NAME

pyFAI-waxs − Powder diffraction integration

DESCRIPTION

usage: pyFAI−waxs [options] **−p** ponifile file1.edf file2.edf ...

Azimuthal integration for powder diffraction.

positional arguments:

FILE Image files to integrate

optional arguments:

−h, **−−help**
show this help message and exit

−v, **−−version**
show program's version number and exit

−p PONIFILE
PyFAI parameter file (.poni)

−n NPT, **−−npt** NPT
Number of points in radial dimension

−w WAVELENGTH, **−−wavelength** WAVELENGTH
wavelength of the X−Ray beam in Angstrom

−e ENERGY, **−−energy** ENERGY
energy of the X−Ray beam in keV (hc=12.398419292keV.A)

−u DUMMY, **−−dummy** DUMMY
dummy value for dead pixels

−U DELTA_DUMMY, **−−delta_dummy** DELTA_DUMMY
delta dummy value

−m MASK, **−−mask** MASK
name of the file containing the mask image

−d DARK, **−−dark** DARK
name of the file containing the dark current

−f FLAT, **−−flat** FLAT
name of the file containing the flat field

−P POLARIZATION_FACTOR, **−−polarization** POLARIZATION_FACTOR
Polarization factor, from **−1** (vertical) to +1 (horizontal), default is None for no correction, synchrotrons are around 0.95

−−error−model ERROR_MODEL
Error model to use. Currently on 'poisson' is implemented

−−unit UNIT
unit for the radial dimension: can be q_nmˆ−1, q_Aˆ−1, 2th_deg, 2th_rad or r_mm

−−ext EXT
extension of the regrouped filename (.xy)

−−method METHOD
Integration method

−−multi
Average out all frame in a file before integrating extracting variance, otherwise treat every single frame

−−average AVERAGE
Method for averaging out: can be ’mean’ (default), ’min’, ’max’ or ’median

−−do−2D
Perform 2D integration in addition to 1D

pyFAI−waxs is the script of pyFAI that allows data reduction (azimuthal integration) for Wide Angle Scattering to produce X−Ray Powder Diffraction Pattern with output axis in 2−theta space.