

Newly Formed Fracture in Indian Ocean May Trigger Quakes in Future (Download PDF)

(March 17, 2017)

Researchers have found a new fault in the Indian Ocean. A new plate boundary may be forming on the floor of the Indian Ocean as a result of the largest earthquake that shook the Andaman-Sumatra region in 2012. **Location of boundary is** on the floor of the Indian Ocean in the Wharton Basin.

 Indian Ocean Indian Ocean in the Wharton Basin affected area

Indian Ocean Indian Ocean in the Wharton Basin Affected Area

Highlights

- Researchers from the **Nanyang Technological University in Singapore** and the **Indonesian Institute of Sciences** found
- Found evidence of a possible new plate boundary forming on the floor of the Indian Ocean in the Wharton Basin.

Seismic data analysis

- Researchers studied seismic data that was recorded before in 2012.
- During and after the 2012 quakes and conducted sea floor depth analysis by venturing into the ocean aboard a research vessel.
- They created a high-resolution imagery of the sea floor, which unveiled deformations that had occurred.
- The analysis showed a new fault system had developed in the area off the coast of Sumatra that was involved in the 2012 quakes.
- The plate had broken along a 1, 000 km fracture zone, resulting in a new plate boundary.
- One that is likely to be the site of future fault-slip quakes.

Basics of Study

- **Slip-strike quake:** Occurs when two plates slide horizontally against one another
- **Cause:** By deformations that occur in plates distant from fault lines as pressure builds up across a plate
- **Effects:** They can lead to inter-plate earthquakes and cause a plate to break; resulting in a new boundary and this in turn can lead to even more quakes.

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