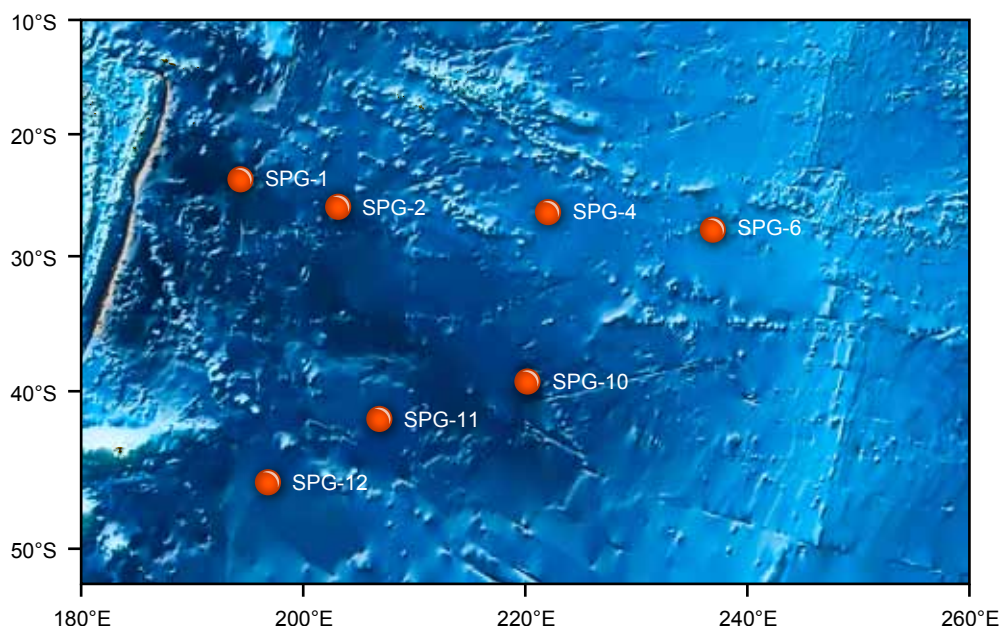


### About the Expedition

In October 2010, an international team of scientists will set sail on the scientific drilling vessel *JOIDES Resolution* for an eight-week IODP expedition to the South Pacific. There, they will penetrate a total of 630 m at seven different drill sites (with an estimated volcanic basement penetration of 300 m) to define the physical and chemical limits of subseafloor microbial life in tectonic and oceanographic settings not yet explored. The results will help to address one of the fundamental objectives of the IODP Initial Science Plan — study of the subseafloor biosphere.



The principal objectives of this expedition are to (1) document habitats, activities, composition, and biomass of microbial communities in subseafloor sediment with very low total activity and very low biomass, (2) determine oceanographic controls on sedimentary habitats, activities, and communities from gyre center to margin, (3) constrain the extent that the subseafloor communities are nourished by hydrogen produced in situ by water radiolysis, and (4) determine how basement habitats, potential activities, and communities vary with crustal age and hydrologic regime and evolve over 100 m.y. in a region of fast seafloor spreading and very low sedimentation rate.

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Integrated Ocean Drilling Program  
United States Implementing Organization

## Expeditions 2009 to 2011

