case ieee30:  $\hat{\phi}$  by meas. noise level 15  $-- \phi_i$  true Current phase angles  $\phi_{_{i}}$  (radians)  $\sigma = 0.01$ , rel. err. = 49.123%  $\sigma = 0.05$ , rel. err.=49.123% ---  $\sigma$  = 0.1, rel. err.=49.123% 10 5 -1010 15 20 25 30 Bus Index i