# Create tform

## Method1: Create\_tform.m

*Create tform using beads*

Estimate the transform matrix between x and y channels.

The example data:

data151\_xch is thunderstorm estimation results for beads in x channel.

data151\_ych is thunderstorm estimation results for beads in y channel. Note, we don’t have to flip the y channel during the thunderstorm process

## Method2: create\_tform\_using\_sample (recommended)

*Create tform using sample captured using polarized standard PSF*

# Crop image

## Method 1: crop\_image\_using\_center\_pixel.m

*Crop image using the center of cropped FoV*

crop and save tiff images based on estimated tform.m

This code allows separate a big FoV into multiple small FoVs.

## Method 2: crop\_image\_using\_whole\_pixels.m (recommended)

*Crop image using the all the pixels in the FoV*

# Other codes:

## background\_estimation\_by\_subtruct\_SMs.m

Estimate the background by subtract pixels with SMs. Similarly, thunderstorm estimated results are used to determine the position of SM for subtracting.