

SHADING DESIGN

WESTON HUANG

ABOUT RESULT

Without assigning the material for each construction, the house now is not comfortable to live. Even though by adding the shading system can ease the hot feeling slightly, half of the time in this house is still not comfortable.

However, it is not the reality in this house. In fact, even without the shading system, the uncomfortable time is not as much as the analysis. That is to say, the correct material of each construction is the key point of the accuracy when doing the simulation.

PERCENT OF TIME COMFORTABLE

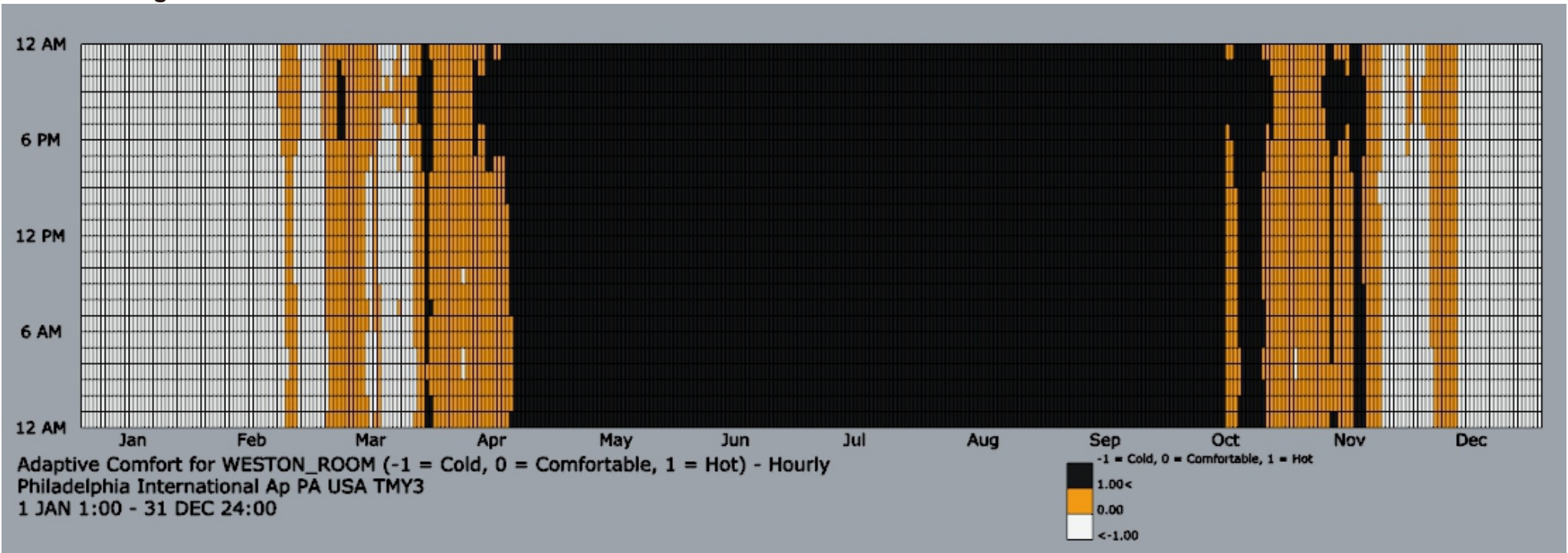
Shading	NO	YES
Comfortable	16.5%	19.2%
Hot	59.9%	53.6%
Cold	23.6%	27.2%

ENERGY PLUS ANALYSIS

Without shading



With shading



SHADING DESIGN

WESTON HUANG

ADJUSTED RESULT

After assigning the materials for constructions and letting the windows open for natural ventilation, the house now is more comfortable. The value of indoor jumps from 16.5% to 36.2%. On the other words, the comfortable days in the house double. As a result, the adjustment has been effective.

Conditions of opening windows for natural ventilation:

Indoor temperature: 20 C - 28 C

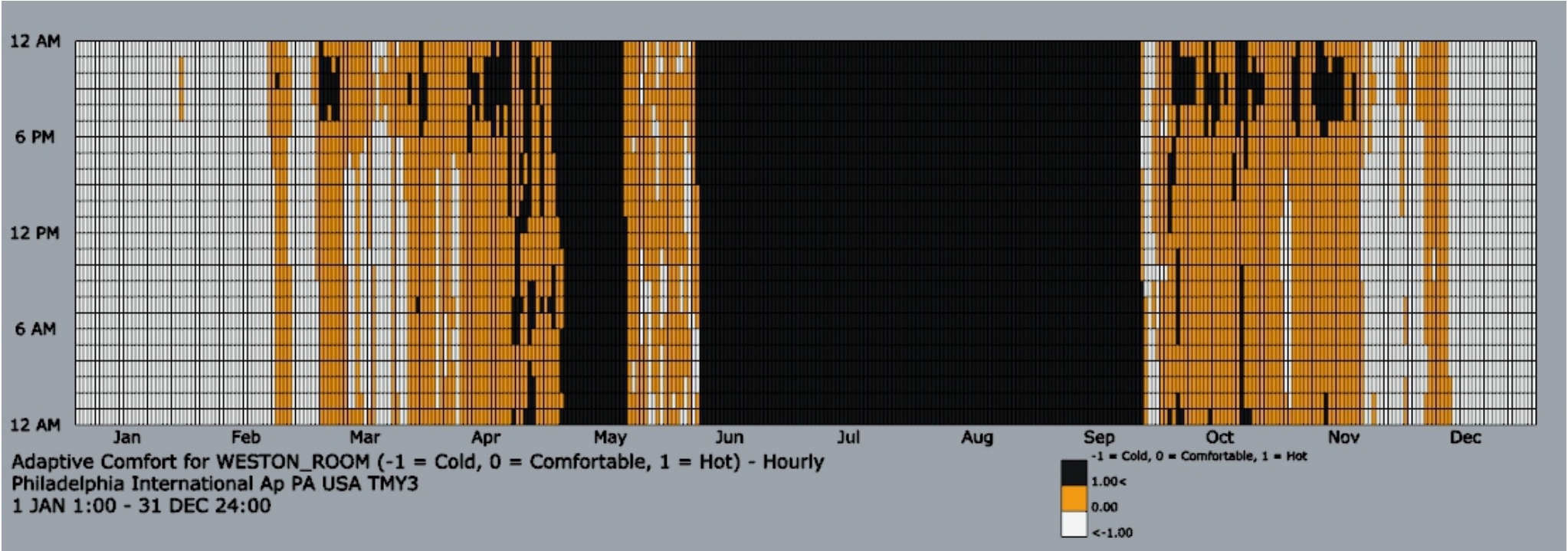
Outdoor temperature: 16 C - 32 C

NATURAL VENTILATION BY OPENING WINDOW PERCENT OF TIME COMFORTABLE

Shading	NO	YES
Comfortable	31.2%	30.2%
Hot	38.5%	33.5%
Cold	30.3%	36.3%

ENERGY PLUS ANALYSIS

Without shading + Natural ventilation by opening windows



With shading + Natural ventilation by opening windows

