Inspection tool for nxs and fio Files

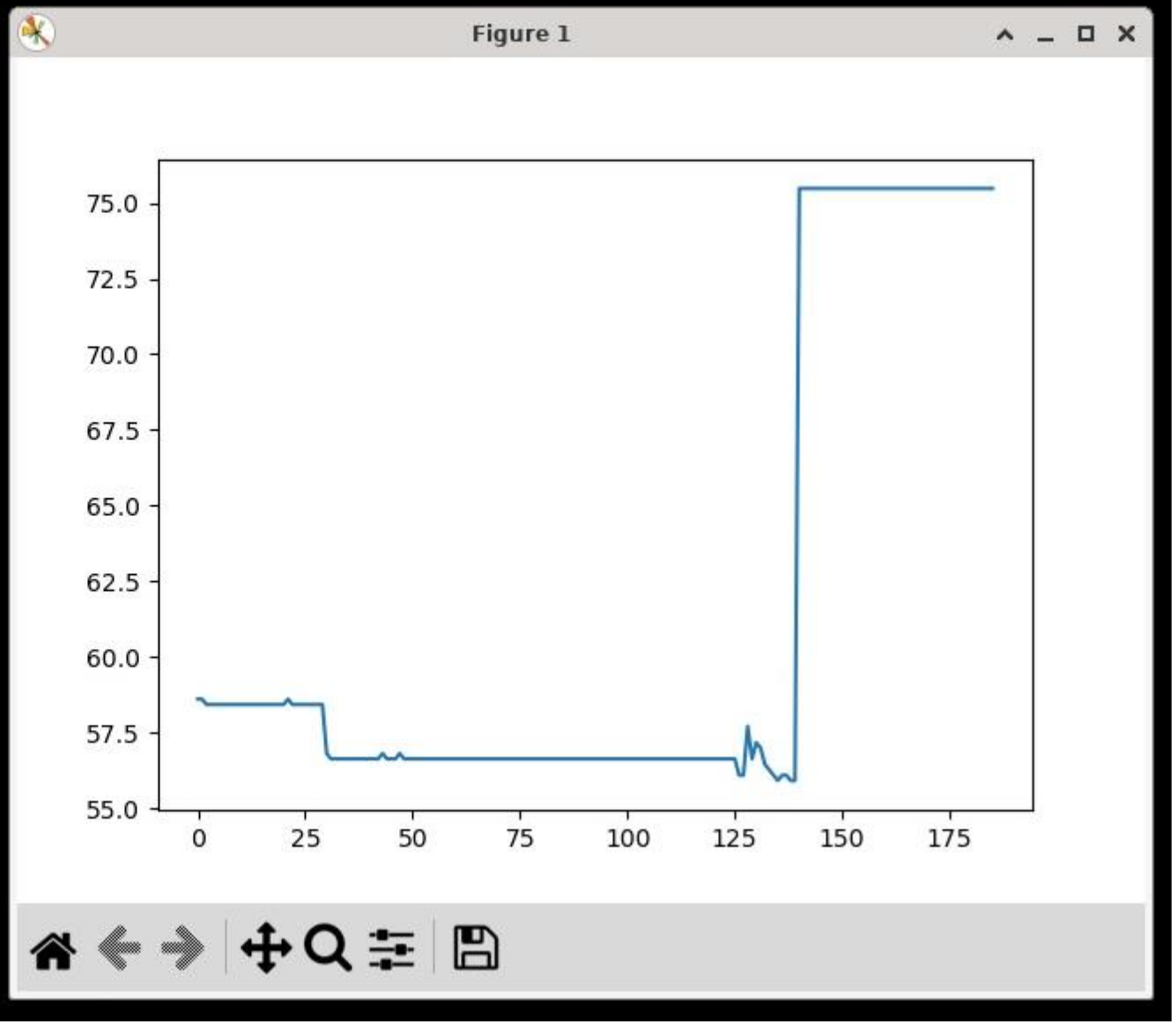
Task: provide a GUI based scan browser to quickly inspect nxs and fio files at the beamline. The cmd based tool „show_scan“ for fio files can be used as a feature baseline

```
usage: show_scan [-h] [-p PATTERN] [-m SCAN_MODE] [-s SCAN_TYPE] [--motor_position MOTOR_POSITION] [--column COLUMN] [--plot] [--log] [-t] [-r]

options:
  -h, --help            show this help message and exit
  -p PATTERN, --pattern PATTERN
                        search file pattern
  -m SCAN_MODE, --scan_mode SCAN_MODE, --scan-mode SCAN_MODE
                        scan mode, e.g. alignment, measurement, ...
  -s SCAN_TYPE, --scan_type SCAN_TYPE, --scan-type SCAN_TYPE
                        scan type, e.g. gscan, ascan, timescan, ...
  --motor_position MOTOR_POSITION, --motor-position MOTOR_POSITION
                        position of motors in scan
  --column COLUMN       show average of data column. NaN if column not available
  --plot                plot data
  --log                 logscale plot
  -t                    sort by time
  -r                    reverse sort
p08user@haspp08ch:/gpfs/current/raw$
```

Filter scans by pattern and display motor parameters over time and plot

```
p08user@haspp08ch:/gpfs/current/raw$ show_scan -p test --motor_position c2_tblpitch --plot
          test_00407.fio : c2_tblpitch =  58.61
          test_00408.fio : c2_tblpitch =  58.61
          test_00409.fio : c2_tblpitch =  58.43
          test_00410.fio : c2_tblpitch =  58.43
          test_00411.fio : c2_tblpitch =  58.43
          test_00412.fio : c2_tblpitch =  58.43
          test_00413.fio : c2_tblpitch =  58.43
          test_00414.fio : c2_tblpitch =  58.43
          test_00415.fio : c2_tblpitch =  58.43
          test_00416.fio : c2_tblpitch =  58.43
          test_00417.fio : c2_tblpitch =  58.43
          test_00418.fio : c2_tblpitch =  58.43
          test_00419.fio : c2_tblpitch =  58.43
          test_00420.fio : c2_tblpitch =  58.43
          test_00421.fio : c2_tblpitch =  58.43
          test_00422.fio : c2_tblpitch =  58.43
          test_00423.fio : c2_tblpitch =  58.43
          test_00424.fio : c2_tblpitch =  58.43
          test_00425.fio : c2_tblpitch =  58.43
          test_00426.fio : c2_tblpitch =  58.43
          test_00427.fio : c2_tblpitch =  58.43
          test_00428.fio : c2_tblpitch =  58.61
          test_00429.fio : c2_tblpitch =  58.43
          test_00430.fio : c2_tblpitch =  58.43
          test_00431.fio : c2_tblpitch =  58.43
          test_00432.fio : c2_tblpitch =  58.43
          test_00433.fio : c2_tblpitch =  58.43
          test_00434.fio : c2_tblpitch =  58.43
```



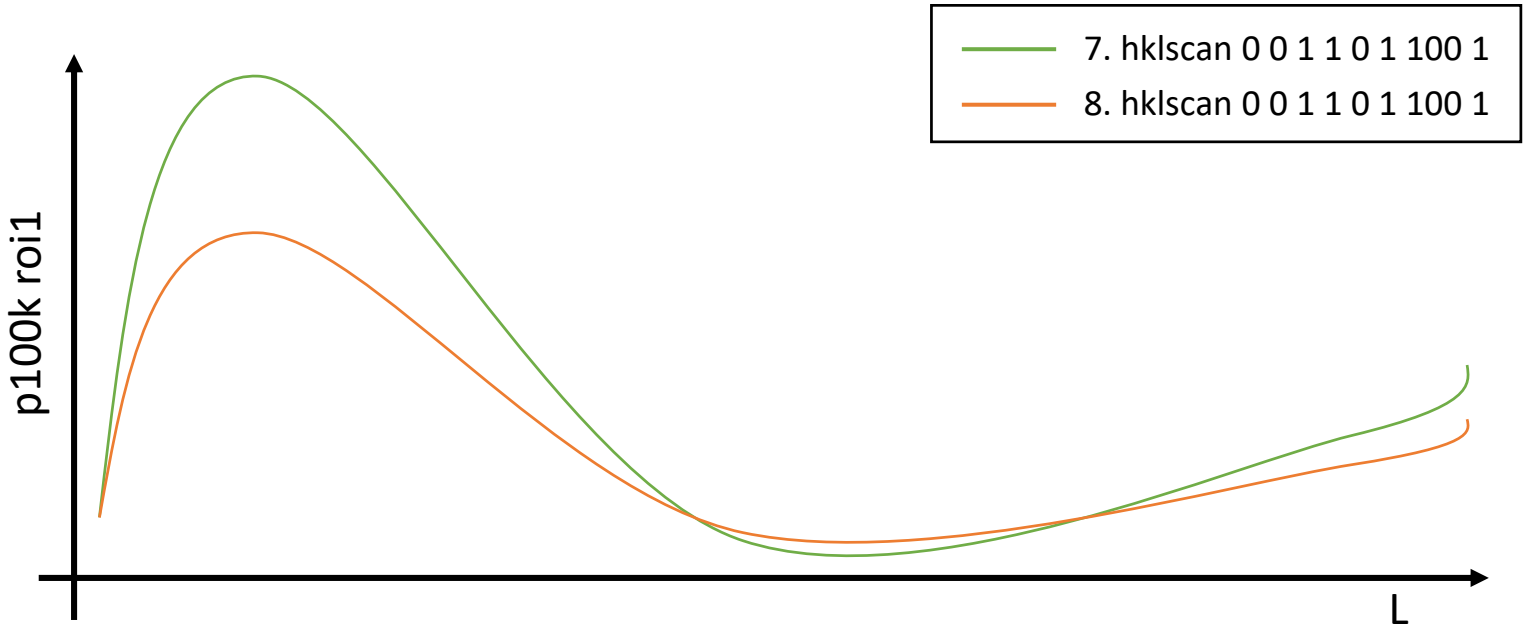
GUI draft

data folder

filter (e.g. name, type, motor, …)

Scan list:

1: dscan om -1 1 20 .1
5: dscan tt -1 1 35 .1
6. timescan 10 1
7. hklscan 0 0 1 1 0 1 100 1
8: hklscan 0 0 1 1 0 1 100 1
12: dscan om -1 1 20 .1



Parameter select:

column 1	param 1
column 2	param 2
…	…
column n	param n

Data display:

L	p100k roi1
0.1	10
0.2	129
0.3	142
0.4	150