Homework 3:

1. Start to read and thoroughly understand the papers that are relevant for your presentation. In about 2 weeks from now you should be ready to discuss the basic structure of your talk with me. You should carefully think about issues such as:

   - Which secondary literature do you intend to include?
   - What background information needs to be provided in your talk?
   - What are the key results of your study?
   - Which key graphics do you intend to show?
   - What are the strong and weak aspects of the relevant studies?
   - Overall, what do you want the class to remember from your talk?
   - What are the open questions or controversial points which might lead to an interesting discussion at the end?

2. Derive the equations given in the class notes for the temporal (1) variance and (2) covariance (slide 2.41).

3. Calculate and plot global maps of the interannual standard deviation of JFM and JAS air temperature (pressure/air.mon.mean.nc) at 1000 hPa over the period 1958-2004 (contour interval: 0.5K; range: 0.5-5K). Compare your result with maps shown in class or online at the reanalysis atlas web page. Hint: You have to construct a loop (WHILE …. ENDMEN) to calculate standard deviation in GrADS.

4. Hartmann: Ch. 1, question 3.