## Boundary layer aspects to evaluate

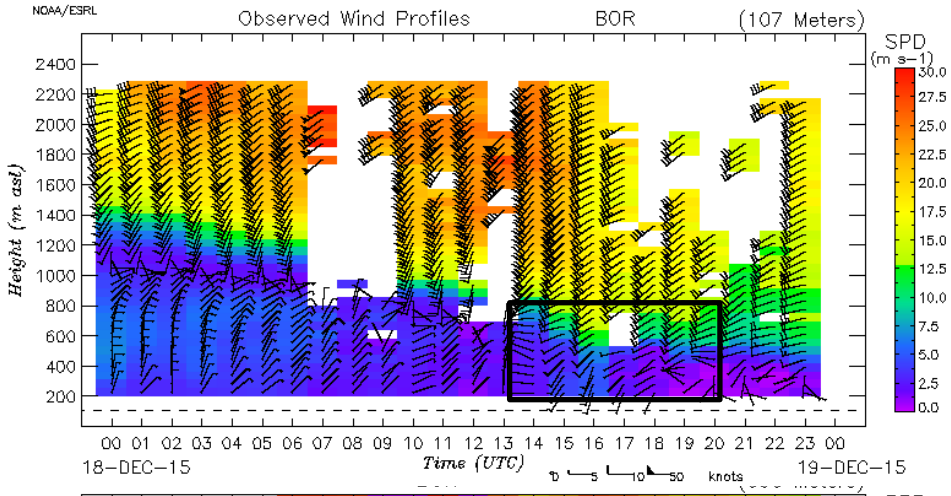
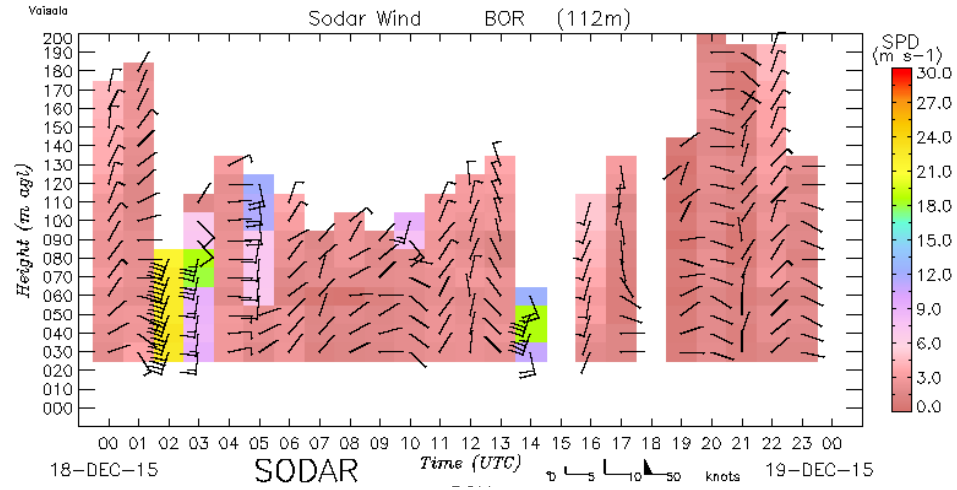
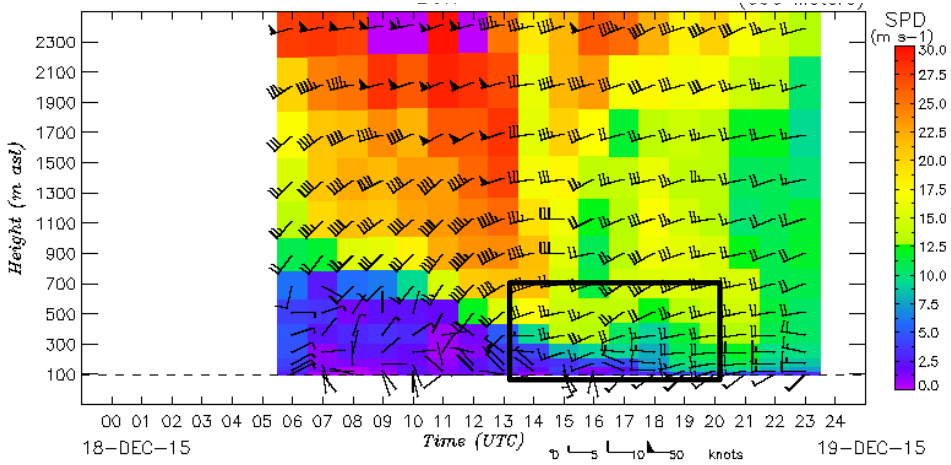
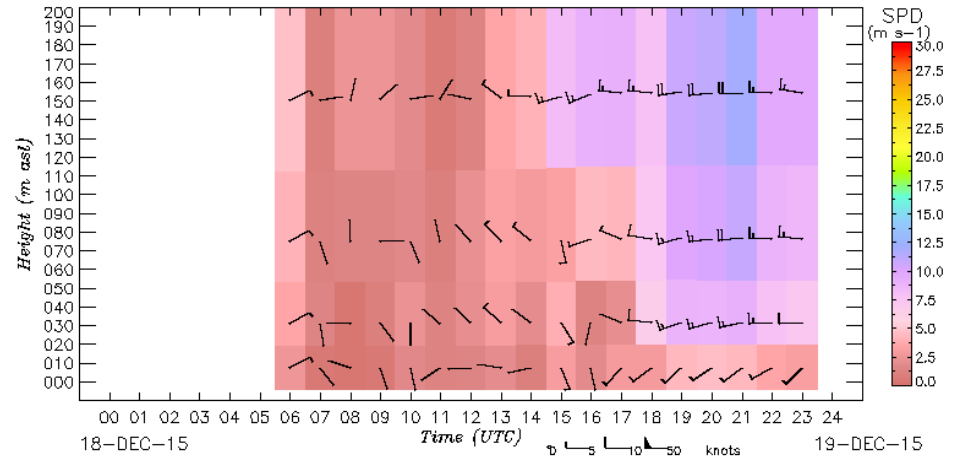
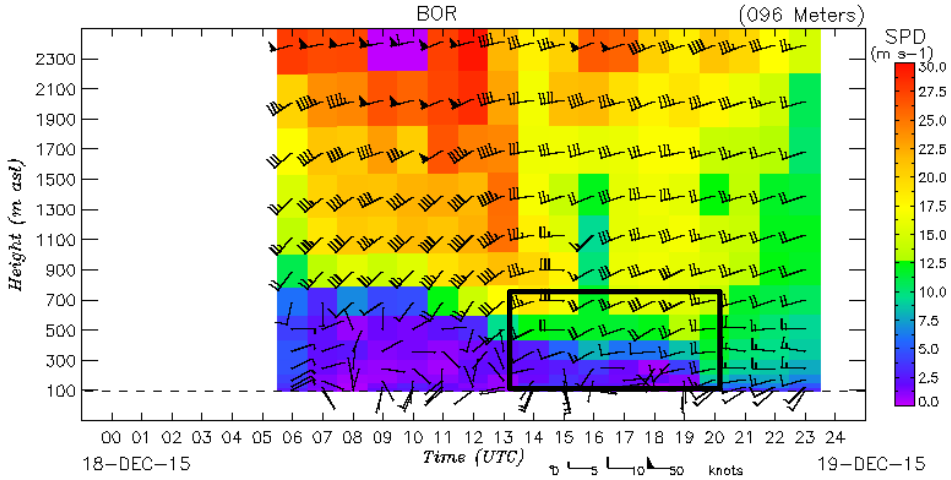
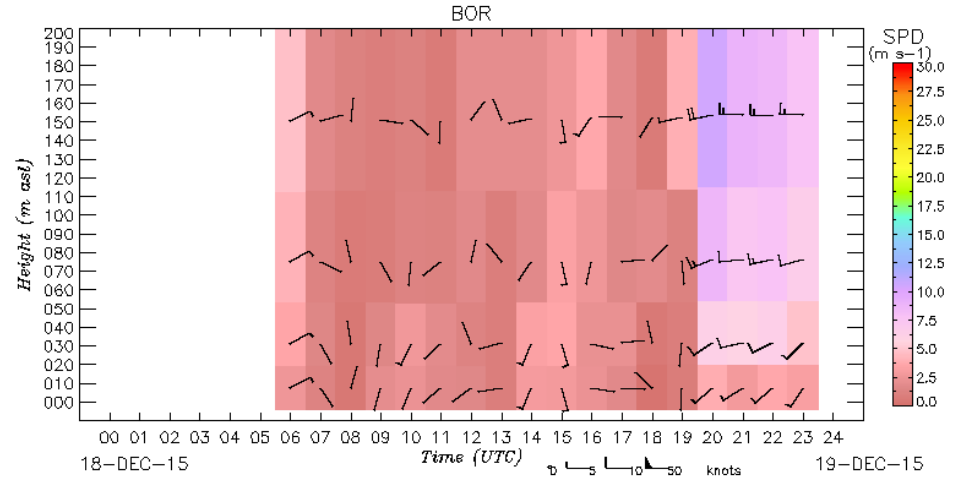
| Parameterization | Aspect |
|---|---|
| Turbulent Mixing (PBL, shallow-cumulus, and Horizontal mixing) | Scale-aware |
| | Z-less mixing length |
| | Cloud PDFs/Cloud mixing |
| | MYNN eddy-diffusivity/mass-flux |
| | Horizontal mixing in x-y-z coordinates (not on σ-levels) |
| | Blended 3D-TKE |

## HRRR Experiments

| | Control Configuration | Experimental Improvements |
|---|---|---|
| Mixing-Length Formulation | as in HRRRv1, v2 | more *z*-less, cloud adaptive, new blending functions, “BouLac” used sparingly |
| Subgrid Cloud Parameterization | as in HRRRv1, v2 | Chaboureau and Bechtold (2002) scheme w/radiative coupling |
| Thermal Roughness Formulation | as in HRRRv1 | Andreas (adapts for snow cover) |

# Results

Observed Profiles at Boardman

Control Run

Experimental Run