



Demonstration of musrfit software

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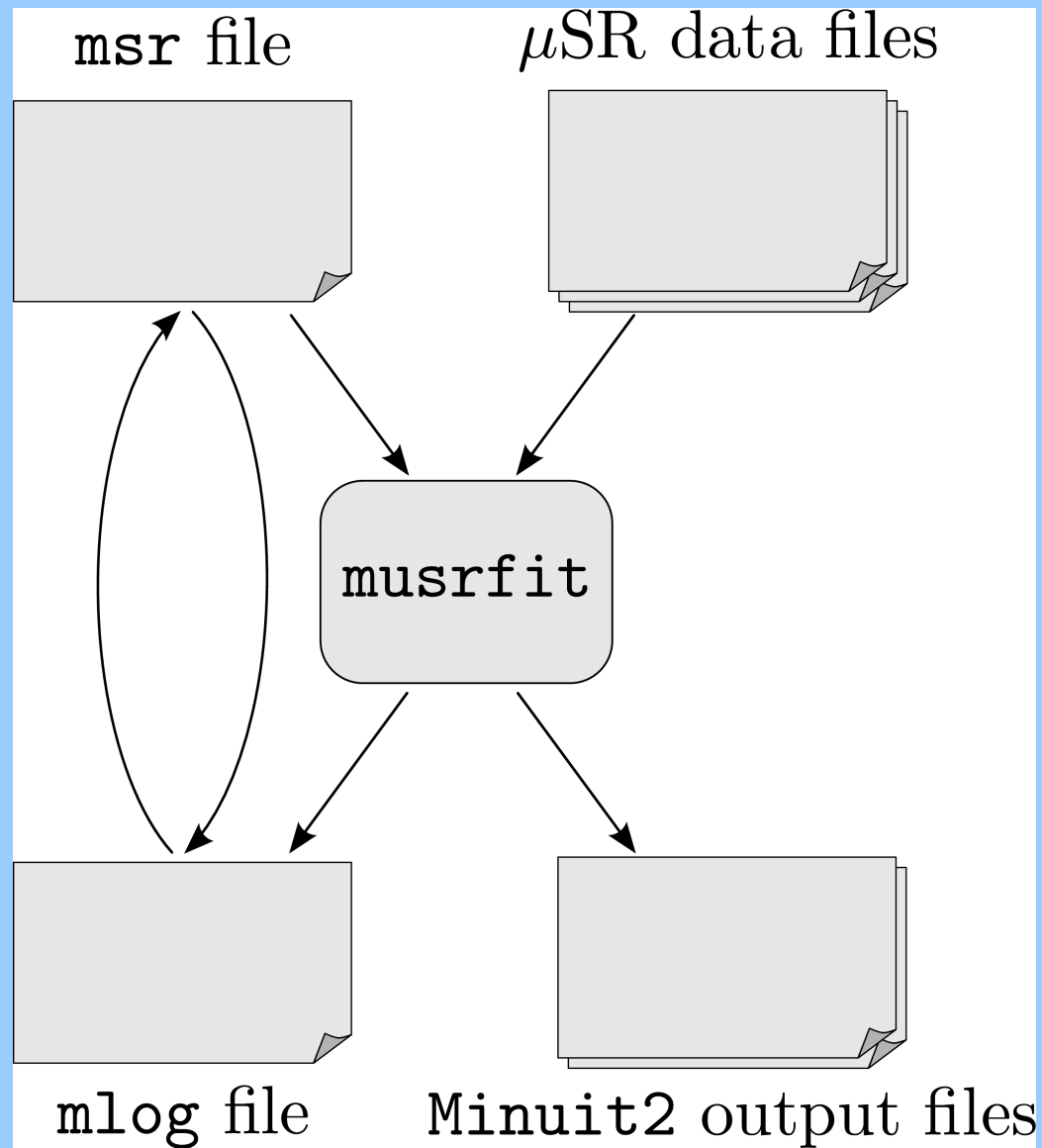
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Overview

- Developed at PSI by A. Suter, and maintained by him and B. M. Wojek.
- Free software released under GNU license
- Written in C++, and runs under Linux, Mac OS X, and (Windows?).
- Based on the CERN ROOT framework, and Minuit2 routine.
- Used to analyze/fit the data in formats used at most of muon facilities.

General file flow during a fit



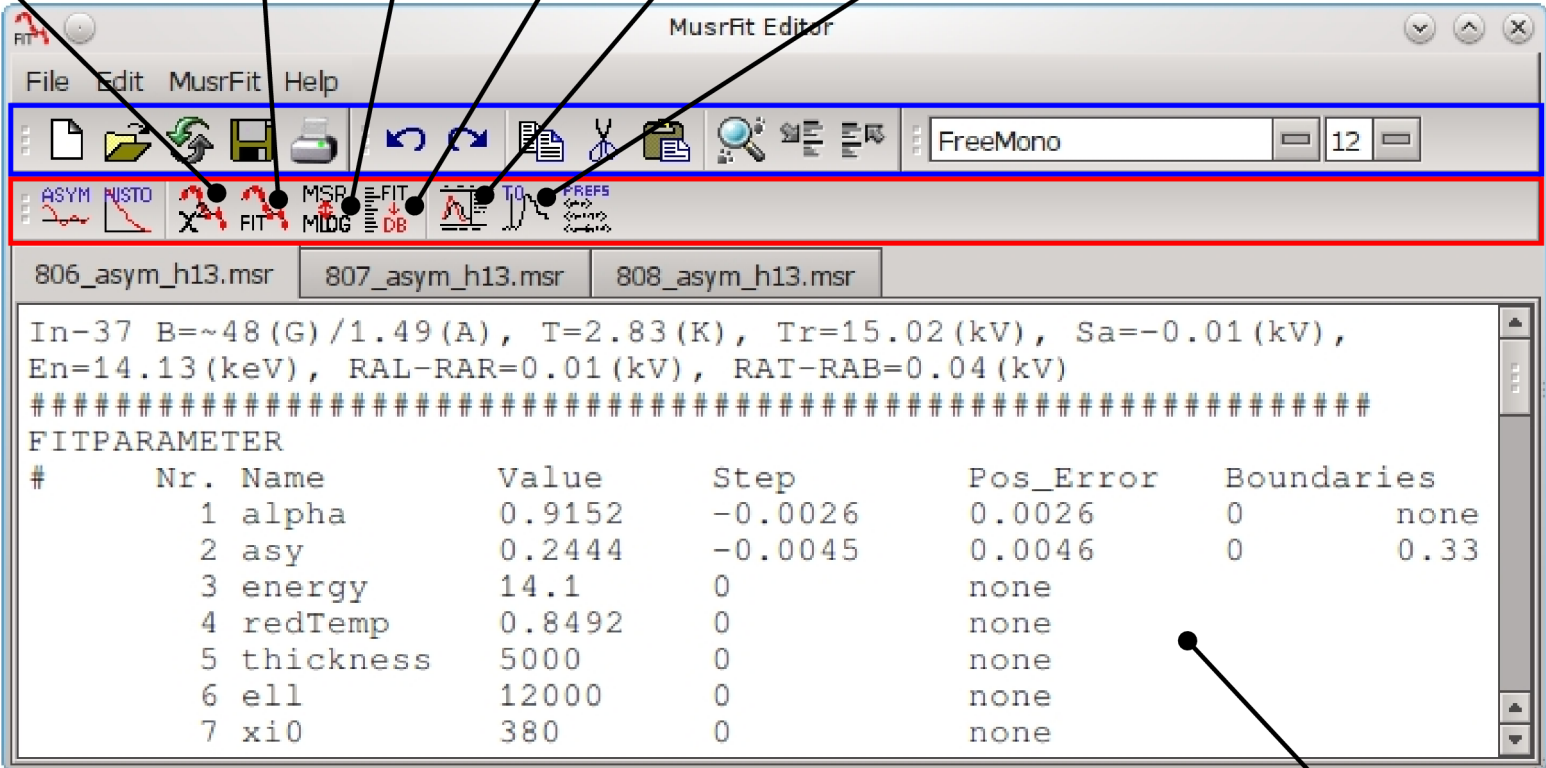
Sub-programs of musrfit

- musrgui/musredit: editor for .msr files
- musrt0: to time window of data and background
- musrview: GUI for plotting data+fits
- musrparam: to extract fit parameters.
- musr2data: fits multiple files.

Screen shot of musredit window

extract fit parameters
create msr files
fit model
calculate χ^2
swap
msr $\leftrightarrow$ mlog
view data/fit
find t_0 , etc.

text edit bar
musrfit bar



The screenshot shows the MusrFit Editor window. The main text editor displays the following content:

```
In-37 B=~48 (G) / 1.49 (A), T=2.83 (K), Tr=15.02 (kV), Sa=-0.01 (kV),  
En=14.13 (keV), RAL-RAR=0.01 (kV), RAT-RAB=0.04 (kV)  
#####  
FITPARAMETER  
#      Nr. Name      Value      Step      Pos_Error  Boundaries  
1  alpha      0.9152     -0.0026    0.0026      0      none  
2  asy        0.2444     -0.0045    0.0046      0      0.33  
3  energy     14.1       0          none  
4  redTemp    0.8492     0          none  
5  thickness  5000       0          none  
6  ell       12000      0          none  
7  xi0       380        0          none
```

text editor window

Type 'musrgui' in a terminal to start this window.

Resources

<http://lmu.web.psi.ch/facilities/software/musrfit/user/>