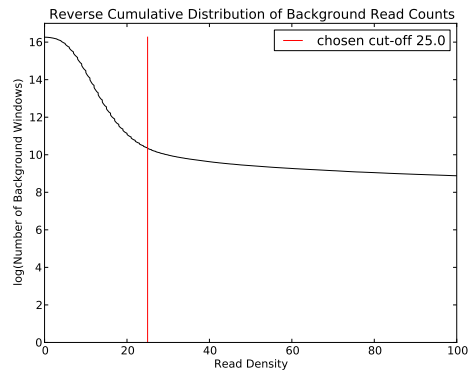# Filtering of Background Read Counts:

0.1

Used BG cut−off: 25
31731 of 11580051 input windows were filtered out (0.274014337243 percent).

Fitting Background Noise Distribution:

0.2

Fitted parameters:
  −sigma: 0.126306723595495
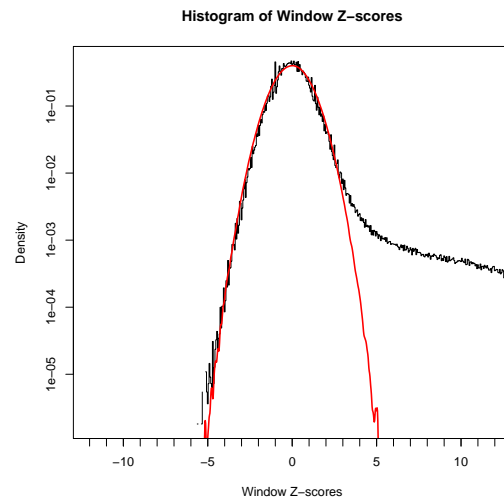 −rho: 0.0148169372502421
  −mu: −0.0709100186277772

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: 3.37
Number of windows above Z value cut−off: 98656
Number of regions above Z value cut−off: 47180
```
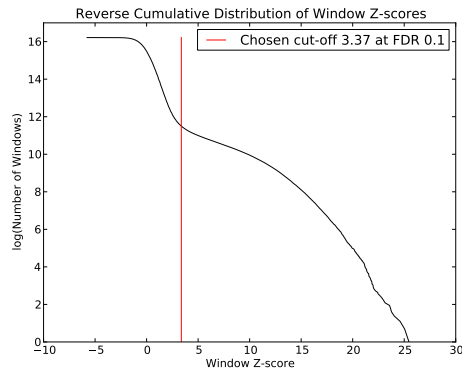

Figure 2: Reverse Cumulative Distribution of Window Z-values.

Refining Peaks (Gaussian Mixture Modelling):

0.3

```
About 47200 input regions.
Found mean fragment length 108.0. Constrained sigma to 33.212 − 90.212
```
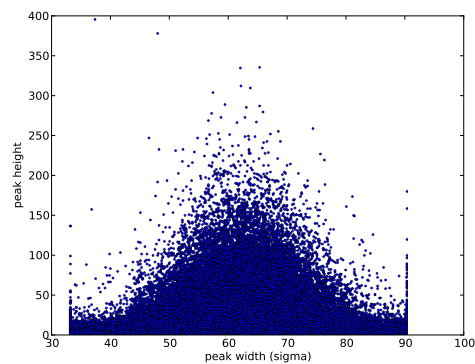

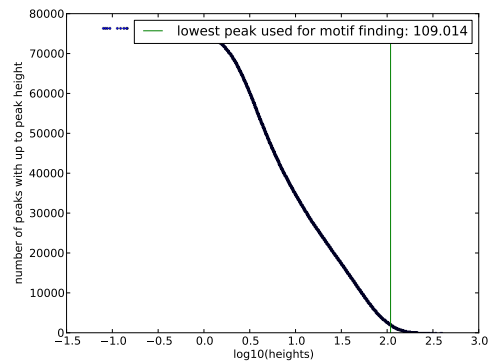Figure 3: Scatter plot of peak height versus peak width
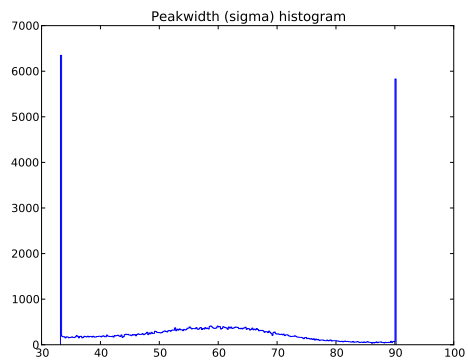
Figure 4: Reverse cumulative distribution of peak heights

Figure 5: Histogram of peak widths (sigmas)

Computing Z-scores of Refined Peaks:

0.4

```
Total number of peaks: 76205
Number of peaks above Z−score of 3.37: 44017
```
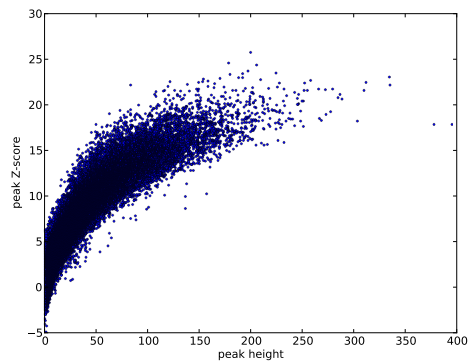
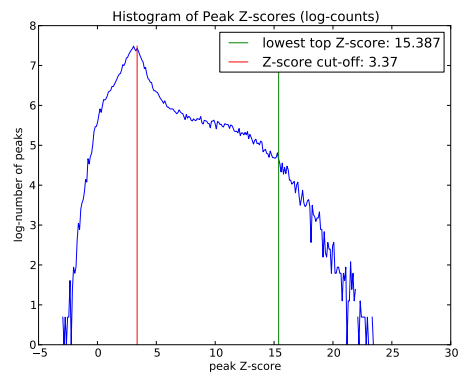Figure 6: Scatter plot of peak height versus peak Z-score
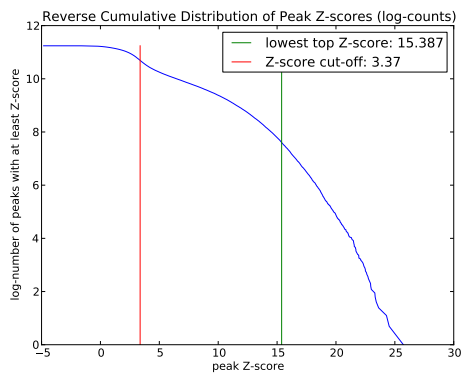

Figure 7: Histogram of peak Z-scores

Figure 8: Reverse cumulative of peak Z-scores

Annotating Refined Peaks:

0.5

308 peaks were not annotated out of 44017 peaks.