

Huge Antarctic ice shelf to break loose

- [Search Yahoo!7 News](#)

April 4, 2009, 6:24 am

A Jamaica-sized ice shelf is close to wrenching itself away from Antarctica, following dramatic weakening of an ice "bridge" linking it to the continent, the European Space Agency (ESA) reports.

The icy umbilical cord tying the Wilkins Ice Shelf to two islands on the Antarctic peninsula "looks set to collapse", ESA says.

The evidence comes from radar pictures taken on Thursday by its Envisat Earth-monitoring satellite, the Paris-based agency said in a press release on Friday.

Scientists have been keeping a worried eye on this ice shelf for years.

For many, it is a barometer of global warming, which has hit the Antarctic peninsula harder than almost any region on Earth.

The Wilkins Ice Shelf was stable for most of the last century, covering about 16,000 sq km before it began to retreat in the 1990s.

By last May, an ice bridge, about 2.7 km wide on average and just 900 metres at its narrowest point, was all that connected it to Charcot and Latady islands.

Over the past year, the ice shelf has lost about 1,800 sq km, or about 14 per cent of its size, in further breakup events, ESA said.

New pictures show "the beginning of what appears to be the demise of the ice bridge" itself.

This week, rifts formed along the central axis of the bridge and a large chunk of ice broke away. The stress patterns are now expanding rapidly, pointing to a likely imminent collapse of the link.

Ice shelves are ledges of thick ice that float on the sea and are attached to the land. They are formed when ice is exuded from ice sheet on land.

In the past 20 years, Antarctica has lost seven shelves.

The process is marked by shrinkage and the breakaway of increasingly bigger chunks before the remainder of the shelf snaps away from the coast.

It then disintegrates into debris or into icebergs that eventually melt as they drift northwards.

Scientists are especially puzzled that the Wilkins has suffered big breakups during the southern hemisphere's winter, when atmospheric temperatures are at their lowest.

One theory is that relatively warm currents from the Southern Ocean are scouring the underside of the shelf, thinning it rapidly from underneath.

In the past 50 years, the peninsula - the tongue of Antarctica that juts up towards South America - has experienced warming of 2.5 degrees celsius, which is many times higher than the global average.

In the early 1990s, many experts predicted that it would take 30 years for a shelf as vast as the Wilkins to be lost.

Antarctica is the world's biggest store of freshwater. Its ice, located on land in two vast slabs and on the peninsula, holds enough water to raise global sea levels by 57 metres.

The Antarctic ice shelves do not add to sea levels when they melt. Like the Arctic ice cap, they float on the sea and thus displace their own volume.

- [Email](#)
- [Print](#)
- Share:

- [Del.icio.us](#)
- [Facebook](#)
- [Digg](#)
- [Yahoo!7 News Via](#)