


*Map making with the*  
***Mira-Titan***

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TABLE 1

DESIGN

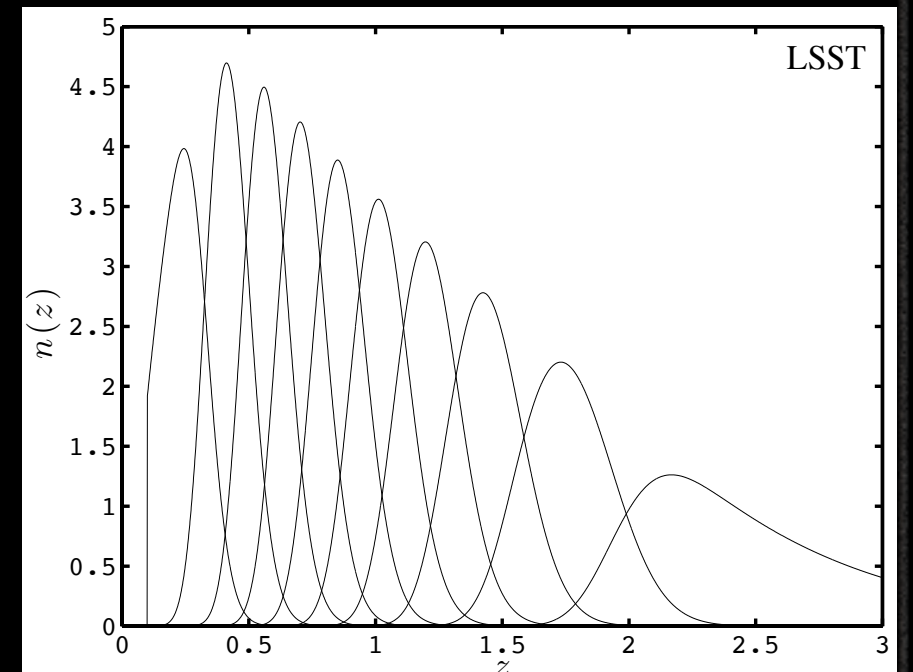


Model	$\omega_m$	$\omega_b$	$\sigma_8$	$h$	$n_s$	$w_0$	$w_a$	$\omega_\nu$
M000	0.1335	0.02258	0.8	0.71	0.963	-1.0	0.0	0.0
M001	0.1472	0.02261	0.8778	0.6167	0.9611	-0.7000	0.67220	0.0
M002	0.1356	0.02328	0.8556	0.7500	1.0500	-1.0330	0.91110	0.0
M003	0.1550	0.02194	0.9000	0.7167	0.8944	-1.1000	-0.28330	0.0
M004	0.1239	0.02283	0.7889	0.5833	0.8722	-1.1670	1.15000	0.0
M005	0.1433	0.02350	0.7667	0.8500	0.9833	-1.2330	-0.04445	0.0
M006	0.1317	0.02150	0.8333	0.5500	0.9167	-0.7667	0.19440	0.0
M007	0.1511	0.02217	0.8111	0.8167	1.0280	-0.8333	-1.00000	0.0
M008	0.1200	0.02306	0.7000	0.6833	1.0060	-0.9000	0.43330	0.0
M009	0.1394	0.02172	0.7444	0.6500	0.8500	-0.9667	-0.76110	0.0
M010	0.1278	0.02239	0.7222	0.7833	0.9389	-1.3000	-0.52220	0.0
M011	0.1227	0.0220	0.7151	0.5827	0.9357	-1.0821	1.0646	0.000345
M012	0.1241	0.0224	0.7472	0.8315	0.8865	-1.2325	-0.7646	0.001204
M013	0.1534	0.0232	0.8098	0.7398	0.8706	-1.2993	1.2236	0.003770
M014	0.1215	0.0215	0.8742	0.5894	1.0151	-0.7281	-0.2088	0.001752
M015	0.1250	0.0224	0.8881	0.6840	0.8638	-1.0134	0.0415	0.002789
M016	0.1499	0.0223	0.7959	0.6452	1.0219	-1.0139	0.9434	0.002734
M017	0.1206	0.0215	0.7332	0.7370	1.0377	-0.9472	-0.9897	0.000168
M018	0.1544	0.0217	0.7982	0.6489	0.9026	-0.7091	0.6409	0.006419
M019	0.1256	0.0222	0.8547	0.8251	1.0265	-0.9813	-0.3393	0.004673
M020	0.1514	0.0225	0.7561	0.6827	0.9913	-1.0101	-0.7778	0.009777
M021	0.1472	0.0221	0.8475	0.6583	0.9613	-0.9111	-1.5470	0.000672
M022	0.1384	0.0231	0.8328	0.8234	0.9739	-0.9312	0.5939	0.008239
M023	0.1334	0.0225	0.7113	0.7352	0.9851	-0.8971	0.3247	0.003733
M024	0.1508	0.0229	0.7002	0.7935	0.8685	-1.0322	1.0220	0.003063
M025	0.1203	0.0230	0.8773	0.6240	0.9279	-0.8282	-1.5005	0.007024
M026	0.1224	0.0222	0.7785	0.7377	0.8618	-0.7463	0.3647	0.002082
M027	0.1229	0.0234	0.8976	0.8222	0.9698	-1.0853	0.8683	0.002902
M028	0.1229	0.0231	0.8257	0.6109	0.9885	-0.9311	0.8693	0.009086
M029	0.1274	0.0228	0.8999	0.8259	0.8505	-0.7805	0.5688	0.006588
M030	0.1404	0.0222	0.8232	0.6852	0.8679	-0.8594	-0.4637	0.008126
M031	0.1386	0.0229	0.7693	0.6684	1.0478	-1.2670	1.2536	0.006502
M032	0.1369	0.0215	0.8812	0.8019	1.0005	-0.7282	-1.6927	0.000905
M033	0.1286	0.0230	0.7005	0.6752	1.0492	-0.7119	-0.8184	0.007968
M034	0.1354	0.0216	0.7018	0.5970	0.8791	-0.8252	-1.1148	0.003620
M035	0.1359	0.0228	0.8210	0.6815	0.9872	-1.1642	-0.1801	0.004440
M036	0.1390	0.0220	0.8631	0.6477	0.8985	-0.8632	0.8285	0.001082
M037	0.1539	0.0224	0.8529	0.5965	0.8943	-1.2542	0.8868	0.003549
M038	0.1467	0.0227	0.7325	0.5902	0.9562	-0.8019	0.3628	0.007077
M039	0.1209	0.0223	0.8311	0.7327	0.9914	-0.7731	0.4896	0.001973
M040	0.1466	0.0229	0.8044	0.8015	0.9376	-0.9561	-0.0359	0.000893
M041	0.1274	0.0218	0.7386	0.6752	0.9707	-1.2903	1.0416	0.003045
M042	0.1244	0.0230	0.7731	0.6159	0.8588	-0.9043	0.8095	0.009194
M043	0.1508	0.0233	0.7130	0.8259	0.9676	-1.0551	0.3926	0.009998
M044	0.1389	0.0224	0.8758	0.6801	0.9976	-0.8861	-0.1804	0.008018
M045	0.1401	0.0228	0.7167	0.6734	0.9182	-1.2402	1.2155	0.006610
M046	0.1381	0.0224	0.7349	0.8277	1.0202	-1.1052	-1.0533	0.006433
M047	0.1411	0.0216	0.7770	0.7939	0.9315	-0.8042	0.7010	0.003075
M048	0.1374	0.0226	0.7683	0.6865	0.8576	-1.1374	-0.5106	0.004548
M049	0.1339	0.0217	0.7544	0.5920	1.0088	-0.8520	-0.7438	0.003512
M050	0.1337	0.0233	0.8092	0.7309	0.9389	-0.7230	0.6920	0.005539
M051	0.1514	0.0222	0.7433	0.6502	0.8922	-0.9871	0.8803	0.002842
M052	0.1483	0.0230	0.7012	0.6840	0.9809	-1.2881	-0.9045	0.006199
M053	0.1226	0.0226	0.7998	0.8265	1.0161	-1.2593	-0.3858	0.001096
M054	0.1345	0.0216	0.8505	0.6251	0.8535	-1.2526	0.5703	0.007438
M055	0.1298	0.0222	0.7504	0.8170	0.9574	-1.0573	1.0338	0.006843
M056	0.1529	0.0219	0.8508	0.6438	1.0322	-0.7359	0.6931	0.006311
M057	0.1419	0.0234	0.7937	0.7415	1.0016	-0.7710	-1.5964	0.005128

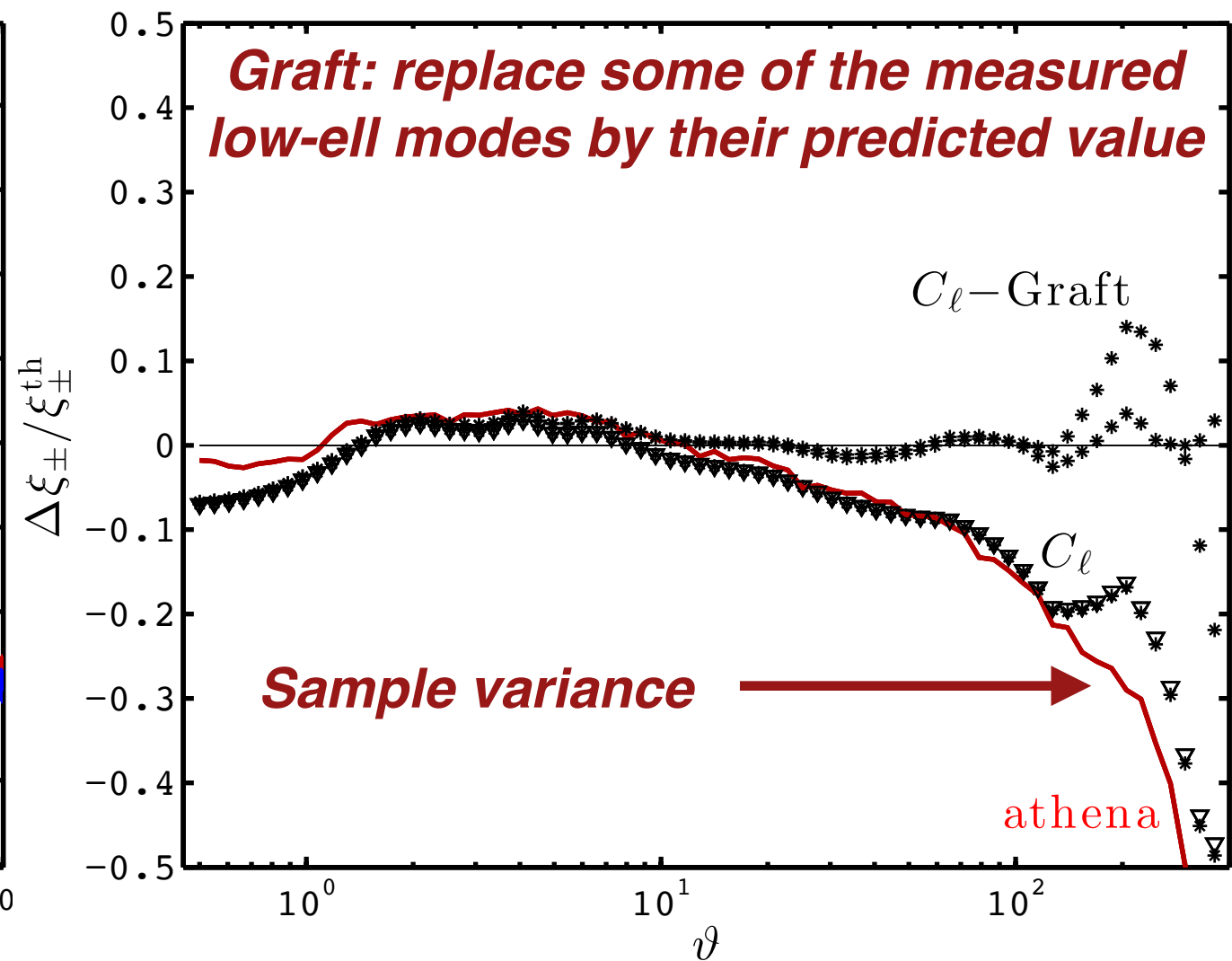
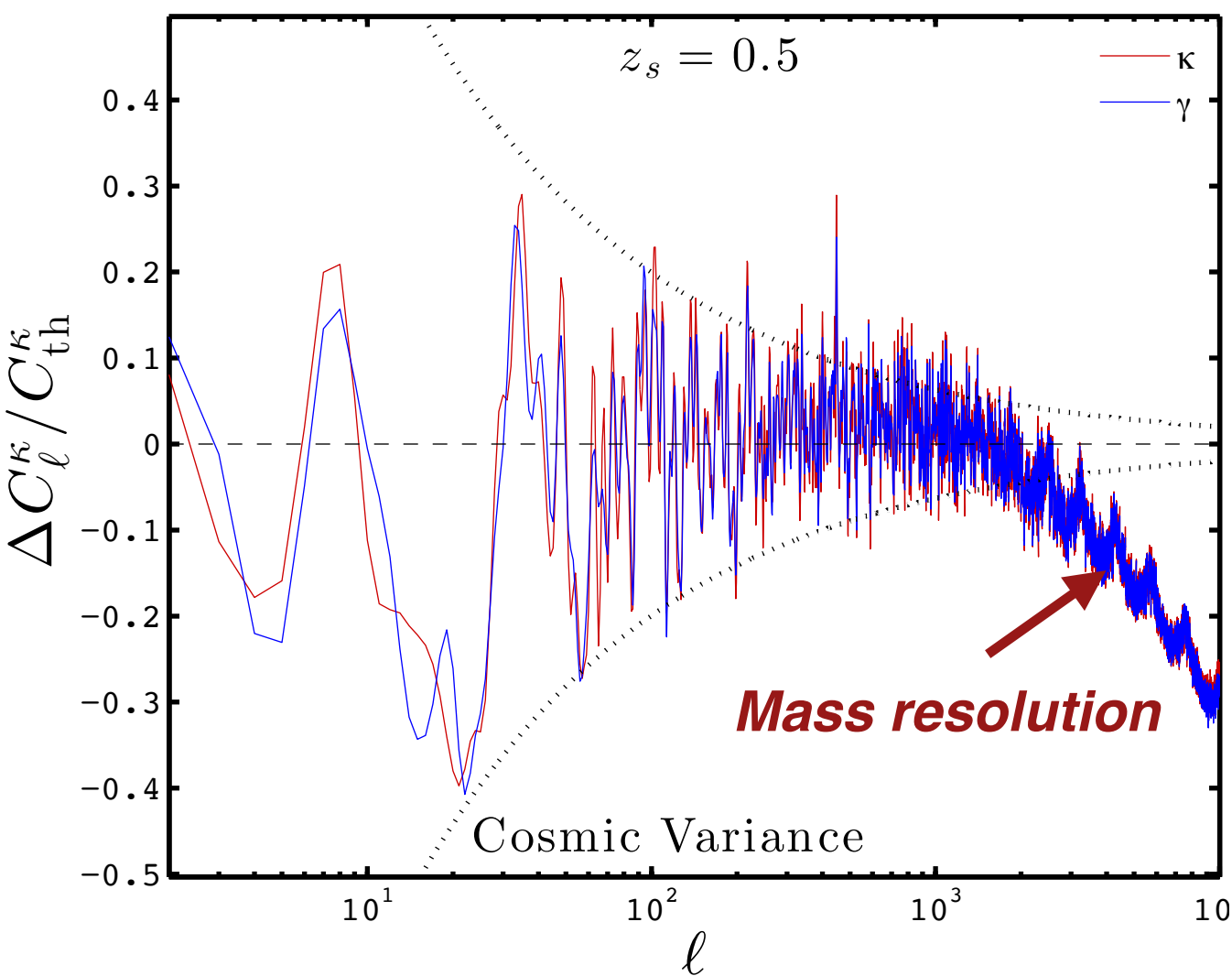
- ArXiv: 1705.03388
- Particle mass =  $\sim 1\text{E}10 \text{ M}_\text{sun}$
- 57 snapshots in the range  $0 < z < 3$
- $L_\text{box} = 2.1 \text{ Gpc}$
- $n_\text{p} = 3200^3$
- Cosmology: M000

# Ray Tracing

- Mira-Titan produces only one Line of Sight.
- Full octant, store mass sheet in Healpix map (Nside = 8192)
- Extract kappa and gamma maps at the 57 snapshots
- Populate Octant with 26 gal/arcmin\*\*2
- Spread these uniformly in 10 tomographic bins
- Sampled galaxies are assigned spec\_z and random positions on the octant
- Shear is interpolated at the (sub)pixel location and at spec\_z from enclosing planes
- Catalogue stores in fits format



# 2 point correlation functions



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