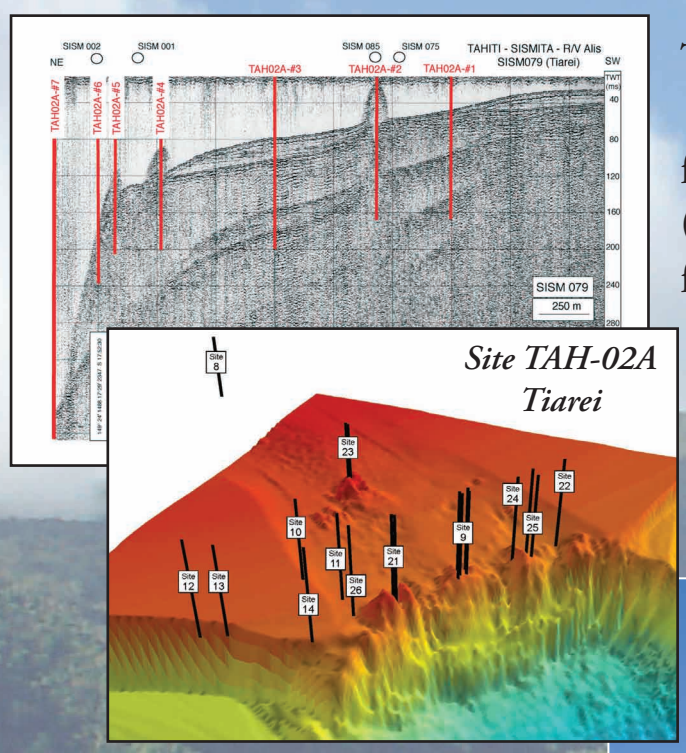
IODP Expedition 310
Tahiti Sea Level

The last deglacial sea level rise in the South Pacific: offshore drilling in Tahiti (French Polynesia)

G. Camoin, Y. Iryu, D. McInroy, A. Skinner and the Expedition 310 Project Team

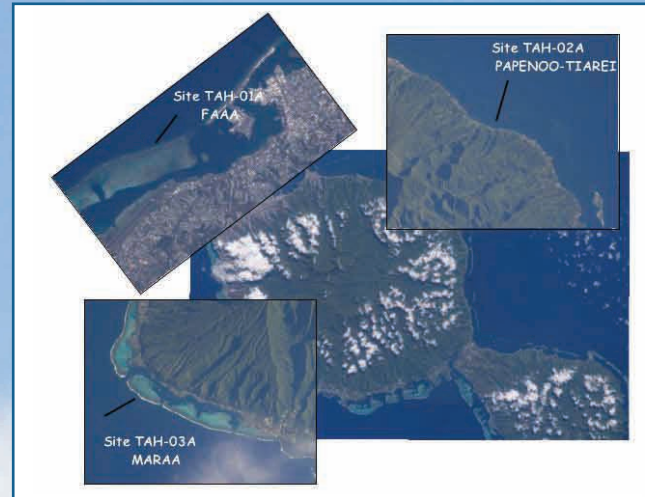
The IODP Tahiti Sea Level Expedition aims to investigate the history and effect of global sea-level and climate change. It will study these changes for a critical period at the end of the ice age by studying cores from Tahiti.



3D bathymetry of the TAH-02 transect at Tiarei and related drilled sites (G. Camoin © IODP).

The scientific objectives are:

- to reconstruct the sea-level rise following the Last Glacial Maximum (23,000 years) when global sea-level had fallen by more than120 m,
- to reconstruct associated changes in sea surface temperatures,
- to analyse the effects of climatic and sea-level changes on reef building.



Drilling sites of the Expedition 310 (Image courtesy of Earth Sciences and Image Analysis Laboratory, NASA Johnson Space Center).

Drillship DP Hunter (I. Pheasant © IODP)

- Total length of hole drilled- 1100 m from 37 holes at 26 sites along 3 transects
- Total length of core recovered – 632 m
- Recovery 57% (70% for last 10 sites)
  - Use of split steel corer without liner has improved quality and quantity of recovery
  - Excellent image logs suggest recovery is commonly in 90-95% region
- Interesting microbiology

- 6th October, sail for first site at Maraa
- 16th November – complete drilling and return to Papeete for demobilisation
- Duration 42 days
- Indications are that there is sufficient good core to fully achieve the scientific objectives of the expedition
- Onshore Science Party at Bremen:13/2 to 15/3/06.

***a**: this camera was used before drilling to survey the seabed around potential drillsites to avoid drilling into live corals and, after boreholes are completed, to check there has been minimal disruption to the seabed (© IODP). **b**: continuous 3 metre core recovered as a single piece following the change to using split steel corer (© IODP). **c**: curation container discussion (M. Koelling © IODP). **d**: Seacore R100 Rig taken from outside core curation container (D. Smith © IODP). **e**: DART seabed template in moonpool (D. Smith © IODP). **f**: logging winch computer and operator G. Henry in rooster box with Seacore personnel (D. Smith © IODP). **g**: drill bits aboard DP Hunter (© IODP).*

ECORD Science Operator

Designed by EMA - ECORD Managing Agency, ema@ipgp.jussieu.fr - View Tahiti and reef break. (H. Wallrabe-Adams © IODP).

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