

NAME

pyFAI-waxs – pyFAI-waxs

DESCRIPTION

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

Azimuthal integration for powder diffraction.

positional arguments:

FILE Files to integrated

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

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 ($hc=12.398419292\text{keV}\cdot\text{A}$)

-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_{nm}^{-1} , q_{A}^{-1} , 2th_deg, 2th_rad or r_mm

--ext EXT

extension of the regrouped filename (.xy)

--multi

Average out all frame in a file before integrating

--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.