

NAME

diff_map – Azimuthal integration for diffraction imaging

DESCRIPTION

usage: diff_map [options] **-p** ponifile imagefiles*

If the number of files is too large, use double quotes like "*.edf"

Azimuthal integration for diffraction imaging.

Diffraction mapping is an experiment where 2D diffraction patterns are recorded while performing a 2D scan, Diff_map is a graphical application (based on pyFAI and h5py) which allows the reduction of this 4D dataset into a 3D dataset containing the two motion dimensions and the many diffraction angles (thousands). The resulting dataset can be opened using PyMca roitool where the 1d dataset has to be selected as last dimension. This file aims at being NeXus compliant.

This tool can be used for diffraction tomography experiment as well, considering the slow scan direction as the rotation.

positional arguments:

FILE List of files to integrate

optional arguments:

-h, --help

show this help message and exit

-V, --version

show program's version number and exit

-o FILE, --output FILE

HDF5 File where processed sinogram was saved, by default diff_tomo.h5

-v, --verbose

switch to verbose/debug mode, default: quiet

-P FILE, --prefix FILE

Prefix or common base for all files

-e EXTENSION, --extension EXTENSION

Process all files with this extension

-t FAST, --fast FAST

number of points for the fast motion. Mandatory without GUI

-r SLOW, --slow SLOW

number of points for slow motion. Mandatory without GUI

-c NPT_RAD, --npt NPT_RAD

number of points in diffraction powder pattern, Mandatory without GUI

-d FILE, --dark FILE

list of dark images to average and subtract

-f FILE, --flat FILE

list of flat images to average and divide

-m FILE, --mask FILE

file containing the mask, no mask by default

-p FILE, --poni FILE

file containing the diffraction parameter (poni-file), Mandatory without GUI

-O OFFSET, --offset OFFSET

do not process the first files

-g, --gpu
process using OpenCL on GPU

-S, --stats
show statistics at the end

--gui Use the Graphical User Interface

--no-gui
Do not use the Graphical User Interface

Bugs:

- 1) If the number of files is too large, use double quotes "*.edf"
- 2) There is a known bug on Debian7 where importing a large number of file can take much longer than the integration itself: consider passing files in the command line