

## ANTARCTIC IN THE NEWS – THE REAL STORY

By Joseph D'Aleo, CCM

As seems to always be the case, the news media have completely misled the public once again regarding climate related issues this time by alleging claims of 4 meter high future sea level rise increases supposedly addressed in two recent studies which performed analysis of glacier melt behavior of six large glaciers in West Antarctica.

Scientists who believe in global warming have long been perplexed why Antarctica was not experience the melting the arctic has experienced (one that repeats in 60 year cycles). So they have been searching for the holy grail with a heavy dose of confirmation bias.

One study was published in Geophysical Research Letters (GRL) and titled “*Sustained increase in ice discharge from the Amundsen Sea Embayment, West Antarctica, from 1973 to 2013*”. This study is available here:

<http://www.ess.uci.edu/researchgrp/erignot/files/grl51433.pdf>

The second study was published in Science and titled “*Marine Ice Sheet Collapse Potentially Under Way for the Thwaites Glacier Basin, West Antarctica*”.

This study is available here:

<http://sciences.blogs.liberation.fr/files/glacier-thwaites.pdf>

Both studies evaluate the relatively recent melt rate history of these glaciers with one focusing on the use observed satellite data to estimate melt rate behavior while the other uses computer models to estimate melt rate behavior.

Amazingly enough and considering how the press manufactured headlines about sea level rise increases being determined from these studies neither of the studies addresses or make any claims about the impact of their research results on specific future sea level rise projections.

In fact GLC study mentions nothing specific about future sea level rise projections while the Science study clearly notes that their research models “are not coupled to a global climate model to provide forcing nor do they include an ice-shelf cavity-circulation model to derive melt rates. Few if any such fully coupled models presently exist (13). As such, our simulations do not constitute a projection of future sea level in response to projected climate forcing.”

Also unreported by the same climate alarmist propaganda focused media were the significant qualifications, limitations and cautions noted in these studies concerning their glacier melt research findings.

The GRL published study noted for example the following qualifiers regarding its analysis:

*“These observations are a possible sign of the progressive collapse of this sector in response to the high melting of its buttressing ice shelves by the ocean.”*

*“Until numerical ice sheet models coupled with realistic oceanic forcing are able to replicate these observations, projections of the evolution of this sector of West Antarctica should be interpreted with caution.”*

The Science published study contained the following similarly related qualifiers regarding its analysis:

*“Although our simple melt parameterization suggests that a full-scale collapse of this sector may be inevitable, it leaves large uncertainty in the timing. Thus, ice-sheet models fully coupled to ocean/climate models are required to reduce the uncertainty in the chronology of a collapse.”*

New York Times article by Justin Gillis On May 12, 2014 similarly has taken as gospel these new carefully choreographed releases.

*“The collapse of large parts of the ice sheet in West Antarctica appears to have begun and is almost certainly unstoppable, with global warming accelerating the pace of the disintegration, two groups of scientists reported Monday.*

*The finding, which had been feared by some scientists for decades, means that a rise in global sea level of at least 10 feet may now be inevitable. The rise may continue to be relatively slow for at least the next century or so, the scientists said, but sometime after that it will probably speed up so sharply as to become a crisis.*

The Pollard and Rignot quotes in the NYT article say: *Over all, the loss of the West Antarctic ice from warming is appearing “more likely a definite thing to worry about on a thousand-year time scale but not a hundred years,” Dr. Pollard said.... [Rignot] said. “It happened many times before when the Earth was as warm as it is about to be.*

Note the words “more likely a definite thing” and “as warm as it is about to be.” So this is all speculation.

Little attention was given to these another recent story:

National Geographic – 10 December 2013

New Record for Coldest Place on Earth, in Antarctica

Scientists measure lowest temperature on Earth via satellites.

Using new satellite data, scientists have measured the most frigid temperature ever recorded on the continent's eastern highlands: about -136°F (-93°C)—colder than dry ice.....

<http://news.nationalgeographic.com/news/2013/12/131210-coldest-place-on-earth-antarctica-science/>

Nor these papers:

**Abstract – 7 JUN 2013**

Recent snowfall anomalies in Dronning Maud Land, East Antarctica, in a historical and future climate perspective

Enhanced snowfall on the East Antarctic ice sheet is projected to significantly mitigate 21st century global sea level rise. In recent years (2009 and 2011), regionally extreme snowfall anomalies in Dronning Maud Land, in the Atlantic sector of East Antarctica, have been observed. It has been unclear, however, whether these anomalies can be ascribed to natural decadal variability, or whether they could signal the beginning of a long-term increase of snowfall. Here we use output of a regional atmospheric climate model, evaluated with available firn core records and gravimetry observations, and show that such episodes had not been seen previously in the satellite climate data era (1979). Comparisons with historical data that originate from firn cores, one with records extending back to the 18th century, confirm that accumulation anomalies of this scale have not occurred in the past ~60 years, although comparable anomalies are found further back in time. We examined several regional climate model projections, describing various warming scenarios into the 21st century. Anomalies with magnitudes similar to the recently observed ones were not present in the model output for the current climate, but were found increasingly probable toward the end of the 21st century.

<http://onlinelibrary.wiley.com/doi/10.1002/grl.50559/abstract>

**Abstract – 2 NOV 2012**

An improved understanding of processes dominating the sensitive balance between mass loss primarily due to glacial discharge and mass gain through precipitation is essential for determining the future behavior of the Antarctic ice sheet and its contribution to sea level rise. While satellite observations of Antarctica indicate that West Antarctica experiences dramatic mass loss along the Antarctic Peninsula and Pine Island Glacier, East Antarctica has remained comparably stable. In this study, we describe the causes and magnitude of recent extreme precipitation events along the East Antarctic coast that led to significant regional mass accumulations that partially compensate for some of the recent global ice mass losses that contribute to global sea level rise. The gain of almost 350 Gt from 2009 to 2011 is equivalent to a decrease in global mean sea level at a rate of 0.32 mm/yr over this three-year period.

<http://onlinelibrary.wiley.com/doi/10.1029/2012GL053316/abstract>

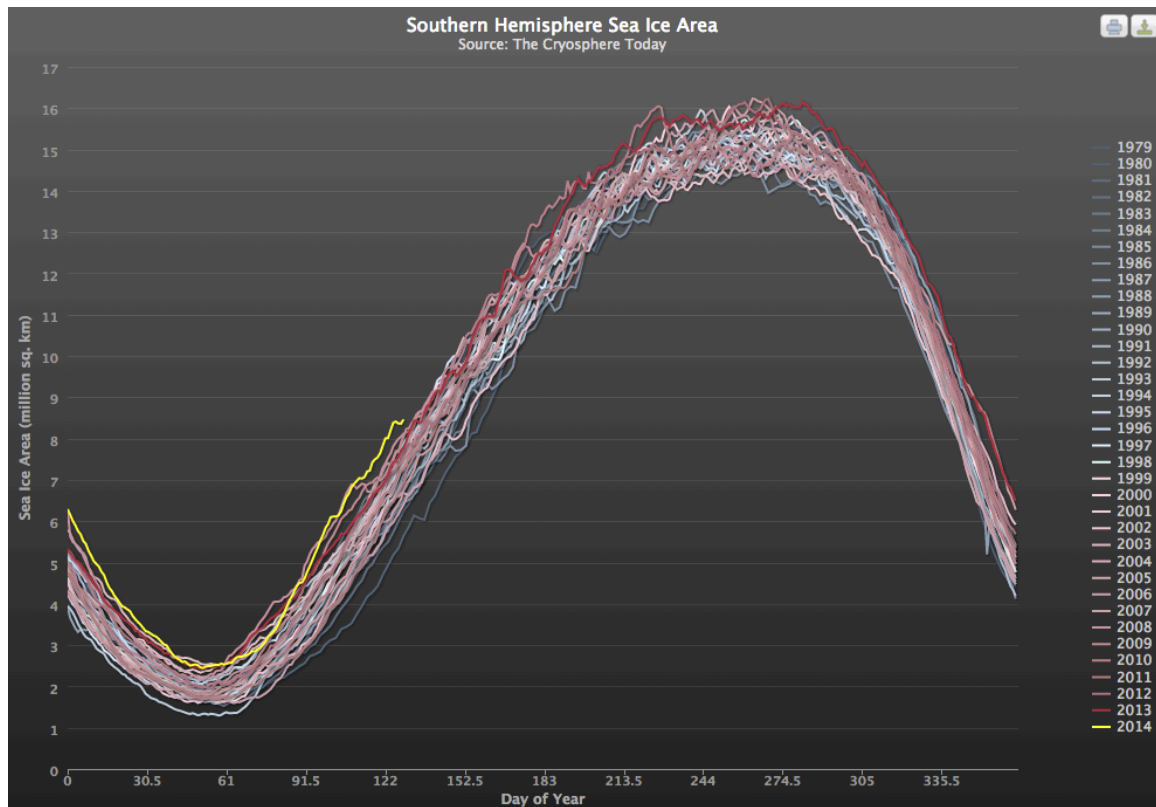
Also in the last decade of the nineteenth century, between 1892 and 1897, there occurred an enormous outburst of ice from the Antarctic, which filled the Southern Ocean with ice floes and icebergs to such an extent that traffic between South America, Africa, and Australia had to seek a more northerly track. This outburst had far-reaching climatic repercussions. The monsoon regimen of the Indian Ocean was profoundly disturbed.....In 1899 – 1900 upwards of 6,500,000 people were on famine relief for several months. The loss of cattle was great, running into many millions.....

<http://www.jstor.org/discover/10.2307/208079?uid=2&uid=4&sid=21103345664011>

But the biggest sin is ignoring the data

### WHAT'S REALLY HAPPENING

Antarctic sea ice has expanded to record levels for April, increasing by more than 110,000 square kilometers a day last month to nine million square kilometers.

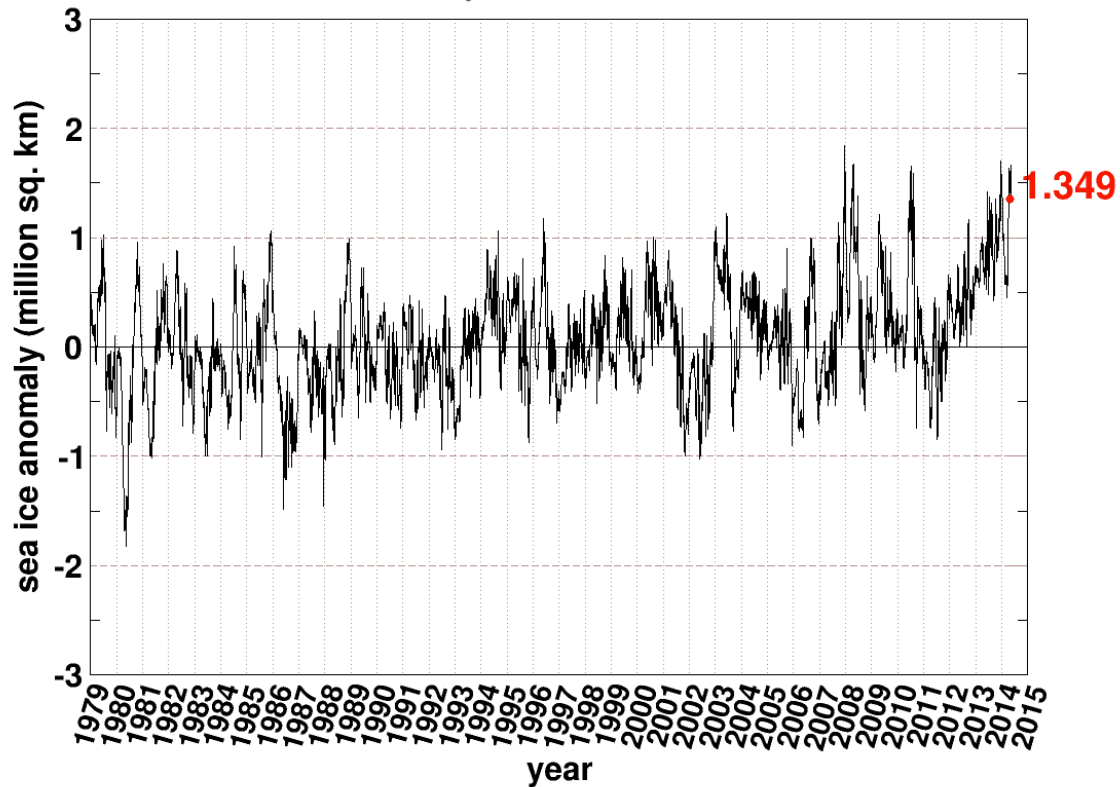


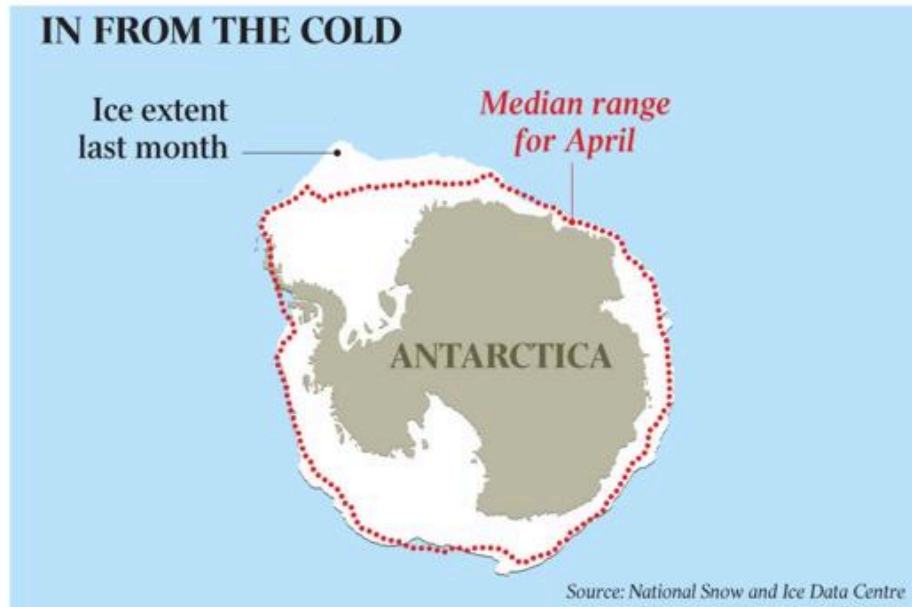
The National Snow and Ice Data Centre said the rapid expansion had continued into May and the seasonal cover was now bigger than the record “by a significant margin” “This exceeds the past record for the satellite era by about 320,000 sq km, which was set in April 2008,” the Centre said.

The southern hemisphere sea ice flowing off of Antarctica has been increasing since 1979. The anomalies peaked in 2008, 2010 and 2013. This year could break that record. Satellites show the temperatures have been declining there since 1979.

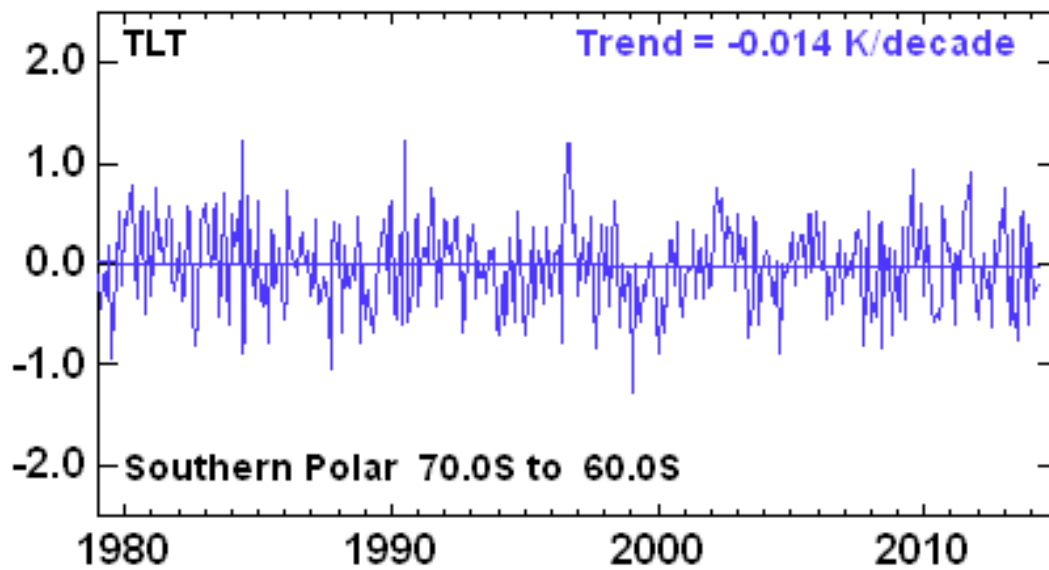
## Southern Hemisphere Sea Ice Anomaly

Anomaly from 1979-2008 mean



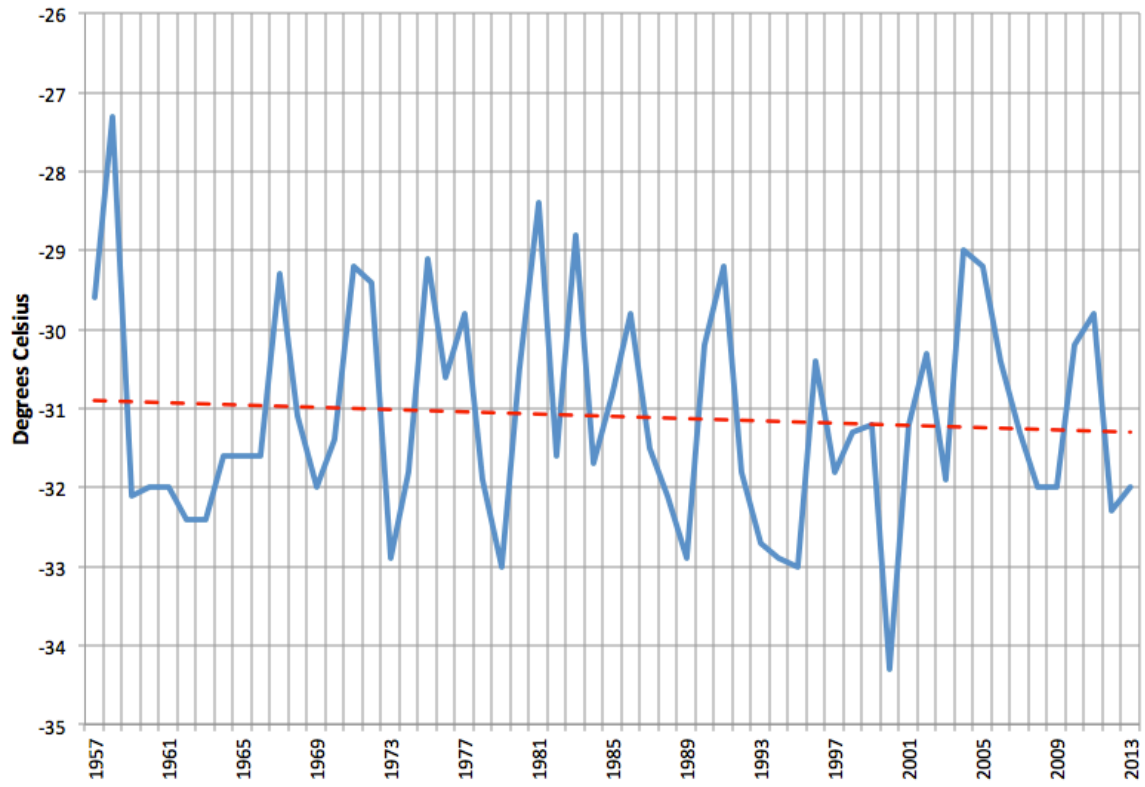


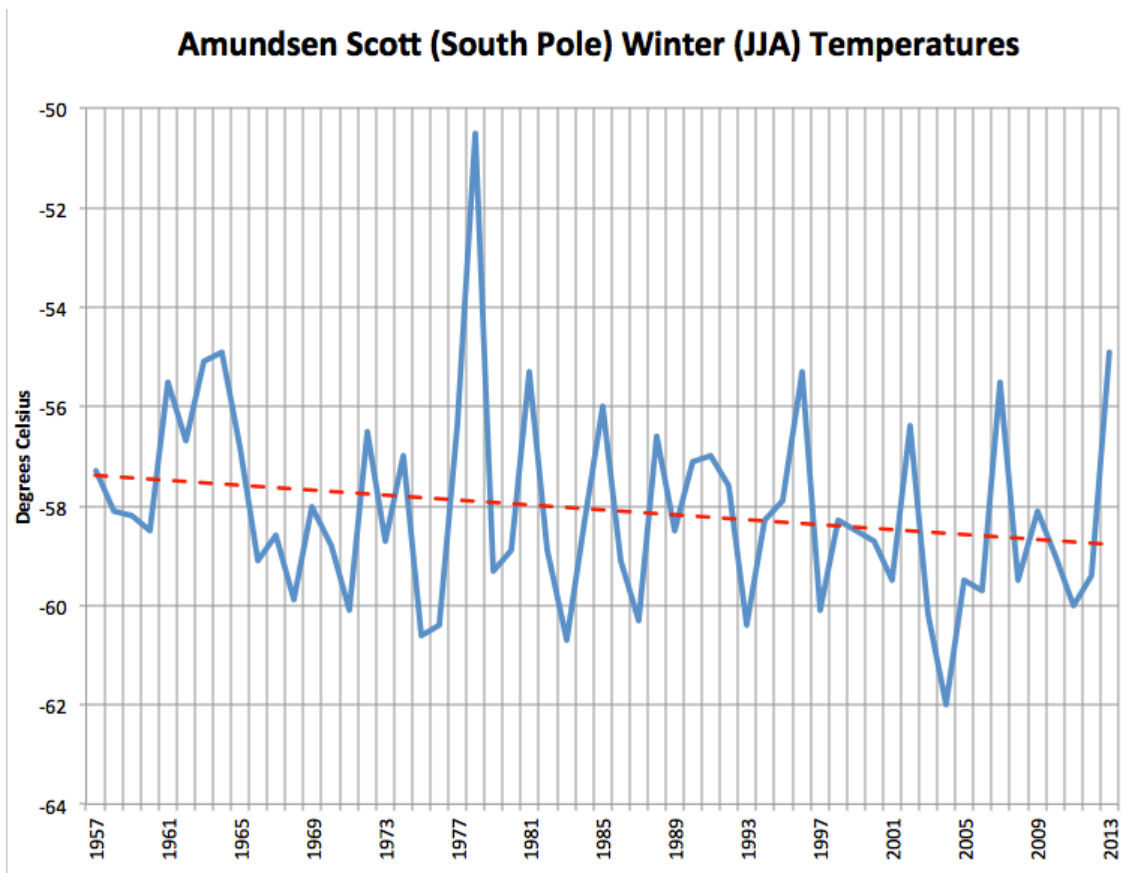
The data that looks into the southern polar region from satellite shows no warming (a very slight cooling) since 1979. They only look as far as 80S.



When we look at the South Pole plots from NASA GISS for summer and winter we find cooling too. The coldest winter was 2004, summer 2000.

### Amundsen Scott (South Pole) Summer (DJF) Temperatures





Also note sea level rises have slowed almost 50% since the early 1900s (now about 4 inches down from 7 inches).

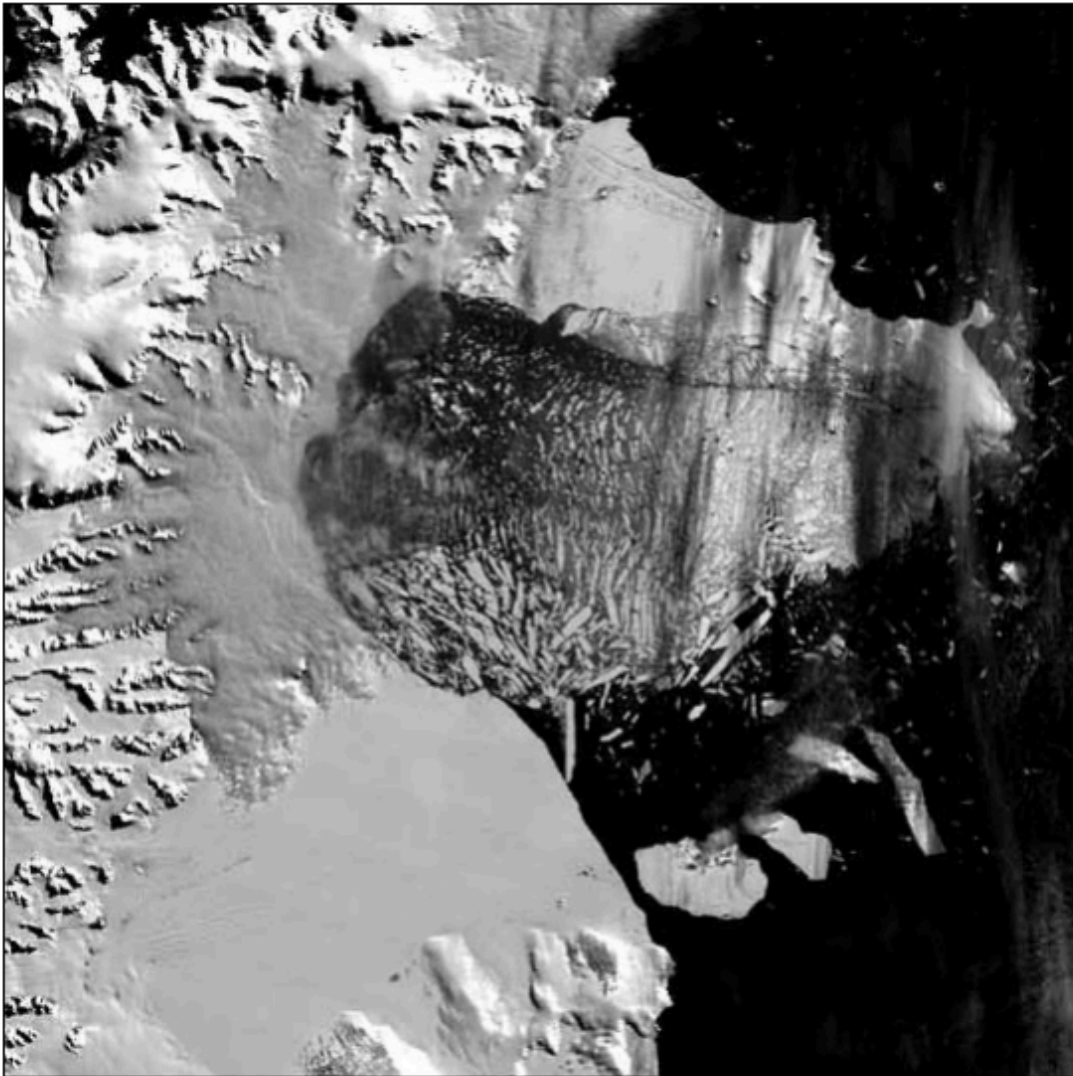
Antarctic ice has been increasing since 1979. As the growing glaciers spill out off the land into the sea, they melt in summer. And by the way floating ice, doesn't raise sea level when it melts, any more than ice cubes in a drink don't cause the glass to overflow when the ice melts.

Huybrechts (2009) states that "the amount of nearby ocean warming required to generate enough sub-ice-shelf melting to initiate a significant retreat of the West Antarctic ice sheet ...may well take several centuries to develop." And once started, he says that the transition time for a total collapse of the West Antarctic ice sheet would range from "one thousand to several thousand years," which time period, in his words, "is nowhere near the century timescales for West Antarctic ice-sheet decay based on simple marine ice-sheet models," such as have been employed in the past. Huybrechts, P. 2009. West-side story of Antarctic ice. *Nature* 458: 295-296.

THE 2001/02 SCARE



The story they forgot back in 2001/02, the world's attention was called to the break up of the Ross Ice Sheet. The media said that was the end of that sheet and the start of major Antarctic ice melt.



That break up was due to strong ultraviolet radiation, which caused warming of the high atmosphere through ozone chemistry in low and middle latitudes with dynamical and radiative coupling down into the troposphere. This caused a shrinking of the polar vortices in both hemispheres and a temporary break up of the southern polar vortex into two centers for a time. Changes in the circulation likely resulted in the break up of the ice, but it quickly returned.

