

***EVALUATION OF PARAMETERIZED SURFACE FLUXES WITH
ARM OBSERVATIONS***

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ABSTRACT

Surface momentum, sensible heat and latent heat fluxes are critical for atmospheric processes such as cloud and precipitation formation, and have often been parameterized in models. However, studies on direct evaluation of the parameterization schemes for these surface fluxes using observations have been limited. This work will take advantage of the long-term observations of surface fluxes collected by the DOE ARM program at the Great Southern Plains site to evaluate the surface layer parameterization schemes commonly used in the Weather Research and Forecasting model. Effort will also be made to quantify the uncertainty/discrepancy between the ARM measurements based on the EC (Eddy-Correlation) and EBBR (Energy Balance Bowen Ratio) methods. The results will be valuable for understanding and improving parameterization of turbulent fluxes in particular, and atmospheric boundary layer processes in general.