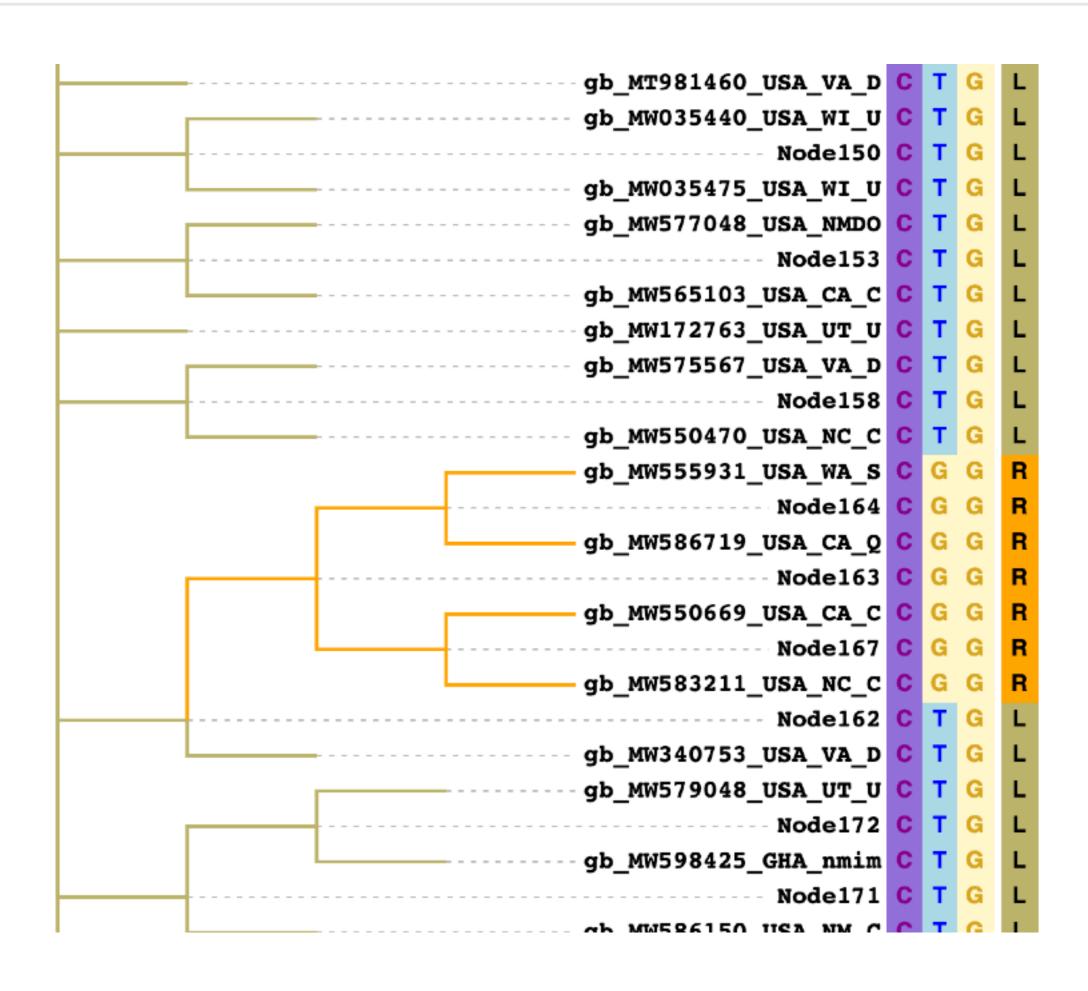# Mapping substitutions with SLAC

- SLAC capable of detecting selection, is fast, but generally lacks power

- It provides a number of intuitive metrics for interpreting selection results

- SLAC recovers ancestral states and allows one to "map" evolutionary history onto a tree.

```
hyphy slac --alignment data/spike.fas --tree data/spike.tree --branches Internal
```

Partition	Site	ES	EN	S	N	P[S]	dS	dN	dN-dS	P [dN/dS > 1]	P [dN/dS < 1]	Total branch length
1	452	1.75	1.25	0.00	1.00	0.584	0.00	0.801	49.6	0.416	1.00	0.0162
1	367	0.996	2.00	0.00	2.00	0.332	0.00	0.998	61.8	0.446	1.00	0.0162

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