



Experiment No. 8

Calibration Of Doubly Constrained Gravity Model

June 30, 2014, 11:15 pm

Input Values :

Solution :

Trip Matrix with respect to Optimal Beta Value (Minimum SSE)

Minimum Residual = 0

Optimal Beta = 0.001

Target O_i

Modelled O_i

Target D_j

Modelled D_j

Beta	Residual SSE
0.001	0
0.002	0



0.003	0
0.004	0
0.005	0
0.006	0
0.007	0
0.008	0
0.009	0
0.01	0
0.011	0
0.012	0
0.013	0
0.014	0
0.015	0
0.016	0
0.017	0



0.018	0
0.019	0
0.02	0
0.021	0
0.022	0
0.023	0
0.024	0
0.025	0
0.026	0
0.027	0
0.028	0
0.029	0
0.03	0
0.031	0
0.032	0



0.033	0
0.034	0
0.035	0
0.036	0
0.037	0
0.038	0
0.039	0
0.04	0
0.041	0
0.042	0
0.043	0
0.044	0
0.045	0
0.046	0
0.047	0



0.048	0
0.049	0
0.05	0
0.051	0
0.052	0
0.053	0
0.054	0
0.055	0
0.056	0
0.057	0
0.058	0
0.059	0
0.06	0
0.061	0
0.062	0



0.063	0
0.064	0
0.065	0
0.066	0
0.067	0
0.068	0
0.069	0
0.07	0
0.071	0
0.072	0
0.073	0
0.074	0
0.075	0
0.076	0
0.077	0



0.078	0
0.079	0
0.08	0
0.081	0
0.082	0
0.083	0
0.084	0
0.085	0
0.086	0
0.087	0
0.088	0
0.089	0
0.09	0
0.091	0
0.092	0



0.093	0
0.094	0
0.095	0
0.096	0
0.097	0
0.098	0
0.099	0
0.1	0
0.101	0
0.102	0
0.103	0
0.104	0
0.105	0
0.106	0
0.107	0



0.108	0
0.109	0
0.11	0
0.111	0
0.112	0
0.113	0
0.114	0
0.115	0
0.116	0
0.117	0
0.118	0
0.119	0
0.12	0
0.121	0
0.122	0



0.123	0
0.124	0
0.125	0
0.126	0
0.127	0
0.128	0
0.129	0
0.13	0
0.131	0
0.132	0
0.133	0
0.134	0
0.135	0
0.136	0
0.137	0



0.138	0
0.139	0
0.14	0
0.141	0
0.142	0
0.143	0
0.144	0
0.145	0
0.146	0
0.147	0
0.148	0
0.149	0
0.15	0
0.151	0
0.152	0



0.153	0
0.154	0
0.155	0
0.156	0
0.157	0
0.158	0
0.159	0
0.16	0
0.161	0
0.162	0
0.163	0
0.164	0
0.165	0
0.166	0
0.167	0



0.168	0
0.169	0
0.17	0
0.171	0
0.172	0
0.173	0
0.174	0
0.175	0
0.176	0
0.177	0
0.178	0
0.179	0
0.18	0
0.181	0
0.182	0



0.183	0
0.184	0
0.185	0
0.186	0
0.187	0
0.188	0
0.189	0
0.19	0
0.191	0
0.192	0
0.193	0
0.194	0
0.195	0
0.196	0
0.197	0



0.198	0
0.199	0
0.2	0
0.201	0
0.202	0
0.203	0
0.204	0
0.205	0
0.206	0
0.207	0
0.208	0
0.209	0
0.21	0
0.211	0
0.212	0



0.213	0
0.214	0
0.215	0
0.216	0
0.217	0
0.218	0
0.219	0
0.22	0
0.221	0
0.222	0
0.223	0
0.224	0
0.225	0
0.226	0
0.227	0



0.228	0
0.229	0
0.23	0
0.231	0
0.232	0
0.233	0
0.234	0
0.235	0
0.236	0
0.237	0
0.238	0
0.239	0
0.24	0
0.241	0
0.242	0



0.243	0
0.244	0
0.245	0
0.246	0
0.247	0
0.248	0
0.249	0
0.25	0
0.251	0
0.252	0
0.253	0
0.254	0
0.255	0
0.256	0
0.257	0



0.258	0
0.259	0
0.26	0
0.261	0
0.262	0
0.263	0
0.264	0
0.265	0
0.266	0
0.267	0
0.268	0
0.269	0
0.27	0
0.271	0
0.272	0



0.273	0
0.274	0
0.275	0
0.276	0
0.277	0
0.278	0
0.279	0
0.28	0
0.281	0
0.282	0
0.283	0
0.284	0
0.285	0
0.286	0
0.287	0



0.288	0
0.289	0
0.29	0
0.291	0
0.292	0
0.293	0
0.294	0
0.295	0
0.296	0
0.297	0
0.298	0
0.299	0
0.3	0
0.301	0
0.302	0



0.303	0
0.304	0
0.305	0
0.306	0
0.307	0
0.308	0
0.309	0
0.31	0
0.311	0
0.312	0
0.313	0
0.314	0
0.315	0
0.316	0
0.317	0



0.318	0
0.319	0
0.32	0
0.321	0
0.322	0
0.323	0
0.324	0
0.325	0
0.326	0
0.327	0
0.328	0
0.329	0
0.33	0
0.331	0
0.332	0



0.333	0
0.334	0
0.335	0
0.336	0
0.337	0
0.338	0
0.339	0
0.34	0
0.341	0
0.342	0
0.343	0
0.344	0
0.345	0
0.346	0
0.347	0



0.348	0
0.349	0
0.35	0
0.351	0
0.352	0
0.353	0
0.354	0
0.355	0
0.356	0
0.357	0
0.358	0
0.359	0
0.36	0
0.361	0
0.362	0



0.363	0
0.364	0
0.365	0
0.366	0
0.367	0
0.368	0
0.369	0
0.37	0
0.371	0
0.372	0
0.373	0
0.374	0
0.375	0
0.376	0
0.377	0



0.378	0
0.379	0
0.38	0
0.381	0
0.382	0
0.383	0
0.384	0
0.385	0
0.386	0
0.387	0
0.388	0
0.389	0
0.39	0
0.391	0
0.392	0



0.393	0
0.394	0
0.395	0
0.396	0
0.397	0
0.398	0
0.399	0
0.4	0
0.401	0
0.402	0
0.403	0
0.404	0
0.405	0
0.406	0
0.407	0



0.408	0
0.409	0
0.41	0
0.411	0
0.412	0
0.413	0
0.414	0
0.415	0
0.416	0
0.417	0
0.418	0
0.419	0
0.42	0
0.421	0
0.422	0



0.423	0
0.424	0
0.425	0
0.426	0
0.427	0
0.428	0
0.429	0
0.43	0
0.431	0
0.432	0
0.433	0
0.434	0
0.435	0
0.436	0
0.437	0



0.438	0
0.439	0
0.44	0
0.441	0
0.442	0
0.443	0
0.444	0
0.445	0
0.446	0
0.447	0
0.448	0
0.449	0
0.45	0
0.451	0
0.452	0



0.453	0
0.454	0
0.455	0
0.456	0
0.457	0
0.458	0
0.459	0
0.46	0
0.461	0
0.462	0
0.463	0
0.464	0
0.465	0
0.466	0
0.467	0



0.468	0
0.469	0
0.47	0
0.471	0
0.472	0
0.473	0
0.474	0
0.475	0
0.476	0
0.477	0
0.478	0
0.479	0
0.48	0
0.481	0
0.482	0



0.483	0
0.484	0
0.485	0
0.486	0
0.487	0
0.488	0
0.489	0
0.49	0
0.491	0
0.492	0
0.493	0
0.494	0
0.495	0
0.496	0
0.497	0



0.498	0
0.499	0
0.5	0
0.501	0
0.502	0
0.503	0
0.504	0
0.505	0
0.506	0
0.507	0
0.508	0
0.509	0
0.51	0
0.511	0
0.512	0



0.513	0
0.514	0
0.515	0
0.516	0
0.517	0
0.518	0
0.519	0
0.52	0
0.521	0
0.522	0
0.523	0
0.524	0
0.525	0
0.526	0
0.527	0



0.528	0
0.529	0
0.53	0
0.531	0
0.532	0
0.533	0
0.534	0
0.535	0
0.536	0
0.537	0
0.538	0
0.539	0
0.54	0
0.541	0
0.542	0



0.543	0
0.544	0
0.545	0
0.546	0
0.547	0
0.548	0
0.549	0
0.55	0
0.551	0
0.552	0
0.553	0
0.554	0
0.555	0
0.556	0
0.557	0



0.558	0
0.559	0
0.56	0
0.561	0
0.562	0
0.563	0
0.564	0
0.565	0
0.566	0
0.567	0
0.568	0
0.569	0
0.57	0
0.571	0
0.572	0



0.573	0
0.574	0
0.575	0
0.576	0
0.577	0
0.578	0
0.579	0
0.58	0
0.581	0
0.582	0
0.583	0
0.584	0
0.585	0
0.586	0
0.587	0



0.588	0
0.589	0
0.59	0
0.591	0
0.592	0
0.593	0
0.594	0
0.595	0
0.596	0
0.597	0
0.598	0
0.599	0
0.6	0
0.601	0
0.602	0



0.603	0
0.604	0
0.605	0
0.606	0
0.607	0
0.608	0
0.609	0
0.61	0
0.611	0
0.612	0
0.613	0
0.614	0
0.615	0
0.616	0
0.617	0



0.618	0
0.619	0
0.62	0
0.621	0
0.622	0
0.623	0
0.624	0
0.625	0
0.626	0
0.627	0
0.628	0
0.629	0
0.63	0
0.631	0
0.632	0



0.633	0
0.634	0
0.635	0
0.636	0
0.637	0
0.638	0
0.639	0
0.64	0
0.641	0
0.642	0
0.643	0
0.644	0
0.645	0
0.646	0
0.647	0



0.648	0
0.649	0
0.65	0
0.651	0
0.652	0
0.653	0
0.654	0
0.655	0
0.656	0
0.657	0
0.658	0
0.659	0
0.66	0
0.661	0
0.662	0



0.663	0
0.664	0
0.665	0
0.666	0
0.667	0
0.668	0
0.669	0
0.67	0
0.671	0
0.672	0
0.673	0
0.674	0
0.675	0
0.676	0
0.677	0



0.678	0
0.679	0
0.68	0
0.681	0
0.682	0
0.683	0
0.684	0
0.685	0
0.686	0
0.687	0
0.688	0
0.689	0
0.69	0
0.691	0
0.692	0



0.693	0
0.694	0
0.695	0
0.696	0
0.697	0
0.698	0
0.699	0
0.7	0
0.701	0
0.702	0
0.703	0
0.704	0
0.705	0
0.706	0
0.707	0



0.708	0
0.709	0
0.71	0
0.711	0
0.712	0
0.713	0
0.714	0
0.715	0
0.716	0
0.717	0
0.718	0
0.719	0
0.72	0
0.721	0
0.722	0



0.723	0
0.724	0
0.725	0
0.726	0
0.727	0
0.728	0
0.729	0
0.73	0
0.731	0
0.732	0
0.733	0
0.734	0
0.735	0
0.736	0
0.737	0



0.738	0
0.739	0
0.74	0
0.741	0
0.742	0
0.743	0
0.744	0
0.745	0
0.746	0
0.747	0
0.748	0
0.749	0
0.75	0
0.751	0
0.752	0



0.753	0
0.754	0
0.755	0
0.756	0
0.757	0
0.758	0
0.759	0
0.76	0
0.761	0
0.762	0
0.763	0
0.764	0
0.765	0
0.766	0
0.767	0



Urban Transportation Systems Engineering Lab

by IIT Bombay - www.iitb.ac.in

0.768	0
0.769	0
0.77	0
0.771	0
0.772	0
0.773	0
0.774	0
0.775	0
0.776	0
0.777	0
0.778	0
0.779	0
0.78	0
0.781	0
0.782	0



0.783	0
0.784	0
0.785	0
0.786	0
0.787	0
0.788	0
0.789	0
0.79	0
0.791	0
0.792	0
0.793	0
0.794	0
0.795	0
0.796	0
0.797	0



0.798	0
0.799	0
0.8	0
0.801	0
0.802	0
0.803	0
0.804	0
0.805	0
0.806	0
0.807	0
0.808	0
0.809	0
0.81	0
0.811	0
0.812	0



0.813	0
0.814	0
0.815	0
0.816	0
0.817	0
0.818	0
0.819	0
0.82	0
0.821	0
0.822	0
0.823	0
0.824	0
0.825	0
0.826	0
0.827	0



0.828	0
0.829	0
0.83	0
0.831	0
0.832	0
0.833	0
0.834	0
0.835	0
0.836	0
0.837	0
0.838	0
0.839	0
0.84	0
0.841	0
0.842	0



0.843	0
0.844	0
0.845	0
0.846	0
0.847	0
0.848	0
0.849	0
0.85	0
0.851	0
0.852	0
0.853	0
0.854	0
0.855	0
0.856	0
0.857	0



0.858	0
0.859	0
0.86	0
0.861	0
0.862	0
0.863	0
0.864	0
0.865	0
0.866	0
0.867	0
0.868	0
0.869	0
0.87	0
0.871	0
0.872	0



0.873	0
0.874	0
0.875	0
0.876	0
0.877	0
0.878	0
0.879	0
0.88	0
0.881	0
0.882	0
0.883	0
0.884	0
0.885	0
0.886	0
0.887	0



0.888	0
0.889	0
0.89	0
0.891	0
0.892	0
0.893	0
0.894	0
0.895	0
0.896	0
0.897	0
0.898	0
0.899	0
0.9	0
0.901	0
0.902	0



0.903	0
0.904	0
0.905	0
0.906	0
0.907	0
0.908	0
0.909	0
0.91	0
0.911	0
0.912	0
0.913	0
0.914	0
0.915	0
0.916	0
0.917	0



Urban Transportation Systems Engineering Lab

by IIT Bombay - www.iitb.ac.in

0.918	0
0.919	0
0.92	0
0.921	0
0.922	0
0.923	0
0.924	0
0.925	0
0.926	0
0.927	0
0.928	0
0.929	0
0.93	0
0.931	0
0.932	0



0.933	0
0.934	0
0.935	0
0.936	0
0.937	0
0.938	0
0.939	0
0.94	0
0.941	0
0.942	0
0.943	0
0.944	0
0.945	0
0.946	0
0.947	0



0.948	0
0.949	0
0.95	0
0.951	0
0.952	0
0.953	0
0.954	0
0.955	0
0.956	0
0.957	0
0.958	0
0.959	0
0.96	0
0.961	0
0.962	0



0.963	0
0.964	0
0.965	0
0.966	0
0.967	0
0.968	0
0.969	0
0.97	0
0.971	0
0.972	0
0.973	0
0.974	0
0.975	0
0.976	0
0.977	0



0.978	0
0.979	0
0.98	0
0.981	0
0.982	0
0.983	0
0.984	0
0.985	0
0.986	0
0.987	0
0.988	0
0.989	0
0.99	0
0.991	0
0.992	0



0.993	0
0.994	0
0.995	0
0.996	0
0.997	0
0.998	0
0.999	0