Radiance Bias Determinations

Radiance Bias Determinations from Simulations

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Radiance Bias Determinations

Ocean/Night: /Sdev/Ne□t for 16 matchups

Radiance Bias Determinations

Ocean/Day : /Sdev/Ne□t for 60 matchups

Radiance Bias Determinations

Land/Night: **/Sdev/Ne□t for 23 matchups**

Radiance Bias Determinations

Land/Day : /Sdev/Ne□t for 24 matchups

Radiance Bias Determinations

Land/Day: correlation between $\Delta\theta_s$ and $\Delta\theta$

Radiance Bias Determinations

Summary

- Over the ocean, the radiance bias due to uncertainty in atmospheric state is comparable to instrument noise in the window region away from H_2O or CH_4 absorption lines
- No major changes in bias statistics between day and night cases
- Over land, uncertainty in surface emissivity results in large bias (~ 5K) at the 10 □m window region
- High quality and accurate surface temperature, H_2O, O_3, CH_4 in-situ data are also indispensable in validating AIRS radiance products