

Model evaluation of high-resolution urban climate simulation: WRF ARW/LSM/SLUCM model as a case study



Zhiqiang Li, Bo Huang, Yulun Zhou, Hopun Chung

Table 1: WRF ARW/LSM/SLUCM Physics Components' Schemes. Table 2: Modelling Variables and its Corresponding Observation Datasets for Model Evaluation.

Component	Scheme	Modeling Variables for Model Evaluation		Corresponding Observation Datasets	
Cumulus	New Simplified Arakawa-Schubert	Name	Description	Observation Datasets	Sources
Microphysics	WDM5	TSK	Surface Skin Temperature	2010 MODIS Aqua LST/E product	USGS Earth Resources Observation and Science (EROS) Center
Radiation	RRTMG	T2	2-meters air temperature	2010 PRD 2 m Air Temperature	Meteorological Bureau of Shenzhen Municipality
Planetary Boundary Layer	Bougeault–Lacarrere	U10	10-meters wind at U direction	2010 PRD 10 m Wind Speed	
Surface Layer	Revised MM5	V10	10-meters wind at V direction		
Land Surface Model	Noah LSM	RAIN	Accumulated total cumulus precipitation	2010 PRD Precipitation	
Urban Canopy Model	Single-layer	RAINNC	Accumulated total grid scale precipitation		
		RH2	2-meters relative humidity	2010 PRD Relative Humidity	
		SWDOWN	Downward shortwave flux at the ground surface	2010 PRD Short Wave Radiation	

