ReneSANCe Studies

Caleb Miller

ALR Integrated

 $\cos\theta^{-}$ integrated from $-\cos\theta$ to $\cos\theta$

 $\cos\theta^+$ constrained to $<|\cos(20^\circ)|$ (red)

 $\cos\theta^+$ constrained to $-\cos\theta$ to $\cos\theta$ (blue)



ALR Integrated

Differences between ReneSANCe and Aleksejevs et al.



ALR windows

ALR integrated in bins of $0.1 \cos\theta$

 $\cos\theta^+$ constrained to $<|\cos(20^\circ)|$

Black points extracted from Aleksejevs et al.



ALR Windows

Differences between ReneSANCe and Aleksejevs et al ReneSANCe errors are

ReneSANCe errors are $O(10^{-7})$

Aleksejevs don't suggest a level of uncertainty

My method of extracting likely accounts for unsmooth features, larger structure a real effect (binning or theory)



Next steps

- Need to confirm uncertainty on Aleksejevs et al. results
- Calculate $\sin^2 \theta_{\rm W}$ sensitivity using the binned approach