The Arctic Polar Vortex

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What Is the Arctic Polar Vortex?

A polar vortex refers to a center of low pressure that swirls about 10 to 30 miles above the surface of the Earth.

The Arctic polar vortex is over the North Pole. Inside the vortex is extremely cold air.

Why the Arctic Polar Vortex Matters

1. It contains the coldest air in the northern hemisphere
2. Changes in its strength and position can disrupt regional weather patterns
3. It is often responsible for Wisconsin's most extreme winter cold

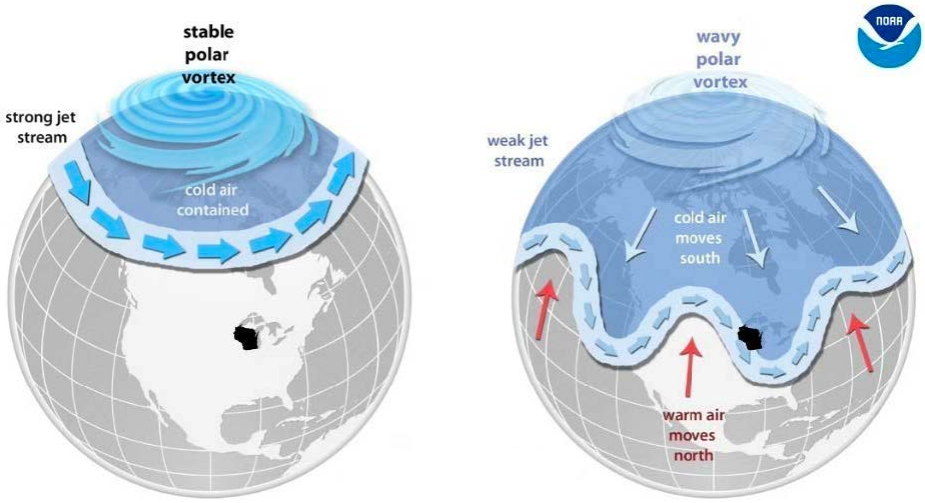

Figure 1: Visualization of the impacts of a strong (left) and weak (right) Arctic polar vortex on the northern hemisphere.

When the Vortex Weakens

When the polar vortex is strong and stable, Arctic air typically remains north of Wisconsin.

Sometimes temperatures high above the atmosphere warm up suddenly, causing the vortex to weaken. The vortex slows down and often shifts away from the North Pole.

When this happens, frigid air can slip southward into Wisconsin.

In January 2019, a blast of Arctic air brought temperatures of 30 below zero to the state!

How Does the Polar Vortex Impact You?

Frigid air from the Arctic polar vortex can cause frostbite and hypothermia that can turn deadly. Dress for the weather and don't underestimate how quickly the cold can become dangerous.

Learn more at: **go.wisc.edu/polar-vortex**

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