

## WHY IS SEISMIC ACTIVITY LOW IN ANTARCTICA?

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**Abstract:** Oceanic intraplate earthquakes which occurred in the oceanic lithosphere have the features as follows:

(1) The level of oceanic intraplate seismicity appears to increase with the particle velocity of the earth's surface due to the rotation of the earth.

(2) The level of oceanic intraplate seismicity appears to increase with the absolute velocity of the movement of the oceanic-plate.

(3) Both the level of oceanic intraplate seismicity and the maximum seismic moment of intraplate earthquakes appear to decrease with age of the ocean floor, which can be regarded as a rough approximate to the distance from an axis of the mid-oceanic ridge. This means that the ridge push force is dissipated while guided through the oceanic lithosphere.

The potential causes of low seismic activity in Antarctica can be summarized as follows:

(1) Because Antarctica is situated in very high latitudes, the particle velocity due to the rotation of the earth is small.

(2) The absolute velocity of the movement of the Antarctic plate is small.

(3) Because Antarctica is distant from the mid-oceanic ridge axes, the continent is almost free from the ridge push force.

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