

```
In [1]: import hail as hl

# hl.init(backend="spark")

# Say, "the default sans-serif font is COMIC SANS"
# matplotlib.rcParams['font.sans-serif'] = "Arial"
# Then, "ALWAYS use sans-serif fonts"
# matplotlib.rcParams['font.family'] = "sans-serif"
```

```
In [2]: # import holoviews as hv
import numpy as np
import pandas as pd

from bokeh.layouts import column, gridplot, Plot, row
from bokeh.models import *
from bokeh.plotting import *
from bokeh.palettes import Category10, Spectral6
from gnomad import *
from gnomad.sample_qc.ancestry import POP_COLORS
from gnomad.utils.filtering import add_filters_expr
from gnomad.utils.plotting import *
# from gnomad_qc.v3.resources import *
from IPython.core.display import display, HTML
from statsmodels.robust.scale import mad

# hv.extension("bokeh")

TOOLS = "hover,save,pan,box_zoom,reset,wheel_zoom"
output_notebook()
display(HTML("<style>.container { width:100% !important; }</style>"))

if 'old_show' not in dir():
    old_show = hl.Table.show
    def new_show(t, n=10, width=90, truncate=None, types=True):
        old_show(t, 10, 170, 40)
    hl.Table.show = new_show
```

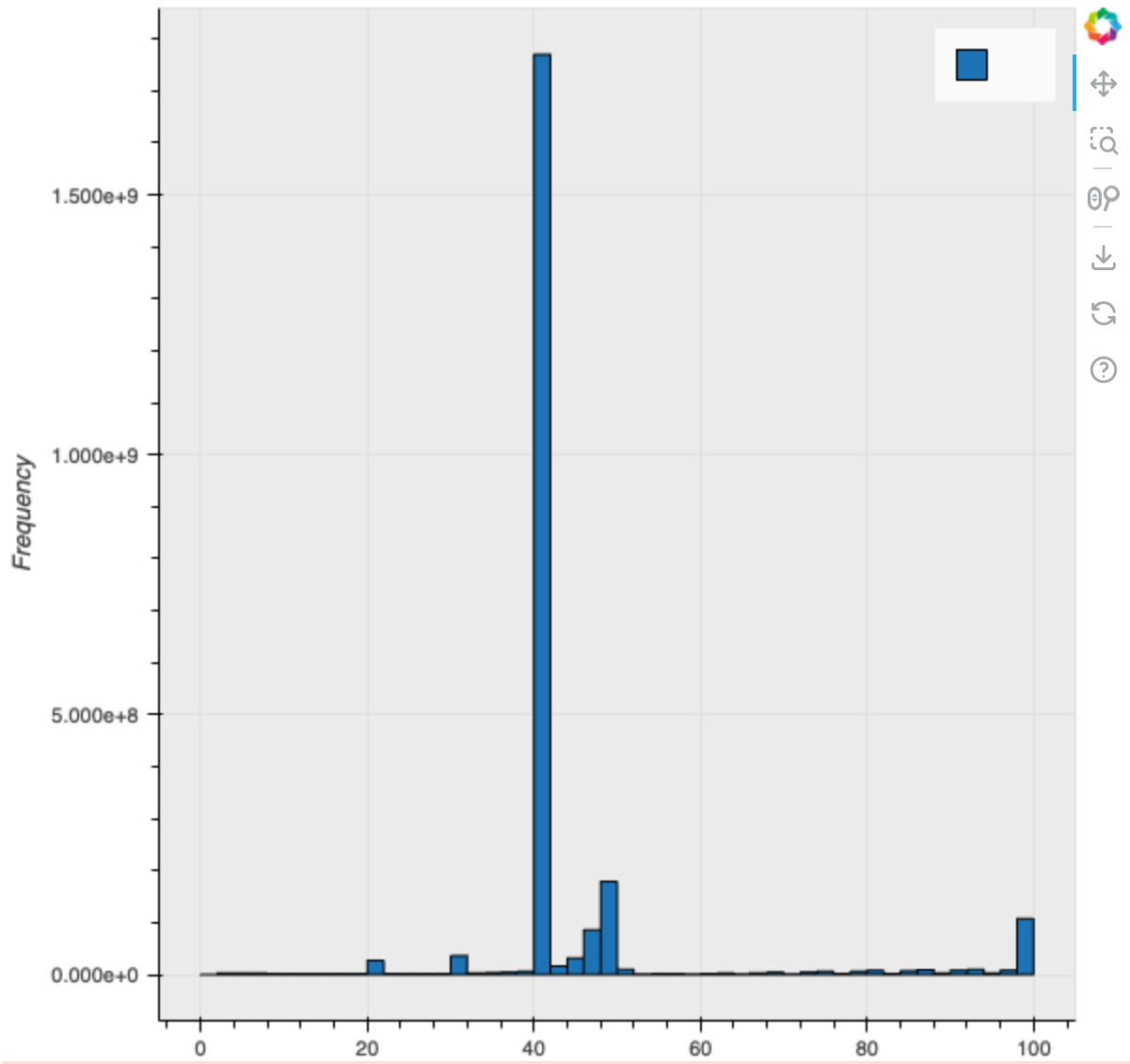
```
/tmp/ipykernel_37220/3819452698.py:14: DeprecationWarning: Importing display
from IPython.core.display is deprecated since IPython 7.14, please import fro
m IPython display
from IPython.core.display import display, HTML
```



BokehJS 3.1.1 successfully loaded.

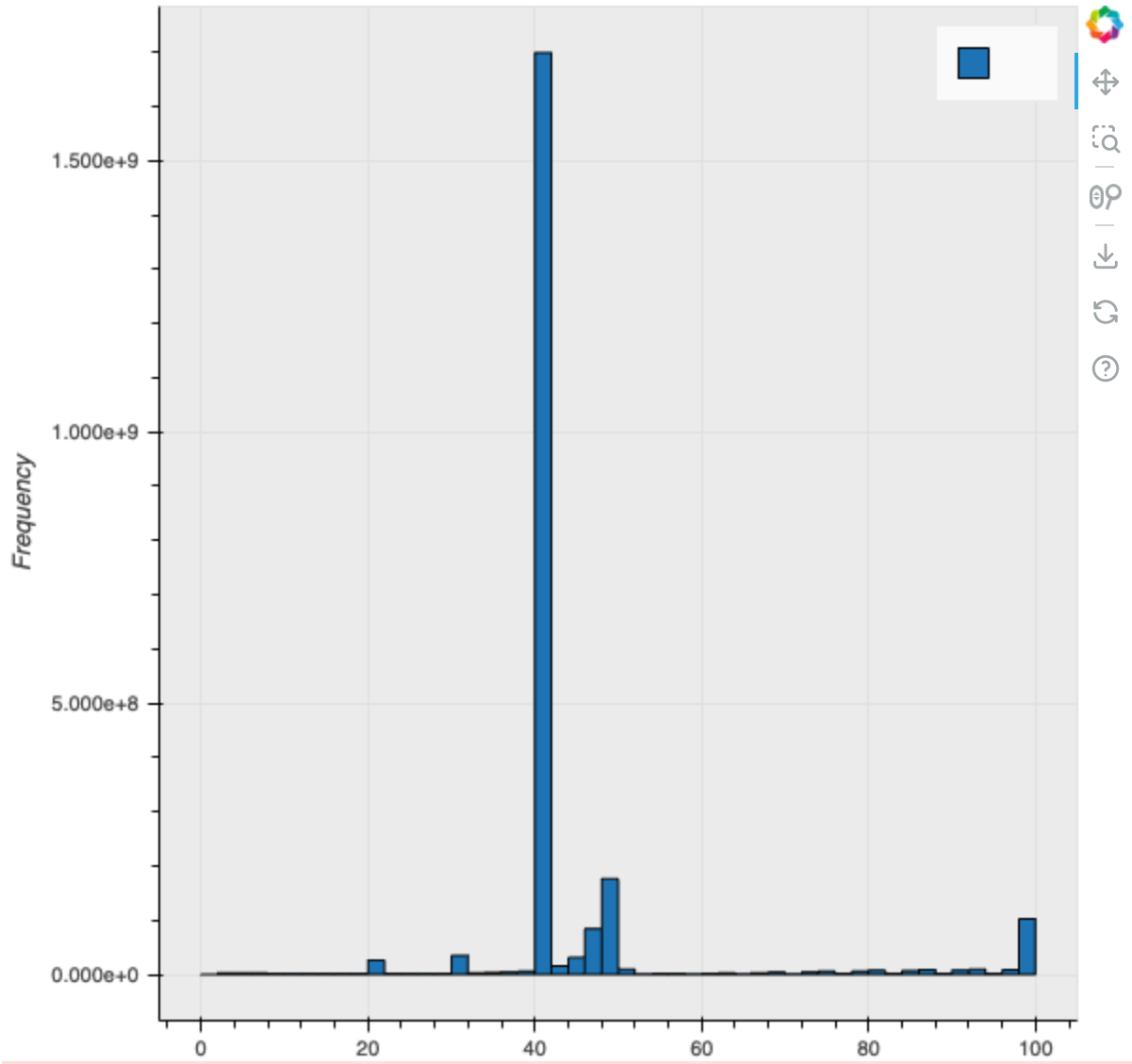
```
In [3]: rgp_path = 'gs://marten-seqr-sandbox-storage/rgp_entire_mt_from_vcf_20240404
rgp_mt = hl.read_matrix_table(rgp_path)
```


GQ of DRAGEN AII

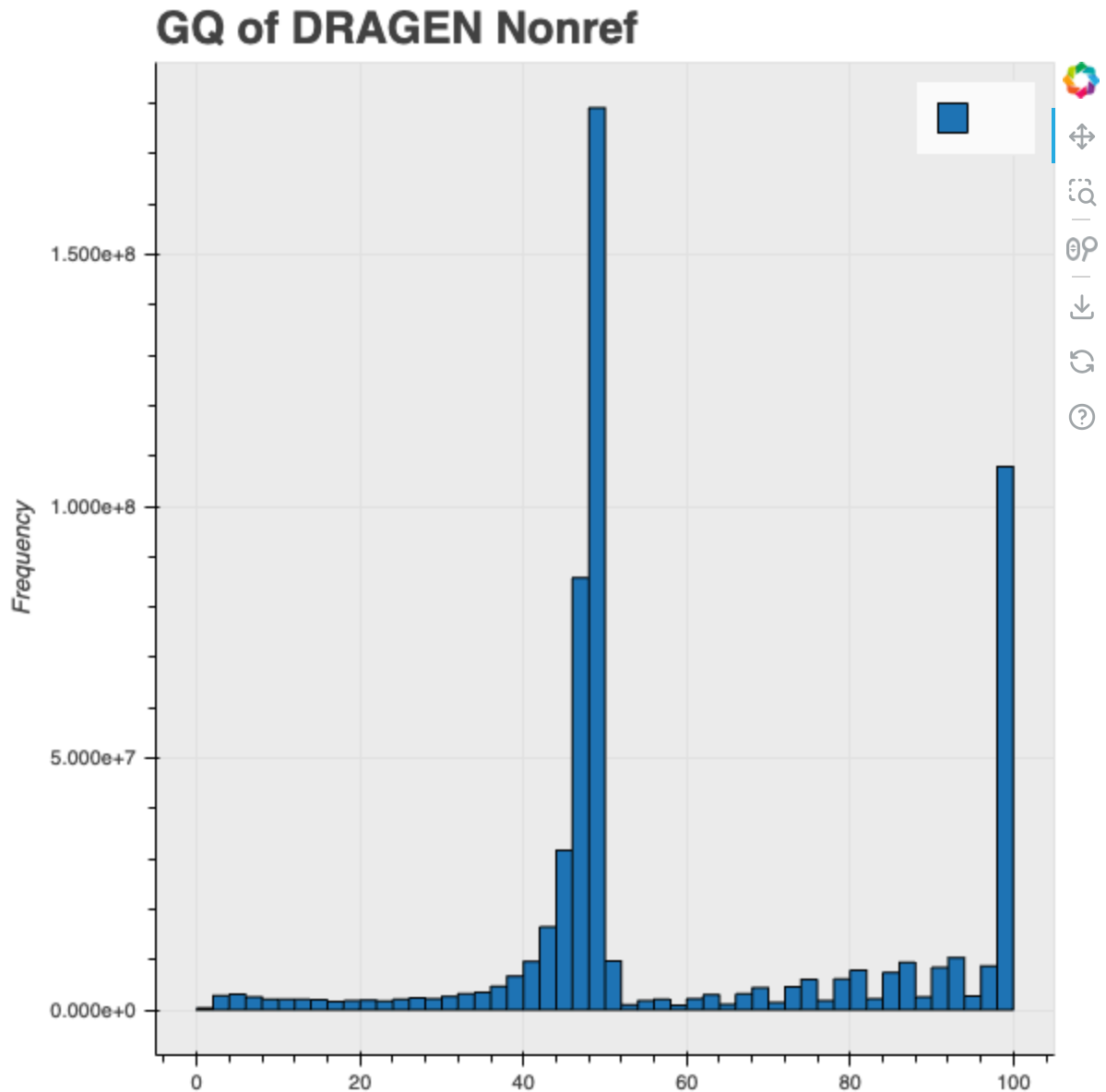


[Stage 6: =====(510 + 1) / 5
10]

GQ of DRAGEN Autosomes



[Stage 8: =====>(509 + 1) / 5
10]



```
In [20]: # does this behavior replicate in the prior GATK/WARP callset ?
```

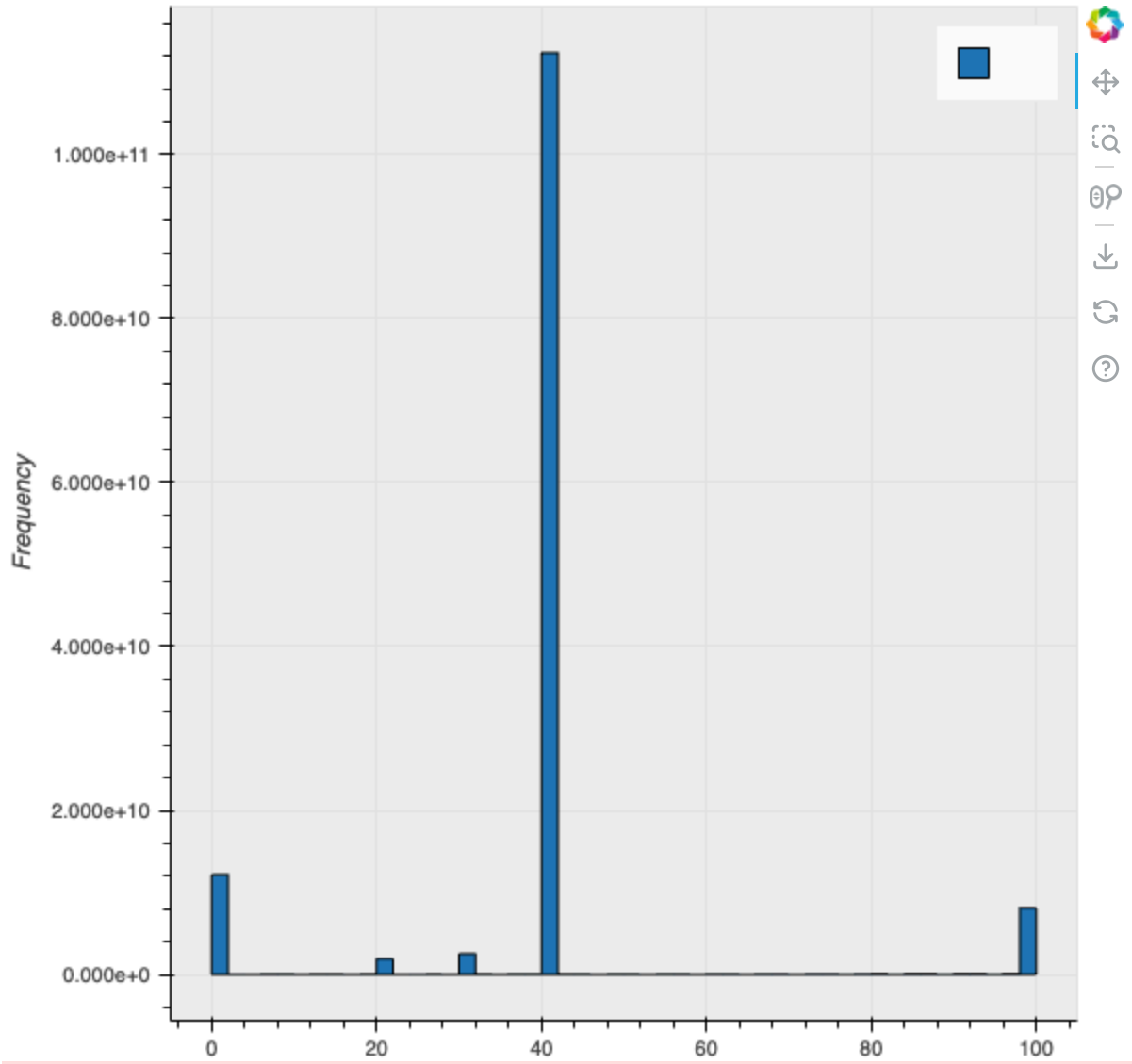
```
In [21]: # rgp_mt
rgp_mt_autosomes = rgp_mt.filter_rows(~sex_set.contains(rgp_mt.locus.contig)
rgp_mt_nonref = rgp_mt.filter_entries(rgp_mt.GT.is_non_ref())
```

```
In [22]: hail_rgp_expr_set = {'All':rgp_mt.GQ , 'Autosomes':rgp_mt_autosomes.GQ , 'No
```

```
In [23]: for hail_title,hail_expr in hail_rgp_expr_set.items():
plotting_obj = hl.plot.histogram(hail_expr,range=(0,100))
plotting_obj.title = f"GQ of GATK/WARP {hail_title}"
plotting_obj.title.text_font_size = '18pt'
show(plotting_obj)
```

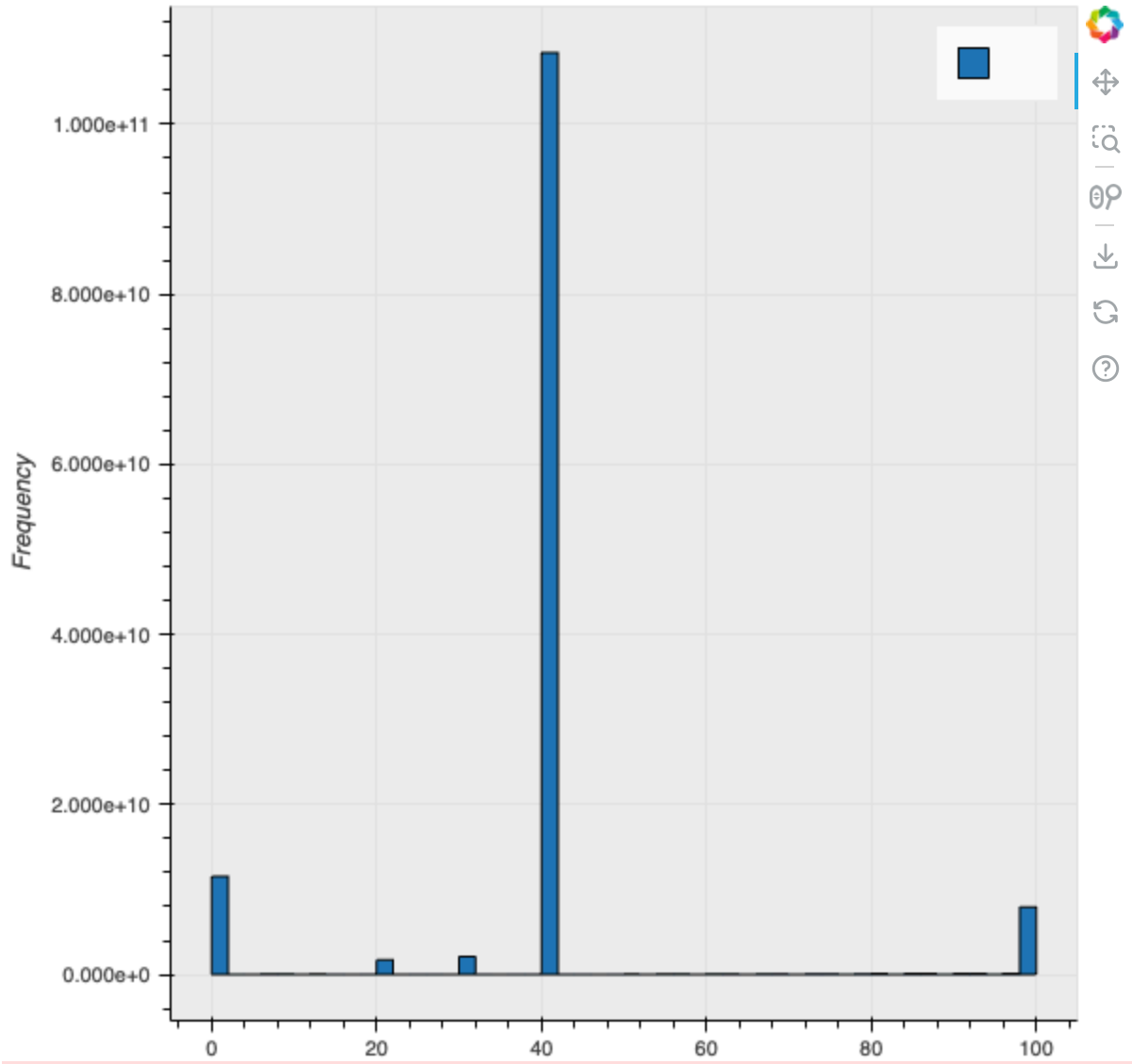
```
[Stage 11:=====> (98 + 2) / 100]
```

GQ of GATK/WARP All

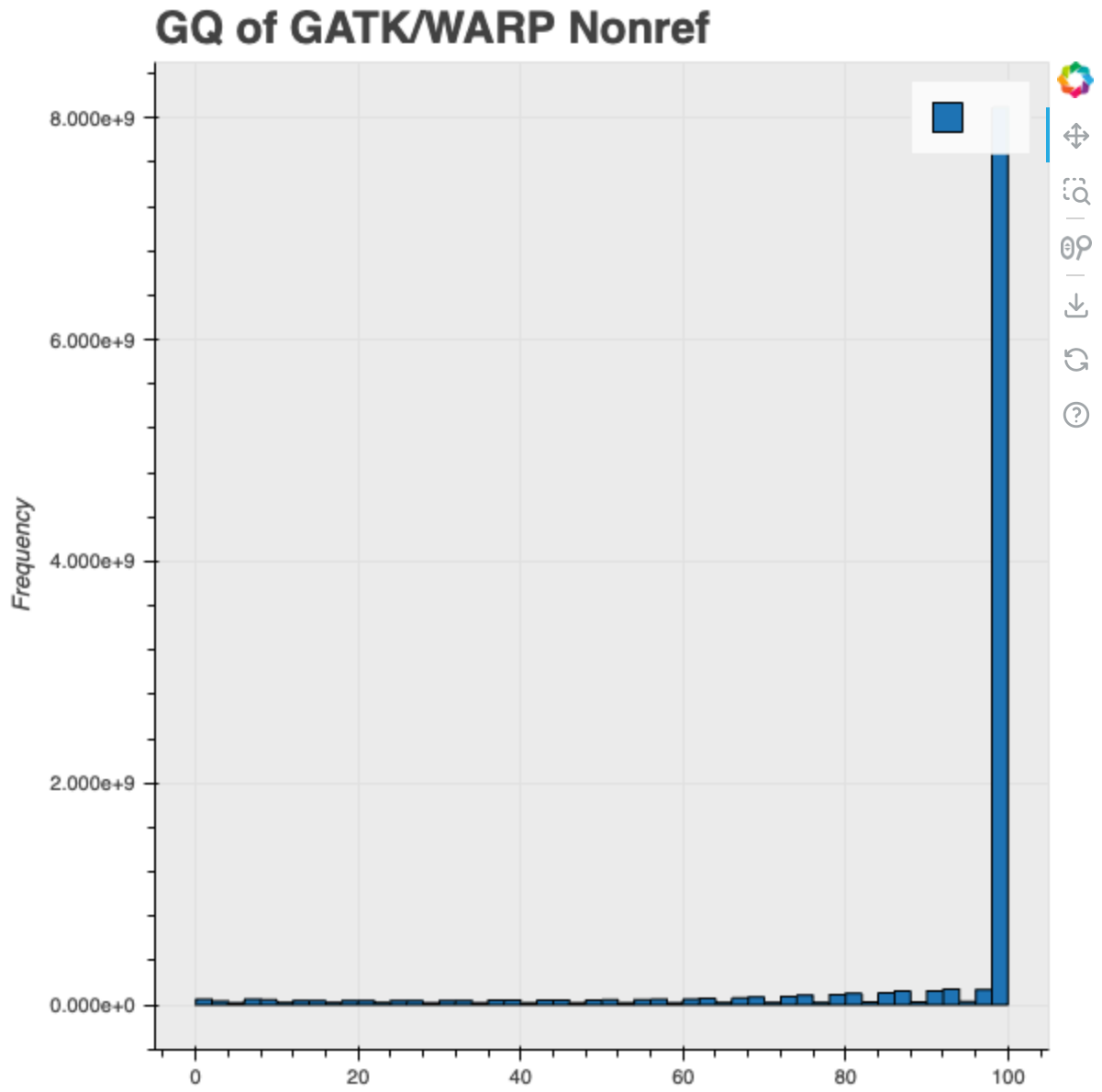


[Stage 14: =====> (94 + 6) / 100]

GQ of GATK/WARP Autosomes



[Stage 17: =====>(99 + 1) / 100]



In []: