ADVANCED SYNOPTIC METEOROLOGY

METR 5413

Spring 2020

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Problem Set #3, additional part

Handed out: Thursday, 20 Feb. 2020

Due: Thursday, 27 Feb. 2020

4. The solid lines below are contours of constant height labeled in dam. Assume that the latitude at A is 41°N. Calculate the geostrophic advection of geostrophic vorticity at point A in the figure shown below. The distance between the 534 and 540 dam contours is 300 km; the distance between the 540 and 546 dam contours is 150 km. (I know, the lines aren’t exactly parallel, but I’m not an Adobe Illustrator artist!) Be sure your units are correct.



5. Repeat Problem 4, but for the geostrophic advection of Earth’s vorticity.