

Live-demo_talk

January 16, 2019

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In [ ]: from PreRequisit import *
        %matplotlib inline

In [ ]: import karabo_data as kd

In [ ]: exmpl_file = '/gpfs/xfel/exp/XMPL/201750/p700000/proc/r0273/CORR-R0273-AGIPD03-S00000.h

In [ ]: hdf5_file = kd.H5File(exmpl_file)

In [ ]: train_id, train_data = hdf5_file.train_from_index(10)

In [ ]: train_id

In [ ]: type(train_data)

In [ ]: train_data.keys()

In [ ]: det_data = train_data['SPB_DET_AGIPD1M-1/DET/3CHO:xtdf']

In [ ]: sorted(det_data.keys())

In [ ]: img = det_data['image.data']

In [ ]: img

In [ ]: img.shape

In [ ]: import matplotlib.pyplot as plt

In [ ]: plt.imshow(img[2].T, vmin=-50, vmax=1500)

In [ ]: run_dir = '/gpfs/xfel/exp/XMPL/201750/p700000/raw/r0273'

In [ ]: run = kd.RunDirectory(run_dir)

In [ ]: sorted(run.selection.keys())

In [ ]: ph_flux = run.get_series('SPB_XTD9_XGM/XGM/D00CS', 'pulseEnergy.photonFlux.value')

In [ ]: type(ph_flux)
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In [ ]: ph_flux.plot()

In [ ]: beam_pos = run.get_dataframe(fields=[('*XGM/DOOCS', '*')])

In [ ]: beam_pos.head()

In [ ]: type(beam_pos)

In [ ]: beam_pos.plot.scatter(x='SA1_XTD2_XGM/XGM/DOOCS/beamPosition.iyPos', y='SPB_XTD9_XGM/XGM/DOOCS/output')

In [ ]: xgm_data = run.get_array('SPB_XTD9_XGM/XGM/DOOCS:output', 'data.intensityTD')

In [ ]: xgm_data

In [ ]: plt.imshow(xgm_data[:, :120].T, origin='lower')

In [ ]:
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