Age-Depth Profiles for Pacific DSDP and ODP Drillsites

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INTRODUCTION

This technical report contains age-depth profiles in support of the paper I submitted to the journal *Paleoceanography* in Feb 2002, and which is in review as of this writing. They show the stratigraphic information I used and the age-depth curves I constructed for each of the DSDP and ODP drillsites included in the paper. I attempted to construct these profiles using a minimum astonishment principle, i.e. smooth polynomial fits where possible and lower order fits where stratigraphic data are scant. The primary source of stratigraphic information were the Initial Reports volumes for both DSDP and ODP, and the data used here are listed in Table 1. If I knew of the existence of other stratigraphic synthesis (e.g. legs 130, 138, and 167), I included that data or used that as a primary source of the age model. See the *Paleoceanography* paper (Lyle, Neogene carbonate burial in the Pacific Ocean ) for more information about the stratigraphy, especially Tables 1 and 2.
Figure 1: DSDP and ODP drillsites used in the compilation for Neogene carbonate burial in the Pacific Ocean. All drillsites with suitable sedimentary records were to be included through ODP Leg 167.
DSDP Leg 5 Drillsites

DSDP Site 32 (NE Pacific)

DSDP Site 33 (NE Pacific)
DSDP Leg 6 Drillsites

DSDP Site 47 (Shatsky Rise)

DSDP Site 55 (Caroline Ridge)
DSDP Leg 7 Drillsites

DSDP Site 62 (Eauripik Ridge)

DSDP Site 63 (E. Caroline Basin)
DSDP Leg 8 Drillsites

DSDP Site 69 (central Pacific)

DSDP Site 70, central Pacific
DSDP Site 75 (central tropical Pacific)
DSDP Leg 9 Drillsites

DSDP Site 77 (Central Pacific)

DSDP Site 78 (E.Central Pacific)
DSDP Leg 16 Drillsites

DSDP Site 155 (Panama Basin)

DSDP Site 157 (Carnegie Ridge)
DSDP Site 158 (Cocos Ridge)

DSDP Site 159 (eastern Pacific)
DSDP Site 160 (eastern Pacific)

DSDP Site 161 (Central Pacific)
DSDP Leg 17 Drillsites

Site 166, Central Pacific

Depth (mbsf) vs Age (Ma)
DSDP Leg 18 Drillsites

DSDP Site 173 (Mendocino FZ)

DSDP Site 177 (Paul Revere Ridge)
DSDP Leg 19 Drillsites

Site 183, NE Pacific near Aleutians

Depth (mbsf) vs. Age (Ma)
DSDP Leg 21 Drillsites

Site 205, South Fiji Basin

Site 206, New Caledonia Basin
DSDP Leg 28 Drillsites

Site 266, Antarctic, S of SEIR

Site 274, Pacific N of Ross Sea
DSDP Leg 29 Drillsites

DSDP Site 277 (S. Campbell Plateau)

- hiatus to Oligocene @ 4.5 mbsf

DSDP Site 278 (Emerald Basin)

- no coring until 100 mbsf
DSDP Leg 34 Drillsites

DSDP Site 319 (Bauer Deep)

Age (Ma)

Depth (mbsf)
DSDP Leg 59 Drillsites

DSDP Site 442 (Shikoku Basin)

DSDP Site 443 (Shikoku Basin)
DSDP Site 446 (Daito Basin)
DSDP Leg 63 Drillsites

DSDP Site 467 (California Borderlands)

DSDP Site 469
(seaward of California Borderlands)
DSDP Leg 68 Drillsites

ODP Site 503 (Guatemala Basin)
DSDP Leg 69 Drillsites

ODP Site 504 (Panama Basin)

ODP Site 505 (Panama Basin)
DSDP Leg 85 Drillsites

DSDP Site 572 (E. equatorial Pacific)

DSDP Site 573 (central equatorial Pacific)

New Age/depth attempt with Shackleton (1999) early Miocene biostrat updates
DSDP Site 574 (central equatorial Pacific)

1999 Age Model

DSDP Site 575 (central equatorial Pacific)
DSDP Leg 86 Drillsites

DSDP Site 576 (NW Pac)

DSDP Site 577 (Shatsky Rise, NW Pac)
Surface cored, then coring skipped to 1
DSDP Leg 90 Drillsites

DSDP Site 586 (Ontong Java Plateau)

DP Site 587 (Lansdowne Bank, L. Howe Rise)
DSDP Site 590 (Lord Howe Rise, W. Pac)

DSDP Site 588 (Lord Howe Rise, W. Pac)
DSDP Site 591 (Lord Howe Rise, W. Pac)

DSDP Site 594 (Chatham Rise, W. Pac)
DSDP Leg 92 Drillsites

DSDP Site 597 (west flank, southern EPR)

DSDP Site 598 (west flank, southern EPR)
DSDP Site 601 (west flank, southern EPR)
ODP Leg 130 Drillsites

ODP Site 803 (Ontong Java Plateau)

ODP Site 804 (Ontong Java Plateau)
ODP Leg 133 Drillsites

ODP Site 811 (Queensland Plateau)

ODP Site 813 (Queensland Plateau)
ODP Leg 136 Drillsites

ODP Site 842 (central Pacific)
ODP Leg 138 Drillsites

ODP Site 844 (Guatemala Basin)

ODP Site 845 (Guatemala Basin)
DSDP Leg 145 Drillsites

DSDP Site 881 (NW Pac Basin)

DSDP Site 882 (Detroit Seamount)
ODP Site 883 (Detroit Seamount, NW Pac)

ODP Site 884 (Detroit Seamount, NW Pac)
ODP Leg 167 Drillsites

All other Leg 167 sites use published stratigraphy:
Site 1010--Hayashida et al, 1999
    Geoph. J. Int. 139, 829-840
and Ravelo et al., 1997
    Paleoc 12(6), 729-741

Sites 1011-1021:
Ravelo et al., 1997
    Paleoc 12(6), 729-741