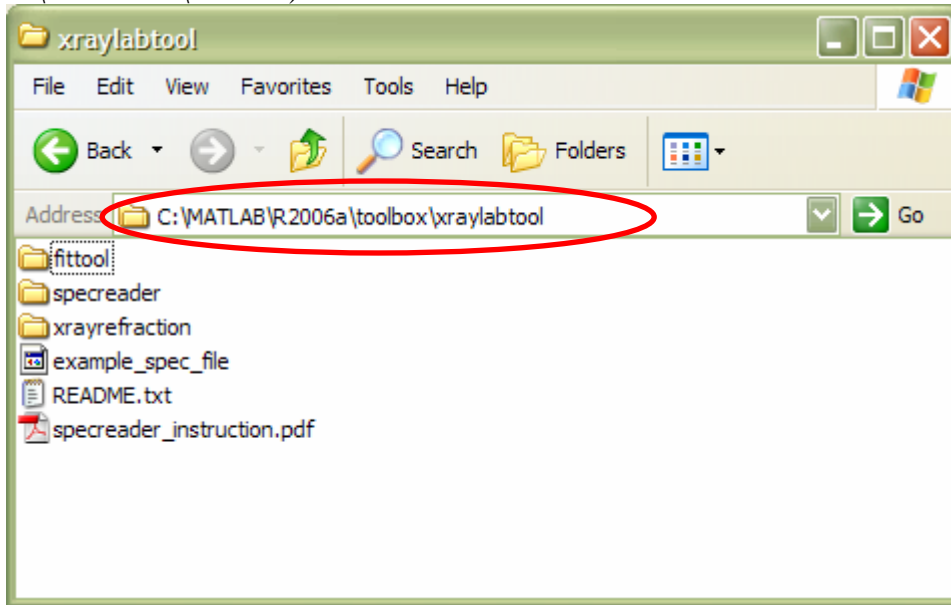


Quick Guide for Spec Reader (Including 'xrayrefraction' and 'fittool')

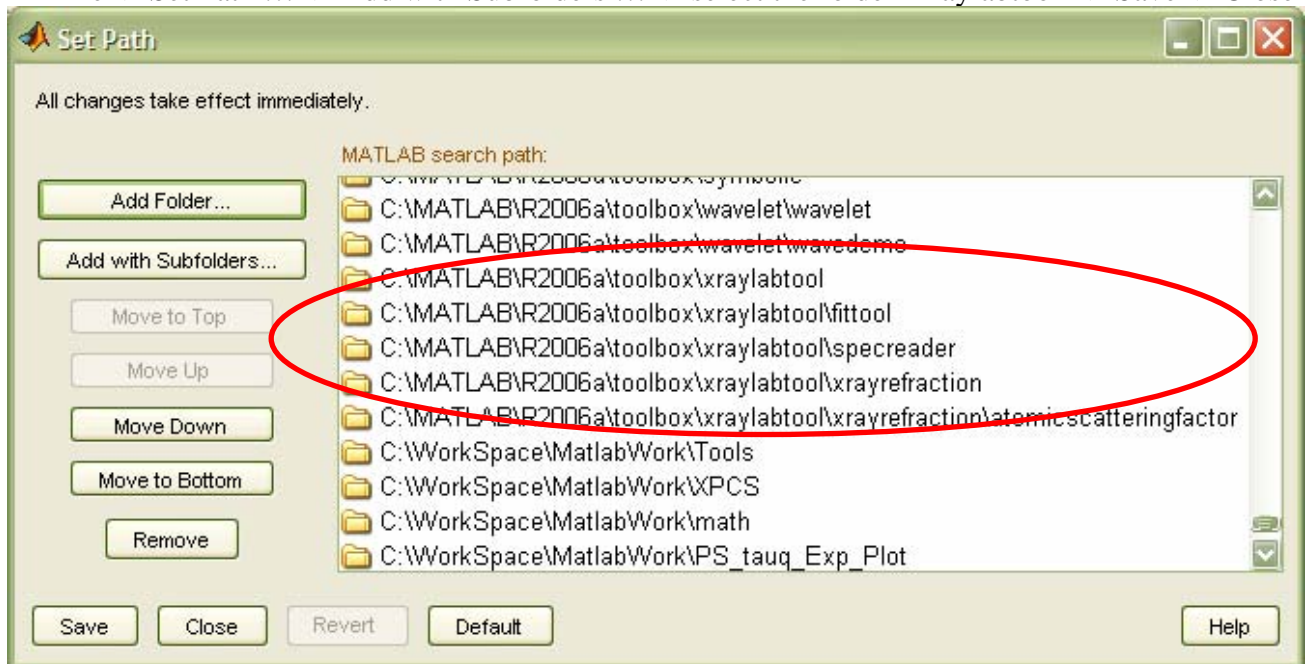
(1) Installation

Unzip xraylabtool.zip to \$matlabroot\toolbox\xraylabtool (suppose MatLab is installed to C:\MATLAB\R2006a):

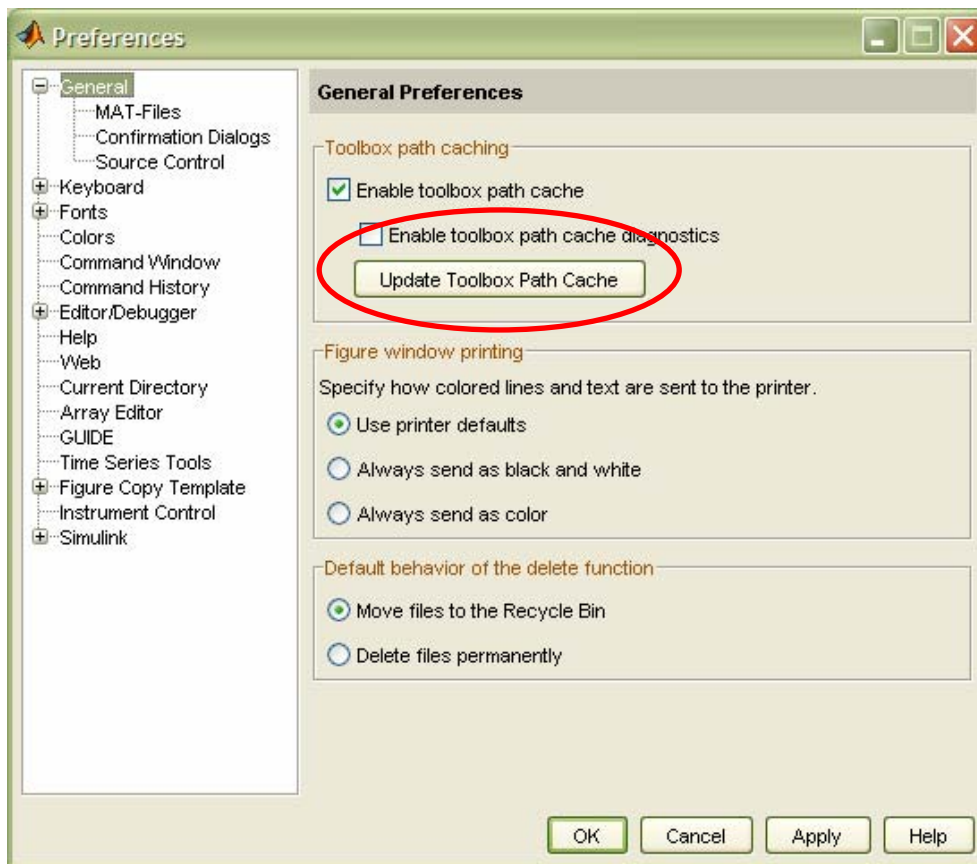


(2) Set the toolbox path in Matlab:

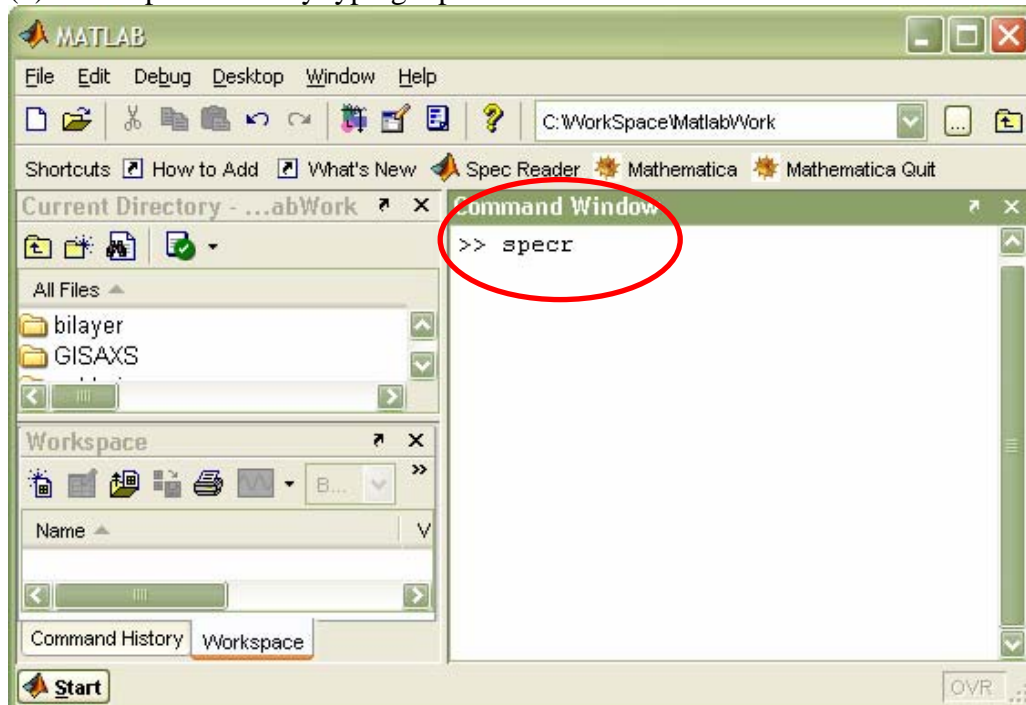
- File -> Set Path ... -> Add with Subfolders ... -> select the folder 'xraylabtool' -> Save -> Close



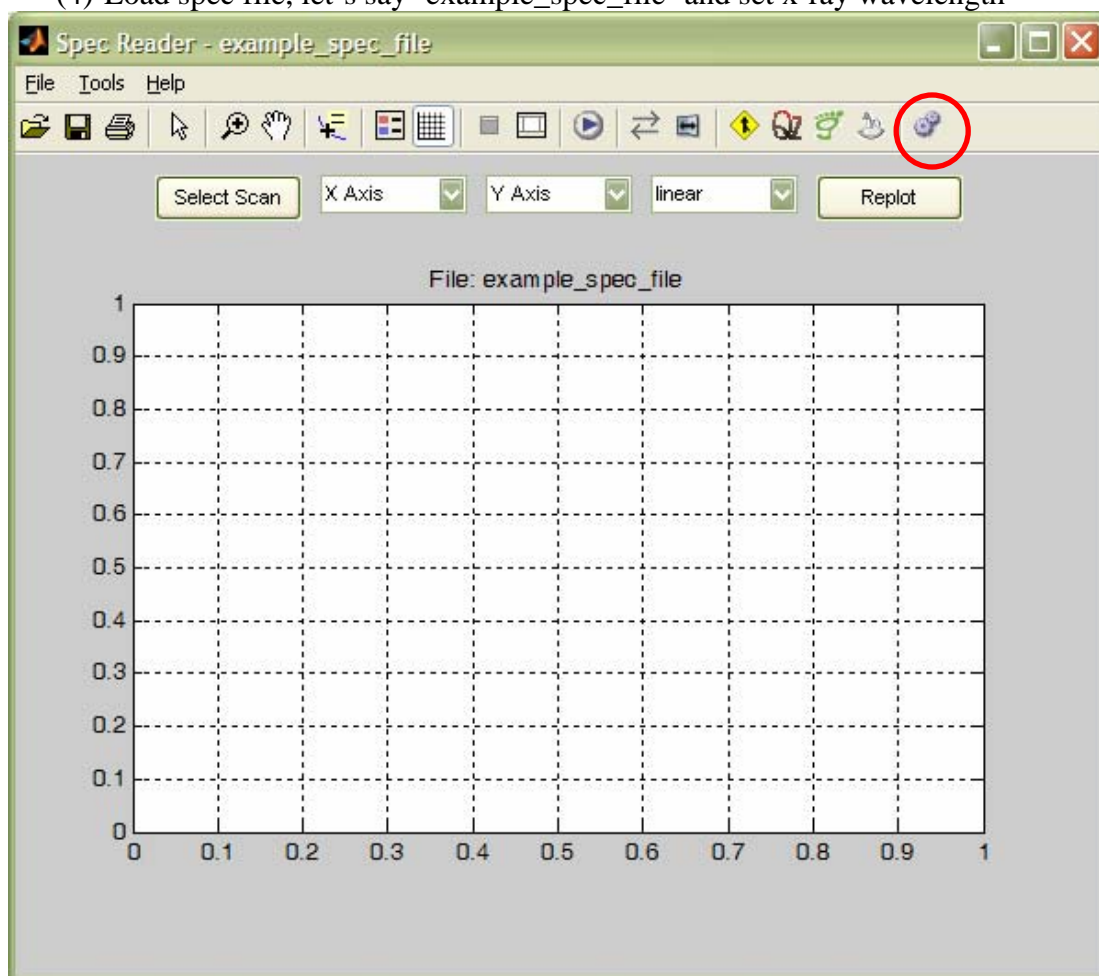
- File -> Preferences -> General -> Update Toolbox Path Cache -> OK



(3) Start spec reader by typing 'specr' in MatLab command window:

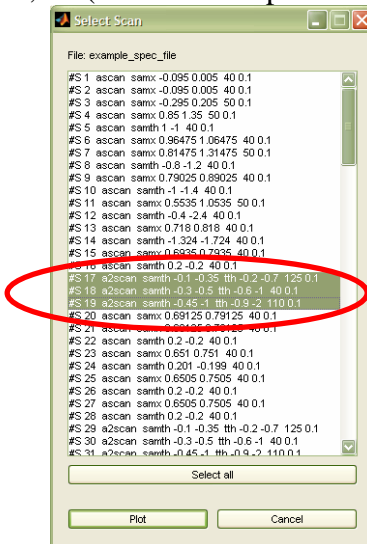


(4) Load spec file, let's say 'example_spec_file' and set x-ray wavelength

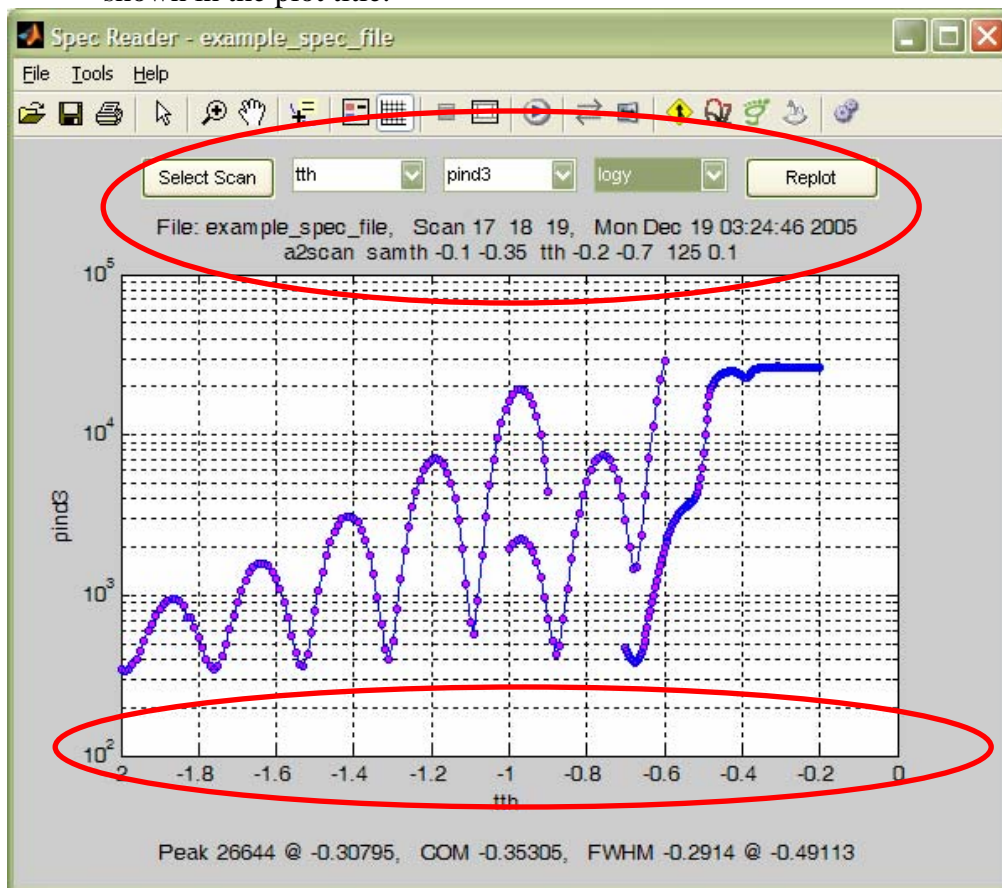


The image shows the 'Spec Reader Settings' dialog box. It has a title bar with 'Spec Reader Settings' and standard window controls. The dialog is divided into a 'Settings' section and a 'Scan Merging Settings' section. In the 'Settings' section, the 'Wavelength: (Angstrom)' field is circled in red and contains the value '1.54'. Other fields in this section include 'Footprint Angle On Incident Side: (Degree)' with a value of '0.3'. The 'Scan Merging Settings' section includes 'Discarding Mode (For Overlapped Region)' set to 'Number-of-point priorit...', 'Interpolation Method (For Merging Factors)' set to 'spline (default)', and 'Scan Monitor Period: (Sec)' set to '0.5'. At the bottom of the dialog are 'OK' and 'Cancel' buttons.

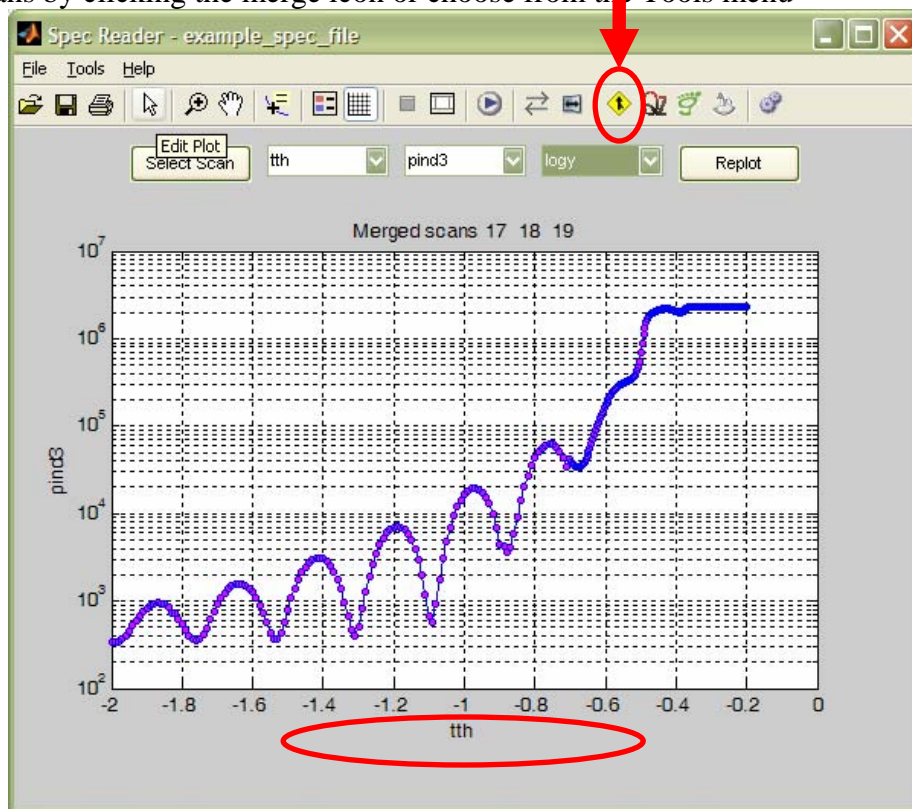
(5) Select scans, for example #17, 18, 19 (Ctrl for multiple selection):



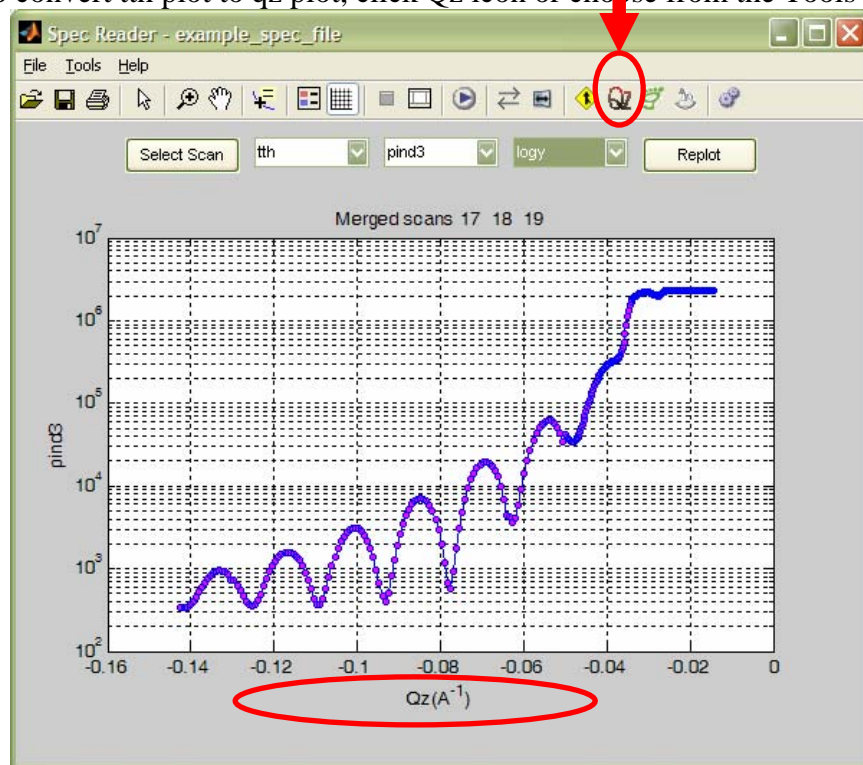
(6) Change x-axis to tth (2 theta, you have to do all the reflectivity and longitudinal diffuse scan manipulation in 2 theta), y-axis to pind3 (detector), and style to logy. Only the first scan (# 17) is shown in the plot title.



(7) Merge the scans by clicking the merge icon or choose from the Tools menu



(8) If you want to convert tth plot to qz plot, click Qz icon or choose from the Tools menu



(9) Save the merged data with or without error bars

