

Project Oceanography
Coral Reefs III:
Coral Calendars
September 26, 1997

- I. Some corals produce density banding in their skeletons as they grow.
 1. Relationship between polyp tissue and skeleton
 2. Boulder corals vs. branching corals
 3. What causes bands? - variations in light, temperature, reproduction

- II. Geological techniques are used to reveal the growth bands.
 1. Drilling
 2. Diamond sawing
 3. X-radiometry

- III. Coral bandings reveal past historic and prehistoric events.
 1. Growth rate of the coral
 2. Impact of flooding
 3. Exchange of carbon dioxide between the atmosphere and oceans
 4. Temperature of the tropical oceans during the last ice age

Exercise

Two coral x-radiographs are shown in the accompanying illustration. The one on the left has been dated and micro sampled for chemical tracers (little drill holes). Examine the core on the right. About where was the growing surface on the coral when you were born? Mark where the surface was and write your birth date next to it. (Hint: you have to be less than 25 years old to do this.)