Atm 401-501

Homework #3

Purpose: Analyze the Presidents' Day II Storm of 16–17 Feb 2003. Compare and contrast the relevant dynamics and thermodynamics that governed this storm with the Presidents' Day I storm of 19 Feb 1979 from HW #2.

Why: Very different storms. Aside from Rich Grumm, the 2003 storm has not been studied

Objective: Write an overview paper with a **maximum** of 1000 words (~3 double-spaced pages)

Organization: Work as teams (undergrads as one team, grads as another team)

Materials: Online maps, loops, references, and web links (see below) on the class home page

How: Employ synoptic-dynamic "horse sense." Improvise. Reference/include relevant figures

When: Submit your overview papers on or before Thursday 7 March 2019

Questions:

- 1. How did the large-scale NH circulation evolution impact the Presidents' Day II storm?
- 2. What dynamical and thermodynamical processes drove the Presidents' Day II storm?
- 3. How does the Presidents' Day II storm differ from the Presidents' Day I storm?
- 4. How does the Presidents' Day II storm compare to classic East Coast winter storms?
- 5. How (and why) did the predictability horizons differ between these two storms?
- 6. How (and why) did the large-scale flow patterns differ after these two storms?

Additional Materials:

• <u>Southern Stream Storm 11-17 February 2003: Presidents Day Weekend Snow</u> <u>Storm</u>: **Richard Grumm**

• <u>NH mean and anomaly maps before and after the Presidents' Day II storm of 16–17</u> <u>Feb 2003</u>: **NOAA/ESRL**

• Presidents' Day Storm II February 2003 Severe Weather Maps: Alicia Bentley Tropical Transition Maps: Alicia Bentley Standardized Anomaly Maps: Alicia Bentley