

Magnitude 7.0 SOUTHERN MID-ATLANTIC RIDGE

Wednesday, June 17, 2015 at 12:51:33 UTC

A major, magnitude 7.0 earthquake occurred in the Southern Atlantic Ocean. The earthquake was located about 2750 km (1709 mi) SE of Arraial do Cabo, Brazil. This shallow earthquake occurred on or near a transform fault forming part of the South American - African Plate boundary.

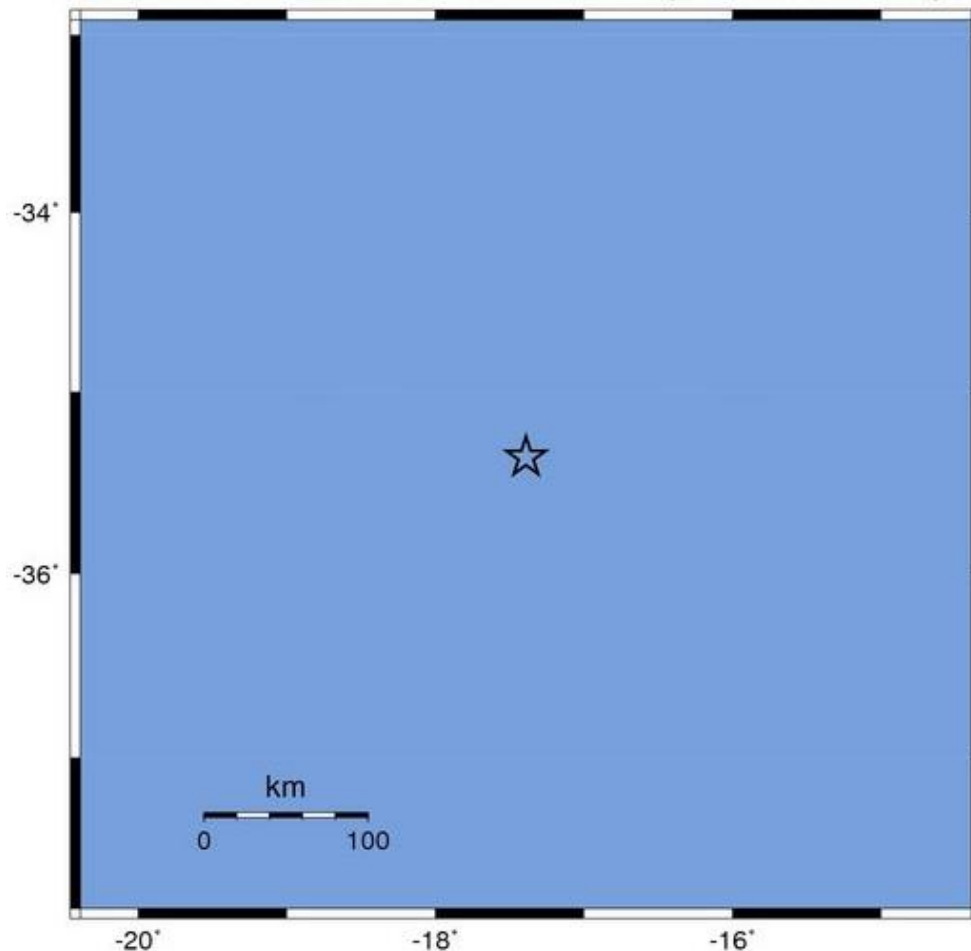


This earthquake occurred 494 km (307 mi) WNW of Edinburgh of the Seven Seas, the main settlement of the island of Tristan da Cunha, a British territory and one of the most remote inhabited places on earth.

The Modified-Mercalli Intensity scale is a twelve-stage scale, from I to XII, that indicates the severity of ground shaking.

Because of the remote location, no one was shaken by this earthquake.

Modified Mercalli Intensity	Perceived Shaking
X	Extreme
IX	Violent
VIII	Severe
VII	Very Strong
VI	Strong
V	Moderate
IV	Light
II-III	Weak
I	Not Felt



USGS Estimated shaking Intensity from M 7.0 Earthquake

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The Mid-Atlantic Ridge is a divergent tectonic plate boundary located along the floor of the Atlantic Ocean, and part of the longest mountain range in the world.

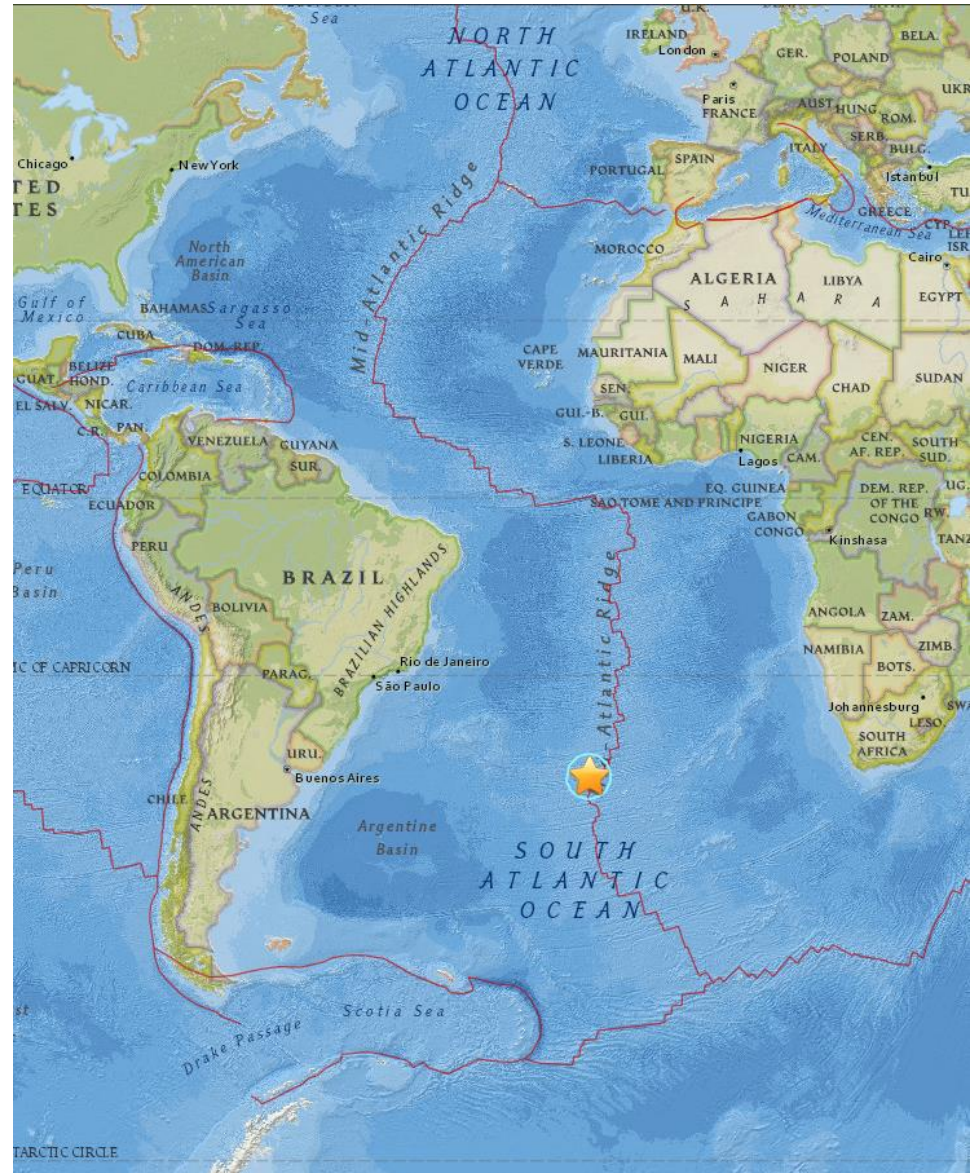
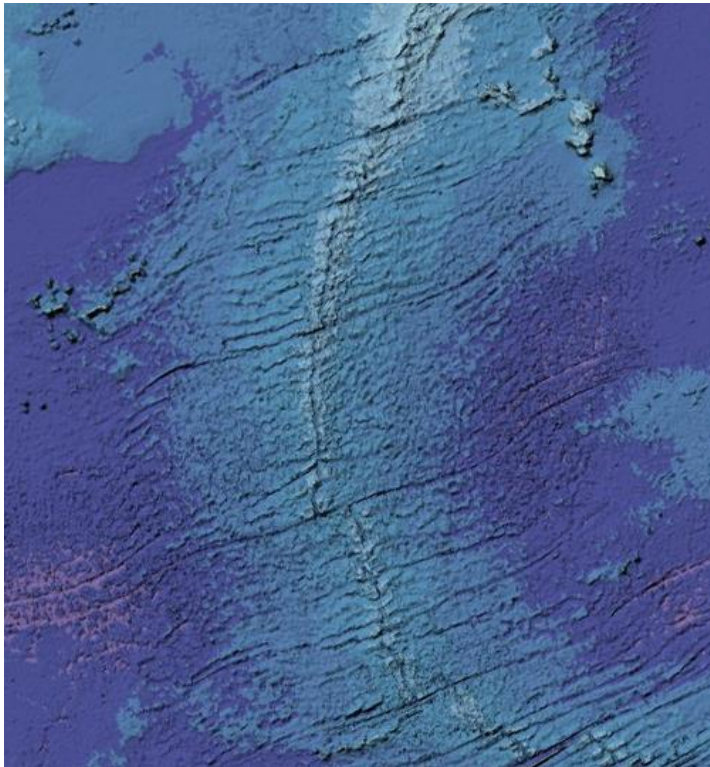
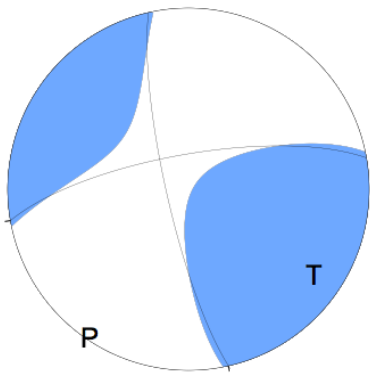
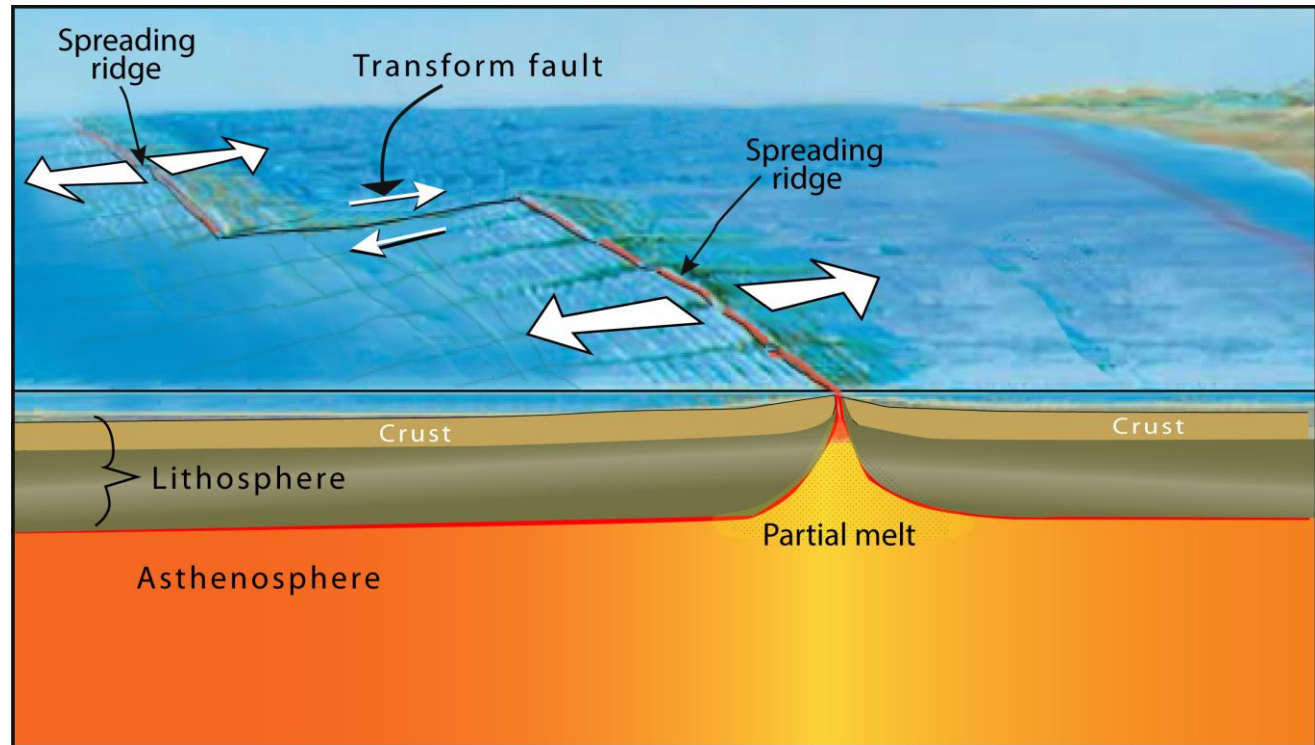


Image courtesy of the US Geological Survey

The Mid-Atlantic Ridge is a divergent plate boundary. This spreading ridge is offset by many transform faults.

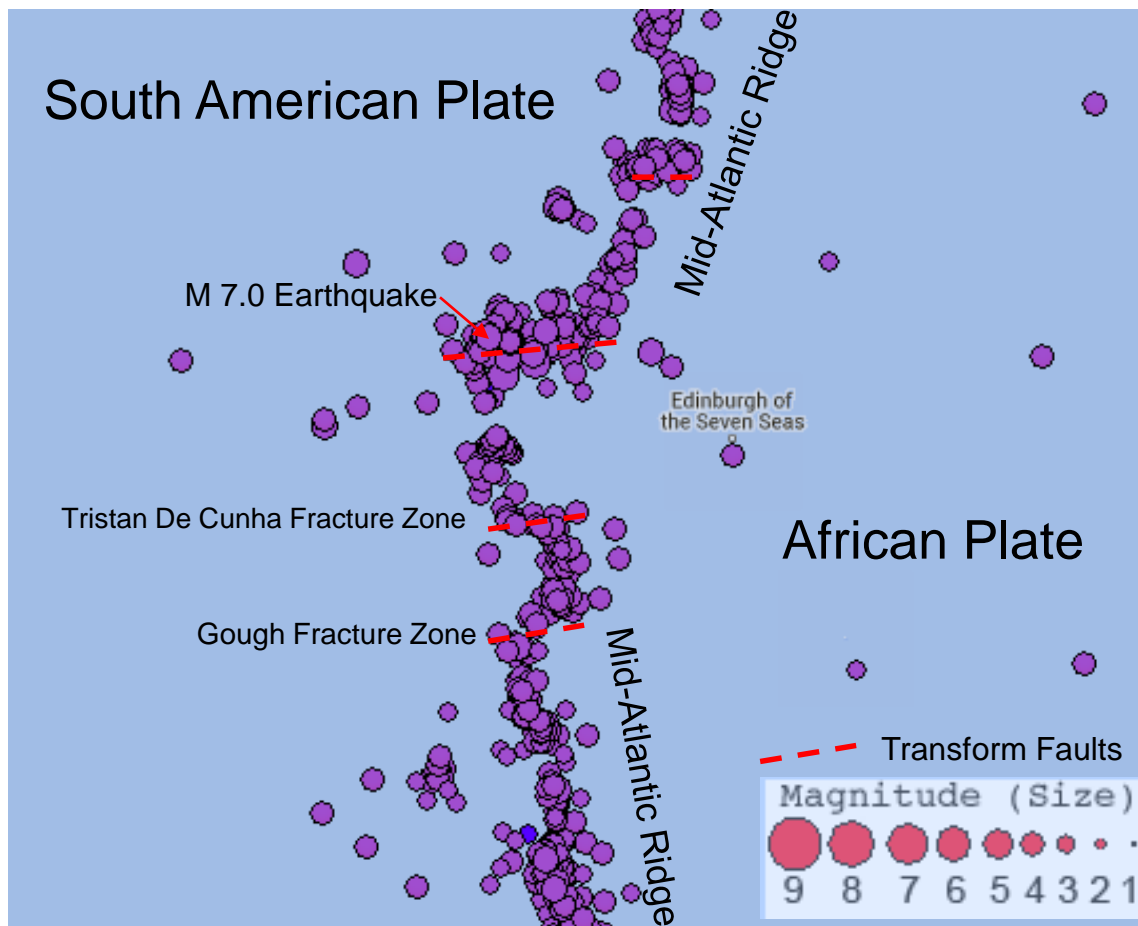


USGS Centroid Moment Tensor Solution

After an earthquake, focal mechanisms can be used to remotely determine type of fault motion that generated the seismic waves.

This focal mechanism is consistent with left-lateral strike-slip faulting on a near-vertical fault. Along with the epicenter location, this helps indicate this earthquake occurred as the result of left-lateral strike-slip faulting on a transform fault.

Regional historical seismicity outlines the Mid-Atlantic Ridge System in the South Atlantic Ocean that forms the plate boundary between the South American Plate and the African Plate.



This earthquake occurred on an unnamed transform fault that offsets the Mid-Atlantic Ridge.

At the latitude of this earthquake, the South American Plate moves approximately westward at a rate of 33 mm/yr with respect to the African Plate.

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