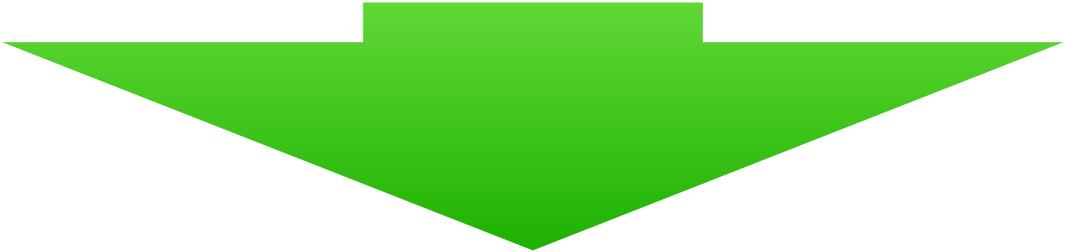
Decemb	er 2019	November 2020	May 2021	



"Neutral" evolution



 Up to Oct 2020, the evolution of SARS-CoV-2 in humans follows a mostly neutral pattern

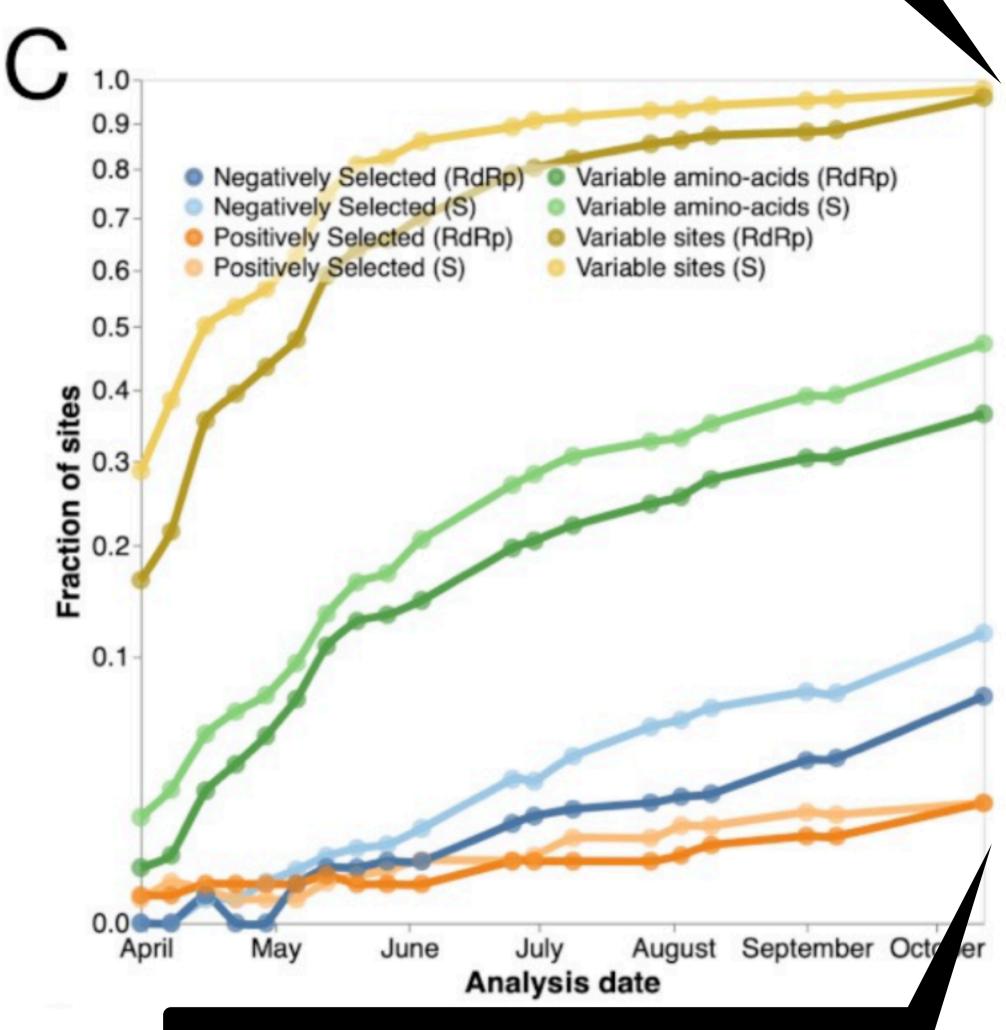
Naive hosts=>lack of selective pressure

Relative lack of meaningful diversity

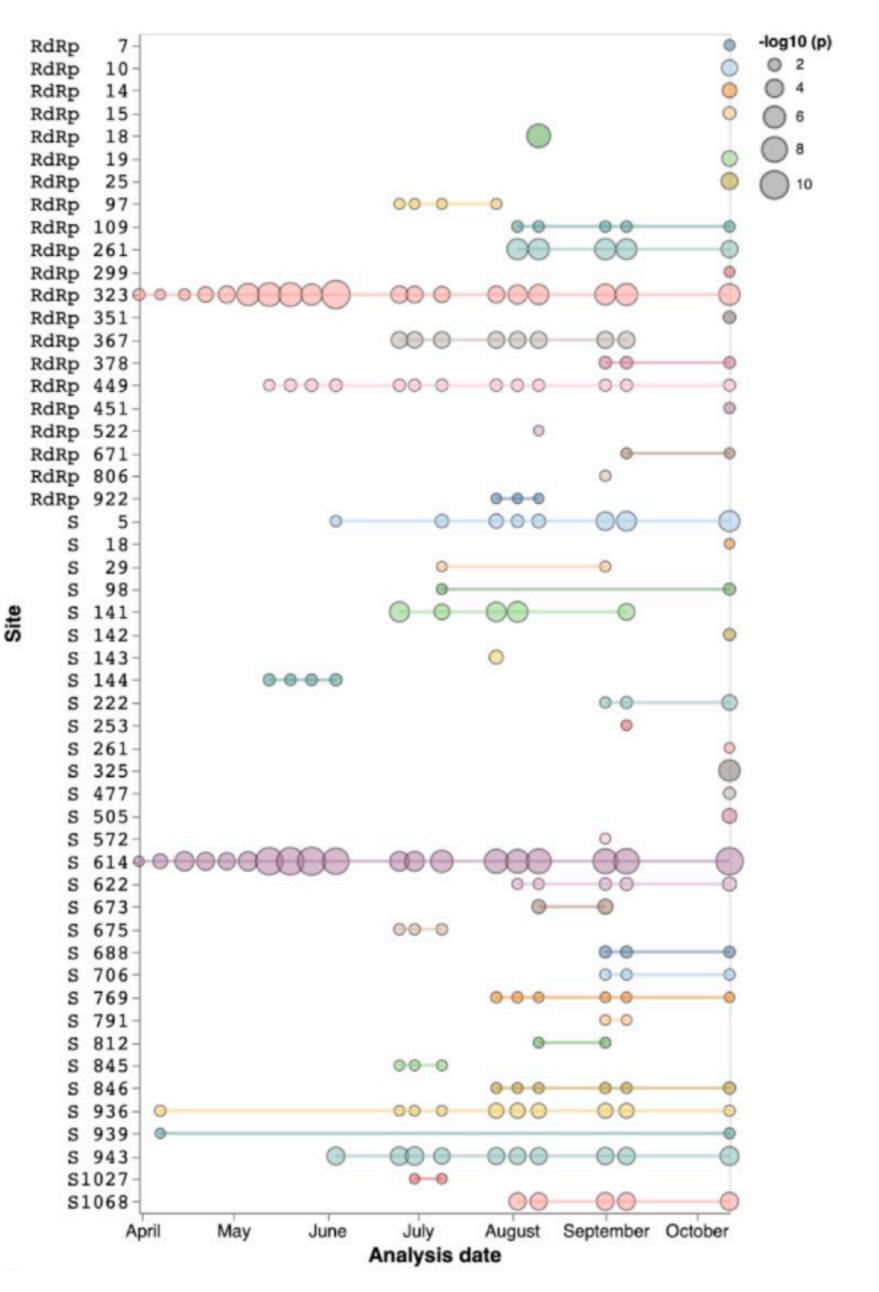
 Only a few sites exhibit signal for positive selection (~150,000 GISAID sequences)

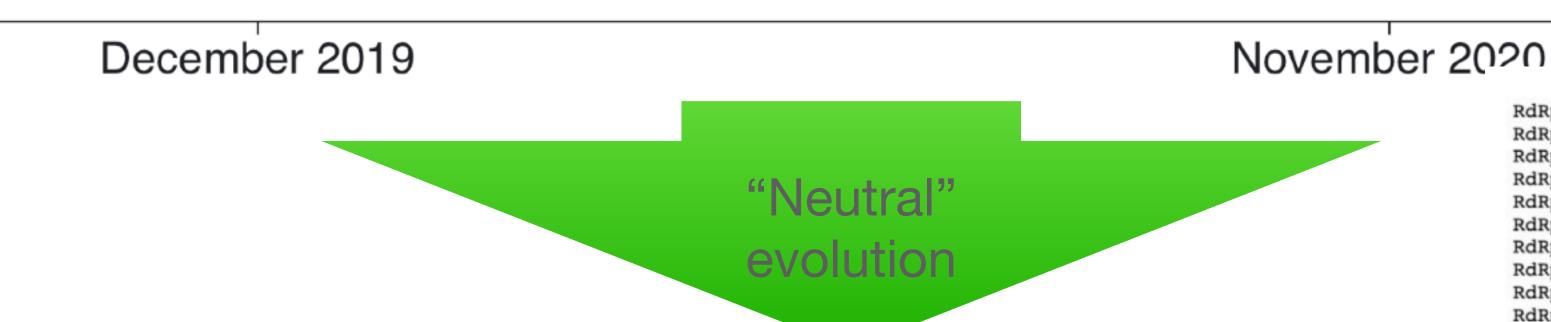
MacLean OA, Lytras S, Weaver S, Singer JB, Boni MF, Lemey P, et al. (2021) Natural selection in the evolution of SARS-CoV-2 in bats created a generalist virus and highly capable human pathogen. PLoS Biol 19(3): e3001115.

Lots of "raw" variation

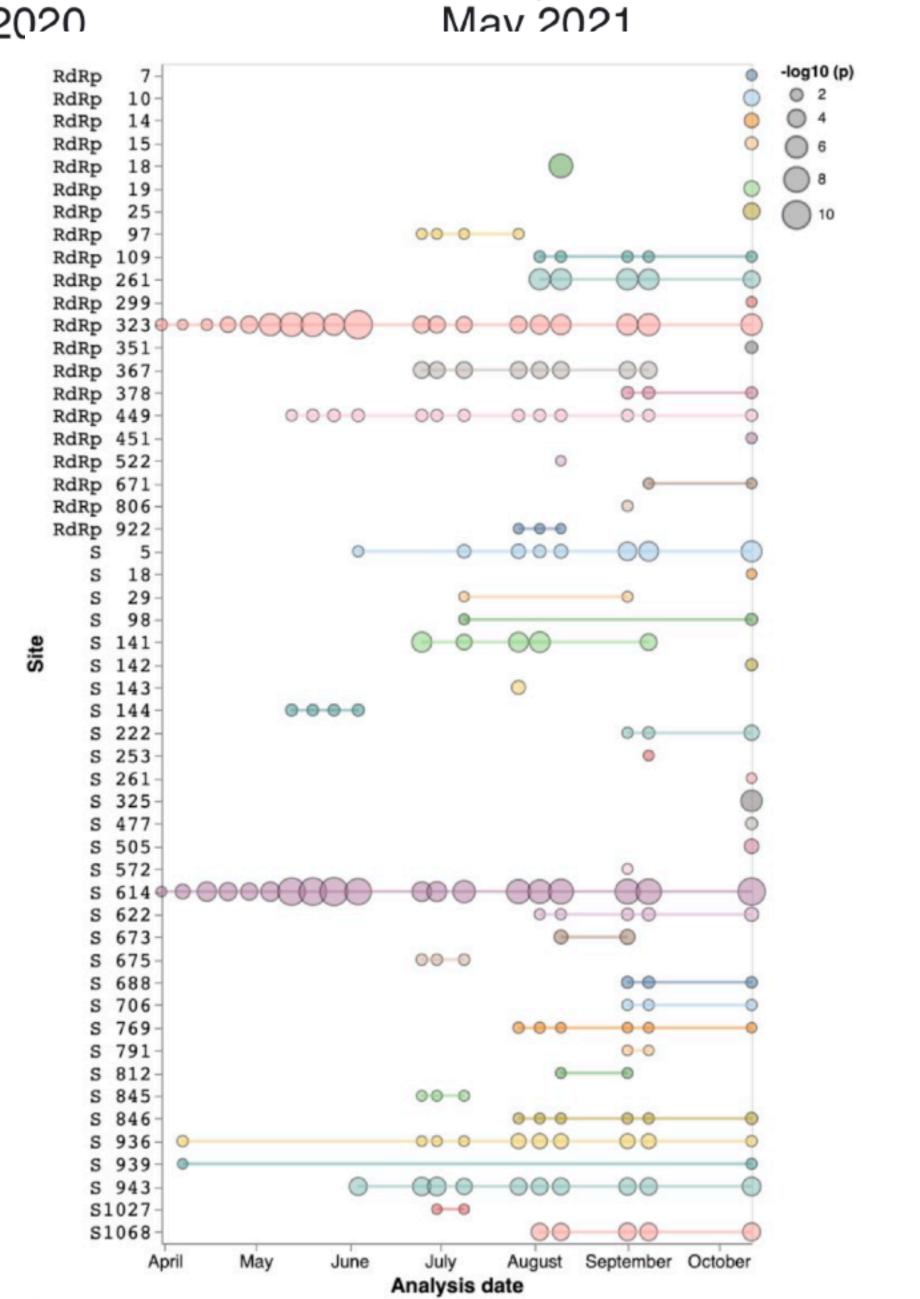


Little "informative" variation





- Up to Oct 2020, the evolution of SARS-CoV-2 in humans follows a mostly neutral pattern
- Naive hosts=>lack of selective pressure
- Relative lack of meaningful diversity
- Only a few sites exhibit signal for positive selection (~150,000 GISAID sequences)



December 2019

November 2020

May 2021

Selective shift,
501Y VOC