	0.1025	0.00233	1.0307E+00	8.5712E-01	1.3405E+00	39.747
223	81	0.0044	0.0026	0.1049	0.00233	1.0221E+00	8.5383E-01	1.3318E+00	39.874
224	81	0.0045	0.0026	0.1072	0.00233	1.0122E+00	8.5003E-01	1.3218E+00	40.023
225	81	0.0046	0.0027	0.1095	0.00233	1.0021E+00	8.4612E-01	1.3115E+00	40.176
226	81	0.0047	0.0027	0.1118	0.00233	9.9294E-01	8.4256E-01	1.3022E+00	40.316
227	82	0.0201	0.0025	0.1025	0.00233	1.0886E+00	9.2345E-01	1.4275E+00	40.307
228	82	0.0200	0.0026	0.1049	0.00233	1.0800E+00	9.1998E-01	1.4187E+00	40.426
229	82	0.0199	0.0026	0.1072	0.00233	1.0700E+00	9.1599E-01	1.4086E+00	40.564
230	82	0.0198	0.0027	0.1095	0.00233	1.0599E+00	9.1191E-01	1.3982E+00	40.708
231	82	0.0197	0.0027	0.1118	0.00233	1.0507E+00	9.0821E-01	1.3888E+00	40.840
232	83	0.0122	0.0161	0.1025	0.00233	8.8695E-01	2.4142E+00	2.5720E+00	69.827
233	83	0.0122	0.0160	0.1049	0.00233	8.7930E-01	2.4139E+00	2.5691E+00	69.985
234	83	0.0122	0.0159	0.1072	0.00233	8.7048E-01	2.4134E+00	2.5656E+00	70.166
235	83	0.0122	0.0158	0.1095	0.00233	8.6151E-01	2.4127E+00	2.5619E+00	70.350
236	83	0.0122	0.0156	0.1118	0.00233	8.5344E-01	2.4120E+00	2.5585E+00	70.515
237	84	0.0058	0.0025	0.1025	0.00385	5.2087E-01	4.5285E-01	6.9020E-01	41.004
238	84	0.0089	0.0026	0.1049	0.00385	5.1002E-01	4.4870E-01	6.7930E-01	41.340
239	84	0.0119	0.0026	0.1072	0.00385	4.9809E-01	4.4410E-01	6.6733E-01	41.720
240	84	0.0150	0.0027	0.1095	0.00385	4.8598E-01	4.3937E-01	6.5515E-01	42.116
241	84	0.0181	0.0027	0.1118	0.00385	4.7453E-01	4.3482E-01	6.4362E-01	42.499
242	85	0.0193	0.0038	0.1025	0.00385	5.1384E-01	6.4220E-01	8.2246E-01	51.336
243	85	0.0178	0.0064	0.1049	0.00385	5.0303E-01	6.3794E-01	8.1241E-01	51.743
244	85	0.0162	0.0090	0.1072	0.00385	4.9130E-01	6.3354E-01	8.0172E-01	52.207
245	85	0.0146	0.0117	0.1095	0.00385	4.7962E-01	6.2958E-01	7.9146E-01	52.699
246	85	0.0130	0.0143	0.1118	0.00385	4.6892E-01	6.2664E-01	7.8267E-01	53.192
247	86	0.0115	0.0149	0.1025	0.00385	6.5358E-01	1.1577E+00	1.3295E+00	60.553
248	86	0.0100	0.0122	0.1049	0.00385	6.4412E-01	1.1585E+00	1.3255E+00	60.927
249	86	0.0085	0.0095	0.1072	0.00385	6.3314E-01	1.1573E+00	1.3192E+00	61.319
250	86	0.0070	0.0068	0.1095	0.00385	6.2152E-01	1.1544E+00	1.3111E+00	61.703
251	86	0.0055	0.0041	0.1118	0.00385	6.1030E-01	1.1507E+00	1.3025E+00	62.060
252	87	0.0122	0.0028	0.1130	0.01481	-1.6953E-01	-1.4035E-01	2.2009E-01	-140.380
253	88	0.0159	0.0092	0.1130	0.01480	-2.0783E-01	-4.1960E-01	4.6825E-01	-116.350
254	89	0.0085	0.0092	0.1130	0.01480	-2.7747E-01	-8.3907E-01	8.8376E-01	-108.298
255	90	0.0049	0.0028	0.1142	0.00233	9.6003E-01	8.1526E-01	1.2595E+00	40.338

256	90	0.0050	0.0029	0.1165	0.00233	9.5061E-01	8.1154E-01	1.2499E+00	40.487
257	90	0.0051	0.0029	0.1188	0.00233	9.3974E-01	8.0724E-01	1.2389E+00	40.663
258	90	0.0052	0.0030	0.1212	0.00233	9.2867E-01	8.0285E-01	1.2276E+00	40.844
259	90	0.0053	0.0031	0.1235	0.00233	9.1871E-01	7.9888E-01	1.2175E+00	41.009
260	91	0.0196	0.0028	0.1142	0.00233	9.6557E-01	7.6330E-01	1.2308E+00	38.327
261	91	0.0194	0.0029	0.1165	0.00233	9.5611E-01	7.5947E-01	1.2210E+00	38.461
262	91	0.0193	0.0029	0.1188	0.00233	9.4522E-01	7.5507E-01	1.2098E+00	38.619
263	91	0.0192	0.0030	0.1212	0.00233	9.3412E-01	7.5059E-01	1.1983E+00	38.783
264	91	0.0191	0.0031	0.1235	0.00233	9.2415E-01	7.4656E-01	1.1880E+00	38.932
265	92	0.0122	0.0155	0.1142	0.00233	8.0860E-01	2.6977E+00	2.8162E+00	73.314
266	92	0.0122	0.0154	0.1165	0.00233	8.0034E-01	2.6963E+00	2.8126E+00	73.468
267	92	0.0122	0.0153	0.1188	0.00233	7.9083E-01	2.6946E+00	2.8082E+00	73.644
268	92	0.0122	0.0152	0.1212	0.00233	7.8116E-01	2.6926E+00	2.8036E+00	73.822
269	92	0.0122	0.0150	0.1235	0.00233	7.7252E-01	2.6907E+00	2.7994E+00	73.981
270	93	0.0062	0.0028	0.1142	0.00368	4.8651E-01	4.6109E-01	6.7030E-01	43.463
271	93	0.0091	0.0029	0.1165	0.00368	4.7501E-01	4.5656E-01	6.5885E-01	43.865
272	93	0.0119	0.0029	0.1188	0.00368	4.6238E-01	4.5159E-01	6.4632E-01	44.324
273	93	0.0148	0.0030	0.1212	0.00368	4.4960E-01	4.4654E-01	6.3367E-01	44.804
274	93	0.0176	0.0031	0.1235	0.00368	4.3763E-01	4.4176E-01	6.2183E-01	45.270
275	94	0.0189	0.0040	0.1142	0.00368	5.4903E-01	8.4027E-01	1.0037E+00	56.839
276	94	0.0174	0.0064	0.1165	0.00368	5.3752E-01	8.3553E-01	9.9350E-01	57.246
277	94	0.0159	0.0089	0.1188	0.00368	5.2499E-01	8.3039E-01	9.8243E-01	57.698
278	94	0.0144	0.0113	0.1212	0.00368	5.1252E-01	8.2543E-01	9.7160E-01	58.163
279	94	0.0129	0.0138	0.1235	0.00368	5.0117E-01	8.2126E-01	9.6210E-01	58.606
280	95	0.0115	0.0143	0.1142	0.00368	5.3906E-01	7.5262E-01	9.2575E-01	54.388
281	95	0.0102	0.0118	0.1165	0.00368	5.2885E-01	7.5112E-01	9.1862E-01	54.851
282	95	0.0088	0.0093	0.1188	0.00368	5.1696E-01	7.4794E-01	9.0921E-01	55.348
283	95	0.0074	0.0068	0.1212	0.00368	5.0452E-01	7.4374E-01	8.9871E-01	55.849
284	95	0.0061	0.0043	0.1235	0.00368	4.9266E-01	7.3929E-01	8.8841E-01	56.321
285	96	0.0122	0.0031	0.1246	0.01367	-1.7016E-01	-7.5873E-02	1.8631E-01	-155.969
286	97	0.0156	0.0090	0.1246	0.01371	-2.7332E-01	-2.9943E-01	4.0542E-01	-132.391
287	98	0.0088	0.0090	0.1246	0.01371	-3.3419E-02	-3.4084E-01	3.4248E-01	-95.600
288	99	0.0054	0.0031	0.1258	0.00233	1.0387E+00	8.7304E-01	1.3569E+00	40.046
289	99	0.0055	0.0032	0.1281	0.00233	1.0273E+00	8.6843E-01	1.3452E+00	40.210
290	99	0.0056	0.0033	0.1305	0.00233	1.0141E+00	8.6314E-01	1.3317E+00	40.403
291	99	0.0057	0.0033	0.1328	0.00233	1.0007E+00	8.5775E-01	1.3180E+00	40.602
292	99	0.0058	0.0034	0.1351	0.00233	9.8856E-01	8.5288E-01	1.3056E+00	40.786
293	100	0.0190	0.0031	0.1258	0.00233	1.0120E+00	6.5886E-01	1.2075E+00	33.067
294	100	0.0189	0.0032	0.1281	0.00233	1.0005E+00	6.5423E-01	1.1954E+00	33.181
295	100	0.0188	0.0033	0.1305	0.00233	9.8732E-01	6.4895E-01	1.1815E+00	33.316
296	100	0.0187	0.0033	0.1328	0.00233	9.7391E-01	6.4358E-01	1.1674E+00	33.457
297	100	0.0186	0.0034	0.1351	0.00233	9.6183E-01	6.3876E-01	1.1546E+00	33.588
298	101	0.0122	0.0149	0.1258	0.00233	9.4251E-01	3.6673E+00	3.7865E+00	75.587
299	101	0.0122	0.0148	0.1281	0.00233	9.3307E-01	3.6646E+00	3.7815E+00	75.715
300	101	0.0122	0.0146	0.1305	0.00233	9.2247E-01	3.6611E+00	3.7755E+00	75.858
301	101	0.0122	0.0145	0.1328	0.00233	9.1168E-01	3.6571E+00	3.7691E+00	76.002
302	101	0.0122	0.0144	0.1351	0.00233	9.0194E-01	3.6533E+00	3.7630E+00	76.132
303	102	0.0067	0.0031	0.1258	0.00351	4.5989E-01	3.8087E-01	5.9713E-01	39.631
304	102	0.0093	0.0032	0.1281	0.00351	4.4802E-01	3.7614E-01	5.8498E-01	40.016
305	102	0.0119	0.0033	0.1305	0.00351	4.3486E-01	3.7094E-01	5.7158E-01	40.465
306	102	0.0146	0.0033	0.1328	0.00351	4.2156E-01	3.6569E-01	5.5807E-01	40.941
307	102	0.0172	0.0034	0.1351	0.00351	4.0921E-01	3.6081E-01	5.4556E-01	41.403
308	103	0.0184	0.0042	0.1258	0.00351	4.0347E-01	7.3353E-01	8.3717E-01	61.188
309	103	0.0170	0.0065	0.1281	0.00351	3.9169E-01	7.2864E-01	8.2725E-01	61.739
310	103	0.0156	0.0087	0.1305	0.00351	3.7880E-01	7.2323E-01	8.1643E-01	62.356
311	103	0.0143	0.0110	0.1328	0.00351	3.6599E-01	7.1782E-01	8.0574E-01	62.984
312	103	0.0129	0.0132	0.1351	0.00351	3.5435E-01	7.1288E-01	7.9609E-01	63.569
313	104	0.0116	0.0138	0.1258	0.00351	4.7136E-02	-1.2658E-01	1.3507E-01	-69.576
314	104	0.0103	0.0115	0.1281	0.00351	3.5583E-02	-1.3117E-01	1.3591E-01	-74.823
315	104	0.0091	0.0092	0.1305	0.00351	2.2279E-02	-1.3676E-01	1.3856E-01	-80.747
316	104	0.0078	0.0069	0.1328	0.00351	8.7208E-03	-1.4244E-01	1.4271E-01	-86.497
317	104	0.0065	0.0046	0.1351	0.00351	-3.8033E-03	-1.4762E-01	1.4767E-01	-91.476
318	105	0.0122	0.0034	0.1363	0.01262	-1.3707E-01	-1.0324E-01	1.7160E-01	-143.013
319	106	0.0154	0.0089	0.1363	0.01260	-2.2057E-01	2.1276E-01	3.0646E-01	136.032
320	107	0.0091	0.0089	0.1363	0.01260	2.2300E-01	-2.1632E-01	3.1068E-01	-44.129
321	108	0.0060	0.0034	0.1375	0.00234	8.2532E-01	3.8973E-01	9.1271E-01	25.277
322	108	0.0061	0.0035	0.1398	0.00234	8.1292E-01	3.8478E-01	8.9938E-01	25.329
323	108	0.0062	0.0036	0.1421	0.00234	7.9862E-01	3.7912E-01	8.8404E-01	25.394
324	108	0.0063	0.0036	0.1445	0.00234	7.8407E-01	3.7340E-01	8.6844E-01	25.465
325	108	0.0064	0.0037	0.1468	0.00234	7.7097E-01	3.6829E-01	8.5442E-01	25.534
326	109	0.0185	0.0034	0.1375	0.00234	9.2119E-01	4.0594E-01	1.0067E+00	23.782
327	109	0.0184	0.0035	0.1398	0.00234	9.0879E-01	4.0105E-01	9.9335E-01	23.812
328	109	0.0183	0.0036	0.1421	0.00234	8.9449E-01	3.9546E-01	9.7801E-01	23.850
329	109	0.0181	0.0036	0.1445	0.00234	8.7994E-01	3.8980E-01	9.6241E-01	23.893
330	109	0.0180	0.0037	0.1468	0.00234	8.6682E-01	3.8474E-01	9.4837E-01	23.934
331	110	0.0122	0.0143	0.1375	0.00234	1.0304E+00	1.4733E-01	1.0408E+00	8.138
332	110	0.0122	0.0141	0.1398	0.00234	1.0183E+00	1.4228E-01	1.0282E+00	7.954
333	110	0.0122	0.0140	0.1421	0.00234	1.0043E+00	1.3649E-01	1.0135E+00	7.739
334	110	0.0122	0.0139	0.1445	0.00234	9.8989E-01	1.3066E-01	9.9848E-01	7.519
335	110	0.0122	0.0138	0.1468	0.00234	9.7691E-01	1.2547E-01	9.8494E-01	7.319
336	111	0.0071	0.0034	0.1375	0.00336	4.6902E-01	1.8202E-01	5.0310E-01	21.211
337	111	0.0095	0.0035	0.1398	0.00336	4.5662E-01	1.7710E-01	4.8976E-01	21.199
338	111	0.0119	0.0036	0.1421	0.00336	4.4281E-01	1.7167E-01	4.7492E-01	21.190
339	111	0.0144	0.0036	0.1445	0.00336	4.2886E-01	1.6624E-01	4.5995E-01	21.188
340	111	0.0168	0.0037	0.1468	0.00336	4.1595E-01	1.6126E-01	4.4612E-01	21.190
341	112	0.0179	0.0044	0.1375	0.00336	4.8293E-01	2.5741E-01	5.4725E-01	28.059
342	112	0.0166	0.0065	0.1398	0.00336	4.7060E-01	2.5252E-01	5.3407E-01	28.218
343	112	0.0154	0.0086	0.1421	0.00336	4.5689E-01	2.4711E-01	5.1943E-01	28.407
344	112	0.0141	0.0106	0.1445	0.00336	4.4305E-01	2.4167E-01	5.0468E-01	28.610
345	112	0.0128	0.0127	0.1468	0.00336	4.3026E-01	2.3664E-01	4.9104E-01	28.811
346	113	0.0116	0.0133	0.1375	0.00336	6.1448E-01	7.7833E-02	6.1939E-01	7.219
347	113	0.0105	0.0111	0.1398	0.00336	6.0246E-01	7.2779E-02	6.0684E-01	6.888

348	113	0.0093	0.0090	0.1421	0.00336	5.8892E-01	6.7184E-02	5.9274E-01	6.508
349	113	0.0082	0.0069	0.1445	0.00336	5.7516E-01	6.1611E-02	5.7845E-01	6.114
350	113	0.0070	0.0048	0.1468	0.00336	5.6236E-01	5.6533E-02	5.6519E-01	5.741
351	114	0.0122	0.0037	0.1480	0.01156	-2.9464E-02	-3.4314E-02	4.5229E-02	-130.651
352	115	0.0151	0.0087	0.1480	0.01156	-6.6151E-02	2.6757E-02	7.1358E-02	157.977
353	116	0.0093	0.0087	0.1480	0.01156	-3.0682E-02	-1.3237E-02	3.3415E-02	-156.663
354	117	0.0065	0.0037	0.1491	0.00233	8.0393E-01	2.7470E-01	8.4957E-01	18.865
355	117	0.0066	0.0038	0.1515	0.00233	7.9065E-01	2.6963E-01	8.3536E-01	18.830
356	117	0.0067	0.0039	0.1538	0.00233	7.7535E-01	2.6383E-01	8.1900E-01	18.792
357	117	0.0068	0.0039	0.1561	0.00233	7.5976E-01	2.5799E-01	8.0237E-01	18.755
358	117	0.0069	0.0040	0.1584	0.00233	7.4575E-01	2.5277E-01	7.8742E-01	18.724
359	118	0.0179	0.0037	0.1491	0.00233	8.0240E-01	2.9418E-01	8.5462E-01	20.134
360	118	0.0178	0.0038	0.1515	0.00233	7.8911E-01	2.8915E-01	8.4041E-01	20.124
361	118	0.0177	0.0039	0.1538	0.00233	7.7378E-01	2.8339E-01	8.2405E-01	20.115
362	118	0.0176	0.0039	0.1561	0.00233	7.5819E-01	2.7759E-01	8.0741E-01	20.109
363	118	0.0175	0.0040	0.1584	0.00233	7.4417E-01	2.7240E-01	7.9246E-01	20.105
364	119	0.0122	0.0137	0.1491	0.00233	8.3110E-01	2.3973E-01	8.6498E-01	16.090
365	119	0.0122	0.0135	0.1515	0.00233	8.1787E-01	2.3462E-01	8.5086E-01	16.006
366	119	0.0122	0.0134	0.1538	0.00233	8.0262E-01	2.2879E-01	8.3459E-01	15.910
367	119	0.0122	0.0133	0.1561	0.00233	7.8708E-01	2.2291E-01	8.1804E-01	15.812
368	119	0.0122	0.0132	0.1584	0.00233	7.7310E-01	2.1766E-01	8.0315E-01	15.724
369	120	0.0075	0.0037	0.1491	0.00321	4.7671E-01	1.5131E-01	5.0015E-01	17.610
370	120	0.0097	0.0038	0.1515	0.00321	4.6392E-01	1.4644E-01	4.8648E-01	17.518
371	120	0.0119	0.0039	0.1538	0.00321	4.4966E-01	1.4106E-01	4.7127E-01	17.416
372	120	0.0141	0.0039	0.1561	0.00321	4.3529E-01	1.3569E-01	4.5594E-01	17.313
373	120	0.0164	0.0040	0.1584	0.00321	4.2200E-01	1.3077E-01	4.4180E-01	17.217
374	121	0.0174	0.0046	0.1491	0.00321	4.6554E-01	1.7099E-01	4.9595E-01	20.168
375	121	0.0163	0.0065	0.1515	0.00321	4.5275E-01	1.6613E-01	4.8227E-01	20.150
376	121	0.0151	0.0084	0.1538	0.00321	4.3851E-01	1.6076E-01	4.6704E-01	20.133
377	121	0.0139	0.0103	0.1561	0.00321	4.2415E-01	1.5538E-01	4.5171E-01	20.119
378	121	0.0128	0.0122	0.1584	0.00321	4.1089E-01	1.5043E-01	4.3756E-01	20.108
379	122	0.0117	0.0127	0.1491	0.00321	4.8935E-01	1.4237E-01	5.0964E-01	16.221
380	122	0.0106	0.0108	0.1515	0.00321	4.7662E-01	1.3745E-01	4.9605E-01	16.087
381	122	0.0096	0.0089	0.1538	0.00321	4.6242E-01	1.3203E-01	4.8090E-01	15.935
382	122	0.0085	0.0069	0.1561	0.00321	4.4808E-01	1.2661E-01	4.6562E-01	15.779
383	122	0.0075	0.0050	0.1584	0.00321	4.3482E-01	1.2166E-01	4.5152E-01	15.631
384	123	0.0122	0.0040	0.1596	0.01050	-1.2124E-02	-2.4917E-03	1.2377E-02	-168.386
385	124	0.0148	0.0086	0.1596	0.01048	-1.6590E-02	6.9080E-03	1.7971E-02	157.393
386	125	0.0096	0.0086	0.1596	0.01048	-1.8215E-02	4.3622E-03	1.8730E-02	166.532
387	126	0.0070	0.0041	0.1608	0.00233	6.9042E-01	2.2642E-01	7.2660E-01	18.157
388	126	0.0071	0.0041	0.1631	0.00233	6.7623E-01	2.2125E-01	7.1151E-01	18.117
389	126	0.0072	0.0042	0.1654	0.00233	6.5987E-01	2.1534E-01	6.9411E-01	18.073
390	126	0.0073	0.0042	0.1677	0.00233	6.4321E-01	2.0937E-01	6.7643E-01	18.030
391	126	0.0074	0.0043	0.1701	0.00233	6.2823E-01	2.0404E-01	6.6053E-01	17.993
392	127	0.0174	0.0041	0.1608	0.00233	6.8841E-01	2.3283E-01	7.2671E-01	18.686
393	127	0.0173	0.0041	0.1631	0.00233	6.7421E-01	2.2768E-01	7.1161E-01	18.660
394	127	0.0172	0.0042	0.1654	0.00233	6.5783E-01	2.2180E-01	6.9421E-01	18.632
395	127	0.0171	0.0042	0.1677	0.00233	6.4116E-01	2.1585E-01	6.7652E-01	18.606
396	127	0.0170	0.0043	0.1701	0.00233	6.2617E-01	2.1054E-01	6.6062E-01	18.585
397	128	0.0122	0.0130	0.1608	0.00233	6.9812E-01	2.1751E-01	7.3122E-01	17.305
398	128	0.0122	0.0129	0.1631	0.00233	6.8395E-01	2.1232E-01	7.1615E-01	17.246
399	128	0.0122	0.0128	0.1654	0.00233	6.6760E-01	2.0638E-01	6.9877E-01	17.178
400	128	0.0122	0.0127	0.1677	0.00233	6.5096E-01	2.0039E-01	6.8110E-01	17.110
401	128	0.0122	0.0126	0.1701	0.00233	6.3599E-01	1.9504E-01	6.6523E-01	17.049
402	129	0.0080	0.0041	0.1608	0.00307	4.3247E-01	1.3588E-01	4.5332E-01	17.442
403	129	0.0099	0.0041	0.1631	0.00307	4.1932E-01	1.3109E-01	4.3933E-01	17.361
404	129	0.0119	0.0042	0.1654	0.00307	4.0465E-01	1.2580E-01	4.2375E-01	17.270
405	129	0.0139	0.0042	0.1677	0.00307	3.8987E-01	1.2052E-01	4.0807E-01	17.179
406	129	0.0159	0.0043	0.1701	0.00307	3.7620E-01	1.1568E-01	3.9358E-01	17.093
407	130	0.0169	0.0049	0.1608	0.00306	4.3062E-01	1.4203E-01	4.5344E-01	18.254
408	130	0.0159	0.0066	0.1631	0.00306	4.1747E-01	1.3726E-01	4.3945E-01	18.200
409	130	0.0148	0.0083	0.1654	0.00306	4.0280E-01	1.3196E-01	4.2387E-01	18.140
410	130	0.0138	0.0100	0.1677	0.00306	3.8803E-01	1.2667E-01	4.0819E-01	18.079
411	130	0.0127	0.0116	0.1701	0.00306	3.7439E-01	1.2181E-01	3.9370E-01	18.022
412	131	0.0117	0.0122	0.1608	0.00307	4.3599E-01	1.3407E-01	4.5614E-01	17.093
413	131	0.0108	0.0105	0.1631	0.00307	4.2285E-01	1.2926E-01	4.4216E-01	16.998
414	131	0.0098	0.0087	0.1654	0.00307	4.0819E-01	1.2394E-01	4.2660E-01	16.890
415	131	0.0089	0.0070	0.1677	0.00307	3.9343E-01	1.1863E-01	4.1093E-01	16.780
416	131	0.0080	0.0052	0.1701	0.00307	3.7977E-01	1.1377E-01	3.9645E-01	16.677
417	132	0.0122	0.0043	0.1712	0.00944	1.2114E-02	1.0221E-02	1.5850E-02	40.155
418	133	0.0146	0.0084	0.1712	0.00944	1.0636E-02	1.0943E-02	1.5260E-02	45.814
419	134	0.0098	0.0084	0.1712	0.00944	1.1853E-02	1.3372E-02	1.7869E-02	48.444
420	135	0.0075	0.0043	0.1724	0.00234	5.6880E-01	1.8344E-01	5.9765E-01	17.875
421	135	0.0076	0.0044	0.1747	0.00234	5.5364E-01	1.7815E-01	5.8159E-01	17.837
422	135	0.0078	0.0045	0.1771	0.00234	5.3614E-01	1.7210E-01	5.6309E-01	17.796
423	135	0.0079	0.0045	0.1794	0.00234	5.1833E-01	1.6598E-01	5.4426E-01	17.756
424	135	0.0080	0.0046	0.1818	0.00234	5.0231E-01	1.6052E-01	5.2734E-01	17.722
425	136	0.0169	0.0043	0.1724	0.00234	5.6732E-01	1.8572E-01	5.9694E-01	18.127
426	136	0.0168	0.0044	0.1747	0.00234	5.5215E-01	1.8046E-01	5.8089E-01	18.099
427	136	0.0167	0.0045	0.1771	0.00234	5.3466E-01	1.7442E-01	5.6239E-01	18.068
428	136	0.0166	0.0045	0.1794	0.00234	5.1685E-01	1.6833E-01	5.4357E-01	18.040
429	136	0.0165	0.0046	0.1818	0.00234	5.0082E-01	1.6289E-01	5.2665E-01	18.016
430	137	0.0122	0.0124	0.1724	0.00234	5.6913E-01	1.7813E-01	5.9635E-01	17.380
431	137	0.0122	0.0123	0.1747	0.00234	5.5398E-01	1.7283E-01	5.8031E-01	17.327
432	137	0.0122	0.0122	0.1771	0.00234	5.3650E-01	1.6676E-01	5.6182E-01	17.267
433	137	0.0122	0.0121	0.1794	0.00234	5.1871E-01	1.6063E-01	5.4301E-01	17.206
434	137	0.0122	0.0119	0.1818	0.00234	5.0270E-01	1.5515E-01	5.2610E-01	17.152
435	138	0.0084	0.0043	0.1724	0.00294	3.8762E-01	1.1946E-01	4.0561E-01	17.128
436	138	0.0102	0.0044	0.1747	0.00294	3.7410E-01	1.1475E-01	3.9130E-01	17.052
437	138	0.0119	0.0045	0.1771	0.00294	3.5903E-01	1.0954E-01	3.7537E-01	16.967
438	138	0.0137	0.0045	0.1794	0.00294	3.4388E-01	1.0435E-01	3.5937E-01	16.881
439	138	0.0155	0.0046	0.1818	0.00294	3.2986E-01	9.9585E-02	3.4456E-01	16.799

440	139	0.0165	0.0051	0.1724	0.00294	3.8520E-01	1.2177E-01	4.0398E-01	17.542
441	139	0.0155	0.0066	0.1747	0.00294	3.7168E-01	1.1707E-01	3.8968E-01	17.482
442	139	0.0146	0.0081	0.1771	0.00294	3.5662E-01	1.1186E-01	3.7375E-01	17.415
443	139	0.0136	0.0096	0.1794	0.00294	3.4148E-01	1.0666E-01	3.5775E-01	17.346
444	139	0.0127	0.0111	0.1818	0.00294	3.2746E-01	1.0187E-01	3.4294E-01	17.281
445	140	0.0118	0.0117	0.1724	0.00294	3.8875E-01	1.1817E-01	4.0631E-01	16.907
446	140	0.0110	0.0101	0.1747	0.00294	3.7525E-01	1.1344E-01	3.9203E-01	16.821
447	140	0.0101	0.0086	0.1771	0.00294	3.6020E-01	1.0822E-01	3.7610E-01	16.722
448	140	0.0093	0.0070	0.1794	0.00294	3.4506E-01	1.0301E-01	3.6011E-01	16.622
449	140	0.0084	0.0054	0.1818	0.00294	3.3104E-01	9.8224E-02	3.4530E-01	16.526
450	141	0.0122	0.0046	0.1829	0.00838	3.7536E-02	1.8592E-02	4.1888E-02	26.350
451	142	0.0143	0.0083	0.1829	0.00837	3.9370E-02	1.8851E-02	4.3650E-02	25.586
452	143	0.0101	0.0083	0.1829	0.00837	3.4695E-02	1.9239E-02	3.9672E-02	29.009
453	144	0.0081	0.0047	0.1841	0.00233	4.4312E-01	1.4119E-01	4.6507E-01	17.674
454	144	0.0082	0.0047	0.1864	0.00233	4.2711E-01	1.3584E-01	4.4819E-01	17.642
455	144	0.0083	0.0048	0.1887	0.00233	4.0864E-01	1.2970E-01	4.2873E-01	17.609
456	144	0.0084	0.0049	0.1911	0.00233	3.8983E-01	1.2349E-01	4.0892E-01	17.577
457	144	0.0085	0.0049	0.1934	0.00233	3.7288E-01	1.1794E-01	3.9108E-01	17.552
458	145	0.0163	0.0047	0.1841	0.00233	4.4249E-01	1.4238E-01	4.6483E-01	17.836
459	145	0.0162	0.0047	0.1864	0.00233	4.2648E-01	1.3703E-01	4.4795E-01	17.813
460	145	0.0161	0.0048	0.1887	0.00233	4.0801E-01	1.3091E-01	4.2849E-01	17.789
461	145	0.0160	0.0049	0.1911	0.00233	3.8919E-01	1.2472E-01	4.0868E-01	17.769
462	145	0.0159	0.0049	0.1934	0.00233	3.7223E-01	1.1918E-01	3.9085E-01	17.754
463	146	0.0122	0.0118	0.1841	0.00233	4.4520E-01	1.3870E-01	4.6631E-01	17.304
464	146	0.0122	0.0117	0.1864	0.00233	4.2921E-01	1.3333E-01	4.4944E-01	17.256
465	146	0.0122	0.0116	0.1887	0.00233	4.1075E-01	1.2717E-01	4.2998E-01	17.203
466	146	0.0122	0.0114	0.1911	0.00233	3.9194E-01	1.2095E-01	4.1018E-01	17.150
467	146	0.0122	0.0113	0.1934	0.00233	3.7500E-01	1.1539E-01	3.9235E-01	17.103
468	147	0.0088	0.0047	0.1841	0.00280	3.3688E-01	1.0114E-01	3.5174E-01	16.711
469	147	0.0104	0.0047	0.1864	0.00280	3.2315E-01	9.6550E-02	3.3726E-01	16.635
470	147	0.0119	0.0048	0.1887	0.00280	3.0786E-01	9.1477E-02	3.2117E-01	16.549
471	147	0.0135	0.0049	0.1911	0.00280	2.9254E-01	8.6430E-02	3.0504E-01	16.460
472	147	0.0150	0.0049	0.1934	0.00280	2.7829E-01	8.1774E-02	2.9006E-01	16.375
473	148	0.0160	0.0053	0.1841	0.00280	3.3585E-01	1.0282E-01	3.5124E-01	17.022
474	148	0.0151	0.0066	0.1864	0.00280	3.2212E-01	9.8230E-02	3.3676E-01	16.959
475	148	0.0143	0.0079	0.1887	0.00280	3.0683E-01	9.3155E-02	3.2066E-01	16.888
476	148	0.0135	0.0093	0.1911	0.00280	2.9151E-01	8.8098E-02	3.0453E-01	16.816
477	148	0.0126	0.0106	0.1934	0.00280	2.7727E-01	8.3429E-02	2.8955E-01	16.746
478	149	0.0118	0.0112	0.1841	0.00280	3.3918E-01	1.0086E-01	3.5385E-01	16.561
479	149	0.0111	0.0098	0.1864	0.00280	3.2545E-01	9.6255E-02	3.3939E-01	16.476
480	149	0.0104	0.0084	0.1887	0.00280	3.1018E-01	9.1168E-02	3.2330E-01	16.379
481	149	0.0097	0.0070	0.1911	0.00280	2.9486E-01	8.6107E-02	3.0718E-01	16.279
482	149	0.0089	0.0057	0.1934	0.00280	2.8063E-01	8.1440E-02	2.9221E-01	16.183
483	150	0.0122	0.0050	0.1946	0.00724	6.6557E-02	2.6866E-02	7.1775E-02	21.981
484	151	0.0140	0.0081	0.1946	0.00724	6.5703E-02	2.6001E-02	7.0661E-02	21.590
485	152	0.0104	0.0081	0.1946	0.00724	6.3126E-02	2.6777E-02	6.8570E-02	22.986
486	153	0.0086	0.0050	0.1957	0.00233	3.1414E-01	9.9757E-02	3.2960E-01	17.617
487	153	0.0087	0.0051	0.1980	0.00233	2.9721E-01	9.4304E-02	3.1181E-01	17.604
488	153	0.0089	0.0051	0.2004	0.00233	2.7765E-01	8.8048E-02	2.9127E-01	17.595
489	153	0.0090	0.0052	0.2027	0.00233	2.5767E-01	8.1703E-02	2.7031E-01	17.593
490	153	0.0091	0.0052	0.2050	0.00233	2.3959E-01	7.5999E-02	2.5135E-01	17.600
491	154	0.0158	0.0050	0.1957	0.00233	3.1355E-01	1.0034E-01	3.2922E-01	17.746
492	154	0.0157	0.0051	0.1980	0.00233	2.9661E-01	9.4902E-02	3.1142E-01	17.742
493	154	0.0156	0.0051	0.2004	0.00233	2.7704E-01	8.8658E-02	2.9088E-01	17.745
494	154	0.0155	0.0052	0.2027	0.00233	2.5706E-01	8.2323E-02	2.6992E-01	17.758
495	154	0.0154	0.0052	0.2050	0.00233	2.3897E-01	7.6629E-02	2.5096E-01	17.779
496	155	0.0122	0.0112	0.1957	0.00233	3.1828E-01	9.8971E-02	3.3331E-01	17.273
497	155	0.0122	0.0110	0.1980	0.00233	3.0134E-01	9.3504E-02	3.1551E-01	17.239
498	155	0.0122	0.0109	0.2004	0.00233	2.8177E-01	8.7234E-02	2.9497E-01	17.202
499	155	0.0122	0.0108	0.2027	0.00233	2.6179E-01	8.0874E-02	2.7399E-01	17.167
500	155	0.0122	0.0107	0.2050	0.00233	2.4370E-01	7.5157E-02	2.5503E-01	17.140
501	156	0.0093	0.0050	0.1957	0.00269	2.8705E-01	8.3655E-02	2.9899E-01	16.248
502	156	0.0106	0.0051	0.1980	0.00269	2.7308E-01	7.9159E-02	2.8432E-01	16.166
503	156	0.0119	0.0051	0.2004	0.00269	2.5756E-01	7.4201E-02	2.6804E-01	16.071
504	156	0.0133	0.0052	0.2027	0.00269	2.4200E-01	6.9264E-02	2.5171E-01	15.972
505	156	0.0146	0.0052	0.2050	0.00269	2.2740E-01	6.4668E-02	2.3642E-01	15.875
506	157	0.0155	0.0055	0.1957	0.00269	2.8895E-01	8.5626E-02	3.0137E-01	16.507
507	157	0.0147	0.0067	0.1980	0.00269	2.7497E-01	8.1132E-02	2.8669E-01	16.439
508	157	0.0140	0.0078	0.2004	0.00269	2.5945E-01	7.6170E-02	2.7040E-01	16.361
509	157	0.0133	0.0089	0.2027	0.00269	2.4387E-01	7.1224E-02	2.5406E-01	16.281
510	157	0.0126	0.0101	0.2050	0.00269	2.2928E-01	6.6616E-02	2.3876E-01	16.201
511	158	0.0119	0.0106	0.1957	0.00269	2.8770E-01	8.3167E-02	2.9947E-01	16.124
512	158	0.0113	0.0094	0.1980	0.00269	2.7372E-01	7.8658E-02	2.8480E-01	16.033
513	158	0.0107	0.0082	0.2004	0.00269	2.5820E-01	7.3686E-02	2.6851E-01	15.928
514	158	0.0100	0.0070	0.2027	0.00269	2.4263E-01	6.8737E-02	2.5218E-01	15.817
515	158	0.0094	0.0058	0.2050	0.00269	2.2804E-01	6.4132E-02	2.3689E-01	15.708
516	159	0.0122	0.0052	0.2062	0.00619	8.7933E-02	3.2049E-02	9.3591E-02	20.025
517	160	0.0138	0.0079	0.2062	0.00620	8.4573E-02	3.0477E-02	8.9897E-02	19.817
518	161	0.0107	0.0079	0.2062	0.00620	9.1586E-02	3.3880E-02	9.7651E-02	20.301
519	162	0.0092	0.0053	0.2074	0.00234	1.7507E-01	5.7106E-02	1.8415E-01	18.066
520	162	0.0093	0.0053	0.2097	0.00234	1.5690E-01	5.1469E-02	1.6512E-01	18.162
521	162	0.0094	0.0054	0.2120	0.00234	1.3585E-01	4.4983E-02	1.4311E-01	18.320
522	162	0.0095	0.0055	0.2144	0.00234	1.1421E-01	3.8359E-02	1.2048E-01	18.565
523	162	0.0096	0.0055	0.2167	0.00234	9.4386E-02	3.2333E-02	9.9771E-02	18.910
524	163	0.0152	0.0053	0.2074	0.00234	1.7459E-01	5.7420E-02	1.8379E-01	18.206
525	163	0.0151	0.0053	0.2097	0.00234	1.5642E-01	5.1794E-02	1.6477E-01	18.321
526	163	0.0150	0.0054	0.2120	0.00234	1.3538E-01	4.5320E-02	1.4277E-01	18.508
527	163	0.0149	0.0055	0.2144	0.00234	1.1374E-01	3.8708E-02	1.2015E-01	18.794
528	163	0.0148	0.0055	0.2167	0.00234	9.3930E-02	3.2693E-02	9.9457E-02	19.191
529	164	0.0122	0.0106	0.2074	0.00234	1.7171E-01	5.4632E-02	1.8019E-01	17.649
530	164	0.0122	0.0104	0.2097	0.00234	1.5354E-01	4.8985E-02	1.6117E-01	17.695
531	164	0.0122	0.0103	0.2120	0.00234	1.3250E-01	4.2489E-02	1.3914E-01	17.780

532	164	0.0122	0.0102	0.2144	0.00234	1.1085E-01	3.5855E-02	1.1650E-01	17.924
533	164	0.0122	0.0101	0.2167	0.00234	9.1025E-02	2.9820E-02	9.5785E-02	18.139
534	165	0.0097	0.0053	0.2074	0.00260	2.4831E-01	6.9870E-02	2.5795E-01	15.716
535	165	0.0108	0.0053	0.2097	0.00260	2.3384E-01	6.5383E-02	2.4281E-01	15.621
536	165	0.0119	0.0054	0.2120	0.00260	2.1781E-01	6.0447E-02	2.2605E-01	15.510
537	165	0.0131	0.0055	0.2144	0.00260	2.0172E-01	5.5526E-02	2.0922E-01	15.391
538	165	0.0142	0.0055	0.2167	0.00260	1.8635E-01	5.0863E-02	1.9317E-01	15.266
539	166	0.0150	0.0057	0.2074	0.00260	2.4724E-01	7.0485E-02	2.5709E-01	15.912
540	166	0.0144	0.0067	0.2097	0.00260	2.3278E-01	6.6002E-02	2.4195E-01	15.830
541	166	0.0138	0.0076	0.2120	0.00260	2.1675E-01	6.1065E-02	2.2519E-01	15.734
542	166	0.0131	0.0086	0.2144	0.00260	2.0065E-01	5.6139E-02	2.0836E-01	15.631
543	166	0.0125	0.0095	0.2167	0.00260	1.8529E-01	5.1465E-02	1.9230E-01	15.523
544	167	0.0120	0.0101	0.2074	0.00260	2.4632E-01	6.8722E-02	2.5573E-01	15.589
545	167	0.0114	0.0091	0.2097	0.00260	2.3185E-01	6.4226E-02	2.4058E-01	15.484
546	167	0.0109	0.0081	0.2120	0.00260	2.1582E-01	5.9279E-02	2.2381E-01	15.359
547	167	0.0104	0.0071	0.2144	0.00260	1.9971E-01	5.4347E-02	2.0698E-01	15.223
548	167	0.0099	0.0061	0.2167	0.00260	1.8435E-01	4.9674E-02	1.9092E-01	15.081
549	168	0.0122	0.0056	0.2179	0.00513	8.8455E-02	3.0810E-02	9.3667E-02	19.204
550	169	0.0135	0.0078	0.2179	0.00512	8.9539E-02	3.0762E-02	9.4676E-02	18.961
551	170	0.0109	0.0078	0.2179	0.00512	8.6287E-02	3.0603E-02	9.1553E-02	19.528
552	171	0.0097	0.0056	0.2190	0.00233	-3.2860E-01	-8.9426E-02	3.4056E-01	-164.776
553	171	0.0098	0.0057	0.2214	0.00233	-3.4879E-01	-9.5463E-02	3.6161E-01	-164.693
554	171	0.0099	0.0057	0.2237	0.00233	-3.7266E-01	-1.0256E-01	3.8651E-01	-164.613
555	171	0.0100	0.0058	0.2260	0.00233	-3.9840E-01	-1.1015E-01	4.1334E-01	-164.545
556	171	0.0101	0.0058	0.2283	0.00233	-4.2483E-01	-1.1788E-01	4.4088E-01	-164.492
557	172	0.0147	0.0056	0.2190	0.00233	-3.2759E-01	-8.8896E-02	3.3944E-01	-164.818
558	172	0.0146	0.0057	0.2214	0.00233	-3.4778E-01	-9.4928E-02	3.6051E-01	-164.733
559	172	0.0145	0.0057	0.2237	0.00233	-3.7167E-01	-1.0201E-01	3.8541E-01	-164.651
560	172	0.0144	0.0058	0.2260	0.00233	-3.9741E-01	-1.0960E-01	4.1225E-01	-164.582
561	172	0.0143	0.0058	0.2283	0.00233	-4.2385E-01	-1.1733E-01	4.3979E-01	-164.527
562	173	0.0122	0.0099	0.2190	0.00233	-3.2732E-01	-8.9976E-02	3.3946E-01	-164.630
563	173	0.0122	0.0098	0.2214	0.00233	-3.4752E-01	-9.6024E-02	3.6054E-01	-164.554
564	173	0.0122	0.0097	0.2237	0.00233	-3.7141E-01	-1.0313E-01	3.8546E-01	-164.482
565	173	0.0122	0.0096	0.2260	0.00233	-3.9717E-01	-1.1073E-01	4.1232E-01	-164.421
566	173	0.0122	0.0095	0.2283	0.00233	-4.2362E-01	-1.1848E-01	4.3987E-01	-164.374
567	174	0.0101	0.0056	0.2190	0.00250	5.5726E-01	1.5678E-01	5.7889E-01	15.714
568	174	0.0110	0.0057	0.2214	0.00250	5.4159E-01	1.5210E-01	5.6254E-01	15.687
569	174	0.0119	0.0057	0.2237	0.00250	5.2389E-01	1.4684E-01	5.4408E-01	15.658
570	174	0.0129	0.0058	0.2260	0.00250	5.0514E-01	1.4132E-01	5.2454E-01	15.630
571	174	0.0138	0.0058	0.2283	0.00250	4.8466E-01	1.3533E-01	5.0320E-01	15.602
572	175	0.0145	0.0060	0.2190	0.00250	5.5888E-01	1.5807E-01	5.8081E-01	15.793
573	175	0.0140	0.0067	0.2214	0.00250	5.4321E-01	1.5339E-01	5.6445E-01	15.768
574	175	0.0135	0.0075	0.2237	0.00250	5.2550E-01	1.4813E-01	5.4597E-01	15.742
575	175	0.0130	0.0083	0.2260	0.00250	5.0673E-01	1.4260E-01	5.2642E-01	15.717
576	175	0.0125	0.0090	0.2283	0.00250	4.8624E-01	1.3660E-01	5.0506E-01	15.692
577	176	0.0120	0.0096	0.2190	0.00250	5.5896E-01	1.5696E-01	5.8058E-01	15.685
578	176	0.0116	0.0088	0.2214	0.00250	5.4329E-01	1.5226E-01	5.6422E-01	15.656
579	176	0.0112	0.0079	0.2237	0.00250	5.2558E-01	1.4700E-01	5.4575E-01	15.626
580	176	0.0108	0.0071	0.2260	0.00250	5.0684E-01	1.4147E-01	5.2621E-01	15.596
581	176	0.0104	0.0063	0.2283	0.00250	4.8636E-01	1.3548E-01	5.0487E-01	15.566
582	177	0.0122	0.0059	0.2295	0.00407	4.8808E-01	1.4416E-01	5.0892E-01	16.455
583	178	0.0132	0.0076	0.2295	0.00408	4.8726E-01	1.4427E-01	5.0817E-01	16.493
584	179	0.0112	0.0076	0.2295	0.00408	4.8818E-01	1.4446E-01	5.0910E-01	16.484

- - - POWER BUDGET - - -

INPUT POWER = 1.0000E+03 WATTS
 RADIATED POWER= 1.0000E+03 WATTS
 WIRE LOSS = 0.0000E+00 WATTS
 EFFICIENCY = 100.00 PERCENT

- - - RADIATION PATTERNS - - -

RANGE= 1.000000E+03 METERS
 EXP(-JKR)/R= 1.00000E-03 AT PHASE -24.98 DEGREES

- - ANGLES - -		- POWER GAINS -			- - - POLARIZATION - - -			- - - E(THETA) - - -		- - - E(PHI) - - -	
THETA	PHI	VERT.	HOR.	TOTAL	AXIAL	TILT	SENSE	MAGNITUDE	PHASE	MAGNITUDE	PHASE
DEGREES	DEGREES	DB	DB	DB	RATIO	DEG.		VOLTS/M	DEGREES	VOLTS/M	DEGREES
-90.00	0.00	5.31	-185.27	5.307	0.00000	0.00	LINEAR	4.51108E-01	-98.48	1.33516E-10	75.87
-85.00	0.00	5.26	-48.17	5.262	0.00021	-0.12	LEFT	4.48758E-01	-98.46	9.55970E-04	75.88
-80.00	0.00	5.13	-42.19	5.126	0.00043	-0.25	LEFT	4.41778E-01	-98.40	1.90249E-03	75.91
-75.00	0.00	4.90	-38.74	4.898	0.00066	-0.37	LEFT	4.30362E-01	-98.30	2.83036E-03	75.97
-70.00	0.00	4.58	-36.34	4.579	0.00091	-0.51	LEFT	4.14825E-01	-98.17	3.73095E-03	76.04
-65.00	0.00	4.17	-34.53	4.167	0.00119	-0.66	LEFT	3.95573E-01	-98.00	4.59633E-03	76.14
-60.00	0.00	3.66	-33.10	3.659	0.00150	-0.83	LEFT	3.73083E-01	-97.80	5.41951E-03	76.26
-55.00	0.00	3.05	-31.94	3.051	0.00187	-1.01	LEFT	3.47869E-01	-97.57	6.19452E-03	76.40
-50.00	0.00	2.34	-30.98	2.339	0.00231	-1.23	LEFT	3.20455E-01	-97.30	6.91650E-03	76.55
-45.00	0.00	1.51	-30.18	1.513	0.00283	-1.48	LEFT	2.91345E-01	-97.02	7.58163E-03	76.73
-40.00	0.00	0.55	-29.52	0.559	0.00348	-1.79	LEFT	2.61003E-01	-96.71	8.18713E-03	76.92
-35.00	0.00	-0.55	-28.96	-0.544	0.00428	-2.16	LEFT	2.29832E-01	-96.39	8.73107E-03	77.12
-30.00	0.00	-1.84	-28.49	-1.829	0.00532	-2.64	LEFT	1.98165E-01	-96.06	9.21224E-03	77.35
-25.00	0.00	-3.36	-28.11	-3.348	0.00672	-3.29	LEFT	1.66256E-01	-95.73	9.62997E-03	77.58
-20.00	0.00	-5.22	-27.79	-5.194	0.00870	-4.22	LEFT	1.34284E-01	-95.41	9.98388E-03	77.83
-90.00	90.00	4.98	-189.44	4.978	0.00000	0.00	LINEAR	4.34325E-01	-96.48	8.26021E-11	73.55
-85.00	90.00	4.93	-52.34	4.931	0.00024	-0.08	LEFT	4.31968E-01	-96.46	5.91636E-04	73.57
-80.00	90.00	4.79	-46.35	4.789	0.00048	-0.16	LEFT	4.24967E-01	-96.42	1.17866E-03	73.66
-75.00	90.00	4.55	-42.89	4.551	0.00073	-0.24	LEFT	4.13517E-01	-96.35	1.75653E-03	73.79

-70.00	90.00	4.22	-40.47	4.218	0.00099	-0.33	LEFT	3.97934E-01	-96.25	2.32090E-03	73.98
-65.00	90.00	3.79	-38.63	3.786	0.00127	-0.43	LEFT	3.78626E-01	-96.12	2.86763E-03	74.22
-60.00	90.00	3.25	-37.17	3.253	0.00158	-0.54	LEFT	3.56070E-01	-95.97	3.39289E-03	74.51
-55.00	90.00	2.61	-35.97	2.613	0.00192	-0.67	LEFT	3.30784E-01	-95.79	3.89319E-03	74.84
-50.00	90.00	1.86	-34.98	1.860	0.00230	-0.81	LEFT	3.03293E-01	-95.58	4.36543E-03	75.21
-45.00	90.00	0.98	-34.14	0.981	0.00275	-0.99	LEFT	2.74104E-01	-95.36	4.80686E-03	75.62
-40.00	90.00	-0.04	-33.43	-0.040	0.00329	-1.21	LEFT	2.43684E-01	-95.11	5.21511E-03	76.05
-35.00	90.00	-1.23	-32.83	-1.231	0.00396	-1.49	LEFT	2.12437E-01	-94.83	5.58815E-03	76.52
-30.00	90.00	-2.64	-32.33	-2.635	0.00483	-1.86	LEFT	1.80699E-01	-94.53	5.92424E-03	77.00
-25.00	90.00	-4.33	-31.90	-4.323	0.00604	-2.37	LEFT	1.48727E-01	-94.19	6.22184E-03	77.50
-20.00	90.00	-6.44	-31.55	-6.424	0.00789	-3.15	LEFT	1.16699E-01	-93.79	6.47960E-03	78.02
-90.00	180.00	5.05	-184.12	5.052	0.00000	0.00	LINEAR	4.38077E-01	-89.62	1.52421E-10	-97.41
-85.00	180.00	5.01	-47.02	5.006	0.00034	0.14	RIGHT	4.35719E-01	-89.63	1.09076E-03	-97.42
-80.00	180.00	4.86	-41.06	4.865	0.00069	0.29	RIGHT	4.28714E-01	-89.67	2.16735E-03	-97.47
-75.00	180.00	4.63	-37.63	4.630	0.00105	0.44	RIGHT	4.17258E-01	-89.73	3.21610E-03	-97.55
-70.00	180.00	4.30	-35.26	4.299	0.00143	0.60	RIGHT	4.01667E-01	-89.82	4.22430E-03	-97.66
-65.00	180.00	3.87	-33.49	3.871	0.00185	0.77	RIGHT	3.82349E-01	-89.93	5.18057E-03	-97.79
-60.00	180.00	3.34	-32.11	3.344	0.00232	0.96	RIGHT	3.59782E-01	-90.06	6.07518E-03	-97.95
-55.00	180.00	2.71	-31.00	2.711	0.00284	1.17	RIGHT	3.34484E-01	-90.22	6.90023E-03	-98.14
-50.00	180.00	1.96	-30.11	1.966	0.00344	1.41	RIGHT	3.06980E-01	-90.40	7.64973E-03	-98.34
-45.00	180.00	1.10	-29.38	1.099	0.00415	1.70	RIGHT	2.77778E-01	-90.59	8.31958E-03	-98.57
-40.00	180.00	0.09	-28.78	0.093	0.00501	2.04	RIGHT	2.47345E-01	-90.81	8.90743E-03	-98.82
-35.00	180.00	-1.09	-28.30	-1.078	0.00608	2.47	RIGHT	2.16087E-01	-91.04	9.41248E-03	-99.08
-30.00	180.00	-2.47	-27.92	-2.454	0.00747	3.02	RIGHT	1.84337E-01	-91.28	9.83518E-03	-99.35
-25.00	180.00	-4.12	-27.63	-4.102	0.00938	3.78	RIGHT	1.52354E-01	-91.52	1.01770E-02	-99.63
-20.00	180.00	-6.17	-27.40	-6.139	0.01223	4.91	RIGHT	1.20319E-01	-91.76	1.04400E-02	-99.92
-90.00	270.00	5.38	-187.63	5.380	0.00000	0.00	LINEAR	4.54899E-01	-91.57	1.01782E-10	-94.32
-85.00	270.00	5.33	-50.53	5.335	0.00008	0.09	RIGHT	4.52549E-01	-91.58	7.28392E-04	-94.34
-80.00	270.00	5.20	-44.57	5.200	0.00016	0.19	RIGHT	4.45565E-01	-91.60	1.44740E-03	-94.40
-75.00	270.00	4.97	-41.14	4.974	0.00025	0.28	RIGHT	4.34144E-01	-91.64	2.14796E-03	-94.49
-70.00	270.00	4.66	-38.77	4.658	0.00035	0.39	RIGHT	4.18599E-01	-91.69	2.82157E-03	-94.63
-65.00	270.00	4.25	-37.00	4.249	0.00046	0.50	RIGHT	3.99338E-01	-91.76	3.46061E-03	-94.81
-60.00	270.00	3.74	-35.61	3.745	0.00060	0.62	RIGHT	3.76837E-01	-91.84	4.05846E-03	-95.02
-55.00	270.00	3.14	-34.51	3.143	0.00076	0.75	RIGHT	3.51611E-01	-91.94	4.60966E-03	-95.27
-50.00	270.00	2.44	-33.61	2.438	0.00096	0.90	RIGHT	3.24184E-01	-92.05	5.10996E-03	-95.55
-45.00	270.00	1.62	-32.88	1.621	0.00121	1.08	RIGHT	2.95060E-01	-92.19	5.55630E-03	-95.87
-40.00	270.00	0.68	-32.29	0.679	0.00152	1.28	RIGHT	2.64704E-01	-92.34	5.94674E-03	-96.22
-35.00	270.00	-0.41	-31.82	-0.409	0.00191	1.54	RIGHT	2.33520E-01	-92.52	6.28038E-03	-96.60
-30.00	270.00	-1.68	-31.44	-1.674	0.00242	1.86	RIGHT	2.01840E-01	-92.73	6.55715E-03	-97.00
-25.00	270.00	-3.17	-31.16	-3.167	0.00310	2.28	RIGHT	1.69918E-01	-92.97	6.77768E-03	-97.44
-20.00	270.00	-4.99	-30.95	-4.974	0.00405	2.87	RIGHT	1.37935E-01	-93.26	6.94312E-03	-97.89
-90.00	360.00	5.31	-185.27	5.307	0.00000	0.00	LINEAR	4.51108E-01	-98.48	1.33516E-10	75.87
-85.00	360.00	5.26	-48.17	5.262	0.00021	-0.12	LEFT	4.48758E-01	-98.46	9.55970E-04	75.88
-80.00	360.00	5.13	-42.19	5.126	0.00043	-0.25	LEFT	4.41778E-01	-98.40	1.90249E-03	75.91
-75.00	360.00	4.90	-38.74	4.898	0.00066	-0.37	LEFT	4.30362E-01	-98.30	2.83036E-03	75.97
-70.00	360.00	4.58	-36.34	4.579	0.00091	-0.51	LEFT	4.14825E-01	-98.17	3.73095E-03	76.04
-65.00	360.00	4.17	-34.53	4.167	0.00119	-0.66	LEFT	3.95573E-01	-98.00	4.59633E-03	76.14
-60.00	360.00	3.66	-33.10	3.659	0.00150	-0.83	LEFT	3.73083E-01	-97.80	5.41951E-03	76.26
-55.00	360.00	3.05	-31.94	3.051	0.00187	-1.01	LEFT	3.47869E-01	-97.57	6.19452E-03	76.40
-50.00	360.00	2.34	-30.98	2.339	0.00231	-1.23	LEFT	3.20455E-01	-97.30	6.91650E-03	76.55
-45.00	360.00	1.51	-30.18	1.513	0.00283	-1.48	LEFT	2.91345E-01	-97.02	7.58163E-03	76.73
-40.00	360.00	0.55	-29.52	0.559	0.00348	-1.79	LEFT	2.61003E-01	-96.71	8.18713E-03	76.92
-35.00	360.00	-0.55	-28.96	-0.544	0.00428	-2.16	LEFT	2.29832E-01	-96.39	8.73107E-03	77.12
-30.00	360.00	-1.84	-28.49	-1.829	0.00532	-2.64	LEFT	1.98165E-01	-96.06	9.21224E-03	77.35
-25.00	360.00	-3.36	-28.11	-3.348	0.00672	-3.29	LEFT	1.66256E-01	-95.73	9.62997E-03	77.58
-20.00	360.00	-5.22	-27.79	-5.194	0.00870	-4.22	LEFT	1.34284E-01	-95.41	9.98388E-03	77.83

***** INPUT LINE 5 EN 0 0 0 0 0.00000E+00 0.00000E+00 0.00000E+00 0.00000E+00 0.00000E+00 0.00000E+00

RUN TIME = 1.050

FEDERAL COMMUNICATIONS COMMISSION
445 12th STREET SW
WASHINGTON DC 20554

MEDIA BUREAU
AUDIO DIVISION
APPLICATION STATUS: (202) 418-2730
HOME PAGE: www.fcc.gov/media/radio/audio-division

PROCESSING ENGINEER: Edward Lubetzky
TELEPHONE: (202) 418-2700
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INTERNET ADDRESS: Edward.Lubetzky@fcc.gov

APR 21 2017

Liberty Broadcasting System LLP
P.O. Box 31000
Spokane, Washington 99223

Re: Liberty Broadcasting System LLP
KFIO(AM), Dishman, Washington
Facility ID Number: 53148
Construction Permit: BP-20160216ACJ
License Application: BL-20161206ACA

Dear Applicant:

This is in reference to your above-captioned application to cover Construction Permit BP-20160216ACJ to move the transmitter site, increase radiator height, and increase daytime power.

In the application we note that the antenna was modified to a shunt fed antenna from the series-fed. You stated that the base insulator does not have the voltage rating necessary for the authorized operation and that replacement would be impractical and costly, and skirt wires would increase leg stress with wind loads violating structural standards. It is our policy not to authorize the use of slant wire feed during the nighttime or critical hours operation because it is difficult to evaluate the vertical characteristics of the antenna. However, the proposed nighttime power is low and you have shown that the antenna radiation pattern non-circularity is under 1 dB for departure angles under 70° and that for extremely high departure angles above 80° allocation considerations are not a concern.¹ Based on the foregoing, the application BL-20161206ACA is hereby GRANTED.

Sincerely,



Son Nguyen
Supervisory Engineer
Audio Division
Media Bureau

cc: Ellen Mandel Edmundson, Esq. (via e-mail only)
Benj. F. Dawson III, P.E. (via e-mail only)

¹ The maximum departure angle for calculating 10% interfering signals from Figure 6a, Section 73.190, is 67° at 100 kilometers.