



SARS COV 2 VARIANTS

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SARS CoV Variants – February 22, 2021

Variant	Predominate Lineage	Mutation
UK	B.1.1.7	23 mutations (6 are synonymous mutations, 14 are non-synonymous mutations and three are deletions)
	B.1.1.7	N501Y
	B.1.1.7	69-70del
	B.1.1.7	P681H
South Africa	B.1.351	N501Y.V2
		E484K
Brazil	P1 (descendent from B.1.128) / P2	Unique combinatio of 17 unique aminio acid changes and 3 deletions, K417T, E484K,and N501Y
	P2	E484K
Mink	Cluster 5 variant	Y453F, 69-70del, I692V and M1229I
USA California	B.1.426 (CAL.20C)	ORF1a: I4205V, ORF1b:D1183Y, S: S13I;W152C; L452R
Current worldwide	B.1	D614G

US COVID-19 Cases Caused by Variants

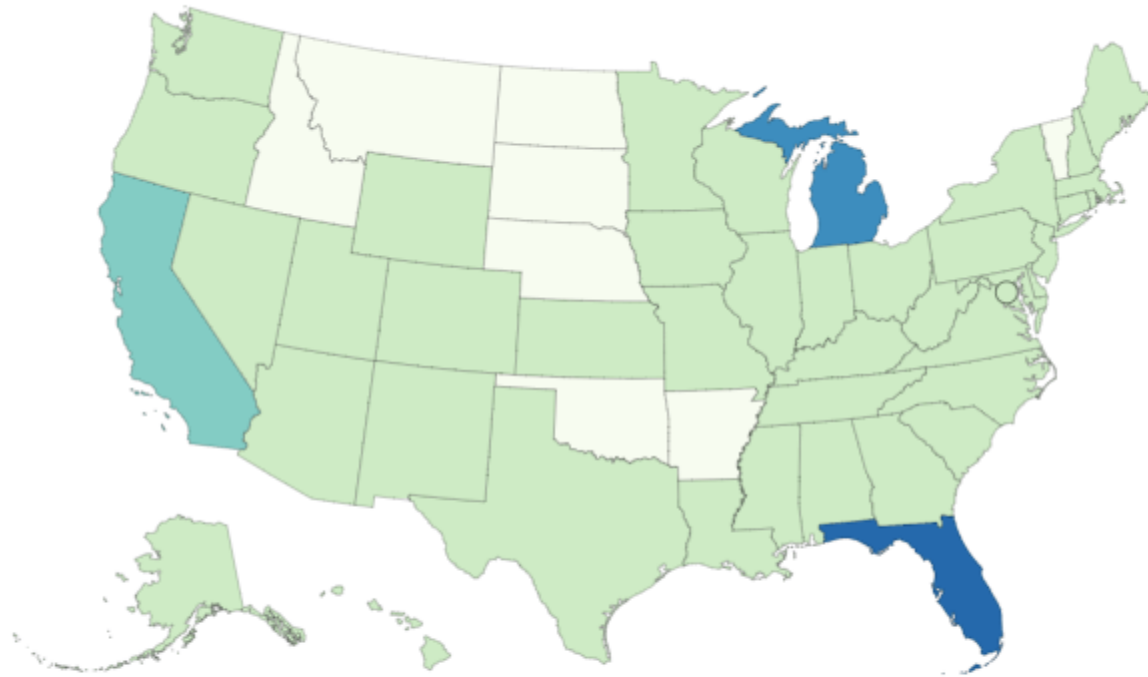
Updated Feb. 21, 2021

Languages ▾

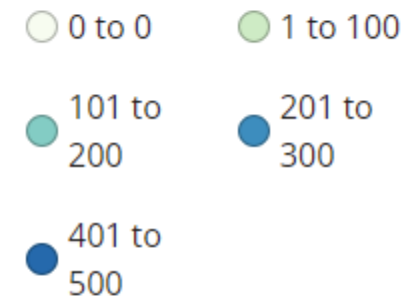
Print

Variant	Reported Cases in US	Number of States Reporting
B.1.1.7	1661	44
B.1.351	22	10
P.1	5	4

Emerging Variant Cases in the United States*†



Number of Cases



Filters

Variant B.1.1.7 ▾

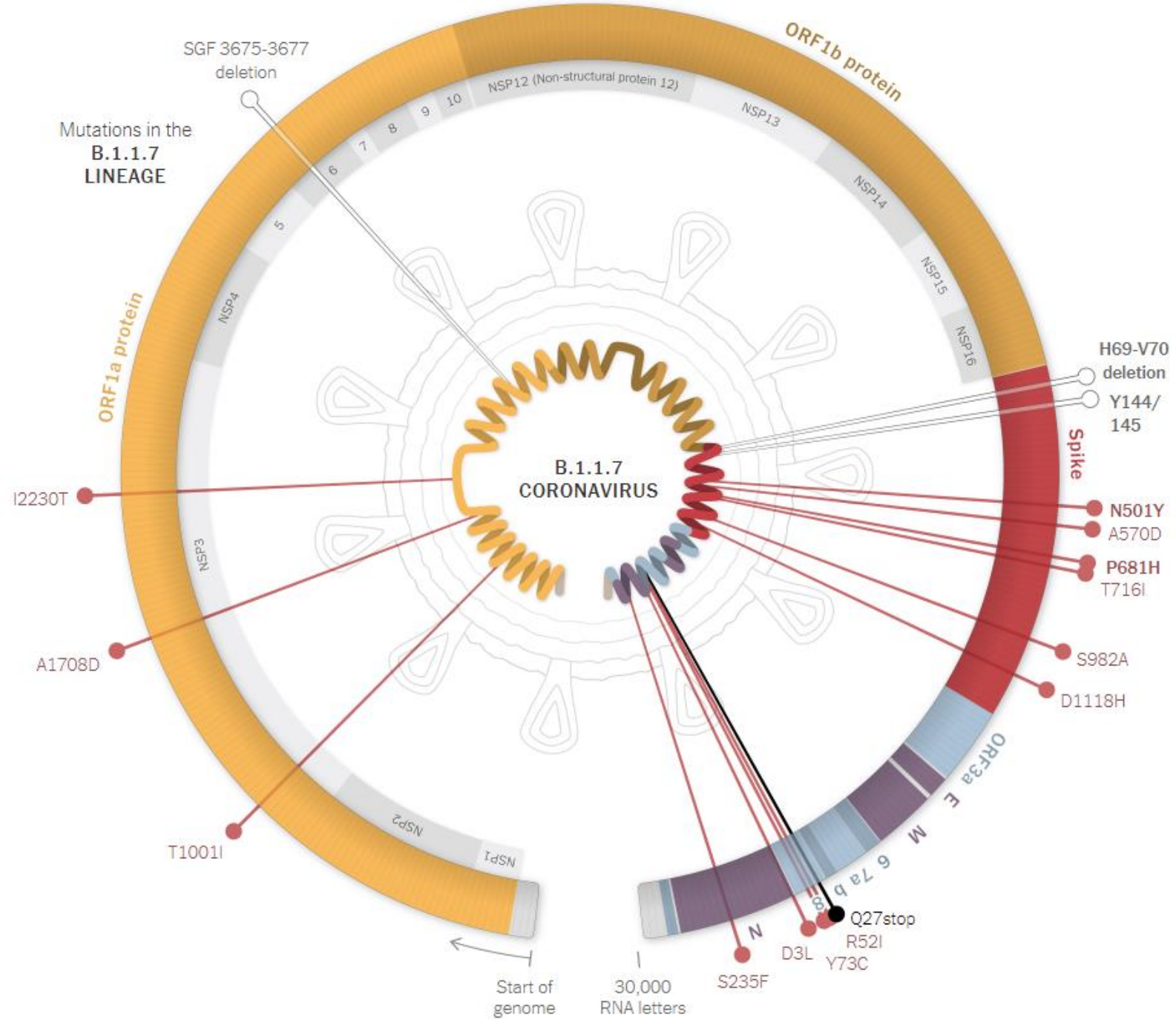
Territories AS GU MH FM MP PW PR VI



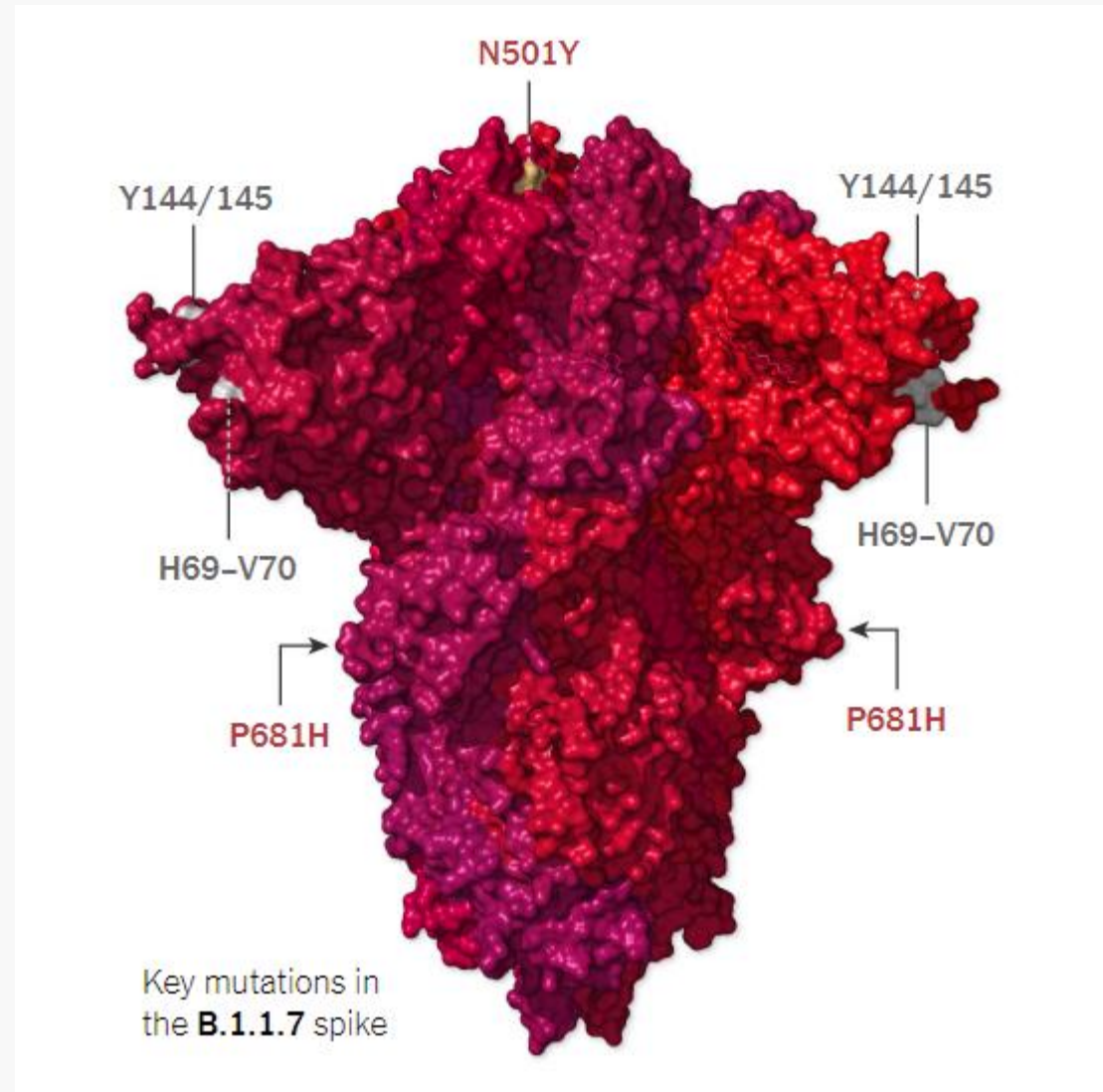


B.1.1.7

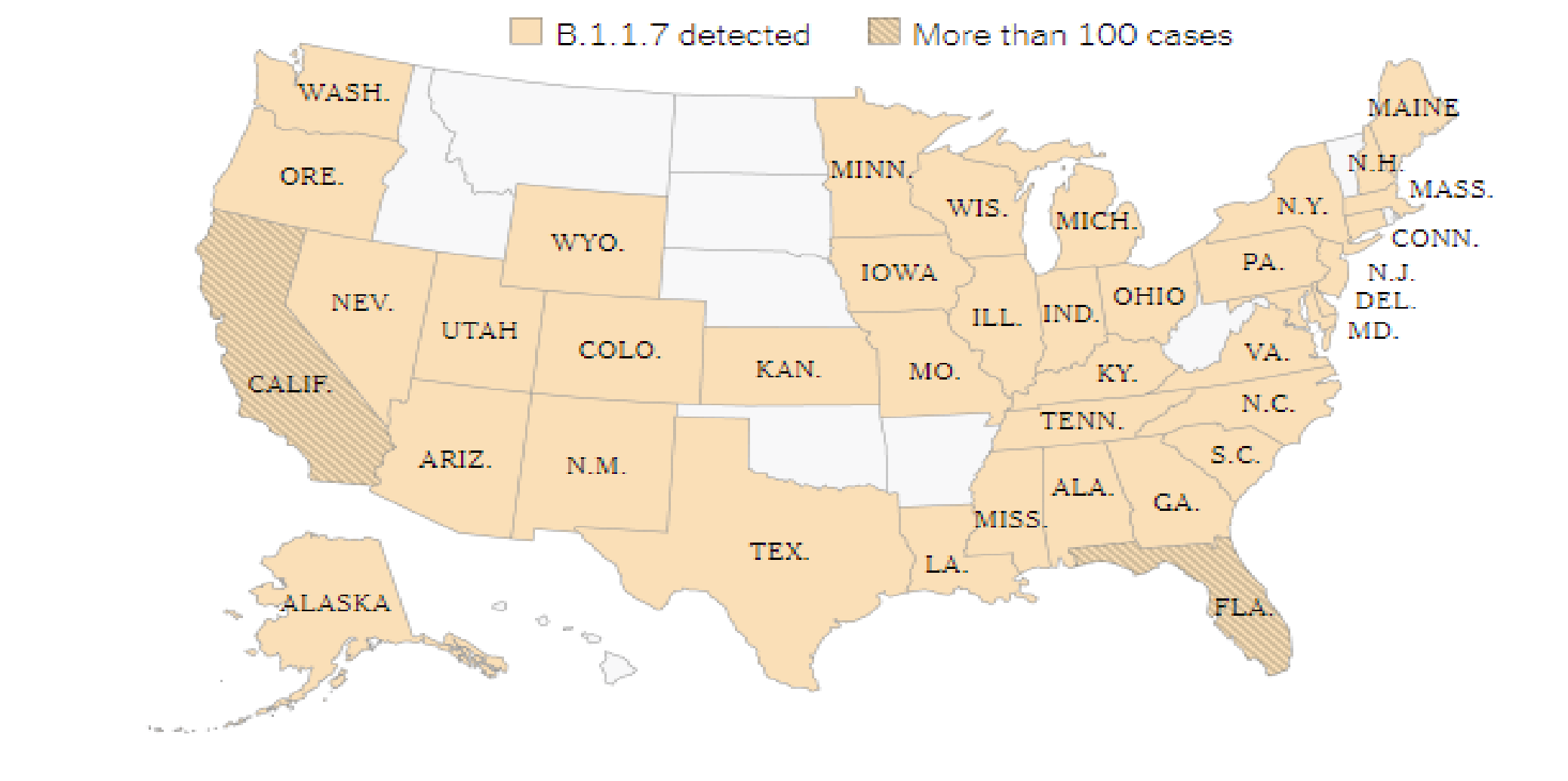




SARS CoV 2 B.1.1.7



B.1.1.7 in the US

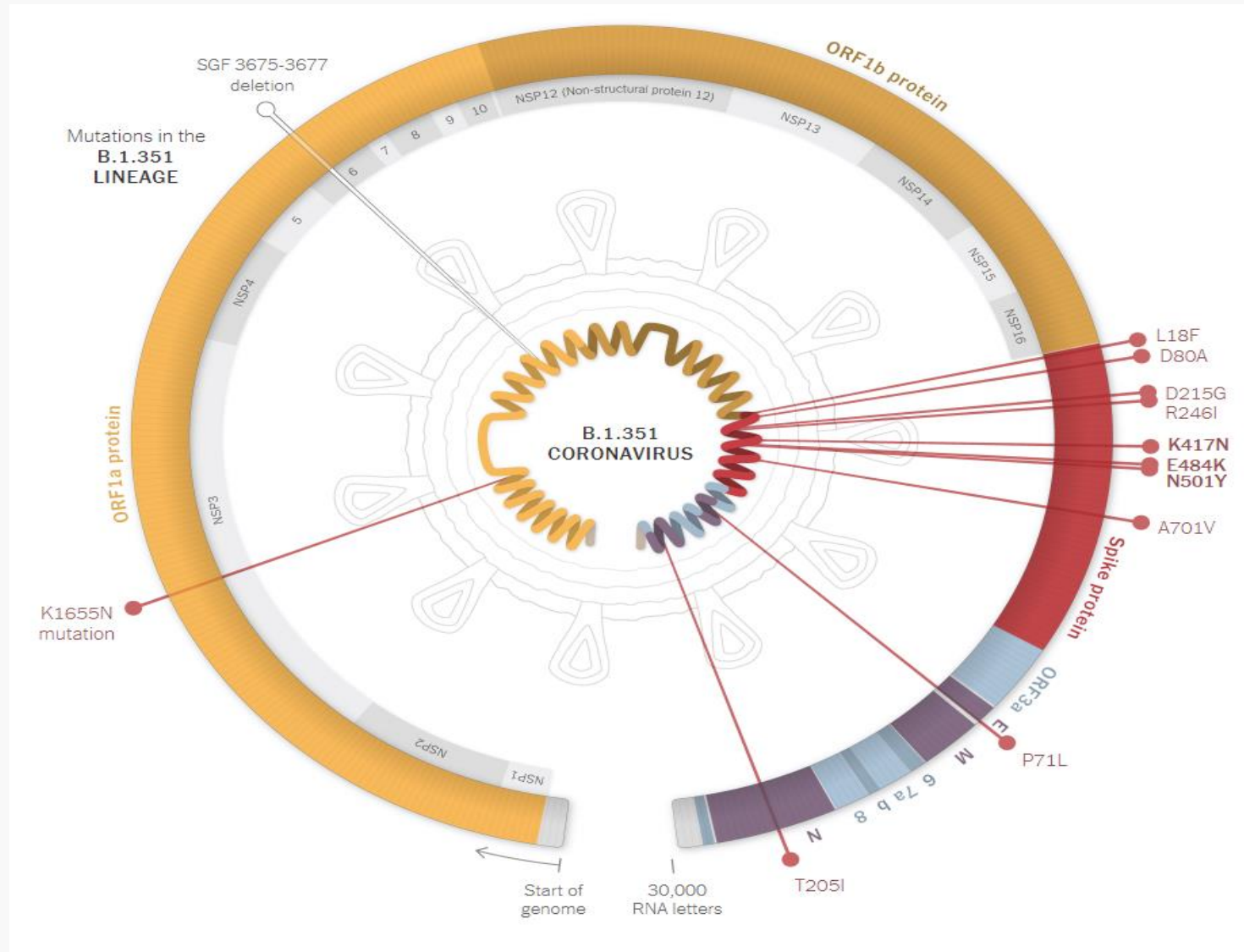




B.1.351



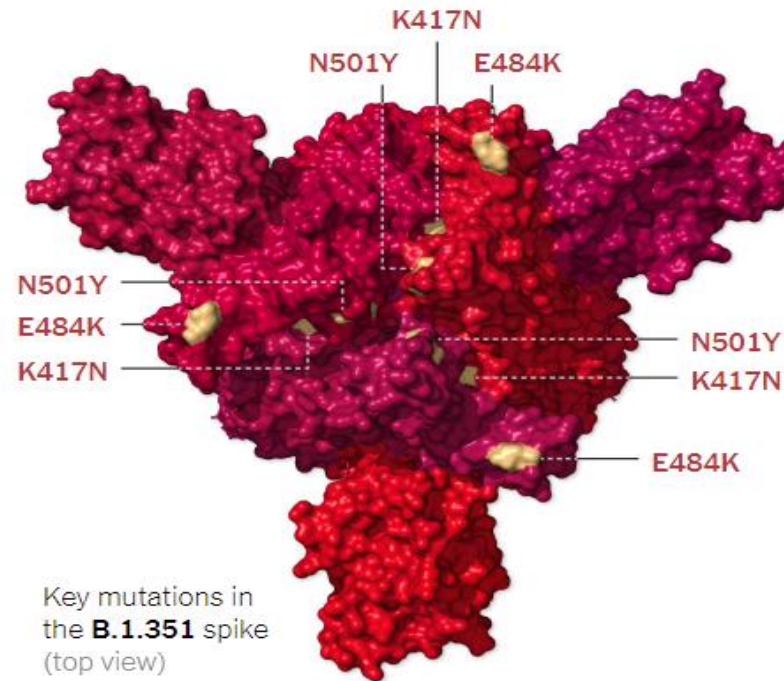
B.1.351 Mutation



KEY MUTATIONS IN B.1.351

Mutations near the tip of the spike protein include:

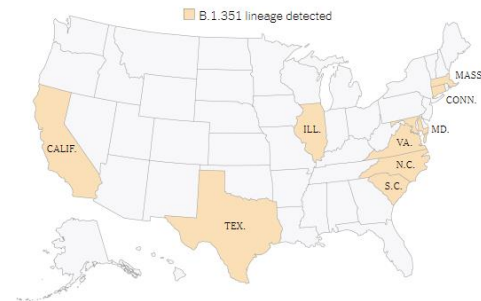
- **N501Y**, which helps the virus latch on more tightly to human cells. This mutation also appears in the B.1.1.7 and P.1 lineages.
- **K417N**, which also helps the virus bind more tightly to human cells.
- **E484K**, which may help the virus evade some kinds of antibodies.



B.1.351 Location



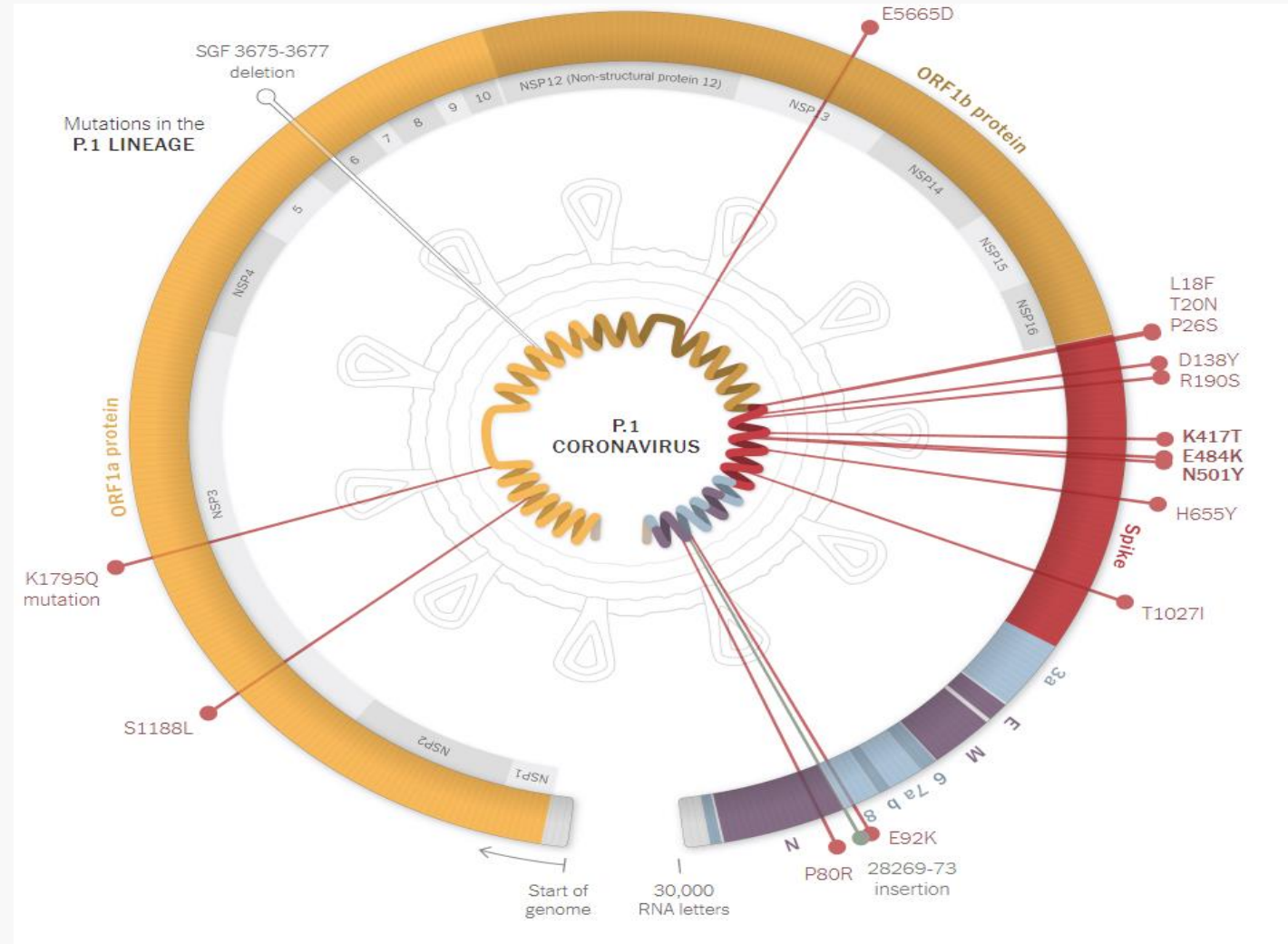
It has been detected in at least nine states, including in a Connecticut resident who was [hospitalized in New York City](#):





B.P.1

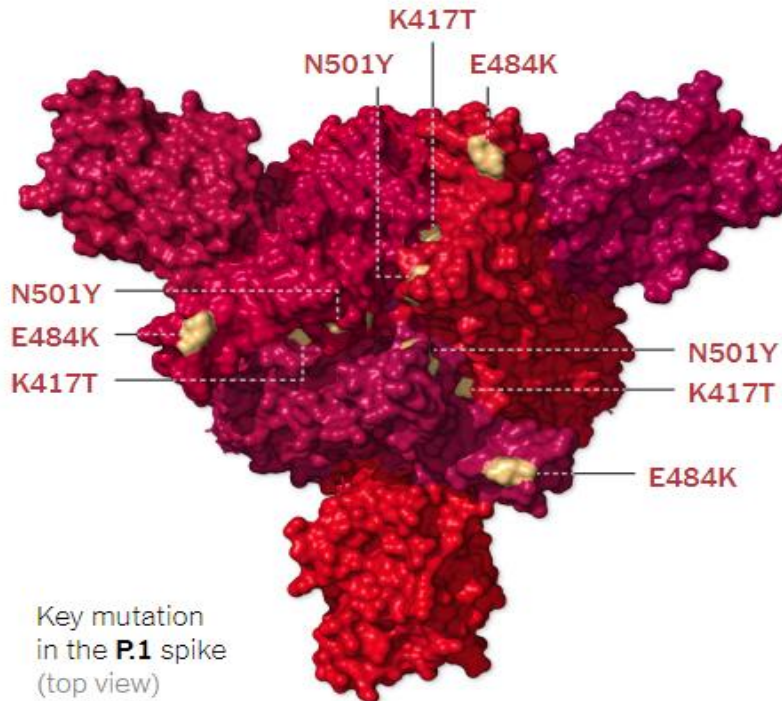
P.1. Mutations



KEY MUTATIONS IN P.1

Key mutations in the spike protein are similar to those in the B.1.351 lineage, although they arose independently:

- **N501Y**, which helps the virus latch on more tightly to human cells. This mutation also appears in the B.1.1.7 and B.1.351 lineage
- **K417T**, which is the same site as the K417N mutation in the B.1.351 lineage. It may also help the virus latch on tighter.
- **E484K**, which may help the virus evade some kinds of antibodies.

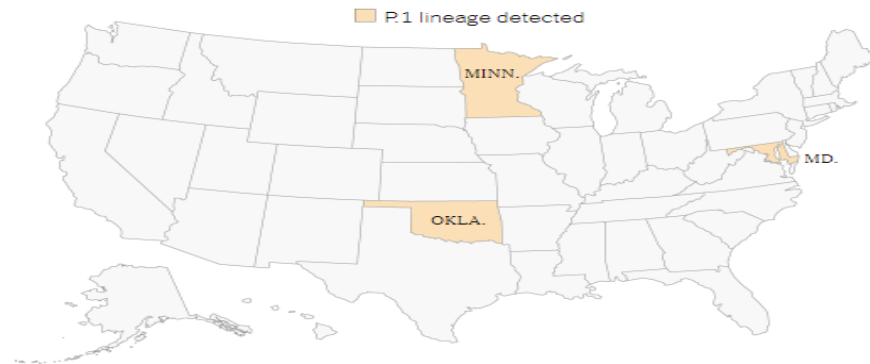


Key mutation
in the **P.1** spike
(top view)

P.1 Location



P.1 has been detected in two states: [Minnesota](#), [Oklahoma](#) and [Maryland](#).





THE END