

FALL

WINTER

SPRING

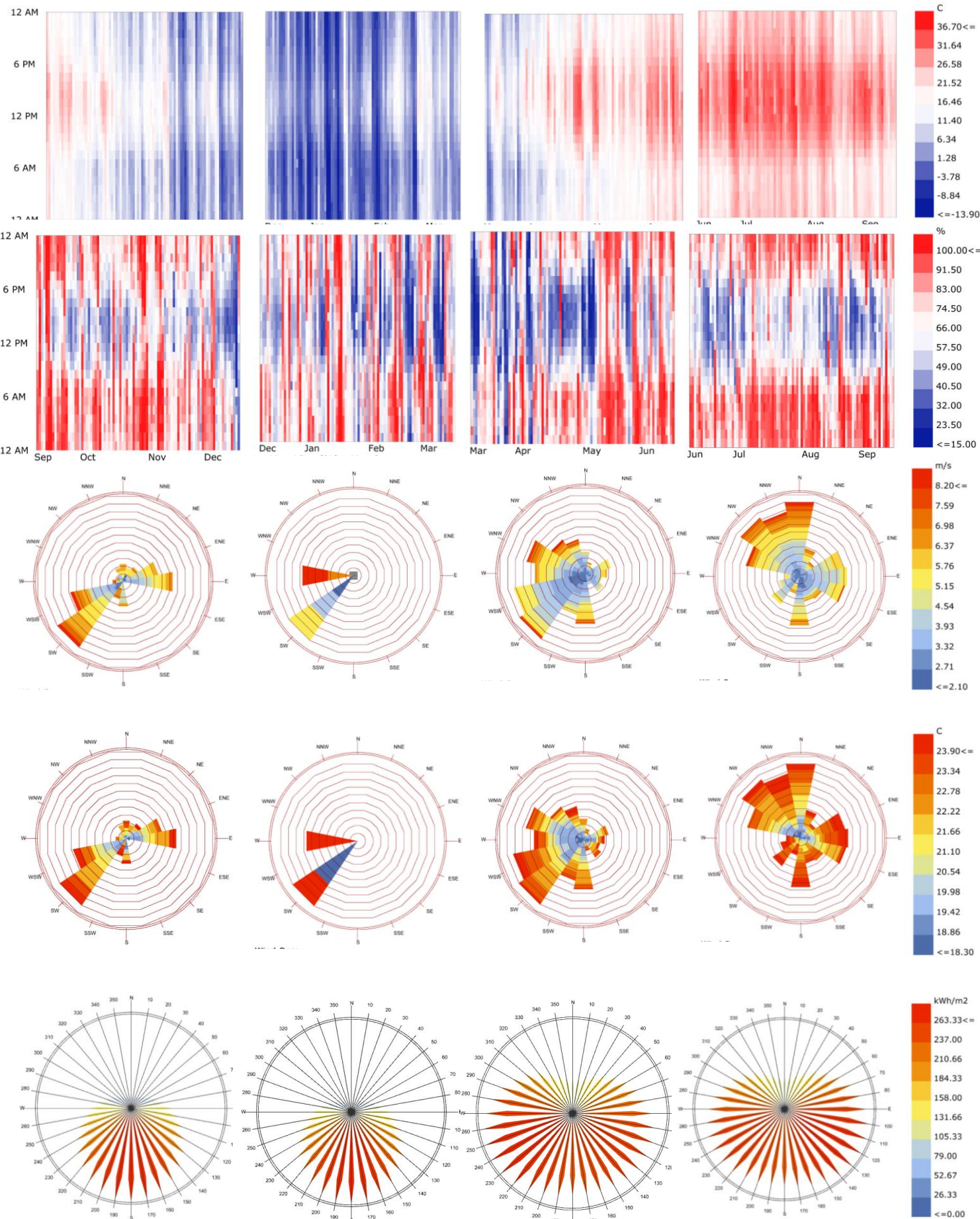
SUMMER

September 21–December 20

December 21–March20

March 21–June20

June21–September20



Climate Analysis

Location : Philadelphia

- The weather is not extreme rather it is moderate with temperature ranging from -4 degree Celsius (lowest) in winters and gradually rising to 30 degree Celsius in Summer.
- The aim is design for optimum thermal comfort indoor.

Sun Path diagram

- Along wit this, the humidity is relatively high during Summer and Fall.
- North and North-west wind is prevalent in summer, whereas, during the rest of the year it is South-west winds which are prominent.
- The temperature of South-west winds during winter is low and thus, should be avoided.
- The solar exposure needs to be capitalized during winter, whereas the exposure to direct sunlight needs to be reduced during winter.

Design Strategies

1. Compact planning of the building for minimizing heat loss.
2. Orientation – longer side preferably parallel to North – South direction, so as to increase direct solar heat gain during winter.
3. Fixed horizontal shading on South façade and adjustable screens on East and West Façade.