case ieee30:  $\hat{\phi}$  by meas. noise level Current phase angles  $\phi_{_i}$  (radians)  $\phi_i$  true  $\sigma = 0.01$ , rel. err.=2.443%  $\sigma = 0.025$ , rel. err.=2.443%  $\sigma = 0.05$ , rel. err.=2.443% 20 10 15 25 30 Bus Index i