

SEA LEVEL RECORD DURING THE LAST 14,000 YR OBTAINED BY DATING CORALS FROM TAHITI

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Two deep cores were drilled on the outer barrier reef flat protecting Papeete harbor in the island of Tahiti (50m and 150m long). By means of thermal ionization mass spectrometry (TIMS) and accelerator mass spectrometry (AMS), we obtained ²³⁰Th and ¹⁴C ages on corals present in these cores (about 25 samples). As checked by XRD, the samples were not altered by diagenesis.

Between 14,000 cal yr BP and 3000 cal yr BP the ages define a smooth increasing profile versus depth. Sedimentological and paleoecological analysis of the core allowed to assess the significance of each dated coral sample in terms of paleobathymetry. After a small correction, the reef growth curve can be used as a record of relative sea level. Most of the rise observed during the last 14,000 cal yr BP can be attributed to a rapid accretion of the barrier reef in response to the eustatic sea level rise linked to the last deglaciation.

Our data will be compared with records previously obtained from French Polynesia (Pirazzoli & Montaggioni, 1988, Montaggioni, 1988, Proc. VI Int. Reef Symp. Townsville), from Barbados (Fairbanks 1989, *Nature* 342, 637, Bard et al. 1990 *Nature* 346, 456), New-Guinea (Chappell & Polach 1991, *Nature* 349, 147, Edwards et al. 1993 *Science* 260, 962), and Abrolhos islands (Eisenhauer et al. 1993, *EPSL* 114, 529). The resemblance and difference between these records will be described. In particular, the presence of abrupt sea level jumps at 11,000 and 14,000 cal yr BP will be discussed in comparison with the Barbados record.



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