

## **C14 DATING OF A 50 M CORE FROM THE TAHITI BARRIER REEF**

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A 50 meters-long core was drilled on the outer barrier reef flat protecting Papeete harbor in the island of Tahiti. By means of accelerator mass spectrometry (AMS facility of Gif), we obtained <sup>14</sup>C ages on corals present in this core. As checked by XRD the samples were not altered by diagenesis. Prior to dating, the corals were leached with acid in order to remove any surface contaminants. Up to now, fourteen samples were dated and all AMS runs were replicated to reach high precision ages. When plotted versus depth the AMS ages define a smooth increasing profile between 10,000 cal yr BP and 3000 cal yr BP, corresponding to the upward reef growth curve of the buildup considered. Sedimentological and paleoecological analysis of the core allowed to define the significance of each dated coral sample in terms of paleobathymetry. After correction, the reef growth curve can be used as a record of relative sea level. Most of the rise observed during the last 10,000 cal yr BP can be attributed to a rapid building of the barrier reef in response to the eustatic sea level change which followed the last deglaciation.

Our data will be compared with records previously obtained from French Polynesia (Pirazzoli & 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 difference between these records will be described and the influence of glacial hydro-isostasy will be discussed.

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