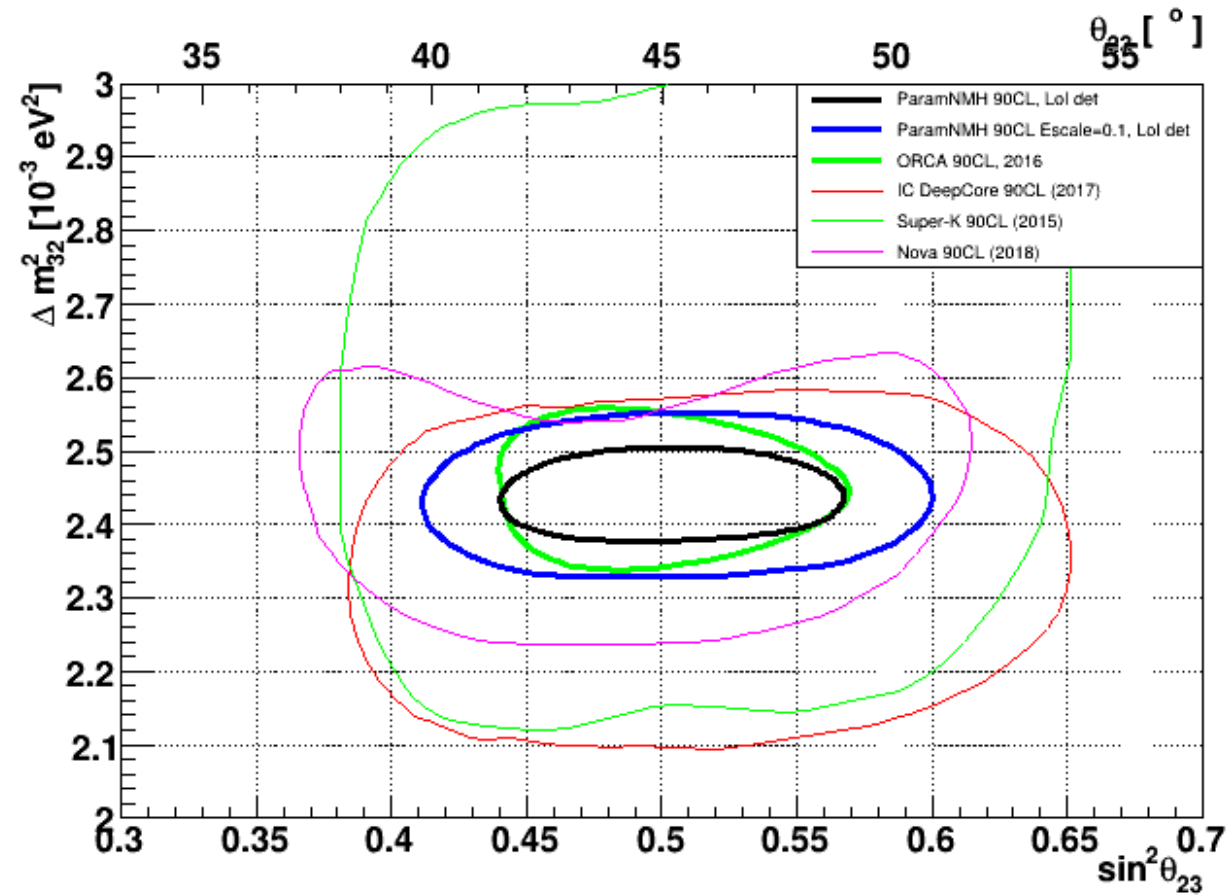


# Contours update

Maximum angle  $\theta_{23}$



# Detector resolution

Resolution is some 3rd  
order polynomial

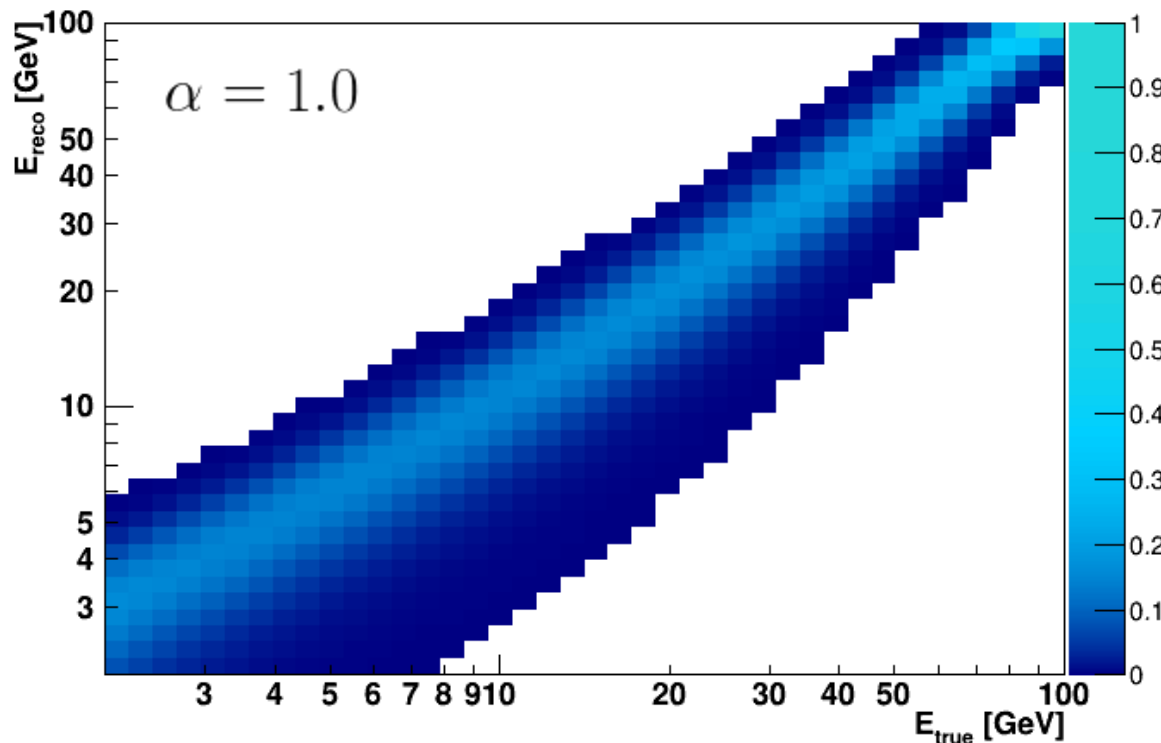
$$E_{mean} = f_3(E, a, b, c)$$

$$\sigma_E = g_3(E, d, e, f)$$

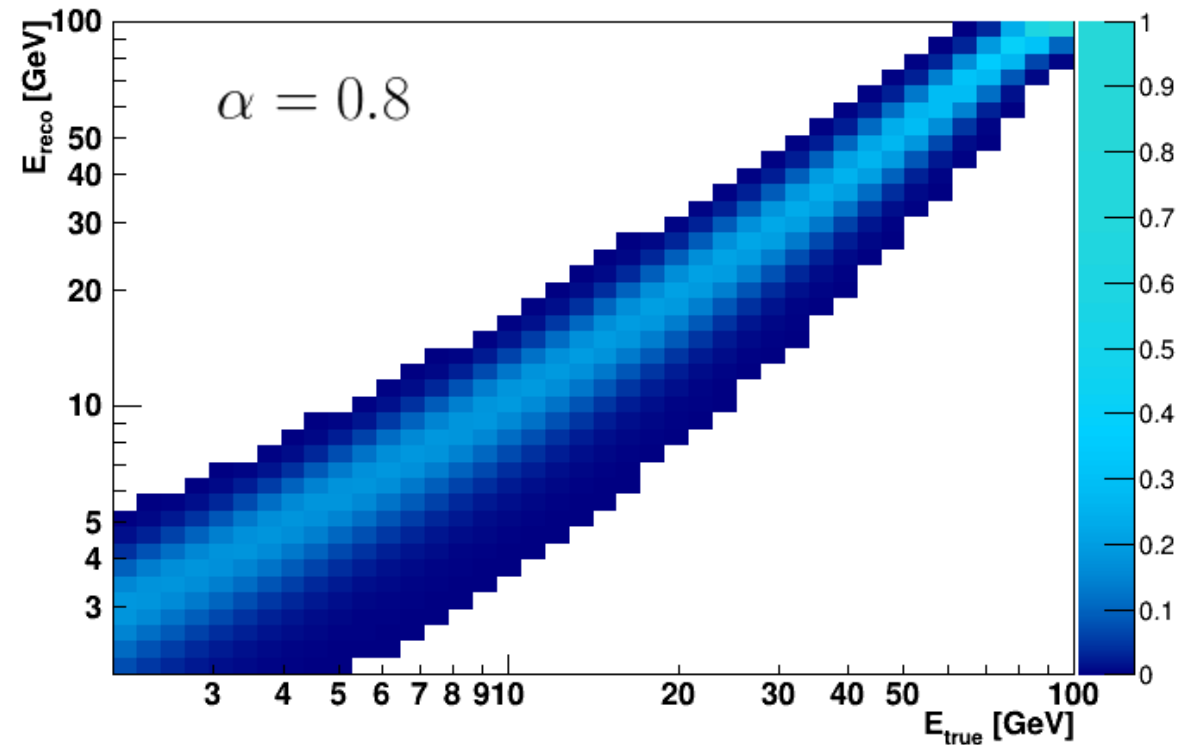
Change resolution with  
some factor alpha:

$$\sigma_E \mapsto \alpha \sigma_E$$

$\nu_e$ -CC, classified as cascades



$\nu_e$ -CC, classified as cascades



# Detector resolution

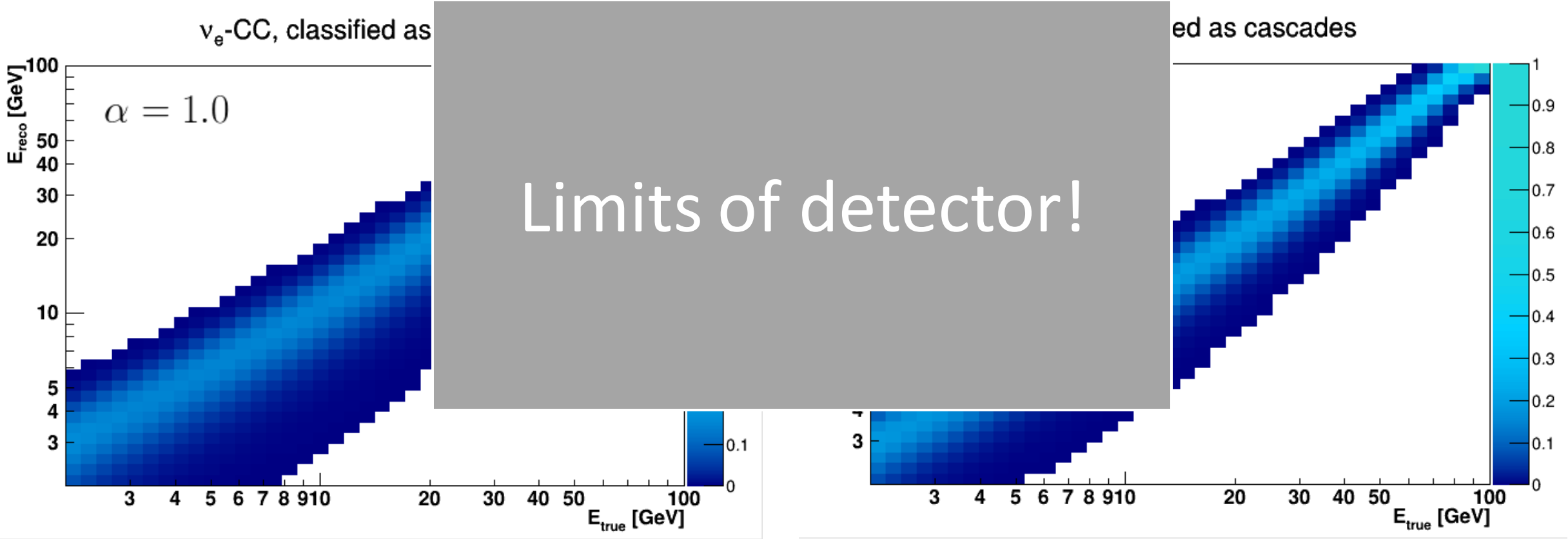
Resolution is some 3rd order polynomial

$$E_{mean} = f_3(E, a, b, c)$$

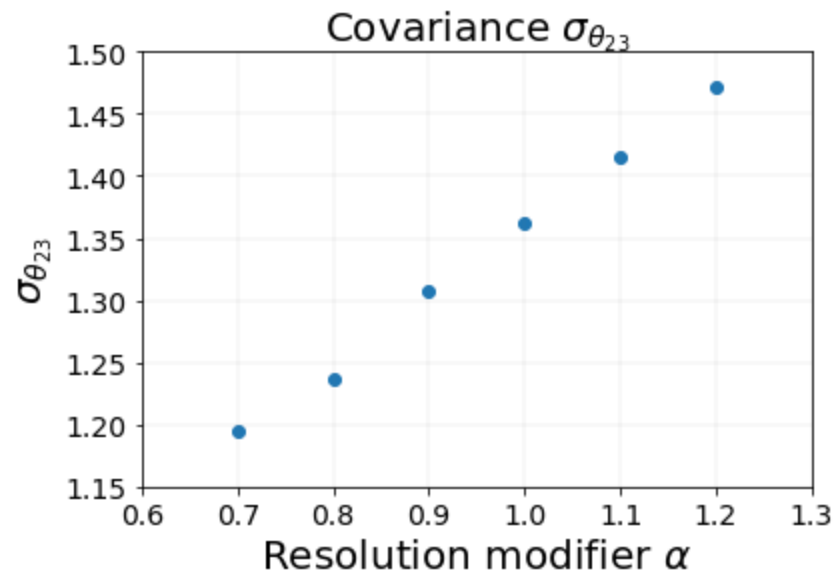
$$\sigma_E = g_3(E, d, e, f)$$

Change resolution with some factor alpha:

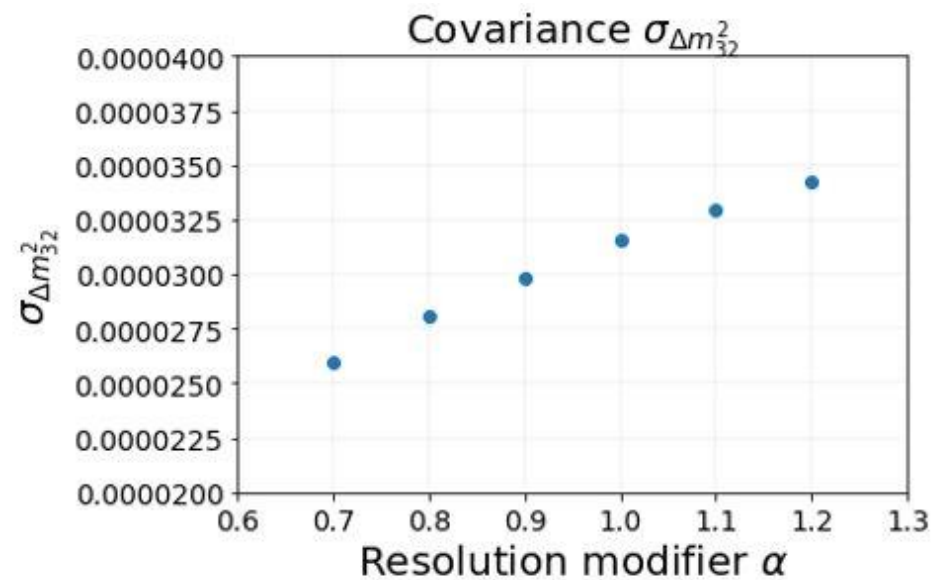
$$\sigma_E \mapsto \alpha \sigma_E$$



# Energy resolution effect on parameters

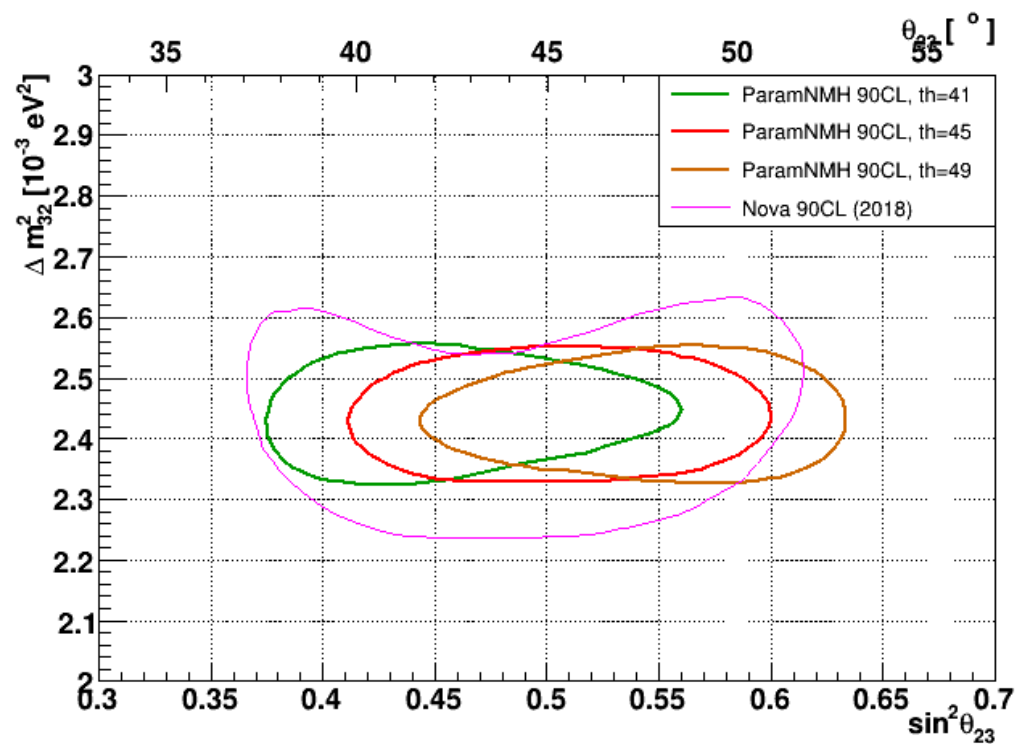


30% increase resolution ->  
12% decrease  $\theta_{23}$   
uncertainty

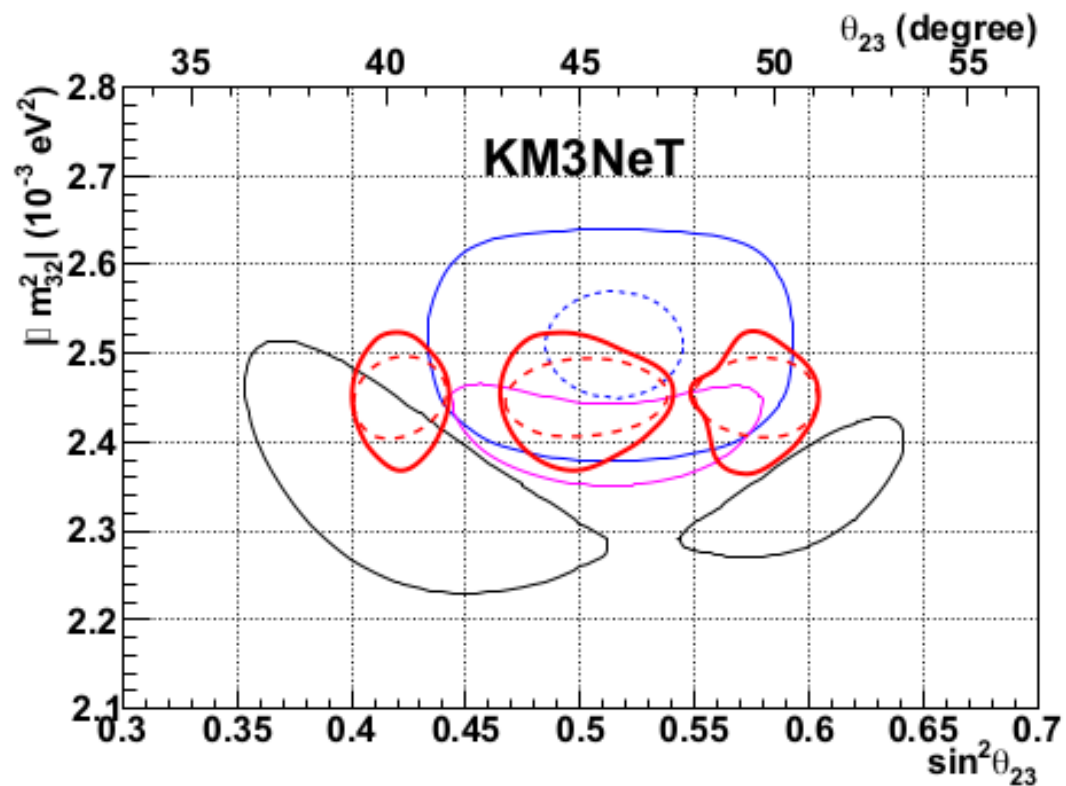


30% increase resolution ->  
21% decrease mass. diff.  
uncertainty

# Octant

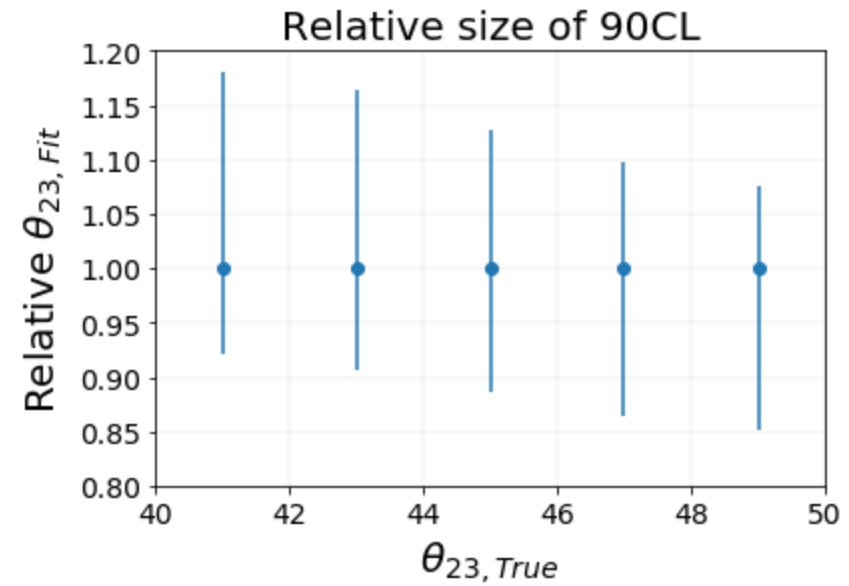
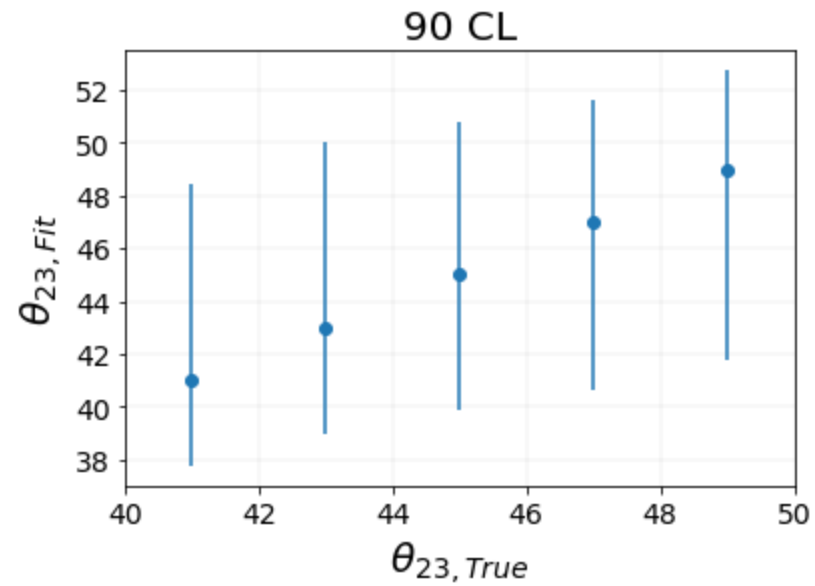


Energy uncertainty also used



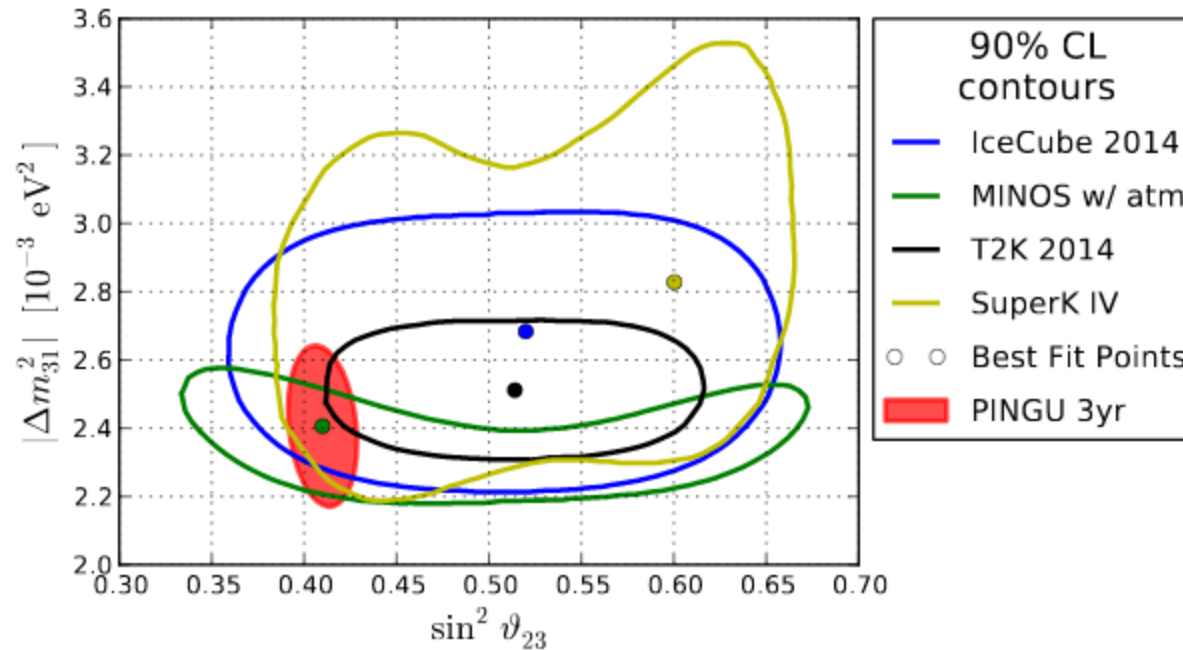
# Uncertainty on octant

- Error bars are taken from 90CL contours at different True values
- Energy uncertainty on



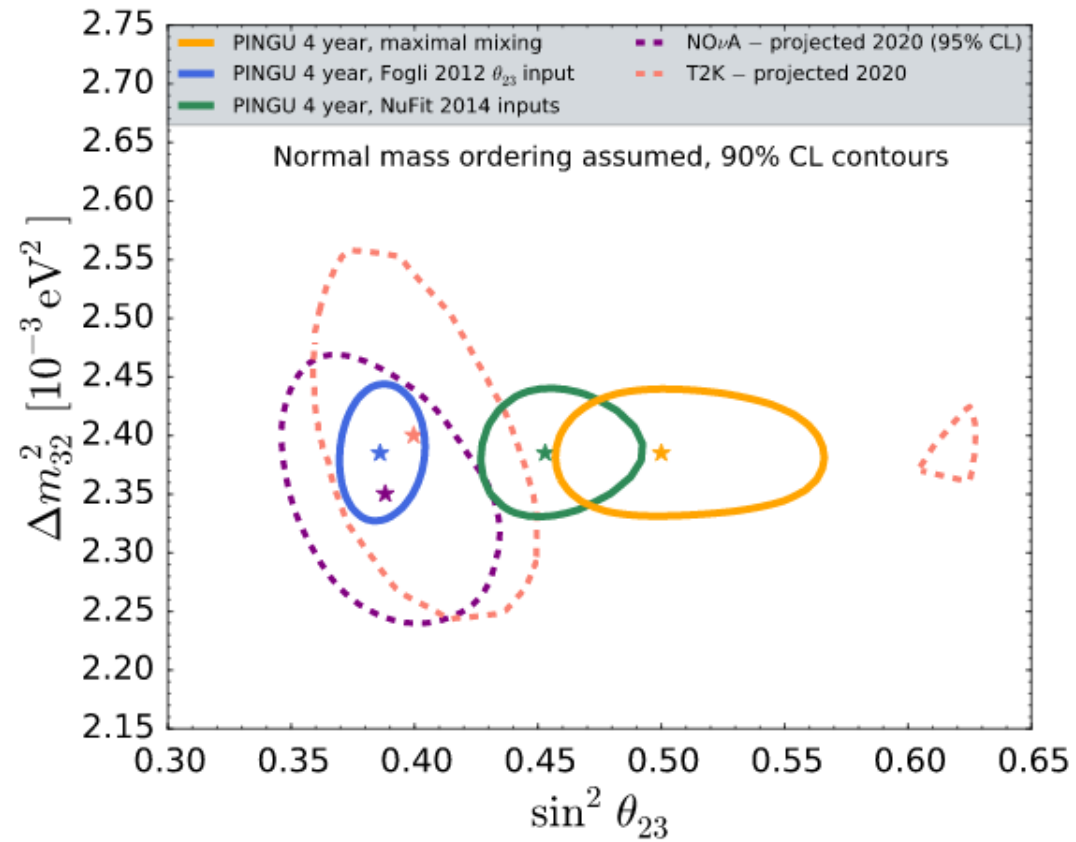
Backup

# PINGU thesis L. Schulte (2015)





# PINGU: A Vision (2017)



# KM3NeT Lol (2016)

