**Problem statement:** 

$$\Omega_{x}^{CW} = f_{\sigma_{tilt}}^{CW}(\Omega_{y}),$$

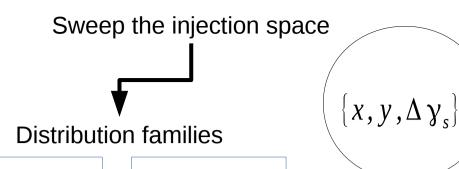
Need to show that

$$\Omega_{x}^{CCW} = f_{\sigma_{tilt}}^{CCW}(\Omega_{y})$$

 $\forall \epsilon > 0 \forall \exists \delta > 0$ :

$$|\Omega_{y}^{0}| - |\Omega_{y}^{1}| < \delta \rightarrow |f_{\sigma_{tilt}}^{CW}(\Omega_{y}^{0})| - |f_{\sigma_{tilt}}^{CCW}(\Omega_{y}^{1})| < \epsilon$$

For a given  $\sigma_{tilt}$ 



**CW** ring

**CCW** ring

Injection space

## HOW:

$$\forall ((x,y), \Delta \gamma_s)$$

get the pair  $((\Omega_y, \Omega_x)_{CW}, (\Omega_y, \Omega_x)_{CCW})$   $f_x^{CW}(\gamma_s)$ 

 $f_y^{CW}(\gamma_s)$ 

 $\Omega_{\nu}(x,\Delta \gamma_{s})$ 

Combine each line for CW w/each for CCW

Get stats:

$$S_{1} = \Omega_{x}^{CW}(\vec{x}_{i}, \Delta \gamma_{s}^{j}) + \Omega_{x}^{CCW}(\vec{x}_{t}, \Delta \gamma_{s}^{p}),$$
  
$$S_{2} = \Omega_{y}^{CW}(\vec{x}_{i}, \Delta \gamma_{s}^{j}) - \Omega_{y}^{CCW}(\vec{x}_{t}, \Delta \gamma_{s}^{p})$$

