Currents consistent with Reunion debris being from MH370, say experts
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Vast, rotating currents sweeping the southern Indian Ocean could have deposited wreckage from a missing Malaysia Airlines passenger jet near Africa, thousands of kilometres from where it is thought to have crashed, oceanographers said today.

French authorities are studying a piece of plane debris found on Reunion Island, off the east coast of Madagascar, to determine whether it came from Flight MH370, which disappeared without a trace 16 months ago with 239 passengers and crew on board.

If confirmed to be part of the missing Boeing 777, experts will try to model its drift to retrace where the debris could have come from, although they cautioned it was unlikely to help in narrowing down the plane's final resting place beyond the vast swathe of ocean off Australia that has been the focus of the search for months.

"This wreckage has been in the water, if it is MH370, for well over a year so it could have moved so far that its not going to be that helpful in pinpointing precisely where the aircraft is," Australian Deputy Prime Minister Warren Truss told reporters. "It certainly would suggest the search area is roughly in the right place."

Australia has been leading a search for the plane since analysis of a series of faint satellite "pings" from the aircraft led investigators to conclude that it crashed in the stormy southern Indian Ocean about 2,000km southwest of Perth.

Models of ocean currents were consistent with the potential discovery of debris in the tropics, roughly 3,700km to the northwest, oceanographic experts said.

A huge, counter-clockwise current, called a gyre, covers much of the southern part of the 70.5 million sq km Indian Ocean, running east along the Southern Ocean near Antarctica, up the west Australian coast and westward below the equator towards Reunion and Madagascar, before turning south.

"Our model results that we did last year predicted that within 18-24 months after the crash, it was a possibility that it would have ended up within that region," said Charitha Pattiaratchi, Professor of Coastal Oceanography at the University of Western Australia.

The point of origin "will definitely be in the Southern Hemisphere, it would be to the east, it would cover definitely the area of the physical search at the moment", he added.

That physical search, now halfway to being completed, covers 120,000 sq km of sea bed.

Pattiaratchi's modelling shows debris could also drift also as far east as Tasmania or

beyond.

Erik van Sebille, an oceanographer at Imperial College London, said that, if the debris on Reunion was indeed from MH370, his modelling suggested the aircraft went down in the north of the search zone.

"This westward drift from near Australia all the way across the Indian Ocean can really only happen if the plane went into the water relatively close to the equator," he said.

Finding more debris would help triangulate where MH370 may have hit the water, he added.

Dave Gallo, who co-led the search for Air France Flight 447 that crashed in the Atlantic Ocean in 2009, warned that retracing the debris' drift through sea-current models could lead investigators astray. "Retro-drifting" from wreckage found just five days after the Air France crash led to no breakthrough, he said.

"We spent two months in that area and found absolutely nothing. That brought mistrust from the industry," said Gallo, director of special projects at the Woods Hole Oceanographic Institution. "Looking at something that is 500 days old is going to be tough."

France's BEA crash investigation agency raised questions in 2012 over the reliability of such "reverse drift" calculations after conducting tests during the search for AF447.

It had asked the French Navy to drop nine buoys at a single spot in the Atlantic, only to find they scattered hundreds of miles apart, highlighting the "great difficulty" of predicting drift. Experts say such divergences can increase over time.

Still, further clues might yet come from the debris. Experts can age the barnacles that attach themselves to flotsam, which would give an idea of how long it had been in the water. They may even be able to tell which part of the ocean it has come from by the species of barnacles attached.

"There's different barnacles in different parts of the ocean, so you might expect some CSI scenario where just by looking at the barnacles, you can pinpoint where it came from," van Sebille said. – Reuters, July 30, 2015.

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