

Unit 12

1. All students: Use the thermal wind relationship to explain why tropical cyclones have typically anticyclonic rotation above 300 hPa or so.
2. Undergraduate students: A hurricane makes landfall in Florida. It has a horizontal pressure gradient of 2 hPa/km at 50 km distance from the storm's center. Determine the gradient wind.
3. Graduate students: Use the momentum conservation equation to show why the eyewall is trumpet-shaped.