

UW definition of “reference truth with responsivity”.

A more conventional and user-friendly definition of reference truth is

$$r_{\text{flat}} = Rr_{\text{ES}} \quad (11)$$

If we assume $R\rho r_{\text{ES}} \approx \rho Rr_{\text{ES}}$ then we get “flat” reference truth. In practice we find the “ratio first” UMBC CCAST reference calibration equation has smaller residuals when compared with r_{flat} , while the “SA⁻¹ first” NOAA 4 algorithm has smaller residuals with r_{resp} . It seems to us the proper focus for calibration algorithm development should be minimizing residuals in comparison with r_{flat} .