

File	Length of chain	Echo state to a screen	Log parameters	BEAST RunTime	Taxa	Sites section	
MERsCOV-Camel_217	50000000	25000	25000	9h	Strains of 2013	GTR+Gamma+Invariants sites	
MERsCOV2-Camel_217	50000000	250000	250000	2h	Strains of 2013	GTR+Gamma+Invariants sites	
MERsCOV3-Camel_217	400000	400	400	1m	Strains of 2013	GTR+Gamma+Invariants sites	No result
MERsCOV4-Camel_217	10000000	1000	1000	3h	Strains of 2013	GTR+Gamma+Invariants sites	

File	Length of chain	Echo state to a screen	Log parameters	BEAST RunTime	Taxa	Sites section	Tree Prior	Clock	Note
MERsCOV-Camel_9_217	50000000	25000	25000	21h 26m 24s	Strains of 2013	GTR+Gamma+Inv variants sites	coalescent Bayesian SkyGrid	lognormal Uncorrelated strict clock-	
MERsCOV-Camel_9_217.v2	150000000	75000	75000	4 days (not completed). Because ESS is very low for Posterior, Prior and likelihood.	Strains of 2013	GTR+Gamma+Inv variants sites	coalescent Bayesian SkyGrid	lognormal Uncorrelated strict clock-	
MERsCOV-Camel_9_217.v3	80000000	35000	35000	1d 1h 55m 12s	Strains of 2013	GTR+Gamma+Inv variants sites	coalescent Bayesian SkyGrid	lognormal Uncorrelated strict clock-	
MERsCOV-Camel_9_217.v4	100000000	35000	35000	1 day (not completed because ESS is very low for Posterior, Prior and likelihood.	Strains of 2013.	GTR+Gamma+Inv variants sites	coalescent Bayesian SkyGrid	lognormal Uncorrelated strict clock-	
MERsCOV-Camel_9_217.v5	70000000	35000	35000	19h 31m 48s	Strains of 2013.	GTR+Gamma+Inv variants sites	coalescent Bayesian SkyGrid	lognormal Uncorrelated strict clock-	
MERsCOV-Camel_9_217.v6	60000000	35000	35000	19h 12m 36s	Strains of 2013.	GTR+Gamma+Inv variants sites	coalescent Bayesian SkyGrid	lognormal Uncorrelated strict clock-	
MERsCOV-Camel_9_217.v6.1	60000000	35000	35000	19h 12m 36s	Strains of 2013.	GTR+Gamma+Inv variants sites	coalescent Bayesian SkyGrid	lognormal Uncorrelated strict clock-	duplicated XML file of above experiment(MERsCOV-Camel_9_217.v6)
MERsCOV-Camel_9_217.v7	60000000	35000	35000	17h 52m 48s	Strains of 2013.	HKY+Gamma+Inv variants sites	coalescent Bayesian SkyGrid	lognormal Uncorrelated strict clock-	ESS result is the worst.
MERsCOV-Camel_9_217.v8	60000000	35000	35000	18h 40m 48s	None	GTR+Gamma+Inv variants sites	coalescent Bayesian SkyGrid	lognormal Uncorrelated strict clock-	ESS is very very low
MERsCOV-Camel_9_217.v9	90000000	25000	25000	1d 4h 4m 48s	Strains of 2013.	GTR+Gamma+Inv variants sites	coalescent Bayesian SkyGrid	lognormal Uncorrelated strict clock-	ESS improved . Likelihood ESS is 174 but priors and posterior range between 47-50
MERsCOV-Camel_9_217.v10	100000000	25000	25000	1d 5h 31m 12s	Strains of 2013.	GTR+Gamma+Inv variants sites	Constant-size coalescent tree	lognormal Uncorrelated strict clock-	ESS range from 30-65
MERsCOV-Camel_9_217.v11	100000000	25000	25000	21h 4m 12s	Strains of 2013.	GTR+Gamma+Inv variants sites	Constant: Exponential Growth	lognormal Uncorrelated strict clock-	very poor ESS. May be try again later. I repeat it again.
MERsCOV-Camel_9_217.v12	100000000	25000	25000		Strains of 2013.	GTR+Gamma+Inv variants sites	Constant: Logistic Growth	lognormal Uncorrelated strict clock-	Not work yet
MERsCOV-Camel_9_217.v13	100000000	25000	25000		Strains of 2013.	GTR+Gamma+Inv variants sites	Constant: Expansion Growth	lognormal Uncorrelated strict clock-	Not work yet.
MERsCOV-Camel_9_217.v14	100000000	25000	25000	1d 8h 9m 36s	Strains of 2013.	GTR+Gamma+Inv variants sites	coalescent:GMRF Bayesian SkyGrid	lognormal Uncorrelated strict clock-	Posterior:100. Prior:170. Likelihood:19
MERsCOV-Camel_9_217.v16	100000000	25000	25000	1d 6h 43m 12s	Strains of 2013.	GTR+Gamma+Inv variants sites	Bayesian Skyline	lognormal Uncorrelated strict clock-	
MERsCOV-Camel_9_217.v15	100000000	25000	25000	1d 7h 26m 24s	Strains of 2013.	GTR+Gamma+Inv variants sites	Extended Bayesian Skyline Plot	lognormal Uncorrelated strict clock-	Posterior:101. Prior:101. Likelihood:9
MERsCOV-Camel_9_217.v17	100000000	25000	25000	0	Strains of 2013.	GTR+Gamma+Inv variants sites	Birth-Death with Serial Samples].	lognormal Uncorrelated strict clock-	Not running. No idea why.
MERsCOV-Camel_9_217.v18	100000000	25000	25000	1d 1h 26m 24s	Strains of 2013.	GTR+Gamma	coalescent:GMRF Bayesian SkyGrid	lognormal Uncorrelated strict clock-	It's really worse result.
MERsCOV-Camel_9_217.v19	120000000	25000	25000	1d 12h 57m 36s	Strains of 2013.	GTR+Gamma+Inv variants sites	coalescent:GMRF Bayesian SkyGrid	lognormal Uncorrelated strict clock-	Posterior:97. Prior:110. Likelihood:7
MERsCOV-Camel_9_217.v20	105000000	25000	25000	Roughly 3 days on the cluster. The cluster should be fixed.	Strains of 2013.	GTR+Gamma+Inv variants sites	coalescent:GMRF Bayesian SkyGrid	lognormal Uncorrelated strict clock-	Without scale parameters in Operator tab.
MERsCOV-Camel_9_217.v21	110000000	25000	25000	Roughly 3 days on the cluster. The cluster should be fixed.	Strains of 2013.	GTR+Gamma+Inv variants sites	coalescent:GMRF Bayesian SkyGrid	lognormal Uncorrelated strict clock-	Without scale parameters in Operator tab.
MERsCOV-Camel_9_217.v22	115000000	25000	25000	Roughly 3 days on the cluster. The cluster should be fixed.	Strains of 2013.	GTR+Gamma+Inv variants sites	coalescent:GMRF Bayesian SkyGrid	lognormal Uncorrelated strict clock-	Without scale parameters in Operator tab.
MERsCOV-Camel_9_217.v23	90000000	25000	25000	Roughly 3 days on the cluster. The cluster should be fixed.	Strains of 2013.	GTR+Gamma+Inv variants sites	coalescent:GMRF Bayesian SkyGrid	lognormal Uncorrelated strict clock-	Without scale parameters in Operator tab.

MERsCOV-Camel_9_217.v24	95000000	25000	25000	Roughly 3 days on the cluster. The cluster should be fixed.	Strains of 2013.	GTR+Gamma+Inv variants sites	coalescent:GMRFBayesian SkyGrid	lognormal Uncorrelated strict clock-	Without scale parameters in Operator tab.
MERsCOV-Camel_9_217.v25	80000000	25000	25000	Roughly 3 days on the cluster. The cluster should be fixed.	Strains of 2013.	GTR+Gamma+Inv variants sites	coalescent:GMRFBayesian SkyGrid	lognormal Uncorrelated strict clock-	Without scale parameters in Operator tab.
MERsCOV-Camel_9_217.v26	100000000	25000	25000	Roughly 3 days on the cluster. The cluster should be fixed.	Strains of 2013	GTR+Gamma	Coalescent-content size	Strict clock	Without scale parameters in Operator tab.
MERsCOV-Camel_9_217.v27	80000000	25000	25000	Roughly 3 days on the cluster. The cluster should be fixed.	Strains of 2013.	GTR+Gamma+Inv variants sites	coalescent:GMRFBayesian SkyGrid	Strict clock	Without scale parameters in Operator tab.
MERsCOV-Camel_9_217.v28	100000000	25000	25000	1d 23h 45m 36s	Strains of 2013	GTR+Gamma+Inv variants sites	coalescent:GMRFBayesian SkyGrid	lognormal Uncorrelated strict clock-	all parameters in Operator tab. I used 20 threads. Posterior:76. Prior:195 Likelihood:9
MERsCOV-Camel_9_217.v29	100000000	25000	25000	1d 10h 4m 48s	All strains	GTR+Gamma+Inv variants sites	coalescent:GMRFBayesian SkyGrid	lognormal Uncorrelated strict clock-	all parameters in Operator tab. I used 20 threads. Bad result.
MERsCOV-Camel_9_217.v30	120000000	25000	25000		Strains of 2013.	GTR+Gamma+Inv variants sites	Extended Bayesian Skyline Plot	lognormal Uncorrelated strict clock-	Because not proper settings in BEAUTI in Taxa section.
MERsCOV-Camel_9_217.v31	100000000	25000	25000	1d 4h 19m 12s	All strains	GTR+Gamma+Inv variants sites	Extended Bayesian Skyline Plot	lognormal Uncorrelated strict clock-	Bad result.
MERsCOV-Camel_9_217.v32	130000000	25000	25000	1w 4d 11h 45m	Strains of 2013	GTR+Gamma+Inv variants sites	coalescent:GMRFBayesian SkyGrid	lognormal Uncorrelated strict clock-	
MERsCOV-Camel_9_217.v33	140000000	25000	25000	1w 4d 20h 49m	Strains of 2013	GTR+Gamma+Inv variants sites	coalescent:GMRFBayesian SkyGrid	lognormal Uncorrelated strict clock-	
MERsCOV-Camel_9_217.v34	150000000	25000	25000	1w 5d 17h 29m	Strains of 2013	GTR+Gamma+Inv variants sites	coalescent:GMRFBayesian SkyGrid	lognormal Uncorrelated strict clock-	
MERsCOV-Camel_9_217.v35	160000000	25000	25000	1w 6d 0h 45m 1	Strains of 2013	GTR+Gamma+Inv variants sites	coalescent:GMRFBayesian SkyGrid	lognormal Uncorrelated strict clock-	Very good result.
MERsCOV-Camel_9_217.v36	170000000	25000	25000	1w 6d 0h 4m 13	Strains of 2013	GTR+Gamma+Inv variants sites	coalescent:GMRFBayesian SkyGrid	lognormal Uncorrelated strict clock-	
MERsCOV-Camel_9_217.v37	180000000	25000	25000	1w 6d 8h 11m 2	Strains of 2013	GTR+Gamma+Inv variants sites	coalescent:GMRFBayesian SkyGrid	lognormal Uncorrelated strict clock-	
MERsCOV-Camel_9_217.v38	190000000	25000	25000	1w 6d 11h 37m	Strains of 2013	GTR+Gamma+Inv variants sites	coalescent:GMRFBayesian SkyGrid	lognormal Uncorrelated strict clock-	
MERsCOV-Camel_9_217.v39	200000000	25000	25000	1w 6d 15h 31m	Strains of 2013	GTR+Gamma+Inv variants sites	coalescent:GMRFBayesian SkyGrid	lognormal Uncorrelated strict clock-	
MERsCOV-Camel_9_217.v40	210000000	25000	25000	1w 6d 16h 34m	Strains of 2013	GTR+Gamma+Inv variants sites	coalescent:GMRFBayesian SkyGrid	lognormal Uncorrelated strict clock-	Very good result.