

Large Igneous Provinces and Hotspots in and around the Pacific Basin

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Details about the meeting:

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Session description:

The Pacific Basin is home to a large number of large igneous provinces and hotspots. As such, it is a natural laboratory to geodynamicists, geochemists and others who are interested in understanding the origin and causes of such voluminous outpouring of lava. The session will bring scientists from various disciplines together to discuss evidence, models, and conflicting hypotheses regarding hotspots and large-volume eruptions in the context of the tectonic evolution and the future development of the Pacific Basin and its margins.

Topics include, but are not limited to:

- Geochemistry of hotspot magmas: geochemical characterization of volcanic products and their integration into geodynamic models or model predictions
- LIPs and hotspots as windows to the earth's mantle: mantle sources and advances in methods to assess lithospheric or recycled slab contributions
- Role and influence of LIPs and hotspots in the physical/tectonic evolution and development of the Pacific Basin and its margins
- Records of LIPs and hotspot volcanism around the Pacific margins, including newly or suspect terrains accreted along convergent margins or continents around the Pacific
- Advances in the interplay of voluminous outpourings of magma and the development and evolution of marine life forms in the Pacific Basin
- Geochemical indicators of hotspot-ridge interaction and advances in understanding the mechanisms of melt production through geodynamic modeling and geophysical observations
- Updates on the Hawaii Scientific Drilling Project results
- Plume-lithosphere interactions
- Use of geophysical tools such as tomography, gravity, and heat flow around hotspots to understand their depths of origin, their fate, and their implications for mantle convection
- Ore-forming and geothermal potentials of LIPs and hotspot volcanoes