

STATE HEADING INFORMATION : COMPUTED ON A DIGITAL
 by Philip B. Mix, WB1CZE : with a WB1CZE program writ
 Williston, Vt. 05495 : on LOTUS 123 software.
 TABLE CUSTOM COMPUTED FOR : SCOTT, W3VS
 THIS STATION IS LOCATED : 3 LAND, MD.?
 LATITUDE (N) : 37deg
 LONGITUDE (W) : 77deg

CALL DIST	STATE	BEARto	BEARfrm	DISTmi
	4ALABAMA	242	56	665
	7ALASKA	328	87	3446
	7ARIZONA	273	72	2043
	5ARKANSAS	262	72	922
	6CALIFORNIA	280	74	2386
	10COLORADO	279	81	1538
	1CONNECTICUT	43	226	385
	3DELAWARE	38	219	88
	4FLORIDA	206	24	686
	4GEORGIA	231	47	527
	6HAWAII	280	57	4804
	7IDAHO	294	89	2034
	9ILLINOIS	285	97	715
	9INDIANA	292	107	517
	10IOWA	297	107	918
	10KANSAS	280	87	1096
	4KENTUCKEY	264	79	449
	5LOUISIANA	247	59	901
	1MAINE	40	224	555
	3MARYLAND	#DIV/0!	#DIV/0!	138
	1MASSACHUSETTS	41	225	470
	8MICHIGAN	317	132	592
	10MINNISOTA	307	116	1041
	5MISSISSIPPI	251	63	867
	10MISSOURI	279	90	824
	7MONTANA	302	98	1905
	10NEBRASKA	291	98	1105
	7NEVADA	286	81	2163
	1NEW HAMPSHIRE	36	219	522
	2NEW JERSEY	29	211	271

5NEW MEXICO	271	74	1637
2NEW YORK	24	206	380
4NORTH CAROLINA	251	68	297
10NORTH DAKOTA	307	111	1404
8OHIO	304	121	385
5OKLAHOMA	273	80	1165
7OREGON	298	87	2426
3PENNSYLVANIA	#DIV/0!	#DIV/0!	242
1RHODE ISLAND	36	219	436
4SOUTH CAROLINA	227	44	395
10SOUTH DAKOTA	299	104	1295
4TENNESEE	253	67	599
5TEXAS	260	68	1241
7UTAH	283	81	1907
1VERMONT	27	210	550
4VIRGINIA	#DIV/0!	#DIV/0!	0
7WASHINGTON	301	90	2374
8WEST VIRGINIA	286	103	282
9WISCONSIN	309	121	839
7WYOMING	294	95	1630

L RAINBOW 100A PC
tten

Note: East Latitudes
and South Longitudes = 0.64577182
are negative! = 1.3439035

B

N LAT	W LONG	N LAT(Rad)	W Long(Rad)		
32	87	0.55850536	1.5184364	-0.17453293	-0.17453293
65	150	1.134464	2.6179939	-1.2740904	-1.2740904
33	113	0.57595865	1.9722221	-0.62831853	-0.62831853
34	93	0.59341195	1.6231562	-0.27925268	-0.27925268
35	120	0.61086524	2.0943951	-0.75049158	-0.75049158
37	105	0.64577182	1.8325957	-0.48869219	-0.48869219
41	72	0.71558499	1.2566371	0.087266463	0.087266463
38	76	0.66322512	1.3264502	0.017453293	0.017453293
28	82	0.48869219	1.43117	-0.087266463	-0.087266463
32	84	0.55850536	1.4660766	-0.12217305	-0.12217305
20	156	0.34906585	2.7227136	-1.3788101	-1.3788101
43	115	0.75049158	2.0071286	-0.66322512	-0.66322512
39	89.9	0.68067841	1.569051	-0.22514747	-0.22514747
39.5	86	0.68940505	1.5009832	-0.15707963	-0.15707963
42	93	0.73303829	1.6231562	-0.27925268	-0.27925268
38	97	0.66322512	1.6929694	-0.34906585	-0.34906585
36	85	0.62831853	1.4835299	-0.13962634	-0.13962634
31	91	0.54105207	1.5882496	-0.2443461	-0.2443461
43	70	0.75049158	1.2217305	0.12217305	0.12217305
39	77	0.68067841	1.3439035	0	0
42	71	0.73303829	1.2391838	0.10471976	0.10471976
43	85	0.75049158	1.4835299	-0.13962634	-0.13962634
45	94	0.78539816	1.6406095	-0.29670597	-0.29670597
32	91	0.55850536	1.5882496	-0.2443461	-0.2443461
38	92	0.66322512	1.6057029	-0.26179939	-0.26179939
47	112	0.82030475	1.9547688	-0.61086524	-0.61086524
41	97	0.71558499	1.6929694	-0.34906585	-0.34906585
39	117	0.68067841	2.0420352	-0.6981317	-0.6981317
43	71	0.75049158	1.2391838	0.10471976	0.10471976
40.4	74.5	0.70511302	1.3002703	0.043633231	0.043633231

34	106	0.59341195	1.850049	-0.50614548	-0.50614548
42	74	0.73303829	1.2915436	0.052359878	0.052359878
35.5	82	0.61959188	1.43117	-0.087266463	-0.087266463
47	101	0.82030475	1.7627825	-0.41887902	-0.41887902
40	83	0.6981317	1.4486233	-0.10471976	-0.10471976
36	98	0.62831853	1.7104227	-0.36651914	-0.36651914
45	123	0.78539816	2.146755	-0.80285146	-0.80285146
40.5	77	0.70685835	1.3439035	0	0
42	72	0.73303829	1.2566371	0.087266463	0.087266463
33	82	0.57595865	1.43117	-0.087266463	-0.087266463
44	100	0.76794487	1.7453293	-0.40142573	-0.40142573
34	87	0.59341195	1.5184364	-0.17453293	-0.17453293
32	98	0.55850536	1.7104227	-0.36651914	-0.36651914
38	112	0.66322512	1.9547688	-0.61086524	-0.61086524
44	72	0.76794487	1.2566371	0.087266463	0.087266463
37	77	0.64577182	1.3439035	0	0
47	122	0.82030475	2.1293017	-0.78539816	-0.78539816
38	82	0.66322512	1.43117	-0.087266463	-0.087266463
44	90.1	0.76794487	1.5725417	-0.22863813	-0.22863813
43	107	0.75049158	1.8675023	-0.52359878	-0.52359878

rad 37
rad 97

	tan(phi)				
L	cos LcotB	phi	cot C	C(rad)	C(deg)
-0.17453293	1.5760219	1.0053883	0.53918934	1.0762909	61.666927
-1.2740904	0.13633516	0.13549976	-1.6069414	-0.55665555	-31.894014
-0.62831853	1.2457769	0.89440395	-0.054035693	-1.5168131	-86.906991
-0.27925268	1.4251291	0.95893648	0.14444804	1.4273405	81.780589
-0.75049158	1.0444813	0.80715151	-0.17459127	-1.3979473	-80.096479
-0.48869219	1.171711	0.86430118	-0.15004934	-1.4218581	-81.46647
0.087266463	1.1459909	0.85332311	1.0867709	0.7438407	42.618933
0.017453293	1.2797467	0.90749731	1.2742702	0.66538075	38.123509
-0.087266463	1.8735697	1.0805221	2.0065563	0.46233979	26.490118
-0.12217305	1.5884059	1.0089232	0.80648938	0.89211095	51.114192
-1.3788101	0.52424341	0.4828537	-0.17913912	-1.3935374	-79.84381
-0.66322512	0.84503808	0.70160635	-0.43936962	-1.1568177	-66.280772
-0.22514747	1.2037298	0.87758387	-0.26918845	-1.3078411	-74.933772
-0.15707963	1.1981618	0.87530399	-0.40872469	-1.1827914	-67.768953
-0.27925268	1.0675893	0.81807642	-0.5100648	-1.0991293	-62.975472
-0.34906585	1.2027517	0.87718427	-0.17087095	-1.4015598	-80.303461
-0.13962634	1.3629871	0.93782036	0.1129208	1.4583518	83.557405
-0.2443461	1.6148433	1.0163388	0.43017982	1.1645465	66.7236
0.12217305	1.0643754	0.81657204	1.209578	0.69083129	39.581717
0	1.2348972	0.89011792	#DIV/0!	#DIV/0!	#DIV/0!
0.10471976	1.1045285	0.83502573	1.1535272	0.71422753	40.922223
-0.13962634	1.0619325	0.81542527	-1.0690389	-0.75204291	-43.088885
-0.29670597	0.95630476	0.76306627	-0.76312768	-0.91894631	-52.651745
-0.2443461	1.5527978	0.9986514	0.3509219	1.2333005	70.662911
-0.26179939	1.2363287	0.89068447	-0.16480152	-1.4074629	-80.641686
-0.61086524	0.76387164	0.65232001	-0.63366223	-1.0059922	-57.639109
-0.34906585	1.0809927	0.82429875	-0.3763583	-1.2108353	-69.375755
-0.6981317	0.9459861	0.75764872	-0.28890605	-1.2895483	-73.885674
0.10471976	1.0664942	0.81756435	1.3988673	0.62063238	35.559616
0.043633231	1.1738777	0.86521328	1.7985091	0.50745035	29.074763

-0.50614548	1.296677	0.91386341	-0.025426835	-1.545375	-88.543464
0.052359878	1.1090905	0.83707605	2.2566586	0.41712871	23.899715
-0.087266463	1.3966135	0.9494009	0.34264824	1.2406859	71.086066
-0.41887902	0.85189492	0.70559314	-0.75391867	-0.92479198	-52.986677
-0.10471976	1.185225	0.86995849	-0.68513917	-0.97011386	-55.58343
-0.36651914	1.2849632	0.90946996	-0.0513437	-1.5194977	-87.060804
-0.80285146	0.69465837	0.60713197	-0.529068	-1.0841656	-62.118116
0	1.1708496	0.86393798	#DIV/0!	#DIV/0!	#DIV/0!
0.087266463	1.1063863	0.83586183	1.3719085	0.62986734	36.08874
-0.087266463	1.5340053	0.99309485	0.92805096	0.82269784	47.137114
-0.40142573	0.95321068	0.76144766	-0.55603376	-1.0633325	-60.924463
-0.17453293	1.4600375	0.97026718	0.31089095	1.269378	72.730003
-0.36651914	1.494041	0.98095513	0.17523853	1.3973192	80.060494
-0.61086524	1.0484668	0.80905379	-0.2283644	-1.3462819	-77.136272
0.087266463	1.0315898	0.80094621	1.9701331	0.46969314	26.911435
0	1.3270448	0.9250245	#DIV/0!	#DIV/0!	#DIV/0!
-0.78539816	0.65938774	0.5829464	-0.60936235	-1.0235212	-58.643443
-0.087266463	1.2750711	0.90572071	-0.28038898	-1.297427	-74.337089
-0.22863813	1.0085816	0.78967062	-0.81658465	-0.88602429	-50.765452
-0.52359878	0.92869855	0.7484463	-0.44710513	-1.1503524	-65.910337

<-----Distance Calculations ----->					
C corr'n	Bearing w/L corr'n	cos D	D(rad)	Dist(miles)	Kilometer
61.666927	241.66693	0.98590527	0.16809499	665.01049	1070.2115
148.10599	328.10599	0.64411034	0.87093667	3445.5639	5544.9986
93.093009	273.09301	0.86964514	0.51631327	2042.6174	3287.2153
81.780589	261.78059	0.97298095	0.23298759	921.73593	1483.3637
99.903521	279.90352	0.82364137	0.60299402	2385.5402	3839.0863
98.53353	278.53353	0.92534179	0.38886022	1538.3929	2475.7591
42.618933	42.618933	0.99527045	0.09729627	384.91951	619.45685
38.123509	38.123509	0.99975184	0.022278493	88.137261	141.84064
26.490118	206.49012	0.98500502	0.17339323	685.97118	1103.9439
51.114192	231.11419	0.99114635	0.13316719	526.83056	847.83646
100.15619	280.15619	0.34902965	1.2142609	4803.8091	7730.8434
113.71923	293.71923	0.87070215	0.51416812	2034.1308	3273.5578
105.06623	285.06623	0.9837262	0.18065509	714.70025	1150.178
112.23105	292.23105	0.9914612	0.13077445	517.36452	832.60262
117.02453	297.02453	0.97320344	0.23202196	917.91577	1477.2159
99.696539	279.69654	0.96189425	0.27694855	1095.6525	1763.2503
83.557405	263.55741	0.9935598	0.11355285	449.23312	722.95771
66.7236	246.7236	0.97418741	0.22770335	900.83065	1449.7205
39.581717	39.581717	0.99016821	0.140342	555.21528	893.51642
#DIV/0!	#DIV/0!	0.99939083	0.034906585	138.096	222.24
40.922223	40.922223	0.99294343	0.11886868	470.26341	756.80208
136.91112	316.91112	0.98883762	0.14955406	591.65964	952.16689
127.34826	307.34826	0.96559246	0.26308432	1040.8034	1674.9808
70.662911	250.66291	0.97607655	0.2191778	867.10221	1395.4408
99.358314	279.35831	0.97840368	0.20820424	823.68909	1325.5754
122.36089	302.36089	0.88630564	0.48149054	1904.8531	3065.5092
110.62424	290.62424	0.96121451	0.27942382	1105.4451	1779.0096
106.11433	286.11433	0.85418482	0.54681525	2163.2881	3481.4125
35.559616	35.559616	0.99132222	0.13183598	521.56411	839.36109
29.074763	29.074763	0.99766096	0.068409766	270.63991	435.54494

91.456536	271.45654	0.91561539	0.41376046	1636.9022	2634.2916
23.899715	23.899715	0.99538132	0.09614817	380.37745	612.14723
71.086066	251.08607	0.99718319	0.075075103	297.00904	477.98119
127.01332	307.01332	0.93771872	0.35479213	1403.6141	2258.8576
124.41657	304.41657	0.99527808	0.097217666	384.60854	618.95639
92.939196	272.9392	0.95693336	0.29454833	1165.28	1875.3029
117.88188	297.88188	0.81783537	0.61315705	2425.7468	3903.7913
#DIV/0!	#DIV/0!	0.9981348	0.061086524	241.668	388.92
36.08874	36.08874	0.99393624	0.1101807	435.89238	701.48826
47.137114	227.13711	0.99501529	0.099888514	395.17484	635.9609
119.07554	299.07554	0.94687696	0.3274146	1295.3042	2084.5529
72.730003	252.73	0.98857077	0.15133455	598.70352	963.50271
80.060494	260.06049	0.95120996	0.31366233	1240.898	1996.9961
102.86373	282.86373	0.88603404	0.48207668	1907.172	3069.241
26.911435	26.911435	0.99036004	0.13896392	549.76336	884.74256
#DIV/0!	#DIV/0!		1 2.1078569E-08	8.3390168E-05	0.00013420107
121.35656	301.35656	0.82527816	0.60010175	2374.0979	3820.672
105.66291	285.66291	0.99745289	0.07138894	282.42599	454.51246
129.23455	309.23455	0.9775956	0.21207813	839.01479	1350.2393
114.08966	294.08966	0.91626934	0.41213092	1630.4554	2623.9168

B
N LAT(Rad) W Long(Rad)

0.55850536	1.5184364	0.64577182	1.3439035	0.17453293	0.17453293
1.134464	2.6179939	0.64577182	1.3439035	1.2740904	1.2740904
0.57595865	1.9722221	0.64577182	1.3439035	0.62831853	0.62831853
0.59341195	1.6231562	0.64577182	1.3439035	0.27925268	0.27925268
0.61086524	2.0943951	0.64577182	1.3439035	0.75049158	0.75049158
0.64577182	1.8325957	0.64577182	1.3439035	0.48869219	0.48869219
0.71558499	1.2566371	0.64577182	1.3439035	-0.087266463	-0.087266463
0.66322512	1.3264502	0.64577182	1.3439035	-0.017453293	-0.017453293
0.48869219	1.43117	0.64577182	1.3439035	0.087266463	0.087266463
0.55850536	1.4660766	0.64577182	1.3439035	0.12217305	0.12217305
0.34906585	2.7227136	0.64577182	1.3439035	1.3788101	1.3788101
0.75049158	2.0071286	0.64577182	1.3439035	0.66322512	0.66322512
0.68067841	1.569051	0.64577182	1.3439035	0.22514747	0.22514747
0.68940505	1.5009832	0.64577182	1.3439035	0.15707963	0.15707963
0.73303829	1.6231562	0.64577182	1.3439035	0.27925268	0.27925268
0.66322512	1.6929694	0.64577182	1.3439035	0.34906585	0.34906585
0.62831853	1.4835299	0.64577182	1.3439035	0.13962634	0.13962634
0.54105207	1.5882496	0.64577182	1.3439035	0.2443461	0.2443461
0.75049158	1.2217305	0.64577182	1.3439035	-0.12217305	-0.12217305
0.68067841	1.3439035	0.64577182	1.3439035	0	0
0.73303829	1.2391838	0.64577182	1.3439035	-0.10471976	-0.10471976
0.75049158	1.4835299	0.64577182	1.3439035	0.13962634	0.13962634
0.78539816	1.6406095	0.64577182	1.3439035	0.29670597	0.29670597
0.55850536	1.5882496	0.64577182	1.3439035	0.2443461	0.2443461
0.66322512	1.6057029	0.64577182	1.3439035	0.26179939	0.26179939
0.82030475	1.9547688	0.64577182	1.3439035	0.61086524	0.61086524
0.71558499	1.6929694	0.64577182	1.3439035	0.34906585	0.34906585
0.68067841	2.0420352	0.64577182	1.3439035	0.6981317	0.6981317
0.75049158	1.2391838	0.64577182	1.3439035	-0.10471976	-0.10471976
0.70511302	1.3002703	0.64577182	1.3439035	-0.043633231	-0.043633231

0.59341195	1.850049	0.64577182	1.3439035	0.50614548	0.50614548
0.73303829	1.2915436	0.64577182	1.3439035	-0.052359878	-0.052359878
0.61959188	1.43117	0.64577182	1.3439035	0.087266463	0.087266463
0.82030475	1.7627825	0.64577182	1.3439035	0.41887902	0.41887902
0.6981317	1.4486233	0.64577182	1.3439035	0.10471976	0.10471976
0.62831853	1.7104227	0.64577182	1.3439035	0.36651914	0.36651914
0.78539816	2.146755	0.64577182	1.3439035	0.80285146	0.80285146
0.70685835	1.3439035	0.64577182	1.3439035	0	0
0.73303829	1.2566371	0.64577182	1.3439035	-0.087266463	-0.087266463
0.57595865	1.43117	0.64577182	1.3439035	0.087266463	0.087266463
0.76794487	1.7453293	0.64577182	1.3439035	0.40142573	0.40142573
0.59341195	1.5184364	0.64577182	1.3439035	0.17453293	0.17453293
0.55850536	1.7104227	0.64577182	1.3439035	0.36651914	0.36651914
0.66322512	1.9547688	0.64577182	1.3439035	0.61086524	0.61086524
0.76794487	1.2566371	0.64577182	1.3439035	-0.087266463	-0.087266463
0.64577182	1.3439035	0.64577182	1.3439035	0	0
0.82030475	2.1293017	0.64577182	1.3439035	0.78539816	0.78539816
0.66322512	1.43117	0.64577182	1.3439035	0.087266463	0.087266463
0.76794487	1.5725417	0.64577182	1.3439035	0.22863813	0.22863813
0.75049158	1.8675023	0.64577182	1.3439035	0.52359878	0.52359878

L	tan(phi) cos LcotB	phi	cot C	C(rad)	C(deg)
0.17453293	1.306884	0.91765133	0.67482123	0.97716948	55.987687
1.2740904	0.38799036	0.37011056	0.055930863	1.5149237	86.798733
0.62831853	1.0736018	0.82087794	0.3255634	1.2560549	71.966646
0.27925268	1.2756374	0.90593631	0.31633558	1.264421	72.445984
0.75049158	0.97053914	0.77044862	0.29001256	1.2885273	73.827177
0.48869219	1.171711	0.86430118	0.15004934	1.4218581	81.46647
-0.087266463	1.321995	0.92319111	0.97352237	0.79881379	45.768659
-0.017453293	1.3268427	0.92495129	1.2467629	0.67600621	38.732303
0.087266463	1.321995	0.92319111	2.2679361	0.41528537	23.794099
0.12217305	1.3171532	0.92142486	0.92788513	0.82278694	47.142219
1.3788101	0.25321209	0.24799951	0.65488066	0.99099771	56.779986
0.66322512	1.0457256	0.80774621	0.02224031	1.5485597	88.725934
0.22514747	1.2935518	0.91269611	-0.12459393	-1.4468412	-82.897893
0.15707963	1.3107067	0.91906038	-0.29907867	-1.280185	-73.349198
0.27925268	1.2756374	0.90593631	-0.30188154	-1.2776142	-73.201904
0.34906585	1.2470142	0.89488851	0.044664474	1.5261615	87.442614
0.13962634	1.3141301	0.92031786	0.19812066	1.3752085	78.793642
0.2443461	1.2876259	0.91047303	0.60425555	1.0272536	58.857297
-0.12217305	1.3171532	0.92142486	1.0322555	0.76952771	44.09069
0	1.3270448	0.9250245	#DIV/0!	#DIV/0!	#DIV/0!
-0.10471976	1.3197751	0.92238233	1.008962	0.78093719	44.744405
0.13962634	1.3141301	0.92031786	-0.89274906	-0.84200174	-48.243146
0.29670597	1.2690593	0.9034245	-0.49035661	-1.1148931	-63.878672
0.2443461	1.2876259	0.91047303	0.51616527	1.0943003	62.698788
0.26179939	1.2818269	0.90828514	-0.003379289	-1.5674171	-89.806382
0.61086524	1.0870515	0.82708427	-0.14848458	-1.4233888	-81.55417
0.34906585	1.2470142	0.89488851	-0.13969752	-1.4319971	-82.047388
0.6981317	1.0165753	0.79361751	0.16107046	1.4110975	80.849931
-0.10471976	1.3197751	0.92238233	1.2163936	0.68807341	39.423702
-0.043633231	1.3257818	0.92456677	1.6883034	0.53474635	30.638709

0.50614548	1.1606596	0.8596183	0.27978712	1.297985	74.369065
-0.052359878	1.3252262	0.92436524	2.0676759	0.45046995	25.810027
0.087266463	1.321995	0.92319111	0.40142897	1.1890587	68.128044
0.41887902	1.2123158	0.88107507	-0.37912056	-1.208418	-69.237252
0.10471976	1.3197751	0.92238233	-0.59323994	-1.0353623	-59.321889
0.36651914	1.2389031	0.89170133	0.16991817	1.4024857	80.356512
0.80285146	0.92184279	0.74475272	0.057894106	1.5129668	86.686611
0	1.3270448	0.9250245	#DIV/0!	#DIV/0!	#DIV/0!
-0.087266463	1.321995	0.92319111	1.2229208	0.68544949	39.273363
0.087266463	1.321995	0.92319111	1.025946	0.77259202	44.266262
0.40142573	1.2215512	0.88479765	-0.24921224	-1.3265592	-76.006244
0.17453293	1.306884	0.91765133	0.42630516	1.1678207	66.911198
0.36651914	1.2389031	0.89170133	0.40273642	1.1879332	68.063558
0.61086524	1.0870515	0.82708427	0.15601816	1.4160259	81.132308
-0.087266463	1.321995	0.92319111	1.7205242	0.52649487	30.165934
0	1.3270448	0.9250245	#DIV/0!	#DIV/0!	#DIV/0!
0.78539816	0.93836239	0.75361007	-0.0045573534	-1.566239	-89.738885
0.087266463	1.321995	0.92319111	-0.22385218	-1.3505747	-77.382228
0.22863813	1.2925098	0.91230612	-0.593507	-1.0351648	-59.310572
0.52359878	1.1492545	0.85473164	-0.079026722	-1.4919335	-85.481493

<-----Distance Calculations ----->

C corr'n	Bearing w/L corr'n	cos D	D(rad)	Dist(miles)	Kilometer
55.987687	55.987687	0.98590527	0.16809499	665.01049	1070.2115
86.798733	86.798733	0.64411034	0.87093667	3445.5639	5544.9986
71.966646	71.966646	0.86964514	0.51631327	2042.6174	3287.2153
72.445984	72.445984	0.97298095	0.23298759	921.73593	1483.3637
73.827177	73.827177	0.82364137	0.60299402	2385.5402	3839.0863
81.46647	81.46647	0.92534179	0.38886022	1538.3929	2475.7591
45.768659	225.76866	0.99527045	0.09729627	384.91951	619.45685
38.732303	218.7323	0.99975184	0.022278493	88.137261	141.84064
23.794099	23.794099	0.98500502	0.17339323	685.97118	1103.9439
47.142219	47.142219	0.99114635	0.13316719	526.83056	847.83646
56.779986	56.779986	0.34902965	1.2142609	4803.8091	7730.8434
88.725934	88.725934	0.87070215	0.51416812	2034.1308	3273.5578
97.102107	97.102107	0.9837262	0.18065509	714.70025	1150.178
106.6508	106.6508	0.9914612	0.13077445	517.36452	832.60262
106.7981	106.7981	0.97320344	0.23202196	917.91577	1477.2159
87.442614	87.442614	0.96189425	0.27694855	1095.6525	1763.2503
78.793642	78.793642	0.9935598	0.11355285	449.23312	722.95771
58.857297	58.857297	0.97418741	0.22770335	900.83065	1449.7205
44.09069	224.09069	0.99016821	0.140342	555.21528	893.51642
#DIV/0!	#DIV/0!	0.99939083	0.034906585	138.096	222.24
44.744405	224.74441	0.99294343	0.11886868	470.26341	756.80208
131.75685	131.75685	0.98883762	0.14955406	591.65964	952.16689
116.12133	116.12133	0.96559246	0.26308432	1040.8034	1674.9808
62.698788	62.698788	0.97607655	0.2191778	867.10221	1395.4408
90.193618	90.193618	0.97840368	0.20820424	823.68909	1325.5754
98.44583	98.44583	0.88630564	0.48149054	1904.8531	3065.5092
97.952612	97.952612	0.96121451	0.27942382	1105.4451	1779.0096
80.849931	80.849931	0.85418482	0.54681525	2163.2881	3481.4125
39.423702	219.4237	0.99132222	0.13183598	521.56411	839.36109
30.638709	210.63871	0.99766096	0.068409766	270.63991	435.54494

74.369065	74.369065	0.91561539	0.41376046	1636.9022	2634.2916
25.810027	205.81003	0.99538132	0.09614817	380.37745	612.14723
68.128044	68.128044	0.99718319	0.075075103	297.00904	477.98119
110.76275	110.76275	0.93771872	0.35479213	1403.6141	2258.8576
120.67811	120.67811	0.99527808	0.097217666	384.60854	618.95639
80.356512	80.356512	0.95693336	0.29454833	1165.28	1875.3029
86.686611	86.686611	0.81783537	0.61315705	2425.7468	3903.7913
#DIV/0!	#DIV/0!	0.9981348	0.061086524	241.668	388.92
39.273363	219.27336	0.99393624	0.1101807	435.89238	701.48826
44.266262	44.266262	0.99501529	0.099888514	395.17484	635.9609
103.99376	103.99376	0.94687696	0.3274146	1295.3042	2084.5529
66.911198	66.911198	0.98857077	0.15133455	598.70352	963.50271
68.063558	68.063558	0.95120996	0.31366233	1240.898	1996.9961
81.132308	81.132308	0.88603404	0.48207668	1907.172	3069.241
30.165934	210.16593	0.99036004	0.13896392	549.76336	884.74256
#DIV/0!	#DIV/0!		1 2.1078569E-08	8.3390168E-05	0.00013420107
90.261115	90.261115	0.82527816	0.60010175	2374.0979	3820.672
102.61777	102.61777	0.99745289	0.07138894	282.42599	454.51246
120.68943	120.68943	0.9775956	0.21207813	839.01479	1350.2393
94.518507	94.518507	0.91626934	0.41213092	1630.4554	2623.9168