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Feeling That Cold Wind? Here's Why.

By **KENNETH CHANG**

A bitter wind has been blowing over parts of North America, Europe and Asia. Some places have been colder than ever, like Melbourne, Fla., which dipped to 28 degrees last Thursday, a record low. Europe has been walloped by snowstorm after snowstorm.

What's going on? Global cooling?

Nope. A mass of high pressure is sitting over Greenland like a rock in a river, deflecting the cold air of the jet stream farther to the south than usual.

This situation is caused by Arctic oscillation, in which opposing atmospheric pressure patterns at the top of the planet occasionally shift back and forth, affecting weather across much of the Northern Hemisphere.

What's notable this year is that the pattern of high pressure over the Arctic is more pronounced than at any time since 1950.

In most years over the past few decades, the opposite has been true: there has been lower-than-average pressure over the Arctic, and higher-than-average pressure over the mid-latitudes — the middle of which cuts through Maine, across the Great Lakes and on to Oregon.

That pattern allows the jet stream to blow unimpeded from west to east and keeps the cold Arctic air largely north of the United States. The result tends to be warmer temperatures across much of the United States east of the Rocky Mountains.

No one is quite sure what drives these flip-flops in air pressure.

"I tend to think of it as a random thing," said John M. Wallace, who is a professor of atmospheric sciences at the [University of Washington](#). "I don't think we understand any reasons why it goes one way one year and the other way another year."

What does seem clear is that these oscillations have nothing to do with [global warming](#), or, for that matter, global cooling. For one, they're not new. And this winter's cold has not been global.

Santa, by North Pole standards, has been experiencing a balmy winter.

“Pretty much all of the Arctic is above normal,” said Dr. Walter Meier of the National Snow and Ice Data Center in Boulder, Colo. In some areas, the temperatures are as much as 15 degrees Fahrenheit above normal.

In terms of global average temperature, this winter's arctic oscillation “probably roughly cancels out,” Dr. Meier said. (In fact, last year ranked as the fifth-warmest year on record since 1850, the United Kingdom's Met Office says.)

And it is certainly not the coldest air that has descended on the United States. In a great blizzard that swept across the East Coast in 1899, even parts of Florida dropped to below zero.

“We're not close to those types of things,” said Michael Vojtesak of the [National Weather Service](#).

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