ATM 211: RAOB Plotting Exercise #1: Peachtree City, GA (Atlanta)

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Due date: Tuesday, February 1

On the attached page, you’ll find radiosonde and METAR data from 1200Z on a day in January in Peachtree City, GA (KFFC). The TTAA (mandatory levels), TTBB (Significant levels) and PPBB (Fixed wind levels) are all given, though you will not need to plot the PPBB data.

Plot the entire sounding on your Skew-T chart. A good method for doing this is:

1) Plot the TTAA (mandatory levels) temperature (red) and dew points (green) first, but don’t connect the points yet. Remember that it is the **dew point *depression*** given in TTAA/TTBB data, so you have to subtract this number from the temperature to calculate the dew point. Also remember that the temperature is positive if the tenths place is even, and negative if the tenths place is odd. It might help to write down all the numbers before plotting. Finally, it isn’t necessary to plot the dew points above the tropopause (the “88” group). *Note: ///// represents missing data.*

2) Mark and label the tropopause (“88” group)

3) Plot the TTBB (significant levels) temperature and dew points.

4) Connect the dew point and temperature points with a straight edge. Typically, temperature is red and dew point is green. Your dew point and temperature lines should *never* cross, but they may meet. If they meet, the air at this level is saturated.

5) Plot the winds from the TTAA data on one of the wind axes.

6) Plot the maximum wind (“77” group) on a different wind axis.

7) Write your name on the Skew-T (preferably on the name label on the reverse side).

Q1: If a parcel of air at 600 mb were forced to rise, at would level would the LCL be? Show your parcel path on the Skew-T.

Q2: In what layer(s) (pressure levels) does the temperature actually rise with height? This is called a **temperature inversion**. Remember that the temperature lines are skewed!

Q3: In what pressure *layer* is the temperature above freezing?

PEACHTREE CITY, GA (KFFC) – 1200000129

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KATL 291153Z COR 08017G26KT 10SM -FZRA OVC020 M01/M02 A3037 RMK AO2 PW08026/1113 FZRAE14B53 SLP293 P0000 60001 70003 T100111022

10006 21011 55005=

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TTAA 79121 72215 99997 01110 12004 00223 ///// ///// 92842 01000

///// 85530 04200 18030 70091 03904 22024 50566 21757 24538 40727

33759 26545 30921 48962 26554 25040 51766 27074 20185 48975 27073

15373 54376 26566 10626 65573 25540 88276 52162 27062 77194 27075

40516 51515 10164 00003 10194 ///// 20525=

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TTBB 79120 72215 00997 01110 11946 04100 22922 01800 33899 04400

44821 03600 55680 05321 66653 07901 77636 09330 88623 09560 99606

10360 11562 14370 22557 14762 33530 18157 44515 19760 55483 24148

66444 27767 77418 31165 88337 44928 99325 45957 11300 48962 22276

52162 33195 47776 44175 49577 55100 65573 31313 45202 81110 41414

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PPBB 79120 72215 90046 12004 17033 19526 90789 20024 21025 22024

91246 22527 24029 25033 919// 24037 92025 25034 26536 26042 927//

26045 93045 26553 27074 27570 9437/ 26072 26554 9502/ 25541 25039=

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