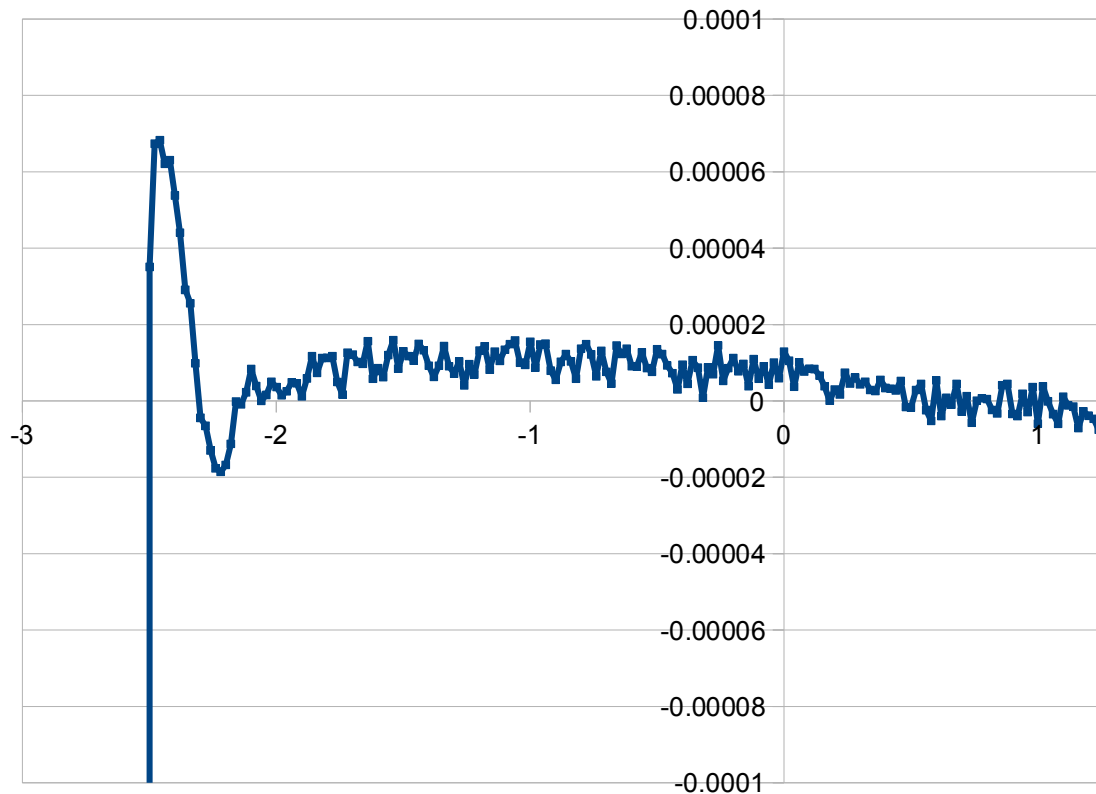


Sheet1

First stab with new Python setup. Off the shelf 2449 board, HP3456A
Input common mode at 2.5V, hooks at ends are likely amplifier saturating.

neg	pos	LTC2449	HP3456	abs error	endpoint line	inl
3.77	1.23	-2.5000000093	-2.53887	-0.03886999	-2.53993186	-0.03993185
3.76	1.24	-2.5000000093	-2.5189	-0.01889999	-2.51995339	-0.01995338
3.75	1.25	-2.5000000093	-2.49892	0.001080009	-2.49996492	3.5092E-005
3.74	1.26	-2.4800337944	-2.47893	0.001103794	-2.47996644	6.7357E-005
3.73	1.27	-2.4600462522	-2.45895	0.001096252	-2.45997796	6.8290E-005



3.43	1.57	-1.8599952851	-1.85921	0.000785285	-1.85998357	1.1716E-005
3.42	1.58	-1.8398523796	-1.83908	0.00077238	-1.83984503	7.3489E-006
3.41	1.59	-1.8198677804	-1.8191	0.00076778	-1.81985656	1.1225E-005
3.4	1.6	-1.7998793442	-1.79912	0.000759344	-1.79986808	1.1263E-005
3.39	1.61	-1.7798913363	-1.77914	0.000751336	-1.77987961	1.1731E-005
3.38	1.62	-1.7598960828	-1.75916	0.000736083	-1.75989113	0.000004952
3.37	1.63	-1.7399143148	-1.73919	0.000724315	-1.73991266	1.6547E-006
3.36	1.64	-1.7199267726	-1.7192	0.000726773	-1.71991418	1.2592E-005
3.35	1.65	-1.6999278311	-1.69921	0.000717831	-1.6999157	1.2129E-005
3.34	1.66	-1.679937439	-1.67923	0.000707439	-1.67992723	1.0212E-005
3.33	1.67	-1.6599484813	-1.65925	0.000698481	-1.65993875	9.7295E-006
3.32	1.68	-1.6399559099	-1.63926	0.00069591	-1.63994027	1.5637E-005
3.31	1.69	-1.6199676041	-1.61929	0.000677604	-1.6199618	5.8023E-006
3.3	1.7	-1.5999819245	-1.59931	0.000671925	-1.59997333	8.5977E-006
3.29	1.71	-1.5799910855	-1.57933	0.000661085	-1.57998485	6.2336E-006

Sheet1

3.28	1.72	-1.5598483104	-1.55919	0.00065831	-1.559836309	1.2001E-005
3.27	1.73	-1.5398537275	-1.5392	0.000653727	-1.53983783	1.5898E-005
3.26	1.74	-1.5198778082	-1.51924	0.000637808	-1.51986936	8.4449E-006
3.25	1.75	-1.4998838585	-1.49925	0.000633858	-1.49987088	1.2974E-005
3.24	1.76	-1.4798941556	-1.47927	0.000624156	-1.47988241	1.1747E-005
3.23	1.77	-1.45990449	-1.45929	0.00061449	-1.45989393	1.0556E-005
3.22	1.78	-1.4399203751	-1.43931	0.000610375	-1.43990546	1.4916E-005
3.21	1.79	-1.4199302439	-1.41933	0.000600244	-1.41991698	1.3260E-005
3.2	1.8	-1.399927726	-1.39934	0.000587726	-1.399918505	0.000009221
3.19	1.81	-1.3799363095	-1.37936	0.00057631	-1.37993003	6.2795E-006
3.18	1.82	-1.3599607628	-1.35939	0.000570763	-1.35995156	9.2035E-006
3.17	1.83	-1.3399674278	-1.3394	0.000567428	-1.33995308	1.4348E-005
3.16	1.84	-1.319973683	-1.31942	0.000553683	-1.31996461	9.0779E-006
3.15	1.85	-1.299983291	-1.29944	0.000543291	-1.29997613	7.1608E-006
3.14	1.86	-1.2798479293	-1.27931	0.000537929	-1.27983759	1.0338E-005
3.13	1.87	-1.2598631438	-1.25934	0.000523144	-1.25985912	0.000004023
3.12	1.88	-1.2398602348	-1.23934	0.000520235	-1.23985064	9.5974E-006
3.11	1.89	-1.2198690604	-1.21936	0.00050906	-1.21986216	6.8981E-006
3.1	1.9	-1.1998868827	-1.19938	0.000506883	-1.19987369	1.3195E-005
3.09	1.91	-1.1798995081	-1.1794	0.000499508	-1.17988521	1.4296E-005
3.08	1.92	-1.1599049438	-1.15942	0.000484944	-1.15989674	8.2063E-006
3.07	1.93	-1.1399111431	-1.13943	0.000481143	-1.13989826	1.2885E-005
3.06	1.94	-1.1199302692	-1.11946	0.000470269	-1.11991979	1.0482E-005
3.05	1.95	-1.0999447014	-1.09948	0.000464701	-1.09993131	1.3389E-005
3.04	1.96	-1.079937676	-1.07948	0.000457676	-1.07992283	1.4847E-005
3.03	1.97	-1.059950171	-1.0595	0.000450171	-1.05993435	1.5817E-005
3.02	1.98	-1.0399658885	-1.03953	0.000435888	-1.03995588	1.0005E-005
3.01	1.99	-1.0199768562	-1.01955	0.000426856	-1.01996741	9.4477E-006
3	2	-0.9999043774	-0.99948	0.000424377	-0.9998889	1.5482E-005
2.99	2.01	-0.9798391256	-0.97943	0.000409126	-0.97983039	0.000008735
2.98	2.02	-0.9598566871	-0.95945	0.000406687	-0.95984192	1.4771E-005
2.97	2.03	-0.9398684185	-0.93947	0.000398418	-0.93985344	1.4978E-005
2.96	2.04	-0.9198728856	-0.91949	0.000382886	-0.91986497	7.9199E-006
2.95	2.05	-0.8998820093	-0.89951	0.000372009	-0.89987649	5.5185E-006
2.94	2.06	-0.8798982482	-0.87953	0.000368248	-0.87988802	1.0232E-005
2.93	2.07	-0.8599117864	-0.85955	0.000361786	-0.85989954	1.2246E-005
2.92	2.08	-0.839921413	-0.83957	0.000351413	-0.83991107	1.0347E-005
2.91	2.09	-0.8199284133	-0.81959	0.000338413	-0.81992259	5.8224E-006
2.9	2.1	-0.7999377791	-0.7996	0.000337779	-0.79992411	1.3667E-005
2.89	2.11	-0.7799405139	-0.77961	0.000330514	-0.77992563	1.4881E-005
2.88	2.12	-0.7599493396	-0.75963	0.00031934	-0.75993716	1.2182E-005
2.87	2.13	-0.7399651501	-0.73966	0.00030515	-0.73995869	6.4634E-006
2.86	2.14	-0.7199733239	-0.71967	0.000303324	-0.71996021	1.3116E-005
2.85	2.15	-0.6998292636	-0.69954	0.000289264	-0.69982167	7.5947E-006
2.84	2.16	-0.6798377167	-0.67956	0.000277717	-0.679833194	4.5228E-006
2.83	2.17	-0.6598591898	-0.65958	0.00027919	-0.659844719	1.4471E-005
2.82	2.18	-0.6398685556	-0.6396	0.000268556	-0.639856244	1.2312E-005
2.81	2.19	-0.6198814418	-0.61962	0.000261442	-0.619867769	1.3673E-005
2.8	2.2	-0.599888349	-0.59964	0.000248349	-0.59987929	9.0549E-006
2.79	2.21	-0.579909822	-0.57967	0.000239822	-0.57990082	8.9986E-006
2.78	2.22	-0.5599150714	-0.55968	0.000235071	-0.55990234	1.2727E-005
2.77	2.23	-0.5399224628	-0.5397	0.000222463	-0.53991387	8.5936E-006
2.76	2.24	-0.5199329834	-0.51972	0.000212983	-0.51992539	7.5892E-006

Sheet1

2.75	2.25	-0.4999504518	-0.49974	0.000210452	-0.49993692	1.3533E-005
2.74	2.26	-0.4799607117	-0.47976	0.000200712	-0.47994844	1.2267E-005
2.73	2.27	-0.4599592369	-0.45977	0.000189237	-0.459949965	9.2719E-006
2.72	2.28	-0.4399687517	-0.43979	0.000178752	-0.43996149	7.2617E-006
2.71	2.29	-0.4198359605	-0.41967	0.00016596	-0.41983296	3.0048E-006
2.7	2.3	-0.399843948	-0.39968	0.000163948	-0.39983448	9.4715E-006
2.69	2.31	-0.3798504453	-0.3797	0.000150445	-0.379846	4.4438E-006
2.68	2.32	-0.3598581534	-0.35971	0.000148153	-0.35984752	1.0631E-005
2.67	2.33	-0.3398777451	-0.33974	0.000137745	-0.33986905	8.6935E-006
2.66	2.34	-0.3198914137	-0.31977	0.000121414	-0.31989058	8.3281E-007
2.65	2.35	-0.2998908516	-0.29977	0.000120852	-0.2998821	8.7542E-006
2.64	2.36	-0.2799005713	-0.27979	0.000110571	-0.27989362	6.9489E-006
2.63	2.37	-0.2599196602	-0.25981	0.00010966	-0.25990515	1.4513E-005
2.62	2.38	-0.2399319503	-0.23984	9.1950E-005	-0.23992668	5.2736E-006
2.61	2.39	-0.2199367713	-0.21985	8.6771E-005	-0.2199282	8.5738E-006
2.6	2.4	-0.1999409776	-0.19986	8.0978E-005	-0.19992972	1.1259E-005
2.59	2.41	-0.1799589861	-0.17989	6.8986E-005	-0.17995125	7.7385E-006
2.58	2.42	-0.1599724684	-0.15991	6.2468E-005	-0.15996277	9.6958E-006
2.57	2.43	-0.1398181077	-0.13977	4.8108E-005	-0.13981423	3.8779E-006
2.56	2.44	-0.1198267285	-0.11978	4.6728E-005	-0.11981575	1.0978E-005
2.55	2.45	-0.0998430979	-0.09981	3.3098E-005	-0.09983728	0.000005818
2.54	2.46	-0.079857884	-0.07983	0.000027884	-0.0798488	9.0791E-006
2.53	2.47	-0.0598645862	-0.05985	1.4586E-005	-0.05986033	4.2563E-006
2.52	2.48	-0.0398718473	-0.03986	1.1847E-005	-0.03986185	9.9966E-006
2.51	2.49	-0.0198893342	-0.01989	-6.6578E-007	-0.01988338	5.9543E-006
2.5	2.5	0.0001022127	0.0001	-2.2127E-006	0.000115099	1.2887E-005
2.49	2.51	0.0200930703	0.02008	-1.3070E-005	0.020103574	1.0504E-005
2.48	2.52	0.0400783401	0.04005	-2.8340E-005	0.040082045	3.7049E-006
2.47	2.53	0.0600704271	0.06004	-3.0427E-005	0.060080524	0.000010097
2.46	2.54	0.0800612848	0.08002	-4.1285E-005	0.080068999	7.7143E-006
2.45	2.55	0.1000490133	0.1	-4.9013E-005	0.100057474	8.4608E-006
2.44	2.56	0.1200375985	0.11998	-5.7599E-005	0.120045949	8.3506E-006
2.43	2.57	0.1400278043	0.13996	-6.7804E-005	0.140034424	6.6198E-006
2.42	2.58	0.1601791102	0.1601	-7.9110E-005	0.160182967	3.8567E-006
2.41	2.59	0.1801714022	0.18008	-9.1402E-005	0.180171442	3.9698E-008
2.4	2.6	0.2001469489	0.20005	-9.6949E-005	0.200149913	2.9637E-006
2.39	2.61	0.2201466728	0.22004	-0.00010667	0.220148392	0.000001719
2.38	2.62	0.2401394863	0.24003	-0.00010949	0.240146871	7.3848E-006
2.37	2.63	0.2601307724	0.26001	-0.00012077	0.260135346	4.5736E-006
2.36	2.64	0.2801076788	0.27998	-0.00012768	0.280113817	6.1379E-006
2.35	2.65	0.3000979777	0.29996	-0.00013798	0.300102292	0.000004314
2.34	2.66	0.3200957458	0.31995	-0.00014575	0.320100771	5.0251E-006
2.33	2.67	0.3400863614	0.33993	-0.00015636	0.340089246	2.8845E-006
2.32	2.68	0.3600651491	0.3599	-0.00016515	0.360067717	2.5675E-006
2.31	2.69	0.3800607007	0.37989	-0.0001707	0.380066196	5.4951E-006
2.3	2.7	0.400051279	0.39987	-0.000181279	0.400054671	3.3918E-006
2.29	2.71	0.4200399388	0.41985	-0.00018994	0.420043146	0.000003207
2.28	2.72	0.440178914	0.43998	-0.000198914	0.440181684	2.7704E-006
2.27	2.73	0.4601649102	0.45996	-0.00020491	0.460170159	5.2491E-006
2.26	2.74	0.4801702406	0.47995	-0.00022024	0.480168639	-1.6021E-006
2.25	2.75	0.5001588445	0.49993	-0.00022884	0.500157114	-0.000001731
2.24	2.76	0.5201427545	0.51991	-0.00023275	0.520145588	2.8339E-006
2.23	2.77	0.5401296075	0.53989	-0.00023961	0.540134063	4.4559E-006

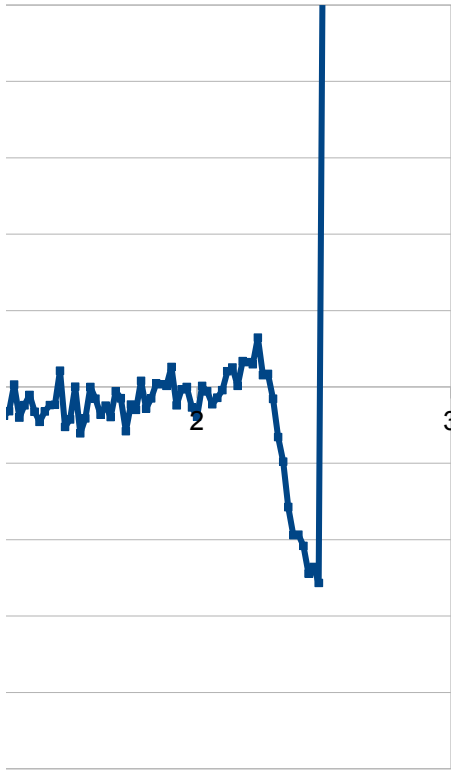
Sheet1

2.22	2.78	0.5601249356	0.55987	-0.00025494	0.560122538	-2.3972E-006
2.21	2.79	0.5801162776	0.57985	-0.00026628	0.580111013	-5.2642E-006
2.2	2.8	0.6000941154	0.59983	-0.00026412	0.600099488	0.000005373
2.19	2.81	0.6200819183	0.6198	-0.00028192	0.620077959	-3.9592E-006
2.18	2.82	0.6400756259	0.63979	-0.00028563	0.640076438	8.1245E-007
2.17	2.83	0.6600658502	0.65977	-0.00029585	0.660064913	-0.000000937
2.16	2.84	0.6800489221	0.67975	-0.00029892	0.680053388	4.4662E-006
2.15	2.85	0.7000346575	0.69972	-0.00031466	0.700031859	-2.7985E-006
2.14	2.86	0.7201791648	0.71986	-0.00031916	0.720180402	0.000001237
2.13	2.87	0.7401746232	0.73984	-0.00033462	0.740168877	-5.7464E-006
2.12	2.88	0.7601572666	0.75982	-0.00033727	0.760157352	8.5125E-008
2.11	2.89	0.7801451255	0.7798	-0.00034513	0.780145827	7.0126E-007
2.1	2.9	0.8001438249	0.79979	-0.00035382	0.800144306	0.000000481
2.09	2.91	0.8201351482	0.81977	-0.00036515	0.820132781	-2.3673E-006
2.08	2.92	0.8401245344	0.83975	-0.00037453	0.840121256	-3.2786E-006
2.07	2.93	0.8601156343	0.85974	-0.00037563	0.860119735	4.1008E-006
2.06	2.94	0.8801037725	0.87972	-0.00038377	0.88010821	4.4376E-006
2.05	2.95	0.900090104	0.89969	-0.000400104	0.900086681	-3.4232E-006
2.04	2.96	0.920079099	0.91967	-0.000409099	0.920075156	-3.9432E-006
2.03	2.97	0.9400717635	0.93966	-0.00041176	0.940073635	1.8715E-006
2.02	2.98	0.960065024	0.95964	-0.000425024	0.96006211	-0.000002914
2.01	2.99	0.9800469596	0.97962	-0.00042696	0.980050585	3.6253E-006
2	3	1.0001150426	0.99967	-0.00044504	1.00010909	-0.000005953
1.99	3.01	1.0201837961	1.01974	-0.0004438	1.020187603	3.8067E-006
1.98	3.02	1.0401761811	1.03972	-0.00045618	1.040176078	-1.0342E-007
1.97	3.03	1.060158005	1.05969	-0.000468005	1.060154548	-3.4566E-006
1.96	3.04	1.0801489931	1.07967	-0.00047899	1.080143023	-5.9697E-006
1.95	3.05	1.1001503933	1.09967	-0.00048039	1.100151507	1.1135E-006
1.94	3.06	1.1201411765	1.11965	-0.00049118	1.120139982	-1.1947E-006
1.93	3.07	1.1401199643	1.13962	-0.00049996	1.140118453	-1.5117E-006
1.92	3.08	1.160114063	1.1596	-0.000514063	1.160106928	-7.1354E-006
1.91	3.09	1.1801081244	1.17959	-0.00051812	1.180105407	-2.7177E-006
1.9	3.1	1.2000977527	1.19957	-0.00052775	1.200093882	-0.000003871
1.89	3.11	1.2200770434	1.21954	-0.00053704	1.220072352	-0.000004691
1.88	3.12	1.2400683481	1.23952	-0.00054835	1.240060827	-7.5207E-006
1.87	3.13	1.2600656692	1.25951	-0.00055567	1.260059307	-6.3626E-006
1.86	3.14	1.2800571974	1.2795	-0.0005572	1.280057786	5.8839E-007
1.85	3.15	1.3001943287	1.29962	-0.00057433	1.30018632	-8.0085E-006
1.84	3.16	1.3201795798	1.3196	-0.00057958	1.320174795	-4.7846E-006
1.83	3.17	1.3401753735	1.33959	-0.00058537	1.340173274	-2.0991E-006
1.82	3.18	1.3601682615	1.35957	-0.00059826	1.360161749	-6.5121E-006
1.81	3.19	1.3801493775	1.37954	-0.00060938	1.38014022	-9.1574E-006
1.8	3.2	1.4001351129	1.39952	-0.00061511	1.400128695	-6.4179E-006
1.79	3.21	1.4201419149	1.41952	-0.00062191	1.420137178	-4.7364E-006
1.78	3.22	1.4401303325	1.4395	-0.00063033	1.440125653	-0.000004679
1.77	3.23	1.4601099026	1.45948	-0.0006299	1.460114128	4.2259E-006
1.76	3.24	1.4801030513	1.47945	-0.00065305	1.480092599	-1.0452E-005
1.75	3.25	1.5000995528	1.49944	-0.00065955	1.500091078	-8.4744E-006
1.74	3.26	1.5200894792	1.51943	-0.00065948	1.520089558	7.8430E-008
1.73	3.27	1.5400701668	1.53939	-0.00068017	1.540058024	-1.2143E-005
1.72	3.28	1.560054766	1.55937	-0.000684766	1.560046499	-0.000008267
1.71	3.29	1.5802050661	1.57952	-0.00068507	1.580205046	-0.00000002
1.7	3.3	1.6001965944	1.5995	-0.00069659	1.600193521	-3.0733E-006

Sheet1

1.69	3.31	1.6201792751	1.61947	-0.000709275	1.620171992	-7.2832E-006
1.68	3.32	1.6401653644	1.63945	-0.00071536	1.640160467	-4.8976E-006
1.67	3.33	1.6601568367	1.65943	-0.00072684	1.660148942	-0.000007895
1.66	3.34	1.680148514	1.67942	-0.000728514	1.680147421	-0.000001093
1.65	3.35	1.7001388501	1.6994	-0.00073885	1.700135896	-2.9542E-006
1.64	3.36	1.7201359849	1.71938	-0.00075598	1.720124371	-0.000011614
1.63	3.37	1.7401274573	1.73937	-0.00075746	1.74012285	-4.6072E-006
1.62	3.38	1.7601073254	1.75934	-0.00076733	1.760101321	-6.0045E-006
1.61	3.39	1.7800982017	1.77933	-0.0007682	1.7800998	1.5984E-006
1.6	3.4	1.8000939209	1.79931	-0.00078392	1.800088275	-5.6459E-006
1.59	3.41	1.8200797681	1.81929	-0.00078977	1.82007675	-3.0181E-006
1.58	3.42	1.8400643114	1.83927	-0.00079431	1.840065225	9.1359E-007
1.57	3.43	1.8602030631	1.8594	-0.00080306	1.860203764	7.0047E-007
1.56	3.44	1.8801919464	1.87938	-0.00081195	1.880192239	2.9216E-007
1.55	3.45	1.9001854863	1.89937	-0.00081549	1.900190718	5.2315E-006
1.54	3.46	1.920163976	1.91933	-0.000833976	1.920159184	-4.7918E-006
1.53	3.47	1.9401582982	1.93932	-0.0008383	1.940157663	-6.3477E-007
1.52	3.48	1.9601461384	1.9593	-0.00084614	1.960146138	0
1.51	3.49	1.9801400136	1.97928	-0.00086001	1.980134613	-5.4002E-006
1.5	3.5	2.0001208875	1.99925	-0.00087089	2.000113084	-7.8034E-006
1.49	3.51	2.0201112796	2.01924	-0.00087128	2.020111563	2.8379E-007
1.48	3.52	2.0401112083	2.03923	-0.00088121	2.040110043	-1.1658E-006
1.47	3.53	2.0601030719	2.05921	-0.00089307	2.060098518	-4.5543E-006
1.46	3.54	2.0800798293	2.07918	-0.00089983	2.080076988	-2.8411E-006
1.45	3.55	2.1000762936	2.09917	-0.00090629	2.100075467	-8.2609E-007
1.44	3.56	2.1200698149	2.11916	-0.00090981	2.120073947	4.1318E-006
1.43	3.57	2.140057357	2.13914	-0.000917357	2.140062422	5.0646E-006
1.42	3.58	2.1601906512	2.15926	-0.00093065	2.160190956	3.0483E-007
1.41	3.59	2.1801726986	2.17924	-0.0009327	2.180179431	6.7324E-006
1.4	3.6	2.2001714166	2.19923	-0.00094142	2.20017791	6.4936E-006
1.39	3.61	2.2201604489	2.21921	-0.00095045	2.220166385	5.9362E-006
1.38	3.62	2.2401419375	2.23919	-0.00095194	2.24015486	1.2923E-005
1.37	3.63	2.2601302248	2.25916	-0.00097022	2.260133331	3.1061E-006
1.36	3.64	2.2801284399	2.27915	-0.00097844	2.28013181	3.3702E-006
1.35	3.65	2.3001334164	2.29914	-0.00099342	2.300130289	-3.1271E-006
1.34	3.66	2.3201218899	2.31911	-0.00101189	2.32010876	-1.3130E-005
1.33	3.67	2.3401168082	2.33909	-0.00102681	2.340097235	-1.9573E-005
1.32	3.68	2.3601271864	2.35908	-0.00104719	2.360095714	-3.1472E-005
1.31	3.69	2.3801229987	2.37906	-0.001063	2.380084189	-3.8810E-005
1.3	3.7	2.4001113605	2.39904	-0.00107136	2.400072664	-3.8696E-005
1.29	3.71	2.420102777	2.41902	-0.001082777	2.420061139	-4.1638E-005
1.28	3.72	2.4402485881	2.43915	-0.00109859	2.440199678	-4.8910E-005
1.27	3.73	2.4602453131	2.45914	-0.00110531	2.460198157	-4.7156E-005
1.26	3.74	2.4802279566	2.47911	-0.00111796	2.480176628	-5.1329E-005
1.25	3.75	2.5	2.49909	-0.00091	2.500165103	0.000165103

ymin	-2.05988833	xmin	-2.05903	slope:
ymax	1.960146138	xmax	1.9593	intercept:



1.000424173
1.5057E-005

