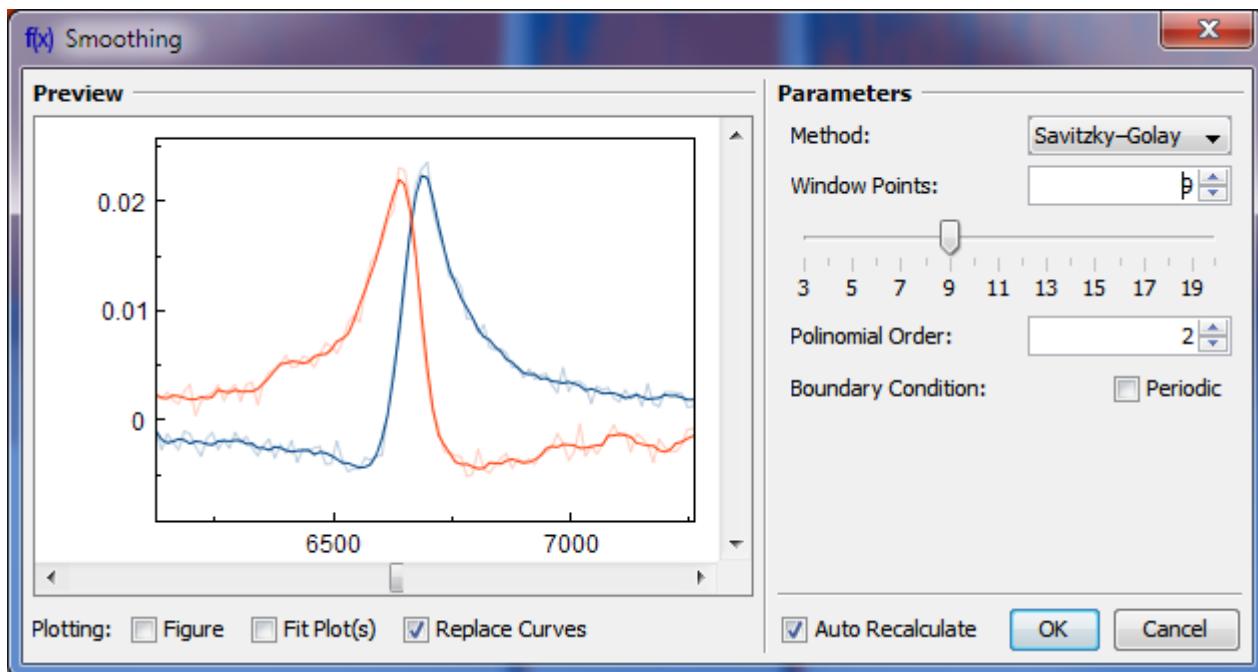


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Smoothing

Open Table or Figure or Fit Plot with initial data and select Processing → Smooth menu item. The opened processing dialog shows parameters, initial curves (semi-transparent) and smoothed preview.



Parameters

Periodic checkbox applies on calculation of first and last $p/2$ points. When it is set MagicPlot will take missing values from the opposite end (as if the signal is periodic) to calculate first and last $p/2$ points.

Algorithms

Two algorithms are available: Central Moving Average and [Savitzky-Golay method](#).

Central Moving Average

Each value A_k is replaced with p -points average:

$$A_k = \frac{1}{p} \sum_{i=k-p/2+1}^{k+p/2} a_i$$

If Periodic checkbox is not set the first and last $p/2$ points are calculated with the same symmetrical formula but with less summands.

Savitzky-Golay Filter

A Savitzky-Golay filter essentially performs a local polynomial regression on a series of equally spaced data points. Each data point value is replaced with local polynomial value at this point.

If Periodic checkbox is not set, MagicPlot will repeat the values of the first and last points to calculate a polynomial for the first and last $p/2$ points.

See Also

- [Data Processing and Auto Recalculation](#)

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