

Log2 transformed Not normalized

Figure 4\_(PDF file) shows boxplots representing summaries of the signal intensity distributions of the arrays. Each box corresponds to one array. Typically, one expects the boxes to have similar positions and widths. If the distribution of an array is very different from the others, this may indicate an experimental problem. Outlier detection was performed by computing the Kolmogorov-Smirnov statistic  $K_a$  between each array's distribution and the distribution of the pooled data.

## - Figure 6: Density plots.

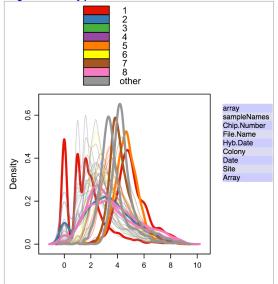


Figure 6 (PDF file) shows density estimates (smoothed histograms) of the data. Typically, the distributions of the arrays should have similar shapes and ranges. Arrays whose distributions are very different from the others should be considered for possible problems Various features of the distributions can be indicative of quality related phenomena. For instance, high levels of background will shift ar array's distribution to the right. Lack of signal diminishes its right right tail. A bulge at the upper end of the intensity range often indicate signal saturation.

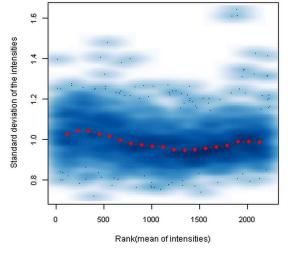
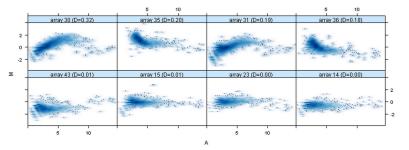
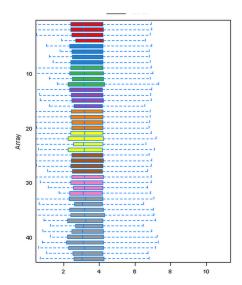


Figure 7\_(PDF file) shows a density plot of the standard deviation of the intensities across arrays on the *y*-axis versu mean on the *x*-axis. The red dots, connected by lines, show the running median of the standard deviation. After transformation to a logarithm(-like) scale, one typically expects the red line to be approximately horizontal, that is, sh trend. In some cases, a hump on the right hand of the *x*-axis can be observed and is symptomatic of a saturation of the i





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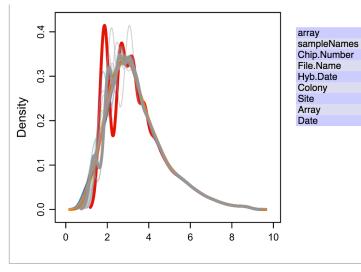
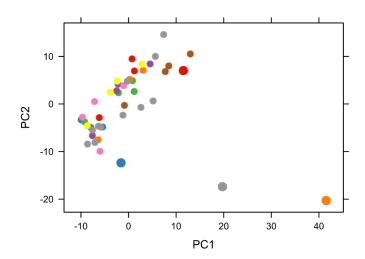


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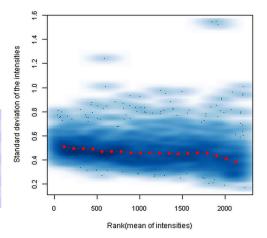
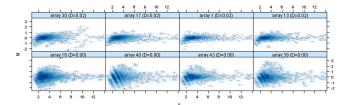
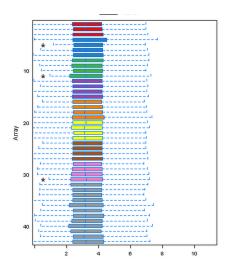
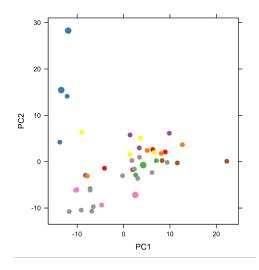


Figure 7 (PDF file) shows a density plot of the standard deviation of the intensities across arrays on the y-axis versus the rank of their mean on the x-axis. The red dots, connected by lines, show the running median of the standard deviation. After normalisation and transformation to a logarithm(-like) scale, one typically expects the red line to be approximately horizontal, that is, show no substantial trend. In some cases, a hump on the right hand of the x-axis can be observed and is symptomatic of a saturation of the intensities.

Log2 transformed normalizeBetweenArrays (limma function)







Log2 transformed Loess transformation

