MGL12-08
First cores from
R/V Langseth

Line Islands Ridge

May 2012

Lamont-Doherty Earth Observatory
Columbia University | Earth Institute
Cruise MGL12-08

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Oregon State University Coring Group
LDEO Marine Office
N.S.F. Marine Geology and Geophysics Program
Why Line Islands?: El Niño & ITCZ
Core Recovery
Foraminifera $\delta^{18}$O Stratigraphy

ML1208 *G. ruber*

Polissar and Lynch-Stieglitz, unpublished data
Reconstructing El Niño

MIS 1,2  MIS 5, 6  MIS 7, 8

Sept. solar (W/m²)

pCO₂

δ¹⁸O (%)

Age (ka)

East-West SST gradient

ODP 806-846 (°C)

17PC G. ruber (this proposal)

LR04 stack

δ¹⁸O (%)
Individual Foraminifera SST Distribution

E-W Transect

A. 90°W, 15 m

B. 160°W, 15 m

C. 160°E, 15 m

0°N, Line Islands

D. Obs. 58 m

E. Meas. Mg/Ca

F. CDF

N

Temperature (C)

N

Temperature (C)

N

Temperature (C)

N

Temperature (C)

N

Temperature (C)
Thank You!

**MGL 12-08 Talks at AGU:**

Holocene ENSO variability at the Line Islands, central tropical Pacific (PP23D-07 Tue. 3:10 pm)

A new stable water isotope-salinity dataset from the central tropical Pacific (PP42C-03 Thur. 11:50)

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