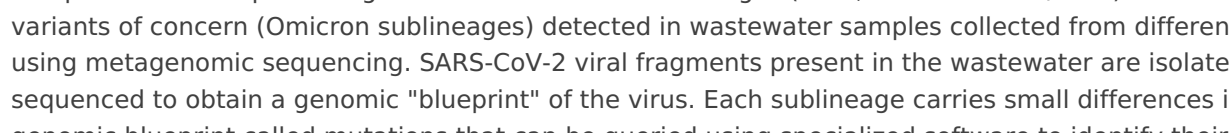


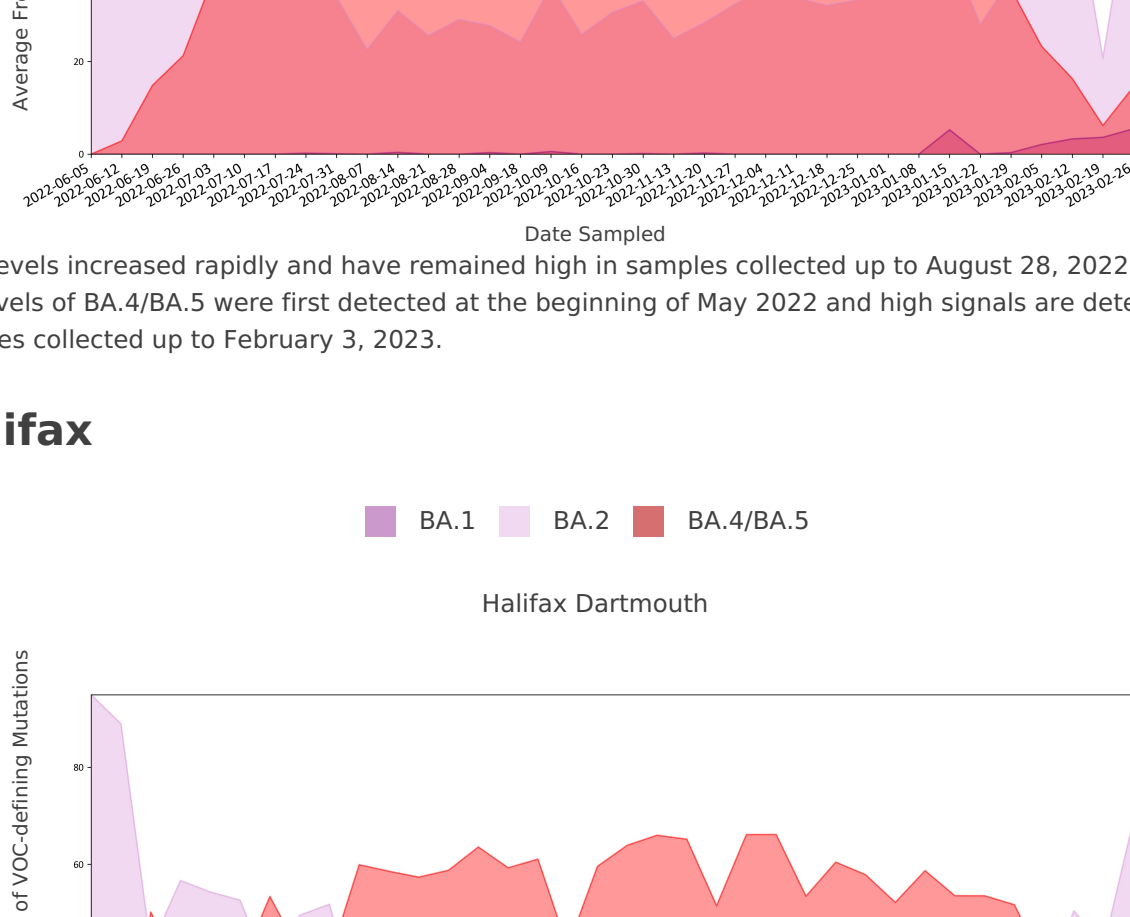
# Wastewater Sequencing Trend Report: Detection of SARS-CoV-2 Variants of Concern by Metagenomic Sequencing



## Longitudinal wastewater sequencing data ending 2023-03-22

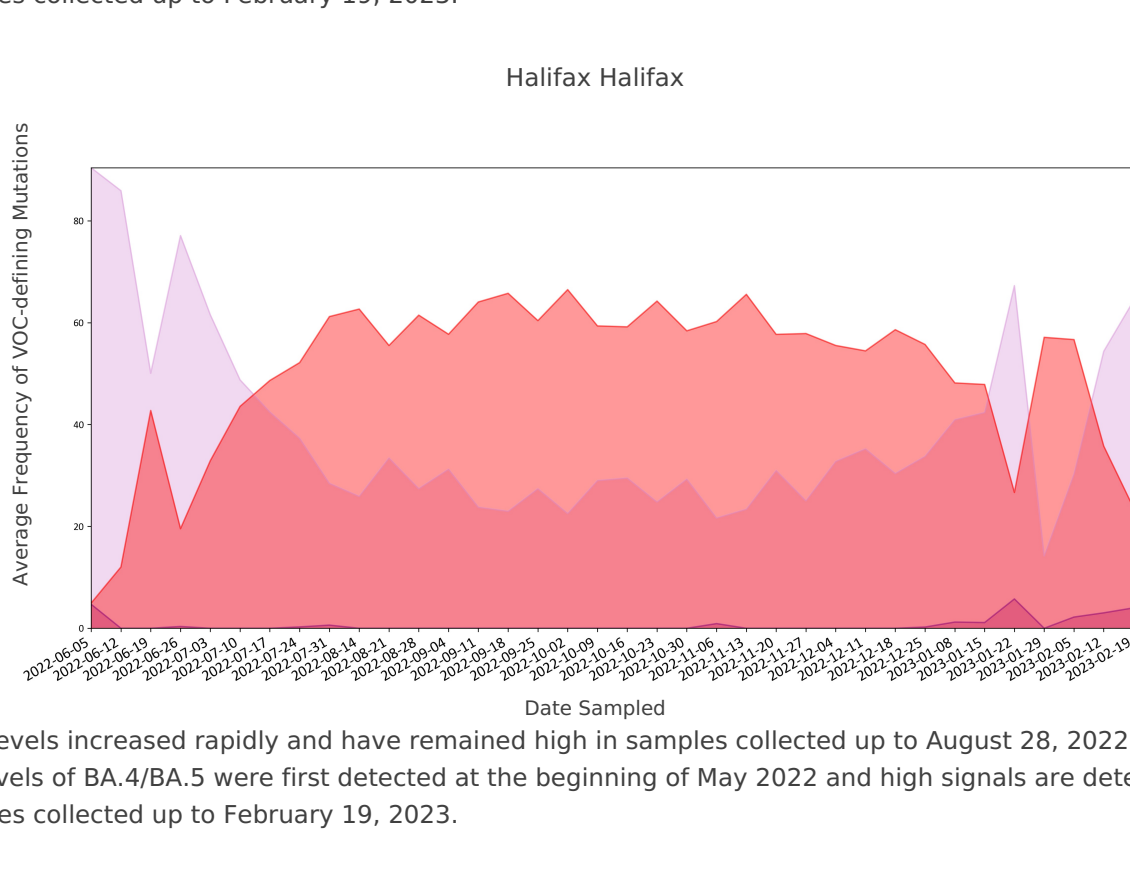
The plots show the percentage of Omicron and its sublineages (BA.1, BA.2 and BA.4/BA.5) SARS-CoV-2 variants of concern (Omicron sublineages) detected in wastewater samples collected from different sites using metagenomic sequencing. SARS-CoV-2 viral fragments present in the wastewater are isolated and sequenced to obtain a genomic "blueprint" of the virus. Each sublineage carries small differences in their genomic blueprint called mutations that can be queried using specialized software to identify their presence and abundance (BA.1, BA.2 and BA.4 or BA.5) present in the wastewater sample. The shaded areas in the plot show BA.1 in dark purple, BA.2 in light purple, BA.4 or BA.5 in red and where applicable, Alpha in blue. To correct for the shared ancestry of BA.2 and BA.4/BA.5 SARS-CoV-2 lineages, the average frequency of VOC-defining mutations for BA.4/BA.5 has been subtracted from BA.2.

### Edmonton

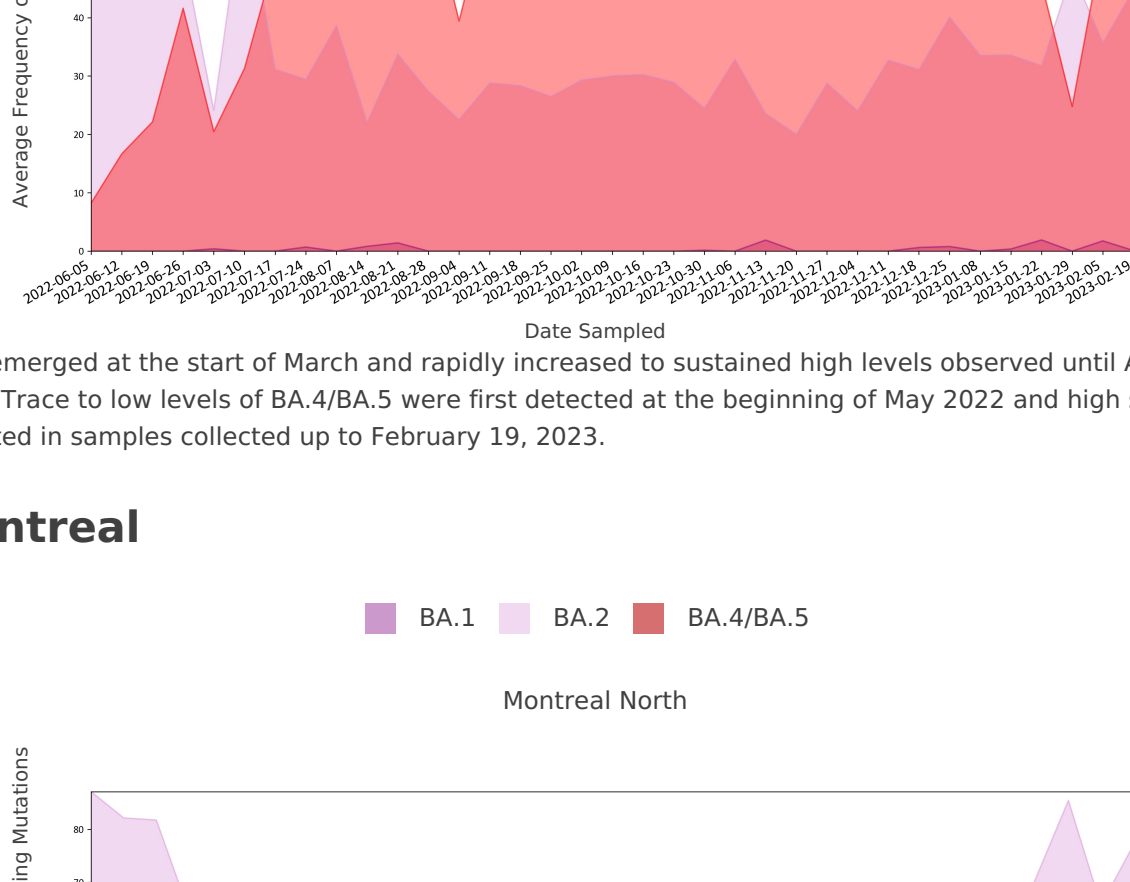


BA.2 levels increased rapidly and have remained high in samples collected up to August 28, 2022. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals are detected in samples collected up to February 3, 2023.

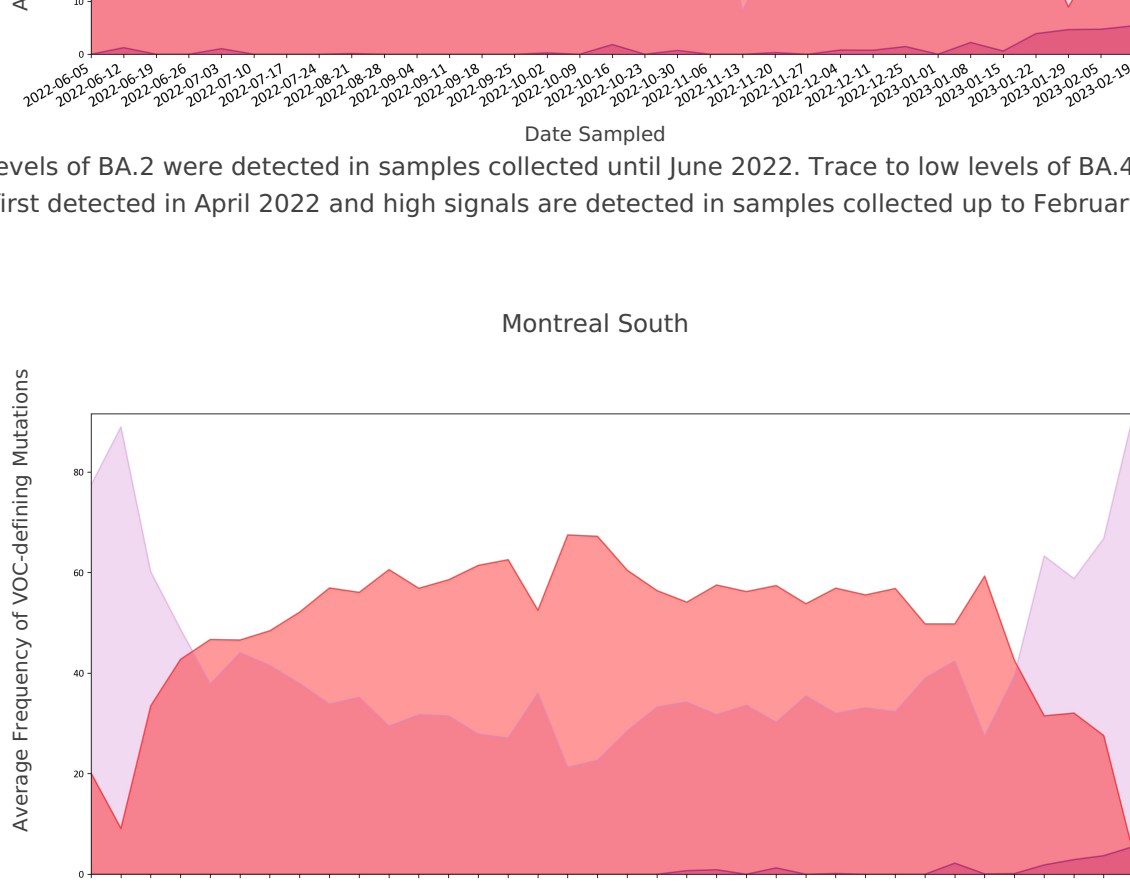
### Halifax



BA.2 levels increased rapidly and have remained high in samples collected up to August 28, 2022. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals are detected in samples collected up to February 19, 2023.

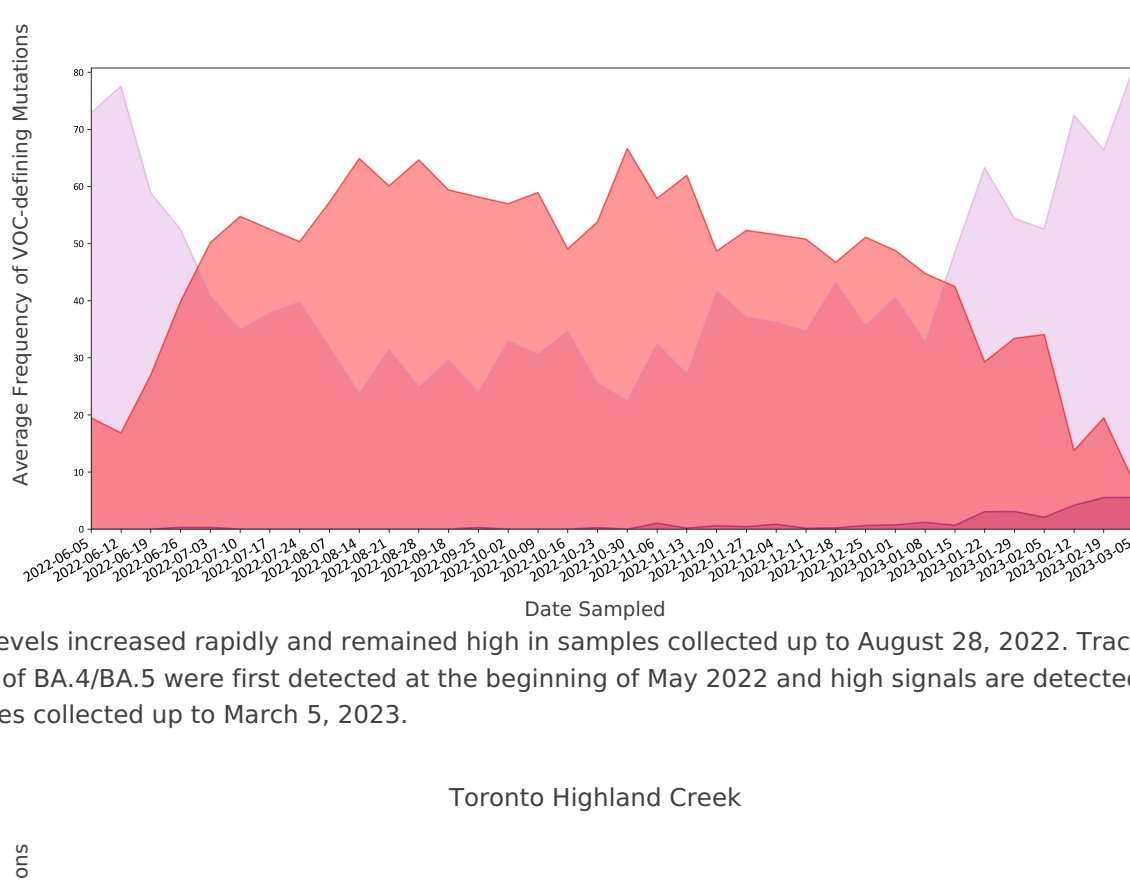


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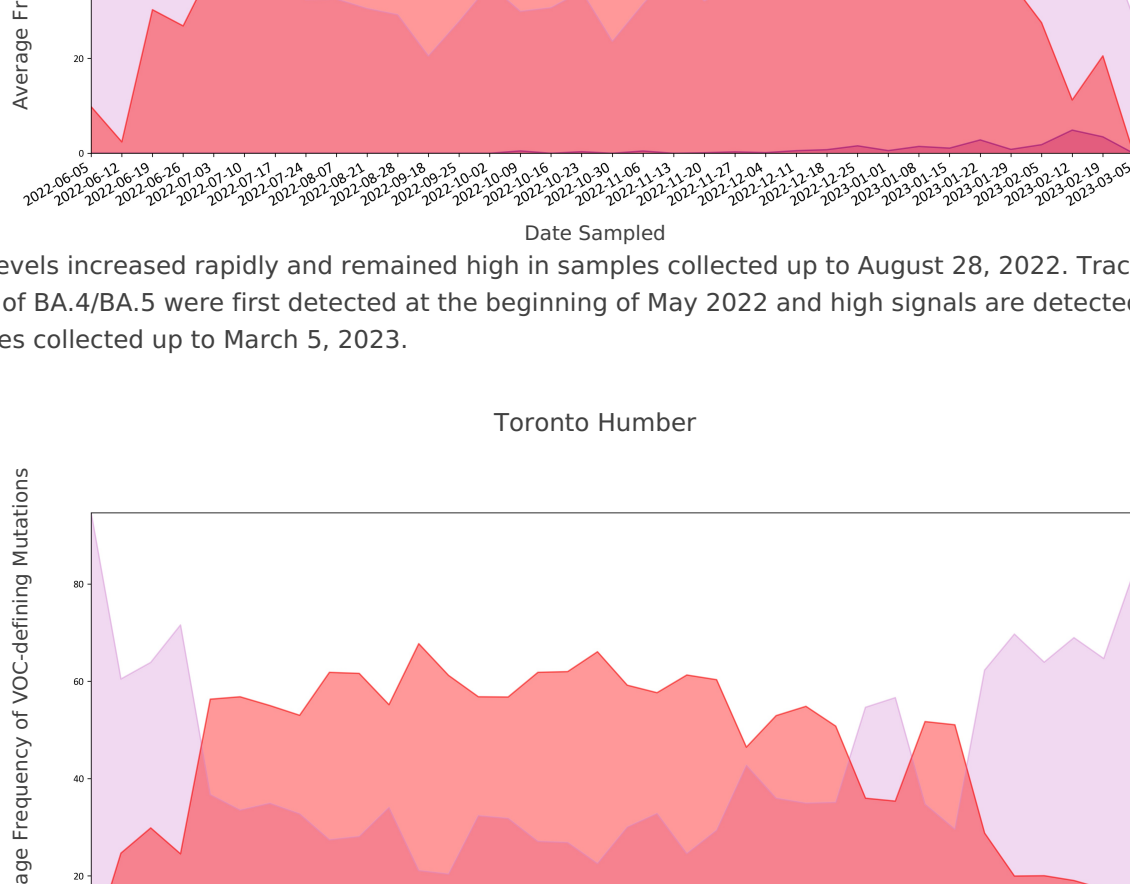


BA.2 emerged at the start of March and rapidly increased to sustained high levels observed until August 28 2022. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals are detected in samples collected up to February 19, 2023.

### Montreal

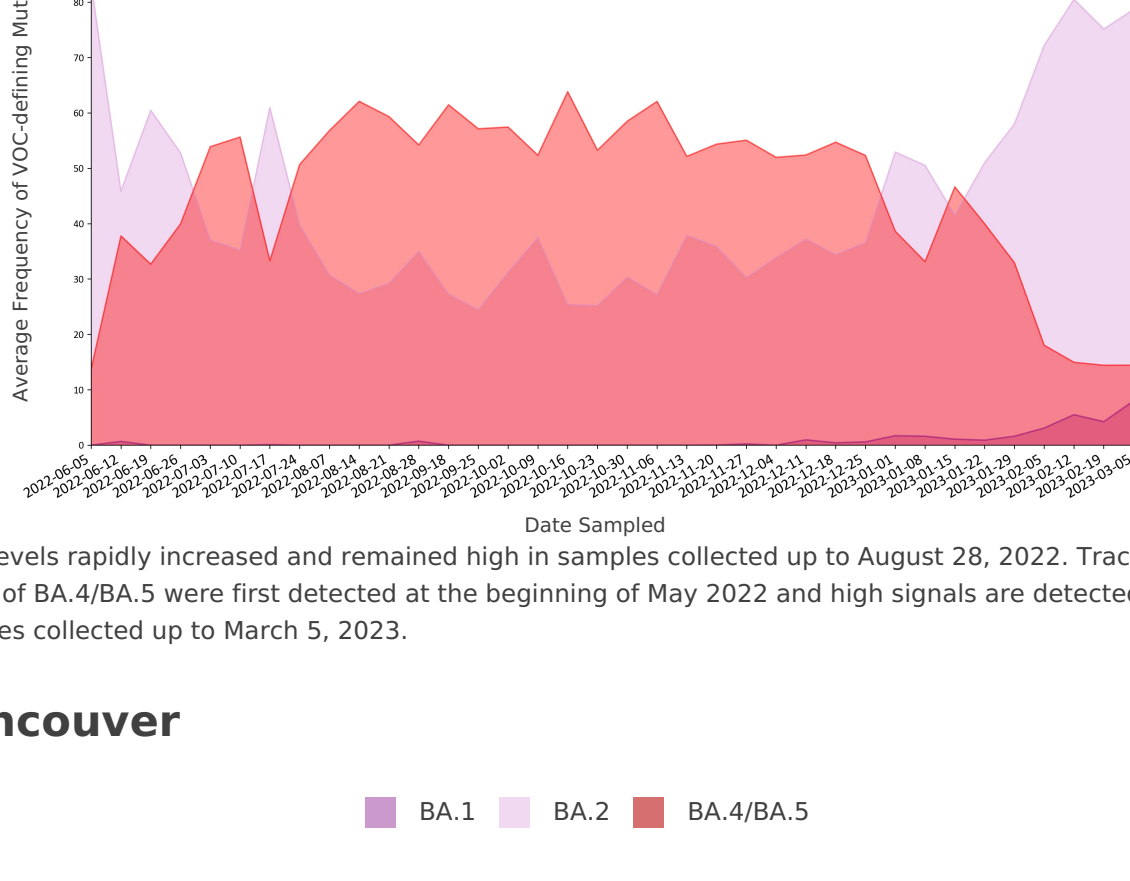


High levels of BA.2 were detected in samples collected up to June 2022. Trace to low levels of BA.4/BA.5 were first detected in April 2022 and high signals are detected in samples collected up to February 19, 2023.

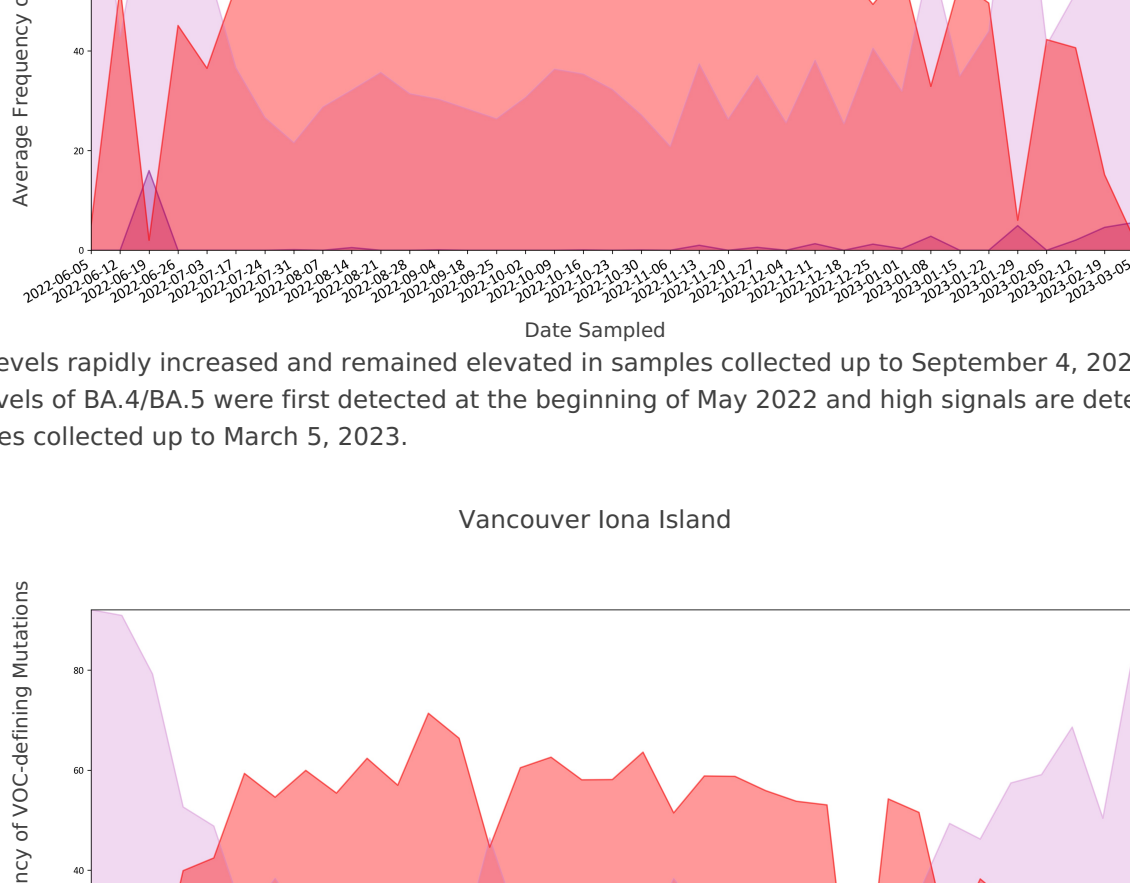


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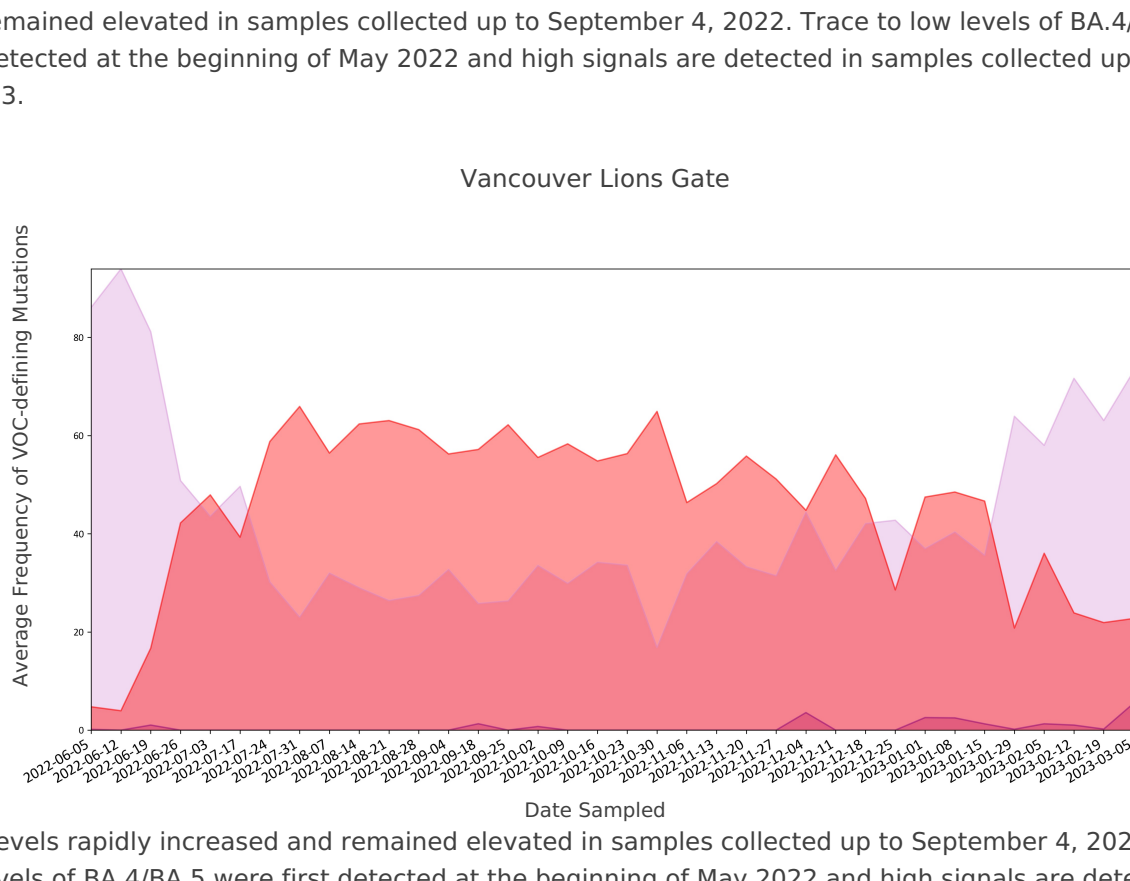
### Toronto



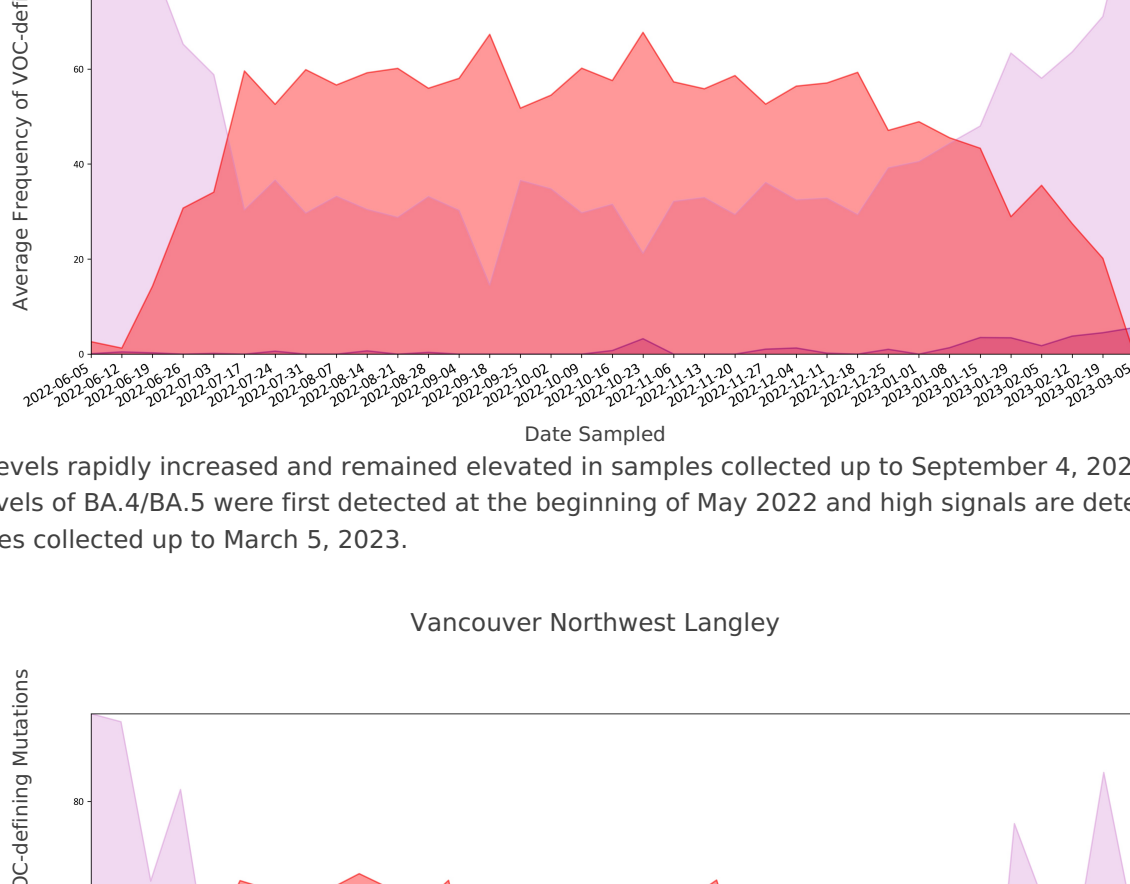
BA.2 levels increased rapidly and remained high in samples collected up to August 28, 2022. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals are detected in samples collected up to March 5, 2023.



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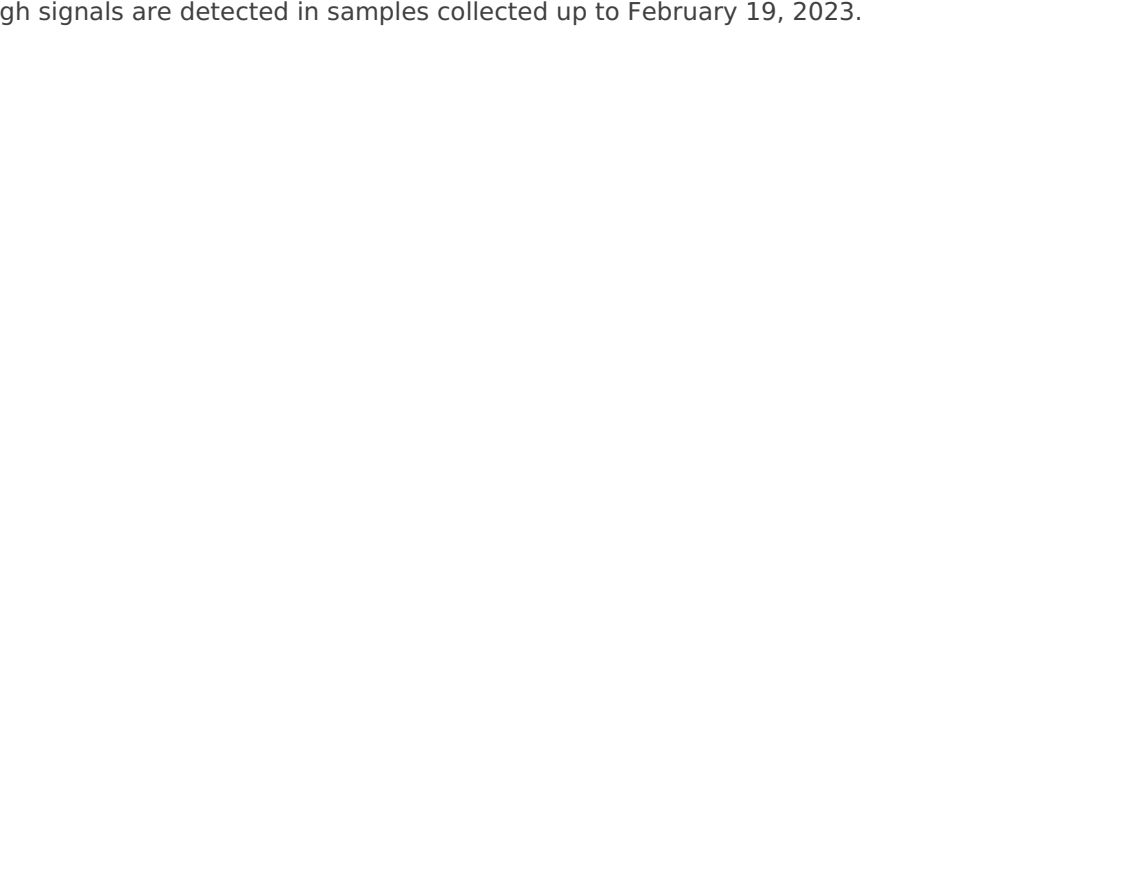


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### Vancouver



BA.2 levels rapidly increased and remained elevated in samples collected up to September 4, 2022. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals are detected in samples collected up to March 5, 2023.



BA.2 emerged in mid January and was detected at high levels by mid February. BA.2 levels rapidly increased and remained elevated in samples collected up to September 4, 2022. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals are detected in samples collected up to March 5, 2023.



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Omicron was first detected in wastewater samples collected from this site on December 5 and has since remained at a high level. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals are detected in samples collected up to February 19, 2023.