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In [ ]: import karabo_data as kd
        run_dir = '/gpfs/xfel/exp/XMPL/201750/p700000/proc/r0273'
        run_data = kd.RunDirectory(run_dir)

In [ ]: #selet trains based on indexes
        train_id, train_data = run_data.train_from_index(10)
        train_id, type(train_data)

In [ ]: # a dictionary with key and value pairs is returned
        sorted(train_data.keys())

In [ ]: # selecting a module to inspect the content
        module_data = train_data['SPB_DET_AGIPD1M-1/DET/OCHO:xtdf']
        sorted(module_data.keys())

In [ ]: #The actual detector data is stored under the property value *image.data*
        img_ary = module_data['image.data']
        img_ary

In [ ]: img_ary.shape

In [ ]: # Create one big array from all detector modules
        train_img = kd.stack_detector_data(train_data, 'image.data', only='SPB_DET_AGIPD1M-1/DET')
        train_img.shape

In [ ]: # Applying the geometry information
        from karabo_data.geometry2 import AGIPD_1MGeometry
        geom = AGIPD_1MGeometry.from_crystfel_geom('xfel.geom')
        type(geom)

In [ ]: img, center = geom.position_all_modules(train_img)
        img.shape

In [ ]: from matplotlib import pyplot as plt
        plt.imshow(np.clip(img[10], -50, 1500))

In [ ]: # There is a plotting routine that makes it even easier
        geom.plot_data_fast(np.clip(train_img[10], -50, 1500))

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