Magnitude 7.0 SOLOMON ISLANDS

Wednesday, November 18, 2015 at 18:31:04 UTC

A 7.0 magnitude earthquake struck offshore in the Solomon Islands. The earthquake occurred 178 km (111 mi) WNW of Honiara, Solomon Islands at a depth of 13.4 km (8.3 mi), according to the US Geological Survey.

No injuries or damage have been reported and no tsunami is expected.

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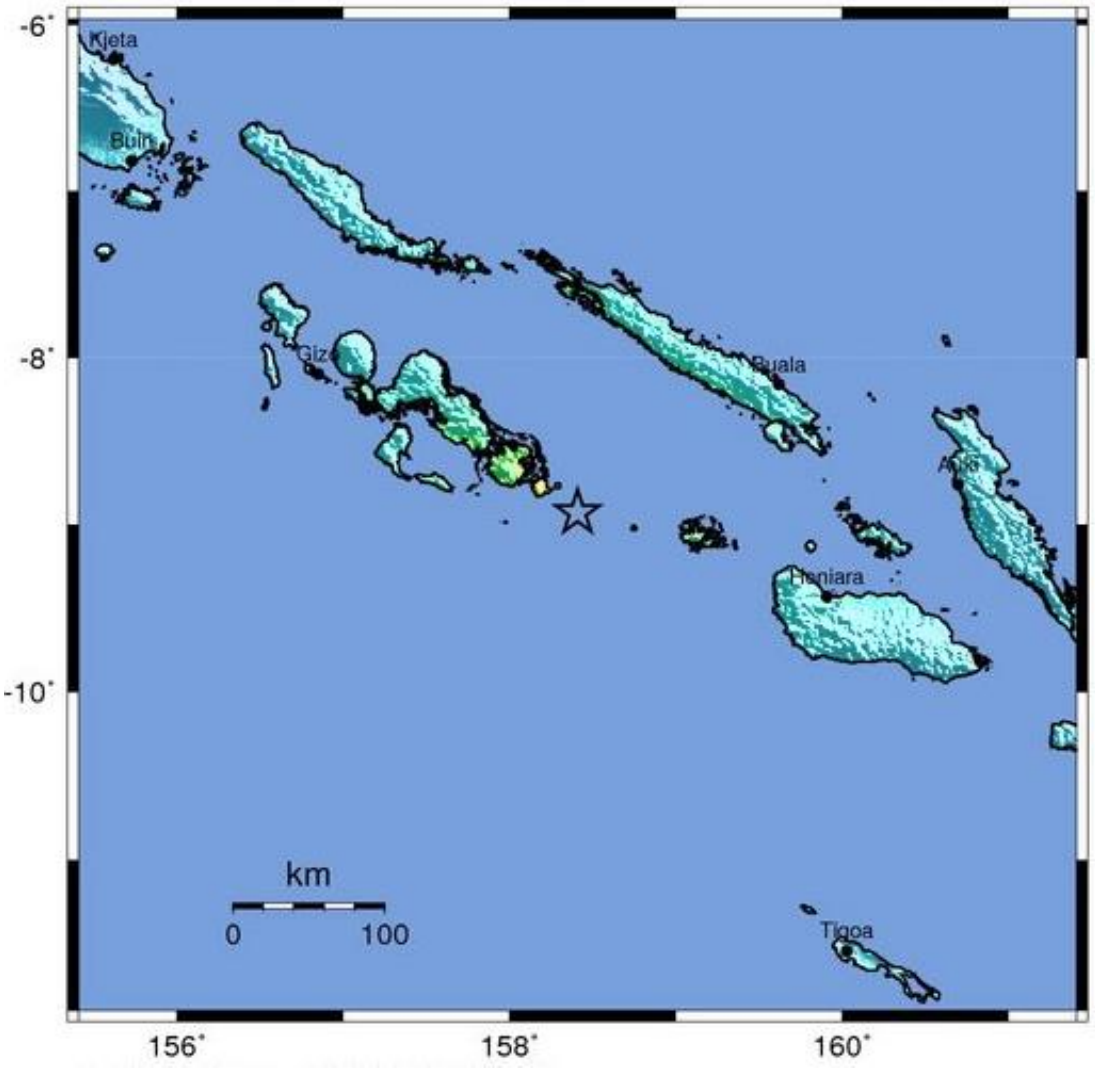
The islands experience light to moderate to strong shaking.

Overall, the population in this region resides in structures that are vulnerable to earthquake shaking, though some resistant structures exist.

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

Image courtesy of the US Geological Survey



USGS Estimated shaking Intensity from M 7.0 Earthquake

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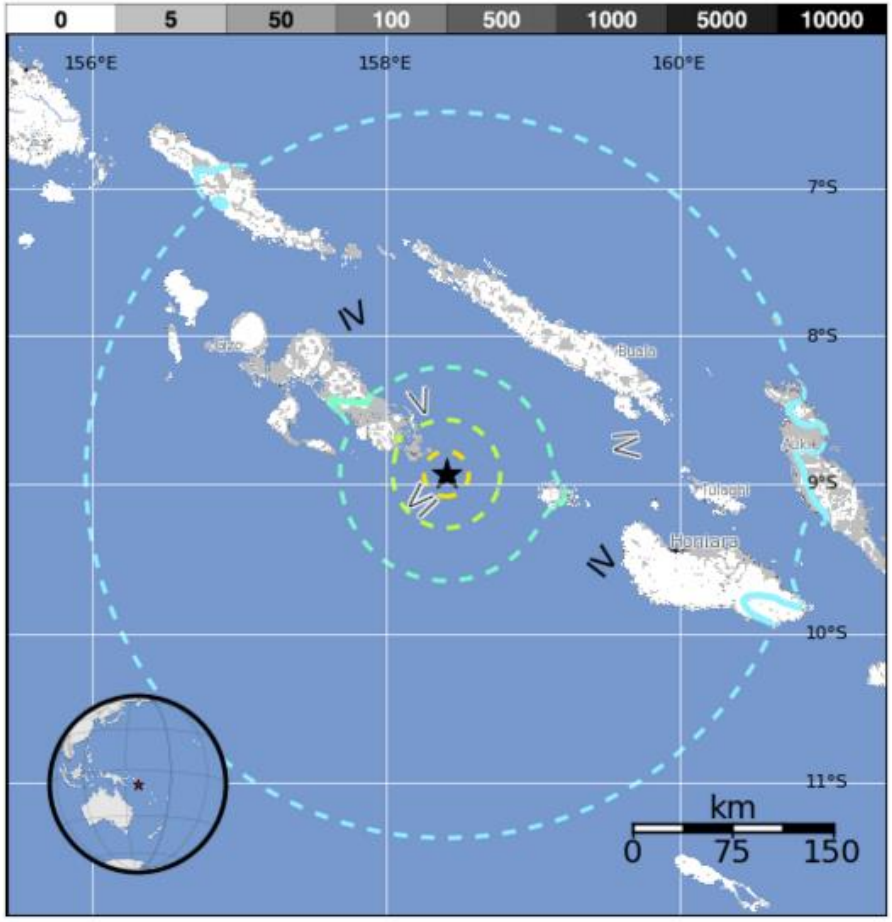
USGS PAGER
Population Exposed to Earthquake Shaking

The USGS PAGER map shows the population exposed to different Modified Mercalli Intensity (MMI) levels.

6,000 people experienced strong ground shaking and 30,000 experienced moderate ground shaking during this earthquake.



MMI	Shaking	Pop.
I	Not Felt	--*
II-III	Weak	153k*
IV	Light	427k
V	Moderate	30k
VI	Strong	6k

The color coded contour lines outline regions of MMI intensity. The total population exposure to a given MMI value is obtained by summing the population between the contour lines. The estimated population exposure to each MMI Intensity is shown in the table.

Image courtesy of the US Geological Survey

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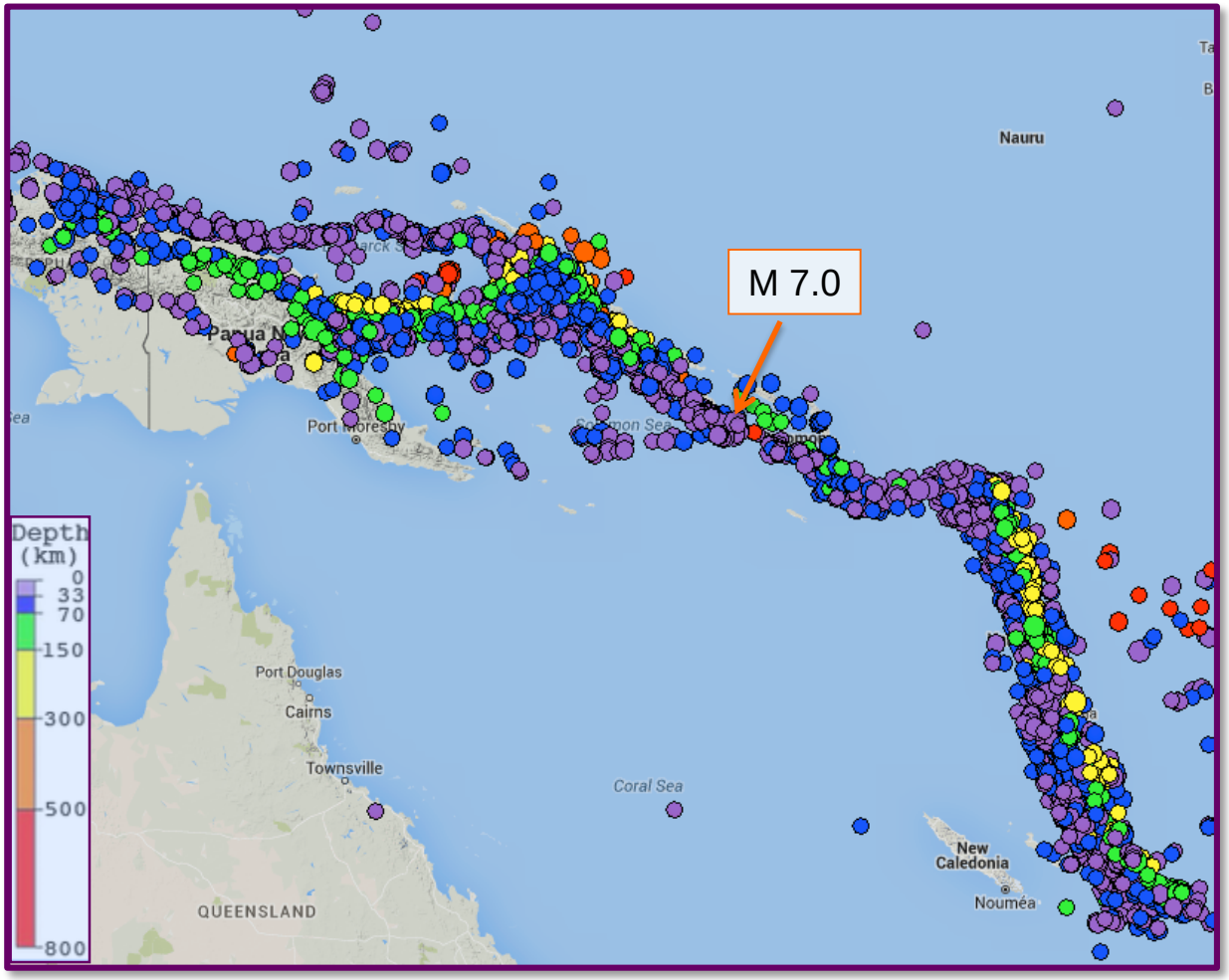
This map shows seismicity along the complex zone of plate convergence between the Australian and Pacific plates in the region between Papua New Guinea and New Caledonia.

Earthquakes are color-coded by depth. There have been 4189 earthquakes of magnitude 5.0 or greater in this region since January 1, 2000.



This figure was created using the IRIS Earthquake Browser (IEB).

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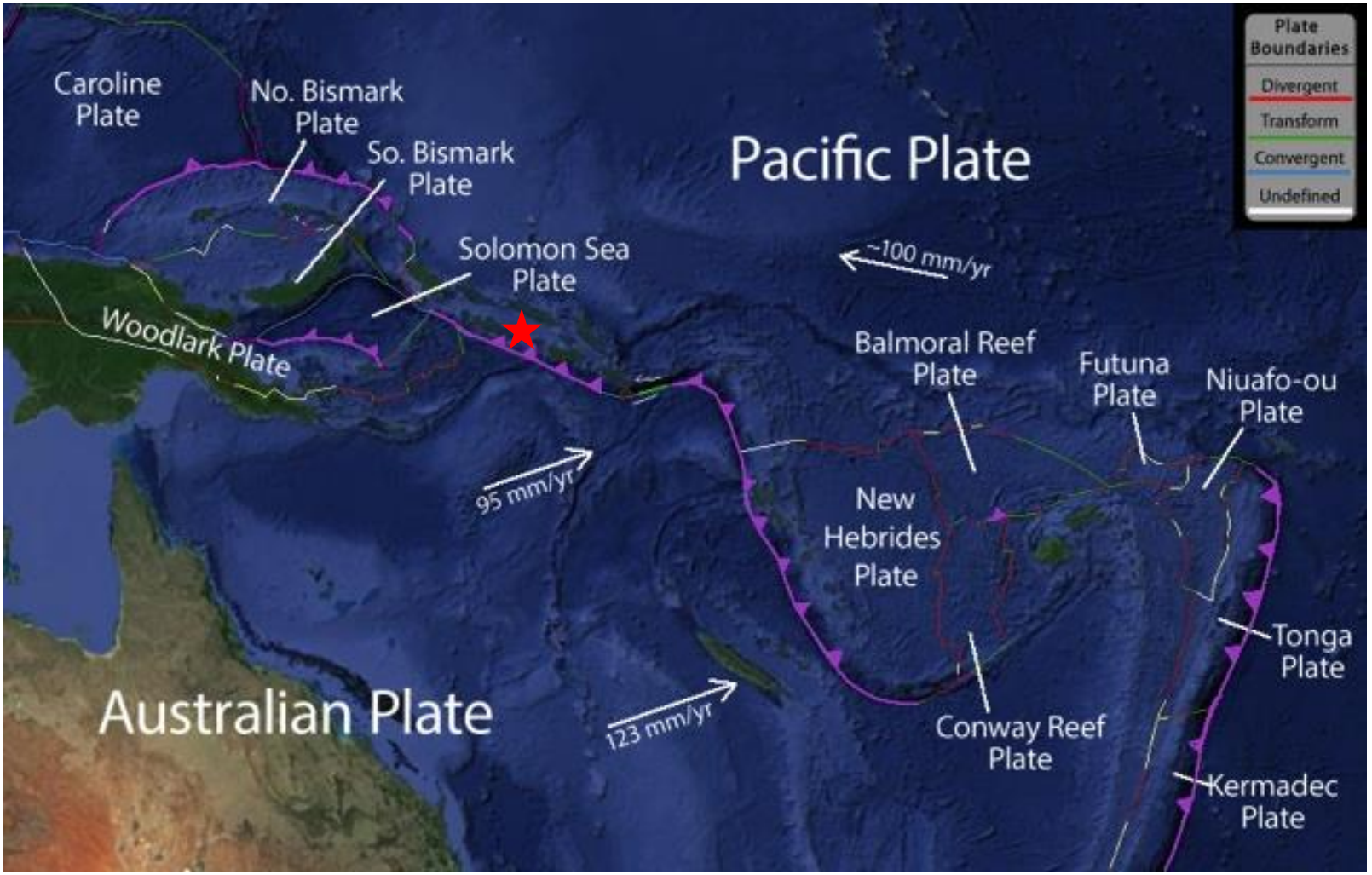
This regional map shows the complexity of major tectonic plates and microplates due to the convergence between the Australian and Pacific plates.



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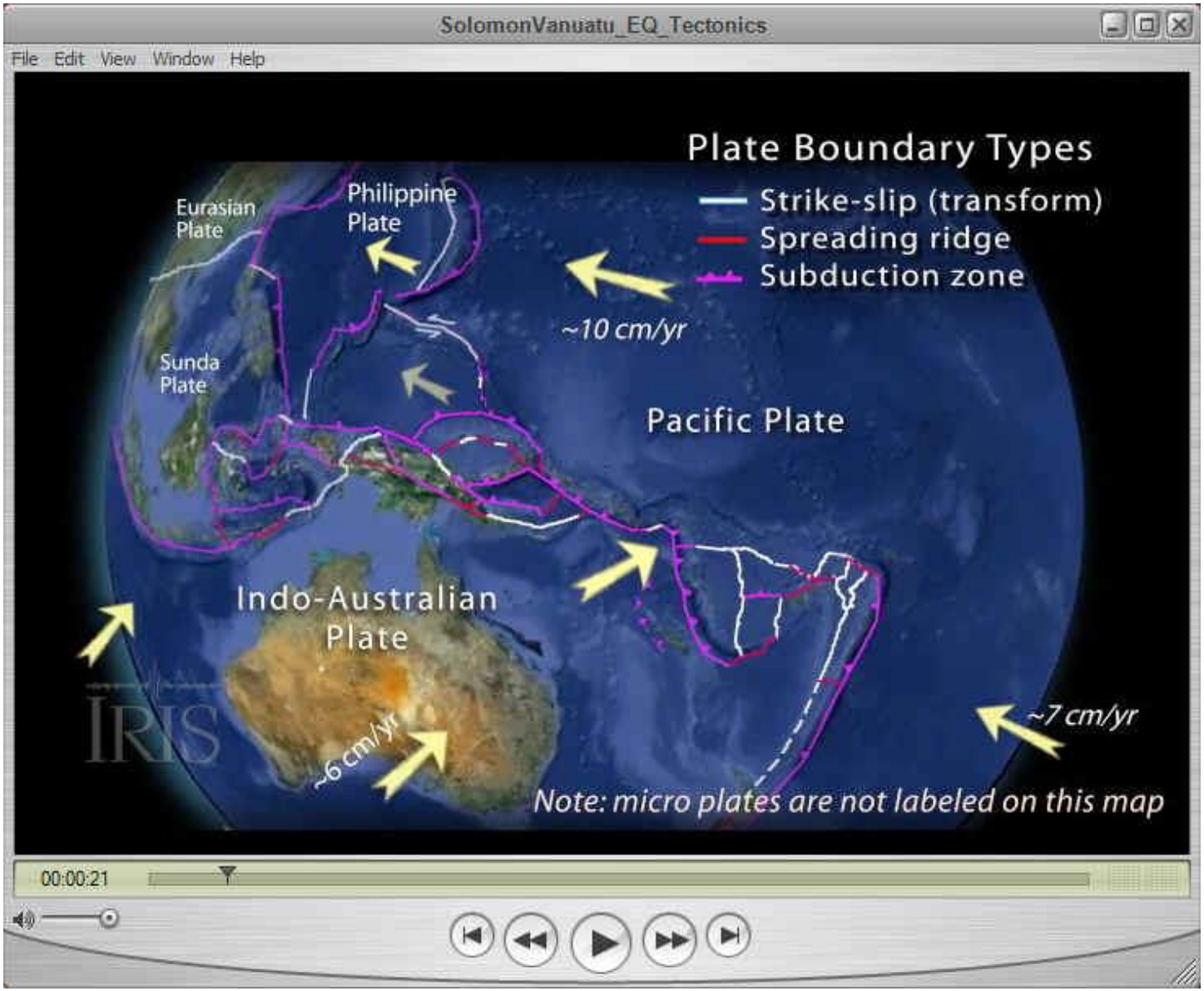

Regional tectonic complexities involving the convergence of the Australian and Pacific Plates.

http://www.iris.edu/hq/programs/education_and_outreach/animations/30

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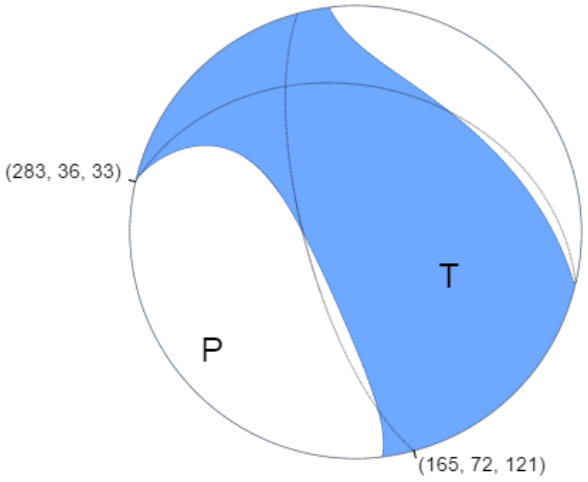
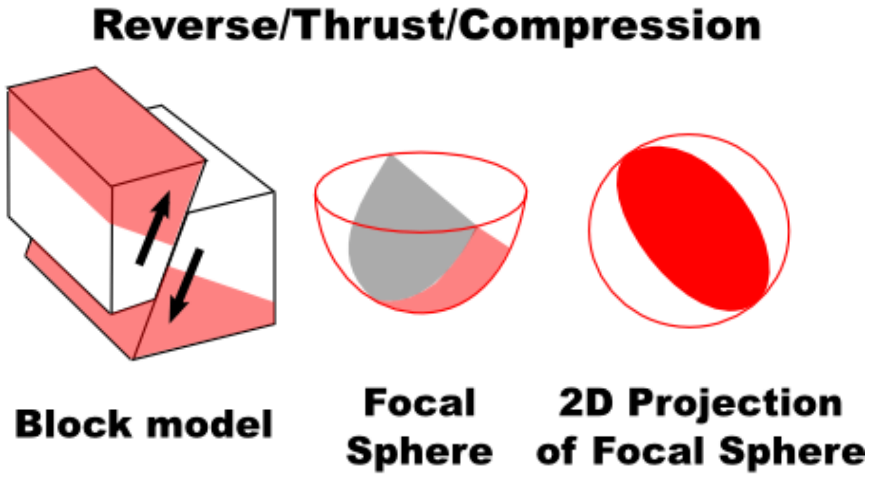
This earthquake occurred as a result of thrust faulting. In the region of this earthquake, the Australian Plate converges with and subducts beneath the Pacific Plate, moving towards the east-northeast at a rate of approximately 94 mm/yr.



Centroid Moment Tensor Solution



Shaded areas show quadrants of the focal sphere in which the P-wave first-motions are away from the source, and unshaded areas show quadrants in which the P-wave first-motions are toward the source. The letters represent the axis of maximum compressional strain (P) and the axis of maximum extensional strain (T) resulting from the earthquake.

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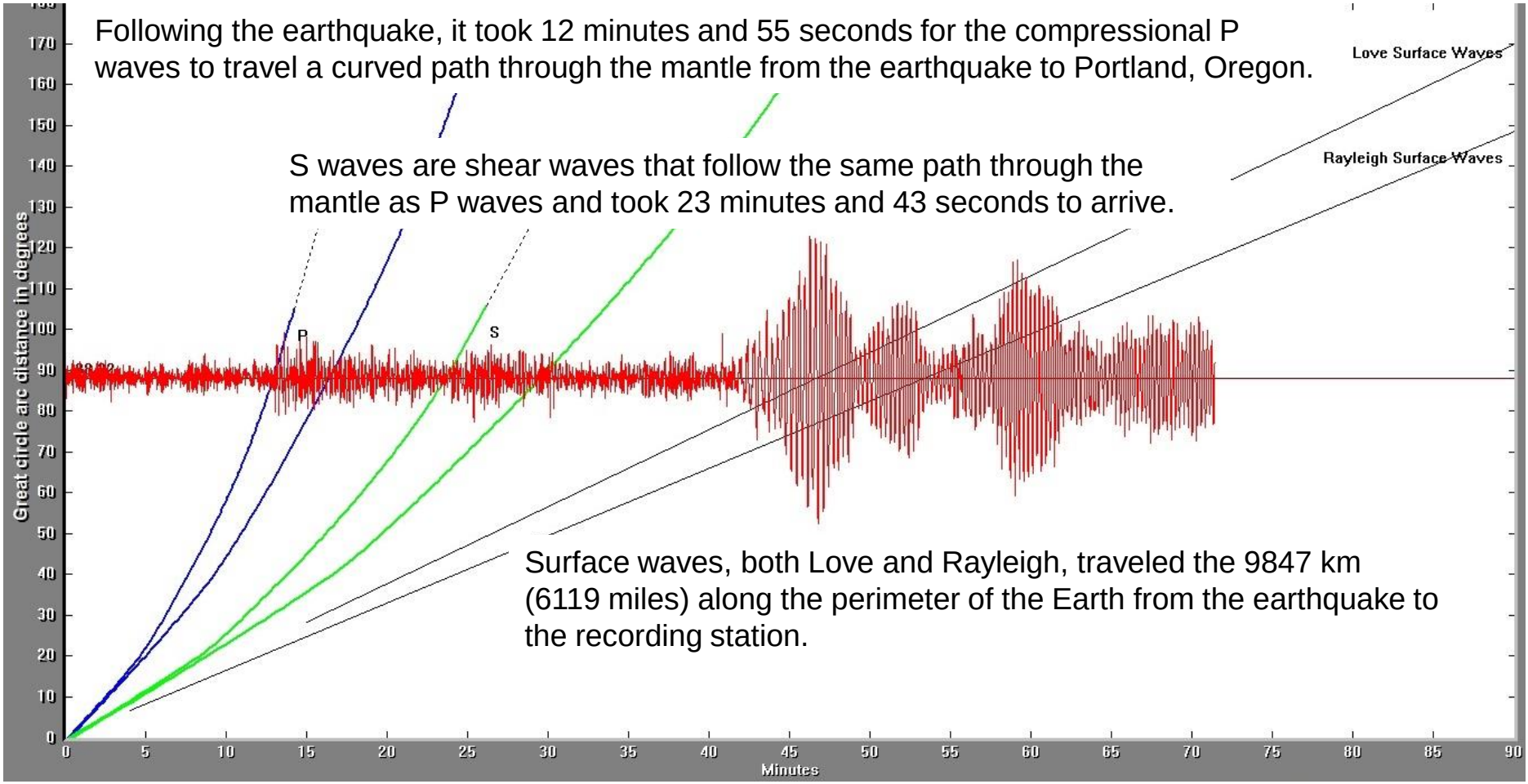
The record of the earthquake on the University of Portland seismometer (UPOR) is illustrated below. Portland is 9847 km (6119 miles, 88.71˚) from the location of this earthquake.



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