

## Laguna Pallcacocha, Ecaudor

- Sediment core displayed abundant light-colored clastic laminae
- Hypothesize that the clastic laminae were deposited during El Nino-induced alluviation events in the drainage basin
- Utilize a new continuous sediment core and identify the frequency components with wavelet analysis

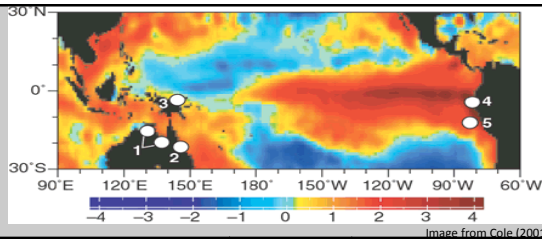
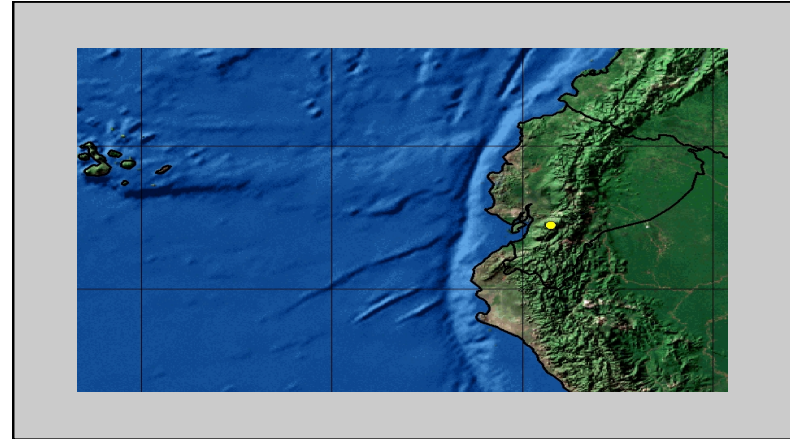
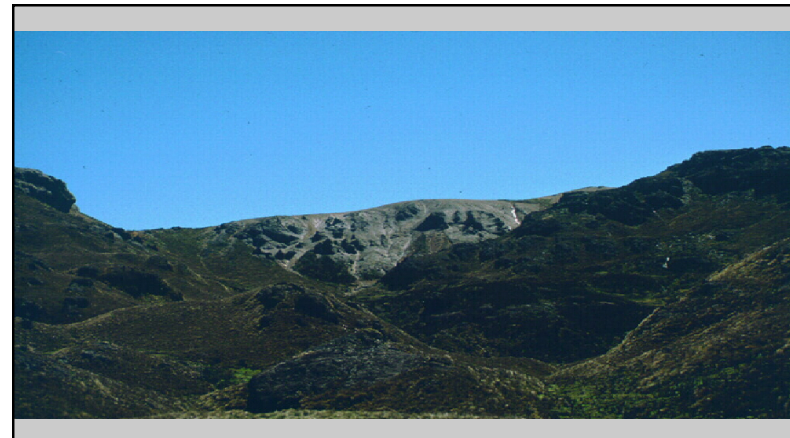
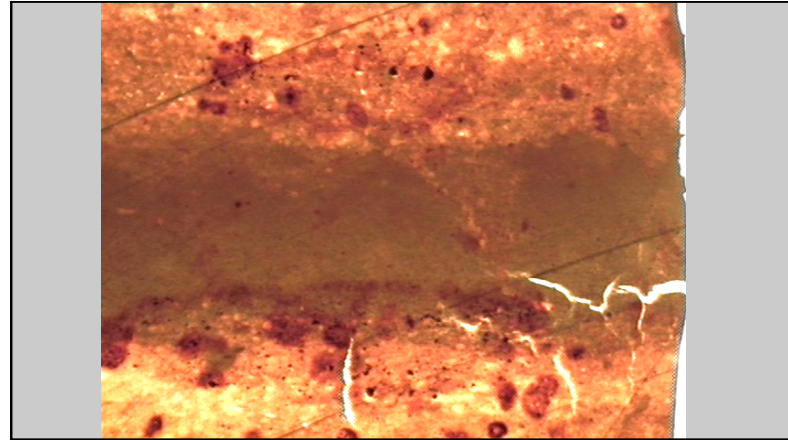


Image from Cole (2001)

Number	Study	Record	Time Span	Resolution
1	North Australia; McGlone <i>et al.</i> (1992) and Shulmeister and Lees (1995)	Lake Sediment: Pollen	Holocene	Inter-Decadal
2	Great Barrier Reef, Australia; Gagan <i>et al.</i> (1998)	Coral: Sr/Ca and $\delta^{18}O$	25 Years; ~5400 cal yr BP	Annual
3	Northern New Guinea, Tadhope <i>et al.</i>	Coral: $\delta^{18}O$	49 Years at ~6500 cal yr BP and ~90 years at 2000-3000 cal yr BP	Annual
4	Ecuador, Rodbell <i>et al.</i> (1999) Moy (2000)	Lake Sediment: Grayscale and Color	~12,000 Years	Sub-Decadal
5	Coastal Peru, Sandweiss <i>et al.</i> (2001)	Midden: Mollusks	Holocene	Discontinuous





### CORTEX XRF Scanner – Univ. of Bremen

*J.H.F. Jansen et al. / Marine Geology 151 (1998) 143–153*

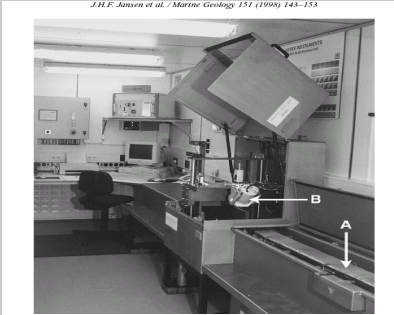


Fig. 1. Interior of the CORTEX sea-going container. *A* = split-core surface, *B* = XRF detector.

Jansen et al. (1998)

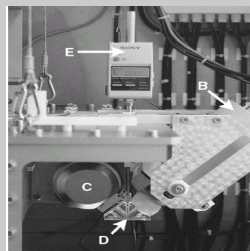
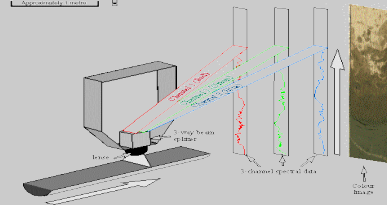
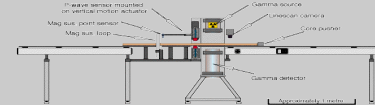


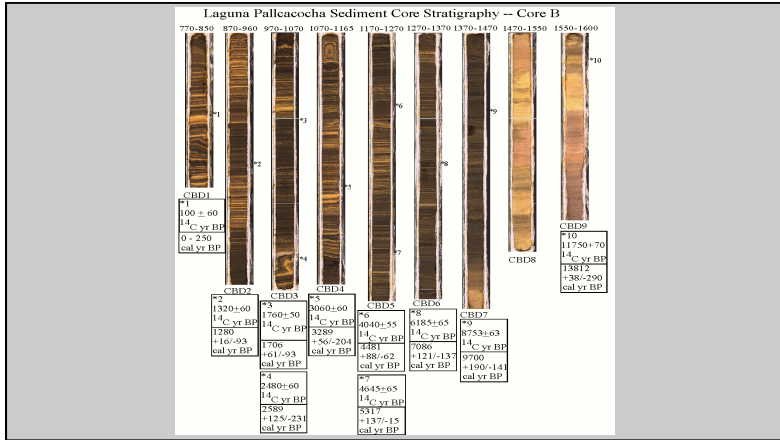
Fig. 2. Central part of the CORTEX. *B* = XRF detector, *C* = X-ray tube, *D* = Hollow helium-flashed prism; *E* = sensor to control the lowering of the prism to the sediment surface.

Jansen et al. (1998)

### Geotek Linescan Camera

A typical MISCL Split/Whole Core configuration for soft sediments





### Age Models

Constant Carbon Accumulation Model:

- Distributes age based on carbon content of sediment

Event Model:

- All laminae assigned a value of 6 months based on Rio Chira discharge data

Both models assign higher sedimentation rates to the light-colored laminae

