









Based on the likelihood ratio test, *episodic diversifying selection* has acted on **4 sites** in this dataset ( $p \leq 0.1$ ).

MEME analysis (v3.0) was performed on the alignment from /Users/sergei/Dropbox/Talks/VEME-current/data/WestNileVirus\_NS3.fas using HyPhy v2.5.40.

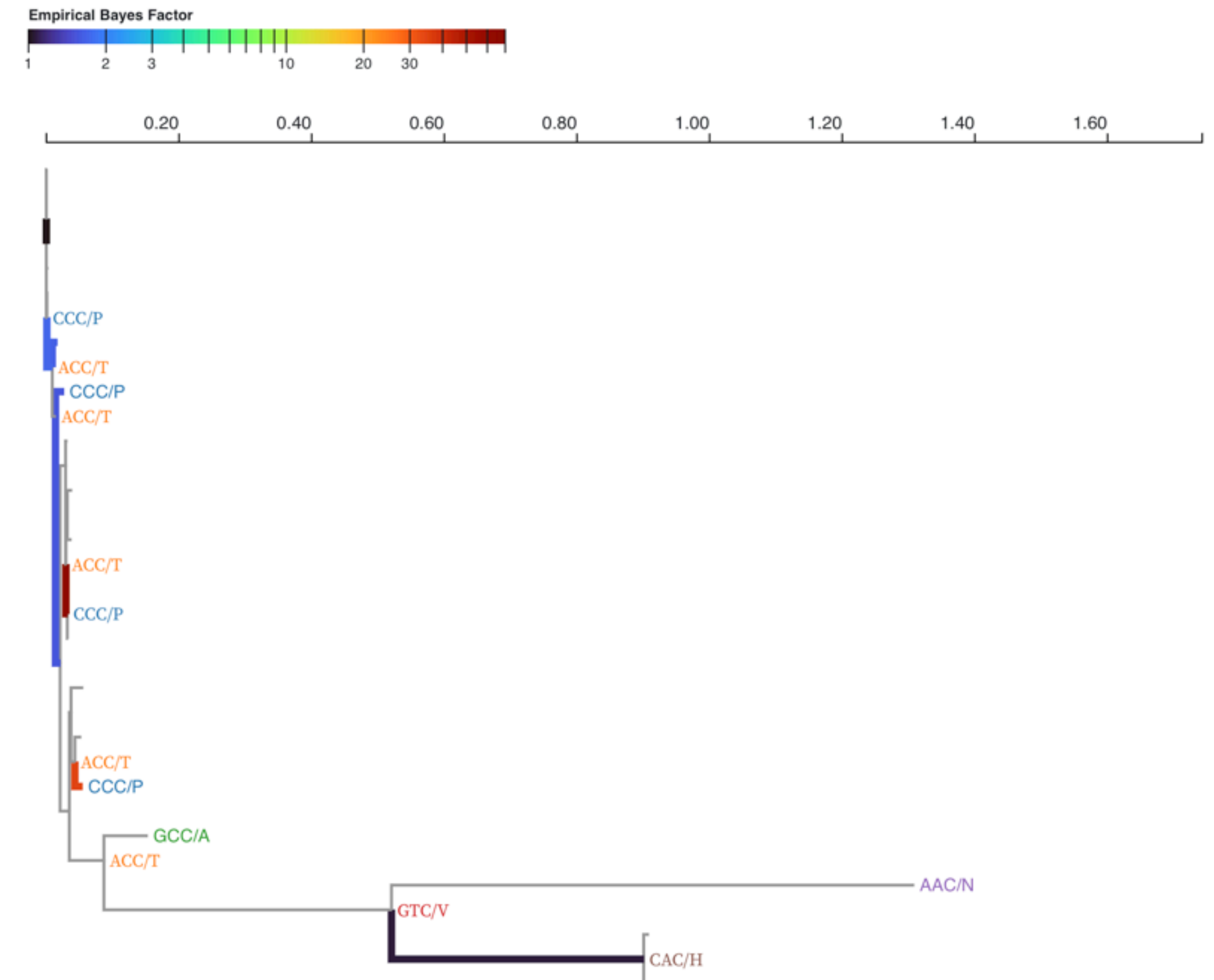
p-value threshold

**Suggested citation:** Detecting Individual Sites Subject to Episodic Diversifying Selection. *PLoS Genet* 8(7): e1002764.

<b>19</b> sequences in the alignment		<b>619</b> codon sites in the alignment		<b>1</b> partitions	
<b>33</b> median branches/partition used for testing		<b>N/A</b> bootstrap replicates		<b>4</b> sites subject to episodic diversifying selection	
<b>0.75</b> median branches with support for selection/selected site		<b>6</b> sites with variable $\omega$ across branches			

**Table 1.** Detailed site-by-site results from the MEME analysis

Part.	Codon	$\alpha$	$\beta^-$	$p^-$	$\beta^+$	$p^+$	LRT	-p-value	# branches under selection	MEME LogL	FEL LogL	Variation p
1	249	0	0	0	2.708	1	7.883	0.009	0	-34.231	-34.232	1
1	557	0.234	0	0.965	140.484	0.035	5.517	0.029	1	-17.698	-14.167	0.029
1	521	0.922	0	0.961	103.466	0.039	3.6	0.078	1	-17.268	-14.308	0.052
1	87	1.972	0	0.948	29.804	0.052	3.455	0.084	1	-23.521	-16.735	0.001



```
hyphy meme --alignment data/WestNileVirus_NS3.fas
```

Based on the likelihood ratio test, *episodic diversifying selection* has acted on **6** sites in this dataset ( $p \leq 0.1$ ).

MEME analysis (v3.0) was performed on the alignment from /Users/sergei/Dropbox/Talks/VEME-current/data/spike.fas using HyPhy v2.5.40.

p-value threshold

0.1

Update

**Suggested citation:** Detecting Individual Sites Subject to Episodic Diversifying Selection. *PLoS Genet* 8(7): e1002764.

118

sequences in the alignment

1273

codon sites in the alignment

1

partitions

162

median branches/partition used for testing

N/A

bootstrap replicates

6

sites subject to episodic diversifying selection

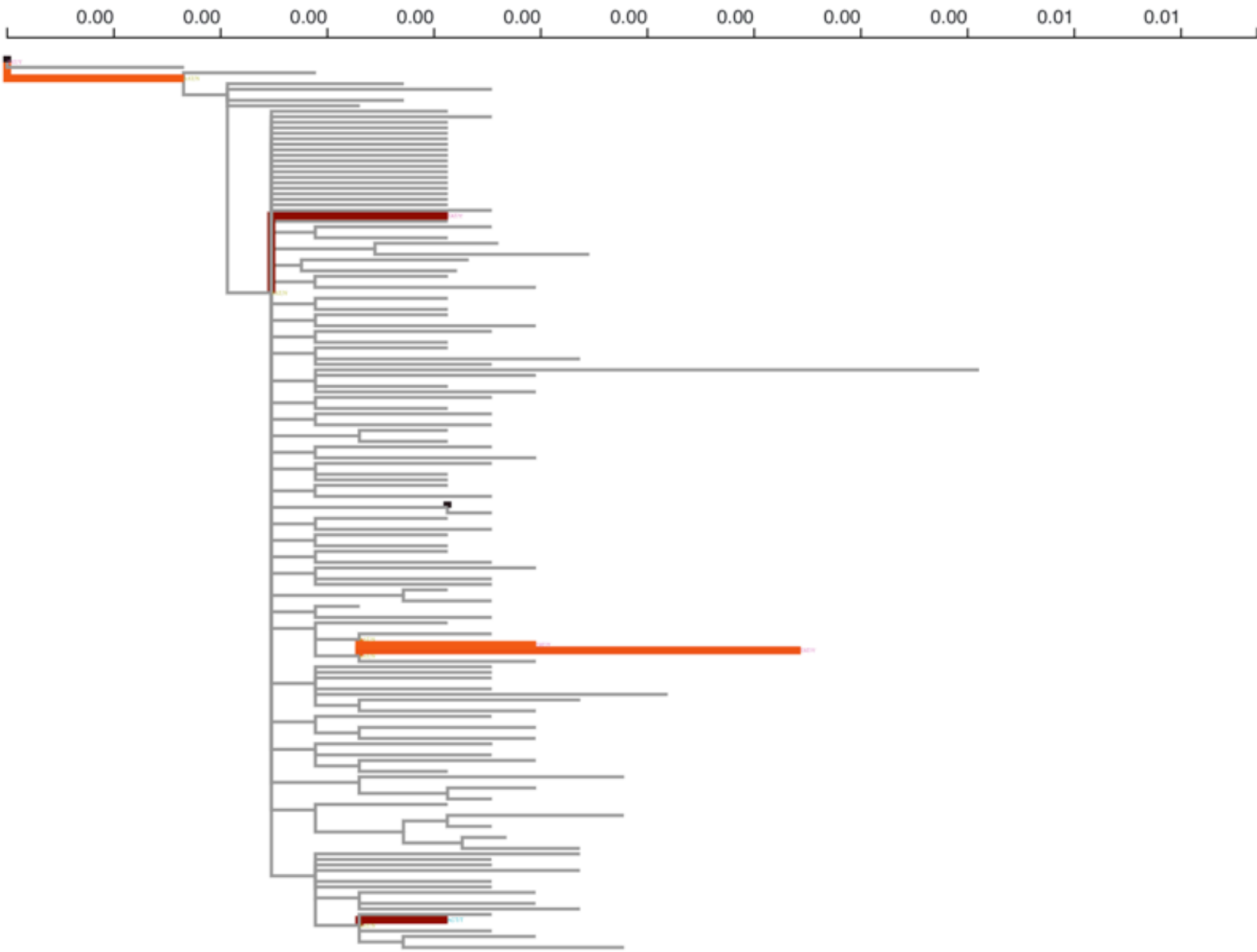
3.00

median branches with support for selection/selected site

3

sites with variable  $\omega$  across branches

Codon	$\alpha$	$\beta^-$	$p^-$	$\beta^+$	$p^+$	LRT	-p-value	# branches under selection	MEME LogL	FEL LogL	$\chi^2$
1	1.213	0.543	0.994	2,732.12	0.006	9.76	0.003	1	-19.143	-14.262	
1,243	0	0	0.983	552.73	0.017	8.846	0.005	2	-23.278	-19.431	
452	0	0	0.01	14.48	0.99	8.771	0.005	5	-36.485	-36.486	
470	3.168	0.727	0.994	10,000	0.006	8.012	0.008	1	-24.317	-19.832	
501	0.004	0.002	0.925	343.752	0.075	5.017	0.037	5	-37.067	-36.202	
157	0	0	0.01	7.313	0.99	3.708	0.074	4	-29.546	-29.547	



```
hyphy meme --alignment data/spike.fas --tree data/spike.tree
```