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SARS2-CoV-2 virus causing the COVID-19 disease lead to pandemic of worldwide proportions the effects of which are still present and felt today both socially and economically. As of present more than 607 million people have been infected of which the official death cases are 6.51 million. A lot of research has been done on the virus and many insights of its structure and reproduction cycle have been revealed yet the detailed mechanism and dynamics of entry into cells still remain unclear.

Herein we have studied the mechanism which the virus uses to infect the cells. We have taken advantage of the state of art real-time microscopy and labelled viral like particles, to measure the dynamics and to appreciate the mechanism of SARS2-CoV-2 entry into host cells. Additionally, we have compared the acquired dynamics to that of different variants of the virus to understand the dissimilarity in infectivity.