Strength of constraint on first trough and peak difference is correlated with intensity of 10bp periodicity signal in averaged minor groove width

Figure 1 Averaged predicted minor groove width of all nucleosomal sequences.

Figure 2 Fourier transformation of the red rectangle region in Figure 1.
Figure 3 Averaged minor groove width of nucleosomal sequences whose minor groove width at first peak position is at least 1 Å greater than that at the first trough position.

Figure 4 Fourier transformation of the red rectangle region in Figure 3.

Figure 5 Averaged minor groove width of nucleosomal sequences whose minor groove width at first peak position is at least 2 Å greater than that at the first trough position.
From the above figures, it can be seen that, as a stronger constraint is applied on the difference between the first trough and peak positions, a more intense signal of periodicity of about 10 is exhibited. However, other significant frequencies also arise. Another problem is the results of Fourier transformation of the red rectangle regions are highly sensitive to the range of the selected regions. Expanding the regions symmetrically could lead to totally different results (different dominating frequency, rather than 10bp, in the spectrum).