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# Brief Note on Ocean Mid Ridges

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## Abstract

The massive mid-ocean ridge system is a continuous extent of underwater volcanoes that wraps around the globe like seams on a baseball, stretching almost 75,000km. Most of the system is submarine, with an average water depth to the top of the ridge of 2,000m. Mid - Ocean ridge takes place along divergent plate boundaries, where new sea floor is created as the Earth's tectonic plates extend apart. As the plates separate, molten rock rises to the ocean floor, producing enormous volcanic eruptions of basalt. The speed of spreading affects the shape of a ridges moderately spreading rates result in steep, asymmetrical topography while faster spreading rates process much wider profiles and more gentle slopes. Two well-studied mid-ocean ridges within the universal system are the Mid-Atlantic Ridge and the East Pacific Rise.

**Keywords:** Ocean; Oceanographers; Fluid Dynamics; Ocean; Salt Water; Ocean Ridges

## Discussion

In contrast, the East Pacific Rise extends fast, at rates of 8 to 20cm per year. Due to the fast-spreading rates, there is no rift valley in the Pacific Ocean system, just a smooth volcanic meeting with a crack along the crest that is much smaller than the Atlantic rift valley. Despite being such prominent character on our planet, much of the mid-ocean ridge system leftover a mystery. While we have mapped about half of the global mid-ocean ridge in high intension, less than one percent of the mid-ocean ridge has been explored in detail using submersibles or remotely maintained vehicles.

By funding expeditions to extend centers in the Atlantic and the Pacific, the Ocean Exploration and Research is helping researchers to draw connections between volcanic, tectonic, hydrothermal, and biological systems to better understand the Earth's remarkable, developing geography. Oceanic ridges are originated in every ocean basin and appear to girdle Earth. They can be thousands of kilometers extensive.

In places, the crests of the ridges are offset across changes faults within fracture zones, and these faults can be followed down the flanks of the ridges. (Transform faults are those along which lateral motions occur.) The flanks are indicated by sets of mountains and hills that are elongate and parallel to the ridge direction. New oceanic crust and part of Earth's higher mantle, which, together with the crust, makes up the lithosphere is formed at submarine spreading axis at these crests of the oceanic ridges. Because of this, certain unique geologic characteristics are found there. Fresh basaltic lavas are revealed on the seafloor at the ridge tufts.

## Conclusion

These lavas are progressively buried by sediments as the ocean floor spreads away from the site. The flow of heat out of the crust is many times greater at the crests than elsewhere in the earth. Earthquakes are frequently happened along the crests and in the transform faults that join the offset ridge segments. Analysis of earthquakes occurring at the ridge crests designate that the oceanic crust is under tension there. A high- amplitude magnetic anomaly is centered over the crests because fresh lavas at the crests are being magnetized in the regulation of the present geomagnetic field.

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