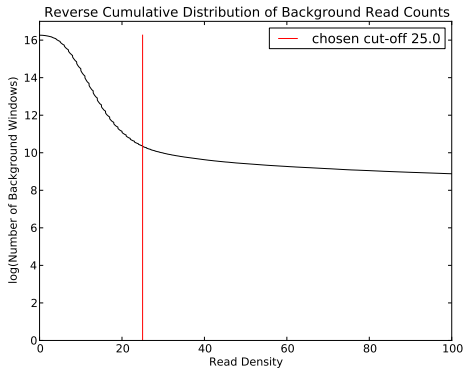
Filtering of Background Read Counts:

0.1

```
Used BG cut-off: 25
31731 of 11579671 input windows were filtered out (0.274023329333 percent).
```



Fitting Background Noise Distribution:

0.2

```
Fitted parameters:
        -sigma: 0.113180633348141
        -rho: 0.00091456329349722
        -mu: 0.00118370542897287
```

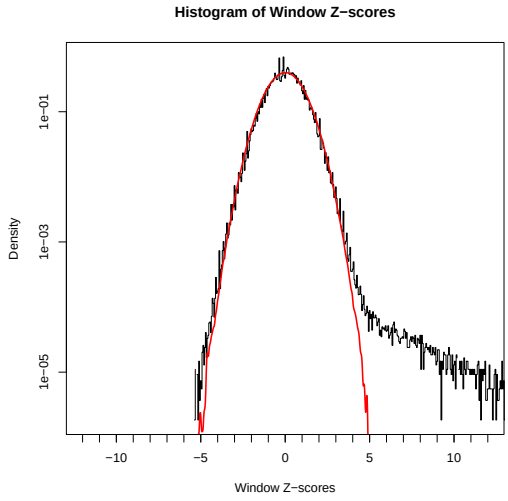


Figure 1: Distribution of Window Z-values with Fitted Gaussian.

Determining Z-value Cut-off and Mergeing Windows:

Bin Reads Log

```
Z value cut-off: 4.19
Number of windows above Z value cut-off: 3396
Number of regions above Z value cut-off: 1969
```

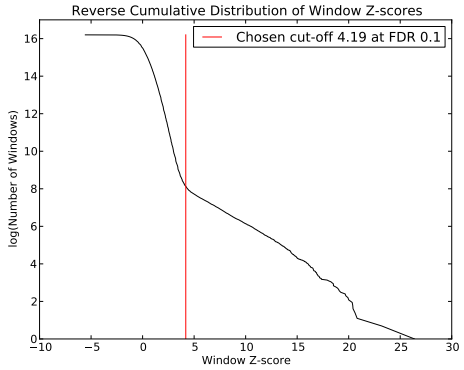


Figure 2: Reverse Cumulative Distribution of Window Z-values.

Refining Peaks (Gaussian Mixture Modelling):

0.3

```
About 2000 input regions.
Found mean fragment length 113.0. Constrained sigma to 35.282-92.282
```

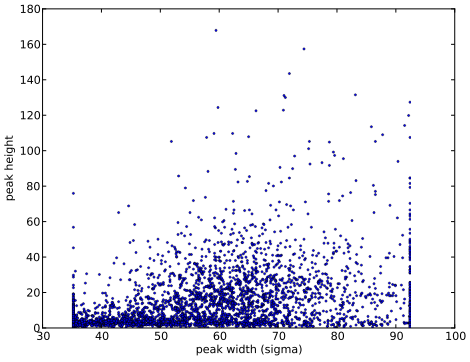


Figure 3: Scatter plot of peak height versus peak width

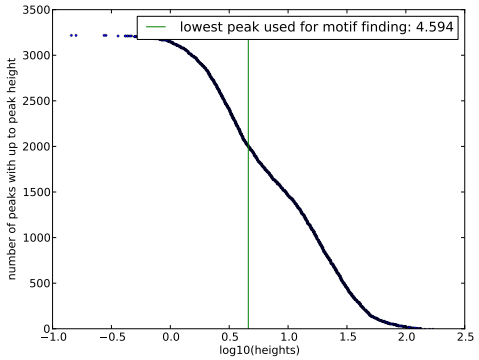


Figure 4: Reverse cumulative distribution of peak heights

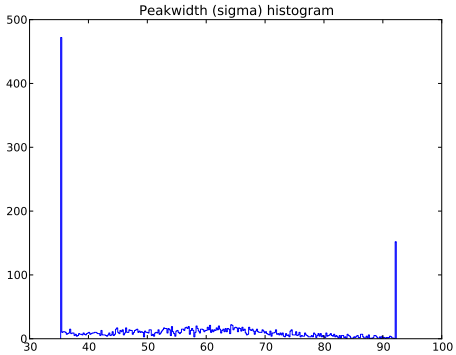


Figure 5: Histogram of peak widths (sigmas)

Computing Z-scores of Refined Peaks:

0.4

Total number of peaks: 3215
Number of peaks above Z–score of 4.19: 1464

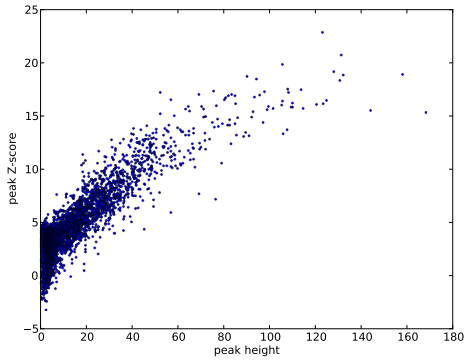


Figure 6: Scatter plot of peak height versus peak Z-score

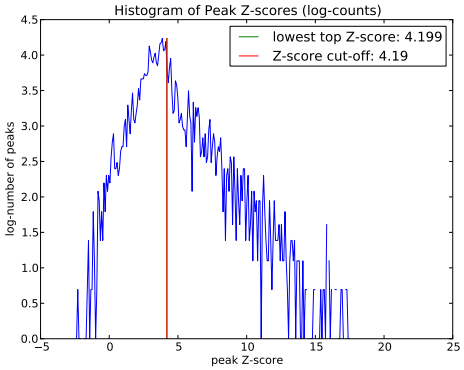


Figure 7: Histogram of peak Z-scores

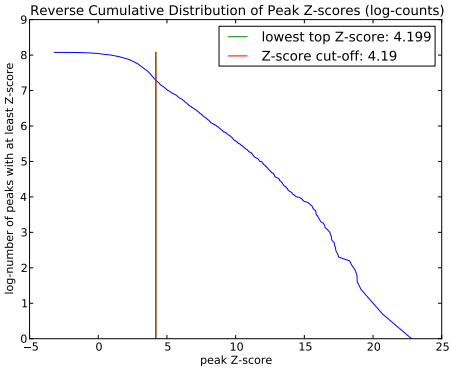


Figure 8: Reverse cumulative of peak Z-scores

Annotating Refined Peaks:

0.5

16 peaks were not annotated out of 1464 peaks.