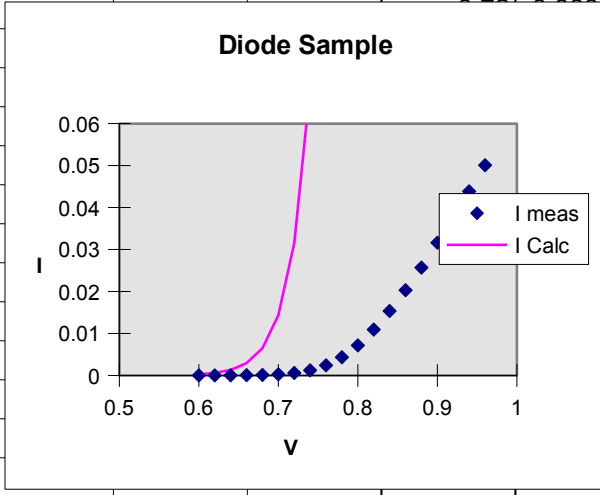


Simple

Fit Using Any Excel Built-In or Add-In Functions. Here we fit using the payment fn.					
<i>Principal</i>	\$20,000.00				
<i>Interest Rate</i>	0.82%	←	Magestic finds the interest rate by minimizing the error between the calculated payment and actual		
<i>Number of Payments</i>	36				
<i>Calculated Payment</i>	\$643.84				
<i>Actual Payment</i>	\$632.63	←	Try various values for the actual payment, and press the 'Find Interest' button to re-calculate the interest.		
<i>error</i>	\$11.21				
Click the 'Diode' tab below for a more interesting example.					
	↓				

Diode

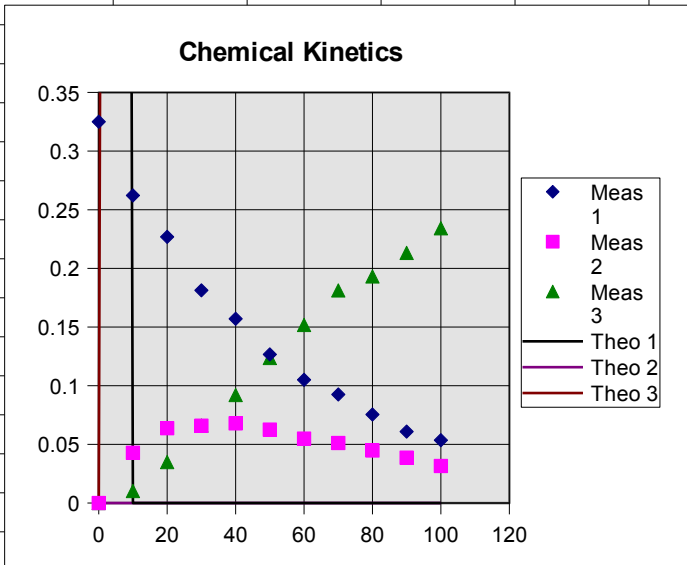
rms error	1803.90%							
Constants					voltage	I meas	I Calc	Err
k/q	8.62E-05				0.6	5.05E-06	0.000265	2.60E-04
					0.62	1.14E-05	0.00059	5.79E-04
	Parameters	Min	Max		0.64	2.52E-05	0.001313	1.29E-03
IS	1.00E-14	1.00E-24	1.00E-10		0.66	5.56E-05	0.00292	2.86E-03
R_OHM	1	0.01	10		0.68	0.000123	0.006481	6.36E-03
TEMP	290	268	276		0.7	0.000269	0.01434	1.41E-02
					0.72	0.000584	0.031516	3.09E-02
					0.74	0.001221	0.068381	6.72E-02
					0.76	0.002402	0.14517	1.43E-01
					0.78	0.004338	0.299025	2.95E-01
					0.80	0.00749	0.59475	5.88E-01
					0.82	0.012917	1.138507	1.13E+00
					0.84	0.021344	2.122698	2.11E+00
					0.86	0.03291	3.876203	3.86E+00
					0.88	0.04672	6.956405	6.93E+00
					0.90	0.0622	12.20332	1.22E+01
					0.92	0.0824	21.62118	2.16E+01
					0.94	0.1062	37.04734	3.70E+01
					0.96	0.1372	64.31808	6.43E+01



ChemKinetics

RMS Error	488.29%				T	Measured		
					0	0.32504	0	0
	Parms	Hi	Low		10	0.262227	0.042811	0.010206
AAO	9	0.00001	100		20	0.226022	0.062770	0.034894
KAB	10	0.00001	100		30	0.186022	0.042811	0.065986
KBC	50	0.00001	100		40	0.146022	0.042811	0.092037
					50	0.106022	0.042811	0.123617
					60	0.066022	0.042811	0.151795
					70	0.092475	0.051103	0.181226
					80	0.075419	0.044751	0.193183
					90	0.060836	0.038619	0.213214
					100	0.053508	0.031531	0.234227
					Theory			
					9	0	0	0
						3.35E-43	8.37E-44	9
						1.25E-86	3.11E-87	9
						4.6E-130	1.2E-130	9
						1.7E-173	4.3E-174	9
						6.4E-217	1.6E-217	9
						2.4E-260	6E-261	9
						8.9E-304	2.2E-304	9
						0	0	9
						0	0	9
						0	0	9

Very Robust Fitting, even with very bad starting values. No guesswork! Try this with any other optimizer.



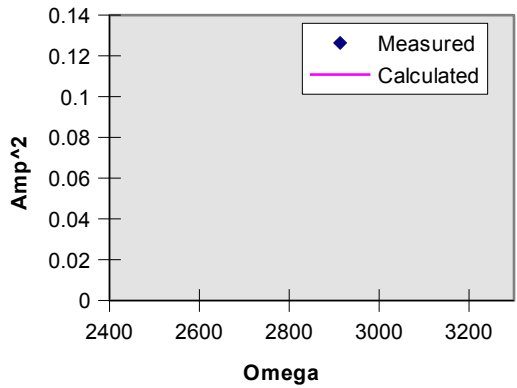
Error		
8.67496	0	0
-0.262227	-0.042811	8.989794
-0.226923	-0.063772	8.965106
-0.181292	-0.065894	8.934014
-0.156965	-0.067905	8.907963
-0.126638	-0.062554	8.876383
-0.105022	-0.054849	8.848205
-0.092475	-0.051103	8.818774
-0.075419	-0.044751	8.806817
-0.060836	-0.038619	8.786786
-0.053508	-0.031531	8.765773

	RMS	#NAME?		Omega	Measured	Calculated	Err
				2400	#NAME?	#NAME?	#NAME?
	Value	Min	Max	2410	#NAME?	#NAME?	#NAME?
CFL	400.00	50	500	2420	#NAME?	#NAME?	#NAME?
OFL	3200.00	2600	3400	2430	#NAME?	#NAME?	#NAME?
QFL	60.00	10	1000	2440	#NAME?	#NAME?	#NAME?
				2450	#NAME?	#NAME?	#NAME?
				2460	#NAME?	#NAME?	#NAME?
				2470	#NAME?	#NAME?	#NAME?
				2480	#NAME?	#NAME?	#NAME?
					AME?	#NAME?	#NAME?
					AME?	#NAME?	#NAME?
					AME?	#NAME?	#NAME?
					AME?	#NAME?	#NAME?
					AME?	#NAME?	#NAME?
					AME?	#NAME?	#NAME?
					AME?	#NAME?	#NAME?
					AME?	#NAME?	#NAME?
					AME?	#NAME?	#NAME?
					AME?	#NAME?	#NAME?
					AME?	#NAME?	#NAME?
					AME?	#NAME?	#NAME?
				2620	#NAME?	#NAME?	#NAME?
				2630	#NAME?	#NAME?	#NAME?
				2640	#NAME?	#NAME?	#NAME?
				2650	#NAME?	#NAME?	#NAME?
				2660	#NAME?	#NAME?	#NAME?
				2670	#NAME?	#NAME?	#NAME?
				2680	#NAME?	#NAME?	#NAME?
				2690	#NAME?	#NAME?	#NAME?
				2700	#NAME?	#NAME?	#NAME?
				2710	#NAME?	#NAME?	#NAME?
				2720	#NAME?	#NAME?	#NAME?
				2730	#NAME?	#NAME?	#NAME?
CLeft	112.5			2740	#NAME?	#NAME?	#NAME?
OmegaLeft	2809.4			2750	#NAME?	#NAME?	#NAME?
QLeft	40.7			2760	#NAME?	#NAME?	#NAME?
				2770	#NAME?	#NAME?	#NAME?
				2780	#NAME?	#NAME?	#NAME?
				2790	#NAME?	#NAME?	#NAME?
				2800	#NAME?	#NAME?	#NAME?
				2810	#NAME?	#NAME?	#NAME?
				2820	#NAME?	#NAME?	#NAME?

Fitted Parameters

Classic Resonance Curve Data

Classic Resonance Curve, Fitted vs. Measured



Used to create "Measured Data"

ResStep1

					2830	#NAME?	#NAME?	#NAME?	
					2840	#NAME?	#NAME?	#NAME?	
					2850	#NAME?	#NAME?	#NAME?	
					2860	#NAME?	#NAME?	#NAME?	
					2870	#NAME?	#NAME?	#NAME?	
					2880	#NAME?	#NAME?	#NAME?	
					2890	#NAME?	#NAME?	#NAME?	
					2900	#NAME?	#NAME?	#NAME?	
					2910	#NAME?	#NAME?	#NAME?	
					2920	#NAME?	#NAME?	#NAME?	
					2930	#NAME?	#NAME?	#NAME?	
					2940	#NAME?	#NAME?	#NAME?	
					2950	#NAME?	#NAME?	#NAME?	
					2960	#NAME?	#NAME?	#NAME?	
					2970	#NAME?	#NAME?	#NAME?	
					2980	#NAME?	#NAME?	#NAME?	
					2990	#NAME?	#NAME?	#NAME?	
					3000	#NAME?	#NAME?	#NAME?	
					3010	#NAME?	#NAME?	#NAME?	
					3020	#NAME?	#NAME?	#NAME?	
					3030	#NAME?	#NAME?	#NAME?	
					3040	#NAME?	#NAME?	#NAME?	
					3050	#NAME?	#NAME?	#NAME?	
					3060	#NAME?	#NAME?	#NAME?	
					3070	#NAME?	#NAME?	#NAME?	
					3080	#NAME?	#NAME?	#NAME?	
					3090	#NAME?	#NAME?	#NAME?	
					3100	#NAME?	#NAME?	#NAME?	
					3110	#NAME?	#NAME?	#NAME?	
					3120	#NAME?	#NAME?	#NAME?	
					3130	#NAME?	#NAME?	#NAME?	
					3140	#NAME?	#NAME?	#NAME?	
					3150	#NAME?	#NAME?	#NAME?	
					3160	#NAME?	#NAME?	#NAME?	
					3170	#NAME?	#NAME?	#NAME?	
					3180	#NAME?	#NAME?	#NAME?	
					3190	#NAME?	#NAME?	#NAME?	
					3200	#NAME?	#NAME?	#NAME?	
					3210	#NAME?	#NAME?	#NAME?	
					3220	#NAME?	#NAME?	#NAME?	
					3230	#NAME?	#NAME?	#NAME?	
					3240	#NAME?	#NAME?	#NAME?	
					3250	#NAME?	#NAME?	#NAME?	
					3260	#NAME?	#NAME?	#NAME?	

ResStep1

					3270	#NAME?	#NAME?	#NAME?	
					3280	#NAME?	#NAME?	#NAME?	
					3290	#NAME?	#NAME?	#NAME?	
					3300	#NAME?	#NAME?	#NAME?	







ResStep2

CRight	201.6				2830	#NAME?	#NAME?	#NAME?	#NAME?
OmegaRig	3110.1				2840	#NAME?	#NAME?	#NAME?	#NAME?
QRight	60.8				2850	#NAME?	#NAME?	#NAME?	#NAME?
					2860	#NAME?	#NAME?	#NAME?	#NAME?
					2870	#NAME?	#NAME?	#NAME?	#NAME?
					2880	#NAME?	#NAME?	#NAME?	#NAME?
					2890	#NAME?	#NAME?	#NAME?	#NAME?
					2900	#NAME?	#NAME?	#NAME?	#NAME?
					2910	#NAME?	#NAME?	#NAME?	#NAME?
					2920	#NAME?	#NAME?	#NAME?	#NAME?
					2930	#NAME?	#NAME?	#NAME?	#NAME?
					2940	#NAME?	#NAME?	#NAME?	#NAME?
					2950	#NAME?	#NAME?	#NAME?	#NAME?
					2960	#NAME?	#NAME?	#NAME?	#NAME?
					2970	#NAME?	#NAME?	#NAME?	#NAME?
					2980	#NAME?	#NAME?	#NAME?	#NAME?
					2990	#NAME?	#NAME?	#NAME?	#NAME?
					3000	#NAME?	#NAME?	#NAME?	#NAME?
					3010	#NAME?	#NAME?	#NAME?	#NAME?
					3020	#NAME?	#NAME?	#NAME?	#NAME?
					3030	#NAME?	#NAME?	#NAME?	#NAME?
					3040	#NAME?	#NAME?	#NAME?	#NAME?
					3050	#NAME?	#NAME?	#NAME?	#NAME?
					3060	#NAME?	#NAME?	#NAME?	#NAME?
					3070	#NAME?	#NAME?	#NAME?	#NAME?
					3080	#NAME?	#NAME?	#NAME?	#NAME?
					3090	#NAME?	#NAME?	#NAME?	#NAME?
					3100	#NAME?	#NAME?	#NAME?	#NAME?
					3110	#NAME?	#NAME?	#NAME?	#NAME?
					3120	#NAME?	#NAME?	#NAME?	#NAME?
					3130	#NAME?	#NAME?	#NAME?	#NAME?
					3140	#NAME?	#NAME?	#NAME?	#NAME?
					3150	#NAME?	#NAME?	#NAME?	#NAME?
					3160	#NAME?	#NAME?	#NAME?	#NAME?
					3170	#NAME?	#NAME?	#NAME?	#NAME?
					3180	#NAME?	#NAME?	#NAME?	#NAME?
					3190	#NAME?	#NAME?	#NAME?	#NAME?
					3200	#NAME?	#NAME?	#NAME?	#NAME?
					3210	#NAME?	#NAME?	#NAME?	#NAME?
					3220	#NAME?	#NAME?	#NAME?	#NAME?
					3230	#NAME?	#NAME?	#NAME?	#NAME?
					3240	#NAME?	#NAME?	#NAME?	#NAME?
					3250	#NAME?	#NAME?	#NAME?	#NAME?
					3260	#NAME?	#NAME?	#NAME?	#NAME?

ResStep2

					3270	#NAME?	#NAME?	#NAME?	#NAME?
					3280	#NAME?	#NAME?	#NAME?	#NAME?
					3290	#NAME?	#NAME?	#NAME?	#NAME?
					3300	#NAME?	#NAME?	#NAME?	#NAME?





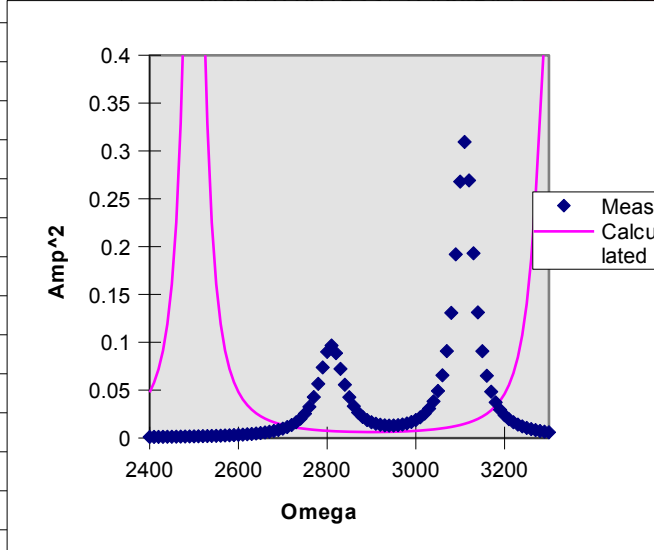
ResStep2

#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	
#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	
#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	
#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	

	RMS	9886.21%			Omega	Measured	Calculated	Err
Control	run1	run2	run3		2400	0.001066	0.047675	43.73355
Max Secs	180	180	120		2410	0.001111	0.057937	51.15905
Max Evals	500	500	200					60.97287
Err Change	1.00E-08	1.00E-08	1.00E-10					74.31303
Gradient	1.00E-07	1.00E-07	1.00E-08					93.03981
Required Err	1.00E-01	1.00E-01	8.00E-01					120.2786
Echo On?	1	1	1					161.3064
								224.3912
								247.7000
	Value	Min	Max					
CFL	500.00	50	1000					
OFL	2500.00	2400	3400					
QFL	50.00	10	1000					
CFR	500.00	50	1000					
OFR	3300.00	2400	3400					
QFR	50.00	10	1000					
	run1	run2	run3					
	1	0	1					5.986227
	1	0	1					4.534605
	1	0	1					3.402962
	0	1	1					2.511159
	0	1	1		2670	0.006492	0.018191	1.801963
	0	1	1		2680	0.007358	0.016437	1.233777
					2690	0.008421	0.014955	0.7759
					2700	0.009743	0.013692	0.405359
					2710	0.011415	0.012611	0.104761
					2720	0.013569	0.01168	-0.139201
					2730	0.016398	0.010875	-0.336796
					2740	0.020191	0.010176	-0.496008
					2750	0.025384	0.009568	-0.623078
					2760	0.032615	0.009037	-0.722916
					2770	0.042738	0.008574	-0.799396
					2780	0.056569	0.008169	-0.855596
					2790	0.073723	0.007816	-0.893985
					2800	0.090004	0.007509	-0.916575
					2810	0.096638	0.007242	-0.925057
					2820	0.08868	0.007013	-0.920917

Control Range Allows On-Sheet Control of Fitting Parameters and Sequenced Runs

Set to 0 to turn off animation



Parameter Mask Allows Selection of Parameters to Fit Along with Sequenced Runs

## ResStep3

					2830	0.072184	0.006818	-0.905554
					2840	0.055617	0.006653	-0.88038
					2850	0.04257	0.006517	-0.846916
					2860	0.033177	0.006408	-0.806865
					2870	0.026589	0.006324	-0.762157
					2880	0.021978	0.006265	-0.714956
					2890	0.01874	0.006229	-0.667605
					2900	0.016469	0.006217	-0.622521
					2910	0.0149	0.006227	-0.582047
					2920	0.01386	0.006261	-0.548265
					2930	0.013242	0.006319	-0.522837
					2940	0.012979	0.0064	-0.50687
					2950	0.013037	0.006507	-0.500863
CLeft	112.5				2960	0.013408	0.006641	-0.504719
OmegaLeft	2809.4				2970	0.014109	0.006803	-0.517825
QLeft	40.7				2980	0.015181	0.006996	-0.539177
CRight	201.6				2990	0.016698	0.007222	-0.567512
OmegaRight	3110.1				3000	0.018778	0.007484	-0.601437
QRight	60.8				3010	0.021602	0.007787	-0.639523
					3020	0.025452	0.008135	-0.680377
					3030	0.030771	0.008534	-0.722665
					3040	0.038275	0.00899	-0.765116
					3050	0.04916	0.009512	-0.806499
					3060	0.065472	0.010111	-0.845571
					3070	0.090746	0.010797	-0.881018
					3080	0.130729	0.011587	-0.911367
					3090	0.191926	0.012498	-0.934879
					3100	0.267922	0.013555	-0.949406
					3110	0.309407	0.014786	-0.952211
					3120	0.269178	0.016229	-0.939709
					3130	0.193052	0.017931	-0.90712
					3140	0.131237	0.019953	-0.847961
					3150	0.090713	0.022378	-0.753309
					3160	0.065025	0.025314	-0.61071
					3170	0.04838	0.028907	-0.402503
					3180	0.037201	0.033361	-0.103224
					3190	0.029414	0.038959	0.324507
					3200	0.023808	0.046109	0.936683
					3210	0.019654	0.055404	1.818999
					3220	0.016497	0.067728	3.105589
					3230	0.014045	0.084424	5.011058
					3240	0.012104	0.107545	7.884782
					3250	0.010543	0.140202	12.29782
					3260	0.009269	0.186807	19.15401



ResStep3

					3270	0.008215	0.252225	29.70123
					3280	0.007334	0.336617	44.89503
					3290	0.00659	0.421322	62.93066
					3300	0.005956	0.459917	76.22076

ResStep3

dErr/dCFL	dErr/DOFL	dErr/dQFL	dErr/dCFR	dErr/dOFR	dErr/dQFR	run1	run2	run3
0.08831	-0.833233	0.103894	0.001157	-0.001284	3.11E-05	1	0	1
0.103183	-1.067309	0.147827	0.001135	-0.001274	3.12E-05	1	0	1
0.122833	-1.403181	0.218564	Error Mask Allows Selection of Date to Fit Along with Sequenced Runs			1	0	1
0.149536	-1.901341	0.338317				1	0	1
0.187013	-2.66687	0.553293				1	0	1
0.241514	-3.883548	0.966057				1	0	1
0.323594	-5.85378	1.817944				0.001019	-0.001212	3.14E-05
0.449788	-8.922029	3.686789	0.000994	-0.001196	3.14E-05	1	0	1
0.626611	-12.57694	7.763546	0.000969	-0.00118	3.13E-05	1	0	1
0.893	-12.08642	14.73953	0.000943	-0.001163	3.13E-05	1	0	1
1.392	-0.376157	18.80783	0.000917	-0.001145	3.11E-05	1	0	1
2.1411	10.32036	13.23123	0.00089	-0.001125	3.1E-05	1	0	1
3.2866	9.882048	6.25446	0.000863	-0.001104	3.08E-05	1	0	1
4.8045	6.341037	2.664301	0.000835	-0.001082	3.06E-05	1	0	1
6.59617	3.744837	1.177622	0.000806	-0.001059	3.03E-05	1	0	1
8.60098	2.230359	0.560392	0.000777	-0.001034	3E-05	1	0	1
10.97024	1.372121	0.287055	0.000747	-0.001008	2.97E-05	1	0	1
13.76928	0.874623	0.156742	0.000717	-0.00098	2.92E-05	1	0	1
16.970726	0.575857	0.09026	0.000686	-0.000951	2.88E-05	1	0	1
20.57899	0.389852	0.054297	0.000655	-0.00092	2.82E-05	1	0	1
24.53776	0.27016	0.033855	0.000623	-0.000888	2.76E-05	1	0	1
28.82213	0.190864	0.021738	0.00059	-0.000854	2.69E-05	1	0	1
33.447187	0.136984	0.014299	0.000557	-0.000818	2.62E-05	1	0	1
38.4013449	0.09957	0.009593	0.000524	-0.00078	2.54E-05	1	0	1
43.6810579	0.0731	0.006538	0.00049	-0.000741	2.44E-05	1	0	1
49.2800835	0.054072	0.004514	0.000456	-0.0007	2.34E-05	1	0	1
55.19006601	0.040209	0.003146	0.000422	-0.000657	2.24E-05	1	0	1
61.41005217	0.029994	0.002209	0.000387	-0.000613	2.12E-05	1	0	1
67.93004115	0.022397	0.001558	0.000353	-0.000567	1.99E-05	1	0	1
74.75003234	0.016707	0.001101	0.000318	-0.00052	1.86E-05	1	0	1
81.87002526	0.012422	0.000777	0.000284	-0.000473	1.71E-05	1	0	1
89.29001959	0.009186	0.000547	0.000251	-0.000424	1.56E-05	1	0	1
97.01001503	0.006738	0.000383	0.000218	-0.000375	1.41E-05	1	0	1
105.03001139	0.00489	0.000266	0.000187	-0.000327	1.25E-05	1	0	1
113.35000851	0.003502	0.000183	0.000157	-0.00028	1.09E-05	1	0	1
121.97000624	0.002469	0.000124	0.00013	-0.000235	9.31E-06	1	0	1
130.89000449	0.001711	8.23E-05	0.000105	-0.000193	7.8E-06	1	0	1
139.91000318	0.001168	5.41E-05	8.3E-05	-0.000156	6.41E-06	1	0	1
149.03000224	0.000792	3.54E-05	6.51E-05	-0.000125	5.22E-06	1	0	1
158.2500016	0.000548	2.36E-05	5.19E-05	-0.000101	4.33E-06	1	0	1
167.57000123	0.000406	1.69E-05	4.42E-05	-8.82E-05	3.84E-06	1	0	1
176.99000107	0.000343	1.38E-05	4.29E-05	-8.72E-05	3.87E-06	1	0	1
186.51000109	0.00034	1.33E-05	4.87E-05	-0.000101	4.58E-06	1	0	1

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## ResStep3

0.000126	0.000381	1.44E-05	6.24E-05	-0.000132	6.12E-06	0	1	1
0.000155	0.000452	1.66E-05	8.45E-05	-0.000183	8.66E-06	0	1	1
0.000191	0.000542	1.94E-05	0.000115	-0.000255	1.23E-05	0	1	1
0.000231	0.000639	2.22E-05	0.000155	-0.00035	1.73E-05	0	1	1
0.000273	0.000735	2.49E-05	0.000202	-0.000468	2.37E-05	0	1	1
0.000314	0.000822	2.7E-05	0.000256	-0.000607	3.15E-05	0	1	1
0.000349	0.000892	2.86E-05	0.000315	-0.000765	4.06E-05	0	1	1
0.000378	0.000941	2.94E-05	0.000377	-0.000937	5.1E-05	0	1	1
0.000398	0.000966	2.95E-05	0.000438	-0.001116	6.23E-05	0	1	1
0.000408	0.000966	2.88E-05	0.000496	-0.001296	7.42E-05	0	1	1
0.000407	0.000943	2.74E-05	0.000547	-0.001469	8.64E-05	0	1	1
0.000397	0.000898	2.55E-05	0.00059	-0.001626	9.83E-05	0	1	1
0.000378	0.000836	2.32E-05	0.000621	-0.001759	0.000109	0	1	1
0.000351	0.000761	2.07E-05	0.000639	-0.001864	0.000119	0	1	1
0.00032	0.000678	1.81E-05	0.000644	-0.001935	0.000128	0	1	1
0.000285	0.000592	1.54E-05	0.000637	-0.00197	0.000134	0	1	1
0.000249	0.000506	1.29E-05	0.000616	-0.001968	0.000138	0	1	1
0.000212	0.000424	1.06E-05	0.000585	-0.001928	0.00014	0	1	1
0.000178	0.000347	8.51E-06	0.000543	-0.001852	0.000139	0	1	1
0.000145	0.000278	6.69E-06	0.000494	-0.001743	0.000135	0	1	1
0.000115	0.000217	5.13E-06	0.000439	-0.001605	0.000129	0	1	1
8.94E-05	0.000165	3.82E-06	0.00038	-0.001442	0.000121	0	1	1
6.71E-05	0.000122	2.77E-06	0.00032	-0.001259	0.00011	0	1	1
4.86E-05	8.66E-05	1.93E-06	0.00026	-0.001066	9.66E-05	0	1	1
3.39E-05	5.92E-05	1.3E-06	0.000204	-0.000871	8.23E-05	0	1	1
2.27E-05	3.9E-05	8.42E-07	0.000155	-0.000688	6.8E-05	0	1	1
1.49E-05	2.53E-05	5.36E-07	0.000115	-0.000537	5.56E-05	0	1	1
1.03E-05	1.72E-05	3.59E-07	9.08E-05	-0.000443	4.82E-05	0	1	1
8.67E-06	1.42E-05	2.91E-07	8.69E-05	-0.000445	5.09E-05	0	1	1
9.65E-06	1.55E-05	3.13E-07	0.000111	-0.000597	7.21E-05	0	1	1
1.3E-05	2.06E-05	4.1E-07	0.000173	-0.000981	0.000125	0	1	1
1.86E-05	2.9E-05	5.66E-07	0.000286	-0.001715	0.000233	0	1	1
2.61E-05	4E-05	7.7E-07	0.000467	-0.002978	0.000431	0	1	1
3.53E-05	5.33E-05	1.01E-06	0.000743	-0.005042	0.000783	0	1	1
4.6E-05	6.85E-05	1.28E-06	0.001149	-0.008325	0.001391	0	1	1
5.81E-05	8.52E-05	1.57E-06	0.001735	-0.013483	0.00244	0	1	1
7.13E-05	0.000103	1.87E-06	0.002578	-0.021563	0.004257	0	1	1
8.56E-05	0.000122	2.18E-06	0.003788	-0.034271	0.00744	0	1	1
0.000101	0.000142	2.5E-06	0.005537	-0.054432	0.013124	0	1	1
0.000117	0.000162	2.81E-06	0.008094	-0.086824	0.023541	0	1	1
0.000133	0.000183	3.13E-06	0.011889	-0.139611	0.043235	0	1	1
0.000151	0.000203	3.44E-06	0.017619	-0.226689	0.081838	0	1	1
0.000168	0.000224	3.74E-06	0.026427	-0.3706	0.160375	0	1	1
0.000187	0.000245	4.03E-06	0.040121	-0.601747	0.32497	0	1	1

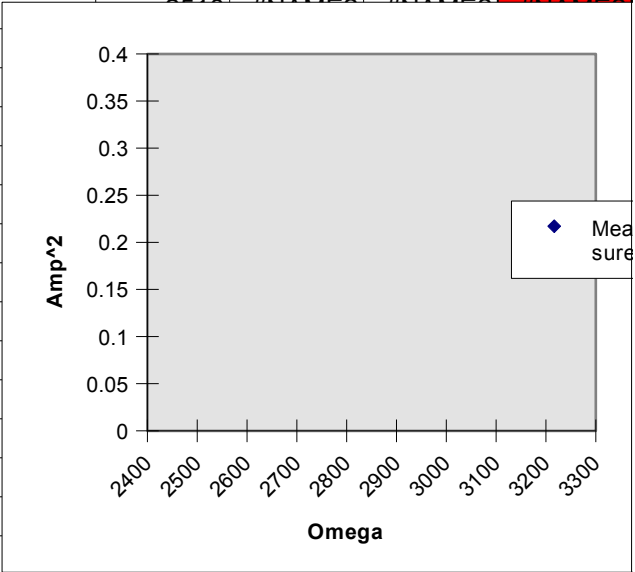
ResStep3

0.000205	0.000266	4.32E-06	0.061197	-0.933191	0.670125	0	1	1	
0.000224	0.000287	4.59E-06	0.091566	-1.250195	1.339363	0	1	1	
0.000243	0.000307	4.86E-06	0.127618	-1.108745	2.337703	0	1	1	
0.000262	0.000327	5.11E-06	0.154179	-0.046721	3.083588	0	1	1	

3014.602

	RMS	#NAME?		Omega	Measured	Calculated	Err
Control	run1	run2	run3	2400	#NAME?	#NAME?	#NAME?
Max Secs	180	180	120	2410	#NAME?	#NAME?	#NAME?
Max Evals	1000	1000	400	2420	#NAME?	#NAME?	#NAME?
Err Change	1.00E-08	1.00E-08	1.00E-10	2430	#NAME?	#NAME?	#NAME?
Gradient	1.00E-07	1.00E-07	1.00E-08	2440	#NAME?	#NAME?	#NAME?
Required Err	5.00E-01	5.00E-01	8.00E-01	2450	#NAME?	#NAME?	#NAME?
Echo On?	1	1	1	2460	#NAME?	#NAME?	#NAME?
				2470	#NAME?	#NAME?	#NAME?
							#NAME?
							#NAME?
	Value	Min	Max				#NAME?
CFL	500.00	50	500				#NAME?
OFL	2500.00	2400	#NAME?				#NAME?
QFL	50.00	10	1000				#NAME?
CFR	500.00	50	500				#NAME?
OFR	3300.00	#NAME?	3400				#NAME?
QFR	50.00	10	1000				#NAME?
	run1	run2	run3				
	1	0	1				
	1	0	1				
	1	0	1				
	0	1	1				
	0	1	1				
	0	1	1				
				2660	#NAME?	#NAME?	#NAME?
				2670	#NAME?	#NAME?	#NAME?
				2680	#NAME?	#NAME?	#NAME?
				2690	#NAME?	#NAME?	#NAME?
				2700	#NAME?	#NAME?	#NAME?
				2710	#NAME?	#NAME?	#NAME?
				2720	#NAME?	#NAME?	#NAME?
				2730	#NAME?	#NAME?	#NAME?
				2740	#NAME?	#NAME?	#NAME?
				2750	#NAME?	#NAME?	#NAME?
				2760	#NAME?	#NAME?	#NAME?
				2770	#NAME?	#NAME?	#NAME?
				2780	#NAME?	#NAME?	#NAME?
				2790	#NAME?	#NAME?	#NAME?
				2800	#NAME?	#NAME?	#NAME?
				2810	#NAME?	#NAME?	#NAME?
				2820	#NAME?	#NAME?	#NAME?

Excel Formulas provide automated solutions with no programming



ResStep4

					2830	#NAME?	#NAME?	#NAME?
					2840	#NAME?	#NAME?	#NAME?
					2850	#NAME?	#NAME?	#NAME?
					2860	#NAME?	#NAME?	#NAME?
					2870	#NAME?	#NAME?	#NAME?
					2880	#NAME?	#NAME?	#NAME?
					2890	#NAME?	#NAME?	#NAME?
					2900	#NAME?	#NAME?	#NAME?
					2910	#NAME?	#NAME?	#NAME?
					2920	#NAME?	#NAME?	#NAME?
					2930	#NAME?	#NAME?	#NAME?
					2940	#NAME?	#NAME?	#NAME?
					2950	#NAME?	#NAME?	#NAME?
CLeft	112.5				2960	#NAME?	#NAME?	#NAME?
OmegaLeft	2800				2970	#NAME?	#NAME?	#NAME?
QLeft	40.7				2980	#NAME?	#NAME?	#NAME?
CRight	201.6				2990	#NAME?	#NAME?	#NAME?
OmegaRight	2900				3000	#NAME?	#NAME?	#NAME?
QRight	60.8				3010	#NAME?	#NAME?	#NAME?
					3020	#NAME?	#NAME?	#NAME?
					3030	#NAME?	#NAME?	#NAME?
					3040	#NAME?	#NAME?	#NAME?
					3050	#NAME?	#NAME?	#NAME?
					3060	#NAME?	#NAME?	#NAME?
					3070	#NAME?	#NAME?	#NAME?
					3080	#NAME?	#NAME?	#NAME?
					3090	#NAME?	#NAME?	#NAME?
					3100	#NAME?	#NAME?	#NAME?
					3110	#NAME?	#NAME?	#NAME?
					3120	#NAME?	#NAME?	#NAME?
					3130	#NAME?	#NAME?	#NAME?
					3140	#NAME?	#NAME?	#NAME?
					3150	#NAME?	#NAME?	#NAME?
					3160	#NAME?	#NAME?	#NAME?
					3170	#NAME?	#NAME?	#NAME?
					3180	#NAME?	#NAME?	#NAME?
					3190	#NAME?	#NAME?	#NAME?
					3200	#NAME?	#NAME?	#NAME?
					3210	#NAME?	#NAME?	#NAME?
					3220	#NAME?	#NAME?	#NAME?
					3230	#NAME?	#NAME?	#NAME?
					3240	#NAME?	#NAME?	#NAME?
					3250	#NAME?	#NAME?	#NAME?
					3260	#NAME?	#NAME?	#NAME?

ResStep4

					3270	#NAME?	#NAME?	#NAME?
					3280	#NAME?	#NAME?	#NAME?
					3290	#NAME?	#NAME?	#NAME?
					3300	#NAME?	#NAME?	#NAME?







ResStep4

#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	1	
#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	1	
#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	1	
#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	#NAME?	1	

