Cruise objectives:

The Perth abyssal Plain was formed about 120Ma ago when India, Australia and Antarctica broke off from the supercontinent called Gondwana. As this area is not well covered in terms of geophysical data, the tectonic history is not well understood and remains highly debated through the scientific community.

The aims of this cruise were to collect new magnetic data and rock samples in order to better constrain the rifting and the seafloor spreading processes that have lead to the formation of this basin.

Summary of the cruise

Boarded scientists were involved in three types of activities:
- Collecting and processing the six new magnetic lines that were acquired
- Mapping the seven dredges sites using multibeam bathymetry
- Sampling the rocks

Results and perspective

- The major discovery of this cruise was the granite, gneiss and sandstone that were dredge on the Batavia Knoll (sites 1 to 4). These continental rocks reveal the presence of two unexplored sunken islands that were probably part of the Gondwana 120Ma ago.
- The volcanic and ultramafic rocks dredged at sites 5 to 7 will provide further information about the seafloor spreading processes that occurred in the area.
- The identification of the magnetic anomalies as well as the dating of the rock samples will help provide new constrains on the tectonic history of Perth Abyssal Plain.

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