

# Mantid - How to reduce McStas event data

=== Python ===

- Set Mantid python path
- Reduce McStas event data via Mantid
  - \$python reduce\_mcstas.py my\_data\_dir

```
from mantid.simpleapi import *
import os
import sys

#load file
list_pwd =os.getcwd()
head = list_pwd + '/' + sys.argv[1]
os.chdir(head)
ws = Load('mccode.h5')

sample = Rebin(ws[0], '10', False)
sample = ConvertUnits(sample, 'Wavelength')

binning = '1.75,0.05,16.5'
sample = Rebin(sample, binning)

mcstasMonitor = CloneWorkspace(mtd['Edet1.dat_ws'])

mcstasMonitor = ConvertToHistogram(mcstasMonitor)
mcstasMonitor = rebin(mcstasMonitor, binning)
monitor = CreateWorkspace(mcstasMonitor.dataX(0), mcstasMonitor.dataY(0), mcstasMonitor.dataE(0),
UnitX='Wavelength')

binningMASK = '0.0005,0.0005,0.4,0.01,0.7'
reduced_norm = Q1D(sample, binningMASK, WavelengthAdj='monitor')

# save as ascii
SaveAscii(InputWorkspace='reduced_norm', Filename='Iq_mcstas.dat', ScientificFormat=True, Separator="Tab")
```