

Phi-beta fit results in ARC and EQU

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Image processing in cxif5315

The best options for image processing in cxif5315

- Water background is evaluated WITH COMMON MODE CORRECTION that enhance intensity of central 2x1... - needs to be re-calibrated
- DO NOT use common mode
- polarization factor map should be rotated by 90 degree because of requested by Meng fancy 90 degree rotation in the geometry file
- USE status mask
- USE radial background subtraction for single angular bin

```
from pyimgalgos.RadialBkgd import RadialBkgd, polarization_factor
from pyimgalgos.GlobalUtils import subtract_bkgd

Xarr = sp.det.coords_x(runnum)
Yarr = sp.det.coords_y(runnum)

#sp.rb = RadialBkgd(Xarr, Yarr, mask=sp.nda_smask, radedges=(5200, 80000), nradbins=200, nphibins=1)
#sp.pf = polarization_factor(sp.rb.pixel_rad(), sp.rb.pixel_phi()+90, sp.DETD_um)

nda_raw = sp.det.raw(evt)

if nda_raw is not None :

    nda = np.array(nda_raw, dtype=np.float32, copy=True)
    nda -= sp.nda_peds

    # Subtract background shape averaged for pure water
    nda = subtract_bkgd(nda, sp.nda_bkgd, mask=sp.nda_smask, winds=sp.winds_bkgd, pbits=0)

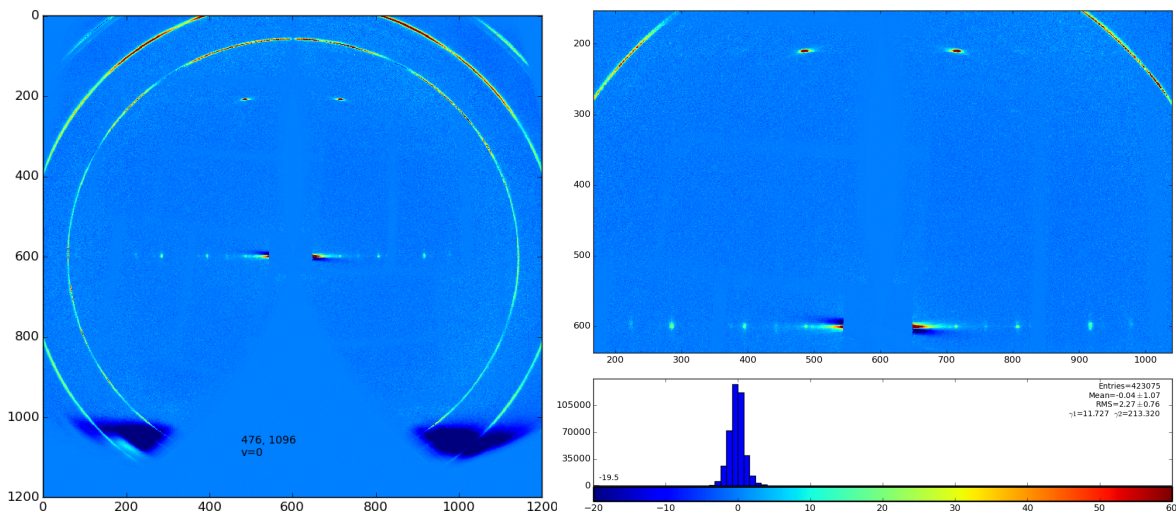
    # Subtract dynamically evaluator redial background
    #nda = sp.rb.subtract_bkgd(nda.flatten() * sp.pf)
    #nda.shape = sp.nda_peds.shape

    nda *= sp.nda_smask
    #sp.det.common_mode_apply(evt, nda)

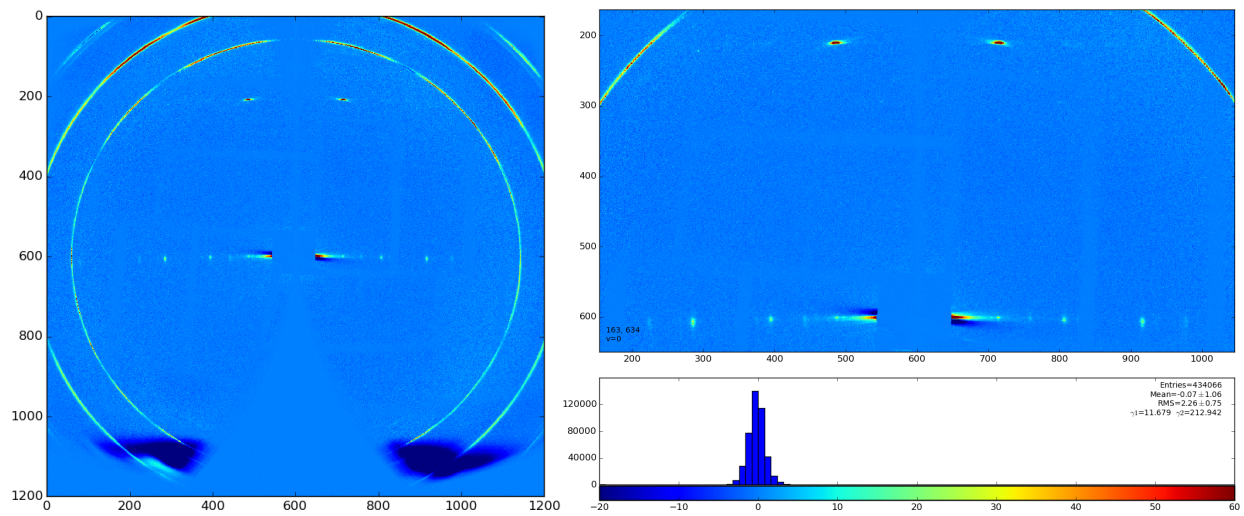
    img = getImage(evt, nda)
```

Fit results

ARC region, fit converged to beta ~ -17°



ARC region, fit converged to beta $\sim -9^\circ$



Distance between 2 peaks in Arc region

