Outdoor Comfort Simulation

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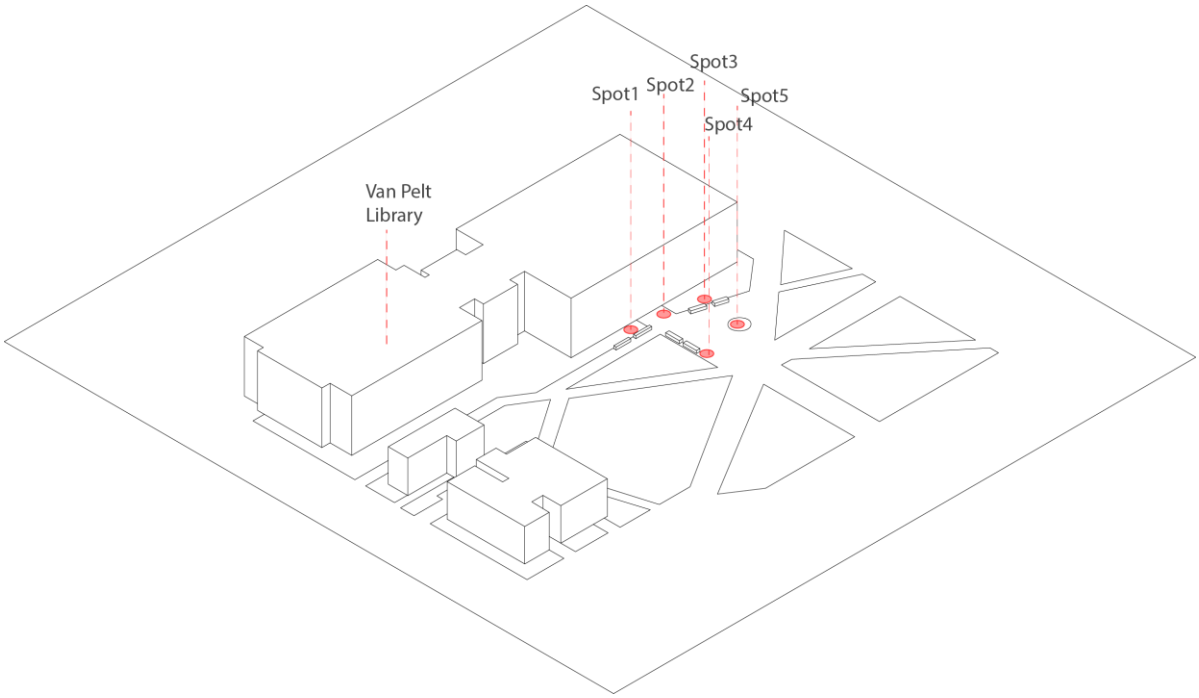
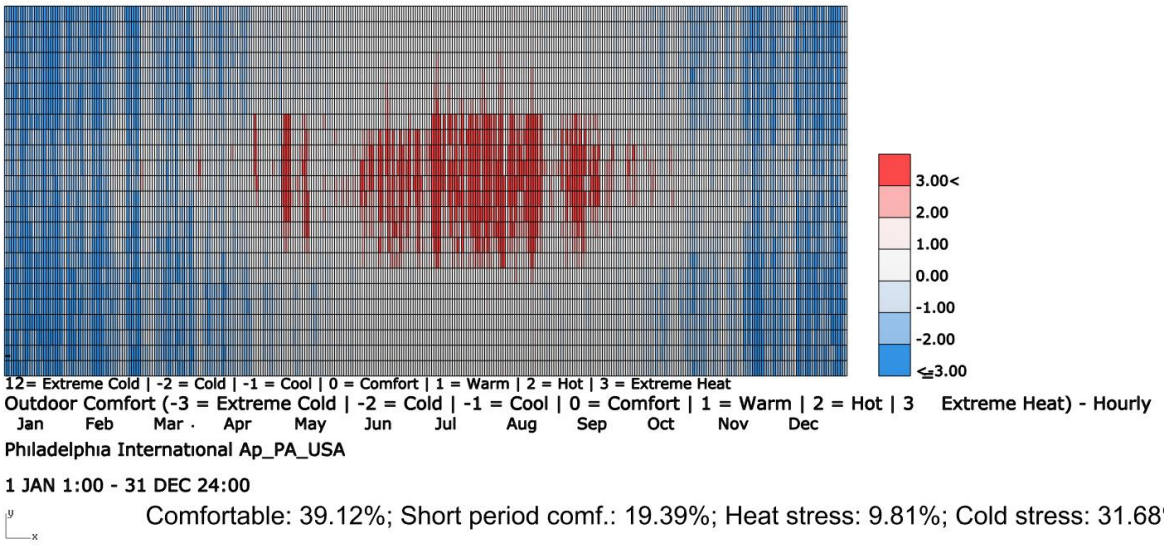
1. Location

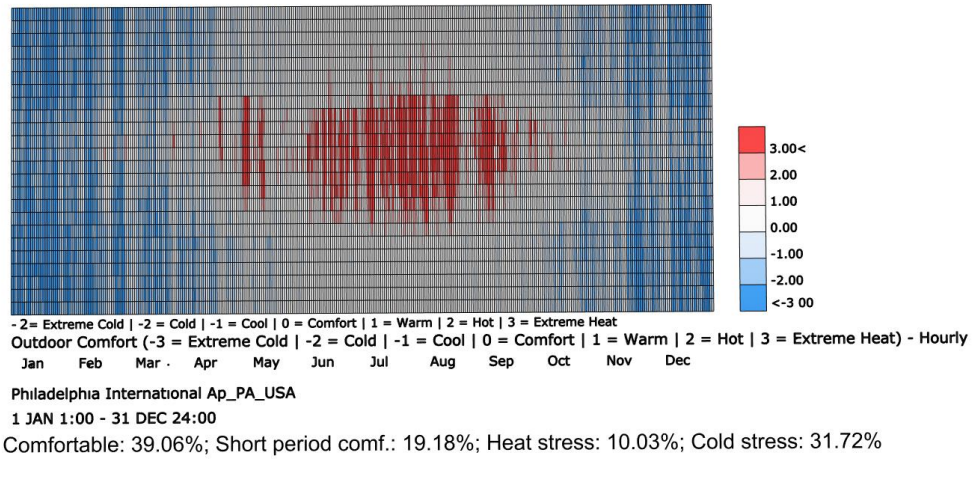


Location is on the bench in front of Van Pelt Library where people usually rest on.

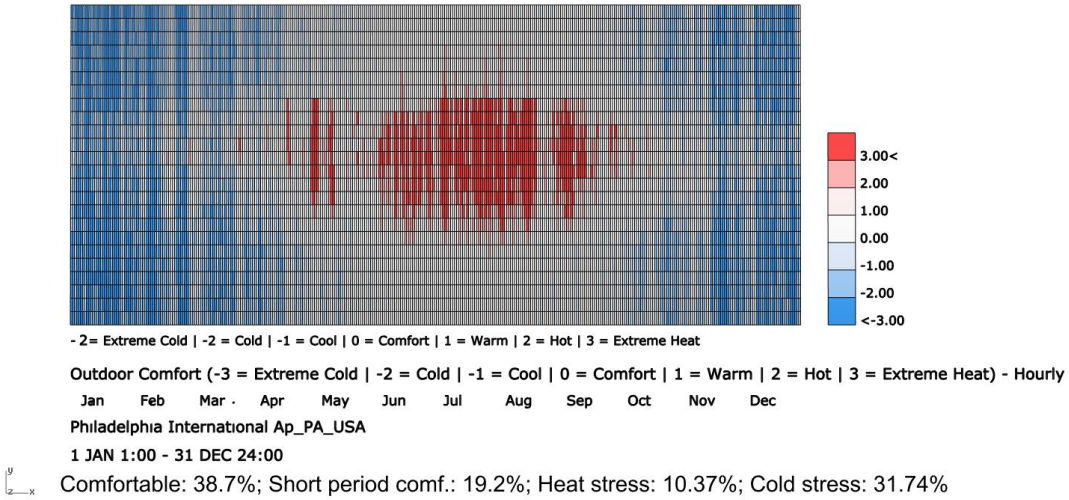
2. Comfort hours percentage



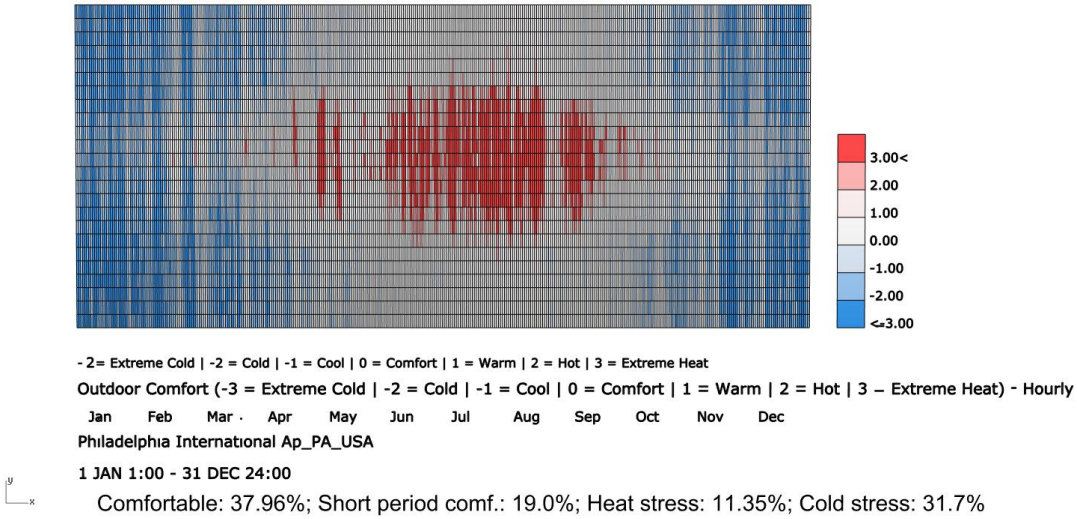
Under natural condition, the comfortable percentage during the year on spot 1 is 39.12%.



Under natural condition, the comfortable percentage during the year on spot 2 is 39.06%.

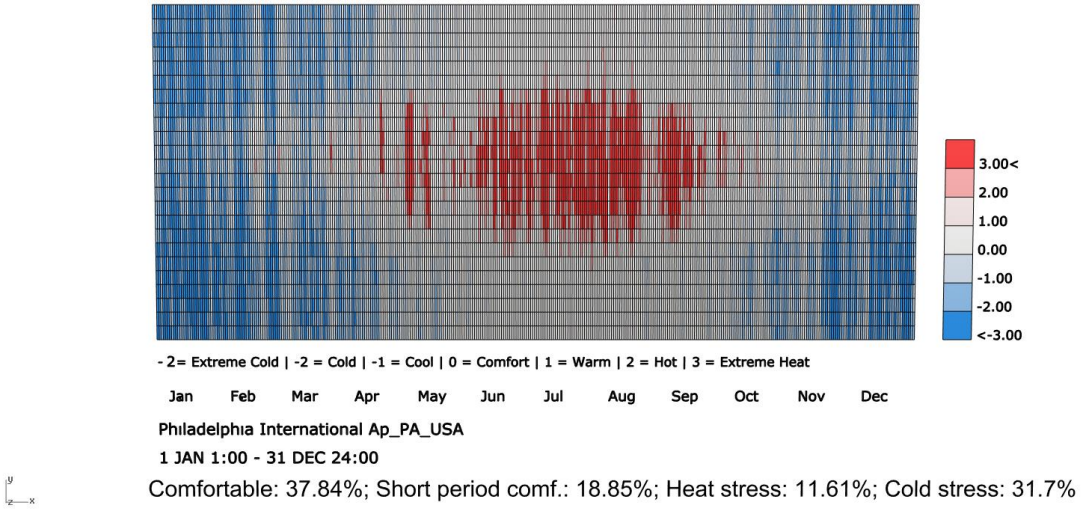


Under natural condition, the comfortable percentage during the year on spot 3 is 38.7%.



Under natural condition, the comfortable percentage during the year on spot 4 is

37.96%



Under natural condition, the comfortable percentage during the year on spot 5 is 37.84%

3. **Location selection**

   Based on the result of simulation, spot 1 is the best location for seating, which has an annual outdoor comfort rate at 39.12%.

4. **Analysis of the result**

   Thinking progress: Select five spots which scatter evenly on the available area in front of the van pelt library, test the annual outdoor comfort rate of each one of the spots, record the result. Based on the result, spot 1 and 2 have relatively better comfort rate, yet spot 1 has a slightly higher rate and the location will block less of the circulation than spot 2. Therefore, spot 1 is chosen as the seating location.

   Difference between the best and the worst: The best location is spot1, the worst location is spot 5. Spot 1 is well shaded by the building itself, being protected by the direct sun radiation in summer and wind in winter. Spot 5 is located in the middle of the front yard, which has no shading nearby, fully exposed to sunlight and wind.

   The effective parameters, therefore, are shading and wind blockage.

   Limitation: The 3d chart is not visually clear enough as simulation.