Fourier Transform Toolkit

The DAVE Fourier Transform Toolkit

FILE   HELP

Sample | Resolution | **Deconvolution**

Deconvolute

What to plot
- ○ real
- ○ imaginary
- ● magnitude
- ○ phase

Scattering Function
- ● I(Q,t)

I(t) scaling
- ○ None   ● I(t=0)=1

Y-axis scale
- ● Linear scale
- ○ Log scale

X-axis scale
- ● Linear scale
- ○ Log scale

Save as DAVE

Filtering Options
Pre-filter [None ▼]

points (pre-filter)
[4]

Savitzky-Golay filter order (pre-filter)
[4]

8
◄ ▢ ►
Group

cursor position = (3969.21, 1.21650)

$Q = 0.99\ \text{Å}^{-1}$

Resolution-corrected tunneling data from a backscattering spectrometer transformed from S(Q,E) to I(Q,t).

t (ps)
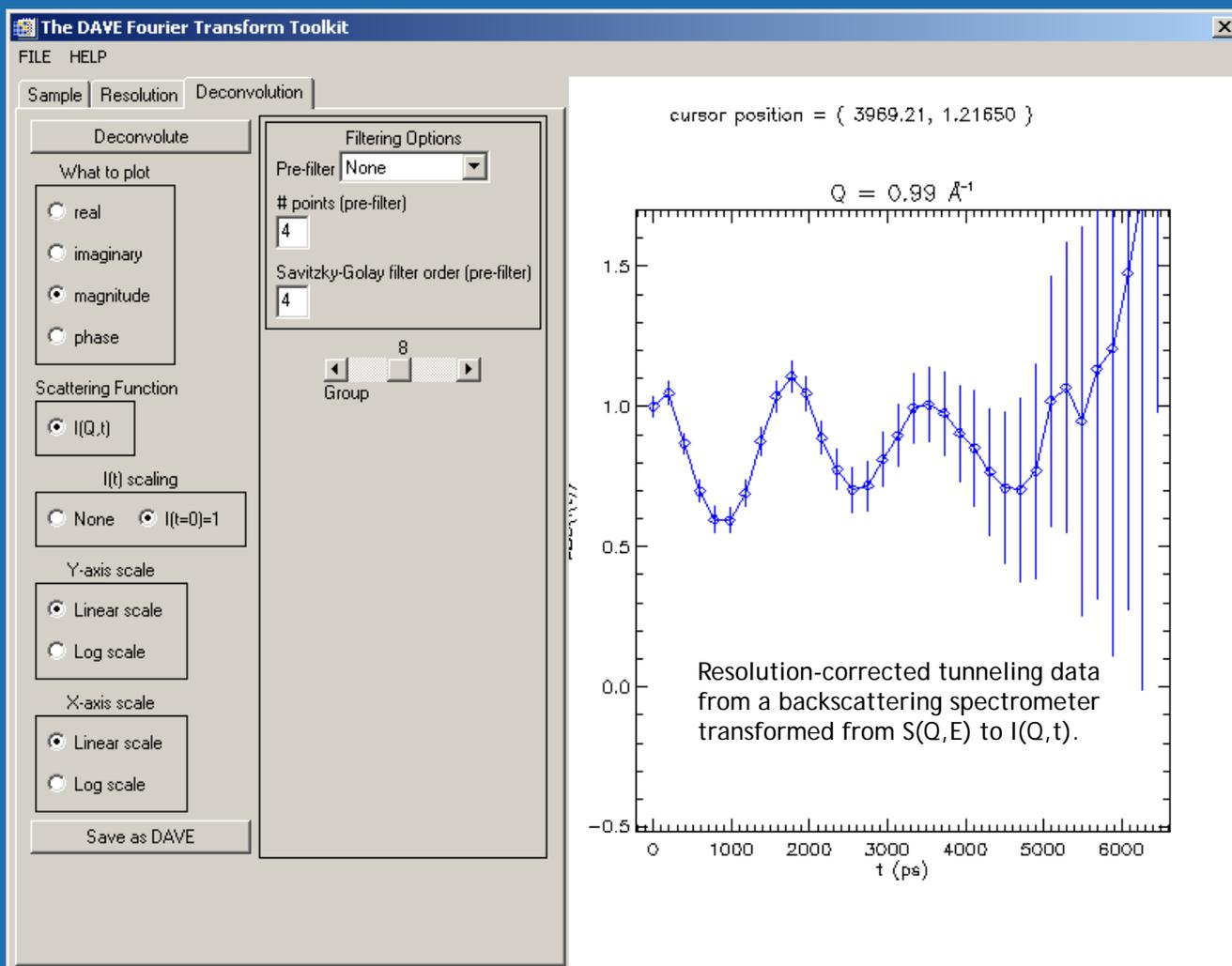
- w   Convert your data from S(Q,E) to I(Q,t)
- w   Flexible filtering options for pre- and post-processing
- w   Filters include Gaussian, boxcar, Savitzky-Golay, and Hanning
- w   Limit dynamic range for transformation
- w   User-defined background subtraction
- w   Estimate resolution-corrected spectra

- w   Monte-Carlo error propagation through transformation
- w   Export your transformed data to other DAVE applications
- w   Send your time-domain data into PAN for analysis
- w   Visualize a 3-dimensional surface or image representation of I(Q,t) using the Data Browser

NIST Center for Neutron Research

DAVE

Data Analysis and Visualization Environment