

Range (M)	147 ELD-M				140 ELD-M				130 ELD-M				120 ELD-M				140 BTHP							
	Trajectory (In)	ComeUp (Mrads)	WindDrift (In)	WindDrift (Mrads)	Trajectory (In)	ComeUp (Mrads)	WindDrift (In)	WindDrift (Mrads)	Trajectory (In)	ComeUp (Mrads)	WindDrift (In)	WindDrift (Mrads)	Trajectory (In)	ComeUp (Mrads)	WindDrift (In)	WindDrift (Mrads)	Trajectory (In)	ComeUp (Mrads)	WindDrift (In)	WindDrift (Mrads)				
0	-2.5	0.00	0.0	0.00	-2.5	0.00	0.0	0.00	-2.5	0.00	0.0	0.00	-2.5	0.00	0.0	0.00	-2.5	0.00	0.0	0.00				
100	0.0	0.00	0.7	0.17	0.0	0.00	0.7	0.18	0.0	0.00	0.8	0.20	0.0	0.00	0.8	0.20	0.0	0.00	0.8	0.21				
200	-4.7	-0.59	2.7	0.34	-4.6	-0.59	2.9	0.37	-4.3	-0.55	3.2	0.41	-3.9	-0.50	3.4	0.43	-5.0	-0.63	3.5	0.45				
300	-17.4	-1.48	6.3	0.54	-17.3	-1.47	6.7	0.57	-16.5	-1.40	7.6	0.64	-15.4	-1.30	8.1	0.69	-18.7	-1.58	8.2	0.70				
400	-39.4	-2.50	11.7	0.74	-39.2	-2.49	12.4	0.79	-37.9	-2.41	14.0	0.89	-35.9	-2.28	15.3	0.97	-42.7	-2.71	15.3	0.97				
500	-71.7	-3.64	19.1	0.97	-71.7	-3.64	20.1	1.02	-70.2	-3.56	22.9	1.16	-67.2	-3.42	25.3	1.28	-78.7	-4.00	25.0	1.27				
600	-116.2	-4.92	28.6	1.21	-116.4	-4.93	30.2	1.28	-115.2	-4.88	34.6	1.46	-111.9	-4.74	38.6	1.64	-129.0	-5.46	37.6	1.59				
700	-174.5	-6.33	40.7	1.48	-175.5	-6.37	43.0	1.56	-175.4	-6.37	49.3	1.79	-173.0	-6.28	56.1	2.03	-196.4	-7.13	53.5	1.94				
800	-249.2	-7.91	55.7	1.77	-251.5	-7.98	59.1	1.88	-254.0	-8.06	67.7	2.15	-255.0	-8.10	78.5	2.49	-284.4	-9.03	73.4	2.33				
900	-343.1	-9.68	74.2	2.09	-347.9	-9.82	79.1	2.23	-354.7	-10.01	90.2	2.55	-363.7	-10.26	106.9	3.02	-397.5	-11.22	97.9	2.76				
1000	-460.2	-11.69	96.7	2.46	-469.2	-11.92	103.7	2.63	-482.6	-12.26	117.6	2.99	-507.0	-12.88	141.7	3.60	-541.6	-13.76	127.8	3.25				
1100	-605.4	-13.98	124.2	2.87	-621.4	-14.35	133.8	3.09	-643.7	-14.86	149.6	3.45	-692.2	-15.98	180.9	4.18	-723.7	-16.71	162.6	3.75				
1200	-785.2	-16.62	156.5	3.31	-811.1	-17.17	168.3	3.56	-842.8	-17.84	184.6	3.91	-924.8	-19.58	223.2	4.72	-949.4	-20.10	200.6	4.25				
1300	-1005.0	-19.64	192.3	3.76	-1043.2	-20.38	205.5	4.01	-1083.5	-21.17	221.9	4.34	-1209.4	-23.63	268.5	5.25	-1223.0	-23.90	241.2	4.71				
1400	-1268.9	-23.02	230.3	4.18	-1320.9	-23.97	244.7	4.44	-1369.3	-24.85	261.7	4.75	-1550.8	-28.14	316.8	5.75	-1548.4	-28.10	284.5	5.16				
1500	-1579.7	-26.75	270.0	4.57	-1647.2	-27.90	285.9	4.84	-1703.9	-28.86	303.9	5.15	-1954.2	-33.10	368.2	6.23	-1929.9	-32.69	330.5	5.60				
1600	-1940.0	-30.80	311.6	4.95	-2025.5	-32.16	329.3	5.23	-2091.4	-33.21	348.9	5.54	-2425.0	-38.51	422.8	6.71	-2372.5	-37.67	379.6	6.03				

Surpassed by 147 ELD-M

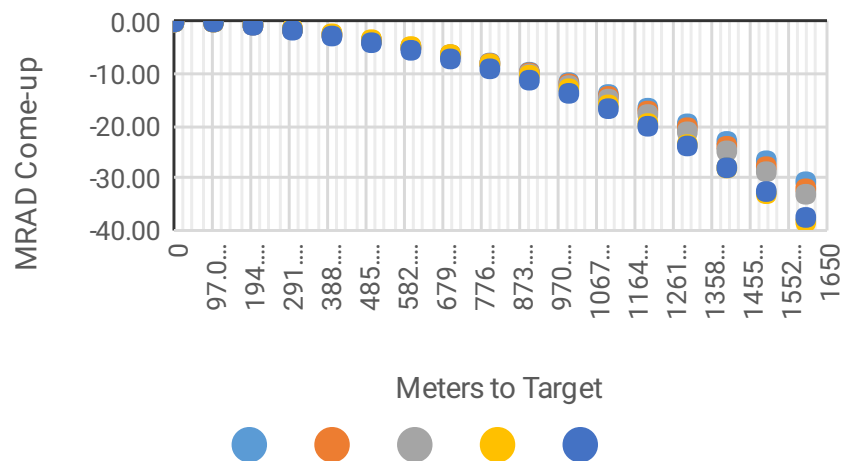
Surpassed by 140 ELD-M

Substantially the same

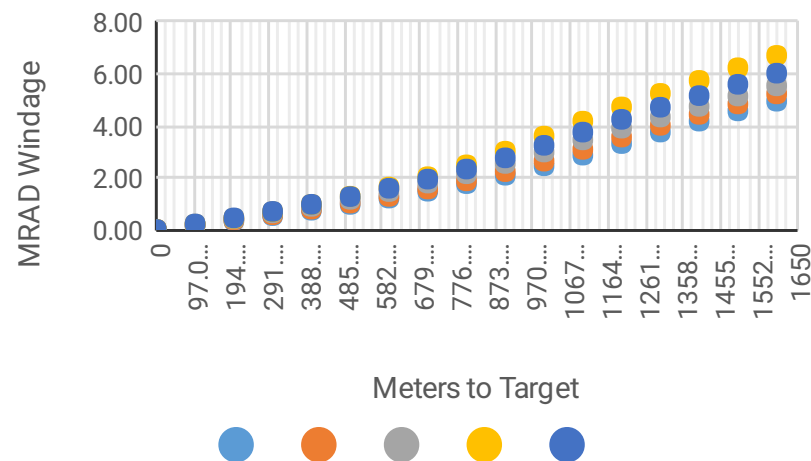
Transonic

As these bullets go transonic, the 147 ELD-M actually has the greatest retained velocity and will have the longest effective range, despite the lowest initial velocity.

6.5 CM Theory Crafting - Trajectory (MRAD)...



6.5 CM Theory Crafting - Windage (MRAD)...



QEatZer	0.079686																
Range	Velocity	Energy	Trajector	ComeUp	ComeUp	WindDrift	WindDrift	WindDrift	SpinDrift	SpinDrift	SpinDrift	TOF	Gyro	VertWin	VertWind	VertWind	
(M)	(FPS)	(Ft-lb)	(In)	(MOA)	(Mrads)	(In)	(MOA)	(Mrads)	(In)	(MOA)	(Mrads)	(Sec)		(In)	(MOA)	(Mrads)	
0	2550	2122	-2.5	0	0	0	0	0	0	0	0	0	1.5952	-0.0015	0	0	
100	2409	1893	-0.0001	-0.0001	0	0.653	0.5702	0.1659	-0.0504	-0.044	-0.0128	0.1324	1.7147	0.3411	0.2979	0.0866	
200	2268	1679	-4.67	-2.0391	-0.5931	2.7084	1.1826	0.344	-0.2103	-0.0918	-0.0267	0.2727	1.8385	0.682	0.2978	0.0866	
300	2130	1480	-17.4244	-5.072	-1.4753	6.3315	1.843	0.5361	-0.4937	-0.1437	-0.0418	0.422	1.9805	1.0231	0.2978	0.0866	
400	1993	1297	-39.3502	-8.5907	-2.4987	11.709	2.5562	0.7435	-0.9167	-0.2001	-0.0582	0.5812	2.1443	1.3637	0.2977	0.0866	
500	1860	1129	-71.7482	-12.5309	-3.6448	19.0525	3.3275	0.9679	-1.4981	-0.2616	-0.0761	0.7516	2.3186	1.7031	0.2974	0.0865	
600	1728	975	-116.1783	-16.9089	-4.9182	28.6146	4.1646	1.2113	-2.2587	-0.3287	-0.0956	0.9345	2.5074	2.0424	0.2973	0.0865	
700	1599	835	-174.5455	-21.7747	-6.3336	40.6995	5.0773	1.4768	-3.2222	-0.402	-0.1169	1.1319	2.7298	2.3813	0.2971	0.0864	
800	1471	706	-249.1954	-27.2016	-7.912	55.7011	6.0801	1.7685	-4.4168	-0.4821	-0.1402	1.3457	3.0126	2.7194	0.2968	0.0863	
900	1342	588	-343.1124	-33.292	-9.6835	74.1544	7.195	2.0928	-5.8772	-0.5703	-0.1659	1.5792	3.4825	3.0573	0.2966	0.0863	
1000	1215	482	-460.1715	-40.1855	-11.6886	96.7272	8.4467	2.4569	-7.6509	-0.6681	-0.1943	1.8361	4.0752	3.3941	0.2964	0.0862	
1100	1096	392	-605.4347	-48.0649	-13.9805	124.1612	9.8567	2.867	-9.7859	-0.7769	-0.226	2.1206	4.319	3.7298	0.2961	0.0861	
1200	1014	336	-785.1598	-57.1395	-16.62	156.5309	11.3909	3.3132	-12.3116	-0.8959	-0.2606	2.4331	4.7561	4.065	0.2958	0.086	
1300	970	307	-1005.014	-67.5144	-19.6377	192.2806	12.916	3.7568	-15.2902	-1.0271	-0.2987	2.7648	5.2806	4.4003	0.2956	0.086	
1400	939	288	-1268.886	-79.154	-23.0233	230.2797	14.3636	4.1779	-18.7935	-1.1722	-0.341	3.1092	5.5449	4.7353	0.2954	0.0859	
1500	915	273	-1579.687	-91.9753	-26.7526	270.0439	15.721	4.5727	-22.8769	-1.3318	-0.3874	3.4635	5.6613	5.0707	0.2952	0.0859	
1600	890	259	-1940.018	-105.8995	-30.8027	311.5519	17.0038	4.9458	-27.584	-1.5055	-0.4379	3.8278	5.7806	5.4065	0.2951	0.0858	

QEatZer	0.078739															
Range	Velocity	Energy	Trajector	ComeUp	ComeUp	WindDrift	WindDrift	WindDrift	SpinDrift	SpinDrift	SpinDrift	TOF	Gyro	VertWin	VertWind	VertWind
(M)	(FPS)	(Ft-lb)	(In)	(MOA)	(Mrads)	(In)	(MOA)	(Mrads)	(In)	(MOA)	(Mrads)	(Sec)		(In)	(MOA)	(Mrads)
0	2570	2053	-2.5	0	0	0	0	0	0	0	0	0	1.6601	-0.0015	0	0
100	2417	1816	-0.0001	-0.0001	0	0.6993	0.6107	0.1776	-0.0537	-0.0469	-0.0136	0.1316	1.792	0.3645	0.3183	0.0926
200	2269	1600	-4.6183	-2.0165	-0.5865	2.8853	1.2598	0.3664	-0.2249	-0.0982	-0.0286	0.2717	1.9246	0.7295	0.3185	0.0926
300	2125	1403	-17.3165	-5.0406	-1.4661	6.712	1.9538	0.5683	-0.5296	-0.1542	-0.0448	0.4211	2.0756	1.0926	0.318	0.0925
400	1984	1223	-39.2281	-8.564	-2.491	12.3672	2.6999	0.7853	-0.986	-0.2152	-0.0626	0.5809	2.2515	1.4576	0.3182	0.0926
500	1845	1058	-71.7174	-12.5255	-3.6433	20.0789	3.5068	1.02	-1.6149	-0.282	-0.082	0.7524	2.4331	1.8204	0.3179	0.0925
600	1706	904	-116.44	-16.947	-4.9293	30.1544	4.3887	1.2765	-2.4392	-0.355	-0.1033	0.9373	2.6383	2.1832	0.3178	0.0924
700	1567	764	-175.476	-21.8909	-6.3673	42.993	5.3634	1.56	-3.485	-0.4348	-0.1265	1.1379	2.8782	2.5458	0.3176	0.0924
800	1430	636	-251.472	-27.4502	-7.9843	59.0882	6.4498	1.876	-4.7834	-0.5221	-0.1519	1.357	3.2259	2.9075	0.3174	0.0923
900	1294	520	-347.857	-33.7525	-9.8175	79.0687	7.6719	2.2315	-6.3761	-0.6187	-0.1799	1.5981	3.7611	3.2695	0.3172	0.0923
1000	1161	419	-469.155	-40.9701	-11.9168	103.7225	9.0576	2.6345	-8.3176	-0.7263	-0.2113	1.8658	4.3702	3.6293	0.3169	0.0922
1100	1048	341	-621.366	-49.3298	-14.3484	133.8266	10.624	3.0902	-10.6496	-0.8454	-0.2459	2.1645	4.379	3.9887	0.3166	0.0921
1200	988	303	-811.132	-59.0298	-17.1698	168.3433	12.2505	3.5633	-13.4156	-0.9763	-0.284	2.4882	5.0268	4.3489	0.3165	0.0921
1300	954	283	-1043.23	-70.0825	-20.3847	205.4887	13.8033	4.0149	-16.6966	-1.1216	-0.3262	2.8268	5.3419	4.7083	0.3163	0.092
1400	924	265	-1320.92	-82.4008	-23.9677	244.6516	15.2601	4.4387	-20.5512	-1.2819	-0.3729	3.1768	5.5529	5.0683	0.3161	0.092
1500	894	248	-1647.22	-95.9087	-27.8967	285.8814	16.643	4.8409	-25.0265	-1.457	-0.4238	3.5385	5.7326	5.4287	0.316	0.0919
1600	864	232	-2025.45	-110.565	-32.1597	329.3286	17.974	5.228	-30.1777	-1.647	-0.4791	3.9127	5.9058	5.7893	0.316	0.0919

QEatZer	0.075868																
Range	Velocity	Energy	Trajector	ComeUp	ComeUp	WindDrift	WindDrift	WindDrift	SpinDrift	SpinDrift	SpinDrift	TOF	Gyro	VertWin	VertWin	VertWin	
(M)	(FPS)	(Ft-lb)	(In)	(MOA)	(Mrads)	(In)	(MOA)	(Mrads)	(In)	(MOA)	(Mrads)	(Sec)		(In)	(MOA)	(Mrads)	
0	2650	2027	-2.5	0	0	0	0	0	0	0	0	0	1.8703	-0.0015	0	0	
100	2471	1763	-0.0001	-0.0001	0	0.7724	0.6745	0.1962	-0.0554	-0.0483	-0.0141	0.1282	2.0566	0.3844	0.3357	0.0976	
200	2296	1522	-4.3165	-1.8847	-0.5482	3.2199	1.4059	0.4089	-0.2347	-0.1025	-0.0298	0.2659	2.2481	0.7688	0.3357	0.0976	
300	2127	1305	-16.5274	-4.8109	-1.3993	7.5591	2.2003	0.64	-0.5598	-0.1629	-0.0474	0.4144	2.4758	1.1529	0.3356	0.0976	
400	1963	1112	-37.9449	-8.2839	-2.4095	14.034	3.0638	0.8912	-1.0566	-0.2307	-0.0671	0.575	2.7476	1.5369	0.3355	0.0976	
500	1805	940	-70.1749	-12.2561	-3.5649	22.923	4.0035	1.1645	-1.7569	-0.3068	-0.0893	0.7493	3.021	1.9199	0.3353	0.0975	
600	1653	789	-115.187	-16.7646	-4.8763	34.559	5.0298	1.463	-2.6966	-0.3925	-0.1142	0.9392	3.3348	2.3032	0.3352	0.0975	
700	1509	657	-175.436	-21.8859	-6.3659	49.334	6.1544	1.7901	-3.9183	-0.4888	-0.1422	1.1469	3.6654	2.6845	0.3349	0.0974	
800	1370	542	-253.992	-27.7252	-8.0643	67.7105	7.391	2.1498	-5.4737	-0.5975	-0.1738	1.3751	4.2294	3.066	0.3347	0.0973	
900	1239	443	-354.740	-34.4203	-10.0117	90.2499	8.7568	2.547	-7.4384	-0.7217	-0.2099	1.627	4.9757	3.4471	0.3345	0.0973	
1000	1116	359	-482.638	-42.1475	-12.2593	117.6138	10.2706	2.9874	-9.9089	-0.8653	-0.2517	1.9062	5.6124	3.8275	0.3342	0.0972	
1100	1042	313	-643.658	-51.0997	-14.8632	149.6116	11.8771	3.4547	-12.9913	-1.0313	-0.3	2.2118	5.878	4.2065	0.3339	0.0971	
1200	997	287	-842.750	-61.3311	-17.8392	184.586	13.4324	3.9071	-16.7984	-1.2224	-0.3556	2.5342	6.4432	4.5856	0.3337	0.0971	
1300	959	265	-1083.50	-72.7879	-21.1716	221.9405	14.9084	4.3363	-21.4196	-1.4388	-0.4185	2.8701	6.93	4.9638	0.3334	0.097	
1400	922	245	-1369.34	-85.4217	-24.8463	261.6755	16.3219	4.7475	-26.9378	-1.6802	-0.4887	3.2195	7.3168	5.3425	0.3332	0.0969	
1500	886	226	-1703.94	-99.212	-28.8575	303.9373	17.6941	5.1466	-33.4449	-1.9471	-0.5663	3.5832	7.6433	5.7204	0.333	0.0969	
1600	851	209	-2091.37	-114.164	-33.2067	348.8766	19.0409	5.5384	-41.0447	-2.2401	-0.6516	3.962	7.9663	6.0984	0.3328	0.0968	

QEatZer	0.072058																
Range	Velocity	Energy	Trajector	ComeUp	ComeUp	WindDrif	WindDrif	WindDrif	SpinDrift	SpinDrift	SpinDrift	TOF	Gyro	VertWin	VertWinc	VertWind	
(M)	(FPS)	(Ft-lb)	(In)	(MOA)	(Mrads)	(In)	(MOA)	(Mrads)	(In)	(MOA)	(Mrads)	(Sec)		(In)	(MOA)	(Mrads)	
0	2750	2015	-2.5	0	0	0	0	0	0	0	0	0	2.3574	-0.0015	0	0	
100	2549	1731	-0.0001	-0.0001	0	0.8042	0.7022	0.2043	-0.0604	-0.0528	-0.0154	0.1239	2.6042	0.4348	0.3797	0.1104	
200	2348	1468	-3.9127	-1.7084	-0.4969	3.4058	1.4871	0.4325	-0.2577	-0.1125	-0.0327	0.258	2.9074	0.8698	0.3798	0.1105	
300	2150	1231	-15.3854	-4.4784	-1.3026	8.1074	2.3599	0.6864	-0.6205	-0.1806	-0.0525	0.404	3.2828	1.305	0.3799	0.1105	
400	1958	1021	-35.8761	-7.8322	-2.2781	15.252	3.3297	0.9685	-1.1862	-0.259	-0.0753	0.5639	3.7675	1.7392	0.3797	0.1104	
500	1772	836	-67.2438	-11.7442	-3.416	25.2539	4.4106	1.2829	-2.003	-0.3498	-0.1018	0.74	4.2498	2.1735	0.3796	0.1104	
600	1592	675	-111.901	-16.2864	-4.7372	38.636	5.6231	1.6356	-3.1274	-0.4552	-0.1324	0.9353	4.7778	2.6073	0.3795	0.1104	
700	1418	535	-173.034	-21.5862	-6.2787	56.0713	6.9949	2.0346	-4.6239	-0.5768	-0.1678	1.1537	5.4782	3.0407	0.3793	0.1103	
800	1250	416	-254.958	-27.8306	-8.095	78.4587	8.5643	2.4911	-6.5818	-0.7185	-0.209	1.4002	6.6702	3.4729	0.3791	0.1103	
900	1092	318	-363.65	-35.2849	-10.2632	106.9265	10.3748	3.0177	-9.1449	-0.8873	-0.2581	1.6812	7.5018	3.9048	0.3789	0.1102	
1000	992	262	-506.986	-44.274	-12.8778	141.7331	12.3768	3.6	-12.4692	-1.0889	-0.3167	1.9982	9.0209	4.3369	0.3787	0.1102	
1100	935	233	-692.222	-54.9555	-15.9847	180.8661	14.3583	4.1763	-16.7764	-1.3318	-0.3874	2.3398	10.2177	4.7686	0.3786	0.1101	
1200	892	212	-924.763	-67.3002	-19.5754	223.2262	16.2443	4.7249	-22.2801	-1.6213	-0.4716	2.6997	10.8006	5.201	0.3785	0.1101	
1300	854	194	-1209.38	-81.2457	-23.6317	268.537	18.0383	5.2468	-29.1602	-1.9588	-0.5697	3.0763	11.3048	5.6333	0.3784	0.1101	
1400	818	178	-1550.83	-96.7461	-28.1402	316.8091	19.7608	5.7478	-37.5741	-2.3437	-0.6817	3.4696	11.7755	6.066	0.3784	0.1101	
1500	784	164	-1954.19	-113.787	-33.097	368.1785	21.4339	6.2344	-47.6813	-2.7759	-0.8074	3.8805	12.072	6.4992	0.3784	0.1101	
1600	751	150	-2424.96	-132.383	-38.5059	422.778	23.0741	6.7115	-59.6593	-3.2561	-0.9471	4.3096	12.3403	6.9323	0.3784	0.1101	

QEatZer	0.080195																
Range	Velocity	Energy	Trajector	ComeUp	ComeUp	WindDrift	WindDrift	WindDrift	SpinDrift	SpinDrift	SpinDrift	TOF	Gyro	VertWin	VertWin	VertWin	
(M)	(FPS)	(Ft-lb)	(In)	(MOA)	(Mrads)	(In)	(MOA)	(Mrads)	(In)	(MOA)	(Mrads)	(Sec)		(In)	(MOA)	(Mrads)	
0	2535	1997	-2.5	0	0	0	0	0	0	0	0	0	1.7821	-0.0015	0	0	
100	2357	1726	-0.0001	-0.0001	0	0.845	0.7379	0.2146	-0.0572	-0.05	-0.0145	0.1342	1.9587	0.3808	0.3325	0.0967	
200	2184	1482	-4.9952	-2.181	-0.6344	3.518	1.536	0.4468	-0.2411	-0.1053	-0.0306	0.2788	2.1524	0.7623	0.3328	0.0968	
300	2017	1265	-18.7179	-5.4485	-1.5848	8.249	2.4011	0.6984	-0.5723	-0.1666	-0.0485	0.4351	2.3755	1.142	0.3324	0.0967	
400	1858	1073	-42.67	-9.3154	-2.7095	15.2978	3.3397	0.9714	-1.0749	-0.2347	-0.0683	0.6046	2.6203	1.5228	0.3324	0.0967	
500	1706	904	-78.6847	-13.7423	-3.9972	24.9582	4.359	1.2679	-1.7767	-0.3103	-0.0903	0.7889	2.8835	1.9022	0.3322	0.0966	
600	1561	758	-129.008	-18.7762	-5.4614	37.5662	5.4675	1.5903	-2.7096	-0.3944	-0.1147	0.99	3.1754	2.2815	0.332	0.0966	
700	1423	629	-196.421	-24.5038	-7.1274	53.5342	6.6784	1.9425	-3.9119	-0.488	-0.1419	1.2101	3.6125	2.66	0.3318	0.0965	
800	1289	517	-284.419	-31.0466	-9.0304	73.389	8.0109	2.3301	-5.4333	-0.5931	-0.1725	1.4523	4.3001	3.0379	0.3316	0.0965	
900	1158	417	-397.495	-38.569	-11.2184	97.861	9.4952	2.7618	-7.3336	-0.7116	-0.207	1.7208	5.1897	3.4146	0.3313	0.0964	
1000	1044	339	-541.614	-47.2981	-13.7575	127.7576	11.1564	3.245	-9.6606	-0.8436	-0.2454	2.02	5.4272	3.7919	0.3311	0.0963	
1100	972	293	-723.679	-57.4531	-16.7112	162.5614	12.9051	3.7537	-12.4736	-0.9902	-0.288	2.3471	6.4969	4.1685	0.3309	0.0963	
1200	931	269	-949.446	-69.0968	-20.098	200.6234	14.5995	4.2465	-15.8831	-1.1558	-0.3362	2.6926	6.9953	4.5451	0.3308	0.0962	
1300	895	249	-1223.02	-82.1627	-23.8984	241.2229	16.2036	4.7131	-19.9821	-1.3423	-0.3904	3.0526	7.3347	4.9216	0.3306	0.0962	
1400	859	229	-1548.39	-96.5939	-28.096	284.4612	17.7431	5.1609	-24.8472	-1.5498	-0.4508	3.4274	7.7031	5.2997	0.3306	0.0962	
1500	824	211	-1929.94	-112.375	-32.6863	330.5413	19.2429	5.5971	-30.5564	-1.7789	-0.5174	3.8183	8.0899	5.6786	0.3306	0.0962	
1600	791	194	-2372.54	-129.520	-37.6731	379.6107	20.7182	6.0262	-37.1927	-2.0299	-0.5904	4.2261	8.402	6.0586	0.3307	0.0962	