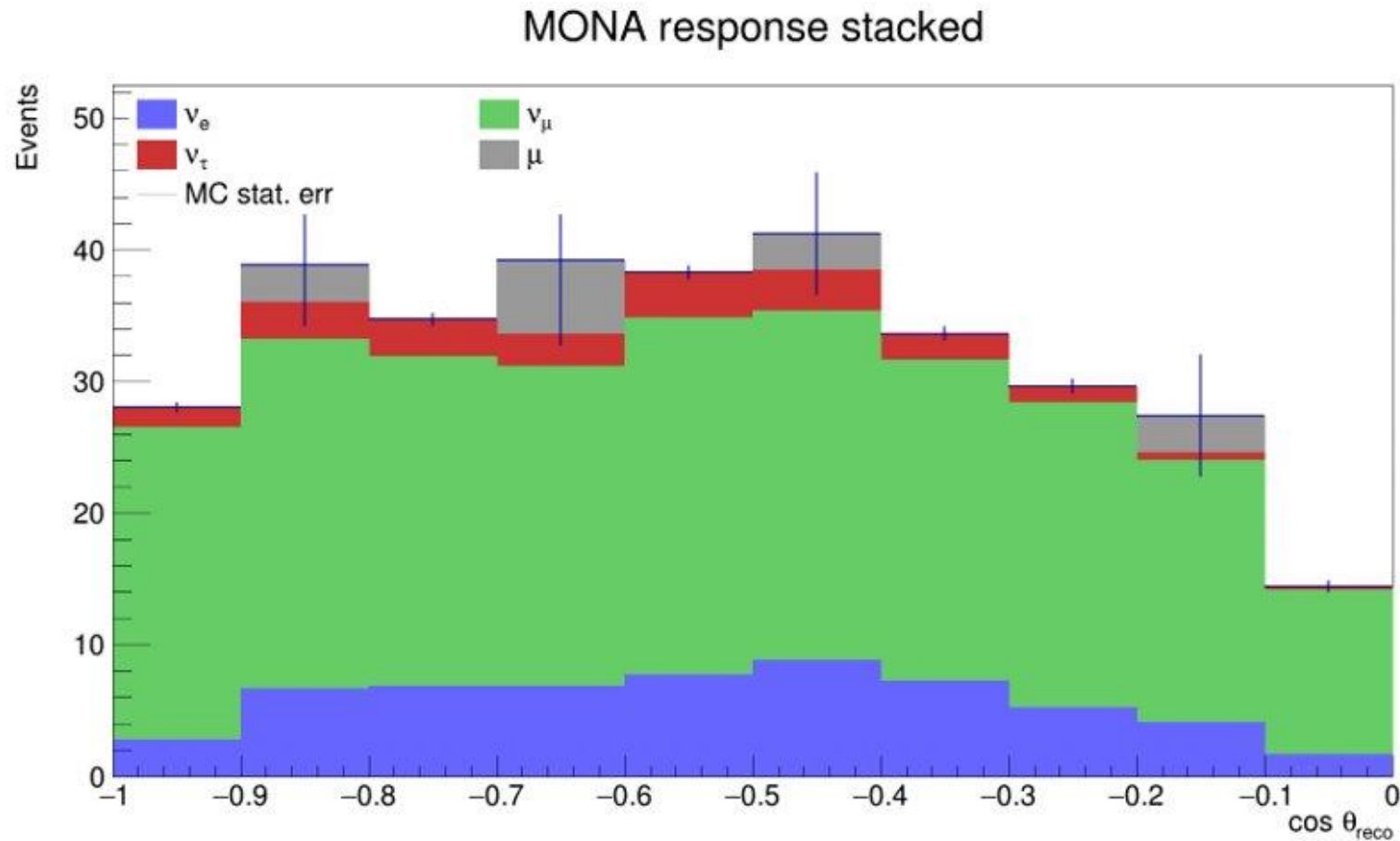


Response statistics

- neutrino events injected into response: 41406 [518k total]
- $\nu + \mu$ events injected into response: 41411 [518k + 25M total]
- events in neutrino model response: 275.569
- events in $\nu + \mu$ model response: 289.474
- muons (weighted): 13.9054
- S/B according to MC is: $275.569/13.9054 \sim 19.82$
- V. Pestel passes 1 muon event (unweighted), L.N. passes 5 events

Stacked histogram of MONA response [NO]

Muons blow up uncertainty!



Stat. err on model

$$\sigma = \sqrt{\sigma_\nu^2 + \sigma_\mu^2 \times \text{op_time}}$$

$$\sigma_\mu = \sqrt{N_{reco}} \text{ normalized per year}$$

$$\sigma_\nu = \sqrt{N_{sim}} / N_{sim} * N_{reco}$$

$$N_{reco} = \sum_i^{evts} w_2^i \Phi_{osc}$$

$$\Phi_{osc}(X) = \Phi_e \times P(e, X) + \Phi_\mu P(\mu, X)$$

Model fit to ORCA4 data [133 days]

