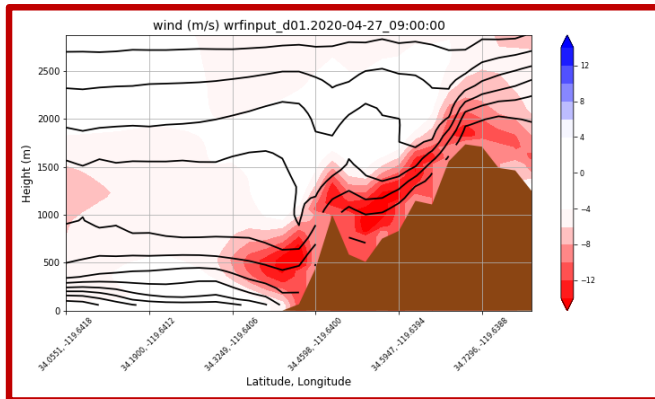


Sensitivity and Accuracy of Sundowner Wind Forecasts

Robert G. Fovell, U. Albany SUNY

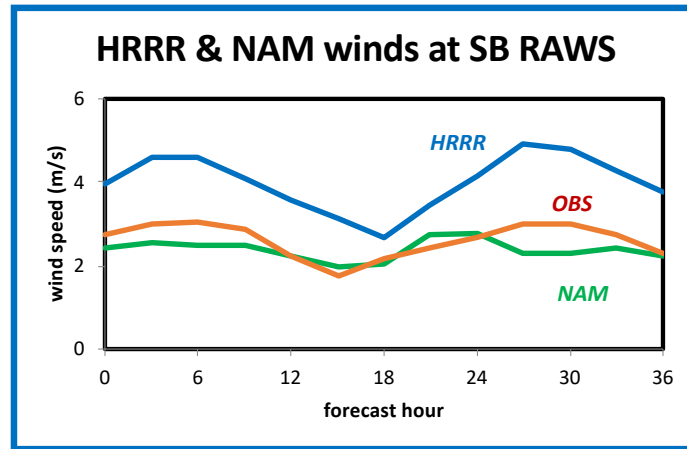
Sundowners are downslope winds in Santa Barbara (SB), CA – serious fire hazard



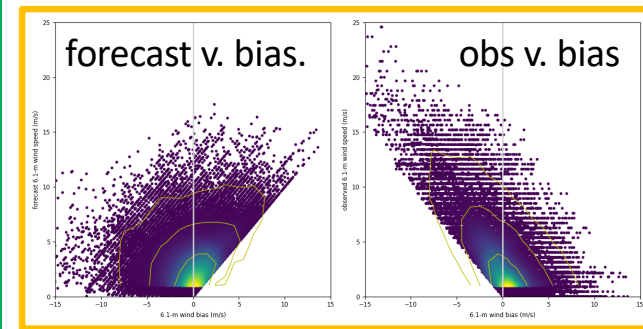
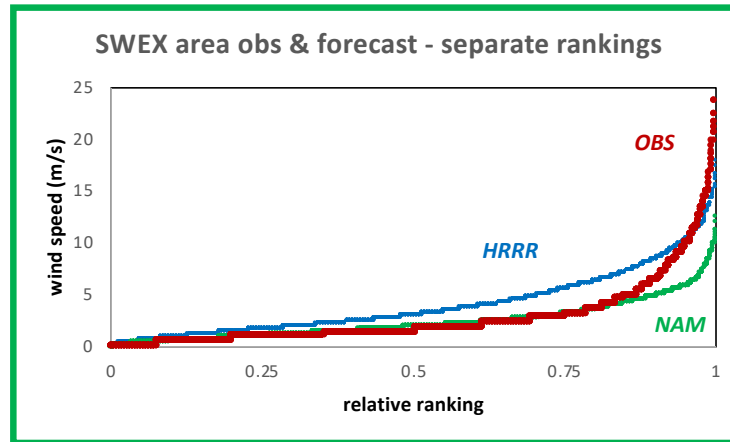
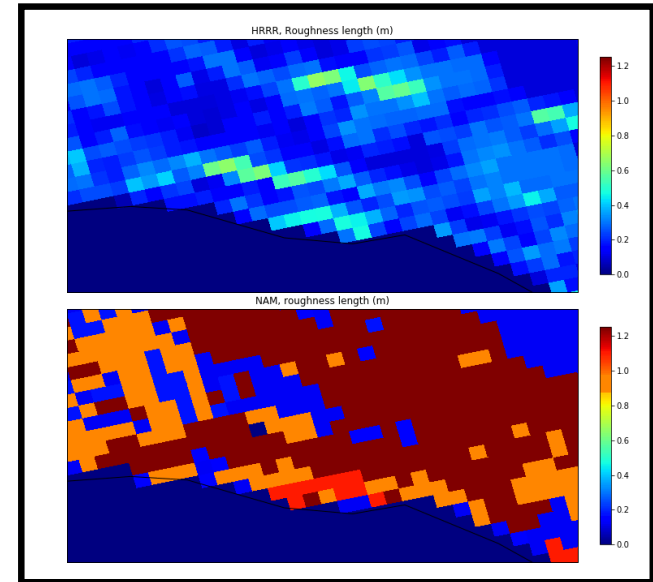
^ 3-km operational models (HRRR, NAM) can capture these events, but HRRR isobaric product is substantially smoothed

*Separately ranked observations and forecasts:
HRRR overpredicts 97% of ranks
NAM distribution fits well, except for (important) high wind events >*

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^ HRRR overpredict SB RAWS winds relative to NAM for month of April 2020, partly owing to NAM's very large surface roughnesses (at right >)



^ Wind speeds are non-negative, biasing biases. Here, obs negatively correlated with bias