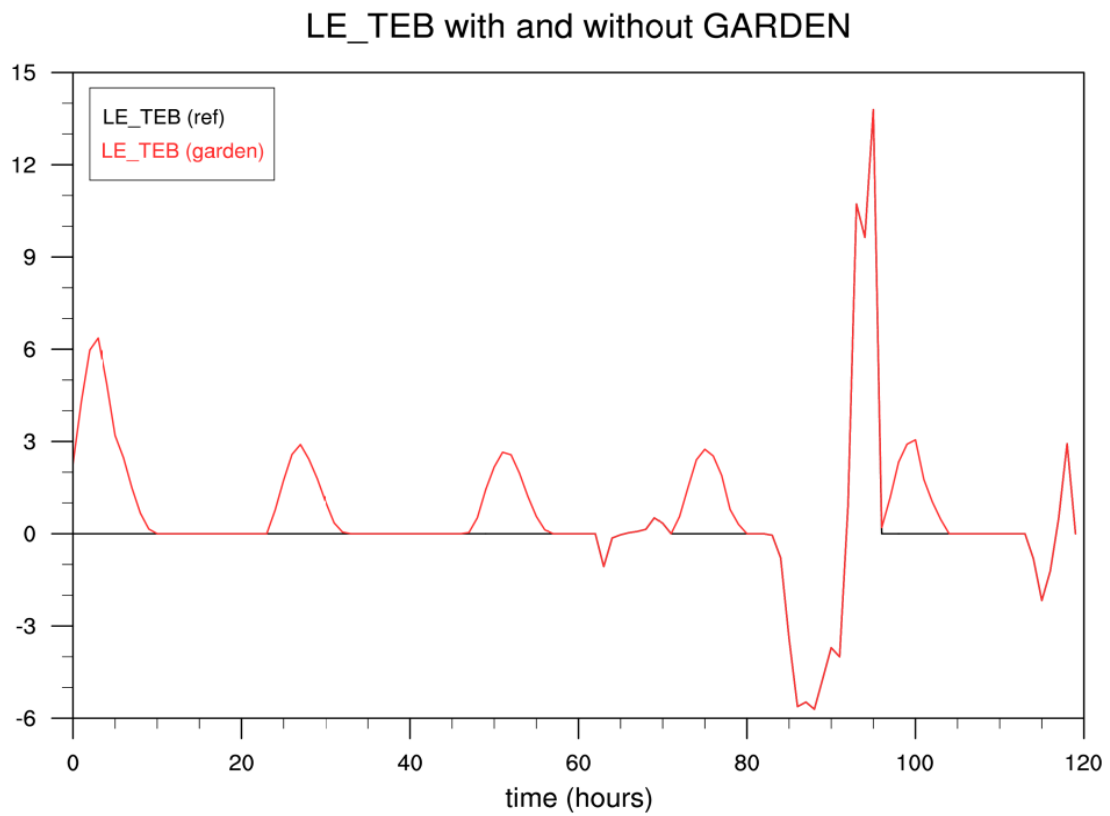


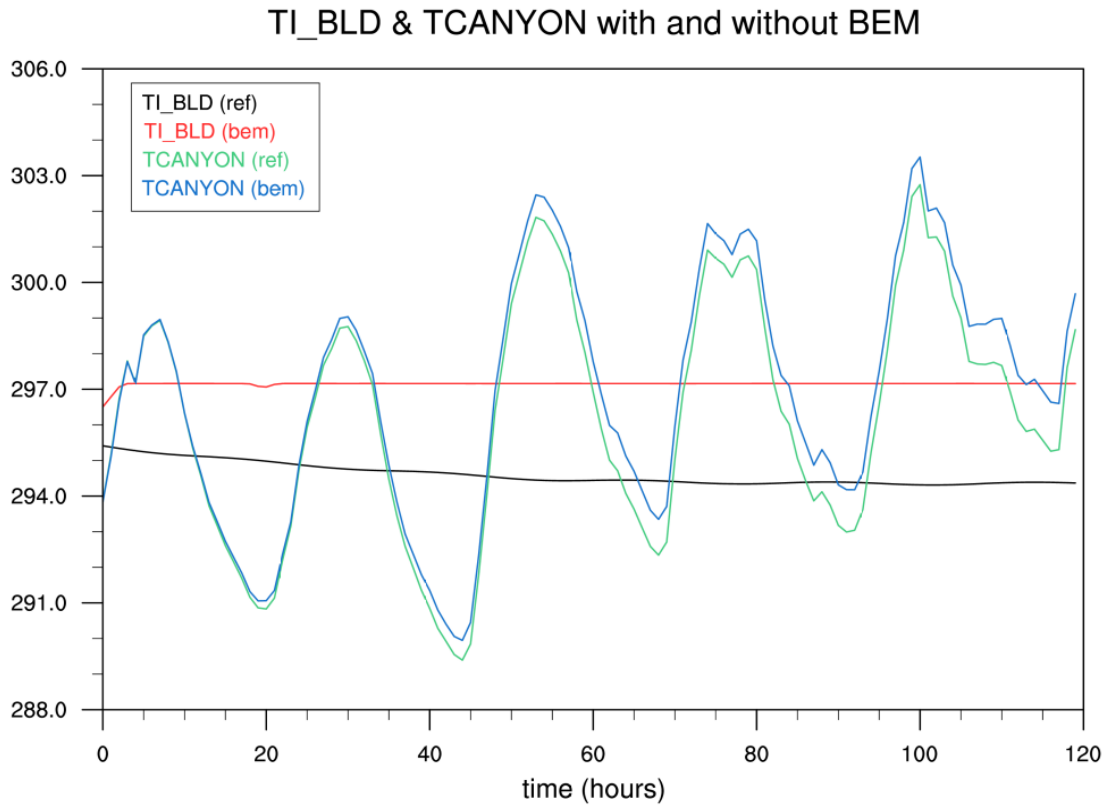
CORRECTION FOR THE TEB EXERCISE

C.2 GARDEN



GARDEN (representation of urban vegetation) creates a latent heat flux by day.

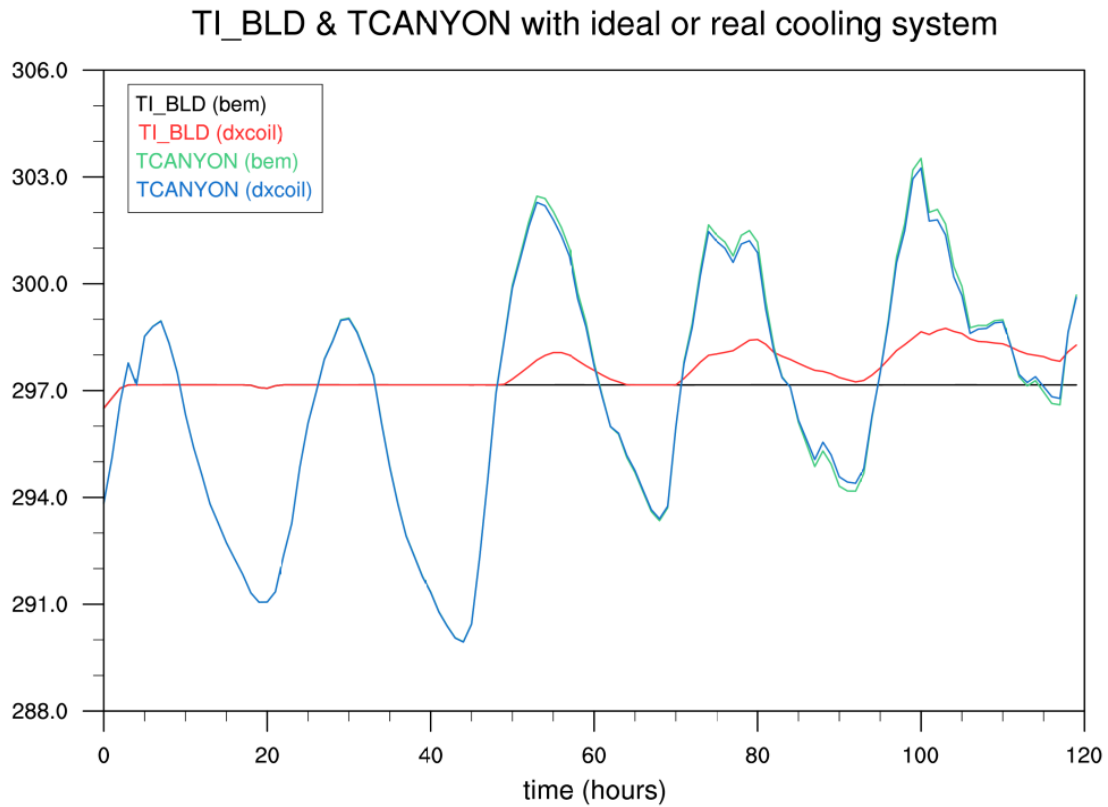
C.3 BEM



BEM (Building Energy Module) is implemented in order to represent the energetics inside the buildings. With BEM, when the temperature inside the building (TI_BLD) is higher than the temperature outside (TCANYON), air conditioning is activated. TI_BLD is kept at TCOOL_TARGET (cooling setpoint of indoor air, 297.16K by default). During the night, buildings are insulated enough to avoid a decrease of indoor temperature.

In the street, the temperature (TCANYON) is influenced by the buildings. The heat flux coming from the wall is different depending on whether BEM is activated or not. With BEM, TCANYON increases : heat transfer from inside to outside, and heat rejection of the cooling system outside.

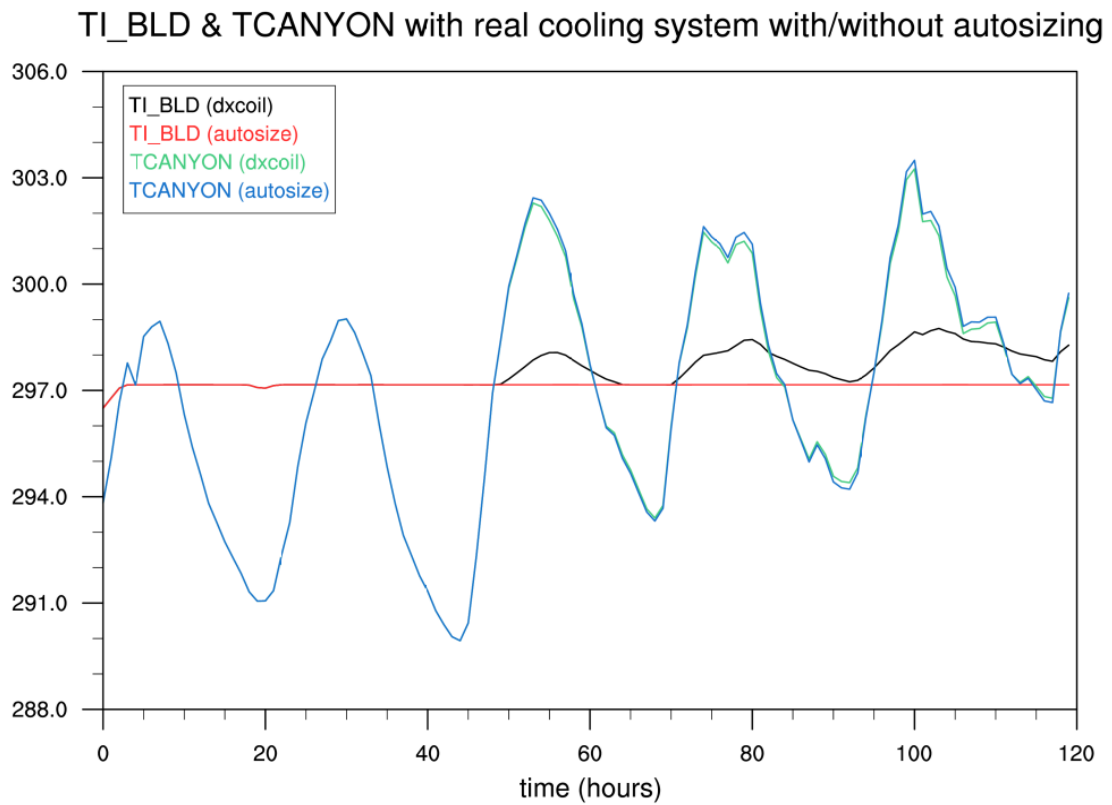
C.4 BEM – DXCOIL



With DXCOIL, possibility to define its own cooling or heating system, with characteristics different from the “IDEAL” case.

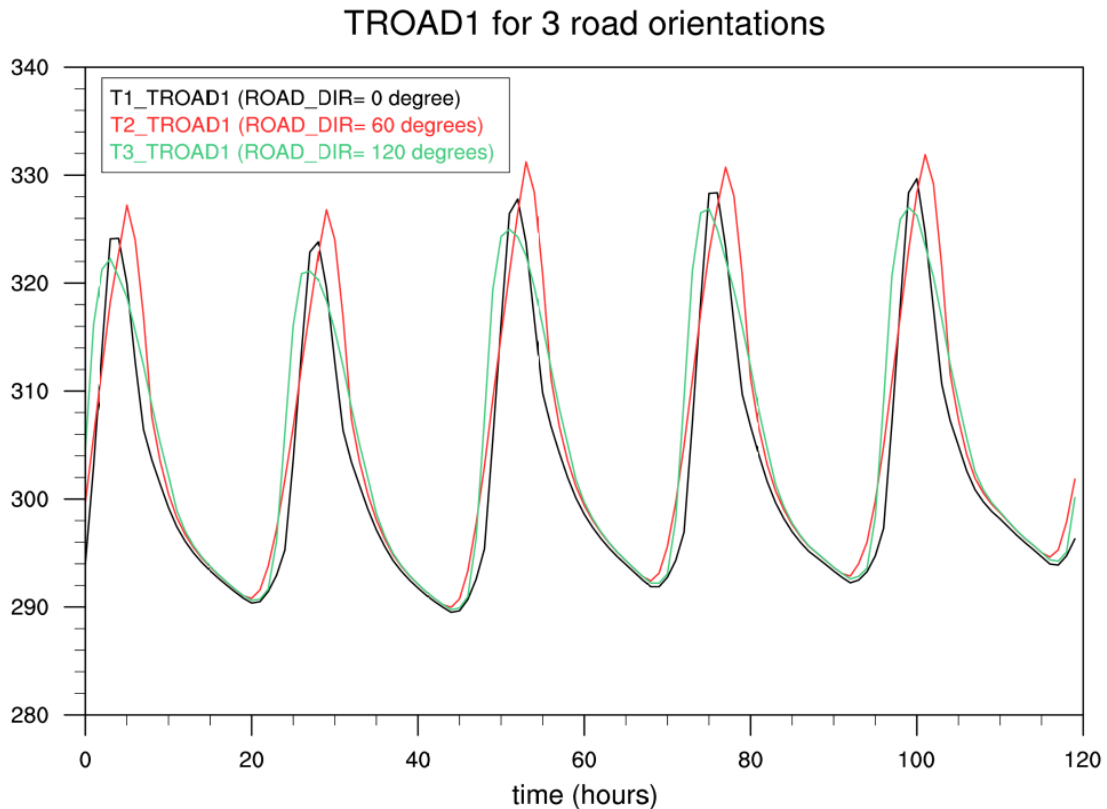
When outdoor temperature grows, the real cooling system (DXCOIL) doesn't achieve to cool the building inside air so perfectly than the ideal one.

C.5 BEM – DXCOIL – AUTOSIZE



The calibration of the cooling system characteristics via LAUTOSIZE allows real cooling performances to reach ideal ones.

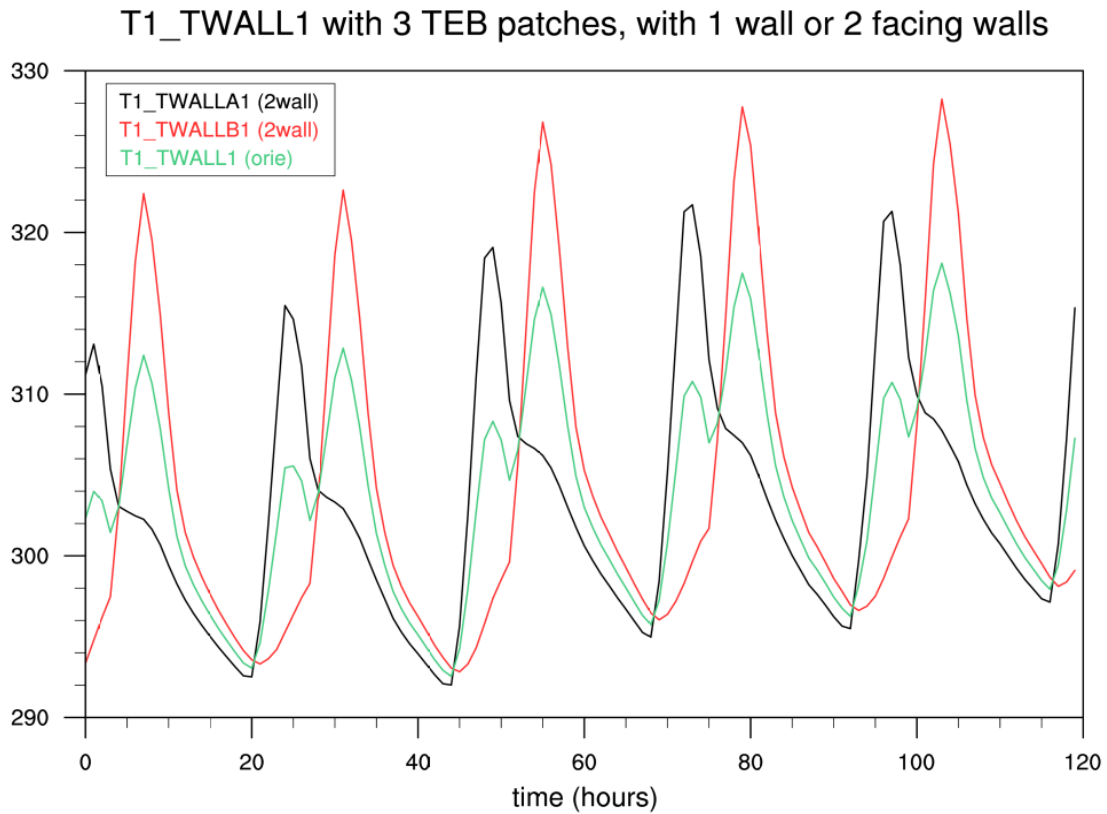
C.6 ORIE



The TEB geometry is based on the canyon hypothesis, to represent the ensemble of the roads of a same grid point. By default, all directions exist with the same probability (CROAD_DIR = UNIF). This hypothesis allows the computation of averaged radiative forcing for road and wall surfaces. It's possible to define a specific orientation with CROAD_DIR = ORIE, the number of orientations is fixed with NTEB_PATCH.

The orientation of the streets modifies the input solar radiation on road and consequently their temperatures.

C.7 ORIE + TWO WALLS



By default, the 2 facing walls of the canyon are considered as only one averaged wall. With `CWALL_OPT = TWO`, the radiative budget is calculated separately for each wall. The input solar radiation is shared between the two walls : one wall gets sun during the morning (WALLA), the other gets sun during the afternoon (WALLB).