Class summary/homework 2 –Due Monday February 10th, 2014 9:00am

1) We have introduced three new concepts in programming:
    a. Writing loops, if-else-statements, and how to define and use new functions.
    b. Practice writing a simple loop, if-else statement and using functions
    (Self-test, no written report needed!)
2) **Review the program albany_climatology.R once more:**
    a. Describe the character of the monthly mean time series
    b. Describe the climatological cycle:
        i. Amplitude of the cycle,
        ii. Timing of coldest, warmest months,
        iii. Months with the strongest change from one to the next month
3) **Change the program and analyze snow (or if you are more interested in precipitation, prcp)**
    a. Make as few changes as necessary, but as many as needed to have the right axis label on the figure plots, and don't overwrite the old temperature figure files (PDF-files in your directory).
    b. Describe briefly the monthly mean time series and the climatological seasonal cycle.
    c. What is the most outstanding difference in the data samples between monthly mean snowfall data and monthly mean temperatures?
4) **Review of the news article on weather extremes and global warming**
    (from ScienceDaily, 03/25/2012):
    a. What is the key message of this article?
    b. What is meant by the "loaded dice"? What natural processes do the 'sides' of this imaginary dice experiment represent in this article?
    c. Sketch the sample space (Venn-diagram) with the debated events. What is the complement event to extreme events?
    d. Do the Zinnwald-Georgenfeld rainfall extreme and the river Elbe flooding represent mutually exclusive events (i.e. are they independent?). Do you see a problem in counting
    global extreme events?
    e. What is your overall impression: Is the headline justified, given what is presented in the text of the article?

5) **Is there anything in class or programming in R that you find confusing**, or any general suggestions or feedback that could help to increase your learning progress?