

Statistical Analysis

- Correlation Function:

$$\bar{x} = \frac{1}{N} \sum_{i=1}^N x_i$$
$$\sigma^2 = \frac{1}{N} \sum_{i=1}^N (x_i - \bar{x})^2$$
$$c(\tau) = \frac{1}{N} \frac{1}{\sigma^2} \sum_{i=1}^N (x_i - \bar{x})(x_{i+\tau} - \bar{x})$$
$$c(0) = 1$$

- Spectral Density Function:

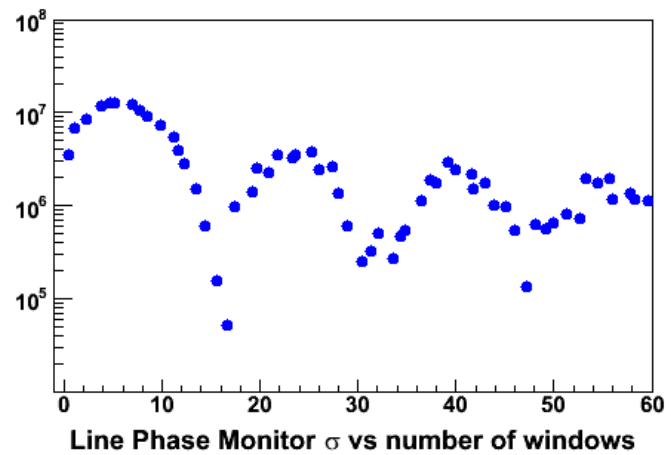
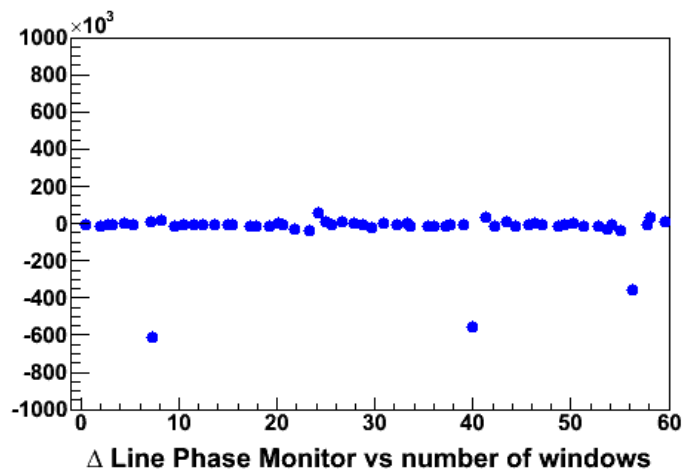
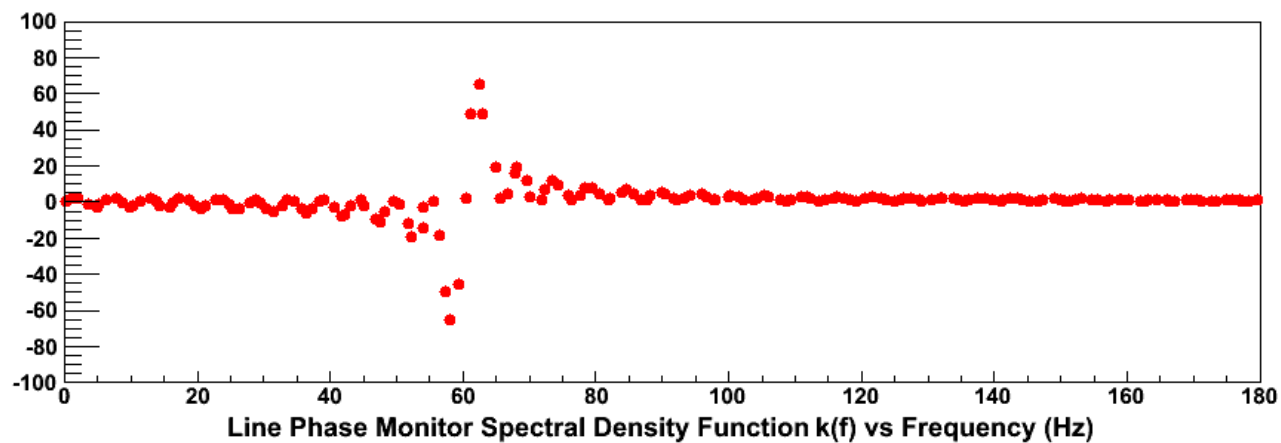
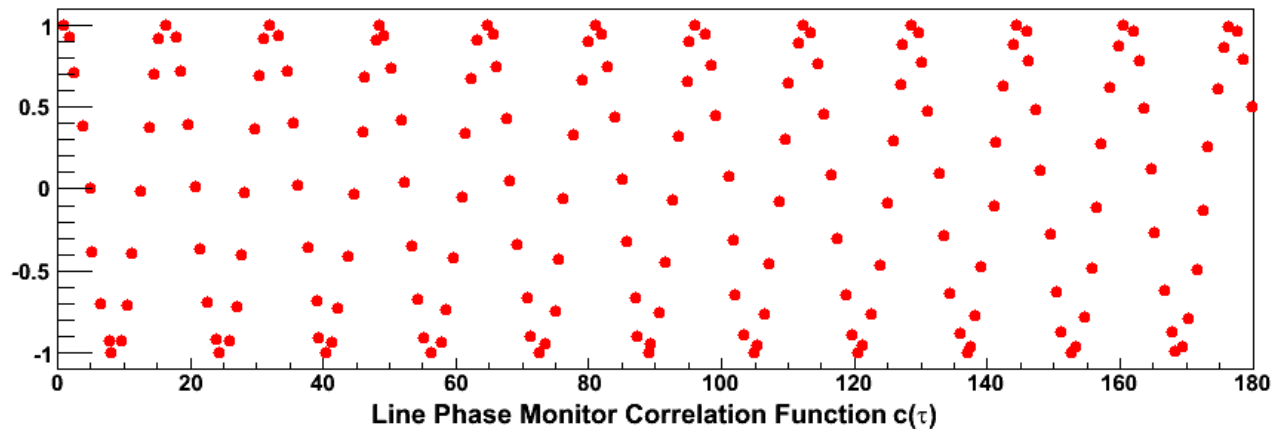
$$k(f) = \sum_{\tau=0} c(\tau) \sin(2\pi f \times T \times \tau)$$
$$T = T_Settle + T_Stable = 1.040 \text{ ms}$$

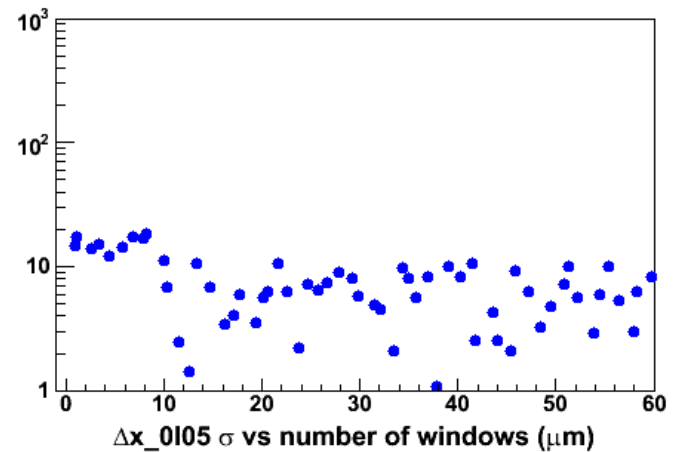
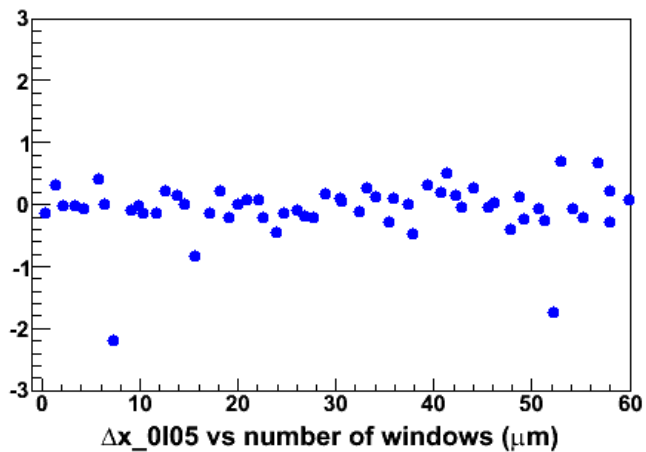
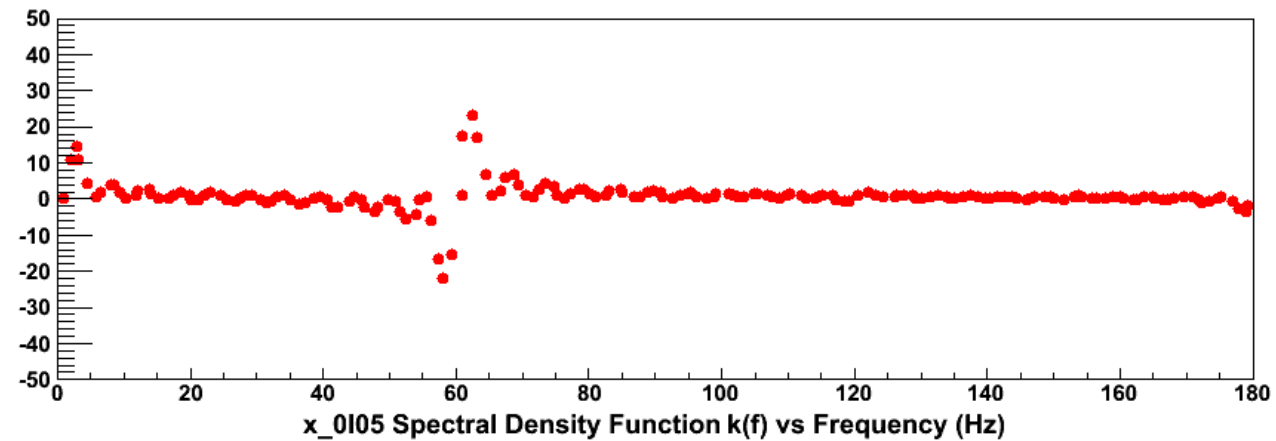
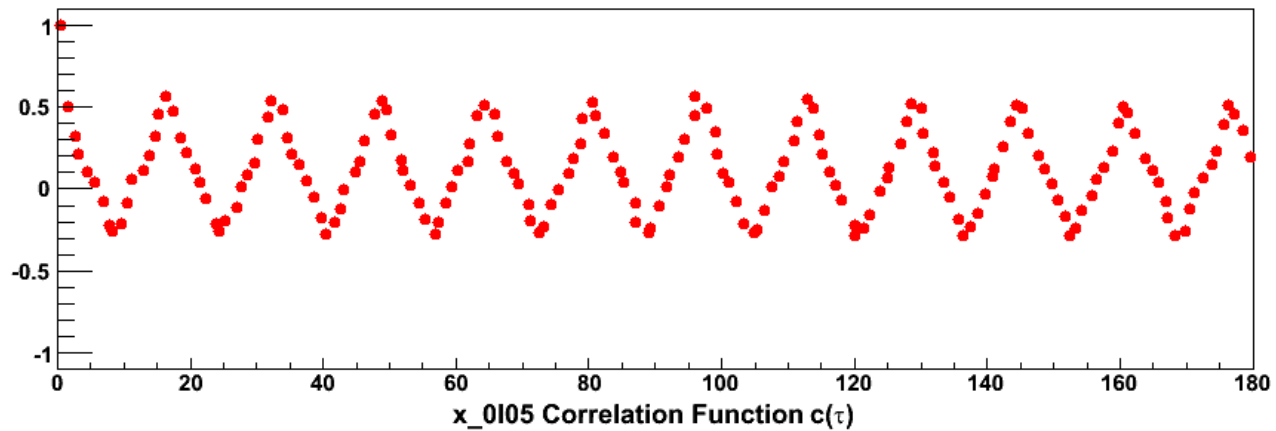
- Difference and σ :

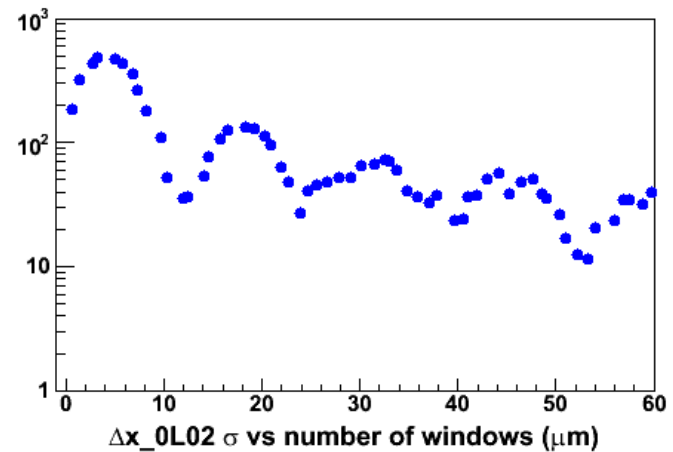
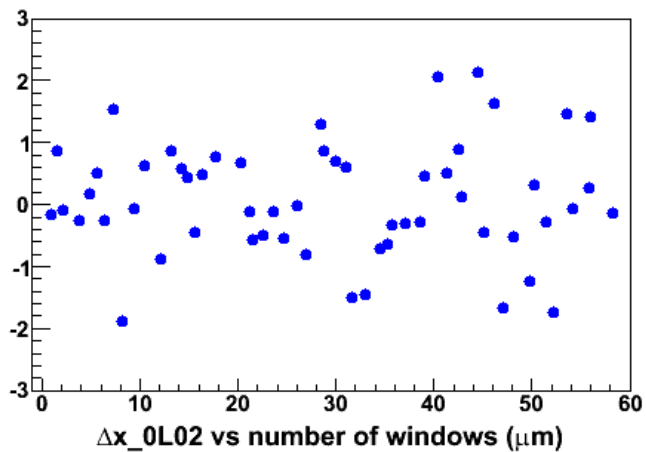
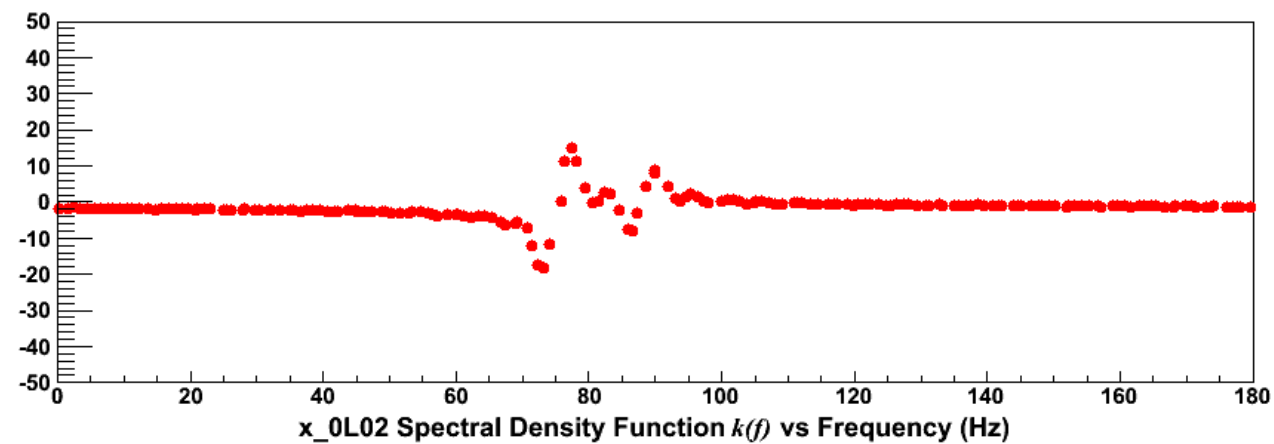
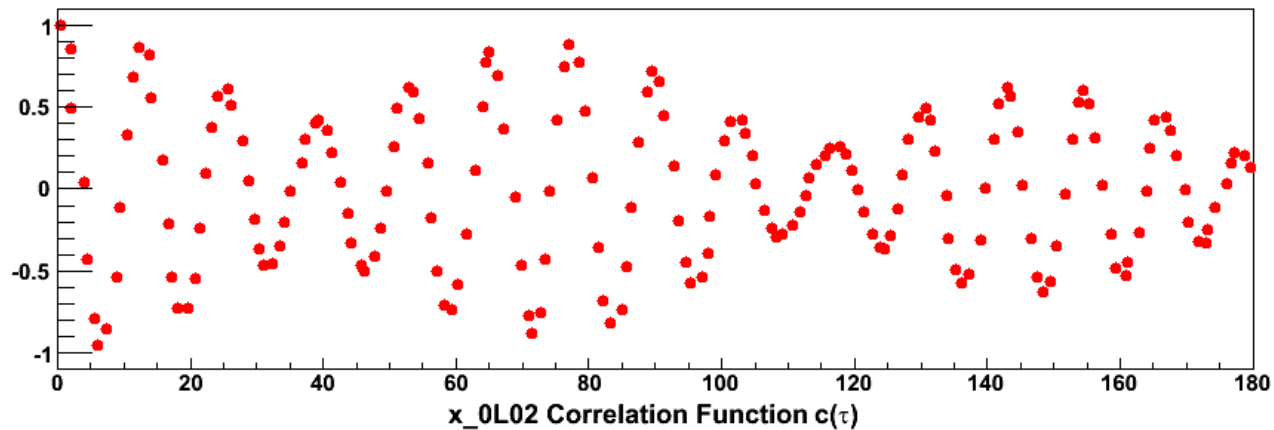
1 window: [] - [] + ...

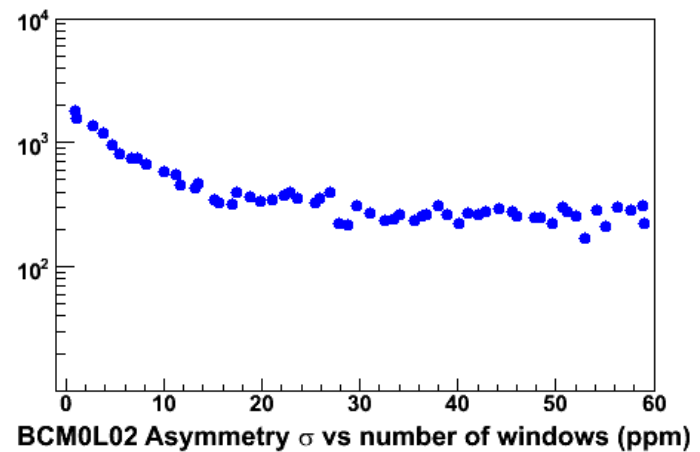
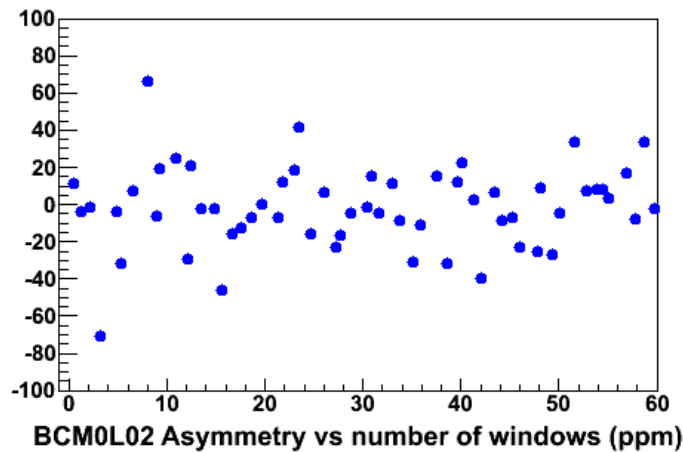
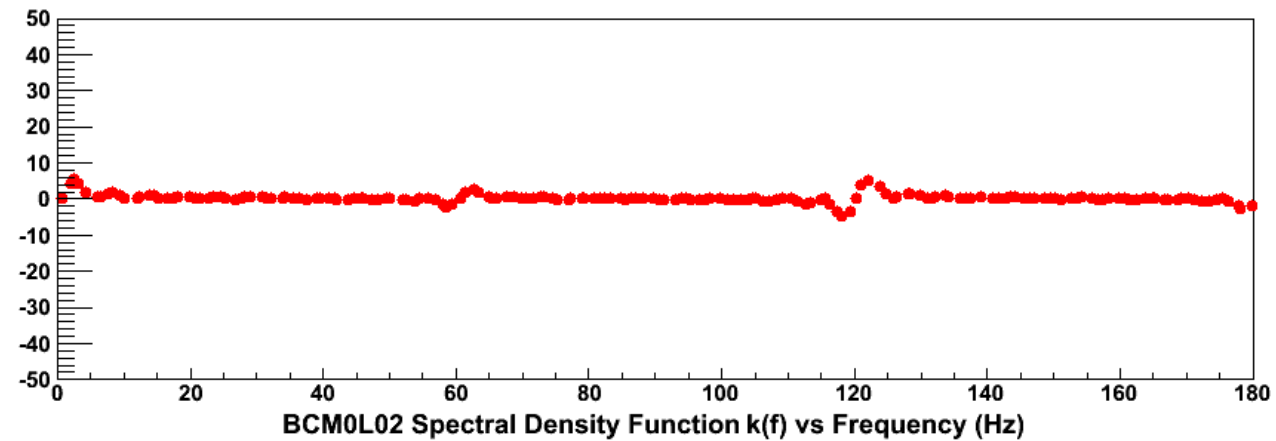
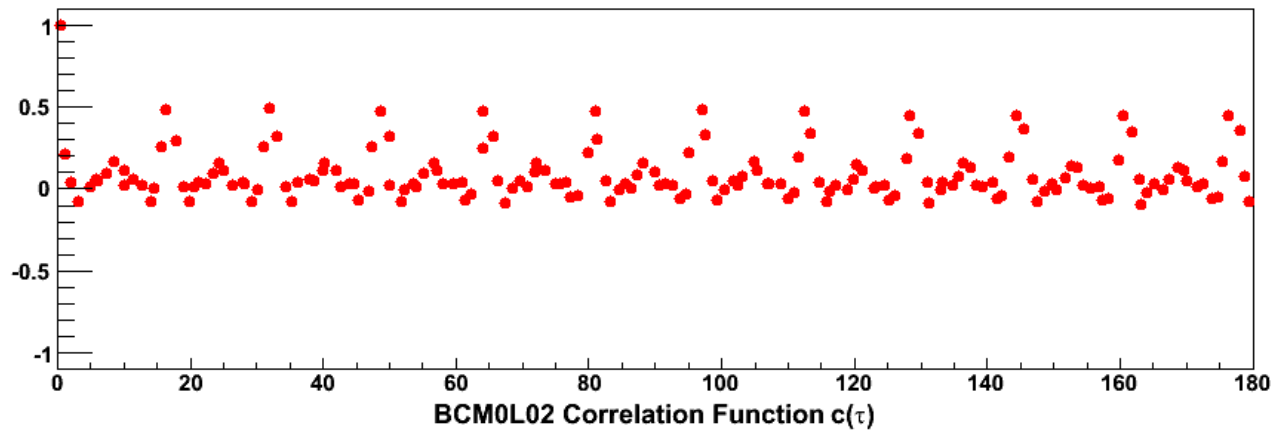
2 windows: []+[] - []+[] + ...

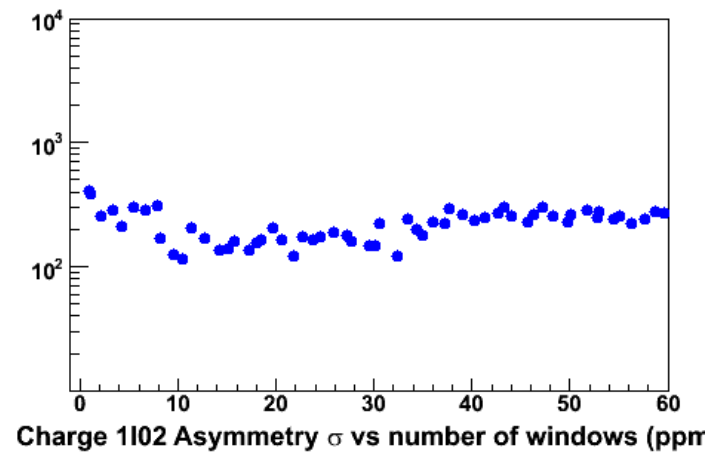
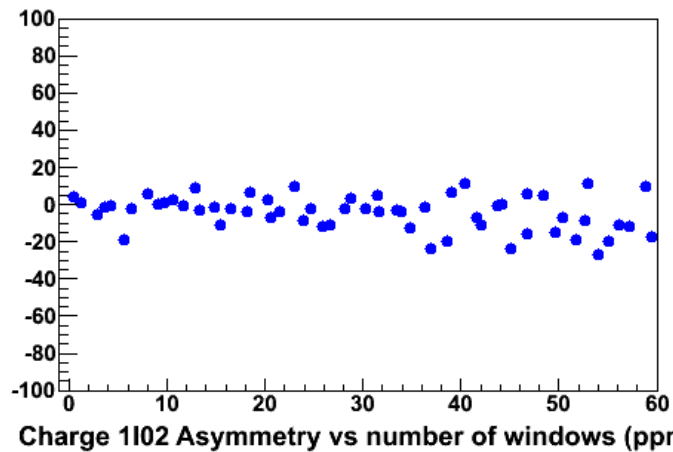
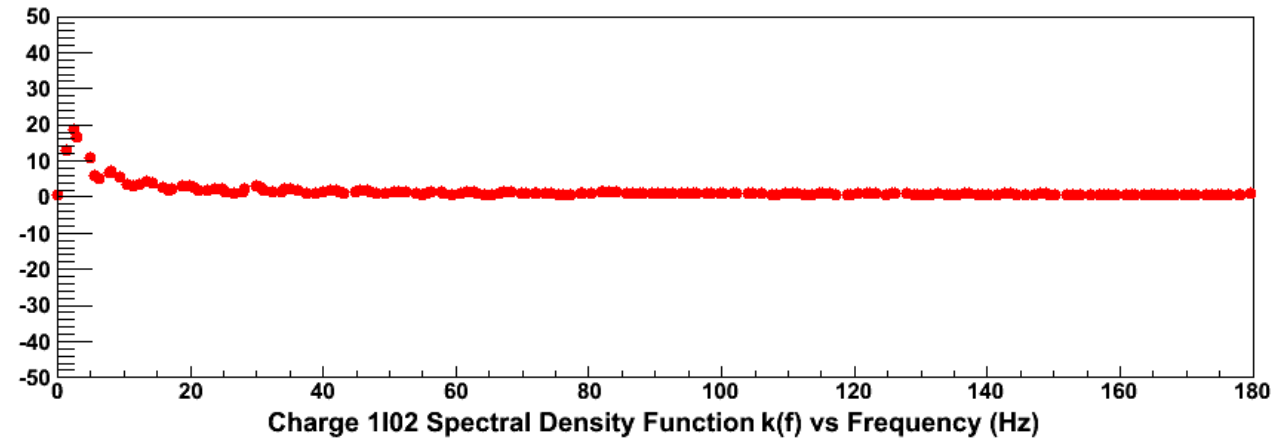
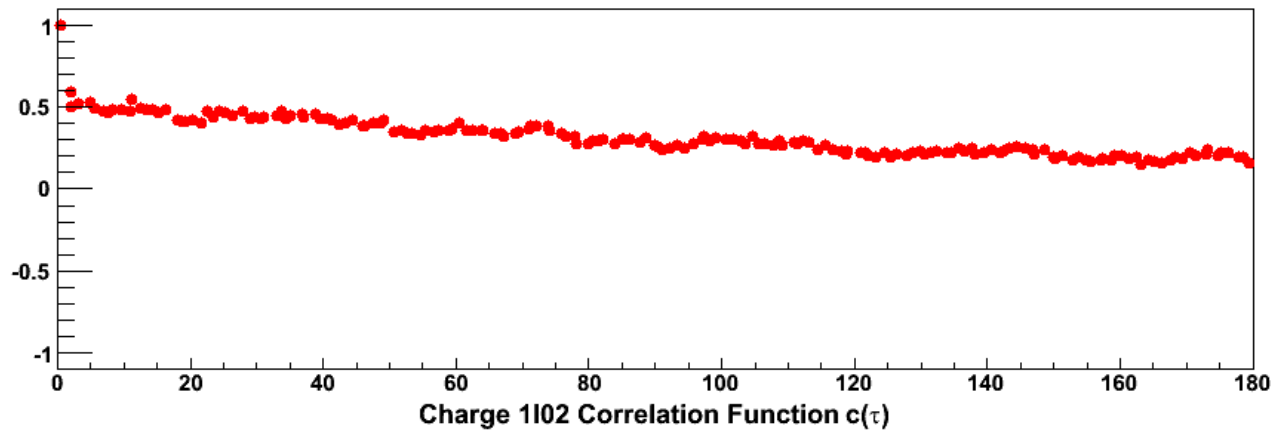
3 windows: []+[]+[] - []+[]+[] + ...

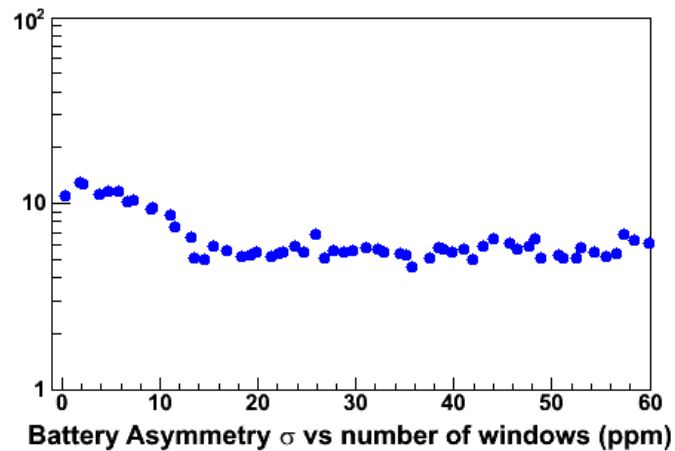
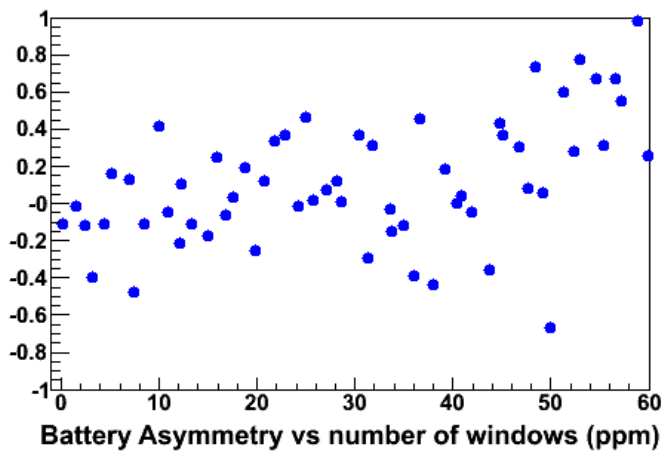
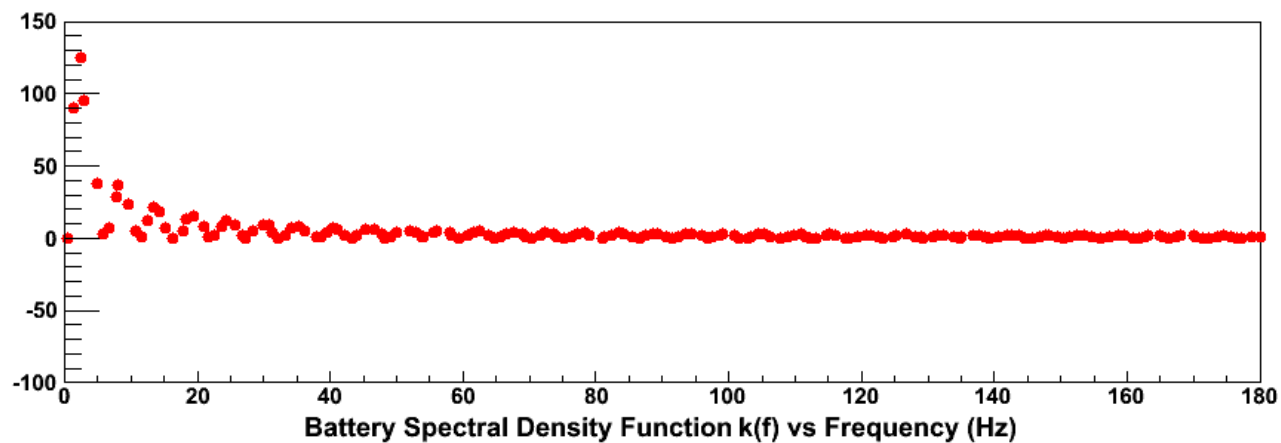
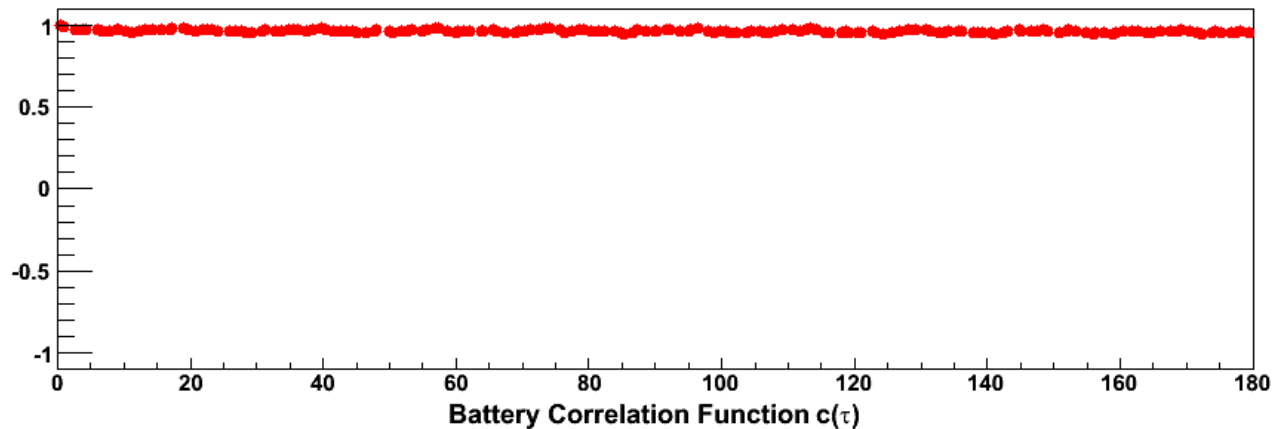


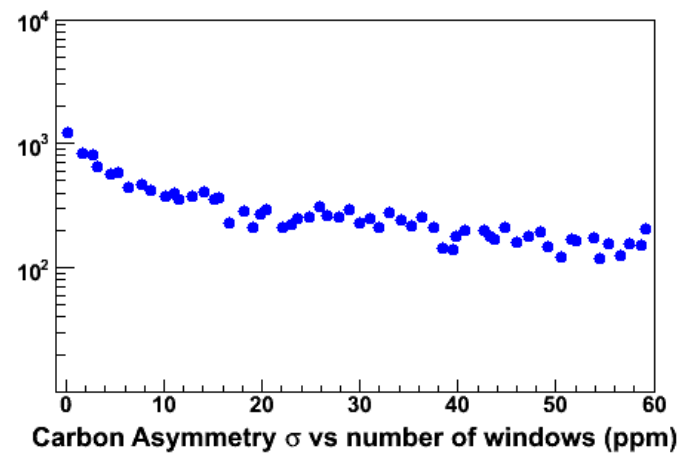
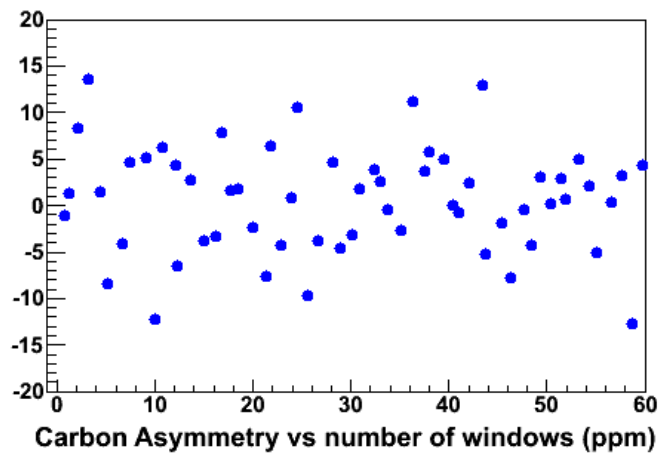
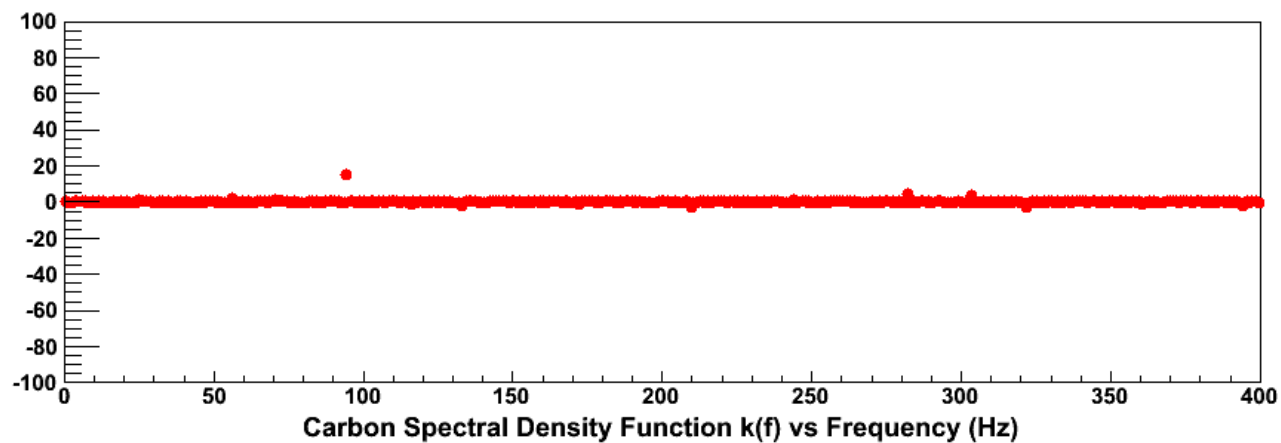
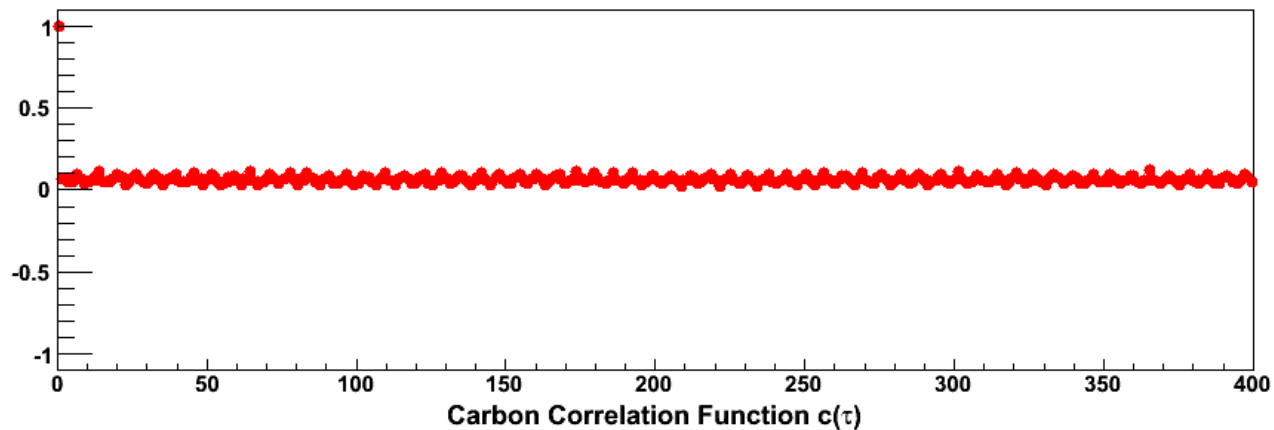


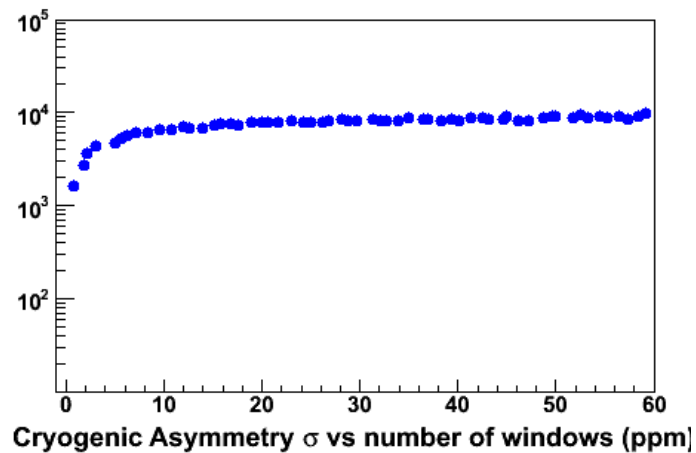
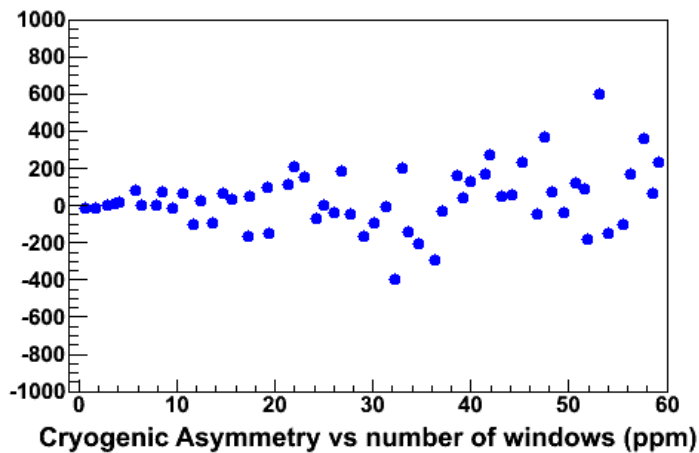
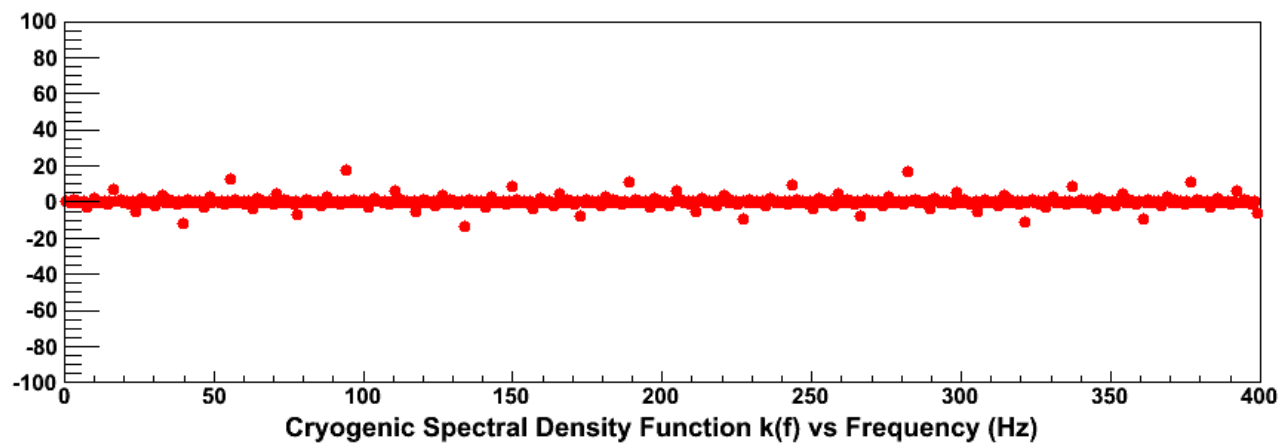
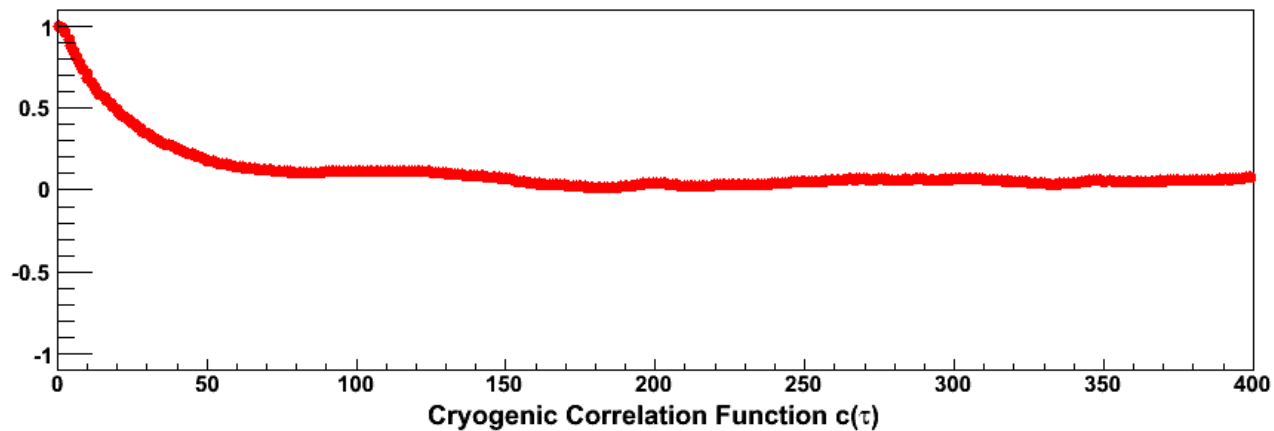




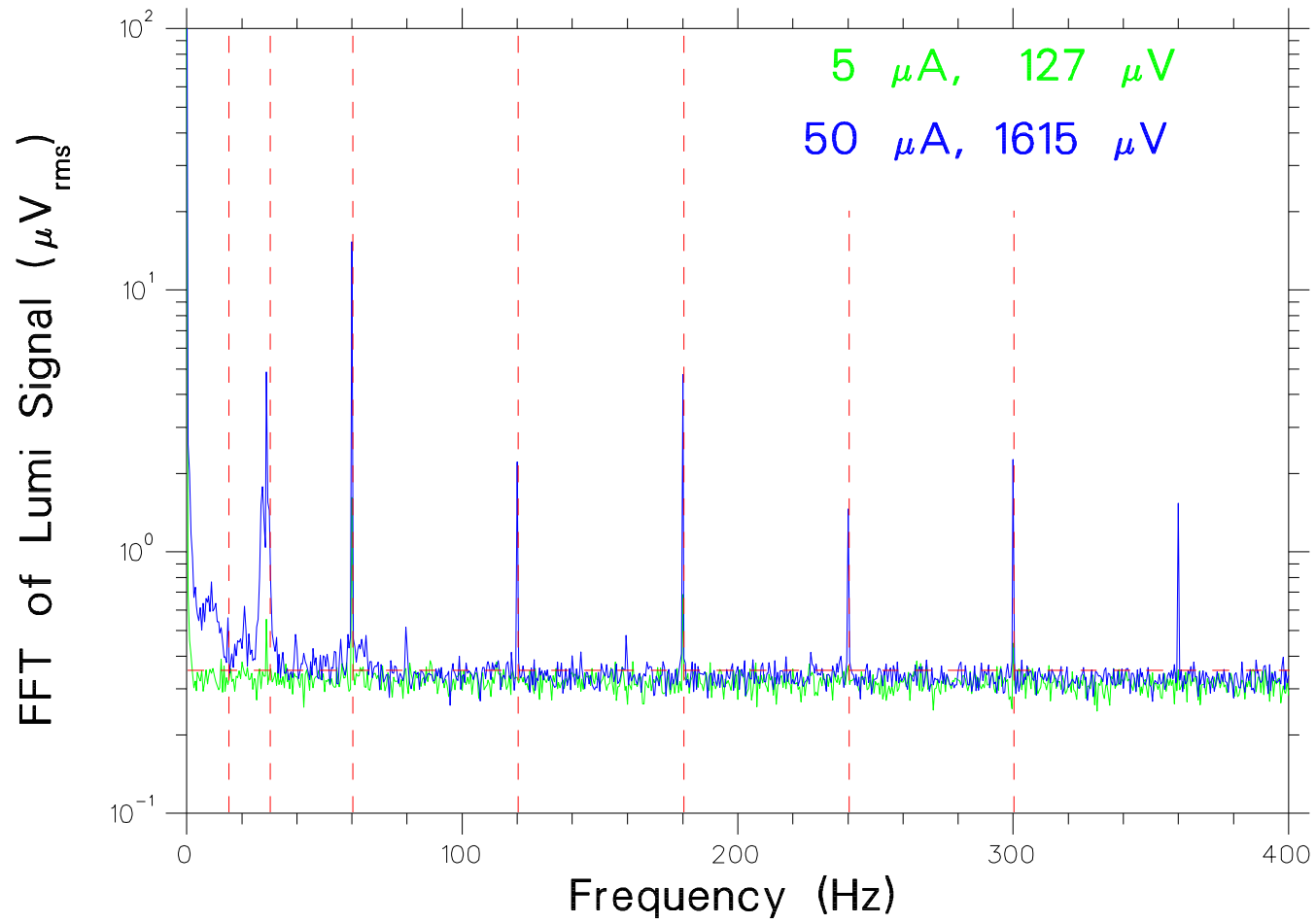








Hall A Lumi, Fan 60 Hz, Carbon



Hall A Lumi, Fan 60 Hz, 15 cm LD₂

