Loken_HW5

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Dear Dr. Dugan:

Use the 'Data/WI_CAVG_LatLong1.nc' file. In this lecture we dealt with the "temperature" variable. This file is the "climatology" variable.

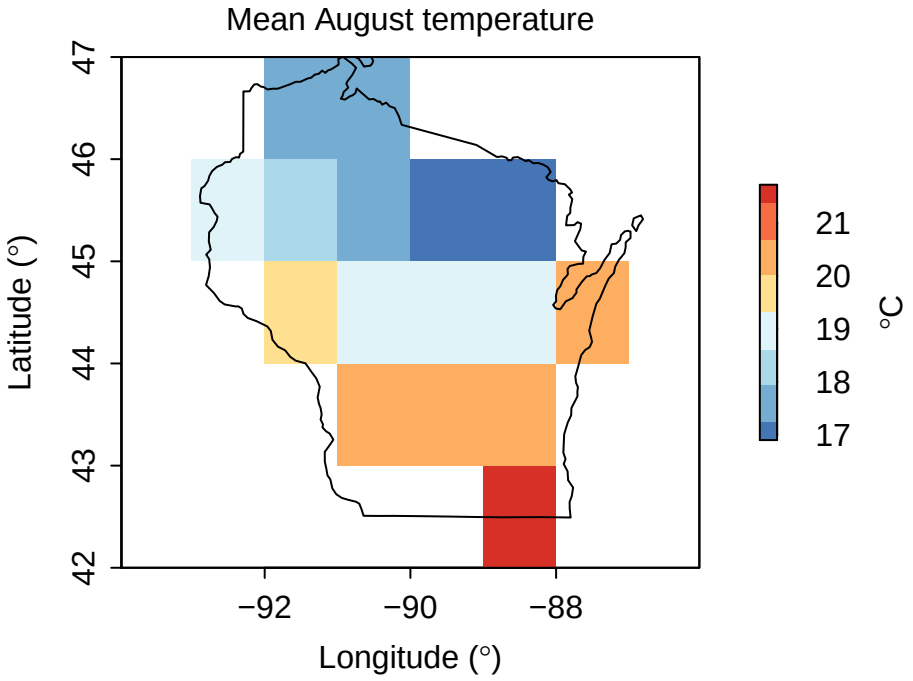
Find the metadata for these dataset. http://berkeleyearth.org/data/. We are using Gridded Data. Monthly Land. Average Temperature (TAVG; 1753 – Recent).

Question 1: The climatology variable is a monthly average for each cell. What years does this average represent?

Direct quote from (http://berkeleyearth.org), "climatology: For each grid cell, an estimate of the true surface temperature for each month during the period January 1951 to December 1980 reported in degrees C."

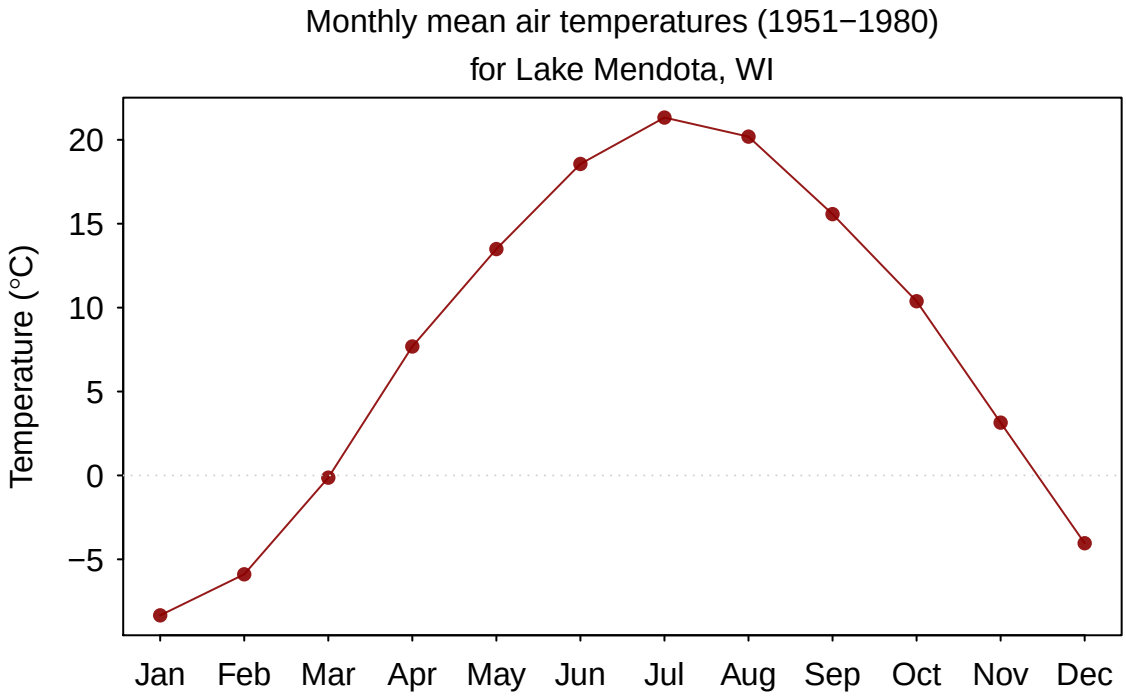
Each climatology value is the average monthly temperature between 1951 and 1980

Question 2: Plot the August averages for Wisconsin.



Extract the averages for the cell over Lake Mendota. Plot the monthly temperature averages.

```
METemp = extract(br_WI,y = ME)
output = data.frame(Month = 1:12, Temp = METemp[[1]][1,])
row.names(output) <- month.abb[1:12]
```



What is the August average for Lake Mendota?

```
output[which(output$Month==8),]
```

```
##     Month     Temp
## Aug     8 20.18909
```

The average August air temperature over Lake Mendota is 20.19 degrees celcius.