

Full results for simulations:

1-5: asymmetry only

6-10: heterotachy only

11-15: asymmetry and heterotachy

16-20: asymmetry and heterotachy (uneven)

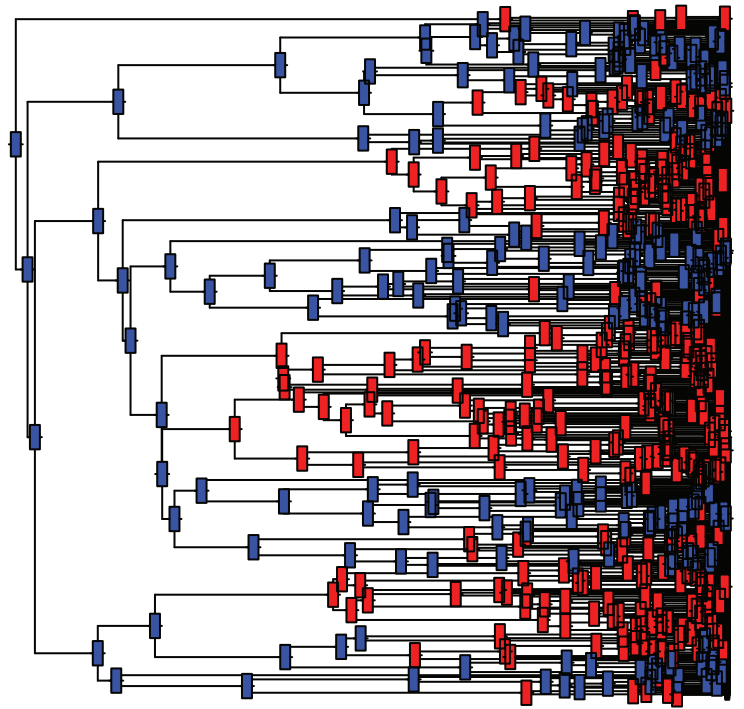
For each simulation, trees are shown:

- Simulated ancestral states
- ace Mk1 and Mk2 reconstructions
- BEAST strict and random local clock Mk1 and mk2 reconstructions

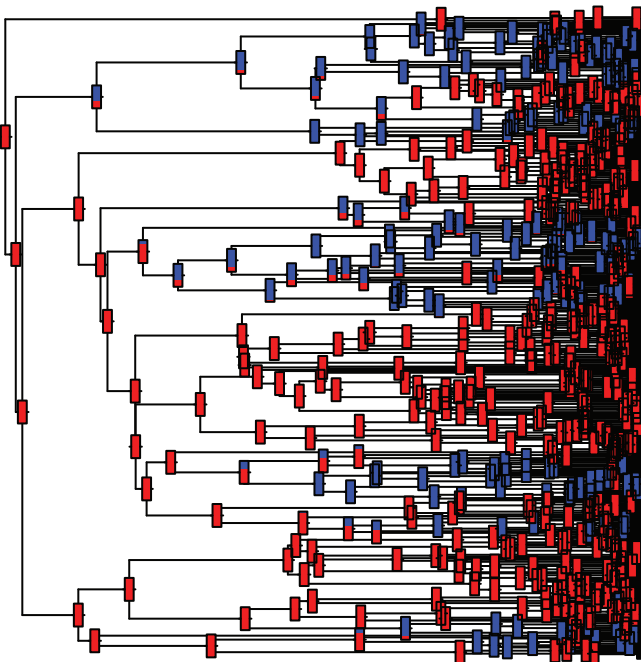
yellow star indicates rate shift on simulated tree where applicable (simulations 6-20)

Simulation

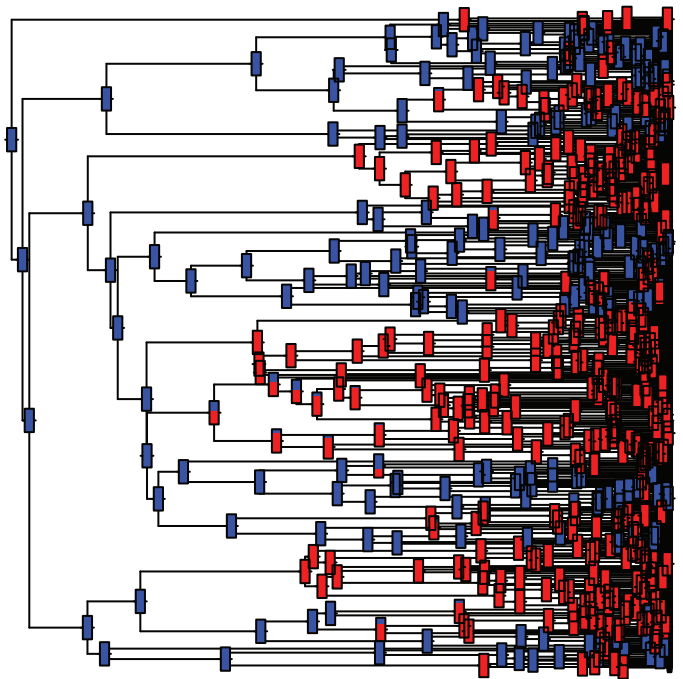
Simulation 1
Asymmetry only



ace Mk1

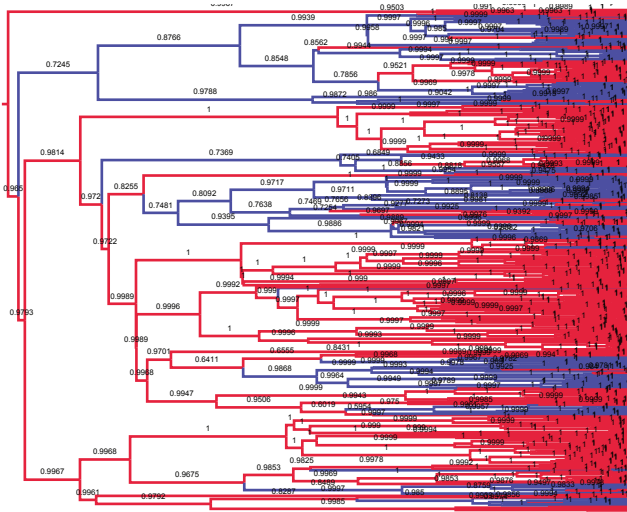


ace Mk2

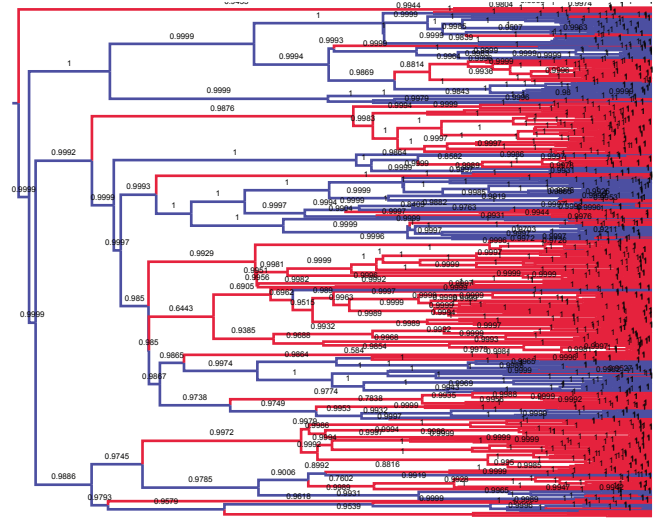


Simulation 1, BEAST reconstructions

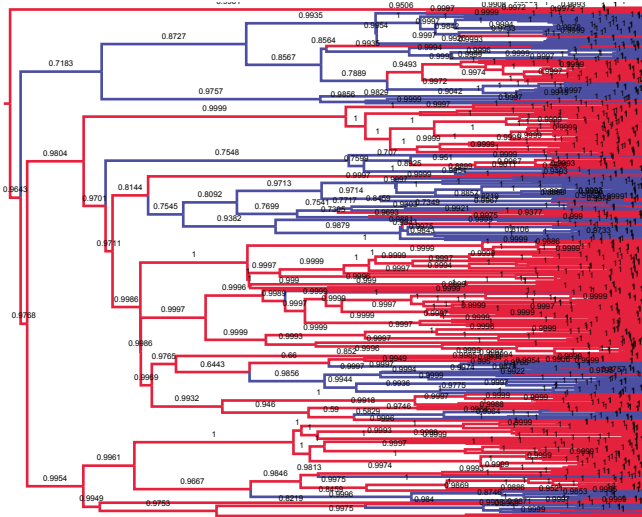
BEAST strict clock Mk1



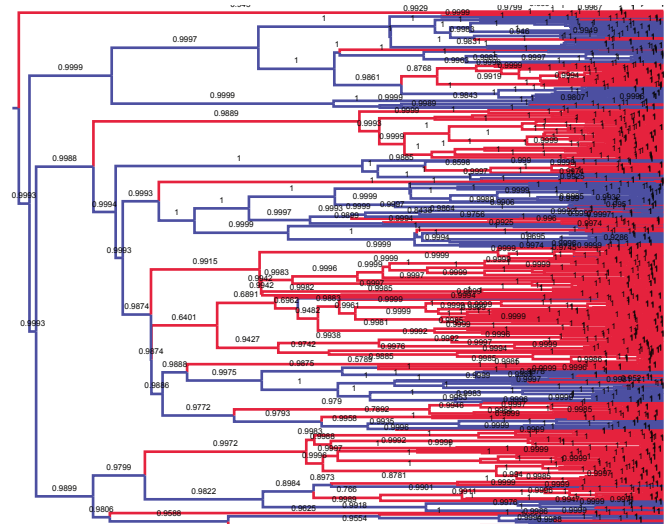
BEAST strict clock Mk2



BEAST Random local clock Mk1

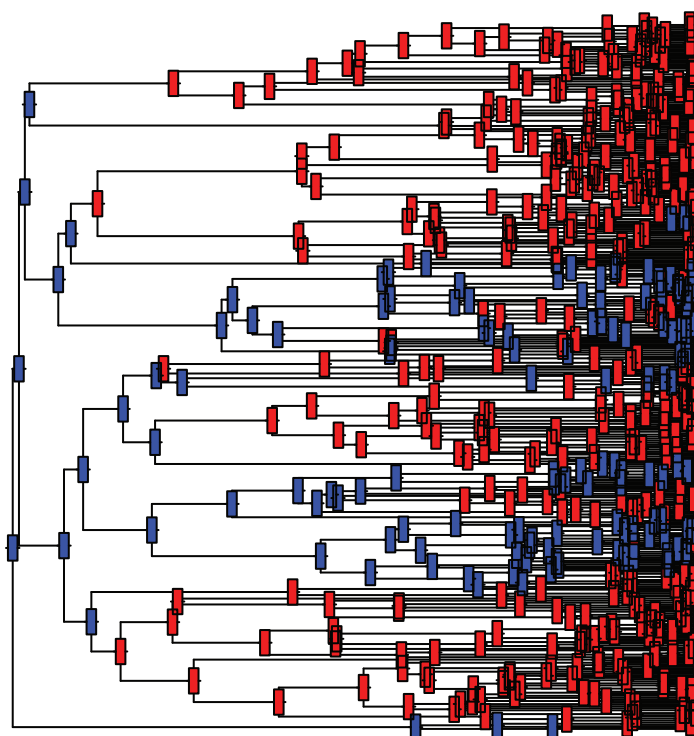


BEAST Random local clock Mk2

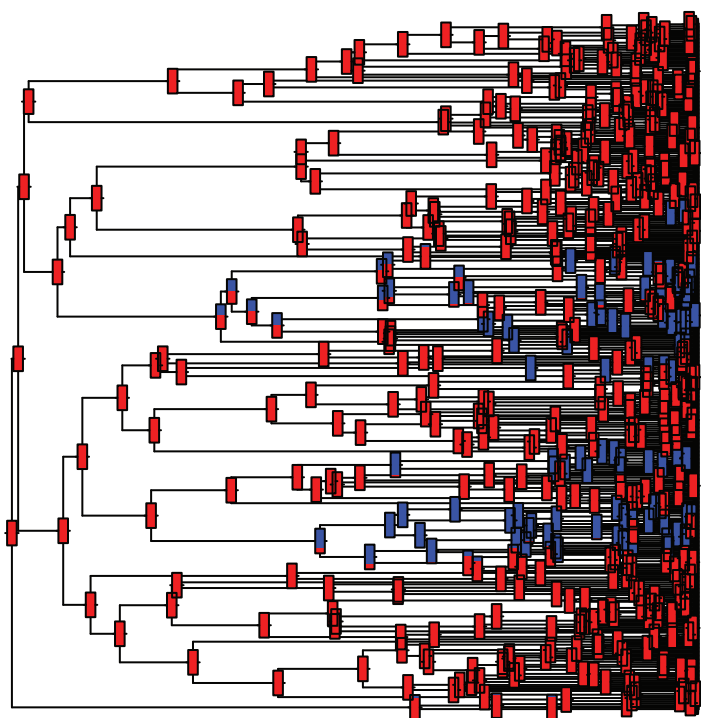


Simulation 2
asymmetry only

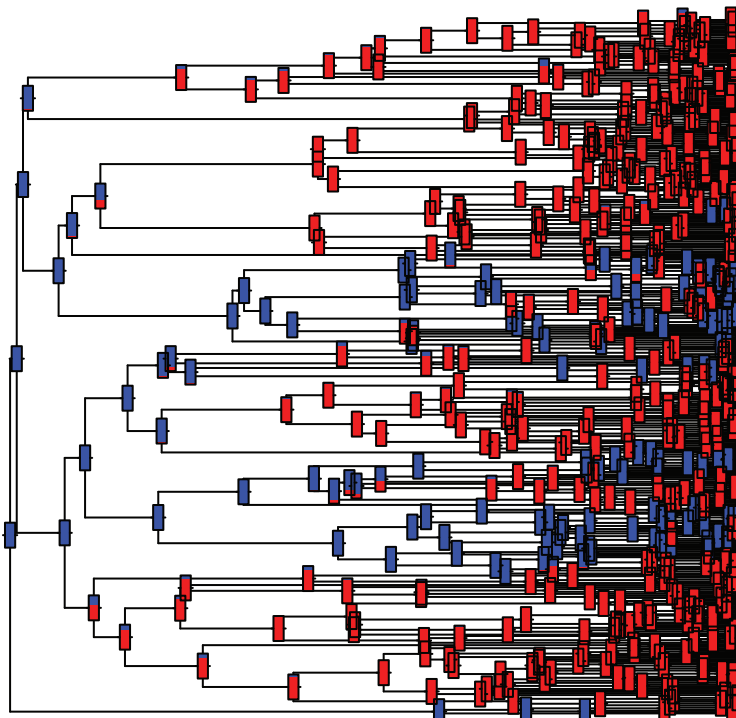
simulation



ace Mk1

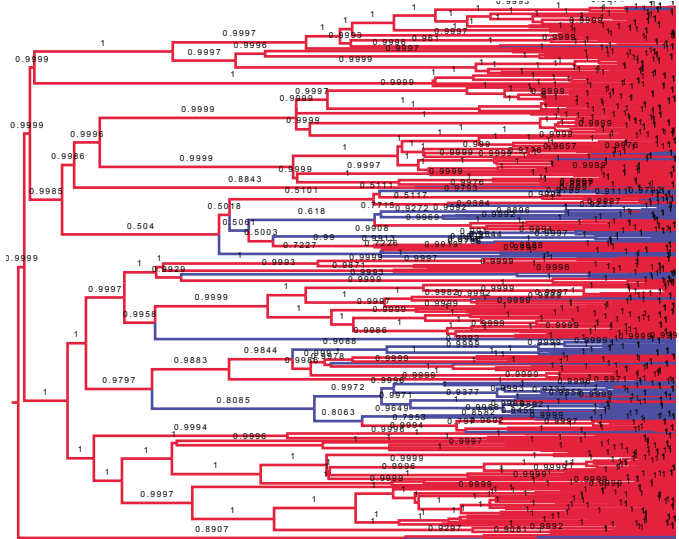


ace Mk2

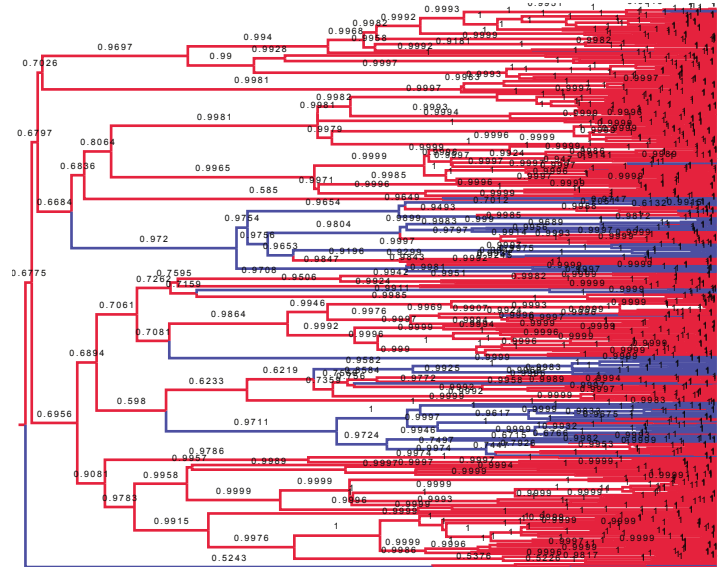


Simulation 2, BEAST reconstructions

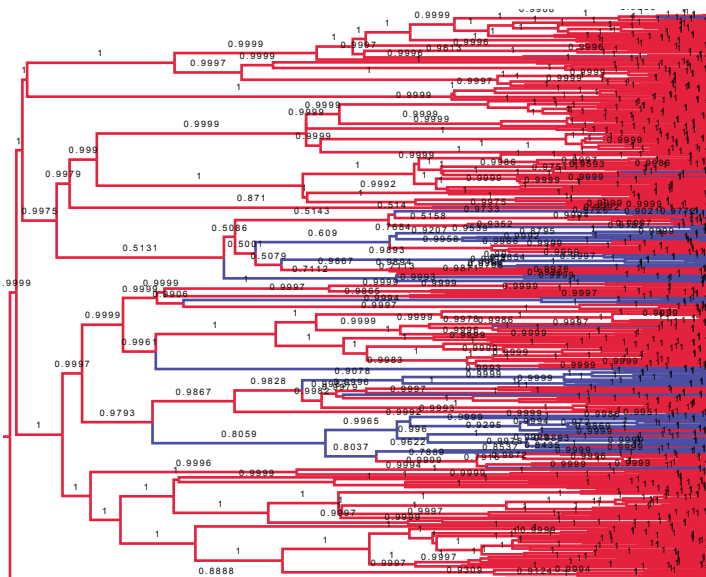
BEAST strict clock Mk1



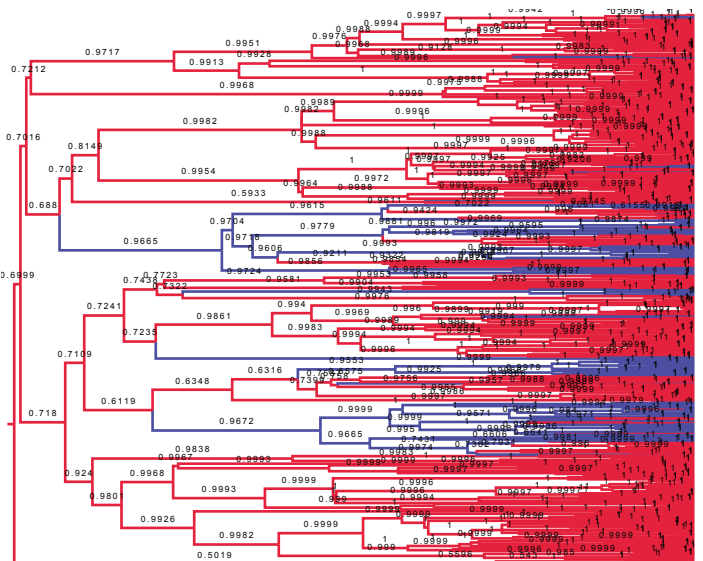
BEAST strict clock Mk2



BEAST Random local clock Mk1

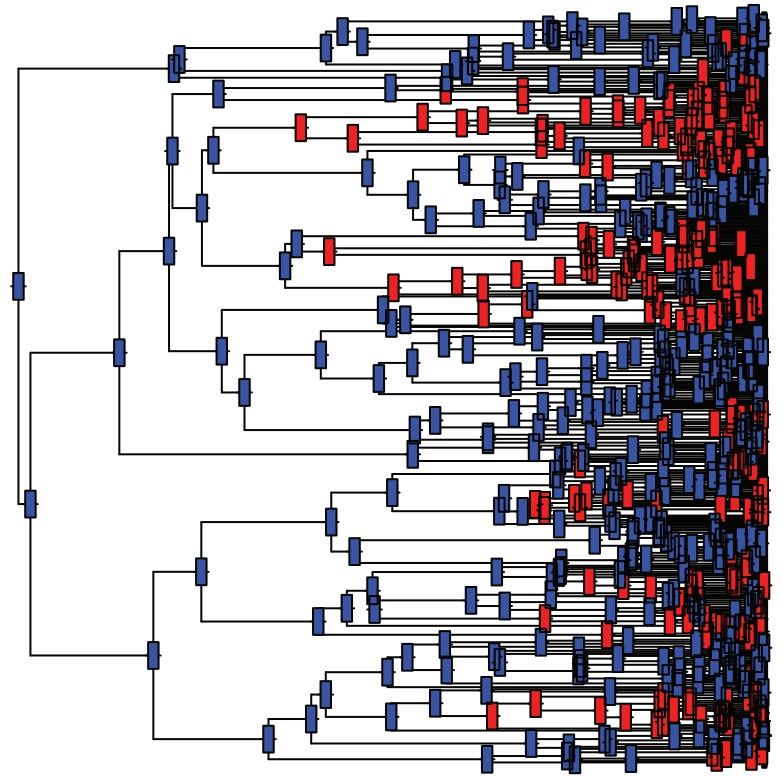


BEAST Random local clock Mk2

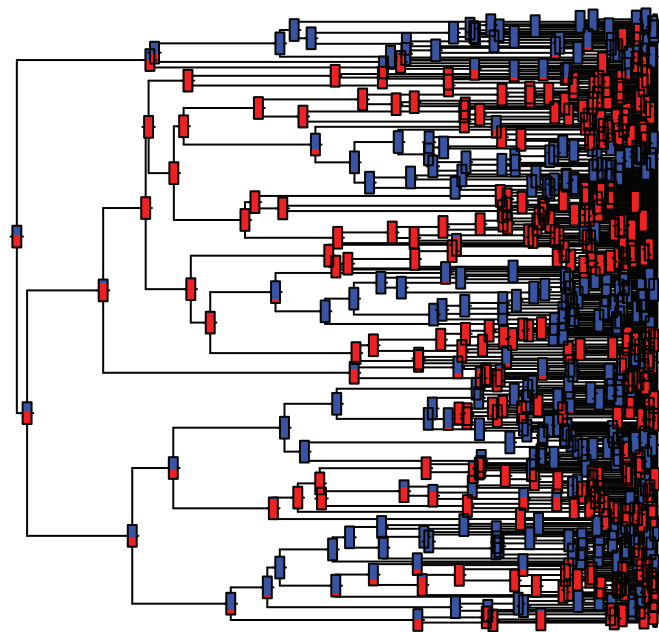


Simulation 3
asymmetry only

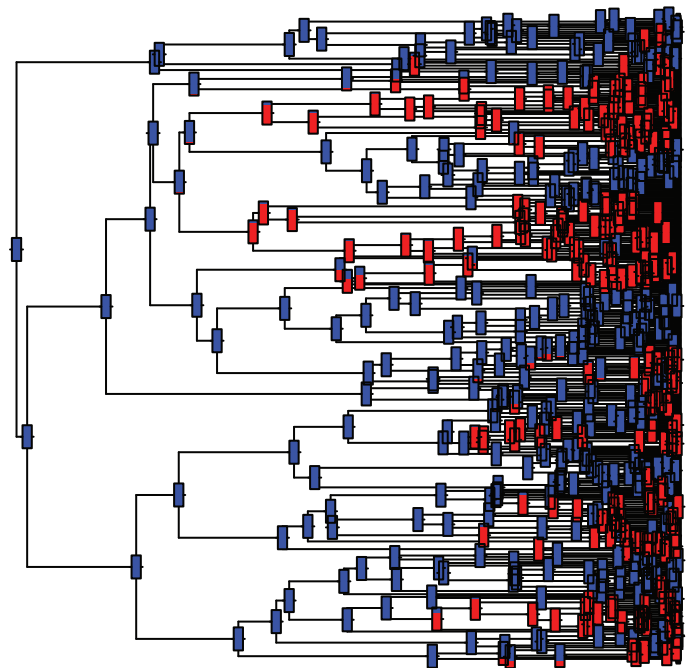
simulation



ace Mk1

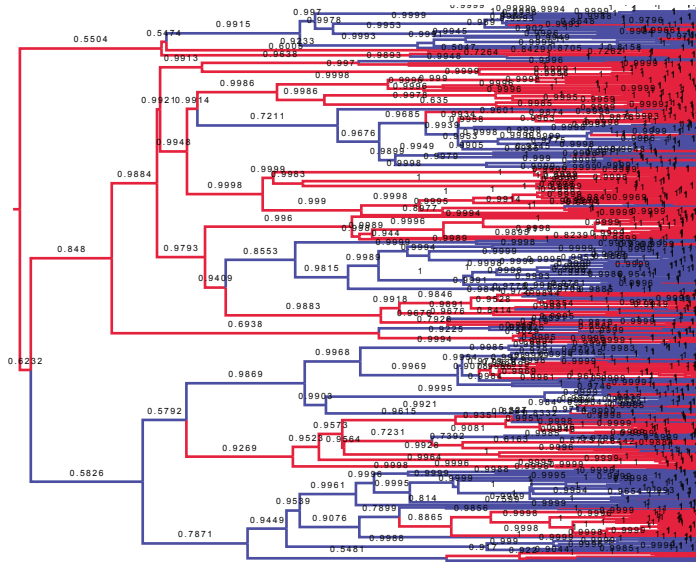


ace Mk2

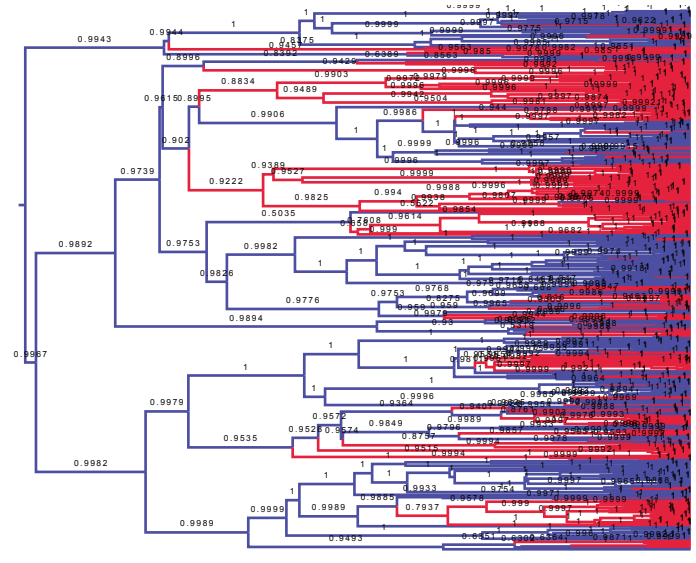


Simulation 3 Beast reconstructions

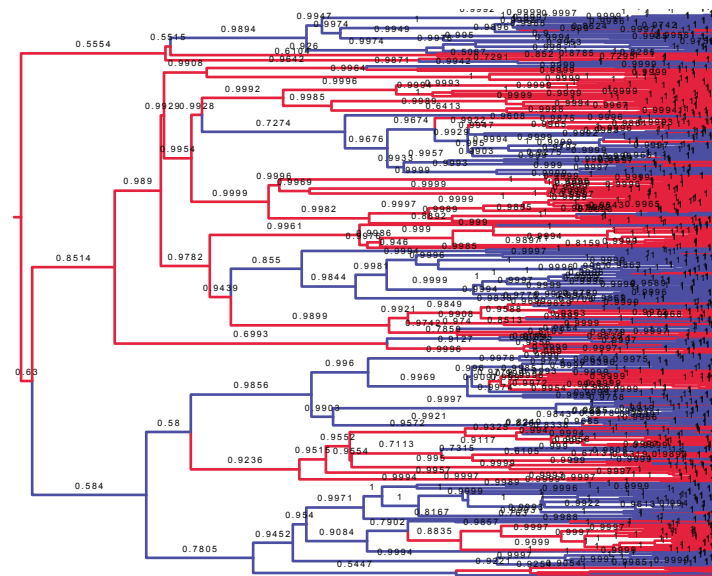
BEAST strict clock Mk1



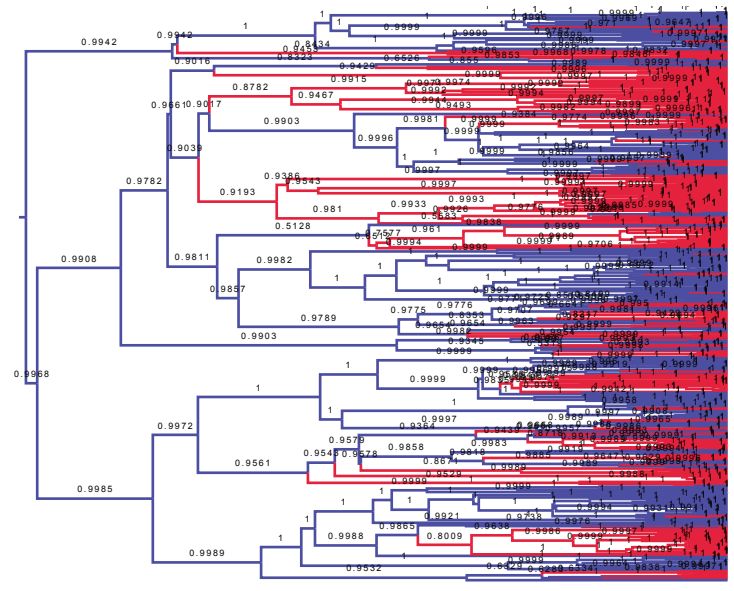
BEAST strict clock Mk2



BEAST random local clock Mk1

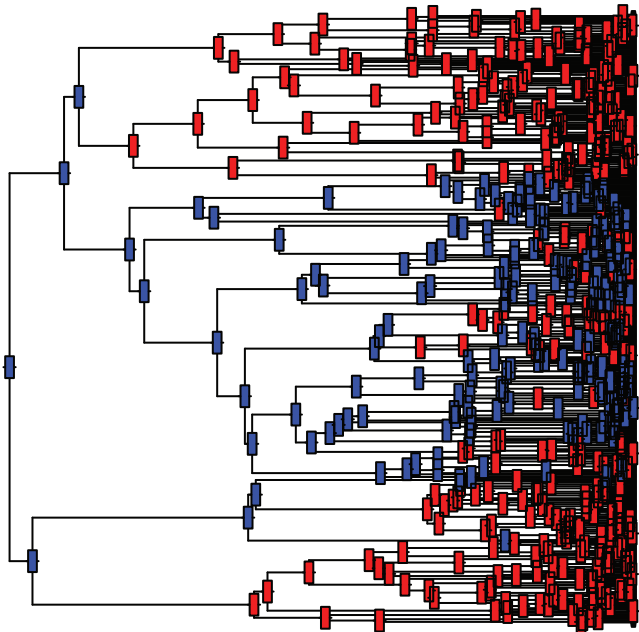


BEAST random local clock mk2

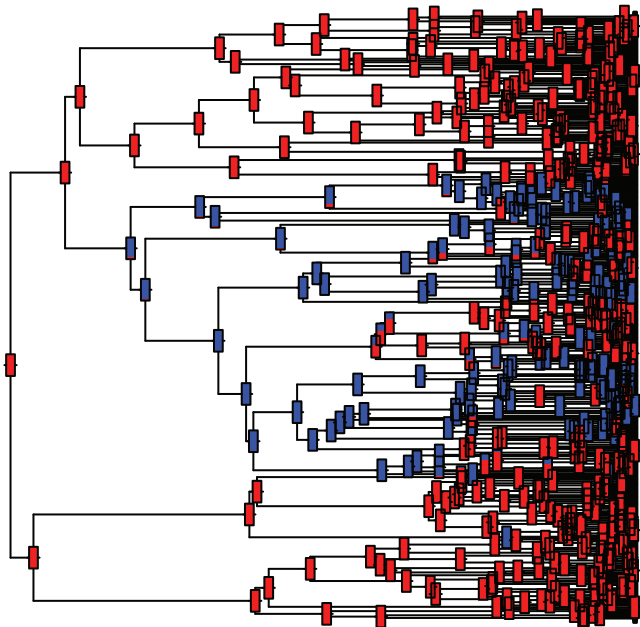


Simulation 4
asymmetry only

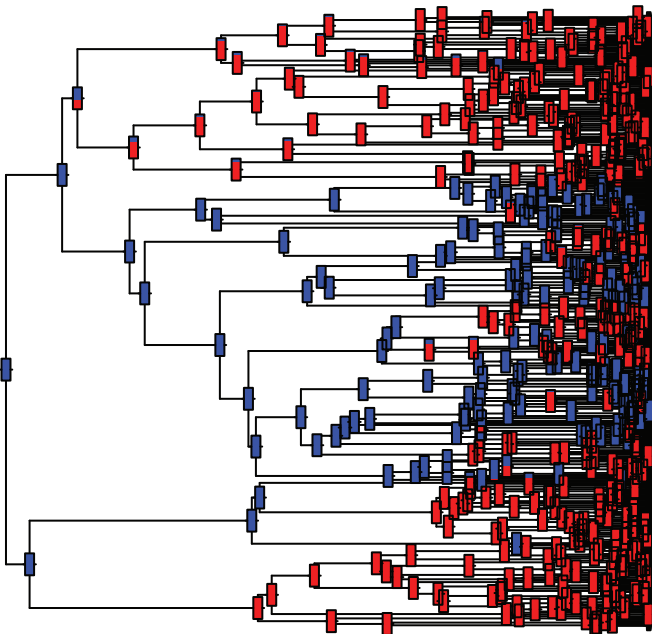
Simulation



ace Mk1

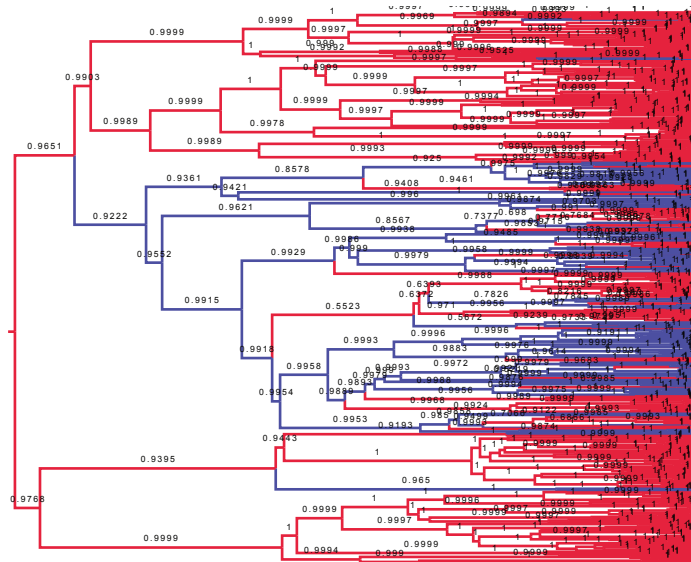


ace Mk2

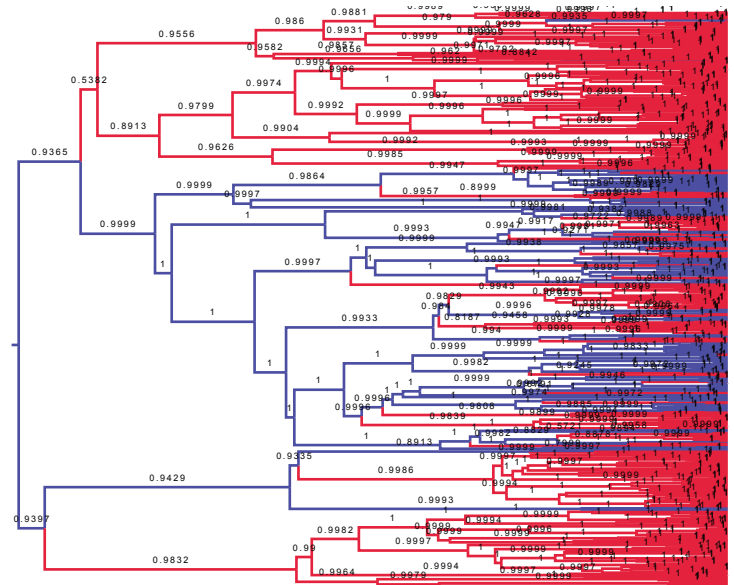


Simulation 4 BEAST reconstructions

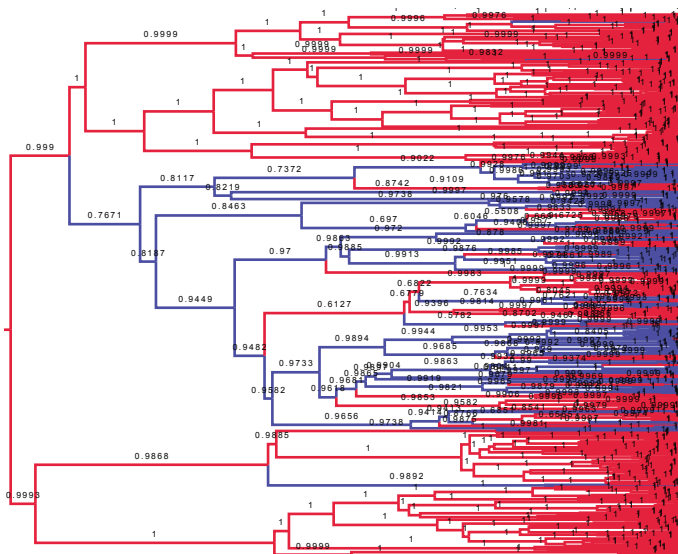
BEAST strict clock Mk1



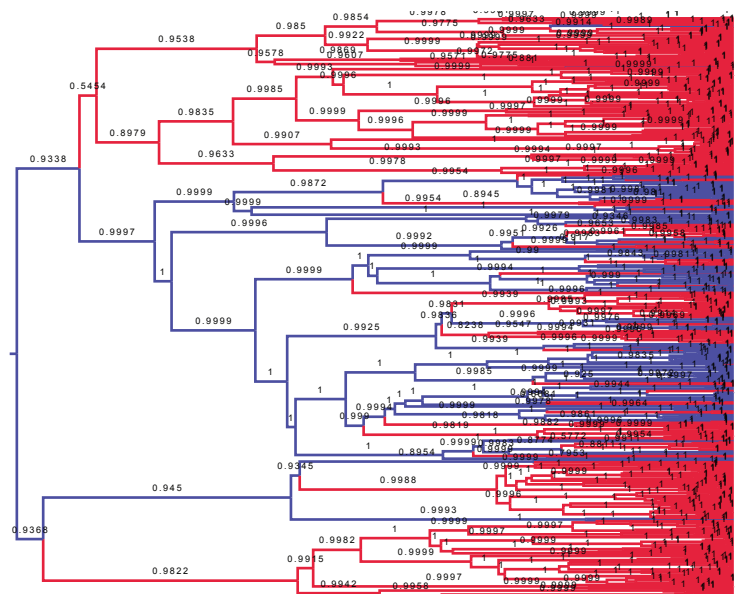
BEAST strict clock Mk2



BEAST random local clock Mk1

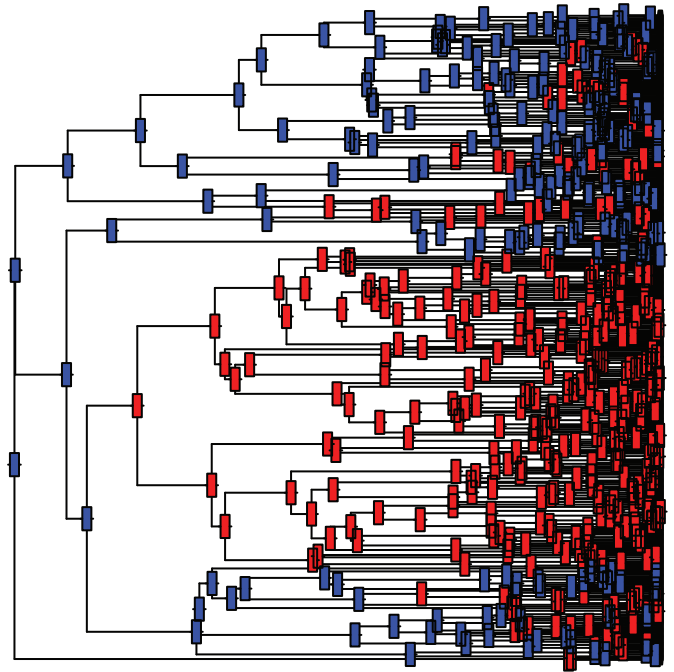


BEAST random local clock Mk2

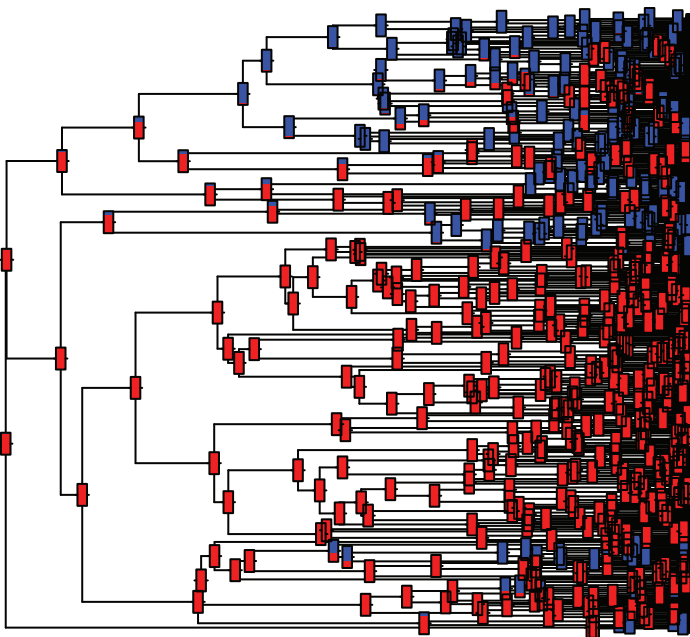


Simulation 5
asymmetry only

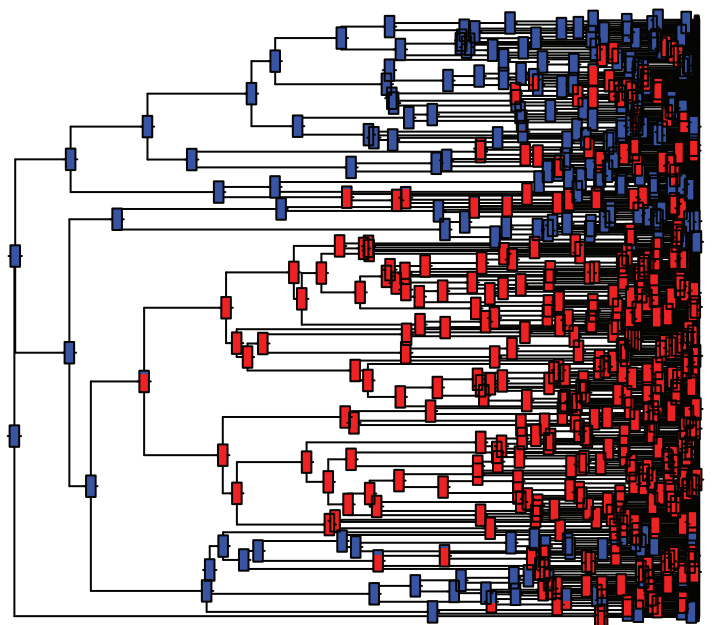
simulation

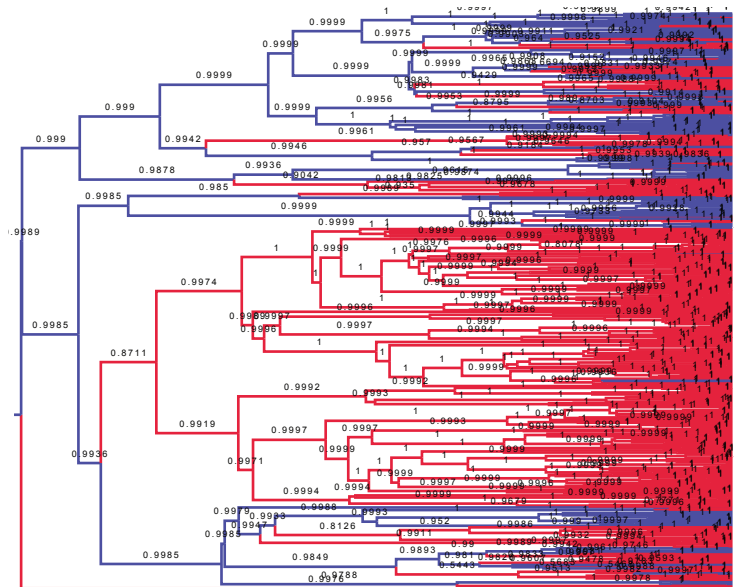


ace Mk1



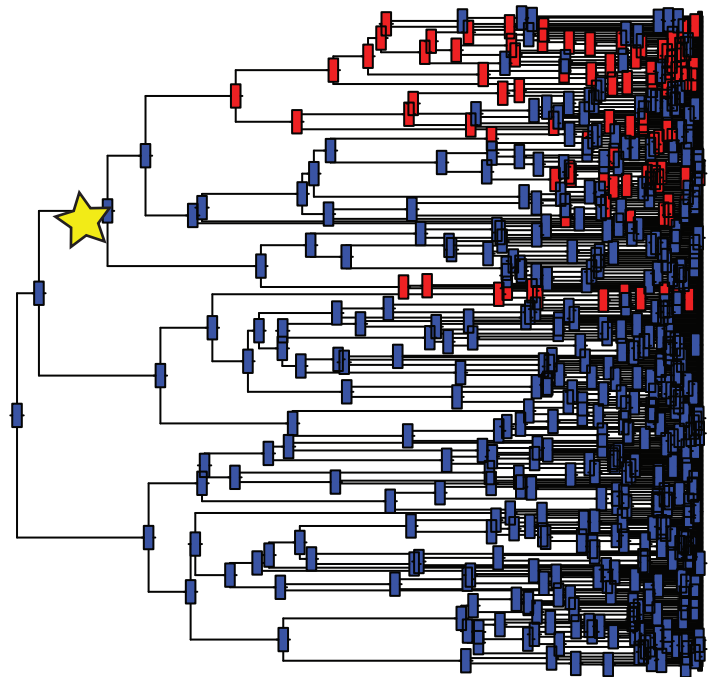
ace Mk2



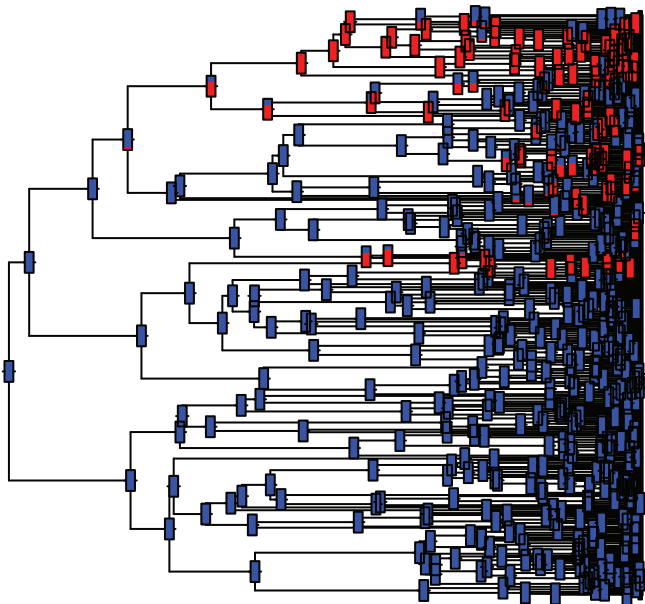


Simulation 6
hetrotachy only

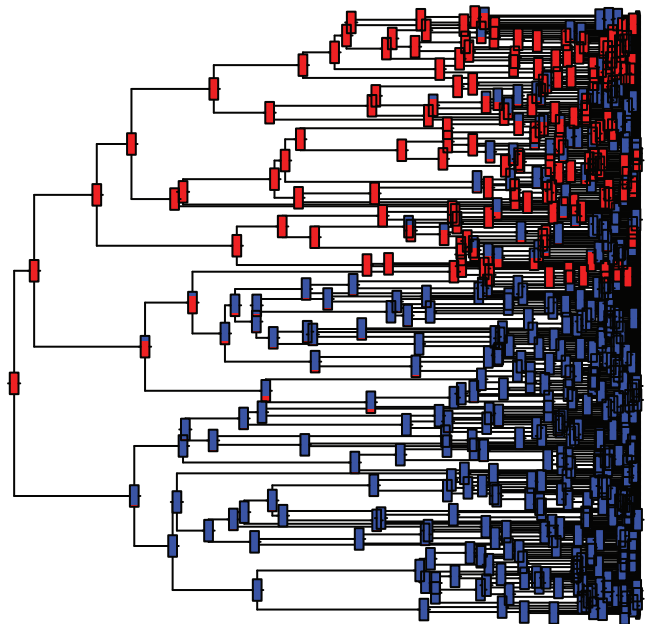
Simulation



ace Mk1

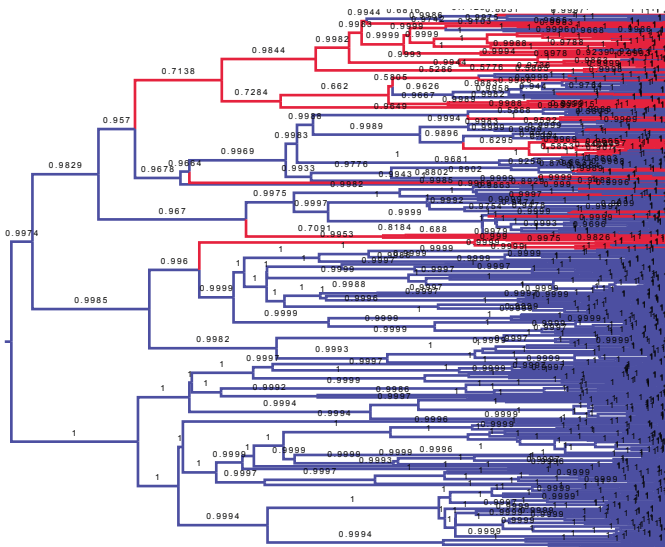


ace mk2

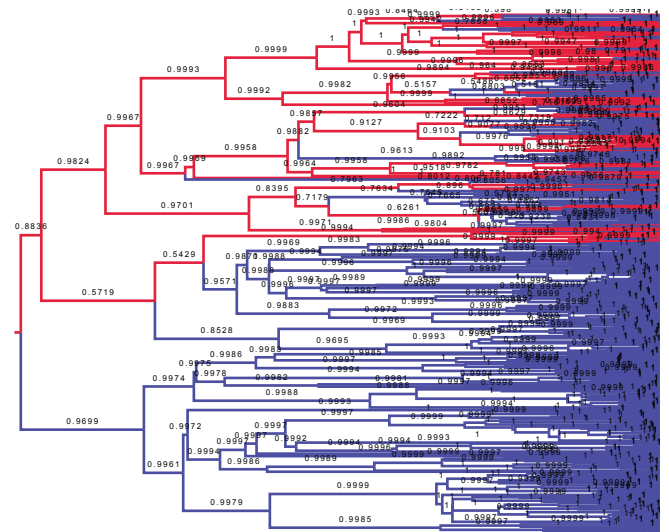


Simulation 6 BEAST reconstructions

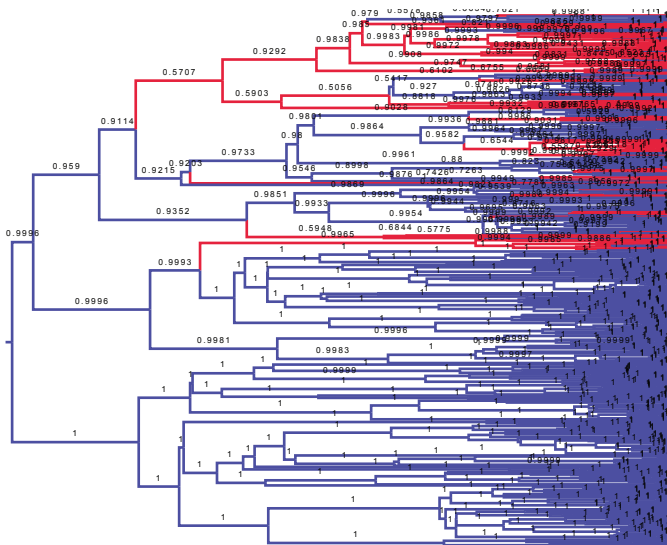
BEAST strict clock Mk1



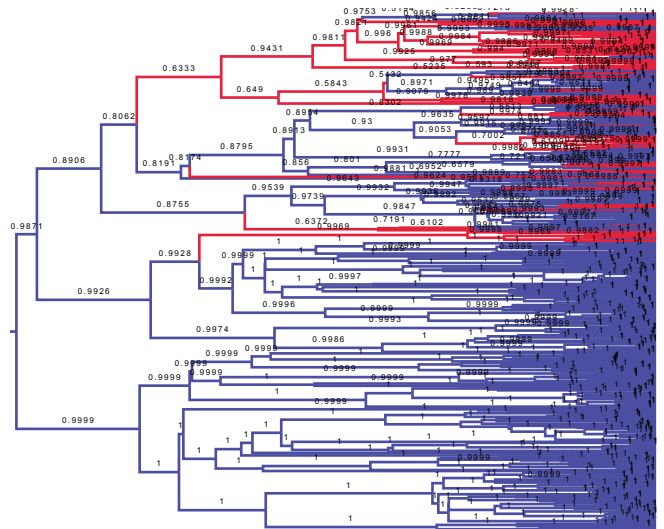
BEAST strict clock mk2



BEAST random local clock Mk1

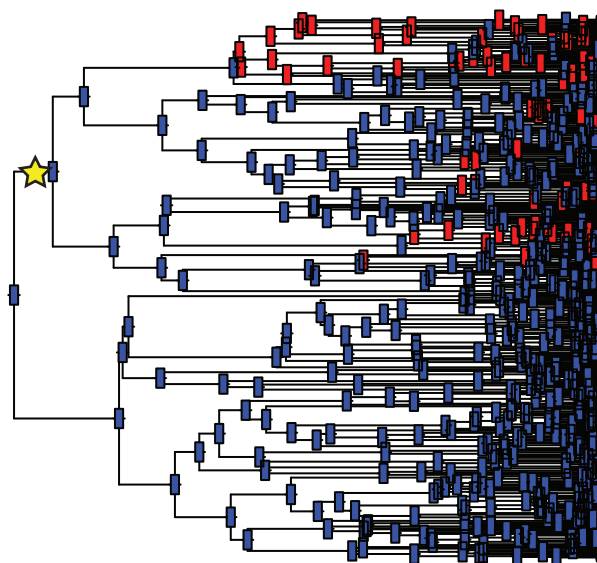


BEAST random local clock Mk2

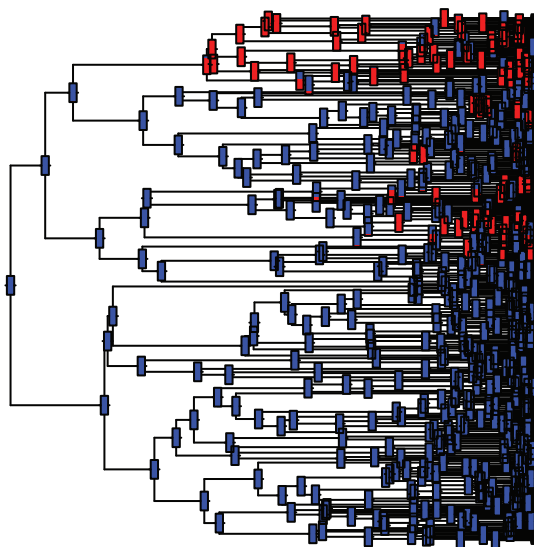


Simulation

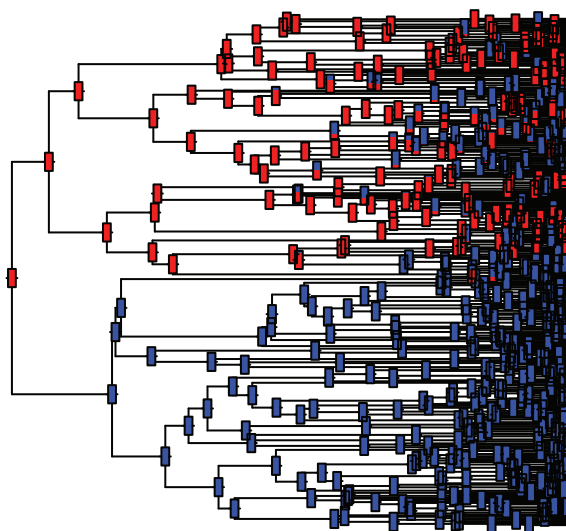
Simulation 7
heterotachy only



ace Mk1

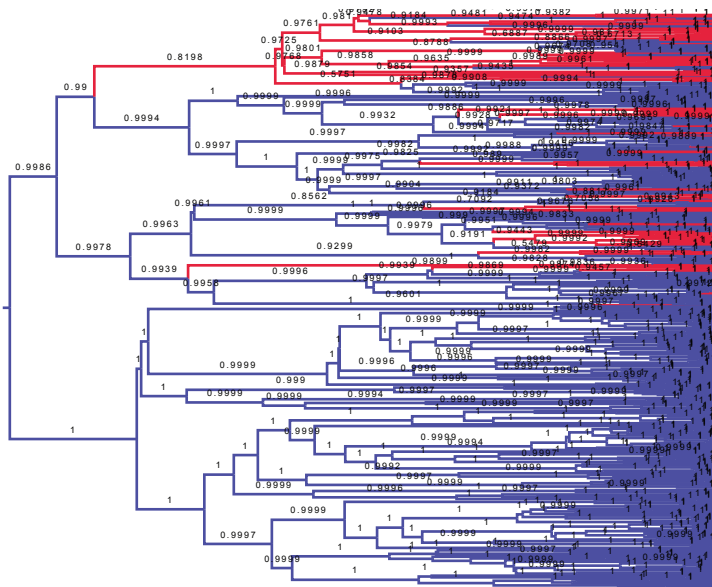


ace Mk2

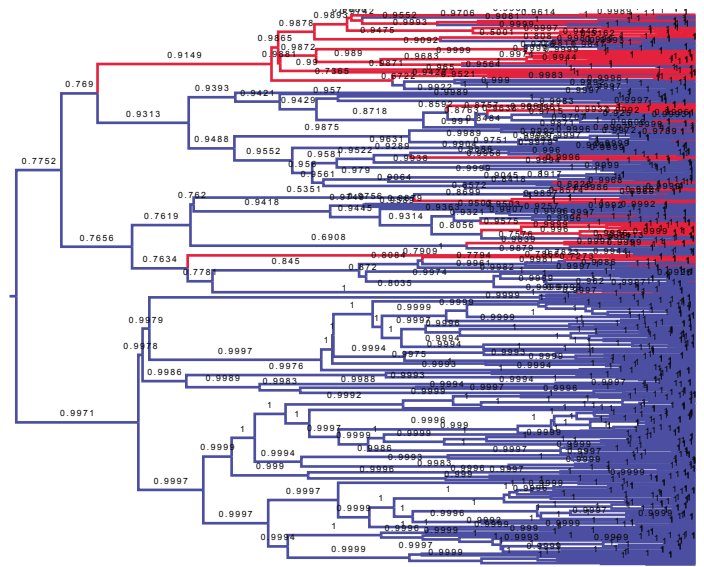


Simulation 7 BEAST reconstructions

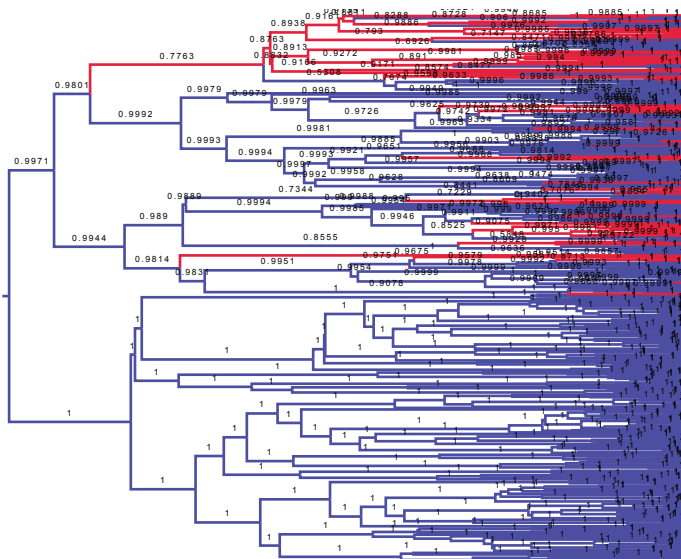
BEAST strict clock Mk1



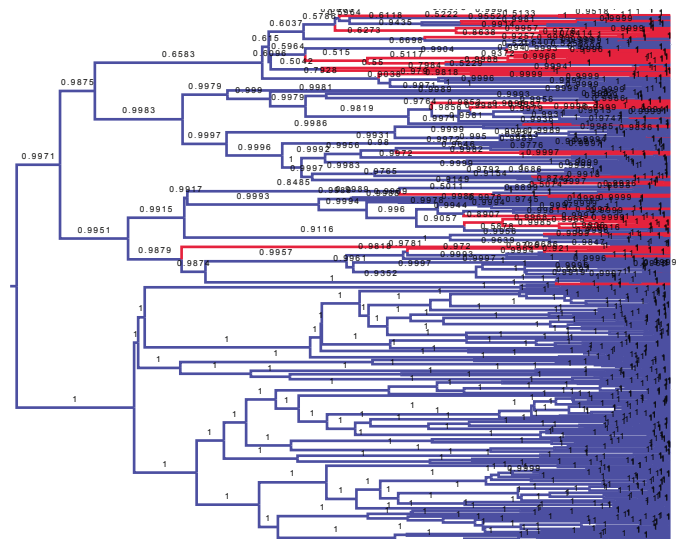
BEAST strict clock Mk2



BEAST random local clock Mk1

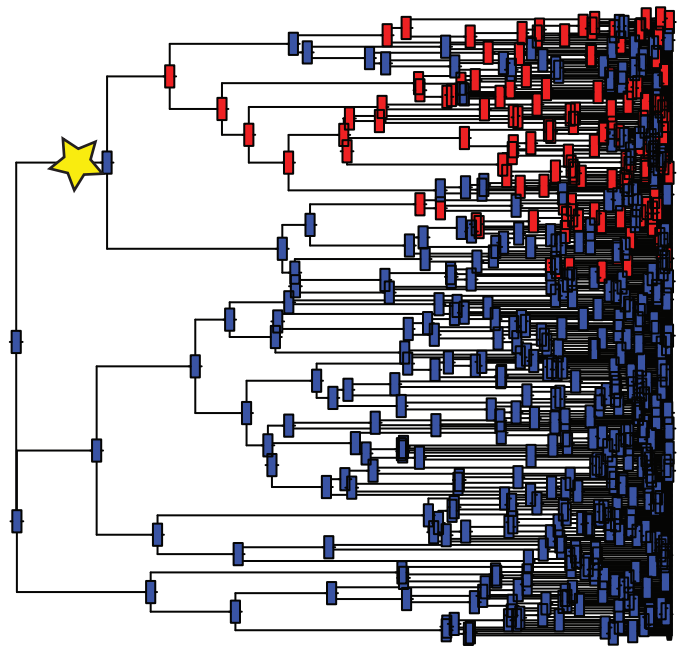


BEAST random local clock Mk2

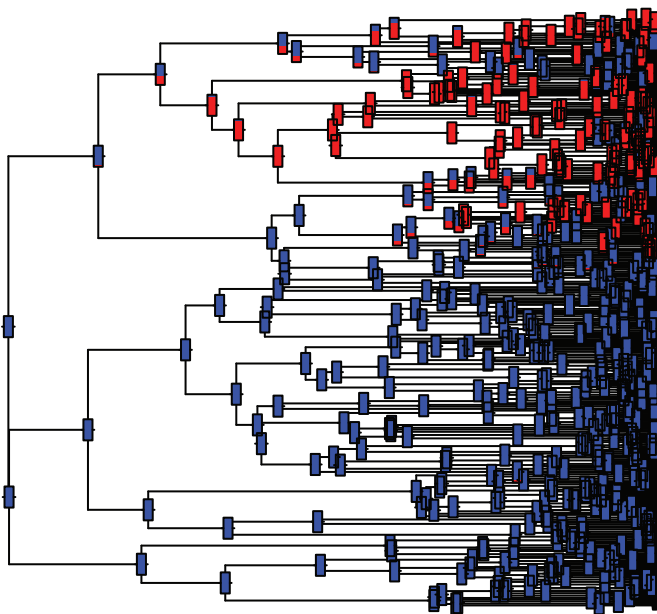


Simulation 8
heterotachy only

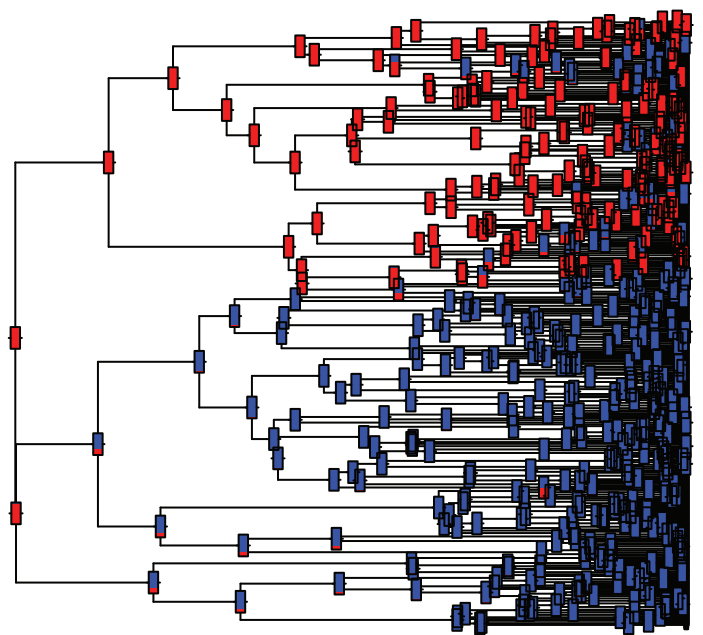
Simulation



ace Mk1

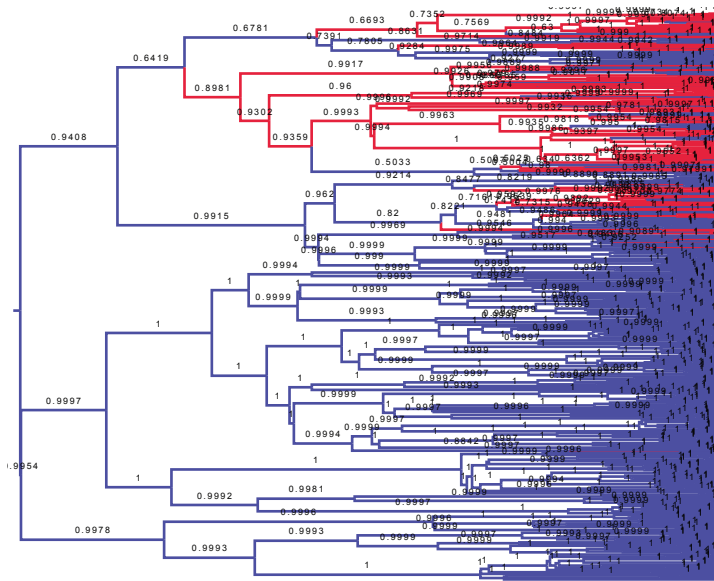


ace Mk2

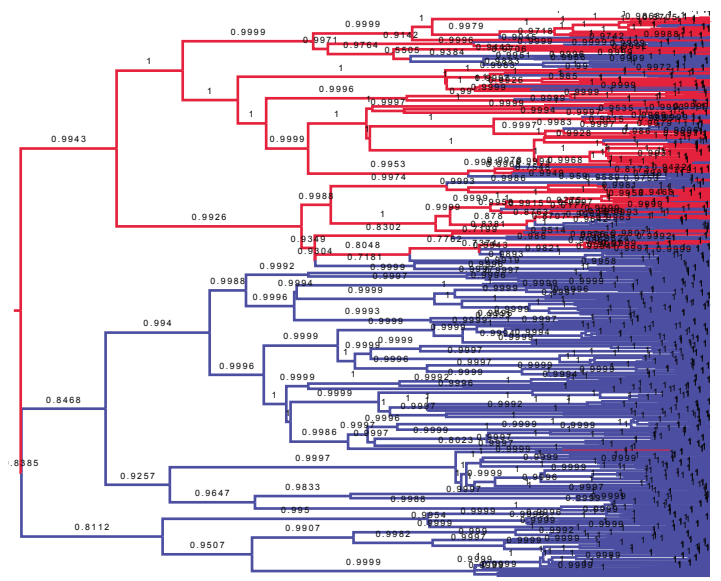


Simulation 8 BEAST reconstructions

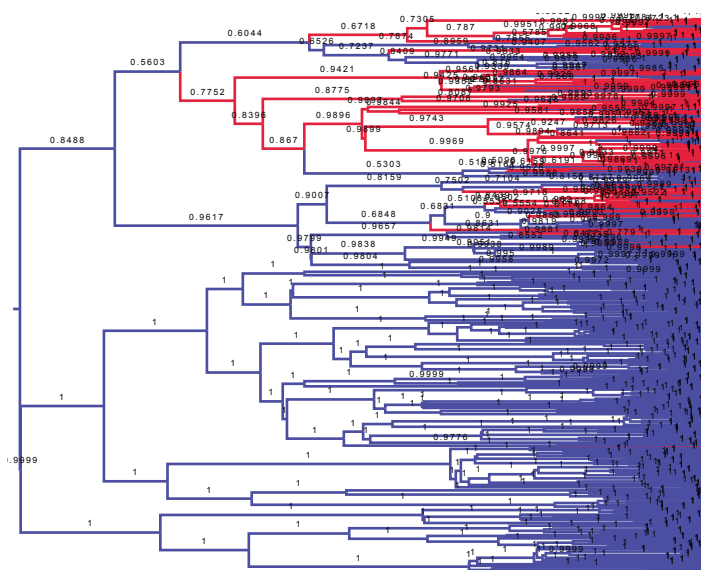
BEAST strict clock Mk1



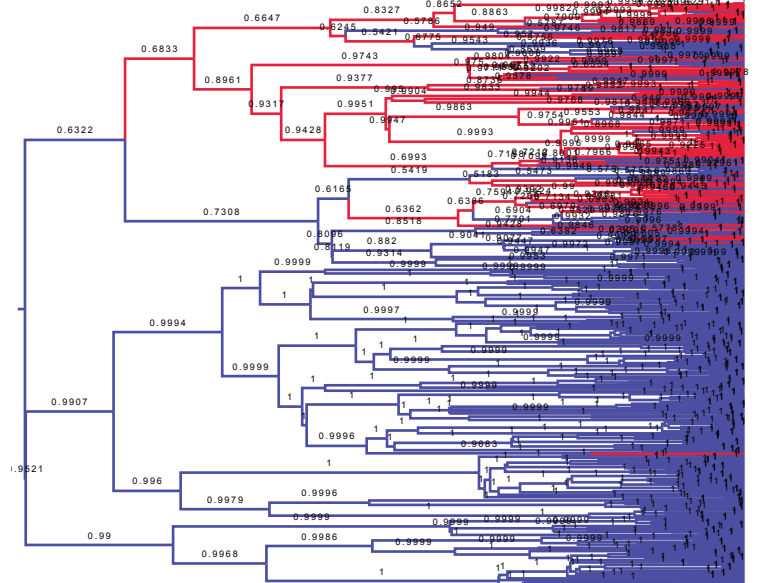
BEAST strict clock Mk2



BEAST random local clock Mk1

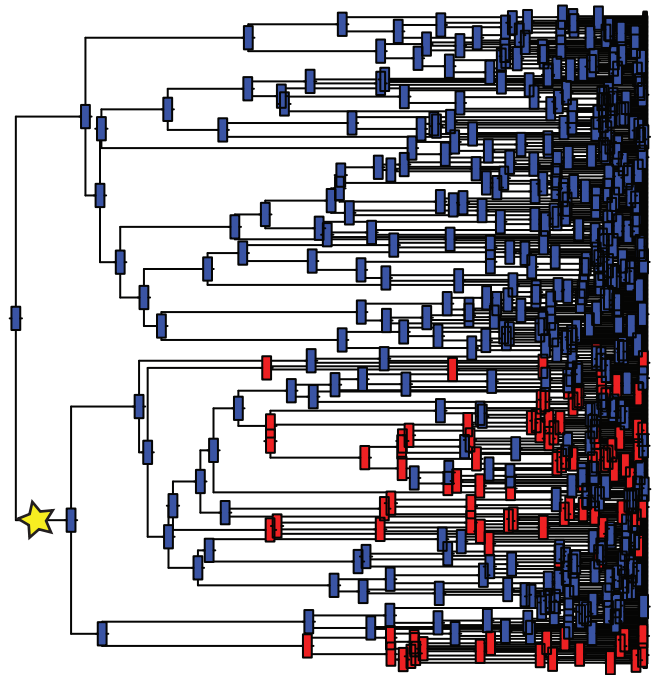


BEAST random local clock Mk2

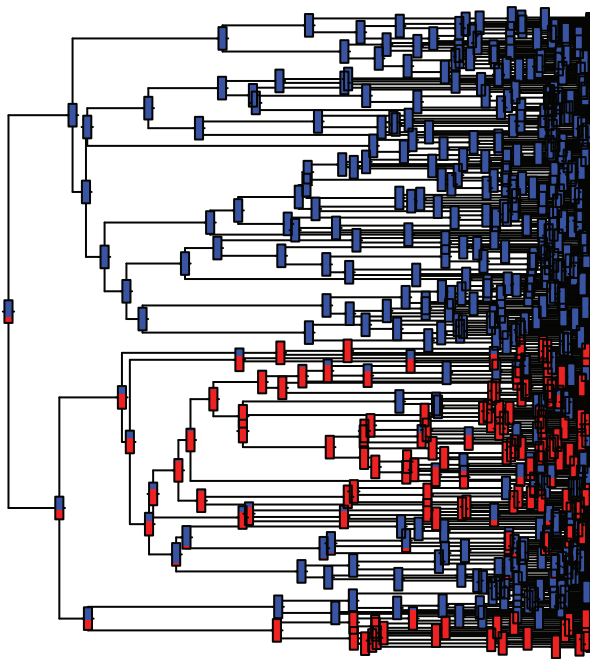


Simulation 9
heterotachy only

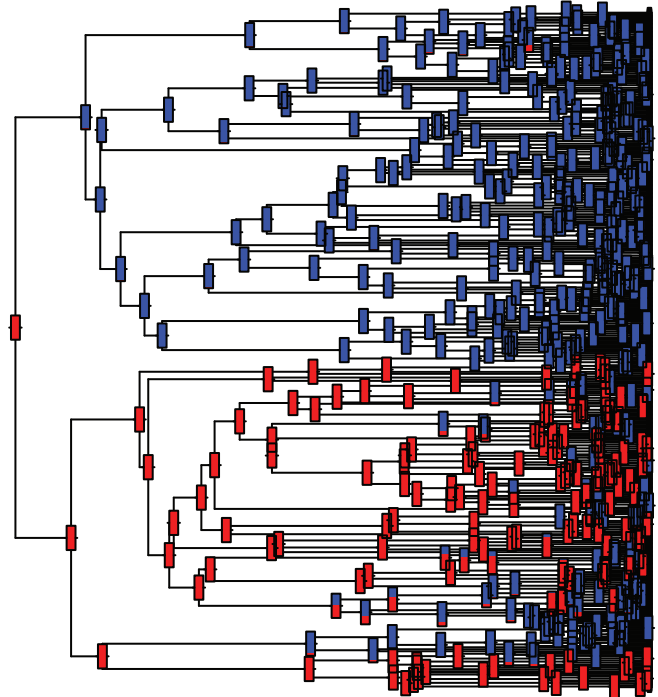
Simulation



ace Mk1

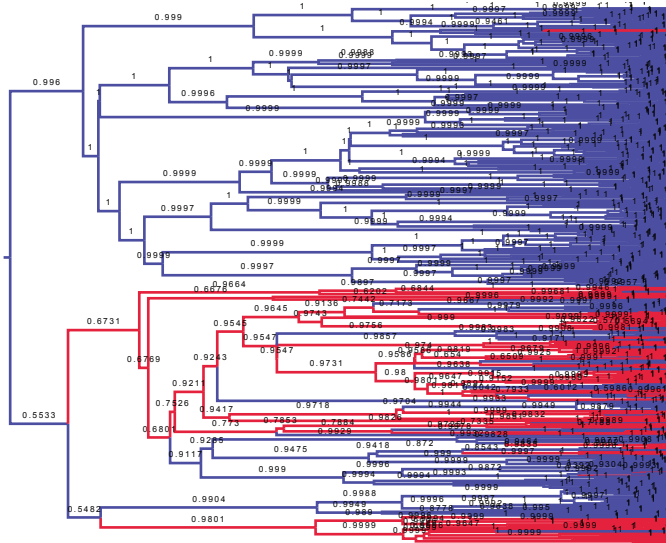


ace Mk2

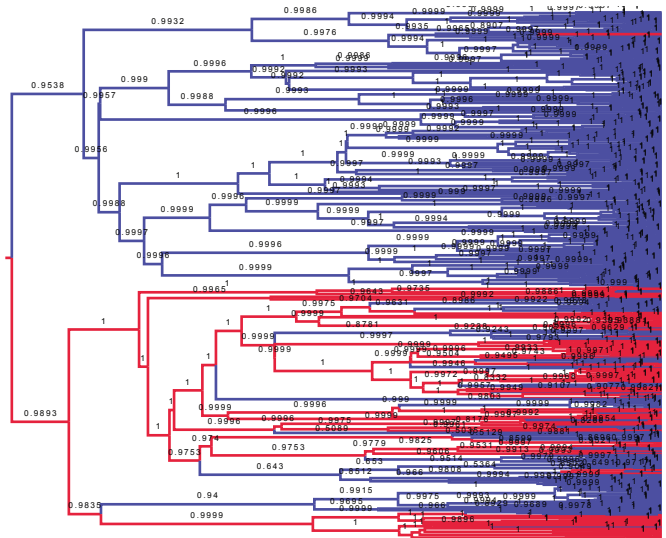


Simulation 9 BEAST reconstructions

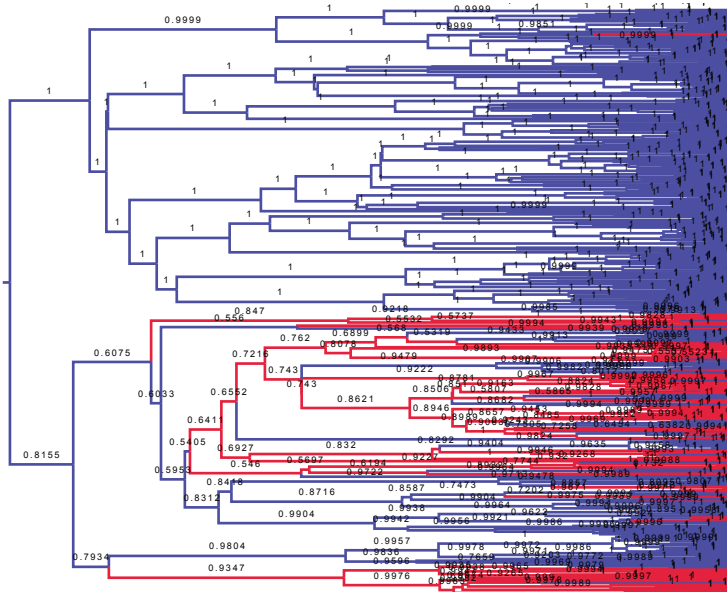
BEAST strict clock Mk1



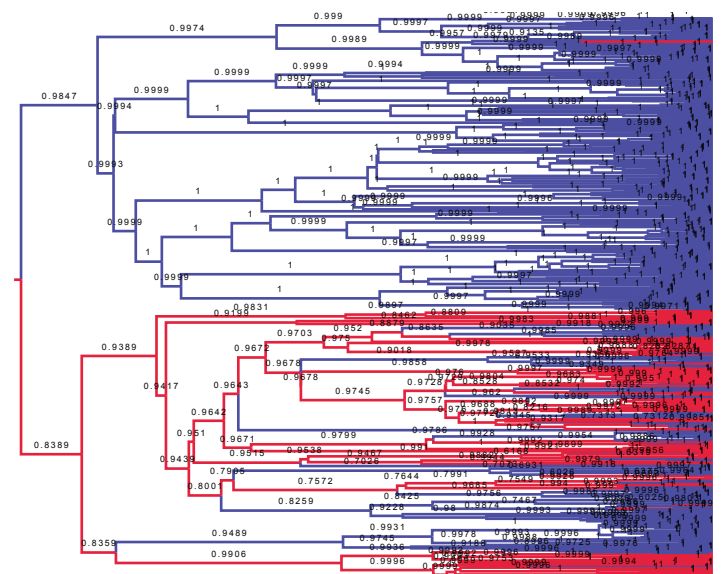
BEAST strict clock mk2



BEAST random local clock Mk1

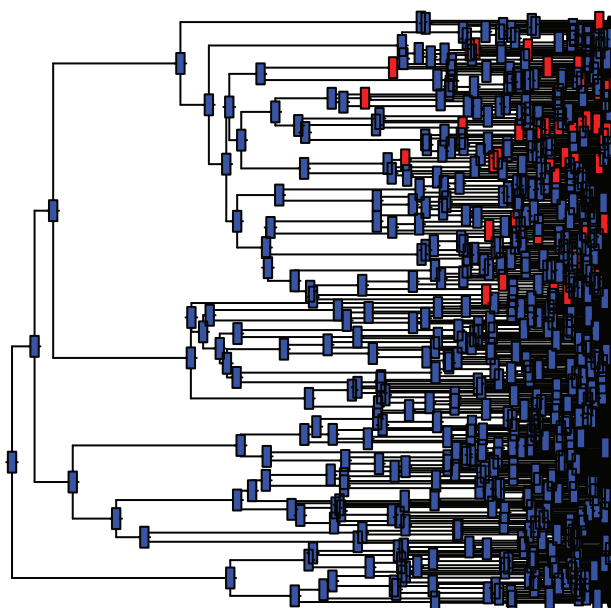


BEAST random local clock Mk2

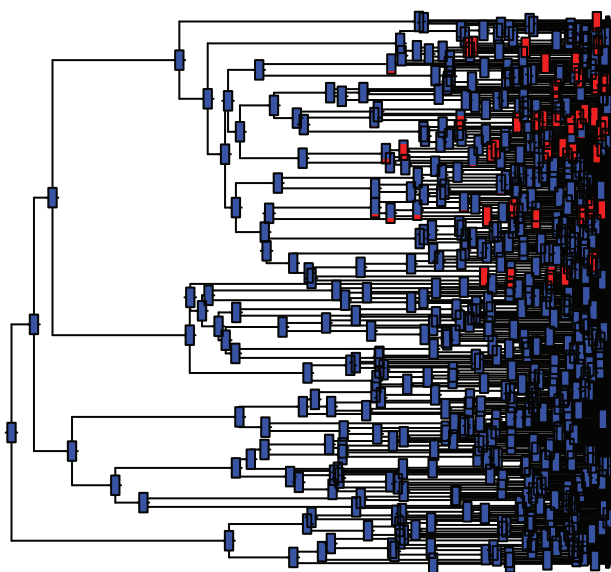


Simulation 10
heterotachy only

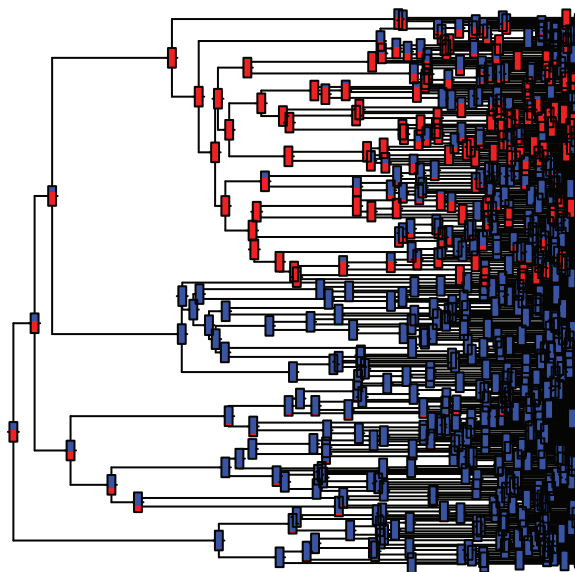
Simulation



ace Mk1

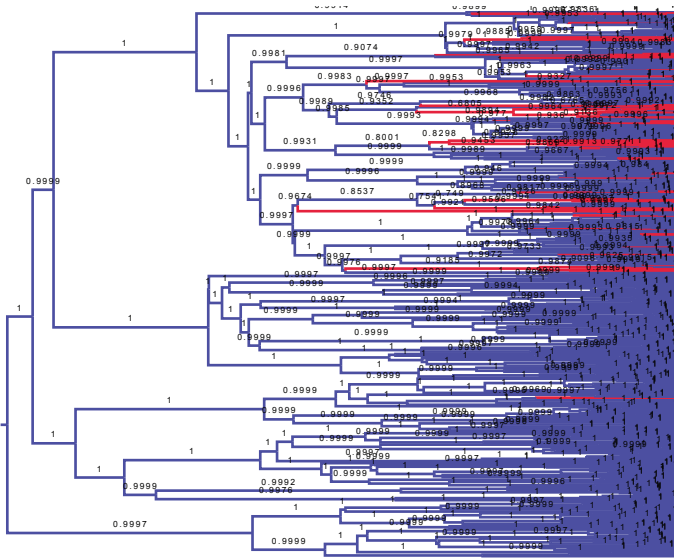


ace Mk2

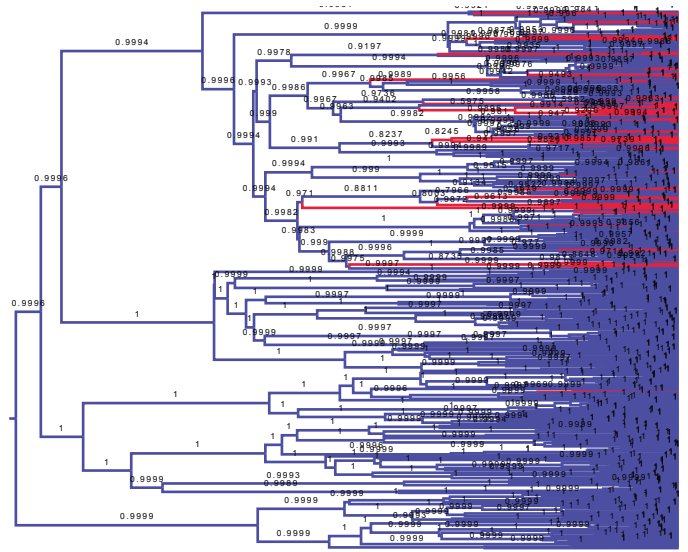


Simulation 10 BEAST reconstructions

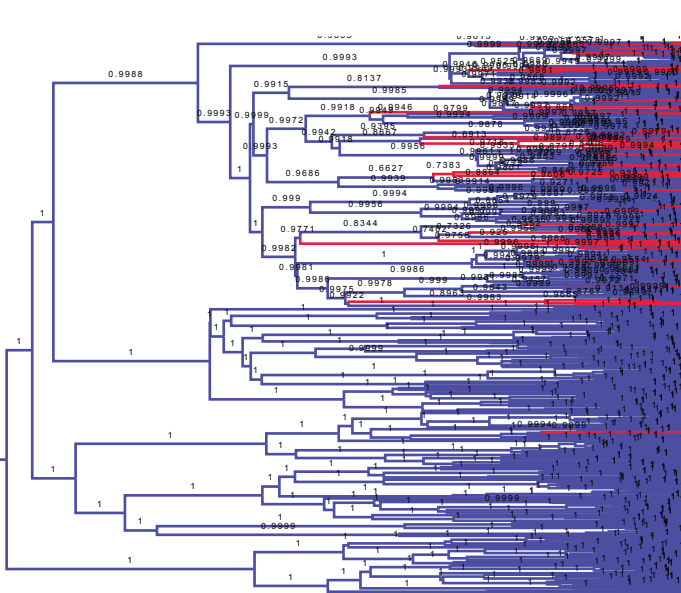
BEAST strict clock Mk1



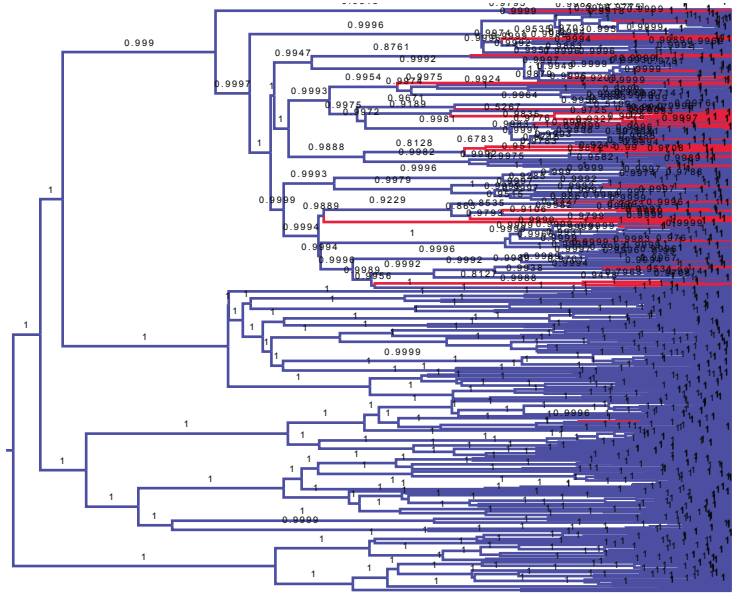
BEAST strict clock Mk2



BEAST random local clock Mk1

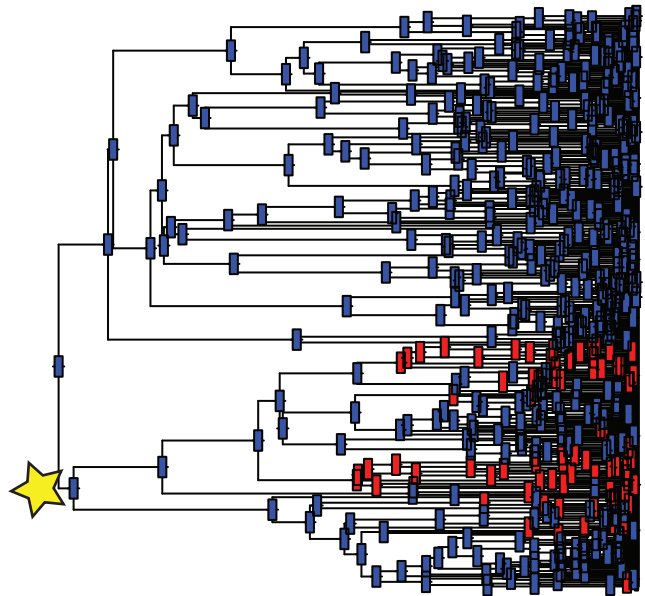


BEAST random local clock Mk2

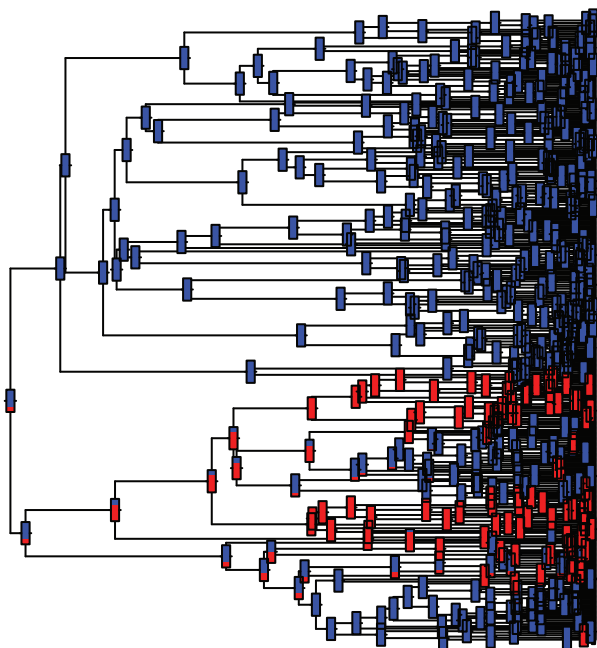


Simulation 11
heterotachy and
asymmetry

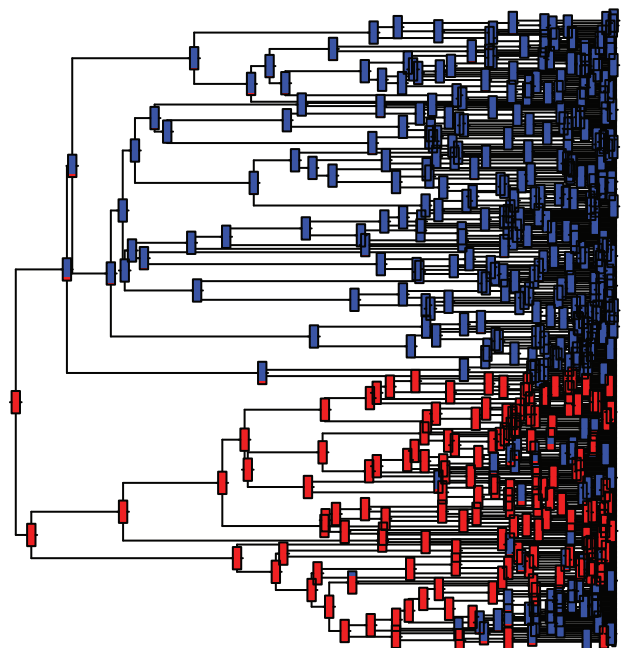
Simulation



ace Mk1

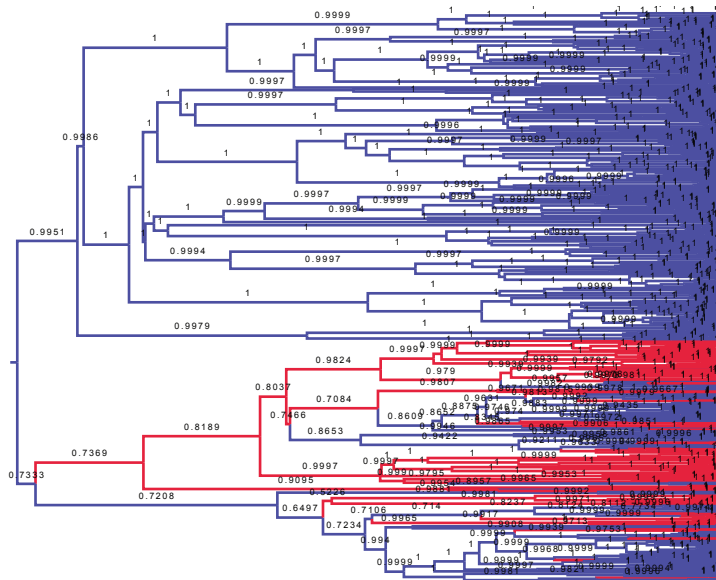


ace Mk2

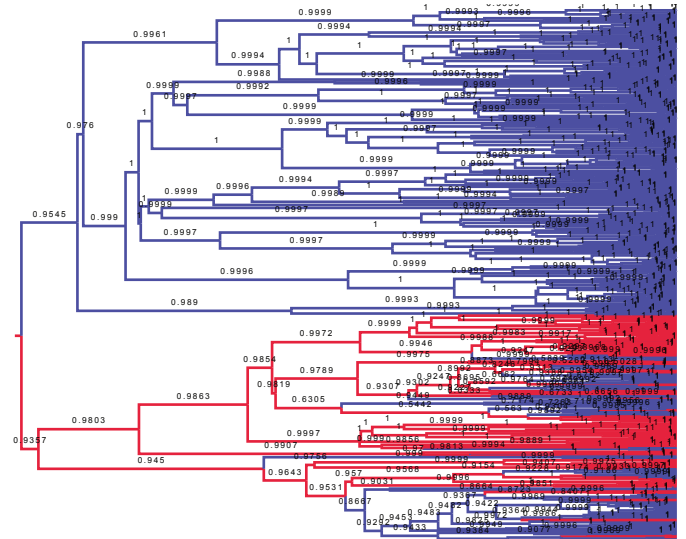


Simulation 11 BEAST reconstructions

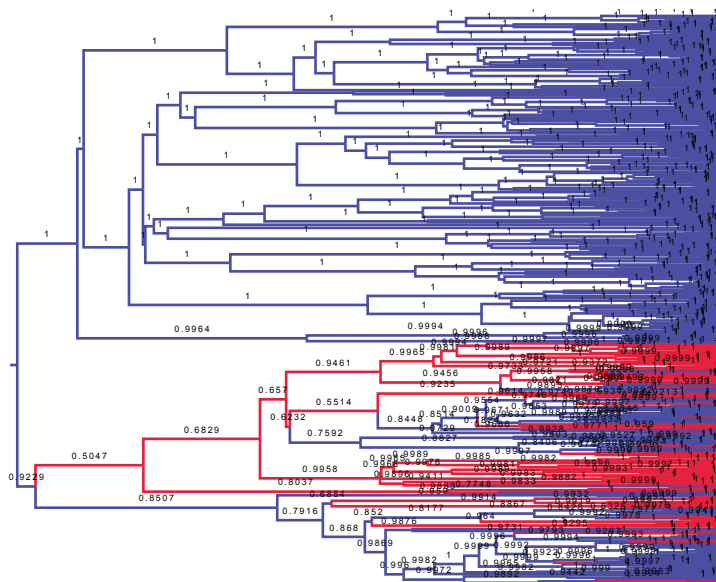
BEAST strict clock Mk1



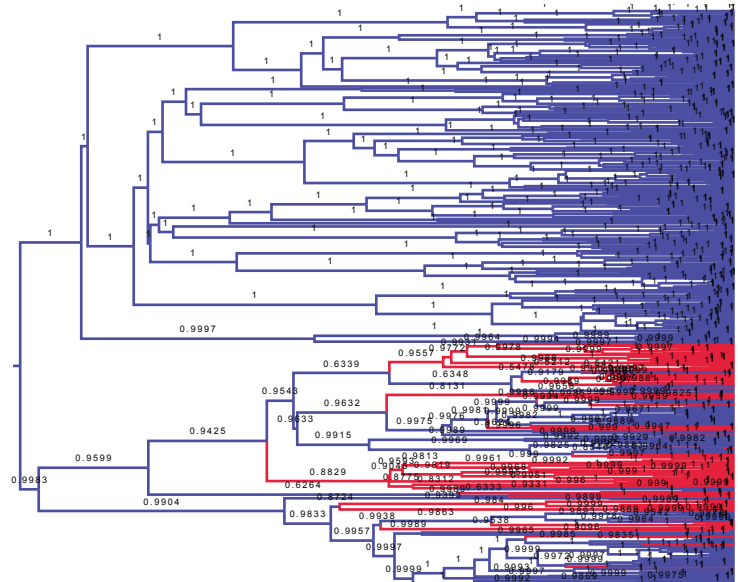
BEAST strict clock Mk2



BEAST random local clock MK1

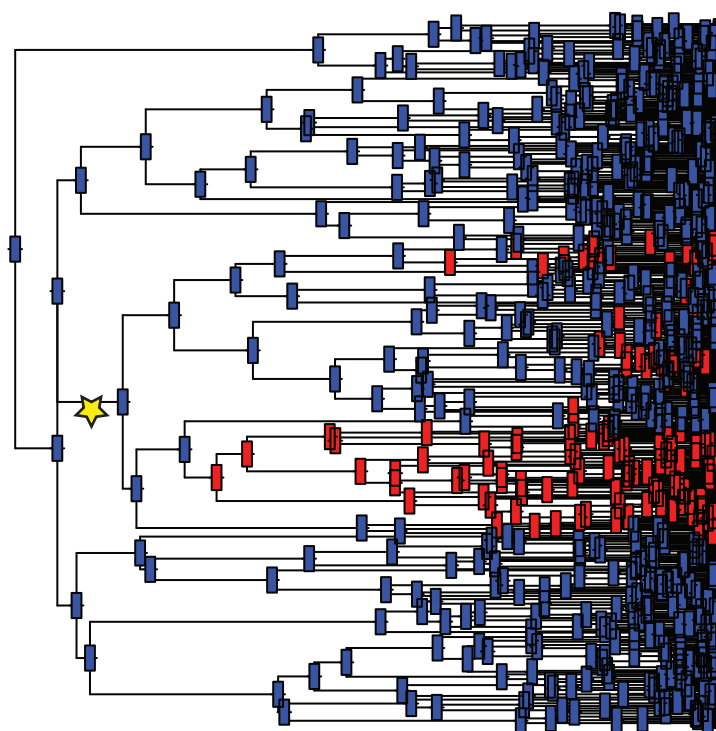


BEAST random local clock Mk2

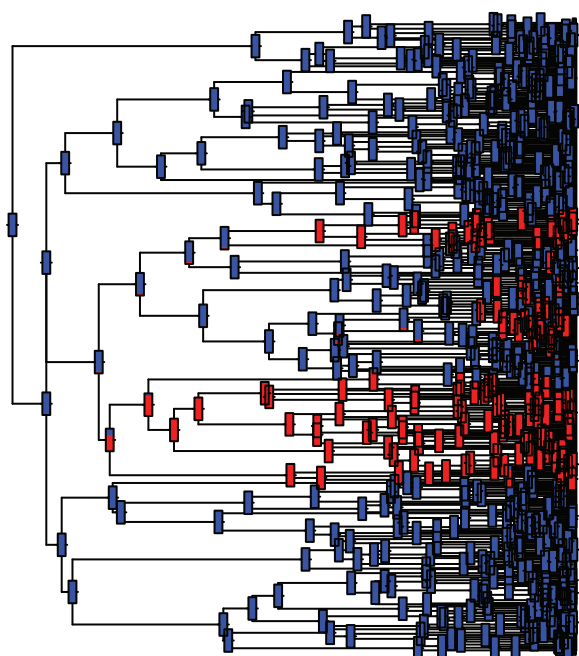


Simulation

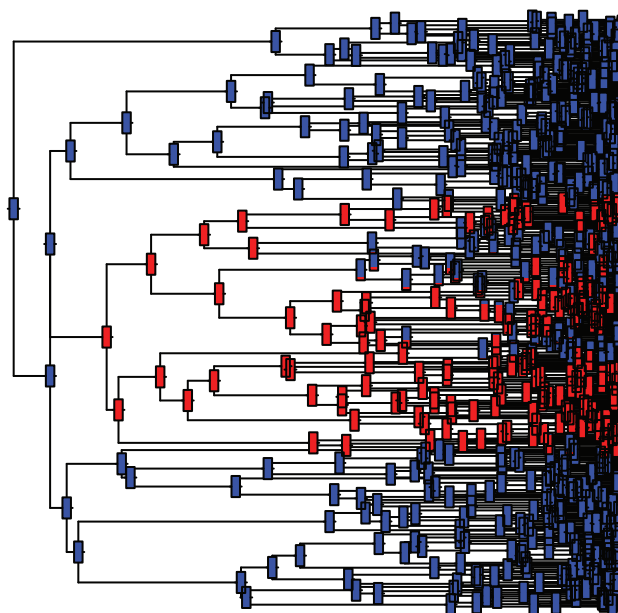
Simulation 12
heterotachy and
asymmetry



ace Mk1

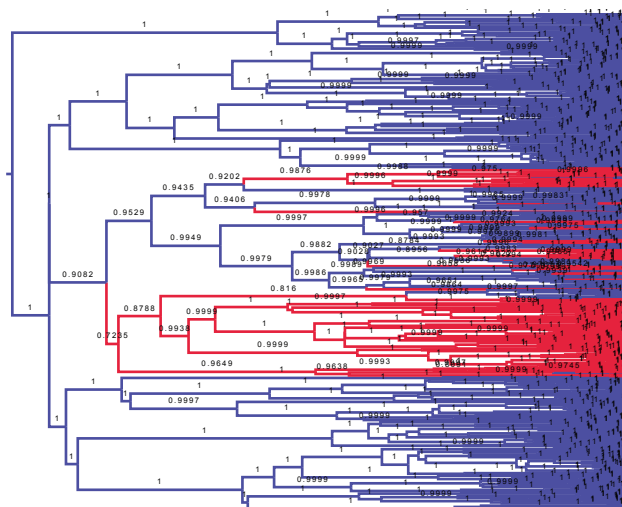


ace Mk2

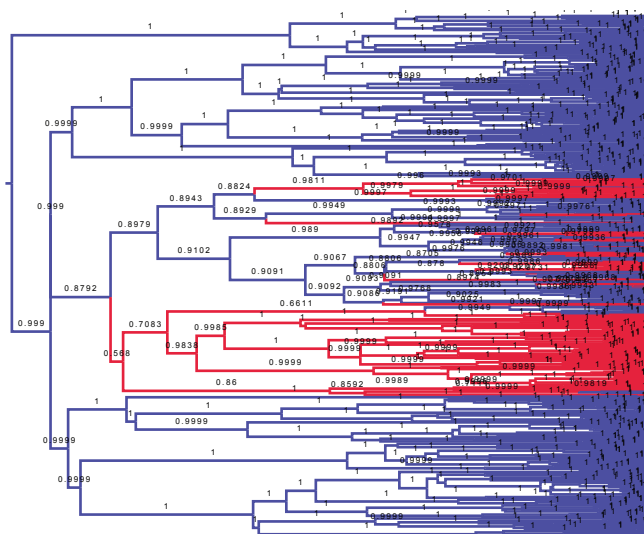


Simulation 12 BEAST reconstructions

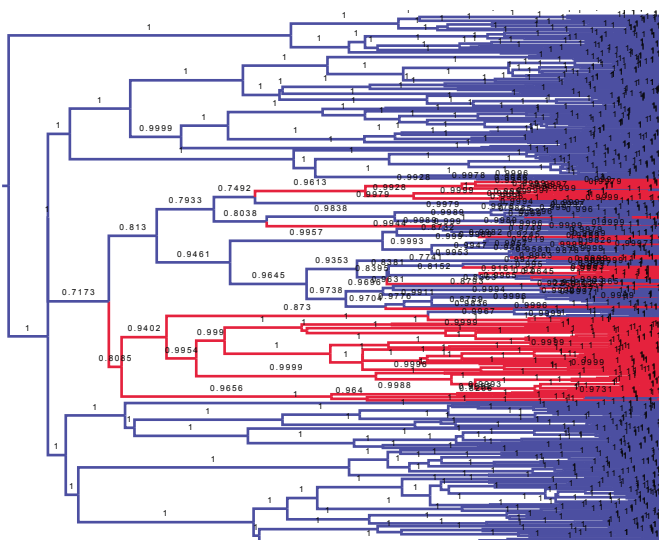
BEAST strict clock Mk1



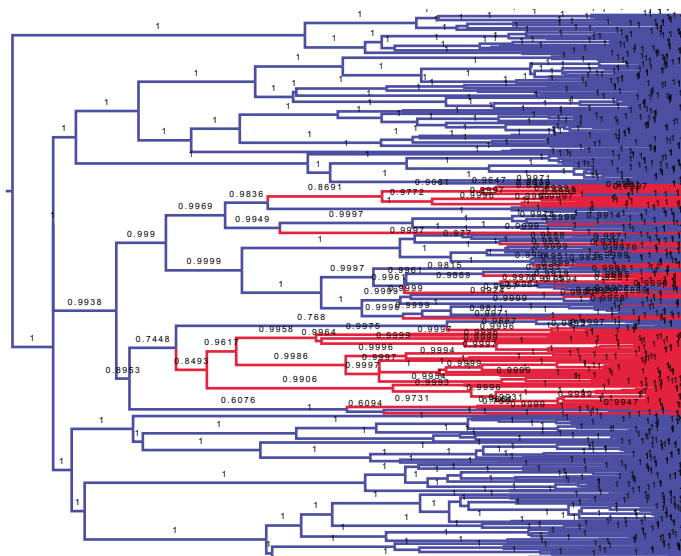
BEAST strict clock Mk2



BEAST random local clock Mk1

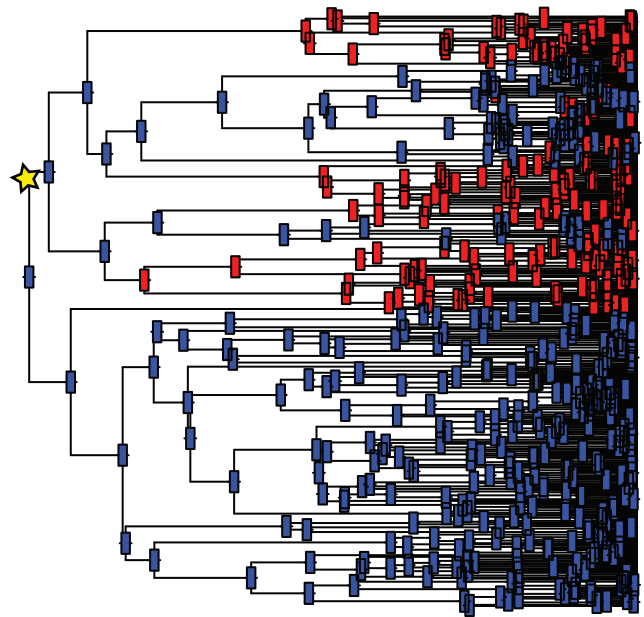


BEAST random local clock Mk2

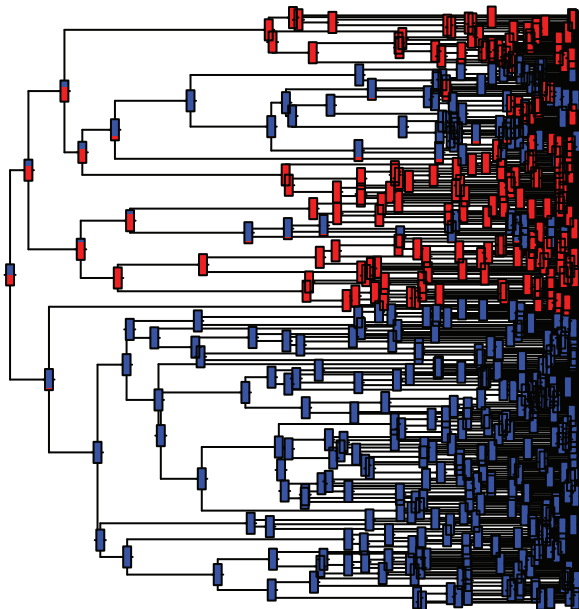


Simulation

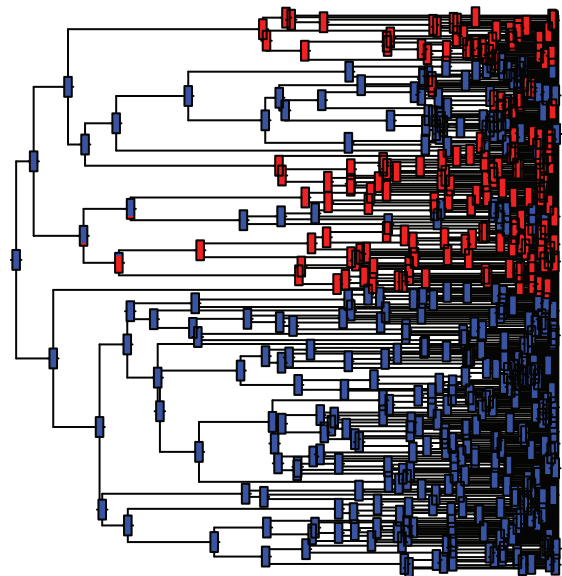
Simulation 13
heterotachy and
asymmetry



ace Mk1

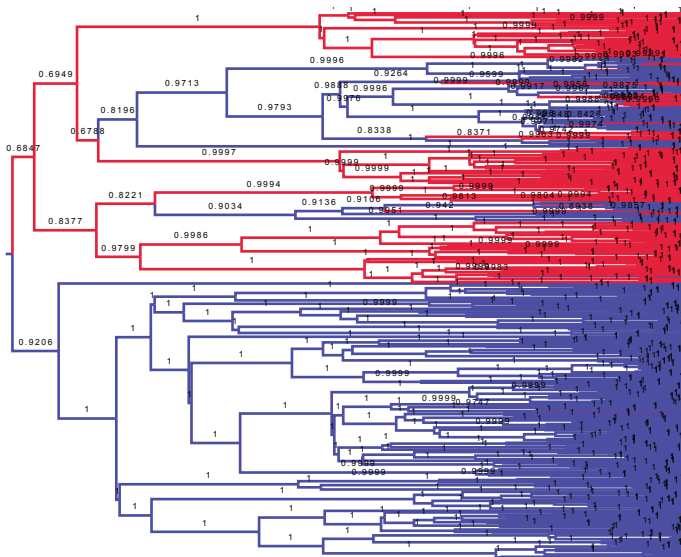


ace Mk2

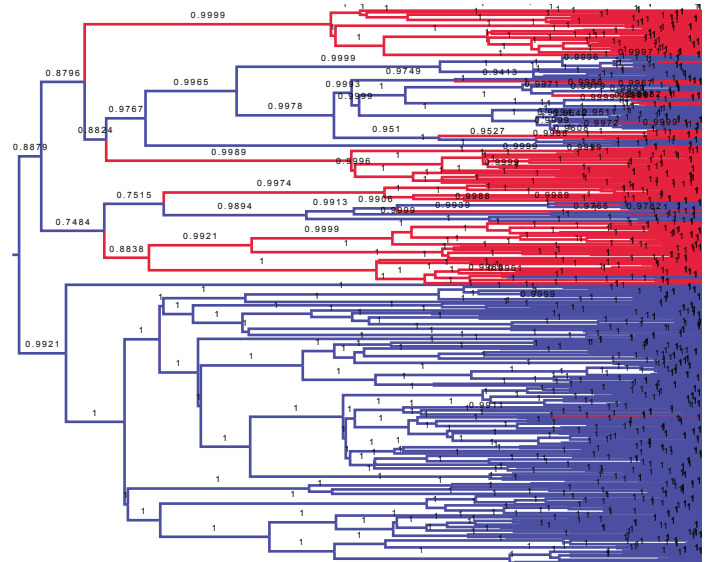


Simulation 13 BEAST reconstructions

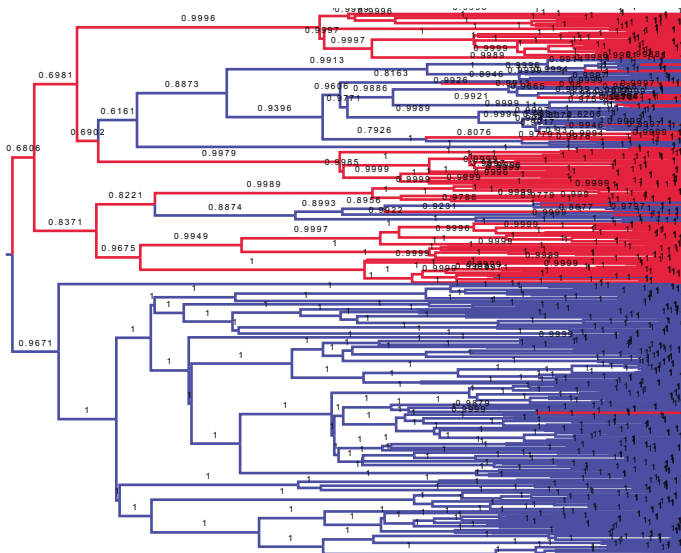
BEAST strict clock Mk1



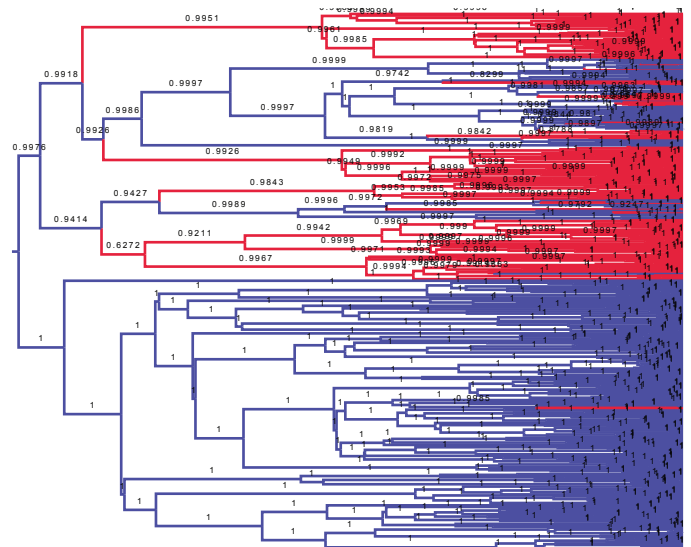
BEAST strict clock Mk2



BEAST random local clock Mk1

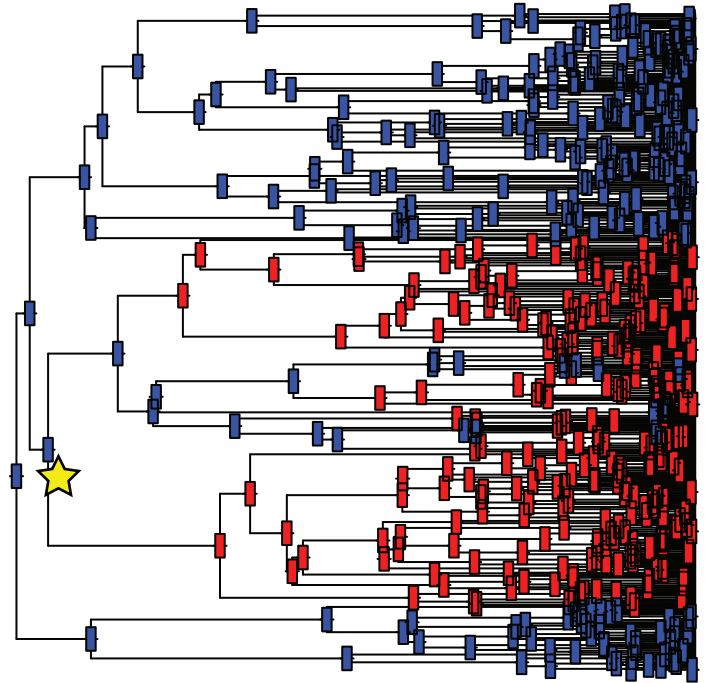


BEAST random local clock Mk2

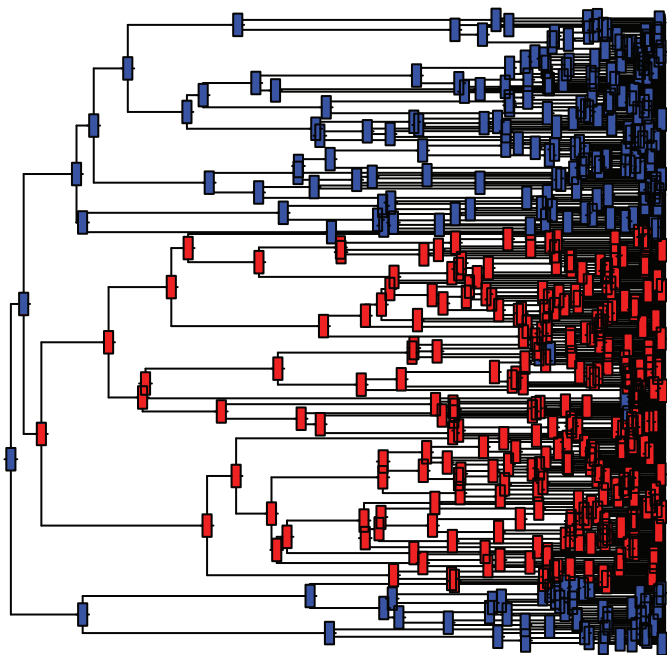


Simulation

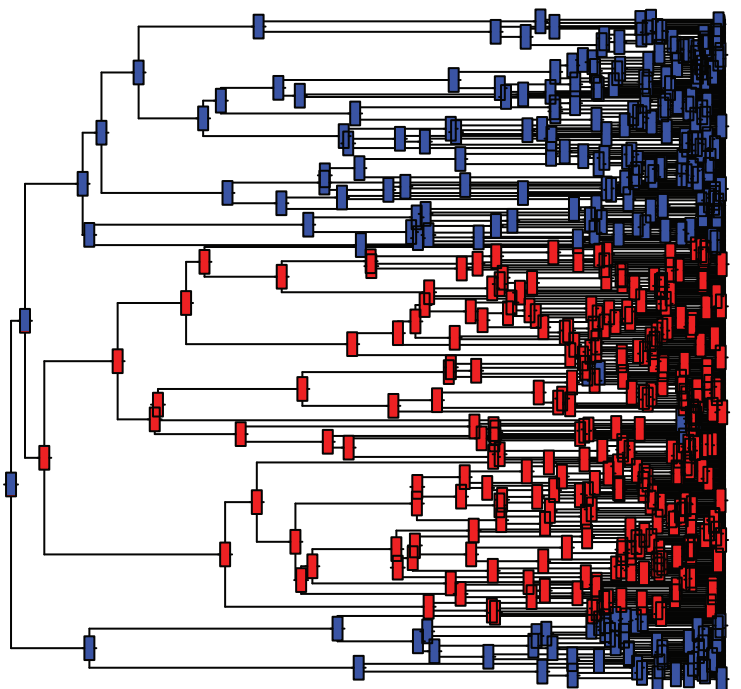
Simulation 14
heterotachy and
asymmetry



ace Mk1

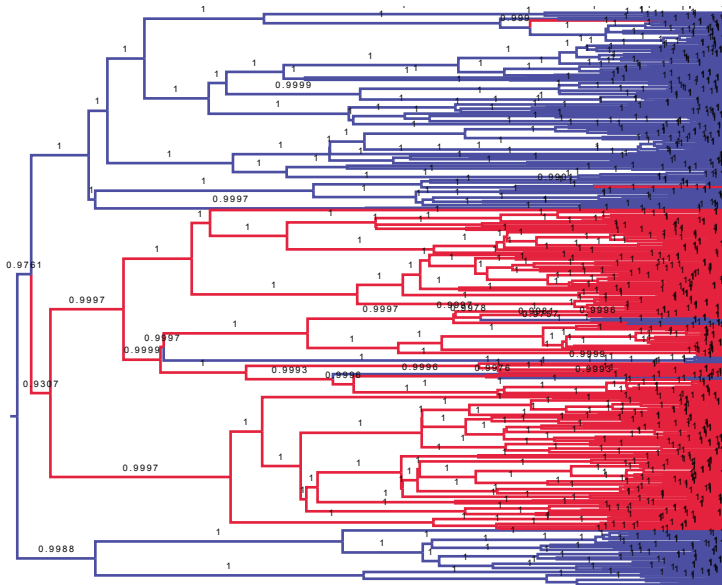


ace Mk2

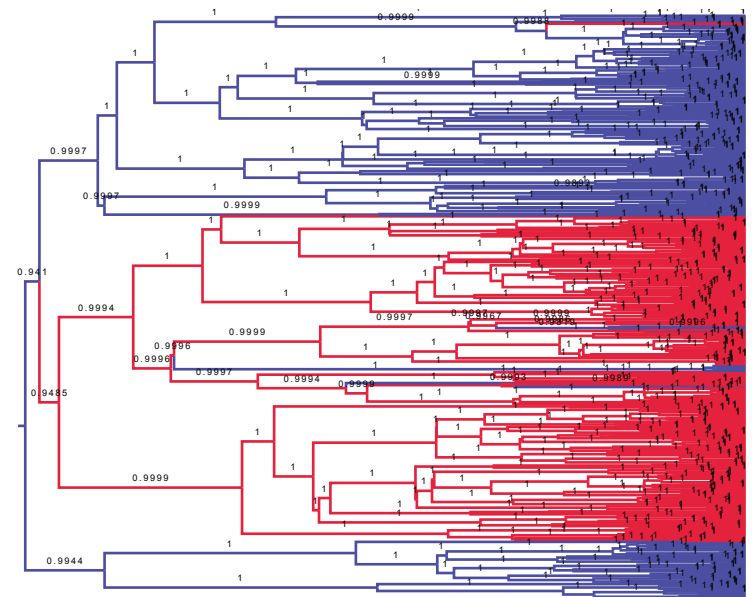


Simulation 14 BEAST reconstrcutios

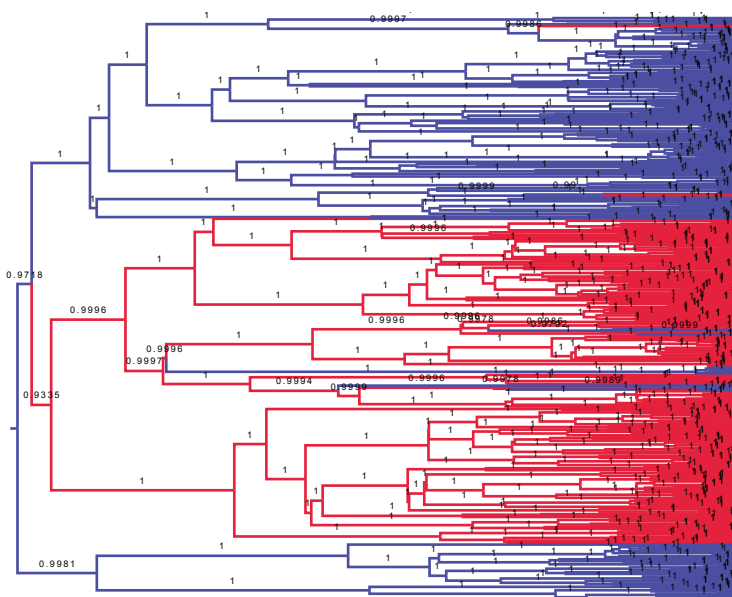
BEAST strict clock Mk1



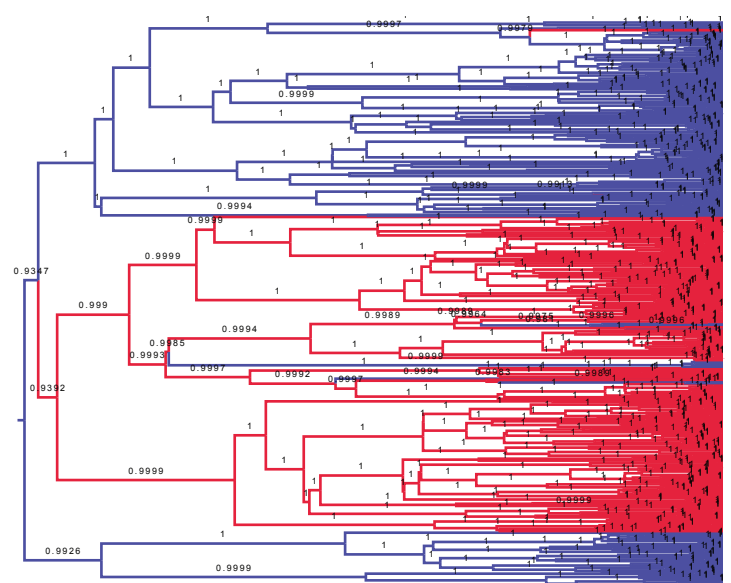
BEAST strict clock Mk2



BEAST random local clock Mk1

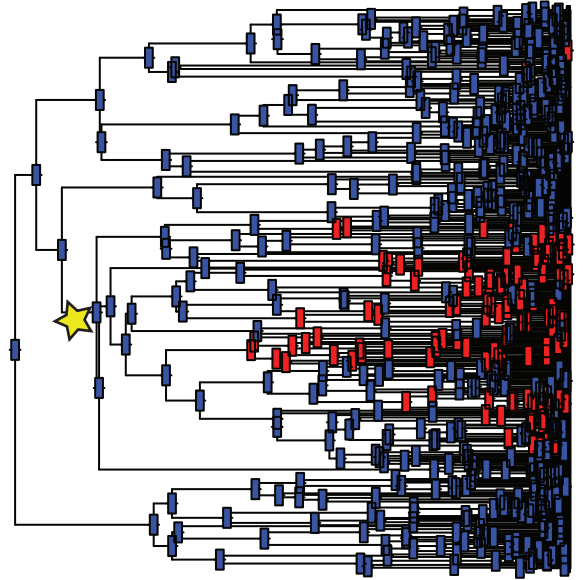


BEAST random local clock Mk2

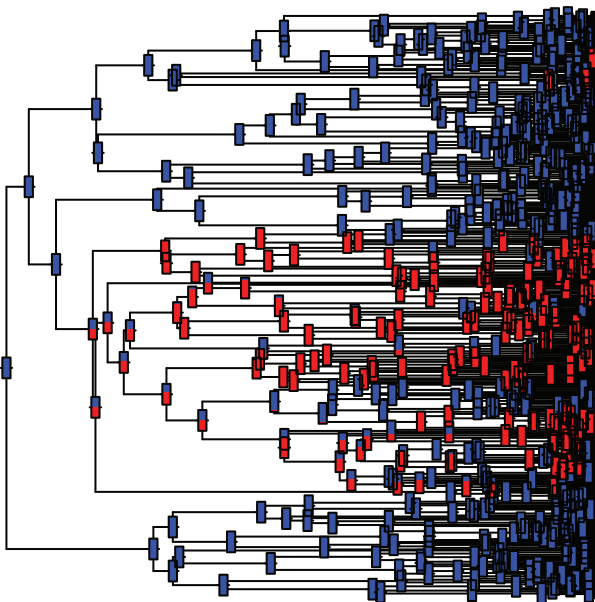


Simulation

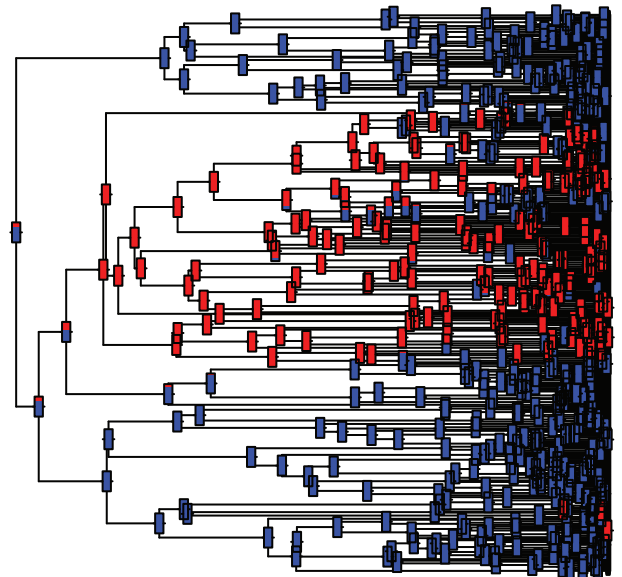
Simulation 15
heterotachy and
asymmetry



ace Mk1

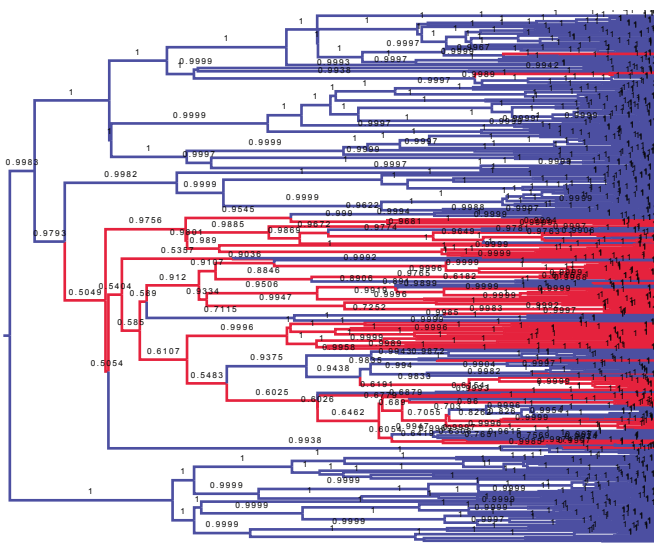


ace Mk2

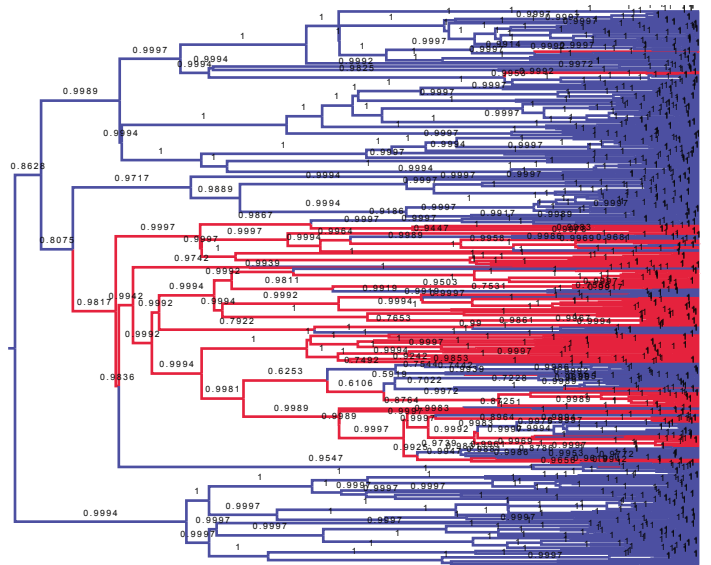


Simulation 15 BEAST reconstructions

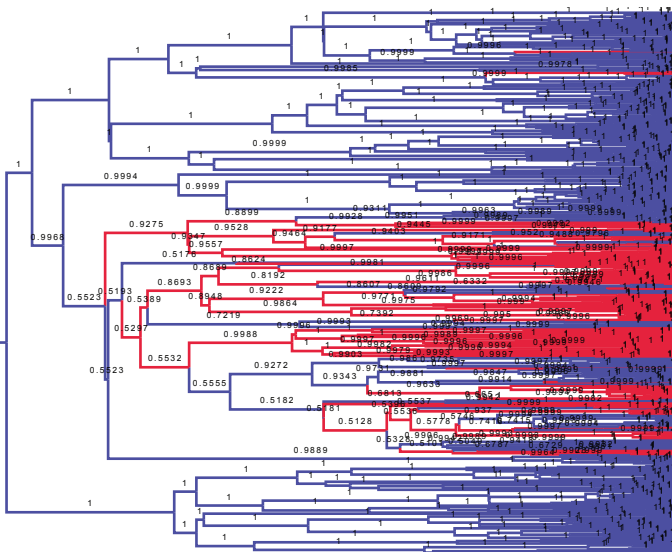
BEAST strict clock Mk1



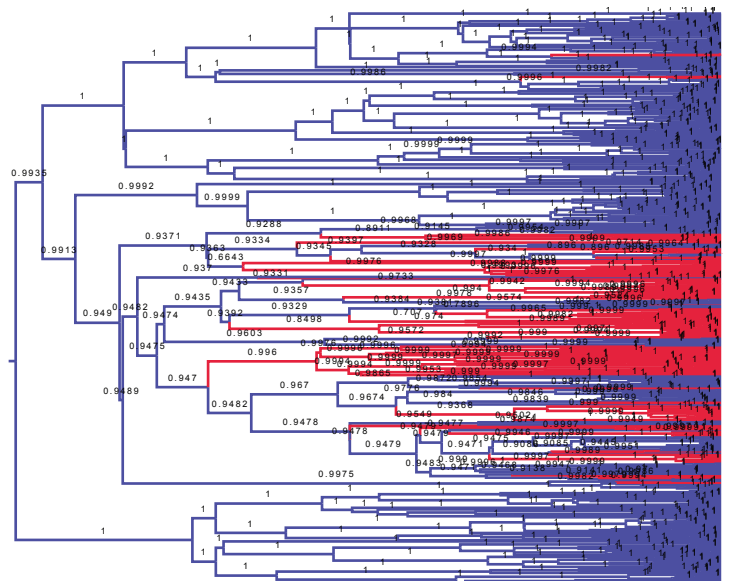
BEAST strict clock Mk2



BEAST random local clock Mk1

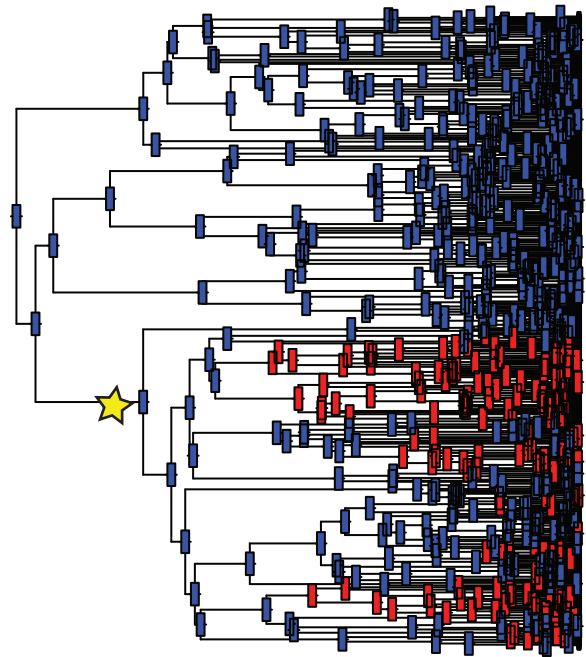


BEAST random local clock Mk2

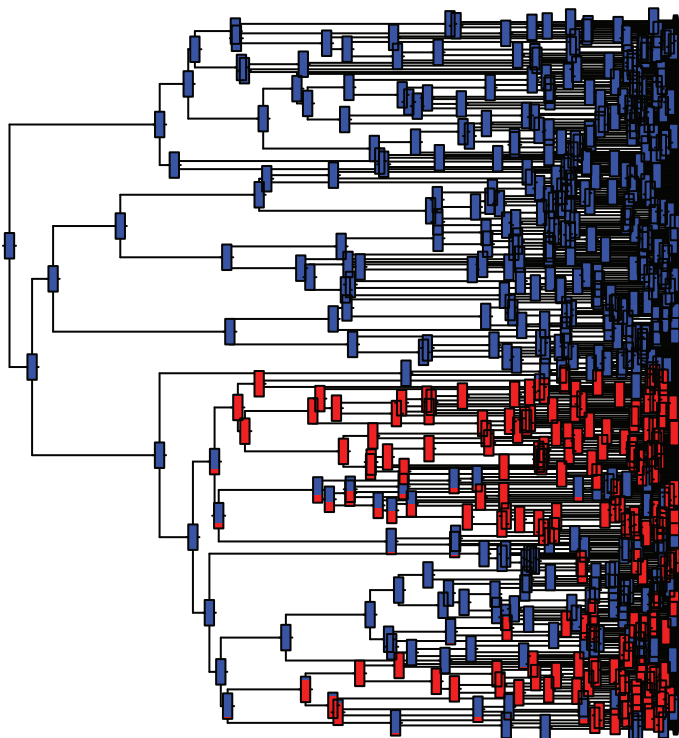


Simulation 16
heterotachy and
asymmetry (uneven)

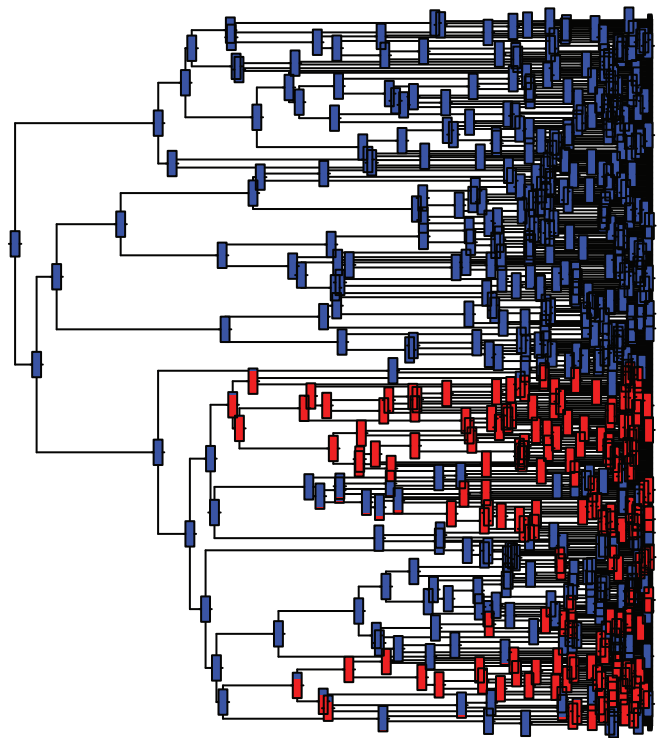
Simulation



ace Mk1

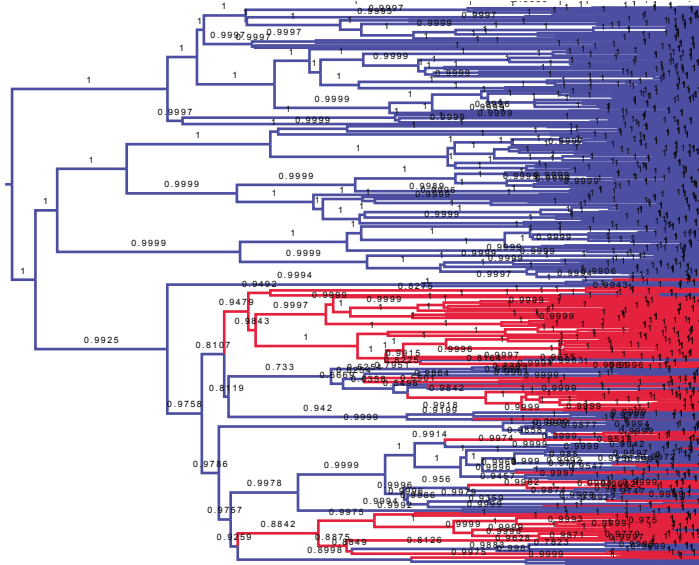


ace Mk2

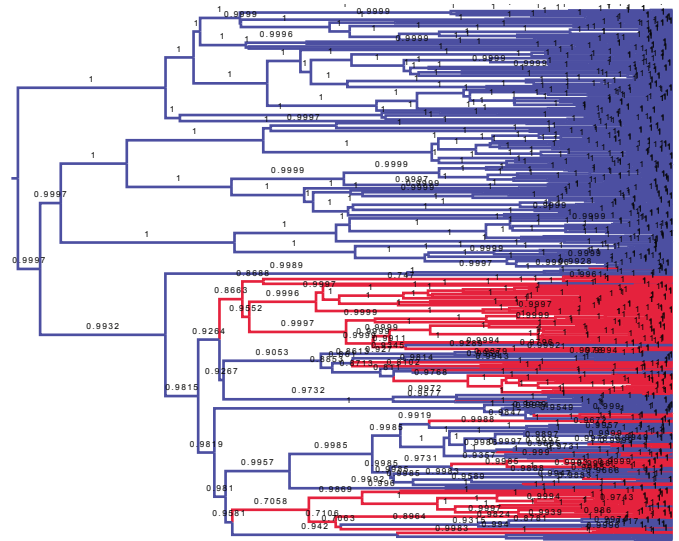


Simulation 16 BEAST reconstructions

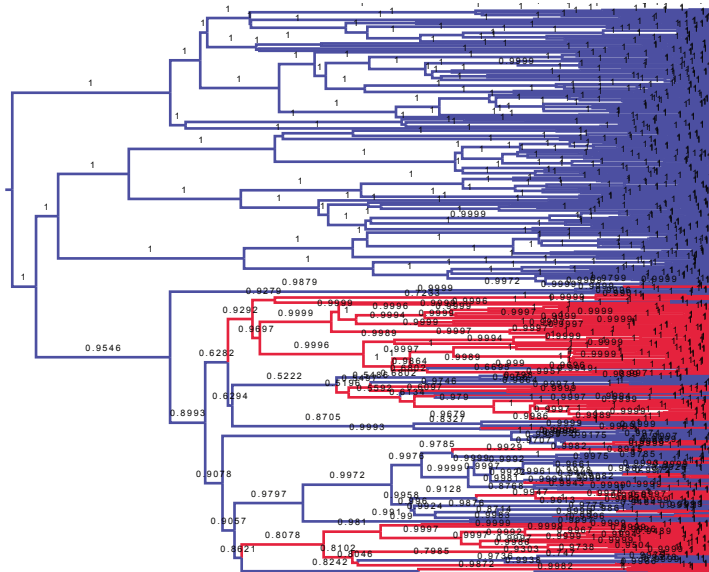
BEAST strict clock Mk1



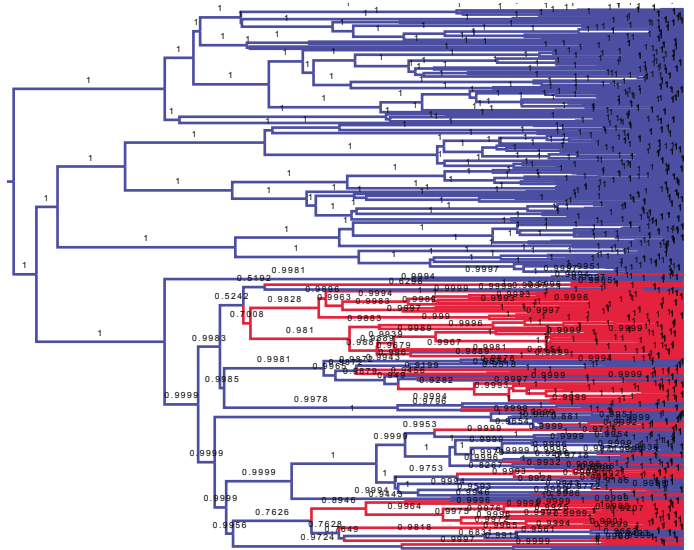
BEAST strict clock Mk2



BEAST random local clock Mk1

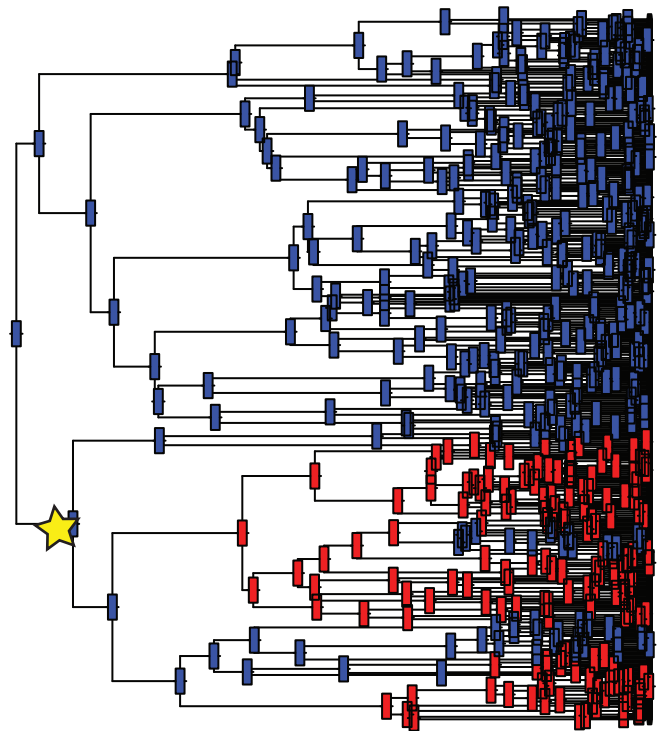


BEAST random local clock Mk2

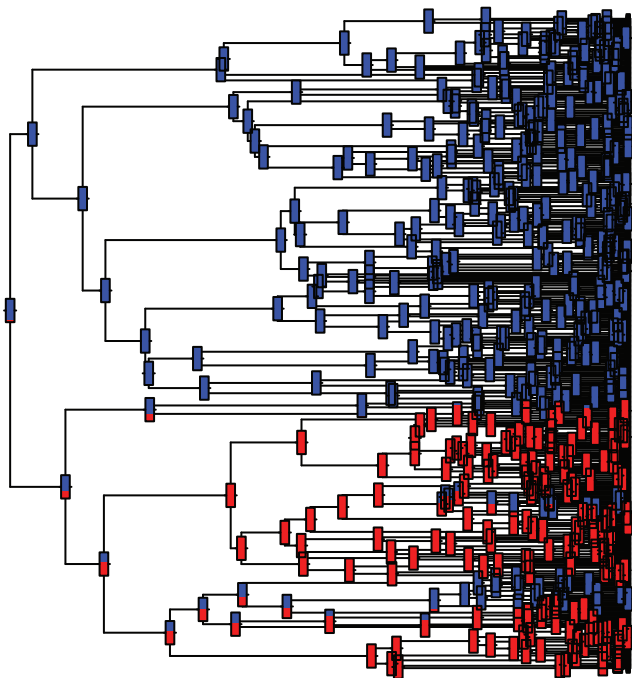


Simulation 17
heterotachy and
asymmetry (uneven)

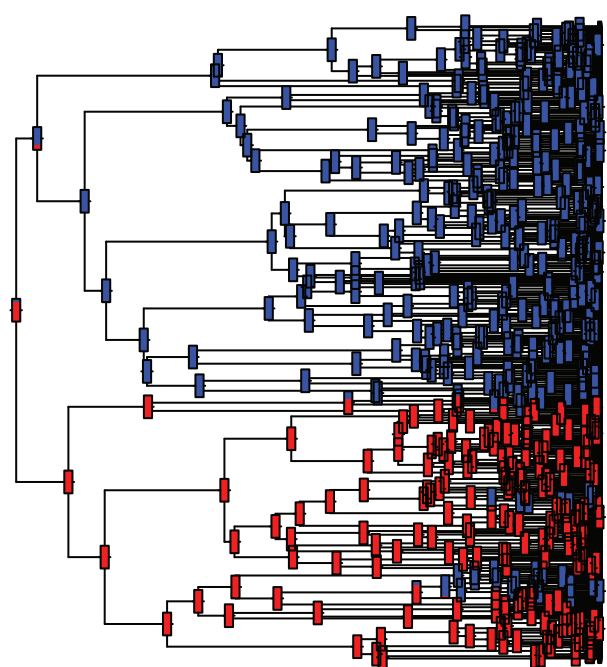
Simulation



ace Mk1

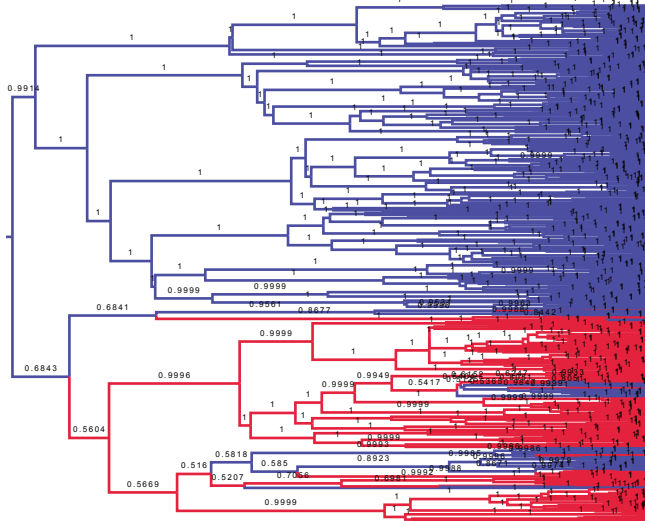


ace Mk2

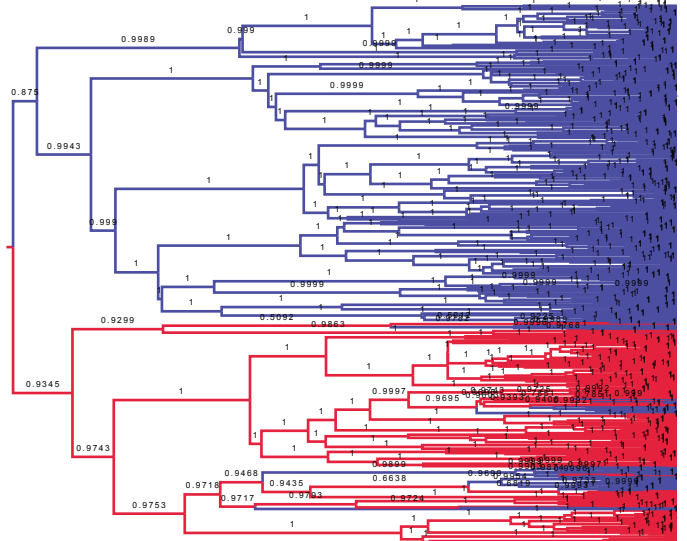


Simulation 17 BEAST reconstructions

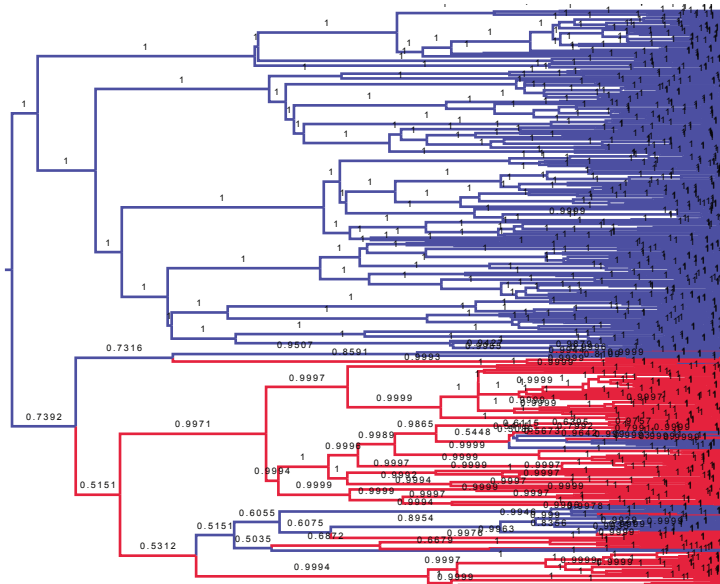
BEAST strict clock Mk1



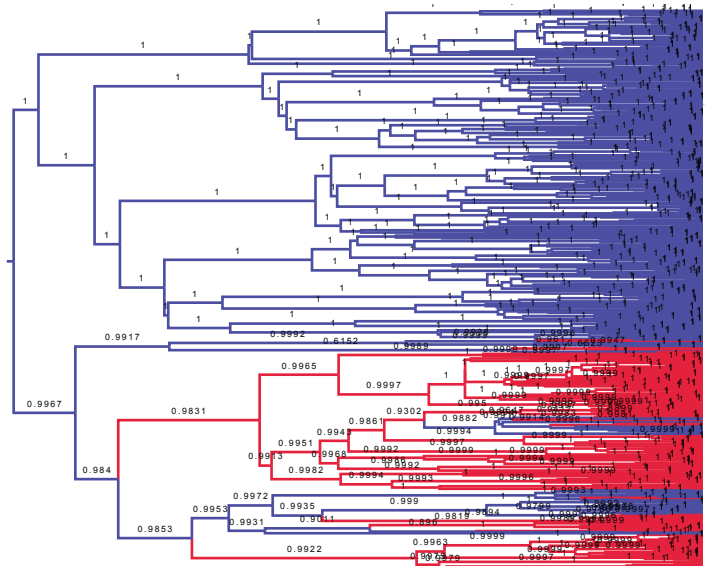
BEAST strict clock Mk2



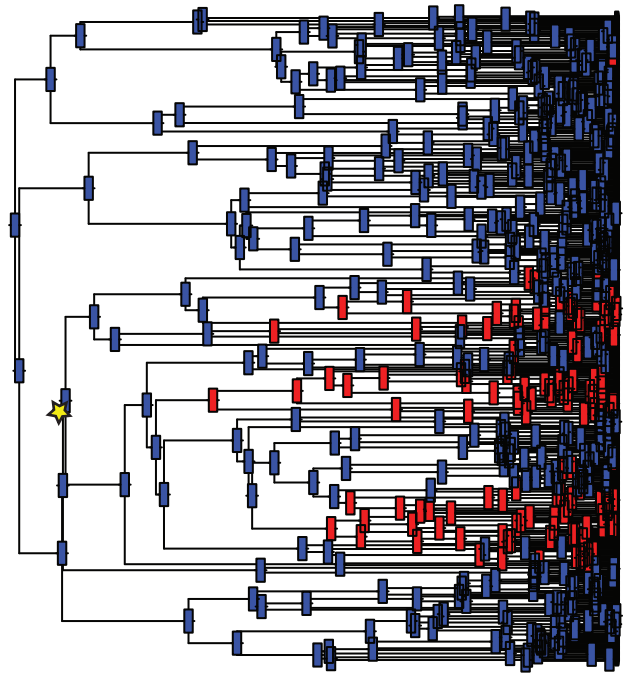
BEAST random local clock Mk1



BEAST random local clock Mk2

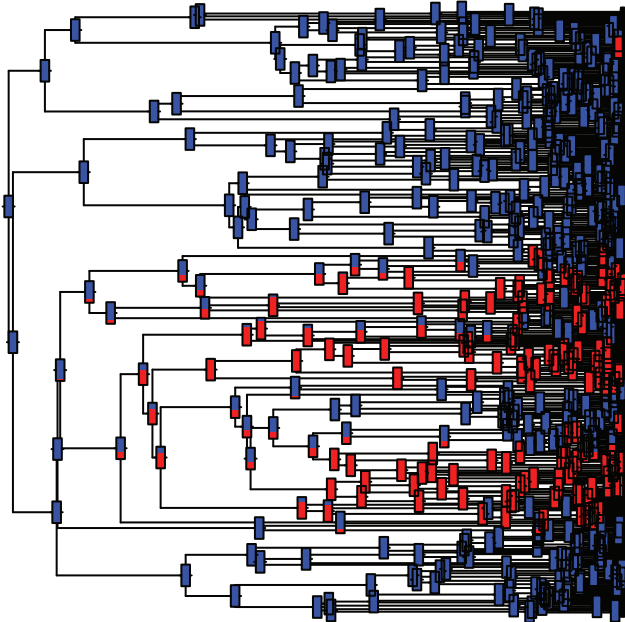


Simulation

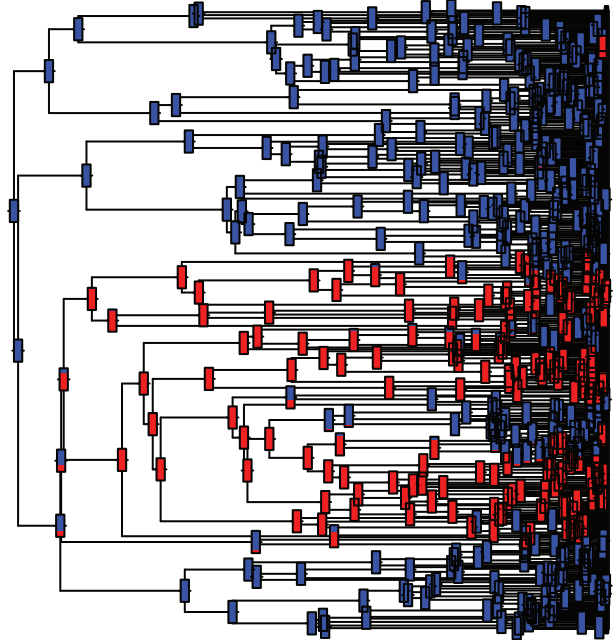


Simulation 18
heterotachy and
asymmetry (uneven)

ace Mk1

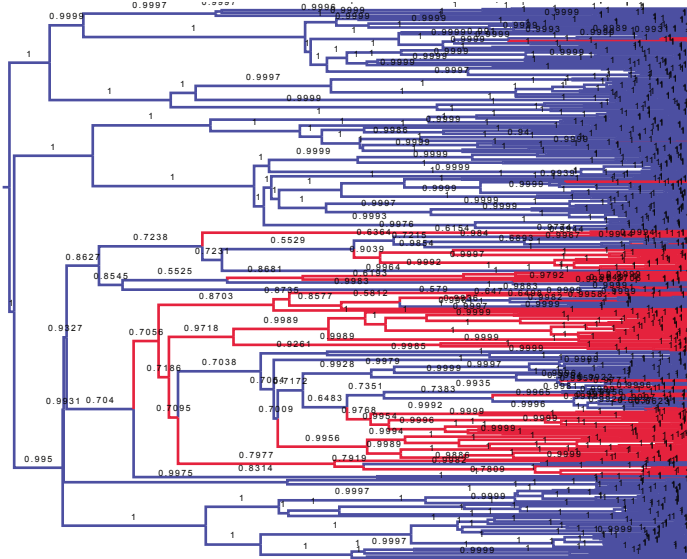


ace Mk2

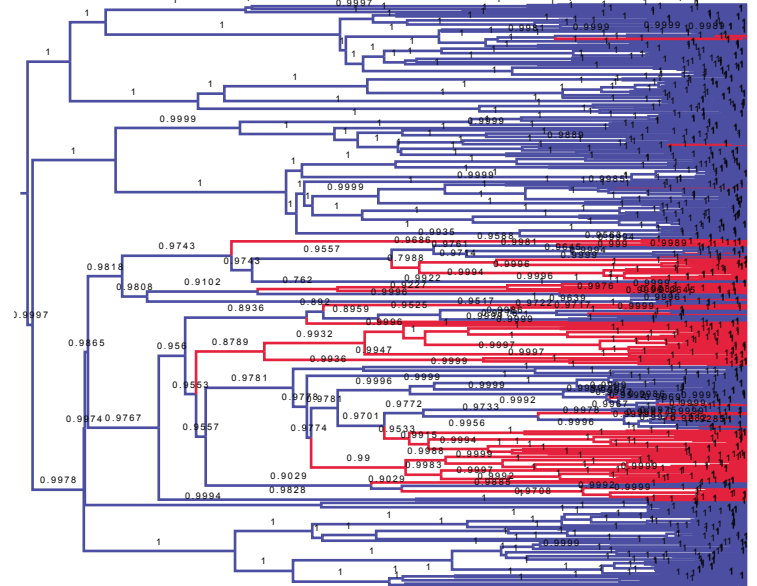


Simulation 18 BEAST reconstruction

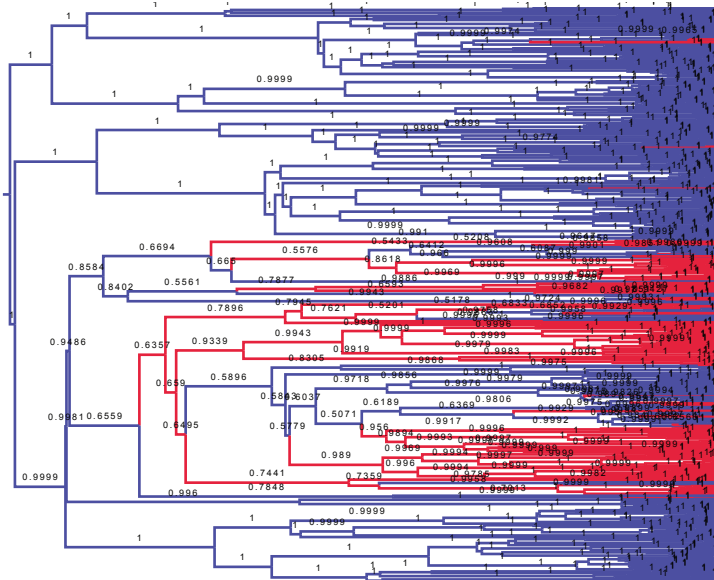
BEAST strict clock Mk1



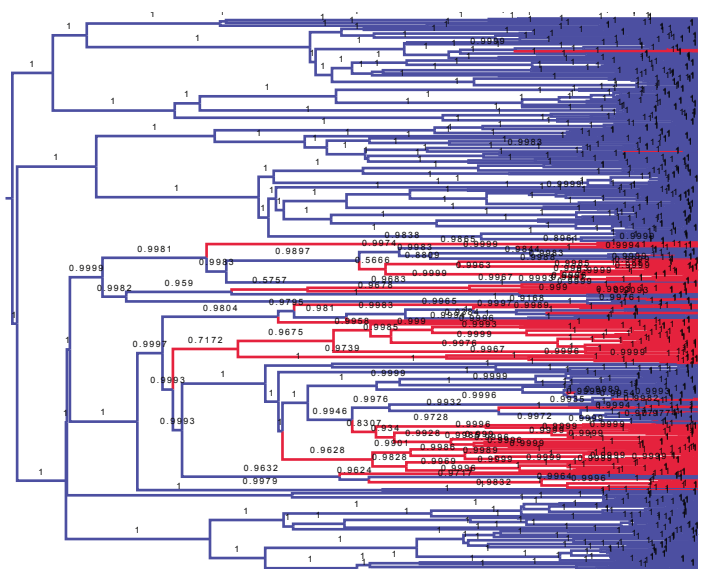
BEAST strict clock Mk2



BEAST random local clock Mk1

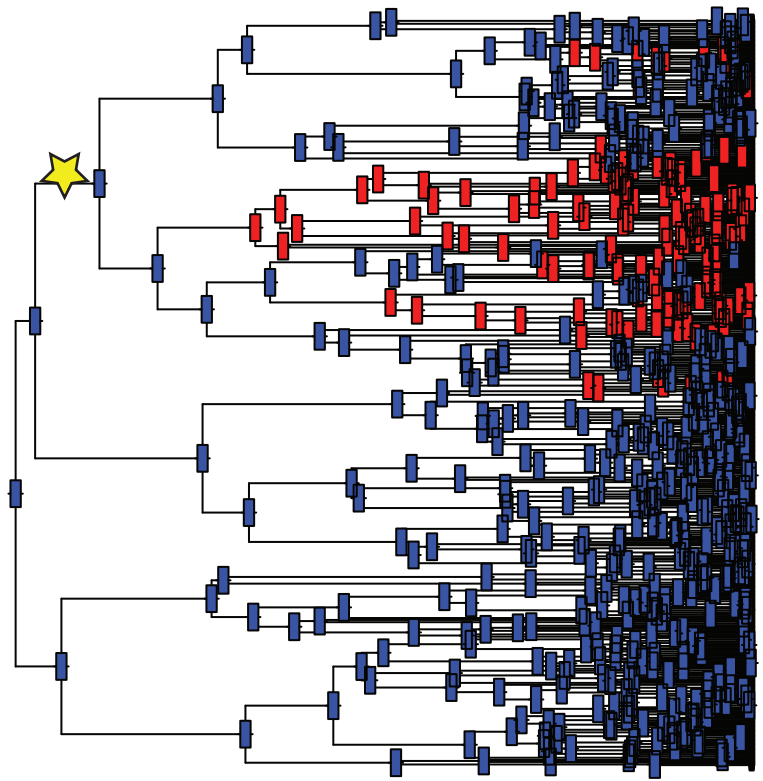


BEAST random local clock Mk2

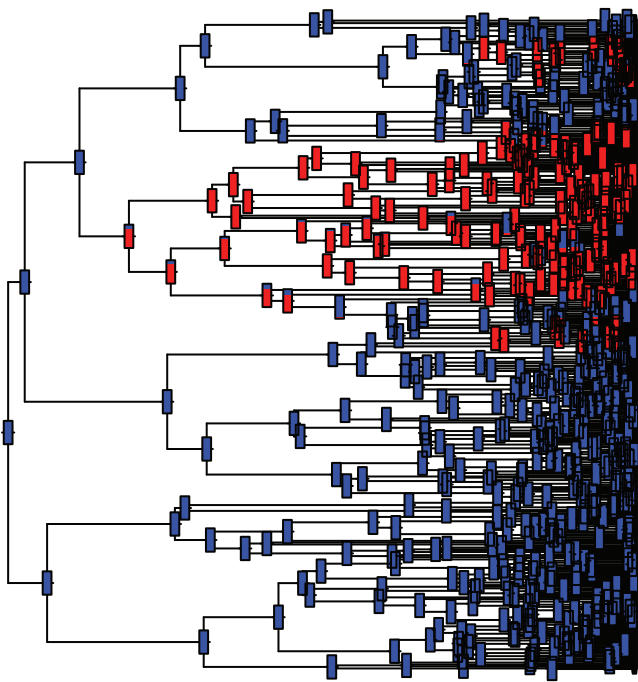


Simulation

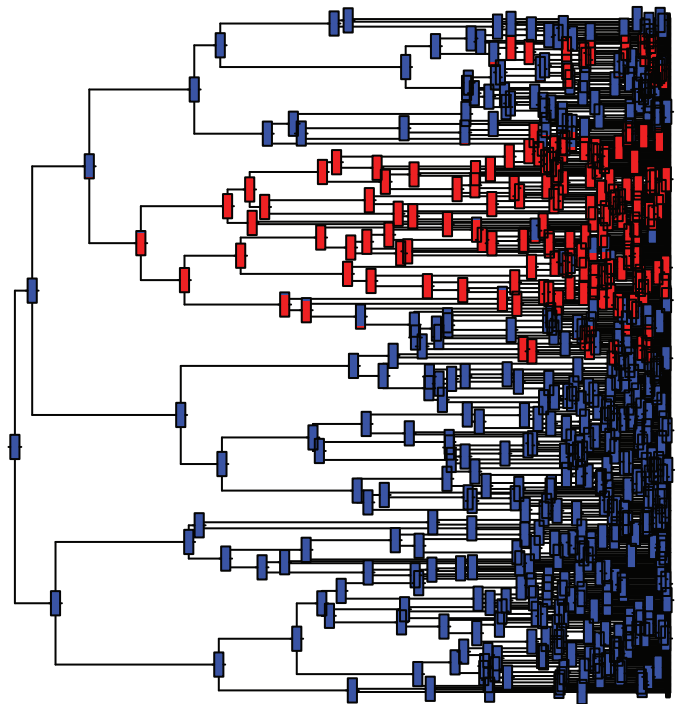
Simulation 19
heterotachy and
asymmetry (uneven)



ace Mk1

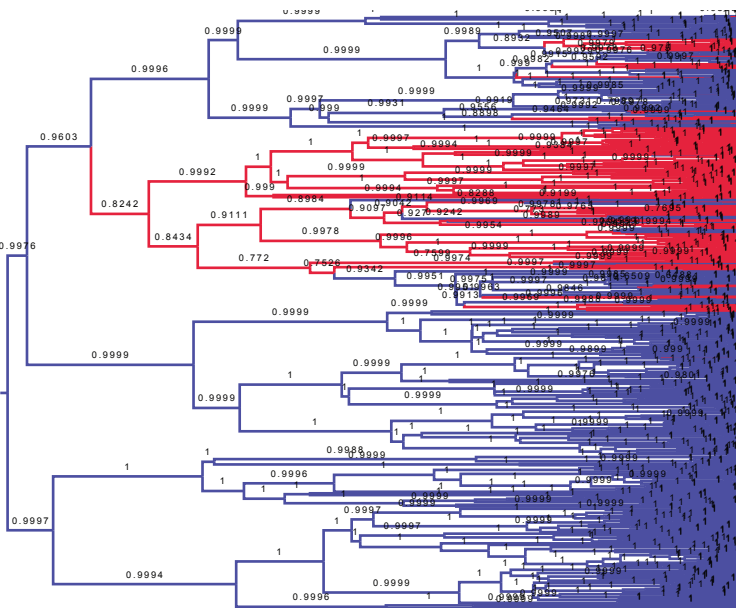


ace Mk2

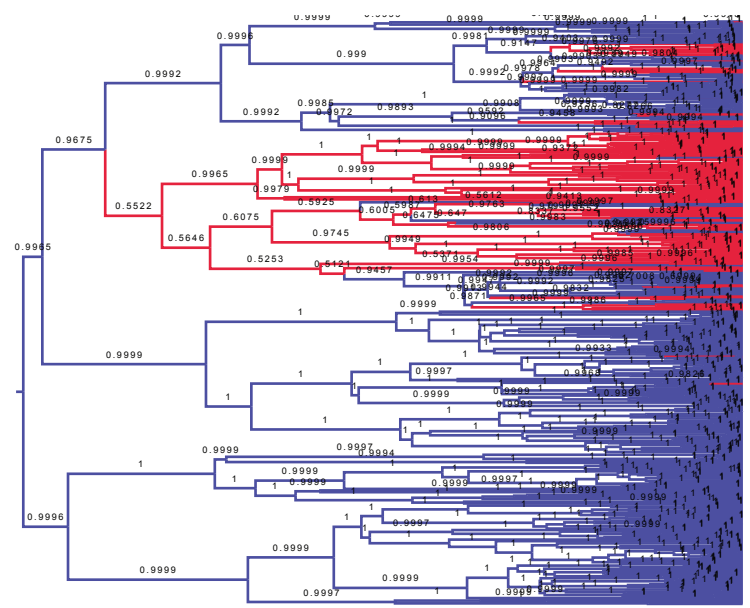


Simulation 19 BEAST reconstructions

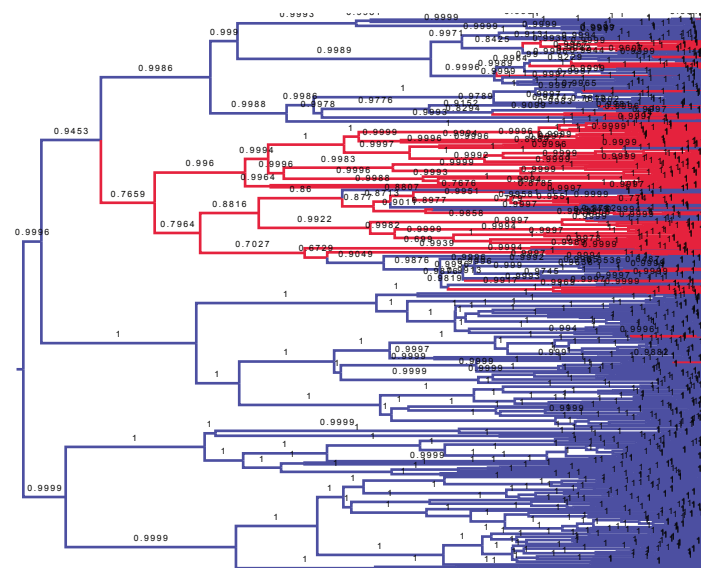
BEAST strict clock Mk1



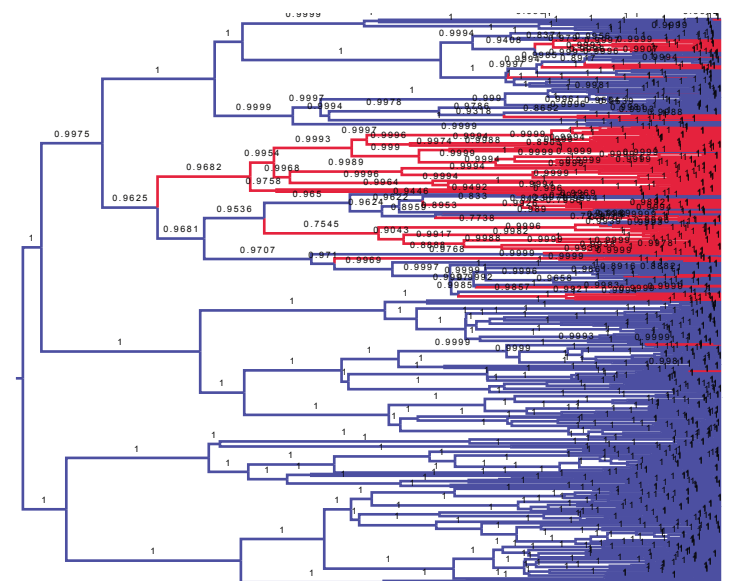
BEAST strict clock Mk2



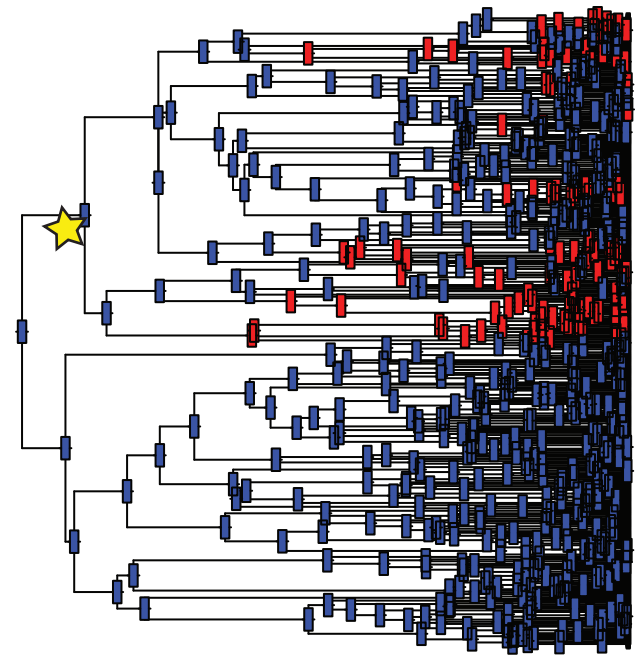
BEAST random local clock Mk1



BEAST random local clock Mk2

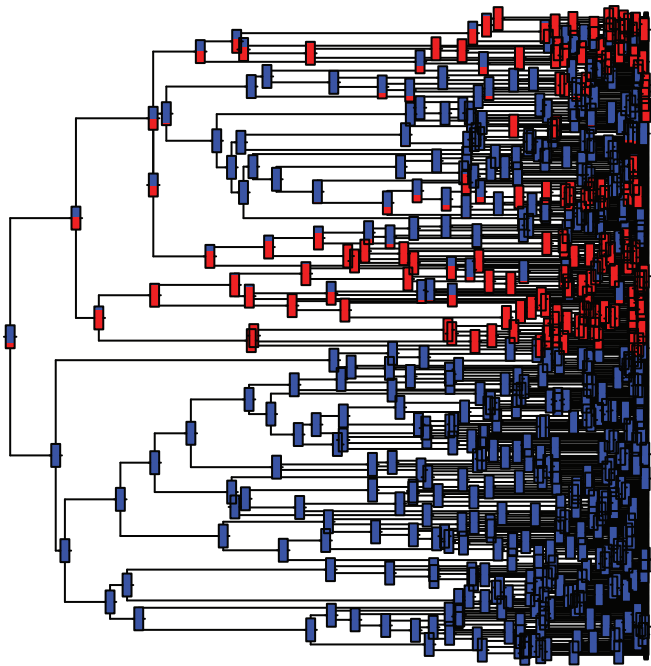


Simulation

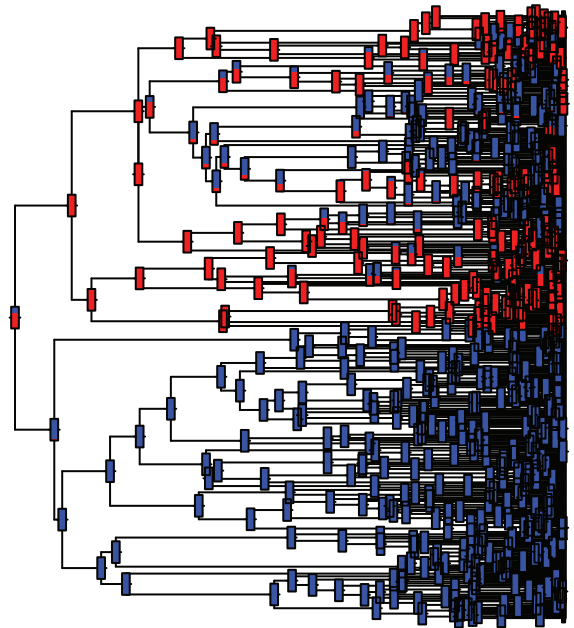


Simulation 20
heterotachy and
asymmetry (uneven)

ace Mk1

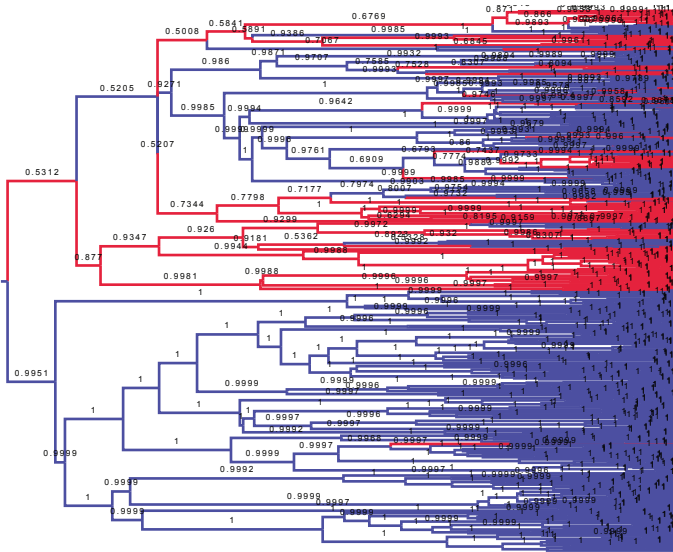


ace Mk2

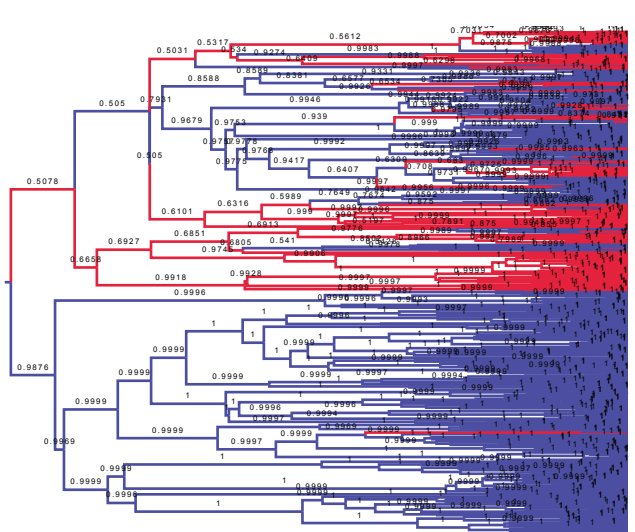


Simulation 20 BEAST reconstructions

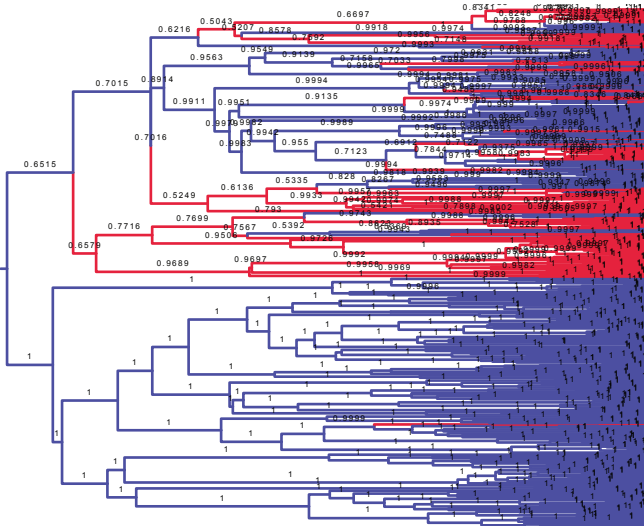
BEAST strict clock Mk1



BEAST strict clock Mk2



BEAST random local clock Mk1



BEAST random local clock Mk2

