

COVID-19 subject 237

2020-08-28

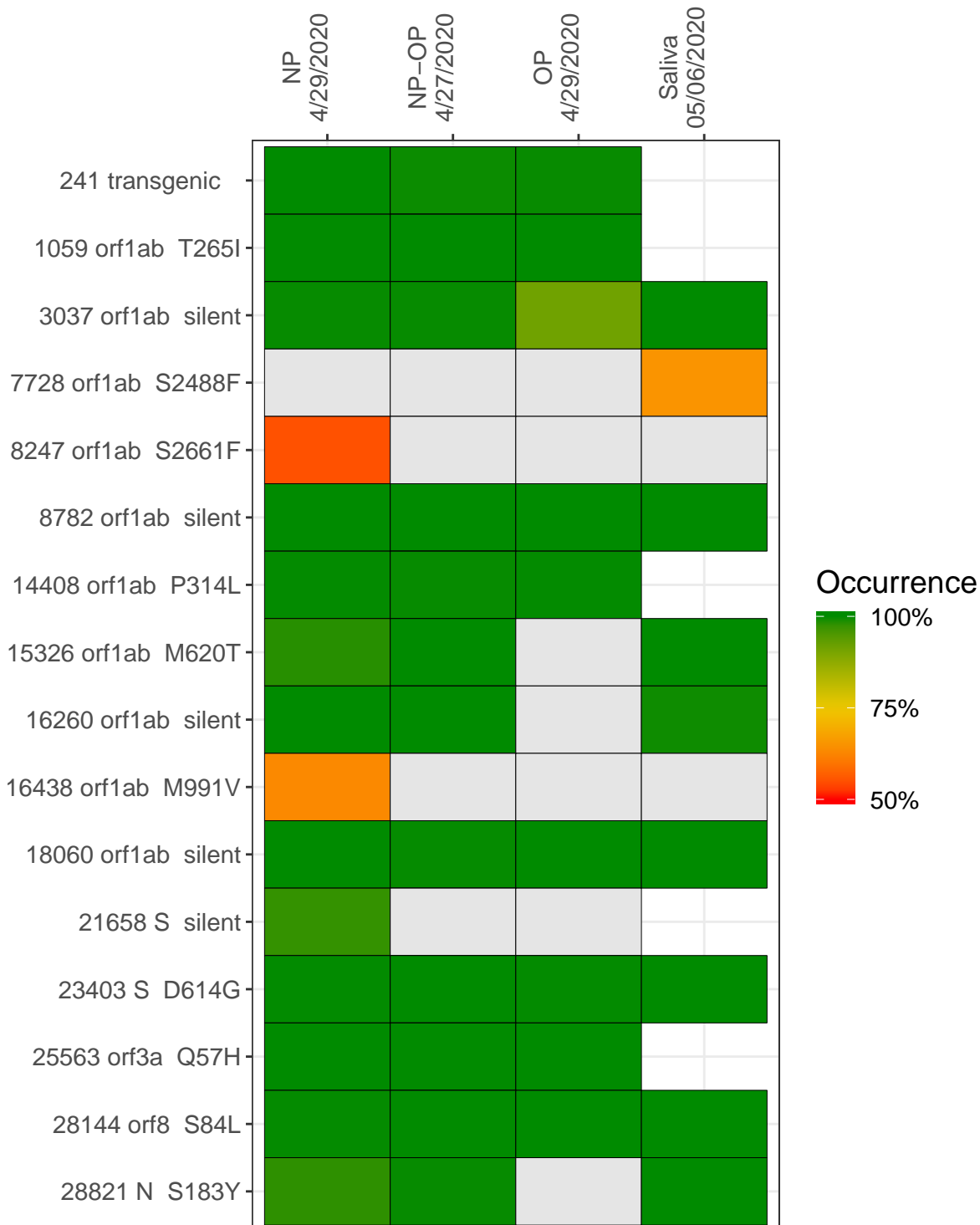
The table below provides a summary of subject samples for which sequencing data is available. The experiments column shows the number of sequencing experiments performed for each specimen. Experiment specific analyses are shown at the end of this report. The code base for this analysis can be found ([here](#)).

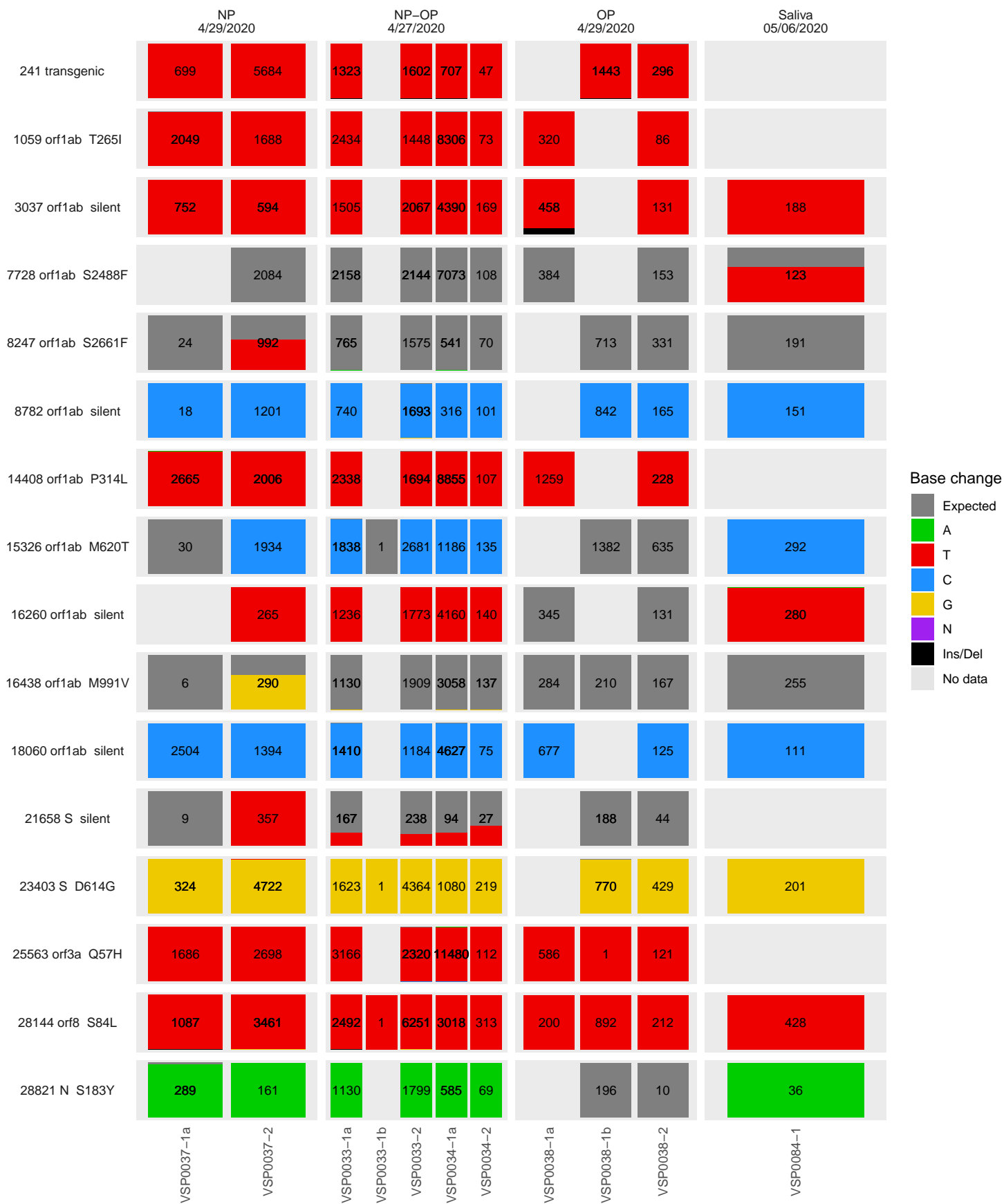
Table 1. Sample summary.

Experiment	Type	Input genomes	Sample type	Sample date	Largest contig (KD)	Reference read coverage	Reference read coverage (>= 5 reads)
VSP0033	composite	NA	NP-OP	4/27/2020	29.97	99.9%	99.8%
VSP0034	composite	NA	NP-OP	4/27/2020	29.84	99.8%	99.8%
VSP0037	composite	NA	NP	4/29/2020	24.92	99.3%	98.9%
VSP0038	composite	NA	OP	4/29/2020	29.92	99.9%	99.5%
VSP0033-1a	single experiment	597	NP-OP	4/27/2020	28.58	99.9%	99.8%
VSP0033-1b	single experiment	597	NP-OP	4/27/2020	0.20	12.0%	0.0%
VSP0033-2	single experiment	2985	NP-OP	4/27/2020	29.89	99.9%	99.5%
VSP0034-1a	single experiment	379000	NP-OP	4/27/2020	29.81	99.8%	99.8%
VSP0034-1b	single experiment	379000	NP-OP	4/27/2020	NA	NA	NA
VSP0034-2	single experiment	1895000	NP-OP	4/27/2020	22.45	98.8%	98.5%
VSP0037-1a	single experiment	154	NP	4/29/2020	6.66	89.3%	86.2%
VSP0037-1b	single experiment	154	NP	4/29/2020	NA	NA	NA
VSP0037-2	single experiment	770	NP	4/29/2020	11.47	95.2%	94.4%
VSP0038-1a	single experiment	412	OP	4/29/2020	0.80	64.3%	61.0%
VSP0038-1b	single experiment	412	OP	4/29/2020	0.56	64.2%	62.1%
VSP0038-2	single experiment	2060	OP	4/29/2020	22.32	99.7%	98.9%
VSP0084-1	single experiment	NA	Saliva	05/06/2020	4.70	78.4%	77.0%

Variants shared across samples

The heat map below shows how variants (reference genome USA-WA1-2020) are shared across subject samples where the percent variance is colored. Variants are called if a variant position is covered by 5 for more reads, the alternative base is found in $> 50\%$ of read pairs and the variant yields a PHRED score > 20 . Gray tiles denote positions where the variant was not the major variant or no variants were found. The relative base compositions of each experiment used to calculate tiles are shown in the following plot where the total number of position reads are shown atop of each plot.

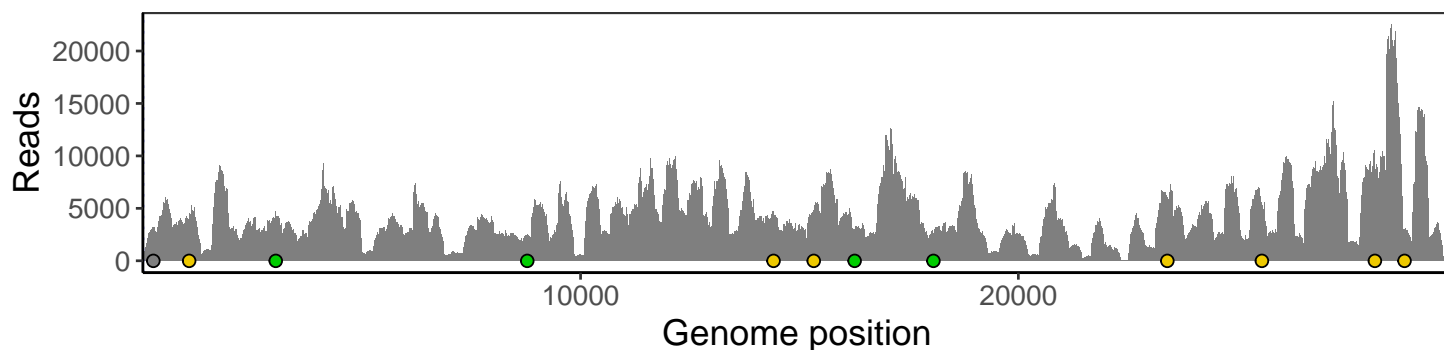




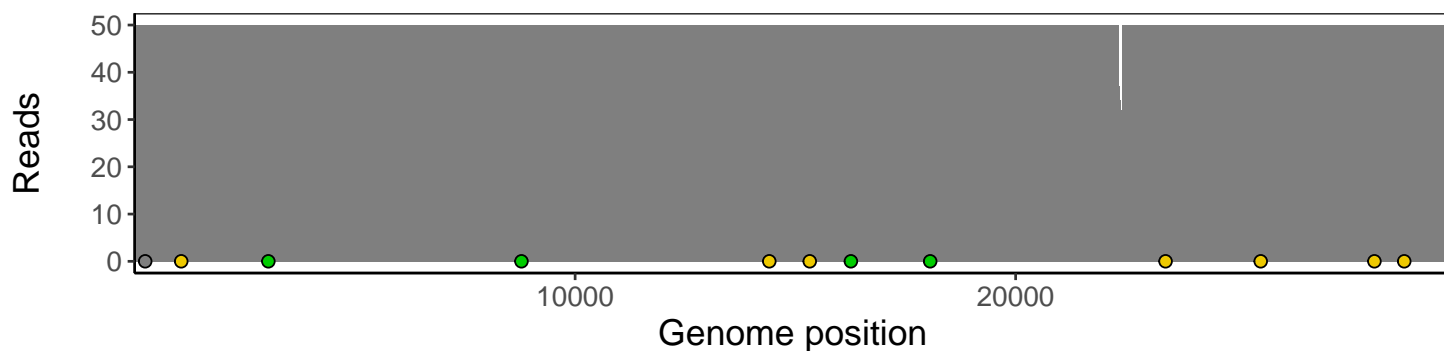
Analyses of individual experiments and composite results.

VSP0033 | 4/27/2020 | NP-OP | 237-tri | composite result

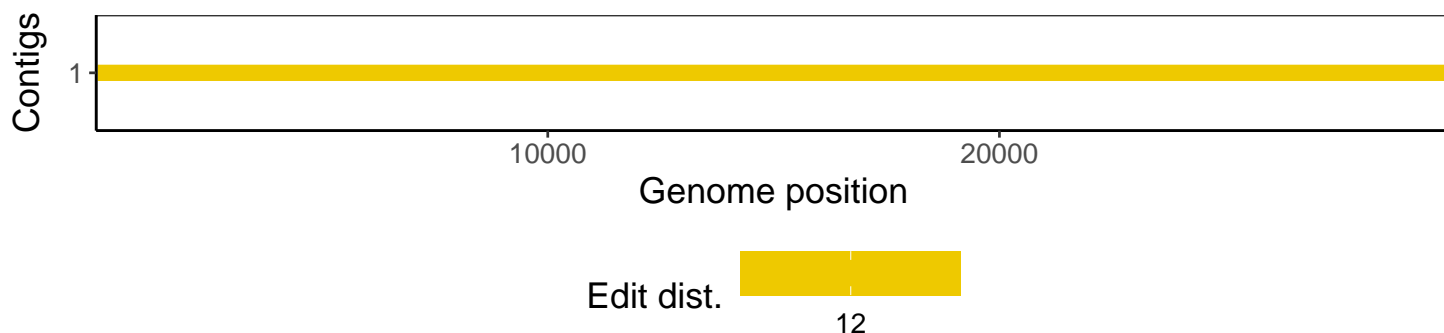
The plot below shows the number of reads covering each nucleotide position in the reference genome. Variants are shown as colored dots along the bottom of the plot and are color coded according to variant types: gray - transgenic, green - silent, gold - missense, red - nonsense, black - indel.



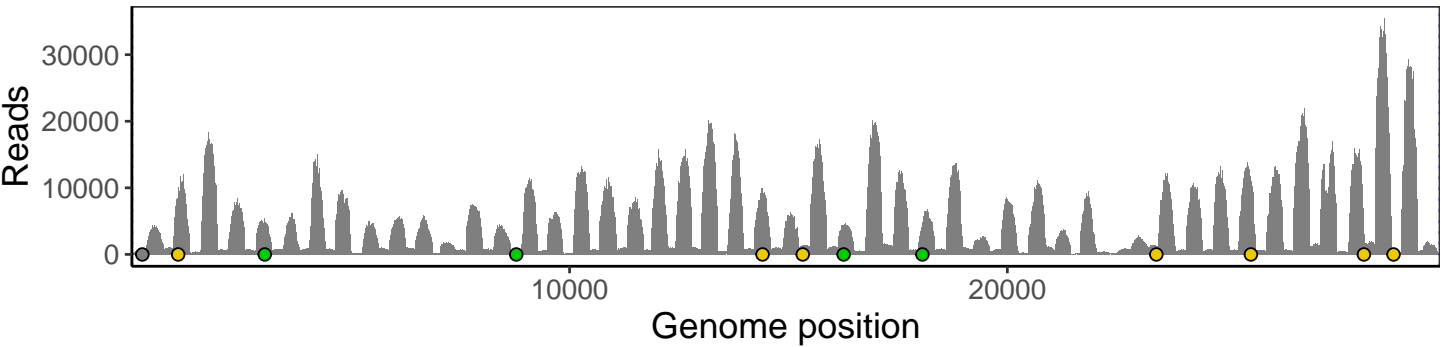
Excerpt from plot above focusing on reads coverage from 0 to 50 NT.



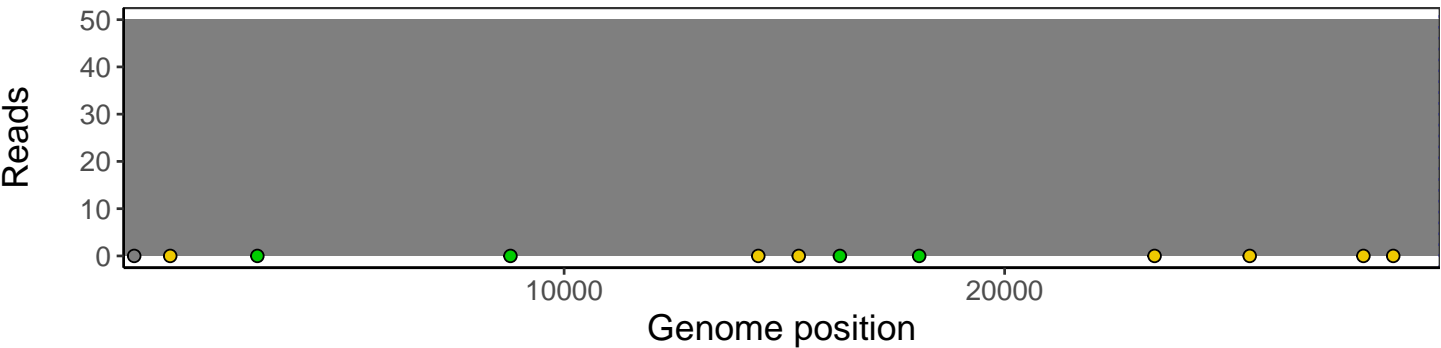
The longest five assembled contigs are shown below colored by their edit distance to the reference genome.



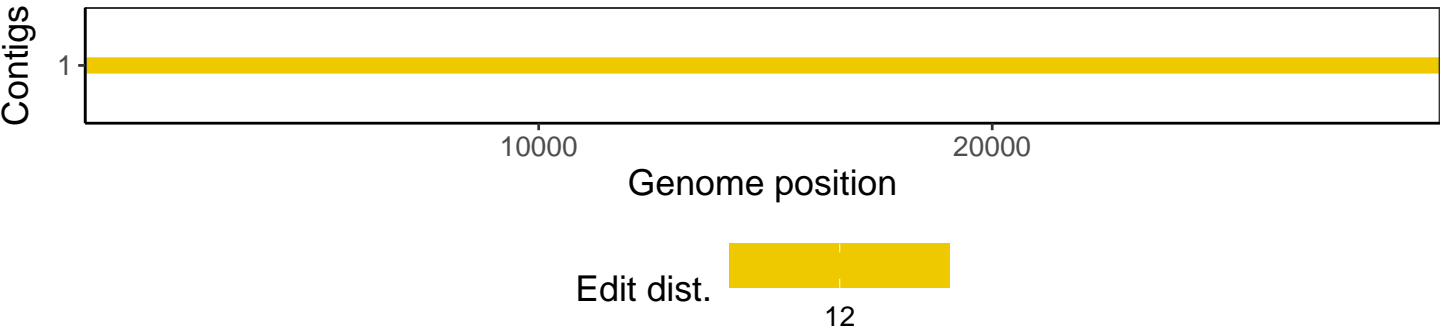
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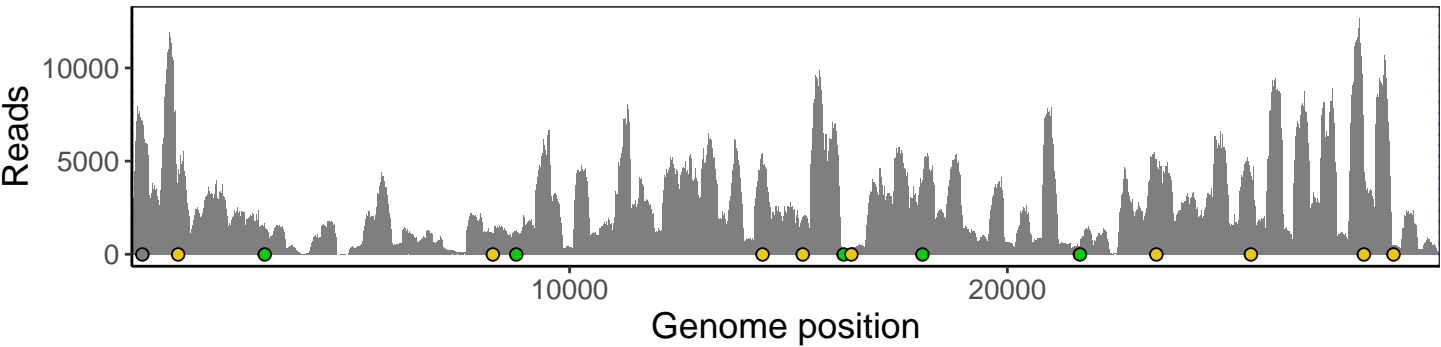
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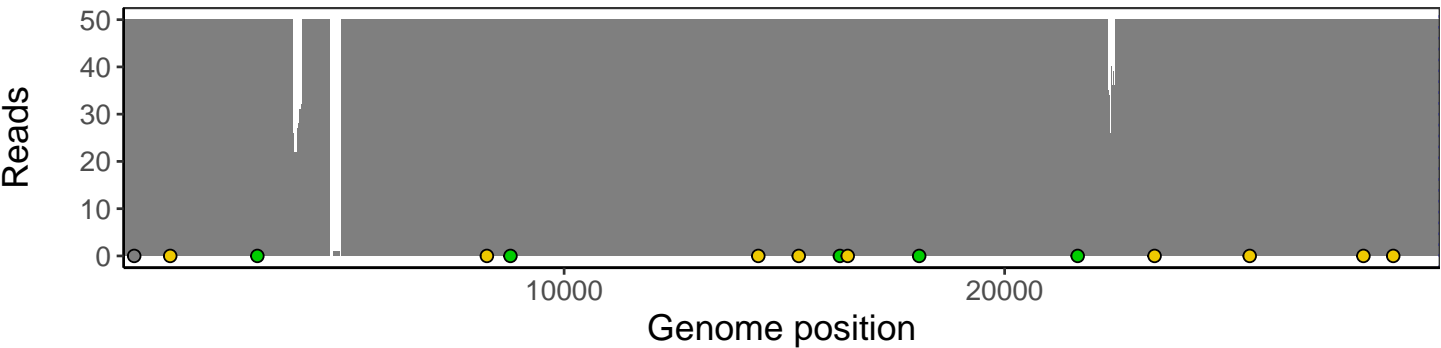
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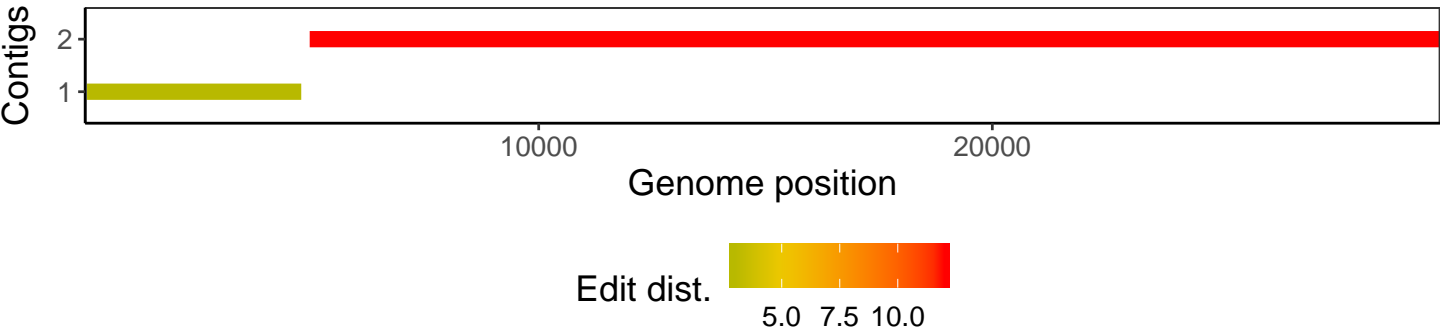
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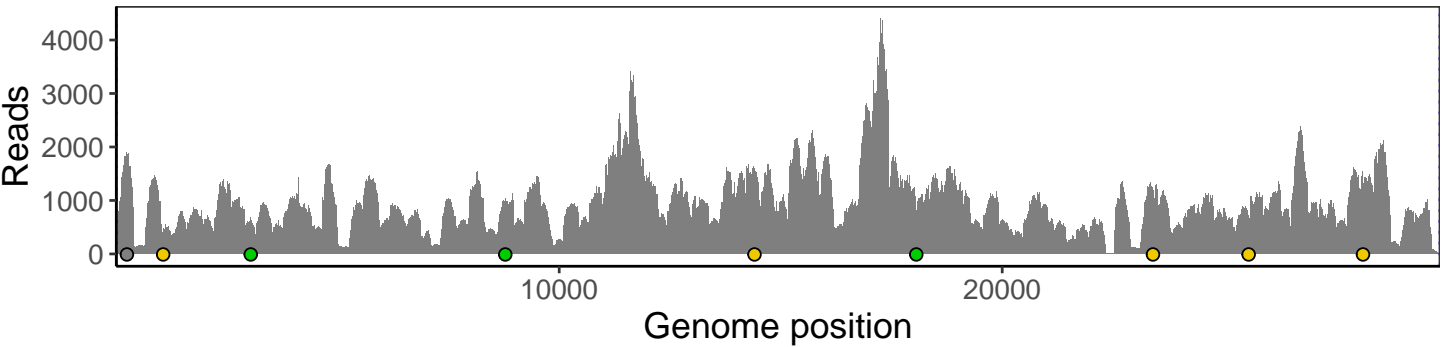
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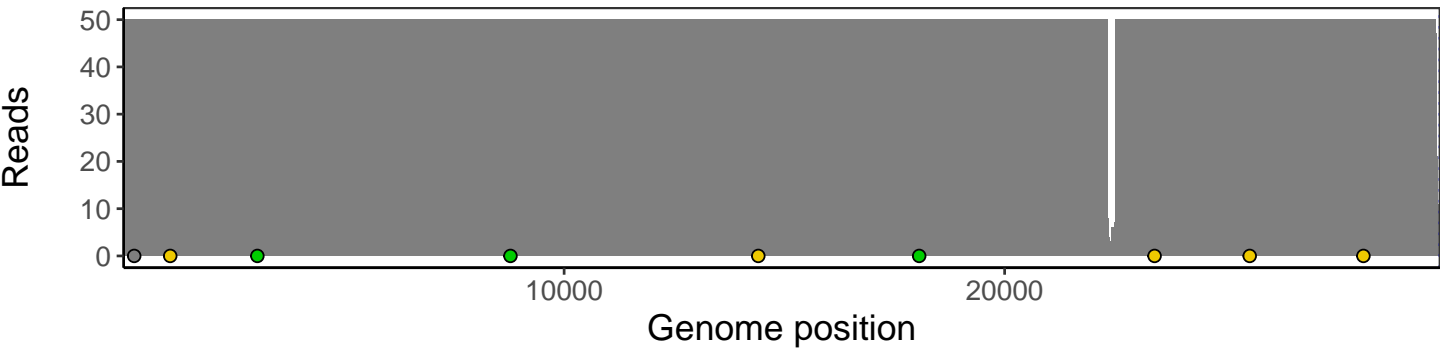
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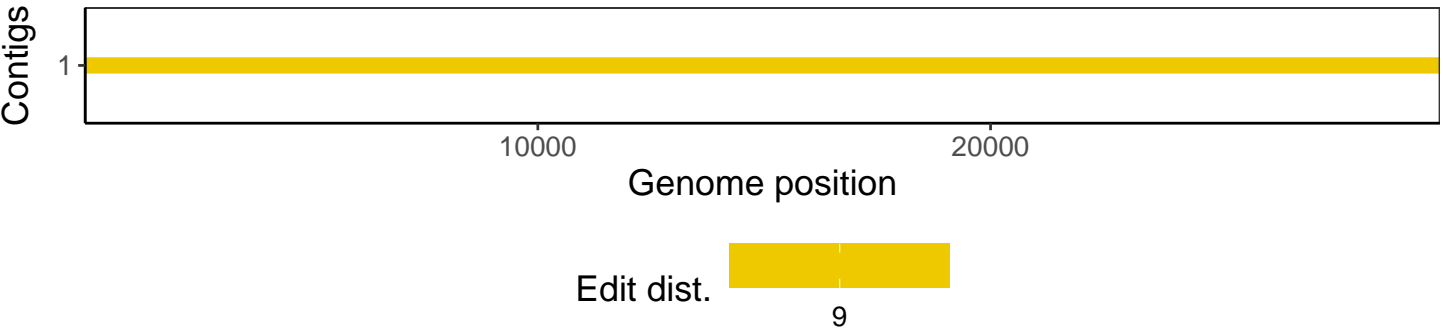
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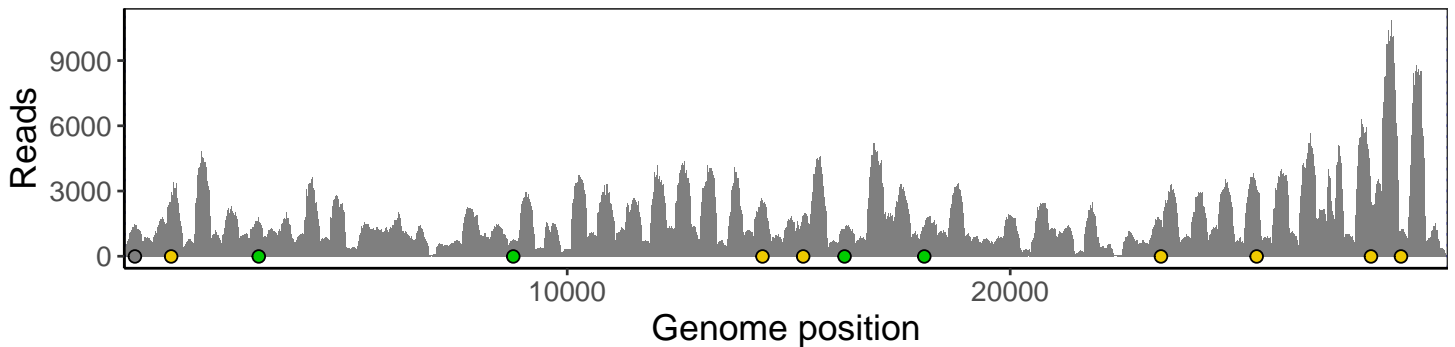
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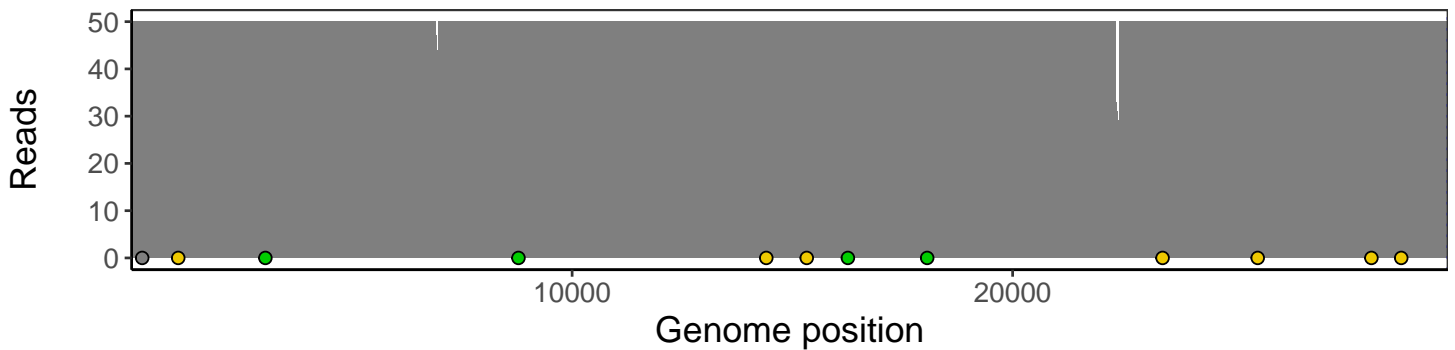
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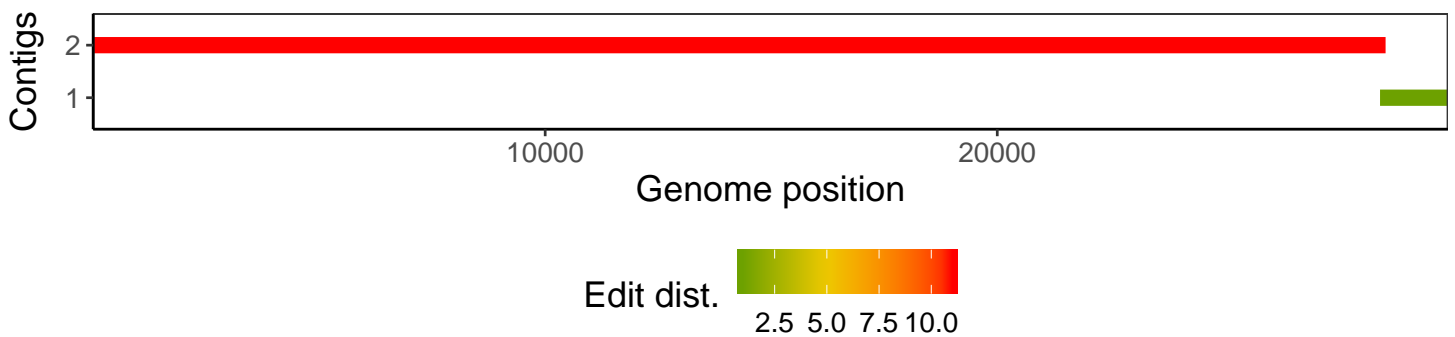
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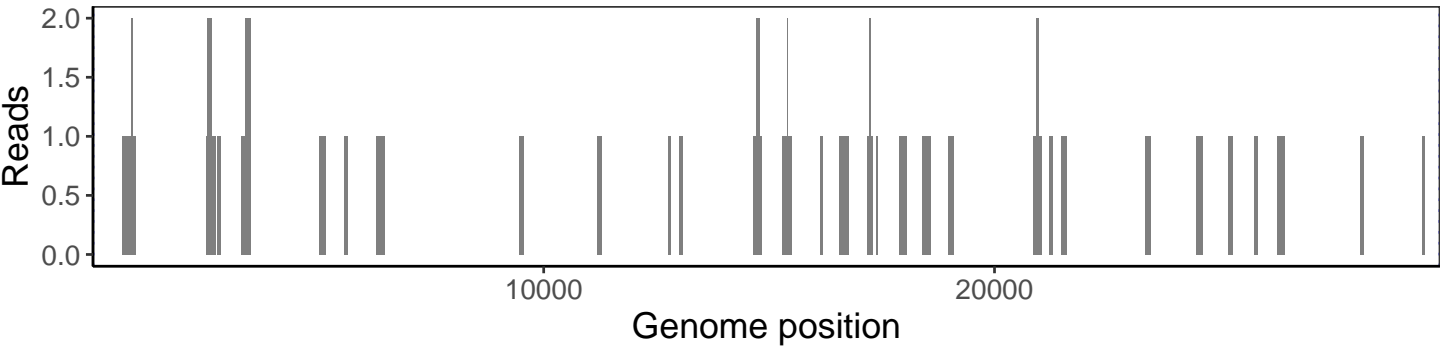
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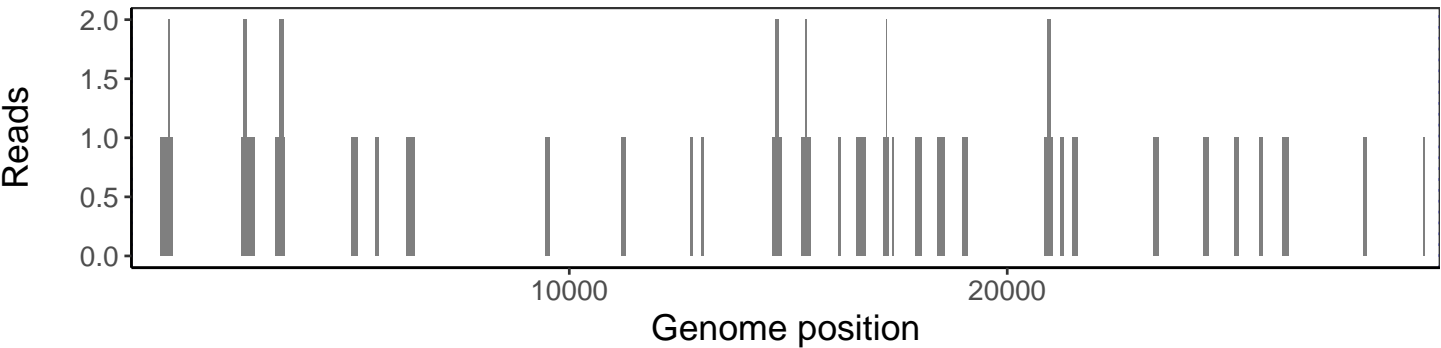
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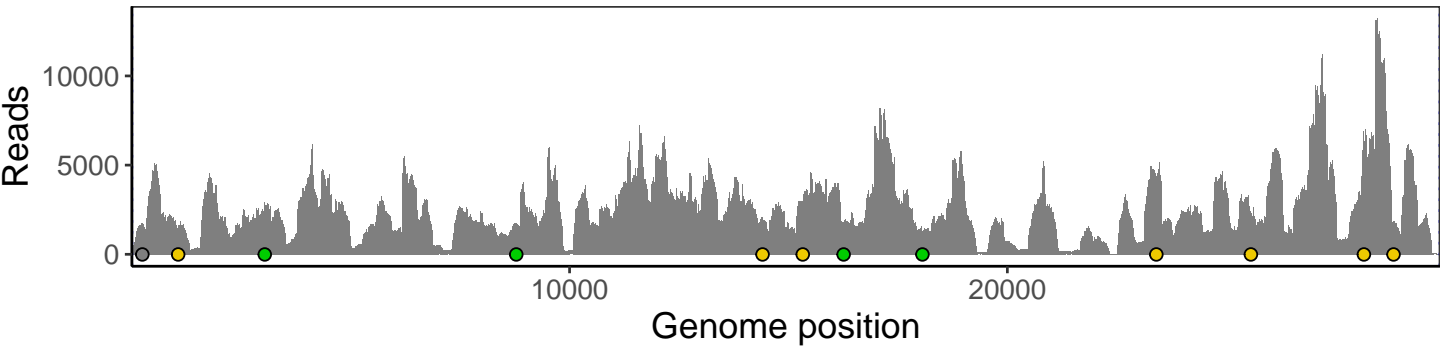
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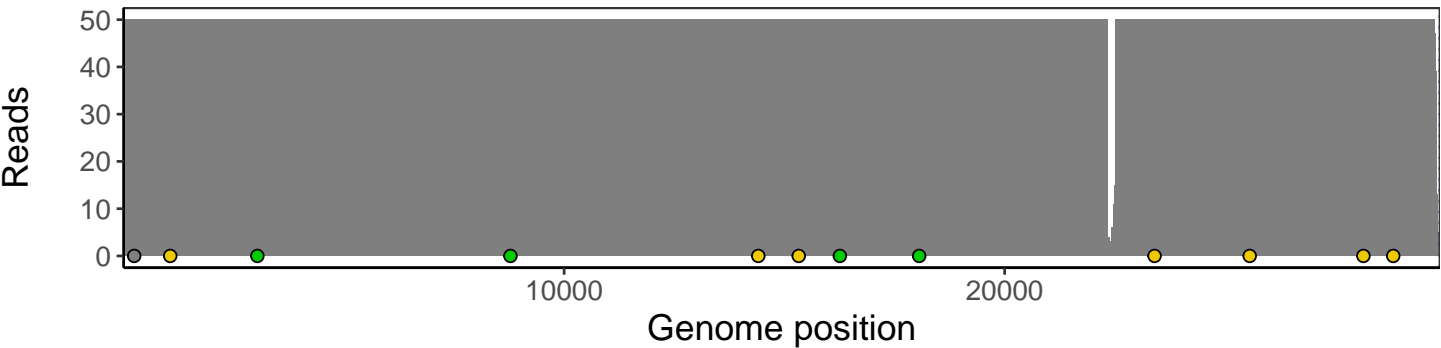
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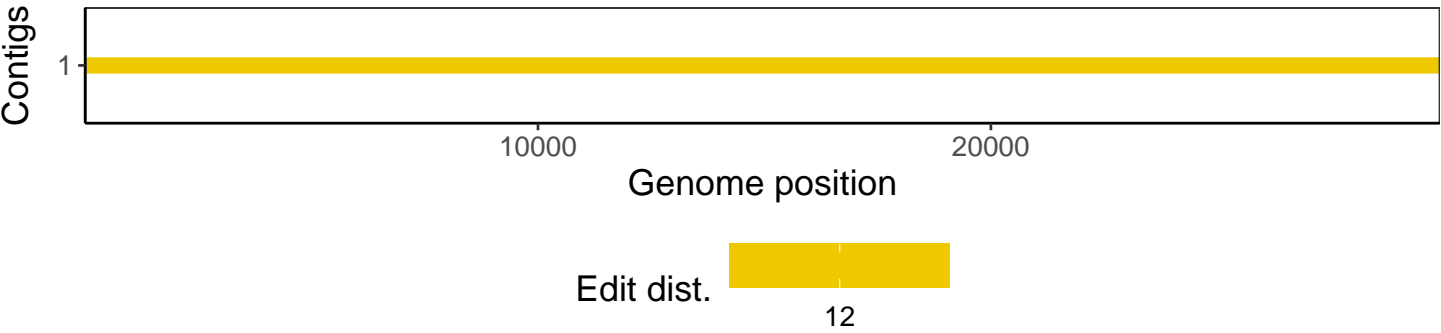
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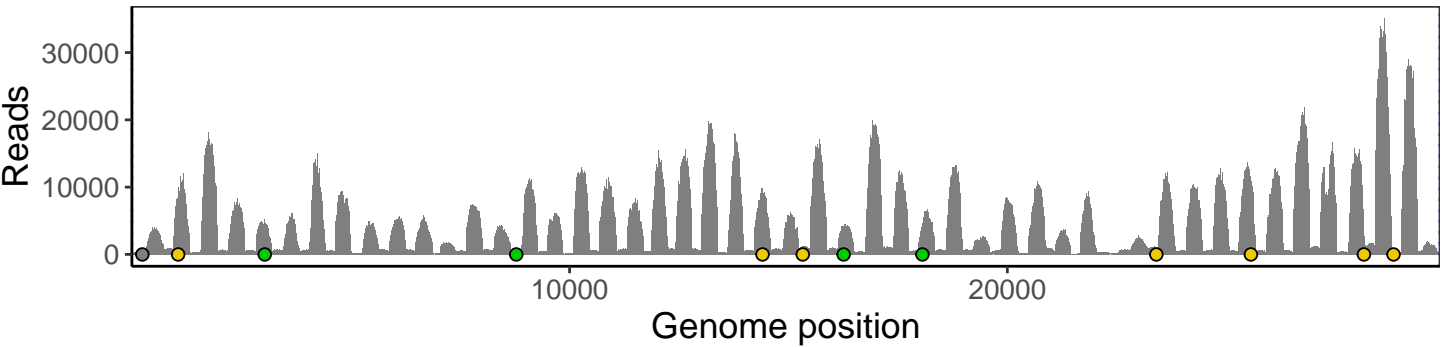
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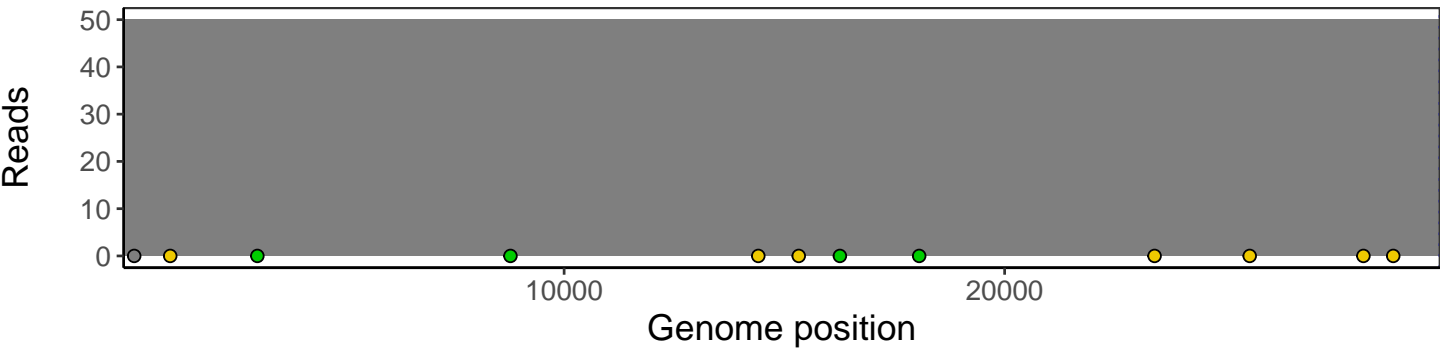
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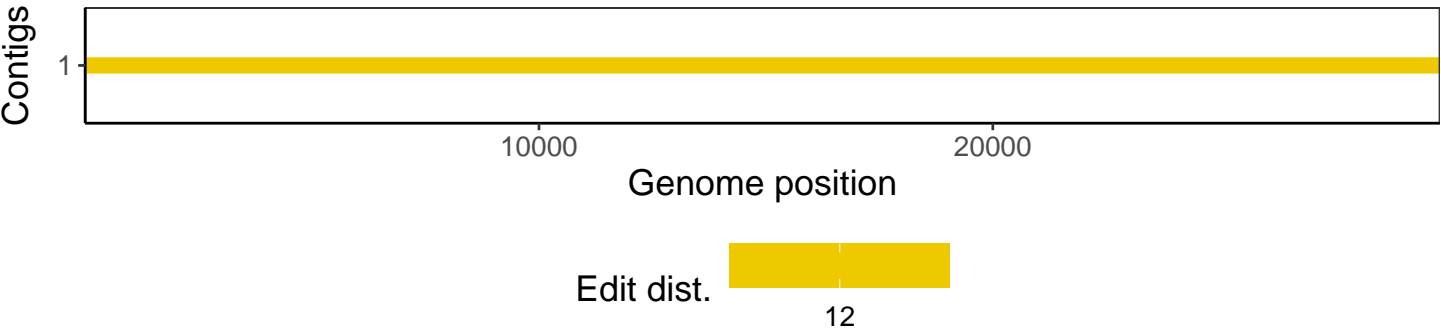
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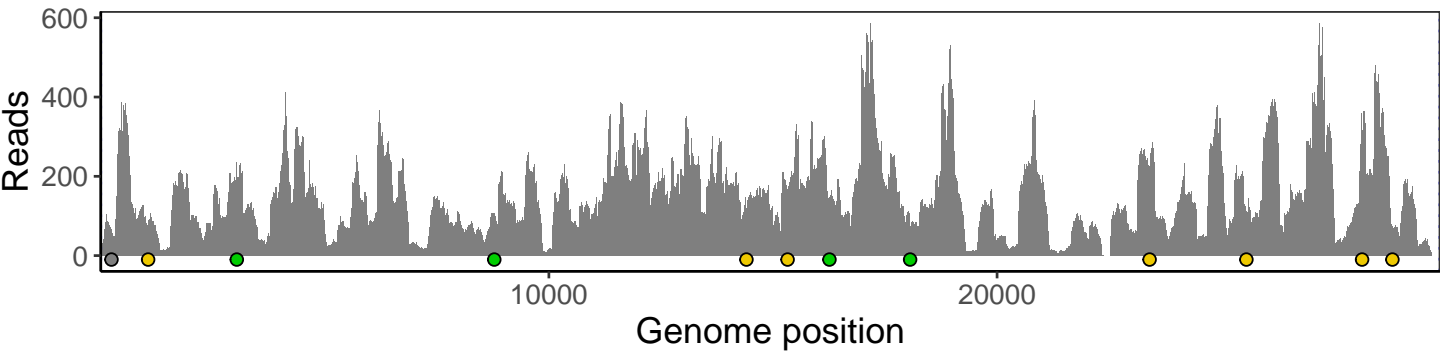


VSP0034-1b | 4/27/2020 | NP-OP | 237-qia | 379000 genomes | single experiment

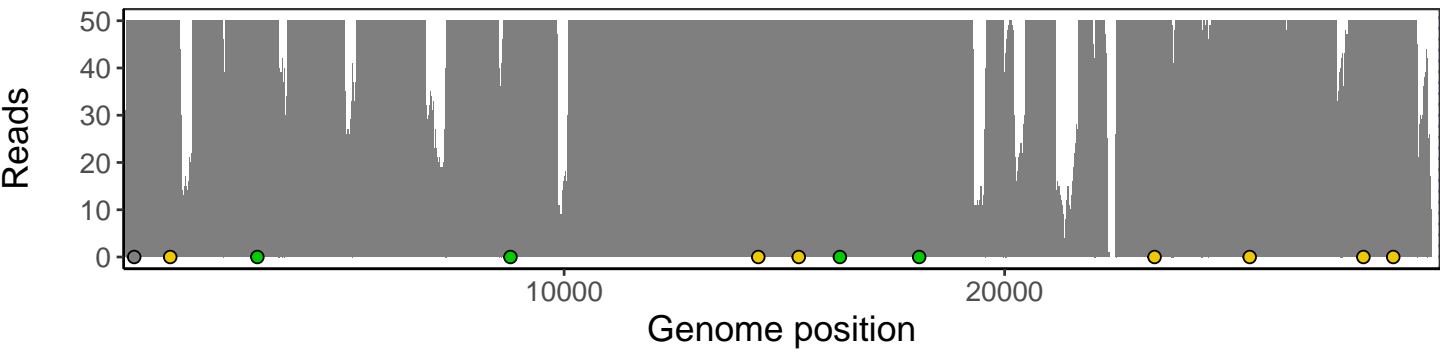
No pileup data available.

No contig data available.

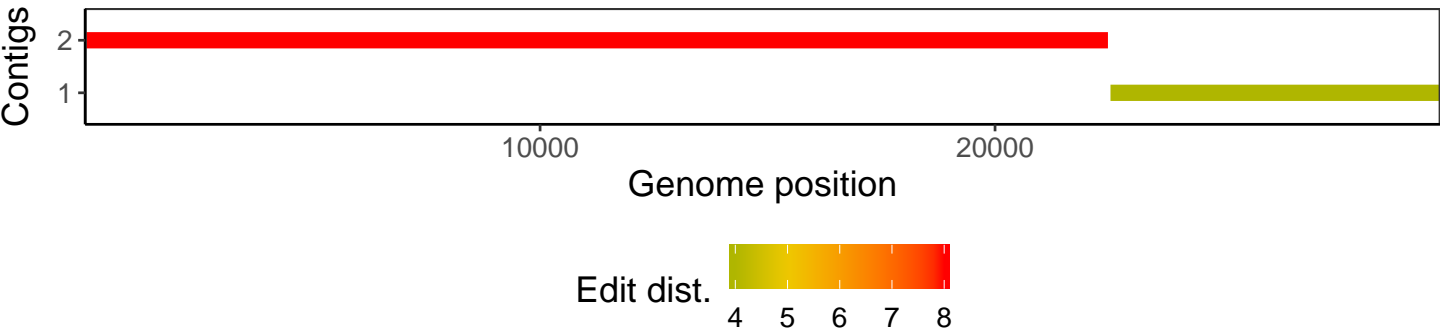
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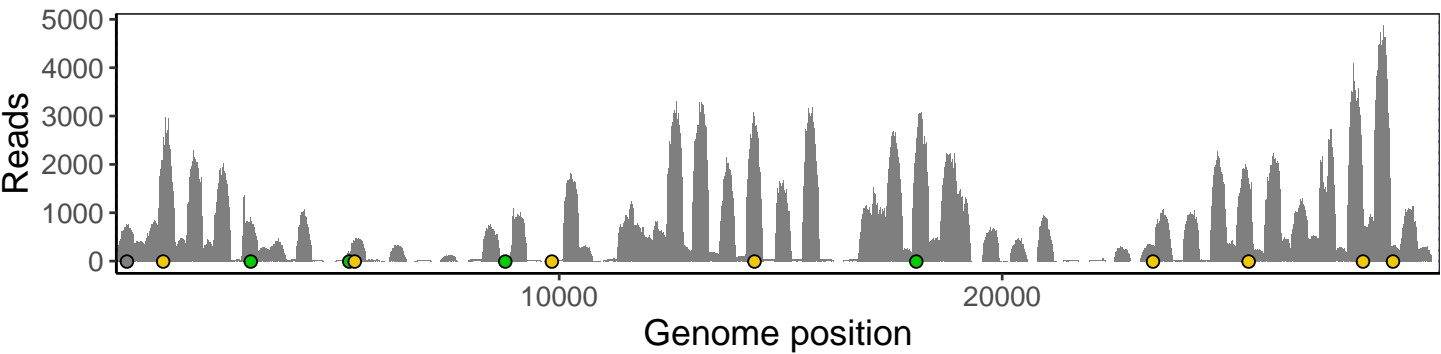
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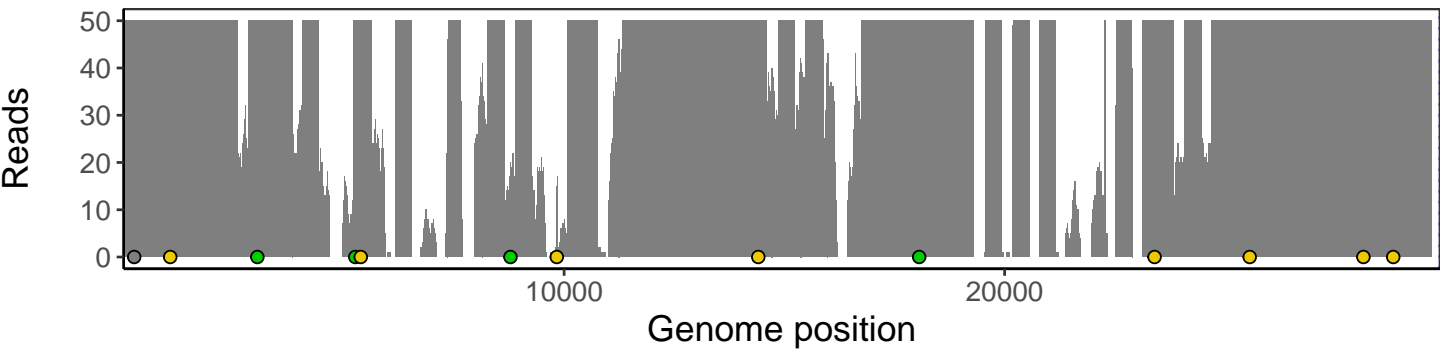
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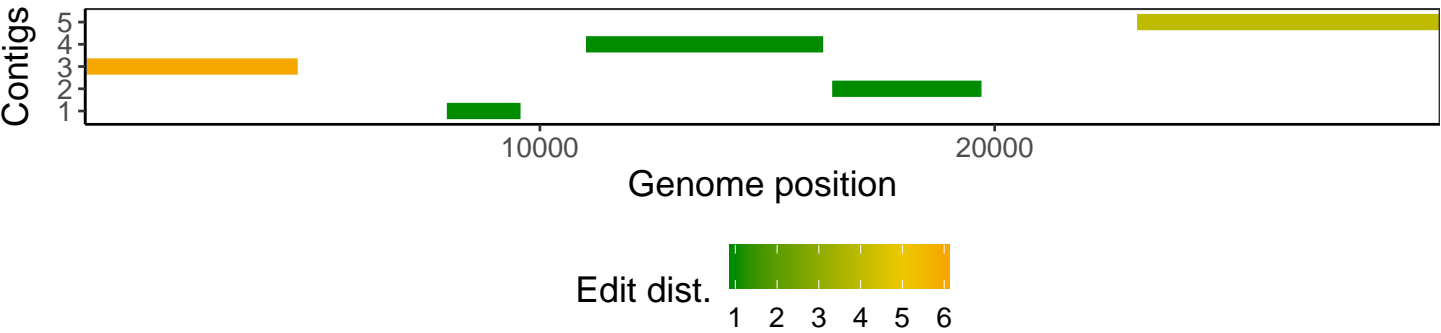
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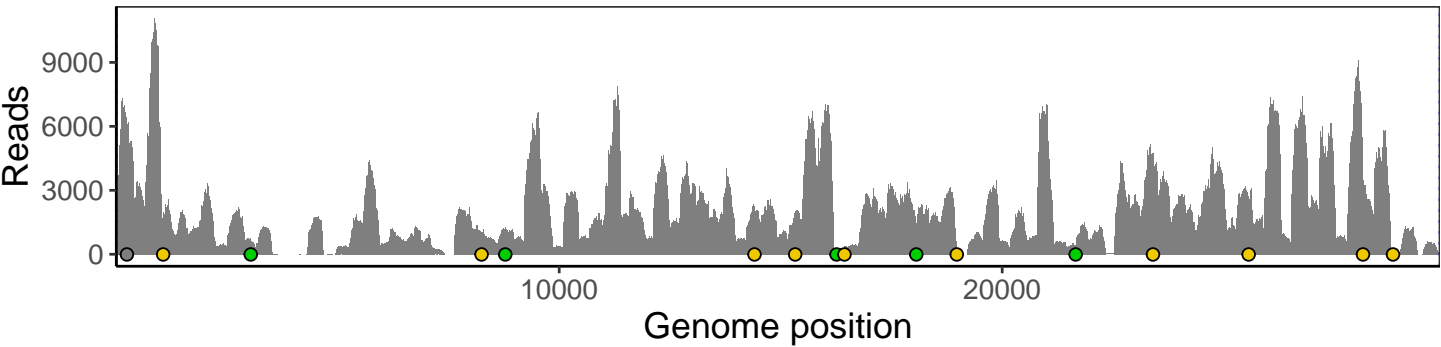


VSP0037-1b | 4/29/2020 | NP | 237n-tri | 154 genomes | single experiment

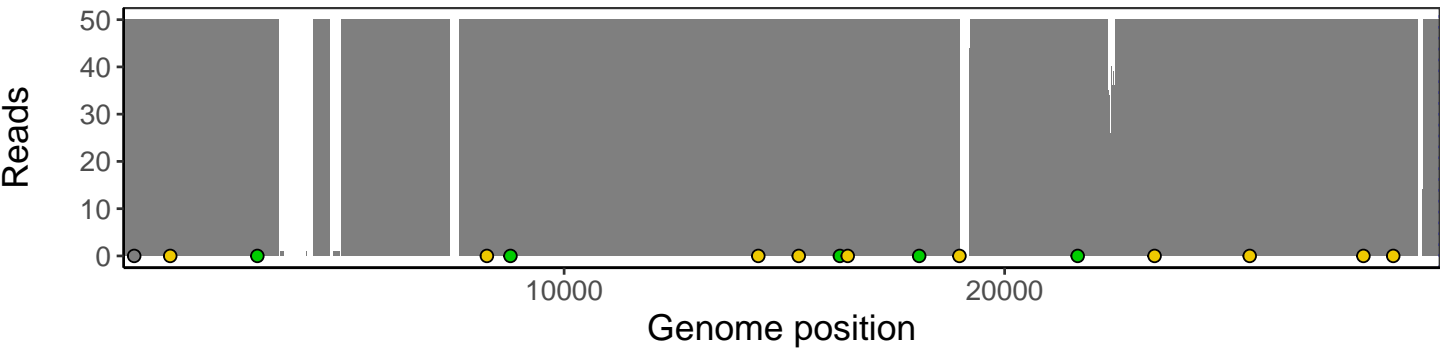
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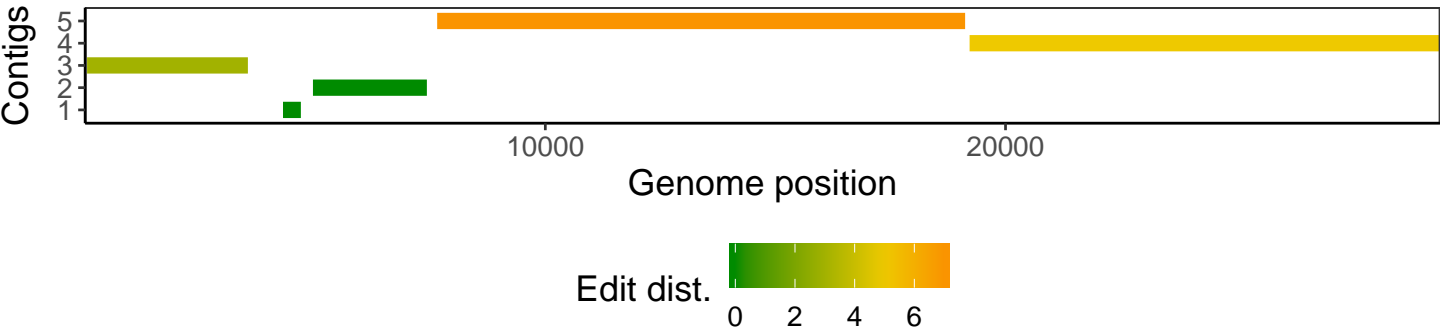
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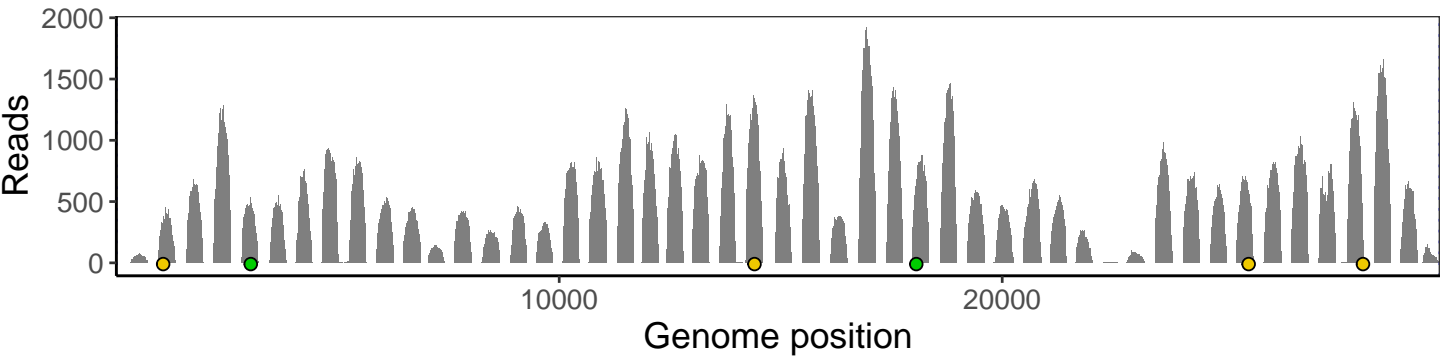
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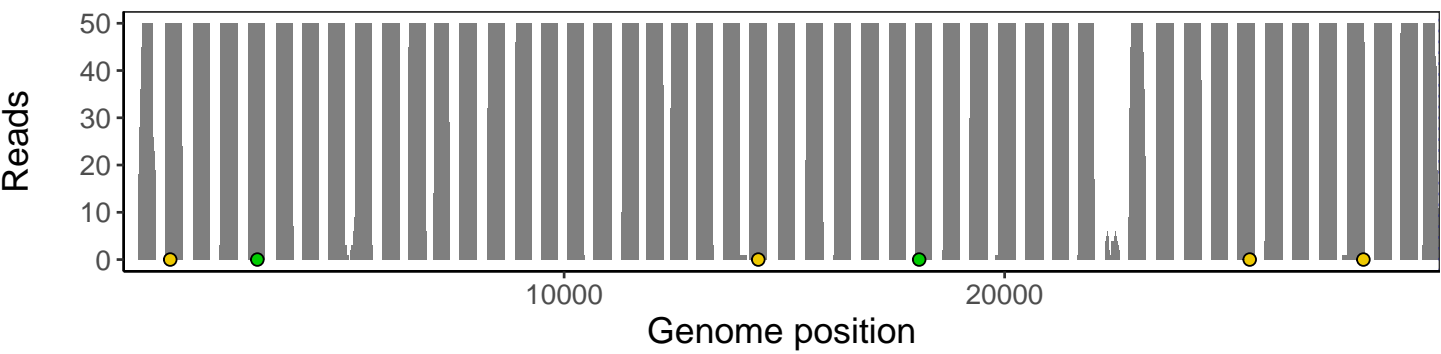
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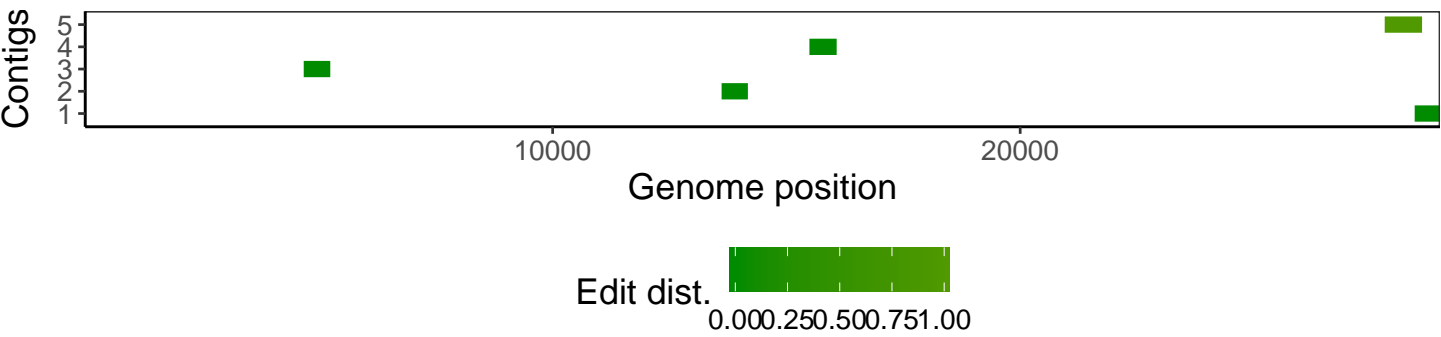
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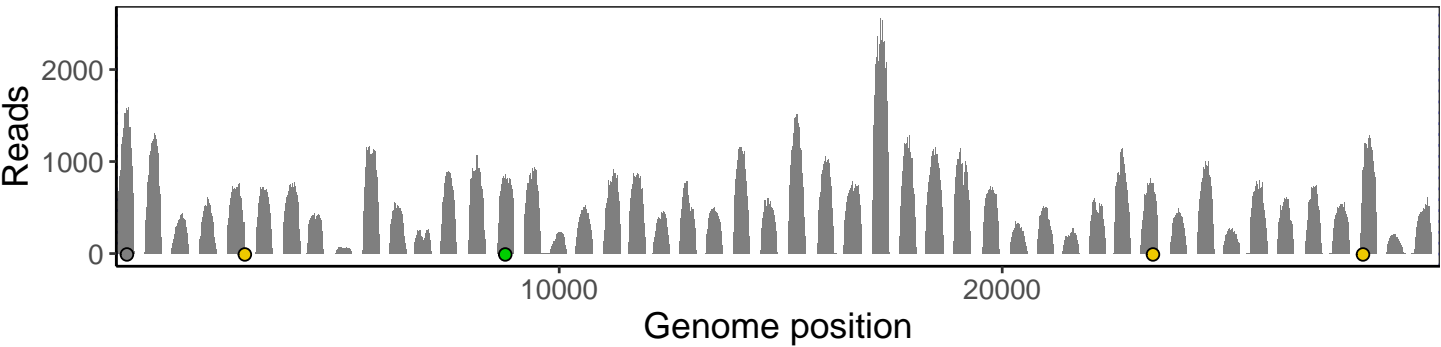
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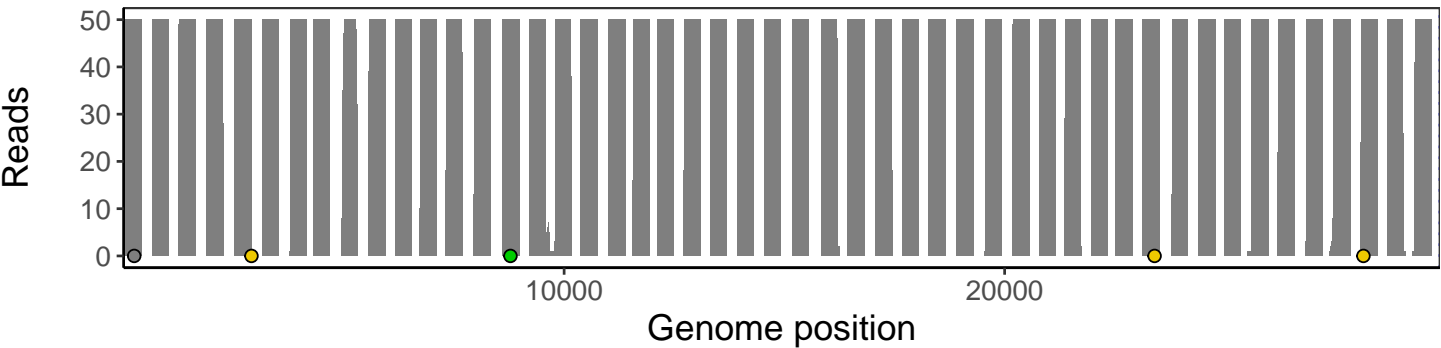
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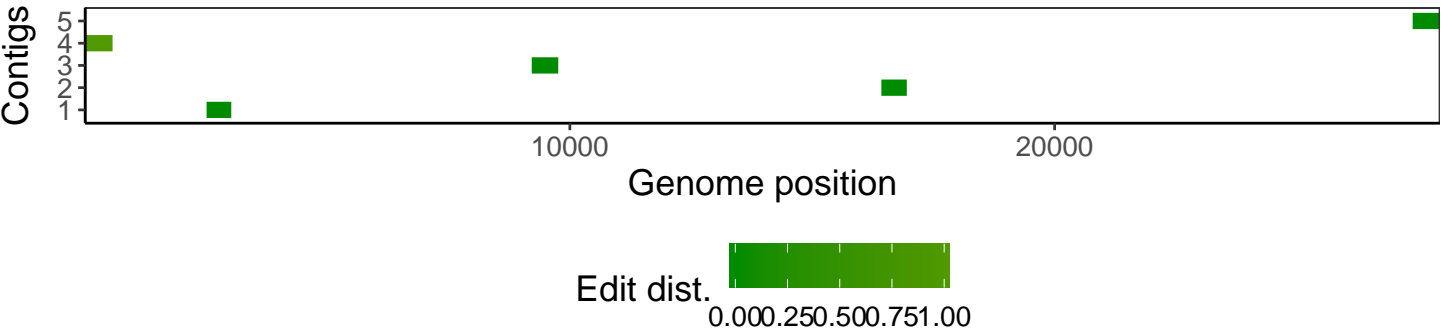
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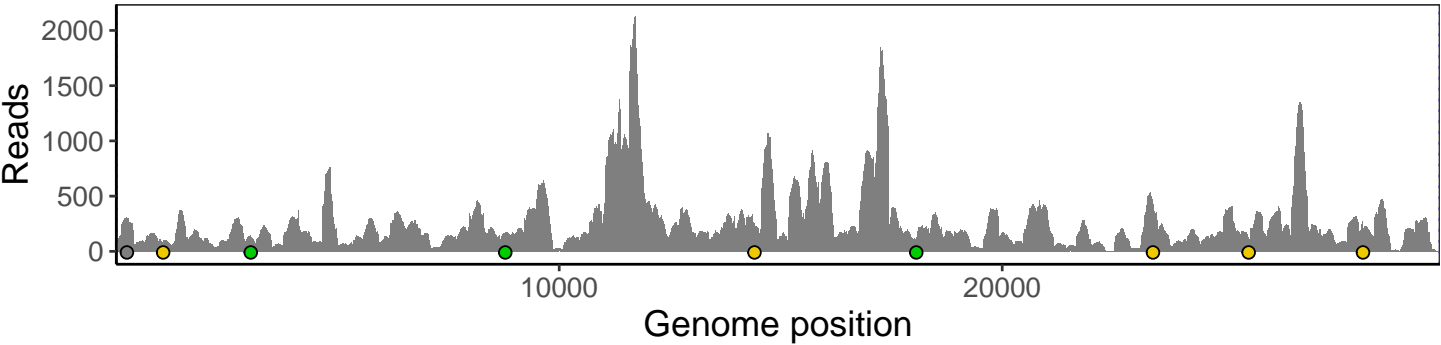
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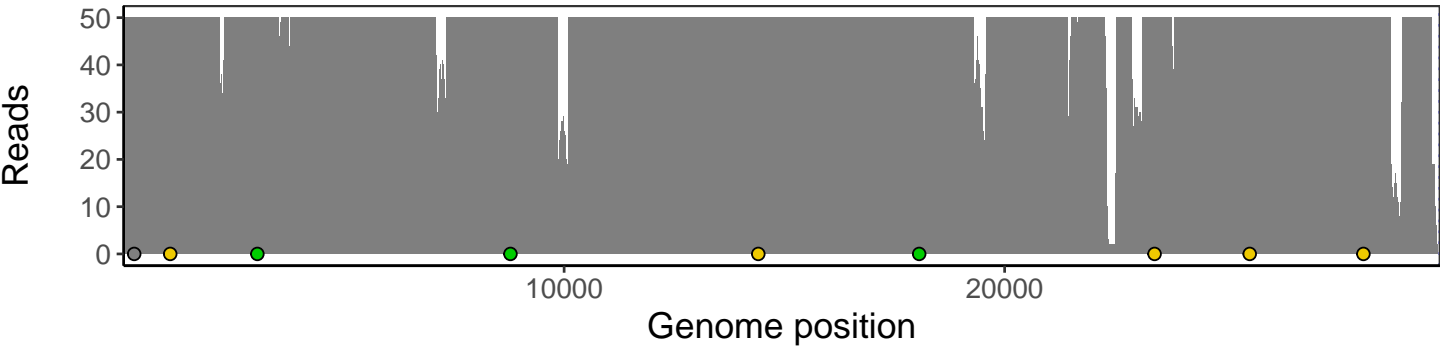
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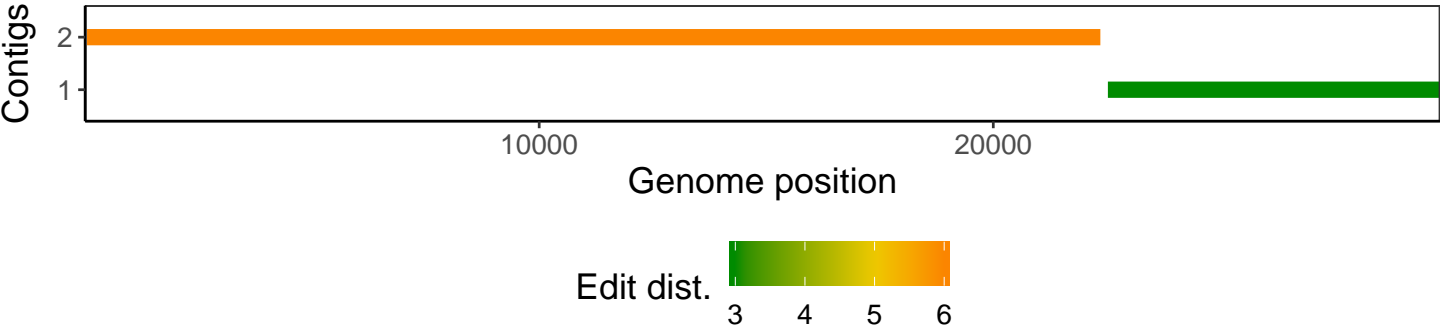
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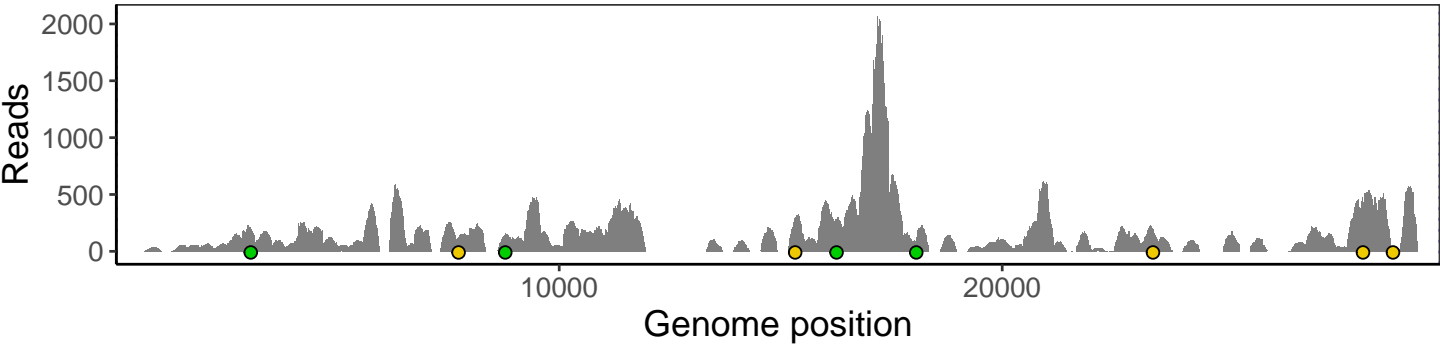
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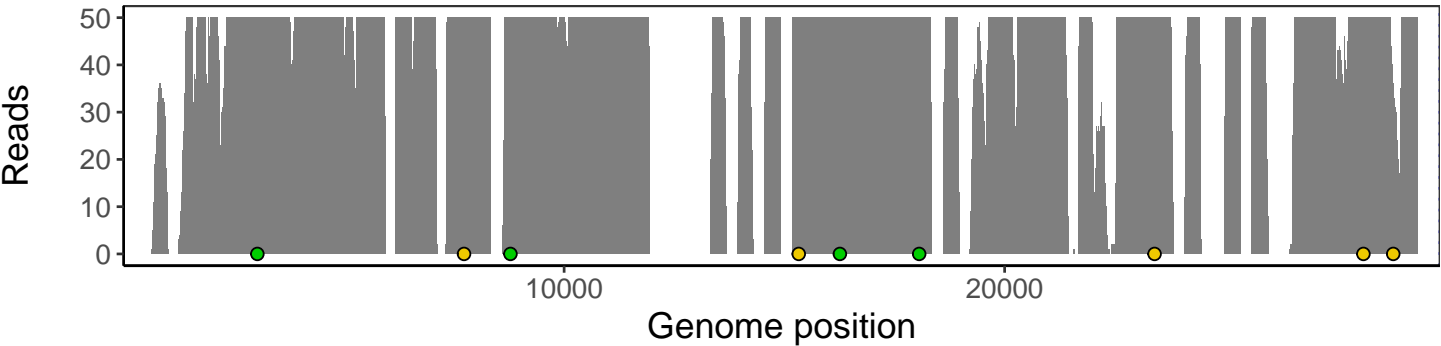
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