

Data	Purpose	Source	Spatial resolution
LST	T_{rad} , net radiation	MODIS (MYD11C1) (Sect. 2.2) MW-LST (Sect. 2.1)	0.05° 0.25°
Surface longwave radiation	Net radiation	CFS-R ² , CFSRv2 ³	0.5°
Surface shortwave fluxes	Net radiation	CERES SYN1deg ⁴	1°
Albedo	Net radiation	MODIS (MCD43B3) ⁵	0.05°
LAI	Trad partitioning	MODIS (MCD15A3) ⁶	0.01°
Land cover type	Canopy characteristics	MODIS (MCD12C1) ⁷	0.01°
Wind speed	Aerodynamic resistance	CFS-R, CFSRv2	0.5°
Lapse rate profile	Atmospheric boundary layer growth model	CFS-R, CFSRv2	0.5°

² NCEP Climate Forecast System Reanalysis (Saha et al., 2010), ³ Saha et al. (2011), ⁴ Doelling (2012), ⁵ Schaaf et al. (2002), ⁶ Myneni et al. (2002), ⁷ Friedl et al. (2010).