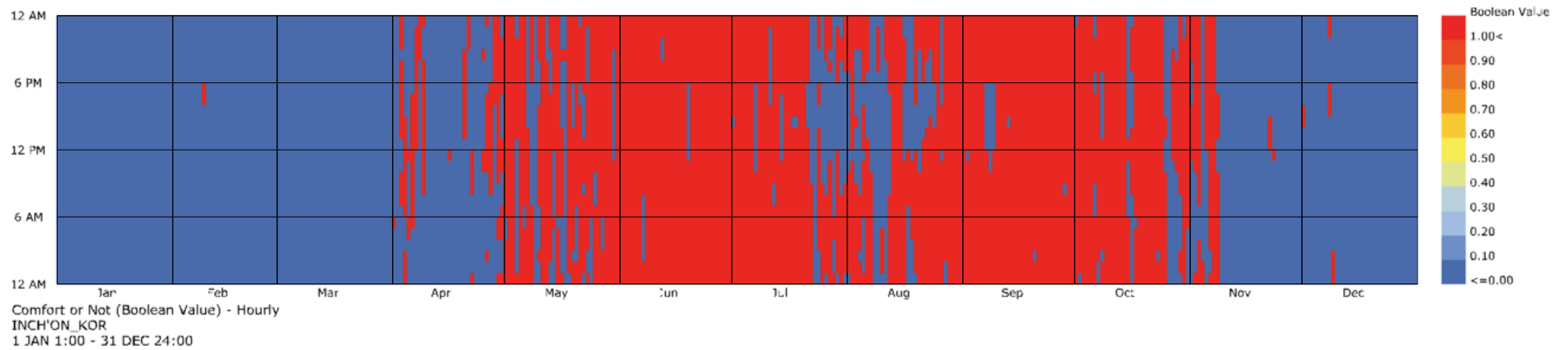
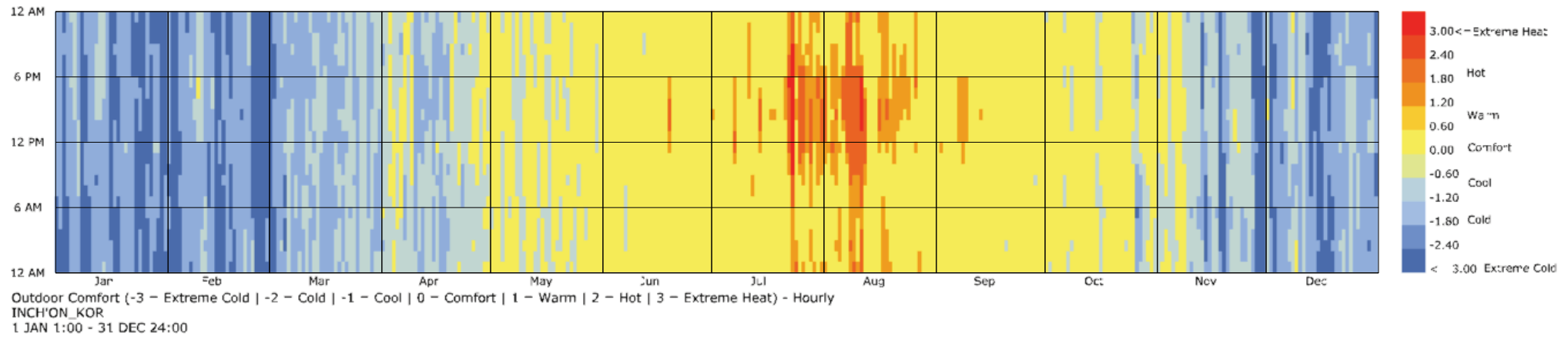
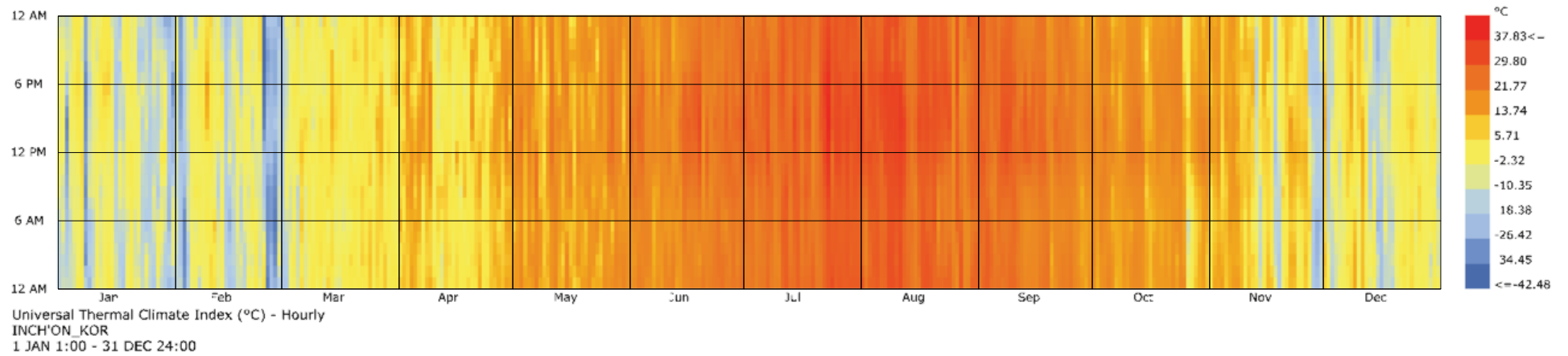


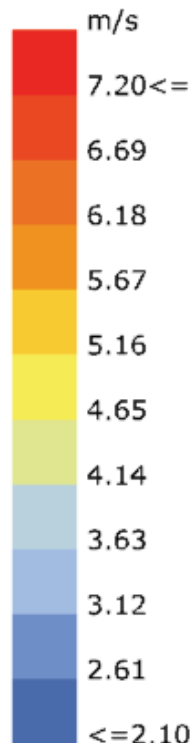
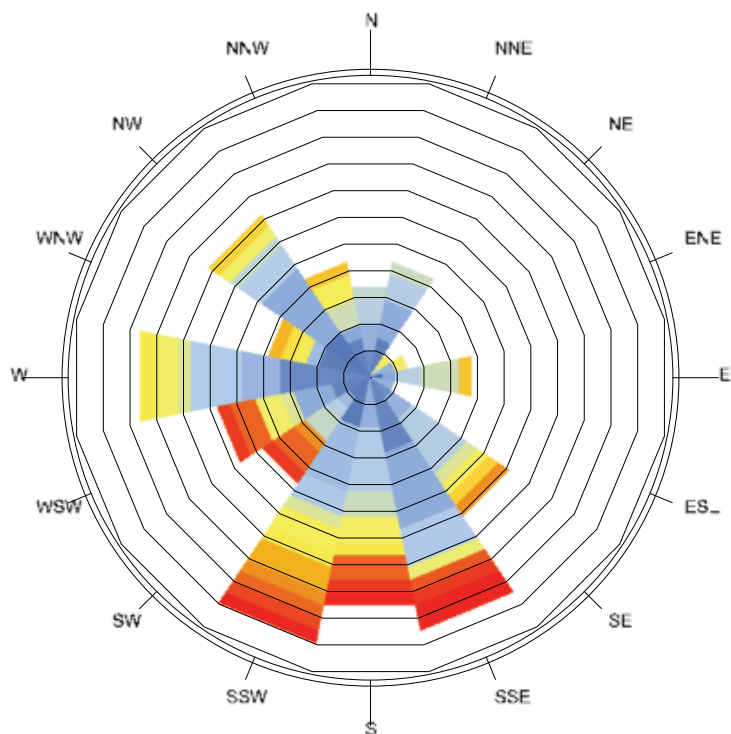
Seoul Weather Analysis for Passive Design Strategies

Mixed Use

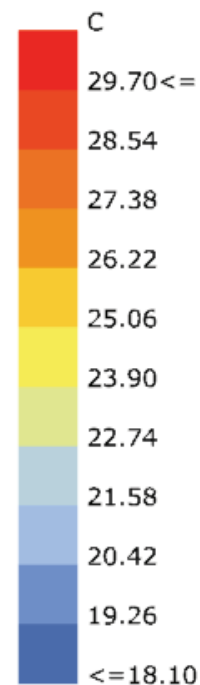
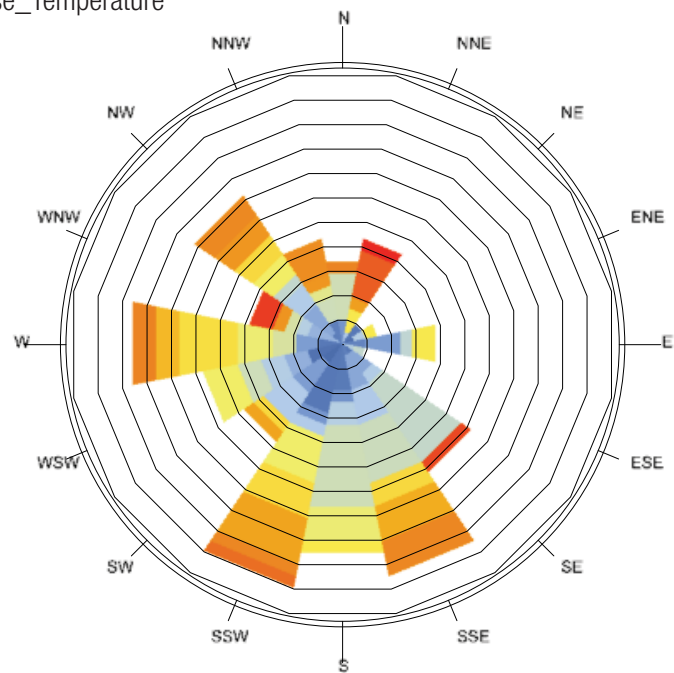
by Rajika Maheshwari | Arch 753



Windrose_Windspeed

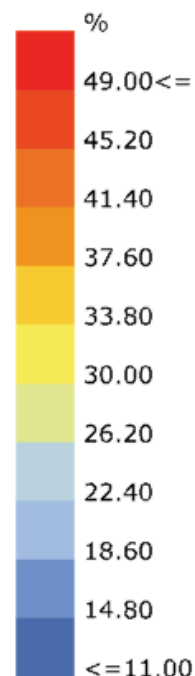
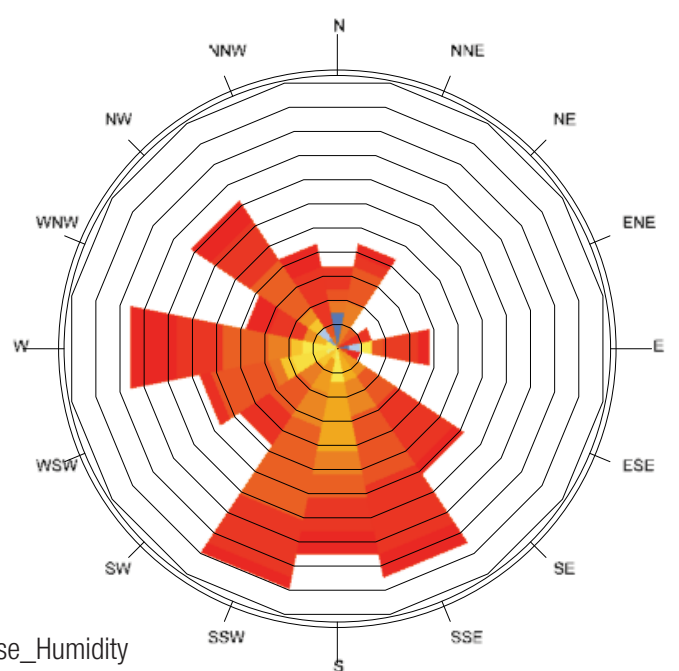


Windrose_Temperature

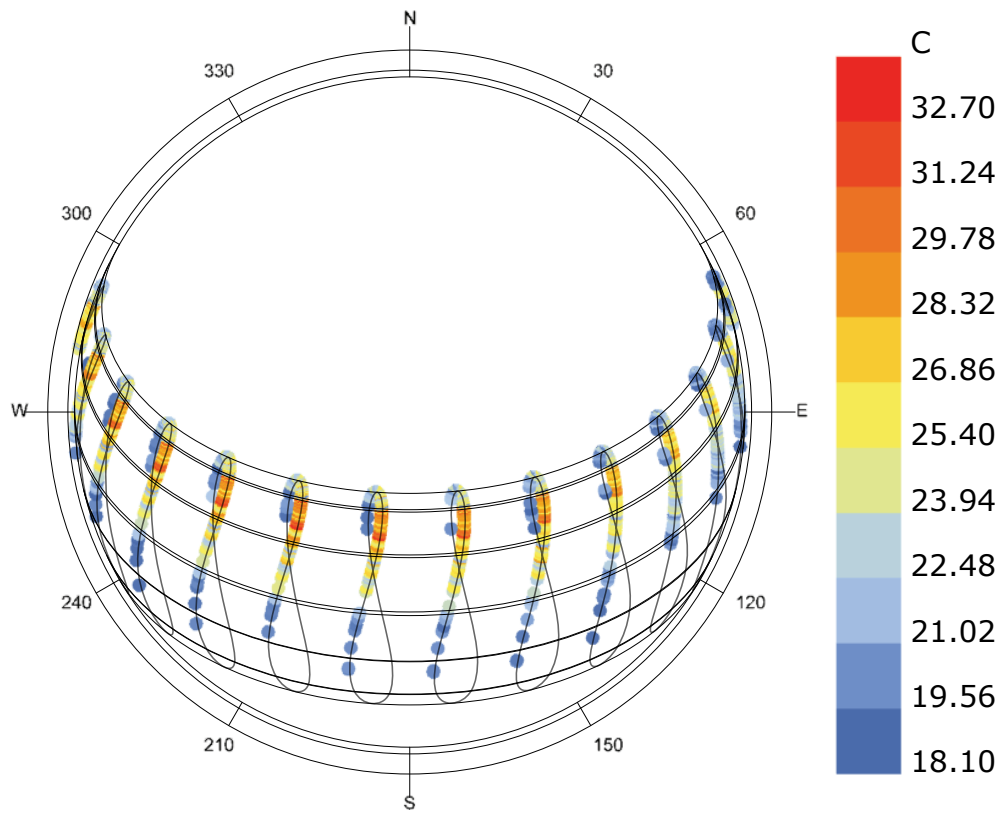


Wind-Rose
 INCH'ON_KOR
 1 MAR 1:00 - 31 OCT 24:00
 Hourly Data: Wind Speed (m/s)
 Calm for 0.00% of the time = 0 hours.
 Each closed polyline shows frequency of 0.0%. = 2 hours.

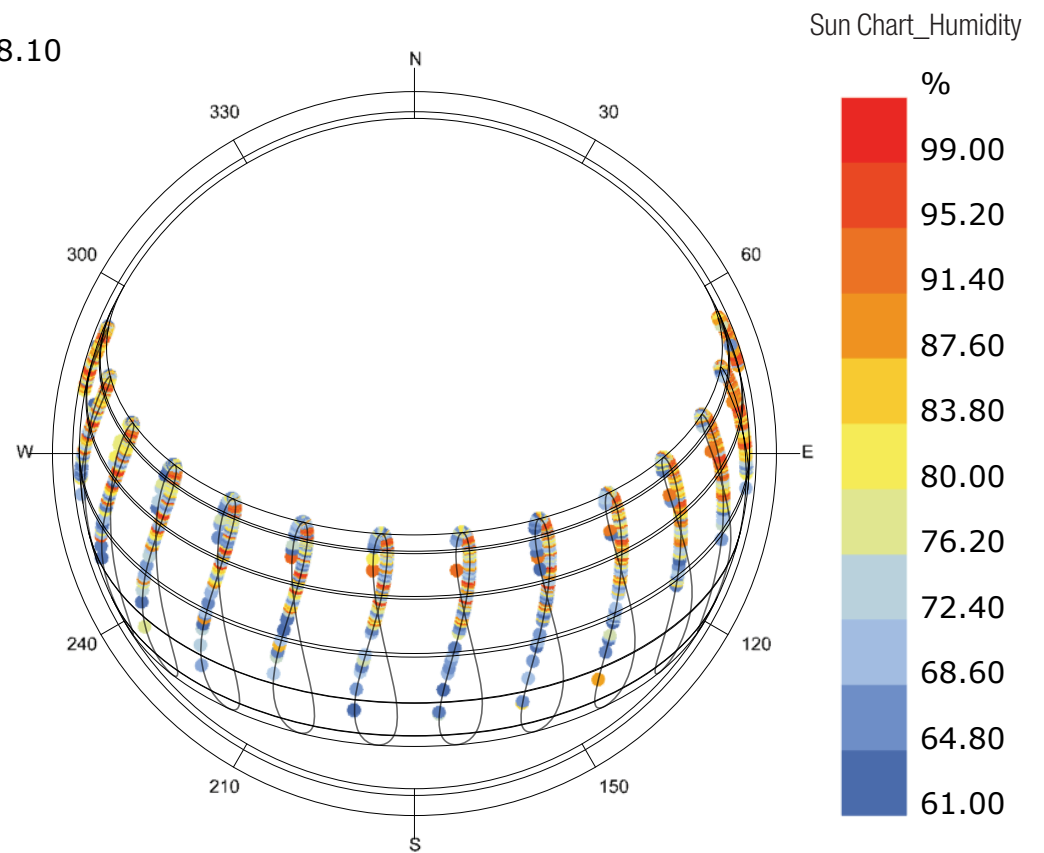
...
 Conditional Selection Applied:
 Wind Speed > 2
 and 18 < Dry Bulb Temperature < 30
 and Relative Humidity < 50
 175.0 hours of total 8760.0 hours (2.00%).



Windrose_Humidity

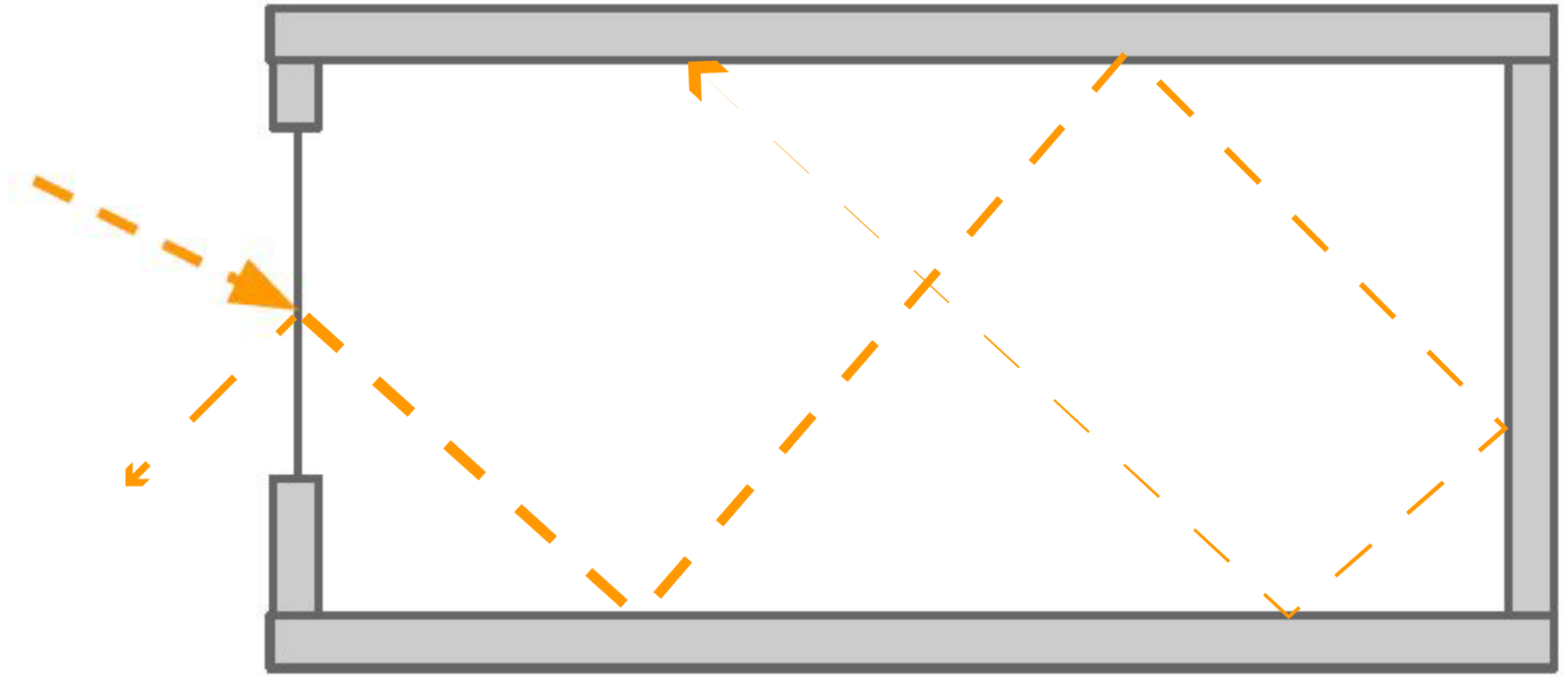


Sun Chart_Temperature



Passive Design Strategies

- Climate is pleasant in the summer months and extremely uncomfortable in the winter months. Hence building should employ thermal mass to keep the building warm during those frigid months
- Using the windrose we see that Seoul faces strong and relatively cool winds from the south. Hence the proposed building should face south to take advantage of natural ventilation in the summer months.
- The sun chart shows the time when the sun is at its peak and can provide inputs for calculating external shading and awnings that can help keep the building cool in the summer months



When sun light hits glass, some of it is reflected and the rest is transmitted through the glass. It bounces around the room, until the energy is diffused and dies. How much of the light is reflected off depends on the type of glass, and the amount the light bounces on the inside depends on the surfaces on the inside.

Rajika Maheshwari
Arch 753

Normal/Direct Radiation: It is used to describe solar radiation traveling on a straight line from the sun down to the surface of the earth.

Diffused Radiation: describes the sunlight that has been scattered by molecules and particles in the atmosphere but that has still made it down to the surface of the earth.

Total Radiation: Is the mixture of normal/direct radiation, diffused and reflected radiation