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**Quantification of microevolutionary patterns: Multivariate rates
and patterns of evolution in the Neogene diatom lineage *Nitzschia
jouseae* Burckle**

Fenster, Eugene Joel, Ph.D.

City University of New York, 1988

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Quantification of Microevolutionary Patterns:
Multivariate Rates and Patterns of Evolution in the
Neogene Diatom Lineage *Nitzschia jouseae* Burckle
by
Eugene J. Fenster

A dissertation submitted to the Graduate Faculty in
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Abstract

Quantification of Microevolutionary Patterns: Multivariate Rates and Patterns
of Evolution in the Neogene Diatom Lineage *Nitzschia jouseae* Burckle

by

Eugene J. Fenster

Advisor: Professor Max Hecht

A study of the rates and patterns of morphological change in the Neogene diatom *Nitzschia jouseae* over its known duration and geographic range was conducted. This study developed a standardized multivariate method for the measurement of morphological rates of change. This method can be applied to taxa differing in morphology. This method consists of using the first canonical variate means to create a measure of rate in terms of standard deviation units. Stasis is defined as that period of time during which the slope of the canonical means is near zero. It is suggested that the history of a lineage be divided into segments and that the rate be calculated as the slope of the first canonical variate means of each segment. Fluctuations in mean morphology about an adaptive peak may be attributable to factors such as minor environmental perturbations and sampling error. This provides a theoretical basis for the division of the history of a lineage. Each segment represents a major trend in the history of the lineage.

The pattern of morphological change exhibited by *N. jouseae* is divided into two phases: the first stage is characterized by directional change in morphology, the second phase, which extends through the last appearance of the species is characterized by little morphological change. At any given temporal horizon there are few differences, if any, in morphology between samples taken from different water masses. The pattern of morphological change with both of these stages conforms to the Raup and Crick model of deviations in morphology within selective bounds.

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From Burckle (1978; figure 4, page 35). Reprinted with permission.

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THE PROBLEM

There is a need to determine if changes seen within a morphological sequence are attributable to local evolution, migration of geographic variants, ecophenotypic variation, or to a combination of these factors. In order to account for these factors samples from sites in several distinct geographic regions are needed. If gaps are seen in the fossil record the question as to the cause of the gaps arise. Are the gaps a result of periods of non-deposition of sediment, migrational events, or to exceptionally rapid periods of evolution? It is also necessary to determine if morphological changes are the result of evolutionary change in the sense of an alteration of the genetic structure of the population or if the changes in morphology seen are due to random fluctuations in the mean of what is essentially a static morphology. Stratigraphic questions also need to be considered. Have there been hiatuses in the deposition of sediment? What is the influence of the rate of sedimentation on the interpretation of the pattern of change? What effect does the depositional environment have on the fossils under consideration? How confident can you be with regard to the chronostratigraphy of the sites? We are presently at a state where testing the null model of random a pattern is most difficult. Bookstein (in press) suggests that some other denominator be substituted for time in the calculation of evolutionary rates. He recommends the substitution of "causal variables" such as salinity and temperature, for example, be calculated (i.e. unit change in morphology per unit change in the causal variable). Once again the problem of randomness is not avoided for the concern now becomes the testing the pattern of change in the causal variable against randomness. The problem actually becomes enlarged as one has to quantify the appropriate causal variable(s) and if determine those variables had a significant influence on evolution of the organism as studied in the fossil record.

INTRODUCTION

The tempo and mode of evolution is still a hotly debated topic over 40 years after Simpson (1944) wrote Tempo and Mode In Evolution. This is evidenced by the large number of published papers which debate the relative merits of the punctuated equilibrium model as opposed to the gradualistic model of evolution.

Evolutionary rate can be defined as an amount and direction of change relative to a standard (this is basically the definition used by Simpson [1944]). In general, evolutionary rates and patterns may be considered: (1) a relatively constant, steady rate of change through time; (2) a punctuated pattern involving long periods of stasis interrupted by periods of change which are rapid on the geological time scale; or (3) a pattern of evolution in which the rate of change fluctuates through time. In order to determine which of these patterns, or which combinations, predominate it is necessary to develop a comprehensive methodology for the measurement of evolutionary rate.

Rates of evolution may be fit into four broad categories: (1) nucleotide rates; (2) protein rates; (3) morphological rates; and (4) taxonomic rates. Of the approaches enumerated above the only ones which are applicable to the fossil record, that is, the only ones that can be measured against an independent time axis, are morphological and taxonomic rates.

Taxonomic rates of change may be viewed as the rate of origination and/or extinction of taxa within a group. These rates are subject to the vagaries of systematic methodology such as lumping and splitting, the shifting of a given group from one taxonomic level to another, and to the questionable validity of comparing higher levels of classification across groups. Measurement at the taxonomic level takes the student one or more steps away from the level at which microevolutionary processes are occurring. For the analysis of higher level, i.e.

macroevolutionary, rates and patterns the study of taxonomic rates of evolution would be best.

For the analysis of microevolutionary patterns in the fossil record the study of morphological rates of evolution is the most practical approach. The morphology of the organism, limited by consequences of the preservation process, is available in the fossil record. Taxonomic rates themselves are based upon morphology (Simpson, 1953). When using the morphological approach it must be emphasized that specimens can only be categorized in terms of morphospecies. However, morphospecies should not be lumped together regardless of their validity as evolutionary species. Following morphospecies through time at distinct geographic regions makes it possible to distinguish between morphospecies (provided that the forms can be traced to different ancestral forms). Such an approach makes it possible to trace the morphological convergence of different evolutionary lineages.

Background

Most approaches to the study of morphological rates of evolution can be traced to Simpson (1944, 1953). Studies following Simpson's books, Tempo and Mode In Evolution and The Major Features of Evolution, either apply methods proposed in them or develop methods based on the suggestions he made.

The techniques introduced in these books were in terms of single characters, character complexes and allometric coefficients. The use of each of these techniques was subsequently developed by other workers (e.g. Haldane on single characters, Westoll on character complexes and Kurten on allometry). Simpson also suggested that these measures can be expressed in terms of absolute time, relative time (e.g. stratigraphic, cyclic, and geological stages), or a biological time scale (expressing change in terms of other organs or organisms). Each of these scales can be found in subsequent work, e.g. Van Valen (1974) for absolute time, Gingerich (e.g. 1976) for relative

time and Wood (1949) for a biological scale. Both in 1944 and in 1953 Simpson expressed his feeling that perhaps the best measure of evolutionary rate would be the measurement of change in genetic terms. Lande's work on quantitative genetic theory and its subsequent application to the fossil record by both himself and Reymont shows that we may be capable of approaching this idealized goal. Although, as Simpson (1944) stated in Tempo and Mode In Evolution, "[The] morphological approach to these particular problems [rate of evolution] is logical, because it is the organism, the phenotype, as an agent in an evolving world with which we are directly concerned. The implicit genetic factors are less important for their own sake than because they are determinants of phenotypic evolution." (a view also expressed in Simpson [1953] and shared by Stanley [1985]). Simpson (1953) pointed out that while genetic and morphological change are not necessarily correlated "... there can be little doubt that well-defined morphological changes in phenotypes of successive populations, particularly as these occur over considerable periods of time in the fossil record, run parallel to genetic changes in these populations."; and that studies of genetic change in extant populations may not, in general, include enough time for even evolutionary events such as speciation or subspeciation to occur.

This should not be taken to mean that Simpson has absolved us of the necessity of considering the effects of genotype on the rate of evolution. Morphological change may not be reflective of genetic change and a constant morphology is not necessarily reflective of a constant genome. Due to the redundancy of the genetic code and to changes that are nearly neutral there may be random changes within the genome which result in no apparent change in morphology. Kimura (1969) has demonstrated that if amino acid changes are due to chance they should be established as frequently in relatively static taxa as in those that undergo rapid change. Genetic change may also be hidden from the paleontologist since the paleontologist mainly sees the fossilized hard parts (in addition to trace fossils), a viewpoint which, according to Schopf (1982), results in an

underestimation of the actual number of mutations by a factor of 10. Unfortunately, the basis for this is not given.

It was in Tempo and Mode In Evolution that Simpson introduced three terms to describe rates of evolution: *horotelic*, *bradytelic* and *tachytelic*. Horotelic rates describe a "standard" rate distribution within a group; bradytelic refers to a low-rate distribution; and tachytelic describes a high-rate distribution. These terms involve an integration of taxonomic and morphological rates of evolution. A taxon whose members have survived relatively unchanged morphologically over long periods of time would also be judged as having a very low rate of taxonomic evolution and would thus be considered bradytelic. More recently, the results of studies of evolutionary rates have been discussed in terms of gradualism, punctuated equilibrium, and punctuated gradualism. In the evolutionary literature gradual and punctuated evolution, as well as stasis, have frequently been used without any "rule of thumb." Objective definitions of these concepts have been suggested by other workers (e.g. Bookstein et al., 1978; Lande, 1986). Without objective definitions these terms are just an alternate way of expressing fast, slow and no change, all of which are relative, qualitative, terms.

In The Major Features of Evolution Simpson expressed concern over the large number of studies which used solely descriptive terms. By this time Haldane had written his paper 'Suggestions As To Quantitative Measurement Of Rates Of Evolution' (1949) and Simpson was able to apply some of the methodology (see equation 1 in this paper) suggested by Haldane to the evolution of equids. Although, as will be discussed later, he expressed some reservations about the use of Haldane's new unit, the *darwin*, as the unit of measurement of evolutionary rate.

Simpson (1944) stated that it would be best to determine rates of evolution for whole organisms. This viewpoint became even more apparent in his elaborated 1953 definition of morphological rates of evolution as "... changes involved in descent rather than in frequency of

units at any given time. They may be rates for a single, unit character,... or they may be rates for character complexes." Levinton (1983) also shares this perspective and observed that the evolution of a single character may not be representative of the evolution of a species. In 1944, as well as 1953, Simpson discussed some of the problems involved in the application of a multivariate measure. These are problems involving the correlation and weighting of the relative importance of characters as well as the difficulties which may be involved in combining characters measured on different bases. However, as opposed to 1944, in 1953 Simpson suggested that the methodology of discriminant functions developed by Fisher might serve as a basis for approaching this problem.

Major advances in the study of rates of morphological evolution were made by Haldane (1949), Lerman (1965) and Lande (1976). Their work forms the basis of all subsequent advances. Haldane was the first to introduce a standardized measure of the rate of morphological evolution of a single character. Among the suggestions made by Haldane which will be discussed here are describing the rate of morphological evolution as: (1) the time required for a character to move one standard deviation, (2) change in terms of percent per million years, and (3) the darwin. Lerman (1965) used measures based on Mahalanobis' D^2 statistic as a multivariate measure of the distance between populations and then converted this to a rate. Based on Lerman's suggestions, Billsborough (1973, 1976) introduced the use of canonical variates analysis to the measurement of morphological rates of evolution. The most recent and innovative approach to the quantification of rates has been an outgrowth of Lande's (e.g., 1976) work on quantitative genetic theory. This work expresses change in mean morphology based on estimates of heritability, genetic variance and fitness of fossil populations as well as on estimates of phenotypic variance. Lande's initial work was univariate but has subsequently been expanded to the multivariate realm (Lande, 1979, 1980a and b; Lande and Arnold, 1983; Reymont, 1982a,b,c,d, 1983, 1985).

Some Problems

The study of rates of evolution involves several problems, many of which have been reviewed by Hecht (1965) and Gingerich (1982). These include the presence of apparent gaps in the fossil record (McKinney [1985] discussed how different patterns of deposition in shallow- versus deep-water marine environments can bias the apparent pattern); and questions concerning the validity of stratigraphic data (Bell and Haglund, 1982). Another major problem, as pointed out by Hecht (1965), involves the accuracy of the phylogenetic scheme used and the recognition of a lineage (Bell and Haglund, 1982), i.e. the ability to distinguish between apomorphic and plesiomorphic characters and to distinguish true relationships from convergence (Hecht, 1965; Boucot, 1982a), as well as the lumping and splitting of groups (a problem with both fossil and recent organisms).

Identifying organisms found sequentially in the fossil record as having an ancestral-descendant relationship is difficult, if not impossible (Schaeffer et al., 1972). Gingerich (1982) found three major biases in the measure of evolutionary rates: (1) the tendency to ignore zero rates since rates are generally compiled to note change (i.e. stasis is data [Gould and Eldredge, 1977]); (2) the fact that stratigraphic data may be misinterpreted (in agreement with Hecht, 1965); and (3) the length of time involved in the study biases the measure of rate in that shorter time intervals are biased towards higher rates and longer time intervals are biased towards lower rates due to the averaging in of reversals in the direction of evolution (Kurten, 1960; Blumenberg, 1980; Ginzburg and Rost, 1982; Gingerich, 1983, 1984; Bell et al., 1985; Williams, 1987). If reversals in the direction of evolution are missed, due to the length of the time interval used in the study, a false impression of stasis may be generated. There is the potential for problems in interpretation when making comparisons between studies in which samples were taken at different time scales (Gingerich, 1983; Bell et al., 1985).

A recent paper by Bookstein (in press) points out that in evolutionary studies the null hypothesis of a random walk must be rejected before rates can be quantified. Evolutionary rates are derivatives of some quantitative feature with respect to time, such derivatives do not exist for symmetric random walks. Since a random walk may imitate trends, jumps and stasis we are always faced with this null hypothesis as an alternative explanation for a sequence of morphological changes. In this paper Bookstein develops a test for the null hypothesis of a random walk. As Bookstein indicates, questions beyond the randomness of a given morphological series need to be considered. For example, the rejection of the null hypothesis does not rule out the possibility that the "causal factor" followed a random walk. That is, a random morphological pattern does not always mean random changes in morphology, the changes in morphology may in fact be deterministic; however, the factor "determining" the morphological changes may have followed a random pattern. Thus, if the null model is not rejected the question arises as to whether the observed pattern has been generated by random or deterministic processes (Fisher, 1986). In addition, Raup and Crick (1981) discuss a model in which a random walk occurs within selective boundaries.

Two important points are made by Raup and Crick (1981) in their study of the evolution of the ammonite *Kosmoceras*. They address both the problem of reversals in evolutionary direction and random walk. They considered the possibility that the morphological sequence they examined emulated a random walk. This was tested for by the application of runs tests to the sequences of morphological points comprising their data set. Also, they demonstrated that for several characters no significant changes were seen when the top and bottom of a section were compared but when samples were taken from within these sections significant changes were seen. This is due to reversals in the direction of evolution and demonstrates the importance of sampling close to the limits of temporal resolution.

Stratigraphy and Geography

Several workers have discussed problems involved in interpretation of stratigraphic data. For example, Benson (1983) demonstrated that both punctuational and gradualistic patterns of evolution may appear within the same lineage during roughly the same period of time depending on the localities from which the samples were taken. In his study the ostracode *Poseidonamicus riograndensis* is seen to be replaced in a punctuational fashion by *P. miocenicus* in the western part of its range whereas in the eastern part of its range *P. riograndensis* undergoes a gradual transition into *P. miocenicus*. This may be due either to migration of *P. miocenicus* or may be a result of the relative completeness of the stratigraphic record in these sections (Dingus and Sadler, 1982). Similarly, Cronin et al. (1981) expressed concern over the misinterpretation of the hominid fossil record attributable to stratigraphic gaps, misdating of the temporal horizons from which specimens were taken, as well as differing interpretations of the morphology itself. Bookstein et al. (1983) also expressed concern over the possibility of misinterpreting the fossil record. They pointed out that gaps in the fossil record, especially where specimens are missing for several continuous stratigraphic sequences, give the impression that a punctuational event has occurred. An impression that is not necessarily correct. The presence of gaps in the stratigraphic record may obscure a gradual sequence and lead to its interpretation as a punctuational event (Rensch, 1959; Levinton and Simon, 1980; Cronin, 1981). Gaps may be due to missing sediments, and thus viewed in terms of stratigraphic completeness as discussed in Schindel (1980, 1982), Sadler (1981), Dingus and Sadler (1982) and Dingus (1984). Or, gaps may be a result of non-preservation or non-deposition of fossil material. Rensch (1959) provided the example of the crossopterygian *Latimeria* being re-discovered in 1938 when this order left no fossil evidence throughout the Tertiary (~63 million years). In their analysis of single characters in *Kosmoceras* Raup and Crick (1982)

found that morphological gaps are associated with sedimentary breaks more often than expected by chance but that the majority of sedimentary breaks are not associated with morphological gaps. Sadler (1981) and Dingus and Sadler (1982) discussed some problems involved in the measurement of the rate of evolution with regard to stratigraphy. They pointed out that when interpolating between known points in time it is not appropriate to assume constant rates of sedimentation. Having gaps in the stratigraphic record is an unavoidable result of the sedimentation process (Schindel, 1982). If neontological concepts are to be applied to the biostratigraphic record it would be best to use organisms with dense fossil records, long generation times and sections which are both fairly recent and have high rates of sedimentary accumulation (Dingus and Sadler, 1982). It is important that Sadler (1981) and Dingus and Sadler (1982) proposed an estimate of stratigraphic completeness. Schindel (1982) also offered a method, resolution analysis, to evaluate the time scale and completeness of the stratigraphic record. These methods help to evaluate the time intervals at which samples may be taken. McKinney and Schoch (1983) applied these methods and demonstrated how failure to do so can result in misinterpretation of data.

Another problem with the stratigraphic record is that aggregations of fossils may include up to several thousand generations. Such aggregations will tend to obscure the presence of short-term trends in the fossil record and a directional trend through these aggregations may represent either a gradualistic trend or a series of punctuational events with intervening periods of stasis (Levinton and Simon, 1980). Gould and Eldredge (1977) pointed out that ecophenotypic variation needs to be considered (Bell and Haglund, 1982; Boucot, 1982b) before making a claim for phyletic gradualism or punctuated equilibrium. A false impression of gradualism may result from the immigration of geographic variants into the stratigraphic section being studied. Migration of geographic variants may also result in a false pattern of stasis (Bookstein et al.,

1978), as in the instance of an interaction between clinal and temporal gradients in morphology, such migration may also account for a significant fraction of the variation in the rate of evolution (Charlesworth, 1984). An additional problem may be that, as Rensch (1959) concluded, during the origin of a new type evolution proceeds at a more rapid rate and populations are smaller relative to a later point in a groups history, and that these conditions can result in a poorly preserved early fossil record.

A problem may arise when comparing rates of evolution in organisms of differing complexities. Here I use the definition of morphological complexity provided by Schopf et al. (1975), where organisms with a larger number of parts are considered to be more complex morphologically than organisms with fewer parts and the perceived morphological complexity of a group is reflected in the terminology used to describe that groups morphology. Complex phenotypes may simply have a greater amount of variation available for selection to act upon and thus may be expected to exhibit greater rates of morphological evolution (Schopf et al., 1975; Gould, 1976). Schopf (Schopf et al., 1975; Schopf, 1984) suggested that for a tenfold increase in morphological complexity there is a tenfold increase in apparent evolutionary rate. In opposition to this, Futuyma (1979) proposed that the need for integration in complex structures may result in a lowered rate of morphological evolution. The resolution of this debate includes consideration of whether functional constraints, developmental constraints, the action of selection, or the interaction of these factors limit the morphological rate of evolution. Such consideration is beyond the scope of this review.

Approaches to the study of morphological rates of evolution may be divided into four major categories: (1) a descriptive approach; (2) a univariate approach, an atomization of the organism into its component parts – this approach is usually an application of one of the measures suggested by Haldane (1949); (3) a multivariate approach; and (4) a quantitative genetics approach.

THE DESCRIPTIVE APPROACH

Many of the initial studies of rates and patterns of evolution, while quantifying morphology, limited themselves to the use of descriptive terms which are highly subjective and thus made comparisons of evolutionary rates across taxa and studies difficult to interpret. This can be attributed to a lack of familiarity with statistical methodology and to the unavailability of both computers and the statistical packages which have made their use much less intimidating. Nonetheless, the use of descriptive terms remains subjective and makes comparisons of different authors works unlikely to yield useful results.

For example, Stebbins described rates of evolution in plants primarily in terms of fast and slow (Stebbins, 1947) or in terms of bradytely, horotely, and tachytely (Stebbins, 1949). A paper by Patterson (1949), measured rates of evolution in the taeniodonts in terms of genera and evolutionary rates were described as fast or slow. That such subjective terms are still applied is demonstrated in their use by Cracraft (1984) to describe morphological evolution in birds. Wood (1949) studied change in the morphology of the rhinoceroses, and qualitatively described the evolution of single characters. Since both rhinoceroses and horses belong to the order Perissodactyla, evolution in the rhinoceroses were measured in terms of "horse-units." The idea presented by Wood (1949), that of having a measure of evolution which can be used to compare rates in different organisms, should be a major consideration in the development of measures of morphological rates of evolution. Measuring rates on taxa above the species level generally presents problems with both the lumping of distinct morphospecies as well as the subjective nature of supraspecific groups. Nonetheless, distinguishing species boundaries in the fossil record will always remain a problem regardless of the chosen methodological approach, thus making this a difficult problem to resolve. A contemporaneous paper, written by Colbert (1948), took a more quantitative approach than those studies discussed above. In his study of

morphological evolution of the ceratopsin dinosaurs, Colbert considered both the geographic and temporal range of the taxa. Graphs of the measured variable for all of the suborders versus absolute time were plotted, making a comparison among the investigated groups possible; the steeper the slope the higher the apparent rate of morphological evolution. Thus a measure without semantic content was available for use in comparison among and between groups.

UNIVARIATE METHODS

Early univariate methods of measurement primarily involved the plotting of a variable against time, such as was done by Colbert (1948). Similar studies are those of Simpson (1944), Gingerich (1976) and Bookstein et al. (1978). A general flaw of these papers is the plotting of the character versus stratigraphic level rather than time and then drawing evolutionary conclusions. The conclusions regarding evolutionary patterns and rates are thus based on the assumption of a constant rate of sedimentation. Raup and Crick (1981), while making this assumption in their study of *Kosmoceratops*, describe such an assumption as "absurd."

Haldane's Methods

Haldane (1949) must be considered the seminal paper on the quantitative measurement of morphological rates of evolution. Comparisons of different characters within a lineage, or the same character between groups, can be calculated on the basis of percent difference. Thus, the first measure is

$$(\ln X_2 - \ln X_1) / \Delta t \quad (1),$$

where X_1 is the character mean at time 1, X_2 is the mean at time 2, and Δt is the amount of time, in years, between times 1 and 2; the resulting rate is frequently expressed in terms of percent

change per million years. Rewriting equation 1 in terms of the ratio $\ln(X_2/X_1)$ makes its proportional nature more apparent. A given amount of change accounts for less relative change in a large character than a small character, measuring proportional change thus scales for this effect and allows for the comparison of structures of different sizes.

The second of Haldane's measures was the time taken for a character to move one standard deviation unit

$$Vt/(\ln X_2 - \ln X_1) \quad (2),$$

where V is the average coefficient of variation and t is time in millions of years.

The third suggestion made by Haldane (1949) captured the imagination of a large number of researchers. He proposed the *darwin* as the unit of evolutionary rate. A darwin is defined as (Haldane 1949, p.55) "...an increase or decrease of size by a factor of e per million years, or, what is practically equivalent, an increase or decrease of 1/1000 per 1000 years." The darwin can be a confusing and awkward measure due to its being a change of e , and is viewed by Simpson (1953) as being an "unnecessary complication." Gould (1984) also found fault with the darwin as a measure of evolutionary rate; stating that its use to compare organisms is valid regardless of time interval, provided that the rate of change is exponential. However, if the rate of change is not exponential then the only valid comparisons are those for which measurements were taken over equivalent time intervals. Haldane's measure of evolutionary rate as expressed in equation 1 has been criticized by Lerman (1965a) for not considering changes in the variance of a character through time. In darwins, equation 1 results in each change of 10^{-8} (1% per million years) as being equivalent to a change of 0.01 darwin, or 10 millidarwins. Equation 1 gives the rate of change in darwins directly if time is expressed in terms of millions of years.

A large number of workers have used Haldane's (1949) methodology. Simpson (1953), for example, applied equation 1, as mean percentage change, to rates of evolution of hypsodonty in

equids. Bader (1955) studied evolutionary rates in two subfamilies of oreodonts using this methodology. Kurten (1960) used the darwin to calculate the rate of evolution of brain volume in the lineage leading from "*Pithecanthropus erectus*" to Recent *Homo sapiens* and to calculate the rate of evolution for the length of the second lower premolar of *Ursus*. Kurten divided these rates into three broad categories: A-rates, which are roughly equivalent to tachytelic rates, short bursts of rapid change; B-rates and C-rates, which are roughly equivalent to horotelic rates, the B-rates being more rapid than C-rates. Blumenberg (1980) added D-rates to Kurten's (1960) A-, B-, and C-rates. Blumenberg defined D-rates as a rate distribution which seldom, if ever, exceeds 10 millidarwins. D-rates are distinguished from bradytelic rates in being concerned with time intervals of at least 100 million years. Similarly, Gingerich (1983) calculated rate in darwins and then classified his results as: (1) very high rates, (2) high rates, (3) moderate rates, and (4) low rates.

Malmgren and Kennett (1981) studied the evolution of the foraminiferan lineage leading from *Globorotalia conoidea* to *G. inflata* and expressed the morphological rate of evolution as percent change per million years. A conclusion of this paper is that the patterns of evolution in the characters studied bear little similarity to each other. Additionally, all of the characters, except one, exhibited a gradual rather than punctuational pattern. This may be construed as evidence that both gradualistic and punctuational trends can occur within a single population during a particular time interval, thus showing that several characters need to be considered in an analysis of evolutionary rates and patterns. It would be best if univariate trends were studied within the framework of a multivariate approach.

I include the multivariate study by Stanley and Yang (1987) in the section on univariate measures of evolutionary rates as they expressed their results for single variables in darwins. This excellent study employed both eigenshape analysis and Mahalanobis' D, two multivariate

measures to compare and contrast between the samples of Neogene and extant bivalves studied. The use of Mahalanobis' D was based on Lerman (1965a). Mahalanobis' D will be discussed in greater detail in the section on multivariate measures of evolutionary rates. The specimens used in this study were limited to differing in size by no more than 25% as to "avoid potential problems for allometry." This in itself has the potential for biasing the evolutionary rate by arbitrarily truncating the samples. The allometric relationship which Stanley and Yang are trying to avoid may potentially have evolutionary significance. This may be especially true as they state that shape is much more important than size in the evolutionary history of the bivalves studied, and in invertebrates generally. Stasis is defined as being changes in morphology which remain within the range of morphological variability at one time. The range of morphological variability is determined by examining extant material from several different localities. Sampling and time between samples comprise the major difficulties in evaluation of the conclusions presented in this paper. Stanley and Yang are faced with the problem that using widely spaced temporal horizons can easily lead to missing many different evolutionary events and patterns, and thus bias their data towards lower rates of evolution.

Temporal Scaling

In *Science* there was a series of three papers concerning the application of Gingerich's method of temporal scaling to the problem of the inverse relationship between time interval and evolutionary rate. Gingerich (1983) found that the average amount of evolutionary change in studies he surveyed was: $\ln X_1 - \ln X_2 = 1.2$. The plot of the natural log of the rate of change in darwins against time results in a smooth curve with a slope of -1.0. Gould (1984) agreed with Gingerich that the effects of the chosen time interval and of scaling for differences in time interval will lead to incorrect conclusions regarding relative rates of evolution. They also agree that the

difference in natural logs of 1.2 is a result of human perception, that is, organisms differing by values less than this are generally not considered different and organisms differing by values greater than this are generally considered too different to compare (When considering this analysis note that $\ln(X_1/X_2)=1.2$ implies a proportional change of more than a factor of three as $e^{1.2} \approx 3.3$). Gould points out that Gingerich's conclusion that the rate of evolution is inversely related to the time interval over which the rate is measured is based on a statistical artifact of plotting the inverse of time (rate) against time. Gingerich (1983) plotted the natural log of rate of change in darwins against the measurement interval as expressed in millions of years. Stanley and Yang (1987) also criticize Gingerich's (1983) conclusions on several bases. First, the biased data cannot be corrected for time interval since higher and lower rates have not been included. Stanley and Yang's (1987) second criticism is based on their study of evolutionary change in bivalve morphology. They concluded that size is of less evolutionary importance than shape. The size ranges of bivalves is primarily attributable to growth rate and age at time of death. The invertebrate data used by Gingerich was taken from Van Valen (1974) and Hallam (1975), which are both primarily concerned with changes in size rather than shape. Since Stanley and Yang (1987) concluded that size generally evolves more rapidly than shape for invertebrates, Gingerich's invertebrate data is biased towards higher rates of evolution. The third point raised by Stanley and Yang (1987) is that fluctuations within a static morphology may account for the pattern observed by Gingerich (1983).

Another Univariate Method

In Lerman (1965a) the rate of univariate evolution expressed in standard deviation units is

$$(X_2 - X_1)/st \quad (3),$$

where s is a measure of the standard deviation of the character X and t is time. This is nearly the

inverse of equation 2, used by Haldane (1949) to calculate the amount of time needed for a given character to change by one standard deviation unit. Lerman (1965a, p. 19, table 1) compared the results of equations 1 and 3 for the rates of evolution of hypsodonty. Rates of change using equation 3 were calculated between: *Hyracotherium* and *Mesohippus*, *Mesohippus* and *Hypohippus*, *Mesohippus* and *Merychippus*, and *Merychippus* and *Neohippus*. The mean standard deviation for all five samples was used to calculate one set of rates and a standard deviation calculated for each pairwise comparison was used to calculate another set of rates. As Lerman pointed out, the sample variances are not the same for end members of the lineage. Thus the rates generated using the average standard deviation may make further comparisons difficult since many statistical tests assume homogeneity of variances. Lerman used Bartlett's test for the homogeneity of variances. This test is highly susceptible to non-normality (Zar 1984) so the sample variances may not actually be different. The variances of each pair, as used by Lerman (1965a, p. 19, table 1, column 3) are more consistent. However, Simpson's (1949) proviso must be considered; that is, by measuring change in terms of standard deviation units characters with low variability will appear to have a higher rate of evolution than characters with a greater amount of variation. In one sense for a given amount of change a character with low variability has evolved at a greater rate than a character with greater variability. Change beyond, or focused at the limits of, the character distribution implies a greater amount of evolutionary change than a change of mean well within the character distribution. A change well within the limits of the character distribution may merely be due minor fluctuations within an essentially static morphology or to sampling errors.

MULTIVARIATE METHODS

The organism is a whole. It functions as an integrated unit. Thus, a multivariate measure of

the rate of morphological evolution is desirable. Such a measure permits viewing the changing organism as a coherent unit (Simpson, 1949), not as a collection of independent characters. Simpson's (1949) statement that "... a primary morphologic approach to the evolution of the whole organism involves too many separate characters for ready analysis and combination, ... Morphologic rates, in the strict sense, are most profitably studied in terms of single characters." (also see Simpson [1944]) can, with the advent of modern computational techniques and computers, no longer be considered an adequate restraint on the use of multivariate methods.

Discriminant Methods

Lerman (1965a) studied the rate of evolution in equids, ammonoids, oreodonts, and pelecypods. Also, an in-depth analysis of morphologic features of *Exogyra* (Mollusca) was presented in Lerman (1965b). The measures proposed by Lerman (1965a,b) are distance measures calculated from the sum of the differences in means divided by the standard deviations through which each character mean moved during a given time interval. Lerman (1965a) calculated the distance between two populations

$$D^2 = \sum ((X_{2i} - X_{1i})^2 / s_i^2) \quad (4),$$

which is an expression of Mahalanobis' D^2 , summed over K characters, for uncorrelated characters (compare this to equation 3). The distance between the means for K characters is then expressed as D, the positive square root of D^2 . For the case of correlated characters Lerman (1965a) expressed D as

$$D = (\sum \sum r^{ij} y_i y_j)^{0.5} \quad (5), \text{ where}$$

$$y_i = ((X_{2i} - X_{1i}) / s_i) \quad (6),$$

and r^{ij} is the ij element of the inverse of the pooled correlation matrix and y_i is the difference

between the means in standard deviations. D/t is then regarded as the rate of increase of the statistical distance between the two populations studied. D can be expressed only as a positive value. In Lerman (1965b) D/t for the uncorrelated case is calculated as

$$D/t = ((\sum (d_i/s_i)^2)^{0.5})/t \quad (7), \text{ where}$$

$$d_i = X_{2i} - X_{1i} \quad (8).$$

Notice that equation 7 is the square root of equation 4 divided by time. In both papers Lerman primarily used the equation for uncorrelated characters. This approach appears to be the less useful of the two, since (in spite of low or non-significant correlations) there is always some correlation between characters. Atchley (1980) criticized all measures of morphological distance that fail to consider inter-character correlation because such measures result in spuriously increased or decreased distances between samples; it is reasonable to assume that different groups will have different inter-character correlations.

Bilsborough (1973) applied Lerman's suggestions to an analysis of changes in the morphology of the hominid cranium. Mahalanobis' D^2 is calculated and then D/t is calculated as to express change in terms of mean standard deviation units per 100,000 years. Bilsborough (1976), analyzed character complexes within the skull and used distances calculated by the Q-method of Gower (1966) to express morphological rates in terms of mean standard deviation units per 100,000 years. This involves obtaining D^2 from a canonical variates technique which allows for a low-dimensional representation of the scatter of the groups studied. This technique permits the contribution of each character to be determined. A general problem with canonical variates is that the contribution of a particular sample to the pooled variance is weighted by the size of the sample (Neff and Marcus, 1980). Gower (1966) suggested that a principal coordinates analysis of the D^2 's between each group will give a more accurate presentation of their actual relationship (Neff and Marcus, 1980).

Other studies which used canonical variates analysis include those of Kelley (1984) using Miocene mollusks; Reyment (1985) who was concerned with the mechanism of ostracod speciation; Chaline and Laurin (1986) who analyzed patterns of rodent evolution; and Cheetham (1986) who studied speciation in bryozoans.

Lazarus (1986) focused on the early stages of the origin of the *Pterocanium prismatium* radiolarian lineage. Univariate measures of change were calculated in terms of standard deviation units, while discriminant analysis was used to estimate the distance between *P. prismatium* and *P. charybdeum*. Single discriminant functions were used to score a particular lineage's data matrix and the rate was then expressed in terms of the number of standard deviations moved. The univariate analysis showed species differences as much as 1–2 standard deviations whereas the multivariate analysis showed species differences in the area of 5 standard deviations in just 50,000 years after the lineages split. The point is, that multivariate measures reveal differences between the species that would otherwise go undetected. This demonstrates that while the taxonomist may have a gestalt recognition of the two species, single character analysis may be incapable of sufficiently distinguishing species. The data may show large overlap between all characters when they are considered singly, with multivariate analysis showing substantial difference.

The studies discussed in this section are related to classical discriminant analysis or canonical variates analysis. Discriminant analysis involves the computation of a discriminant function to classify each observation into groups which have been defined a priori. The closely related canonical variates analysis finds that linear combination of variables which exhibits the highest possible multiple correlation with the group. The first canonical variate is that linear combination which best summarizes the among-group variance. Generalized distance analysis is another way of estimating differences between groups and is closely related to both of these

methods. Discriminant analysis is most suited for placing unknown specimens into groups which have been given an a priori designation, as well as for examining the relationship between individual unidentified specimens and a priori groups. Canonical variates analysis and distance analysis are suited for examining the relationships between these groups.

CONCLUSIONS

The morphology of an organism has frequently been discussed in terms of independent or uncorrelated characters. As the foregoing discussion shows, a multivariate rate of evolution which is based on the quantification of several morphometric variables, will provide a greater understanding of the evolution of a morphology as an integrated whole than the atomistic view a univariate approach provides. This is especially so for those methods of multivariate analysis which take character correlations into consideration. Many recent studies (e.g. Lazarus, 1986; Cheetham, 1986; Chaline and Laurin, 1986) have utilized multivariate methods in their studies of morphological rates of evolution. Studies such as these have primarily treated multivariate rates of evolution as a scalar quantity whereas Bookstein (pers. comm.) suggests expressing multivariate rates of change as a vector.

Using a methodology similar to those found in Lazarus (1986), Cheetham (1986) and Chaline and Laurin (1986) as a base, I would like to suggest a standardized measure of the rate of morphological evolution. The pattern of evolution is determined by a temporal sequence of points (generally a sequence of the means of samples). This sequence may be broken into several stages within which a general trend is maintained. A given pattern may consist of many stages, with a large number of changes in the rate and direction of evolution, or of a single stage with a single consistent trend. Justification for the use of stages may be drawn from Lande (1986). He has demonstrated that fluctuations in morphology within periods of stasis may be due to genetic drift,

environmental tracking, or ecophenotypic plasticity. The same may be true for fluctuations within periods of directional change. As a result of these fluctuations an average rate calculated over sampling intervals will be biased.

Based on these considerations the simplest and most effective method of quantifying the morphological rate of evolution, once the hypothesis that the pattern of evolution conforms to that of a random walk has been rejected, is to apply canonical variates analysis and then to view the slope of the line of the first canonical variate means of each stage as the rate of morphological change. The first canonical variate best summarizes among-group variance, the second canonical variate best summarizes the remaining among-group variance, etc. (Neff and Marcus, 1980). The use of slopes will create a measure of morphological change in terms of standard deviation units. The question of whether differences in rate exist can then be examined by testing for heterogeneity of the slopes. When there is difficulty in discerning the boundaries of these stages the boundary which results in the slope with the lowest standard error of the slope should be used as the measure of rate. Confidence intervals for the slope may also be calculated. A slope close to zero is what would be expected when morphology is static through time. The concept of using slopes (or a qualitative analog) has been applied by other workers (e.g. Colbert, 1948; Simpson, 1953; Kelly, 1984; Chaline and Laurin, 1986). As has been suggested by Bookstein (pers. comm.), in the event that the pattern of evolution conforms to a random walk the Brownian speed of evolution should then be calculated (B.S.E.). The B.S.E. is the mean reduced speed. The calculation of this value will be discussed in the Analysis section.

The requirements for studying the questions raised in this review are met by fossil marine diatoms from the deep-sea record. Such material permits the collection of large samples of specimens over a wide geographic range. The sites from which this material is obtained also permits sampling at relatively closely spaced time intervals. Stratigraphic correlation between

sites and the absolute dating of the material is aided by the availability of paleomagnetic, stable-isotope, and biostratigraphic methods.

TEMPORAL AND GEOGRAPHIC DISTRIBUTION OF *NITZSCHIA JOUSEAE*

Diatoms are unicellular, photosynthetic organisms (Hendy, 1964). The diatom cell is surrounded by a siliceous skeleton, which is called a frustule. A diatom frustule consists of two valves which fit together much as a pillbox; one half is the epitheca into which fits the other half, the hypotheca. During asexual reproduction the epitheca develops a new hypotheca and the old hypotheca becomes the epitheca to a new hypotheca (Taylor, 1980). Thus asexual reproduction in diatoms results in a gradual diminution in size and an increase in size variance (the MacDonald-Pfitzer Rule). There is a species-specific minimum size at which sexual reproduction may occur and result in the restoration of maximal frustule size. However, maximal size may also be restored vegetatively. If this reproductively induced morphological variation is present at the same relative magnitudes throughout the temporal range of a diatom lineage (and if random samples of the diatom population which existed at a given temporal horizon have been taken) then any changes in morphology may be considered evolutionary change, once geographic variation has been ruled out. If sexual reproduction is not synchronized throughout the population, then the MacDonald-Pfitzer Rule could result in a steady state in which mean size and size variance do not change through time. If these assumptions are seriously violated the observed patterns will be seriously biased as a result of ontogenetic variation and sampling artifacts. However, due to the rapid rate of both asexual and sexual reproduction in diatoms time-averaging alleviates the seriousness of these problems. The rate of sexual and asexual reproduction is dependent upon environmental parameters (Lewis, 1984). Moreover, Lewis (1984) presented 0.3 asexual divisions per day resulting in sexual reproduction every 100 generations as a reasonable rate. Sampling error due to differential preservation remains a problem in this study as it does in all studies concerning the fossil record.

Members of the genus *Nitzschia* Hassal are distributed globally in the modern oceans

(Round, 1981). The genus *Nitzschia* is a member of the Kingdom Protista, Phylum Chrysophyta, Class Bacillariophyceae, and Family Nitzschiaceae. *Nitzschia* is a very diverse genus, containing free-living photosynthetic forms, saprophytes (Hendy, 1964), and species which are the endosymbionts of foraminifera (e.g., Lee et al., 1980).

The species *Nitzschia jouseae* was initially described by Burckle (1972). According to Burckle (1972) *N. jouseae* is limited in distribution to the equatorial Pacific and Indian Oceans as well as the temperate latitudes of the Pacific. The temporal range of *N. jouseae* is limited to the Pliocene. Stratigraphically, the *N. jouseae* Zone (the biostratigraphic zone defined by the FAD and LAD of *N. jouseae* [Burckle, 1972]) begins with the "c" event of the Gilbert Reversed Magnetic chron and ranges through the middle of the Gauss normal chron. This study finds that, within the equatorial zone (figure 1), *N. jouseae* has its longest temporal range in the eastern equatorial Pacific Ocean (DSDP Site 157) with its first appearance datum level (FAD) at 4.81 Ma and its last appearance datum level (LAD) at 2.55 Ma. In the central Pacific the FAD is 4.69 Ma and the LAD is 2.61 Ma in RC12-66 and 2.68 Ma in DSDP Site 573. Thus, this study is basically in agreement with the study of Burckle and Trainer (1979) who place the LAD of *N. jouseae* in the equatorial Pacific at 2.6 Ma. In the northwest Pacific Ocean (figure 1), DSDP Site 578, Koizumi and Tanimura (1986) report *N. jouseae*'s first appearance at approximately 4.45 Ma and its last appearance between 2.48 and 2.50 Ma. Thus, Koizumi and Tanimura (1986) are basically in agreement with Burckle et al. (1985), who consider the first and last appearances of *N. jouseae* in the northwest and equatorial Pacific to be isochronous. In the Indian Ocean site (V29-40; figure 1) the first appearance is older than 3.88 Ma (Burckle and Opdyke, 1977) and the LAD occurs at 2.6 Ma. Given the exceedingly small sample sizes at the extremes of the temporal range of *N. jouseae*, the temporal range over which the multivariate analysis was conducted is from 4.59-2.61 Ma in DSDP Site 157, 4.69-2.69 Ma in RC12-66 and 4.69-2.84

Ma in DSDP Site 573. Ciesielski (1983) reported finding *N. jouseae* for a short interval at two sites in the southwest Atlantic Ocean (DSDP Sites 513 [57°35'S, 24°38'W] and 513A) at approximately 4.60 Ma. This finding is near the first appearance of the species within the Pacific Ocean. Outside of the equatorial Pacific Ocean its abundance drops off sharply and, thus far, there has been no recovery of this species in the southern Pacific.

MATERIALS AND METHODS

Variables Studied

Slides were prepared after Schrader (1974). This method consists of air drying a 1–2.5 cc sample, washing and heating it in 10% hydrochloric acid to remove organic material. The sample is then given six 90 minute washes in filtered water. Then, 7–8 drops of material is pipetted, with water, onto a cover slip resting on a hot plate. When the cover slip is dry Permount is used to attach the cover slip to a slide and permitted two days to harden before viewing.

Five characters were measured on each specimen at 1000x using a binocular light microscope (figure 2): (1) maximum length of the marginal costae (MKL), (2) maximum width between marginal costae (MKW), (3) sum of the distances to the edge of the frustule from the ends of the longest marginal costae (DIFFML), (4) sum of the distances between the marginal costae and the edge of the frustule at its maximum width (DIFFMW), and (5) the number of transverse costae (NC). Each of the continuous variables was measured in ocular micrometer units which were then converted to microns (μ). The conversion factor was 0.4. For the central equatorial site, the number of specimens per sample was generally in the upper teens through the low twenties. Though the number of whole specimens per sample occasionally exceeded 50 or more. The samples from sites outside of the equatorial Pacific Ocean contained considerably fewer specimens, with samples ranging from no whole specimens to a maximum of 19 per sample. To determine the influence of measurement error on the data, twenty measurements were taken from a single specimen on two different days. The results of an ANOVA indicates no significant differences between measurements. Measurement error, itself, was calculated as the square-root of the error variance of the ANOVA model; these values for the variables analyzed in this study are: 0.06 for MKL, 0.06 for MKW, 0.06 for DIFFML, 0.09 for DIFFMW, and 1.64 for NC.

THE CORES

There were several reasons for choosing to study the marine microfossil material available from Deep Sea Drilling Project (DSDP) and Lamont-Doherty Geological Observatory (L-DGO) of Columbia University cores. First, in marine cores large numbers of microfossils are found in a minimum of space. This enables the collection of relatively large sample sizes while maintaining low levels of mixing of temporally disjunct populations (each sample contains approximately 3,000 years of sedimentary material). Second, piston cores can be sampled and analyzed to identify a record of paleomagnetic events. Each magnetic reversal is a synchronously occurring global event (Kennett, 1982). This record of reversals in Earth's polarity is tied to the absolute time scale by comparison with the same sequence of reversals found in terrestrial volcanic material. The volcanic material having been dated using the potassium-argon method. The polarity reversals allow for a precise calibration of the cores in absolute time. Sites without magnetic analyses (such as rotary cores) can be correlated with those cores for which absolute dates are available by means of oxygen isotope and calcium carbonate data as well as biostratigraphic markers. Since calcium carbonate and oxygen isotope stratigraphy provide a continuous record (if hiatuses and diastems are not present) dates may be associated with events without resorting to the linear interpolation and without assuming a constant rate of sedimentation. In addition, oxygen and calcium carbonate isotope stratigraphy provides climatic data. Dates for samples taken between magnetic reversals are calculated by linear interpolation and thus assume a constant rate of sedimentation between reversals. Third, marine cores generally have continuous sedimentation (see figure 3 for a plot of the relationship between depth and time at the sites examined). This provides a continuous sequence of fossils so that a time-averaged record of a microfossil lineage may be taken. Presently there are representative cores available from most regions of the oceans as well as from major lakes and seas. This

permits the examination of the group(s) of interest over their geographic range (see figure 1 and table 1 for the locations and distances between the sites examined).

The sites used in this study were chosen on several different bases. Those sites with paleomagnetic stratigraphy in addition to stable isotope stratigraphy were given priority. Sites were also chosen based on the prior findings of relatively abundant and well preserved samples of *N. jouseae*.

DSDP Site 157 is located at 01°45.70' South; 85°54.17' West in the eastern equatorial Pacific Ocean. Since this core was obtained by rotary drilling there are no paleomagnetism data available. DSDP Site 157 was raised from the southern edge of the Panama Basin on the southern side of the Carnegie Ridge beneath the Peru–Chile current. Over the last 5 million years there has been little change in the oceanography and topography of this region (Heath and van Andel, 1973). This is the easternmost site considered in this study. The average sedimentation rate of this core for the time duration considered was 6.3 cm/Kyr (thousand years). Correlation of DSDP Site 157 with the central Pacific sites (RC12–66 and DSDP Site 573) is by means of chemostratigraphy (calcium carbonate concentrations) and various biostratigraphic indicators (Burckle, 1978; figure 4).

DSDP Site 573 was raised at 00°29.91' N; 133°19.81' W from beneath the equatorial Pacific Ocean upwelling zone. Since DSDP Site 573 is a hydraulic piston core its chronostratigraphy is based on paleomagnetic data (Weinreich and Thayer, 1985; based on Berggren et al., [1983]). The sedimentation rate in this core undergoes an abrupt change at approximately 3.9 Ma from a rate of about 0.4 cm/Kyr to 1.5 cm/Kyr (Baldauf, 1985).

Like DSDP Site 573, RC12–66 (an L–DGO core) is a hydraulic piston core and is located in the central equatorial Pacific Ocean to the north and west of DSDP Site 573 (figure 1; 2°37.0' North; 148°13.0' West). The chronostratigraphy of RC12–66 is based on paleomagnetism

(Burckle, 1978) and the correlation of the paleomagnetic reversals with the absolute time for these reversals found Berggren et al. (1983; this is also the time scale to which the dating of magnetic reversals at the other sites has been tied). The central Pacific sites have good magneto- and chemo-stratigraphic control (Foster and Opdyke, 1970; Shackleton and Opdyke, 1977; Barron et al., 1985; Prell, 1985) that allow for their relatively precise calibration in absolute time. The average sedimentation rate of this core was 0.5 cm/Kyr.

DSDP Site 578 was raised at 33°55.6' North and 151°37.7' East in the northwest Pacific Ocean. This site is a hydraulic piston core and represents mainly complete and undisturbed sections of sediment (Bleil, 1985); thus it contains all paleomagnetic reversals that occurred during the time span covered in this study (Heath et al., 1985a). Following a hiatus ending at approximately 8.8 Ma, the sedimentation rate in this core was approximately 1.5 cm/Kyr for the time span under consideration. The chronostratigraphy of DSDP Site 578 is based on the paleomagnetism presented in Bleil (1985; also see Heath et al., 1985b).

L-D60 core V29-40 was raised from the Indian Ocean at 10°29' South; 78°03' East (Burckle and Opdyke, 1977). This core has good magneto- and chemostratigraphic control and its chronostratigraphy is derived from Burckle and Opdyke (1977). The sedimentation rate was approximately 0.3 cm/Kyr. Although it lacks the early portions of the temporal range of *Neogene*, this site was chosen for study because it was the best of the available Indian Ocean cores.

SAMPLING INTERVAL

Completeness, which is defined as the percentage of the time span under consideration represented by sediment at a given level of resolution, was calculated for the three equatorial Pacific Ocean sites. Temporal resolution is dependent upon the chosen interval of time between samples. In RC12-66 samples were taken at approximately 10 cm intervals while in DSDP Sites

157 and 573 samples were taken at 0.5 m intervals. In V29-40 and DSDP Site 578, which were used primarily as checks on possible ecophenotypic or geographic variation in morphology, samples were taken at intervals of 1 m and 1.5 m respectively. The samples from RC12-66 include approximately 2.5 cc of material and the samples from the other sites all contain approximately 1 cc of material. Thus, on the average, a single sample contains about $3,000 \pm 1,000$ years of material (based on rough approximations of Schindel's [1982] calculations of microstratigraphic acuity). Estimates of the completeness of the stratigraphic sections under consideration were calculated using the methods of in Schindel (1982). In brief, this is a method based on a collection of empirical data concerning the influence of time interval on sedimentation rate. Assuming a 50% compaction rate, the number of millimeters in a given sampling interval is estimated. This value is then divided by the expected short-term sedimentation rate which is taken from a log-log plot of sedimentation rate versus time interval (Schindel, 1982, p.342). In this instance a conservative short-term interval of 0.01 million years (level of resolution) was used. The result of these calculations are then divided by the time interval under consideration and the resulting figure is the percent completeness at the chosen level of resolution. From these calculations, at the 0.01 Ma level of resolution (assuming that all intervals between samples were 0.01 Ma), the estimated completeness of DSDP Site 157 is 65%, DSDP Site 573 is 15% and RC12-66 is 2.7% complete. In order, these estimates of completeness range from excellent to fair to poor.

ANALYSIS

All of the statistics utilized in this study (with the exception of the runs test, the median test, and calculation of the Brownian speed of evolution) were performed using the Version 5 Edition of SAS. Computing facilities were provided by the City University of New York - University Computer Center (CUNY-UCC).

The approach to data analysis consisted of two major sections: (1) an analysis of the pattern of morphological change through time, and (2) an examination of the data for geographic/ecophenotypic variation and the influence, if any, of such variation on the interpretation of the pattern of change as determined by the first portion of the analysis.

Univariate Analysis

Univariate analysis of the data consisted of a visual interpretation of the plots of the means (SAS: PROC MEANS and PROC PLOT) of all the morphological variables (figures 5-9) versus time. With the exception of the northwest Pacific and Indian Ocean sites, samples in which fewer than five specimens were measured were excluded from the analysis.

MKL mean (figure 5) exhibited an increase through time; a similar trend is seen in DIFFML (figure 6). NC (figure 7) fluctuated within a stable range throughout the duration of the species. MKW (figure 8), upon the first appearance of *N. jouseae* underwent an increase in mean until about 3.8 Ma, after which the means fluctuated within a relatively small range. DIFFMW (figure 9) underwent an increase in mean until approximately 4.0 Ma. After 4.0 Ma there was little change in the mean until approximately 3.5 Ma after which the mean began to increase again, but at a slower rate than the initial increase. The plots of the coefficients of variation (c.v.'s; figures 11-15) show a similar pattern of variation at each of the equatorial Pacific Ocean sites.

Multivariate Analysis

Multivariate analysis involved the use of canonical variates analysis (SAS: PROC CANDISC) and the plotting of the first canonical variate means against time (figure 10). With the exception of the northwest Pacific and Indian Ocean site, only those sample with a minimum of five specimens were included in the multivariate analysis. Canonical variates analysis is a multivariate statistical technique which may be used to examine differences between populations which have been defined on an a priori basis. The first canonical variate is that linear combination of characters which best summarizes among- (between) sample differences (Neff and Marcus, 1980; Reyment et al., 1984). Each subsequent canonical variate best summarizes the remaining among-sample variance. The total canonical structure coefficients are the total sample correlations between the original variables and the canonical variates (SAS, 1985) and the contribution of the individual variables to the canonical scores may be determined by examining the loadings on the canonical variates (Klecka, 1980). The eigenvalues indicate the relative amount of between-group variance accounted for by each canonical variate. Heterogeneity of the within-sample covariance matrices was tested for with a likelihood ratio test (SAS, 1985: PROC DISCRIM).

Figure 9 indicates that there were two distinct stages in the evolutionary development of *N. jouseae*. During the first stage an increase was seen in the first canonical variate mean. Following this is a second phase which continued until the extinction of the lineage. During this second phase there was relatively little change in the first canonical variate means. The total canonical variate structure coefficients (table 2) indicate that no single character exerted a clear dominance in discrimination between temporal horizons at each site. However at site RC12-66, DIFFMW exerted the most influence while at the other central Pacific Ocean site (DSDP Site 573) MKW and DIFFML exerted the most influence as did MKW at the easternmost site (DSDP Site

157).

Random Walk

The runs test (Sokal and Rohlf, 1981), which examines data for randomness of fluctuations, was applied to the first canonical variate means. A nonparametric test for serial randomness (Zar, 1984) was applied to both the first canonical variate means and to each variable. Bookstein's reduced speed method (pers. comm.) of testing for a random walk in morphology was also applied. This method is discussed in greater detail below in conjunction with measures of morphological change.

Rates Of Morphological Change

Slopes of the first canonical variate means defining each stage, and the overall regression, were calculated (table 3). The slope was used as a measure of the multivariate rate of change. The slope of the lines rather than the average value of the rates across each interval were used to calculate the rate of change. This was done to avoid problems concerning minor fluctuations in the means. Such changes are more likely due to temporary, environmentally induced, fluctuations related to phenotypic plasticity or to sampling error rather than to any real evolutionary change. If an average of the rates between adjacent samples had been used, positive and negative fluctuations in the means would effect the measure of rate. Two additional tests were applied to the slopes: (1) all of the slopes were tested against the null hypothesis of $B=0$ (where b is the regression coefficient) and (2) the slope of each regression was tested against the null hypothesis that the slopes from each site were statistically equivalent and a common slope was calculated (SAS: PROC GLM).

The variance about the regression attributable to sedimentary mixing when there is a

constant trend in morphology was calculated as (Marcus, pers. comm.)

$$1/12(\Delta^2 Y) + s^2_{Y.X} \quad (9)$$

where $\Delta Y = B\Delta t$, the slope of the regression multiplied by the time interval over which the regression was calculated, and $s^2_{Y.X}$ is the error variance of the regression.

The Brownian speed of evolution (Bookstein, pers. comm.) was calculated for each stage and for the entire duration of the lineage (B.S.E.; table 3). The B.S.E. is a measure of the expected evolutionary speed for sequences conforming to a random walk that has been suggested by Bookstein (pers. comm.). The B.S.E. is the mean reduced speed of evolution as is calculated as

$$\Sigma(|\Delta M|)/(\sqrt{\Delta t})/N \quad (10)$$

where ΔM is the change in morphology for the interval Δt , the sum of the $\Delta M/\sqrt{\Delta t}$ over all samples taken is then divided by the number of samples to obtain the mean reduced speed, the Brownian speed of evolution. The B.S.E., in this study, is expressed in terms of the expected mean deviation of the standard deviation units between adjacent points scaled to one million years for the evolutionary stage under consideration. The standard deviation of the B.S.E. can be used to determine if a sequence of morphological points conform to a random walk. The B.S.E. divided by 0.798 (the positive half of a normal distribution of unit variance) estimates the expected standard deviation per million years. If the actual standard deviation of the B.S.E. is equal to the expected standard deviation, then the morphological sequence under consideration conforms to a random walk.

Analysis Of Geographic Variation

Eighteen temporal horizons were selected from the collected data (table 4). Eleven of these horizons were selected based on their relationship to a magnetic reversal. The remaining 7 horizons were selected for the sake of completeness. At each chosen temporal horizon those

samples temporally closest to one another were included in the analysis. Since all samples were not taken from the same horizon, samples of a maximum of 0.03 Myr apart were compared when more closely spaced samples were not available.

Univariate analysis involved the use of an analysis of variance (ANOVA) and Tukey's studentized range test to detect pairwise differences in mean values (table 5; SAS: PROC GLM). The homoscedasticity (homogeneity) of the c.v.'s across -sites was tested for by application of pairwise F-tests for the homogeneity of variances to the variances of data which had been transformed to natural-logarithms (table 6; Sokal and Rohlf, 1981; Zar, 1984; SAS: PROC TTEST). Assuming equal mixing of temporally separated populations, the amount of variance in a sample taken from the period of directional change in the morphology of *N. jouseae* will be greater than the variance of a given sample taken from the period during which directional change was not occurring. This is so due to the mixing of different morphologies during the former stage which does not occur during the latter stage.

Multivariate analysis involved testing for heterogeneity of the covariance matrices (likelihood ratio test; SAS Statistics Version 5), and an ANOVA and Tukey's studentized range test was conducted to detect differences in the first canonical variate scores (table 7). The canonical variates analysis conducted in this analysis of geographic variation is slightly different from that used to examine patterns and rates of evolution. In order to increase the number of temporal horizons available for comparison, some of the samples with low numbers of specimens which were previously dropped have been included in this analysis. However, this has resulted in little change in canonical structure and differences in the first canonical variate means are found primarily in the third decimal place and more rarely in the second decimal place. The results of this analysis indicate few differences between the means at the .05 probability level with the exception of a period of time ranging from ≈ 4.08 to ≈ 3.83 Ma (tables 5 and 7). Similarly,

multivariate ANOVA's (MANOVA; Wilk's criterion, a likelihood-ratio criterion; SAS, Version 5) were conducted on the original variables from matched temporal horizons in order to examine the similarity of the patterns of morphological evolution through time.

Validity Of The Characters

Nearly all of the covariance matrices used in the canonical variates analysis were of full rank. This lack of redundancy in the data matrices indicates that five distinct characters have been measured. Out of 62 samples taken from RC12-66 only one sample was not of full rank. Sixty-three out of the 74 samples taken from DSDP Site 157 and 43 out of 55 samples taken from DSDP Site 573 are of full rank. In each instance when the covariance matrix was not of full rank the sample size was equal to, or less than, five. Within each core there are no significant differences in the covariance matrices at the .05 probability level. This indicates that, through time, the relationships between the variables remained relatively stable.

DISCUSSION

Patterns of Morphological Change

The FAD's (≈ 4.8 Ma) seem to indicate an isochronous origin of *N. jouseae* throughout the Pacific Ocean (Burckle et al., 1985). In this study, the FAD of *N. jouseae* was found to be somewhat earlier in the easternmost site than in the other sites. Thus the possibility of westward migration from a hypothetical first evolutionary appearance in the east must be examined. Such migration is difficult to demonstrate in light of the similarity of the c.v.'s (figures 11–15). In addition, through time, there is little regularity in the geographic pattern of heterogeneous c.v.'s (table 6). These points suggest that either a localized evolutionary event was followed by geologically rapid dispersal (cf. Buzas and Culver, 1986) or that *N. jouseae* arose synchronously across the Pacific Ocean. The level of temporal resolution available makes it impossible to distinguish between these possibilities. Had migration (westward or eastward) of morphological variants played a significant role in the observed evolutionary pattern, then I would expect the site(s) receiving the immigrants to exhibit consistently greater variation than the site(s) from which they had emigrated. In addition, transition between morphological stages (as discussed later) would be expected to have exhibited a geographic pattern if directional migration had been an ongoing phenomenon. Analysis of the covariance matrices and multiple comparisons of the means (Tukey's studentized range test) of each character across the equatorial Pacific Ocean sites at a given temporal horizon does not support directional migration. Since both the mixing rate of the oceans ($\approx 1,000$ years [Shackleton, 1977]) and the surface mixing rate of the Pacific Ocean (≈ 100 years) are below the available level of temporal resolution the detection of subtle migratory patterns is difficult. Oceanographically, the Neogene equatorial Pacific Ocean circulation consisted primarily of a northern and southern equatorial surface current flowing in a westerly direction, an eastward-flowing surface countercurrent, and directly beneath the equator

an easterward flowing undercurrent (Kennett, 1982; this is the same circulation pattern found in the modern Pacific Ocean). The surface current and countercurrent are likely to have contributed to mixing of living diatoms while the undercurrent contributed further horizontal mixing of settling diatoms.

At each of the sites studied, with the exception of the easternmost site, the first canonical variate accounted for at least 60% of the total canonical variance of the data (table 8). The first canonical variate of the eastern equatorial Pacific Ocean site accounted for approximately 48% of the total canonical variance. Based on the plot of the first canonical variate means of the three equatorial Pacific Ocean sites, the history of *N. jouseae* is divided into two phases. The first phase, starting with *N. jouseae*'s first appearance and concluding between 4.2 and 4.0 Ma (table 3 and figure 10), is one of directional change in morphology. Following this phase the morphology became relatively static. It should be noted that had this study been limited to a univariate analysis the time of transition between evolutionary patterns would have been placed at a later date for the central equatorial Pacific Ocean sites (see MKW and DIFFMW, figures 8 and 9). The definition of the boundary between stages is most problematical at DSDP Site 157. This easternmost site is located closer to a coast (the west coast of South America) than the other equatorial Pacific Ocean sites, it is the site which exhibits the highest sedimentation rate and it is in a different biogeographic region than the other two equatorial Pacific sites (Collier, 1970; Prothero and Lazarus, 1982). With the exception of DSDP Site 157, for reasons to be discussed latter, the break in evolutionary trend was placed at that point for which the lowest standard errors of the slope of both stages were calculated (Had the break in evolutionary patterns been placed at other points the slopes for the period of directional change would have been within 1 standard deviation unit of the values referenced in table 3). That the observed pattern of morphological change is not an artifact of sampling populations with relatively high variances (as

represented by figures 10–14) is confirmed by the similarities of the patterns of morphological change and c.v.'s among the sites.

Of the characters exerting the greatest influence on the total canonical structure (table 2), only MKW emulated the multivariate pattern (figures 8 and 10). Of the other characters, DIFFML (figure 6) appeared to have exhibited an upward trend in its mean throughout the duration of the lineage, although there is a slowing down in DIFFML's increase at approximately 3.8 Ma, which occurs just after the change in multivariate pattern. DIFFMW (figure 9) underwent an increase in mean until about 4.0 Ma after which it remained relatively static until about 3.5 Ma, at which point it again began to increase. The break in the increase in the mean of DIFFMW occurred just after the change in multivariate pattern.

A somewhat different canonical structure has been found at each site (table 2), and yet, the overall patterns at these sites are very similar. For all the equatorial sites the covariance matrices were homogeneous through time. This indicates that the change in rate and direction of morphological change was not accompanied by an alteration of the relationships among the morphometric variables. Each of the sites has in common the fact that one of the width characters is predominant in the total canonical structure. During asexual reproduction the short axis, the width, changes less than the long axis (Drebes, 1977; Gietler, in Lewis, 1984). This shows that morphological change between samples through time is not based solely on size variation attributable to the mechanism of asexual reproduction.

It is necessary to determine if the sequence of values conforms to a particular pattern or if they follow a random walk. If the null hypothesis of a random walk is not rejected the question will arise as to whether the observed pattern was generated by random processes or if deterministic processes produced a random pattern (Fisher, 1986). Fisher's (1986) dichotomy is basically an epistemological problem. Are we capable of considering every factor impinging

upon observed (random) patterns; and if we are, then does that pattern still behave in a random fashion with respect to its environment, or can its behavior be attributable to deterministic processes? A runs test (Sokal and Rohlf, 1981) conducted on the first canonical variate means did not indicate a significant number of runs occurring in either evolutionary stage, even though a distinct increase in the first canonical variate mean is seen in the first phase. The nonparametric median test for the randomness of measurements was applied to both the first canonical variate means and to the univariate measures. This test uses the number of runs above and below the median as the critical value (Zar, 1984). The sequence of first canonical variate means were found to emulate a random walk during the phase of directional change in both the easternmost site and in one of the two central equatorial sites (RC12-66). However, in the other equatorial site (DSDP 573) the hypothesis of a random walk was rejected for the period of directional change. For the second stage of evolution the hypothesis of a random walk was rejected for both the easternmost site and for one of the two central sites (DSDP 573). In summation, of the two equatorial Pacific Ocean sites the null hypothesis of a random walk accounting for the sequence of first canonical variate means was not rejected for both stages in RC12-66 and was rejected for both stages in DSDP Site 573. For the easternmost site, DSDP Site 157, the null hypothesis of a random walk was not rejected for the period of directional change and was rejected for the second stage.

A univariate application of the test for serial randomness of the data failed to reject the hypothesis of a random walk for the period of directional change in morphology. For the second stage the hypothesis of a random walk was accepted at all three sites for NC. For MKL this hypothesis was accepted only at DSDP Site 573. DIFFMW, DIFFML and MKW are the three variables which provided the greatest contribution to the total canonical structure. Of these three variables the hypothesis of a random walk was accepted with the exception of DIFFML at DSDP Site

573 and MKW at RC12-66. The inconsistency of the univariate pattern with the multivariate pattern should be noted. Neither of these tests consider the magnitude of change or the interval of time between points. All of these tests consider only the direction of change. The overall conformity of the patterns of morphological change at the different sites (with the exception of the period of time during which the lineage was undergoing a transition between patterns and when the lineage was nearing its LAD), adds further ambiguity to the examination of the null hypothesis of a random walk. It is quite possible for a random walk to result from the diatoms phenotypic plasticity and/or factors such as fluctuations in selection and mutation rates (Dobzhansky, 1970; Wright, 1977) to have accounted for the directional change in morphology seen in the first of the two evolutionary stages. The r -square (coefficient of determination) values of the slopes calculated for each site and stage were exceedingly low (table 3). The r -square values ranged from 0.38-0.47 for the period of directional change, and from 0.03-0.12 for the second phase of morphological change.

The reduced speed method (Bookstein, pers. comm.), which takes both magnitude of change and time interval into consideration, is a more powerful test for the detection of random patterns than either the runs or median tests. The results of the reduced speed method indicated that the pattern of morphological change observed for *N. jouseae* did not conform to a random walk. Table 3 lists the actual and expected standard deviations estimated by this method.

The rate of morphological change was calculated by dividing the morphological history observed for the *N. jouseae* into two stages in which there appeared to be a consistent morphological trend. Rates of morphological change within these stages were then calculated as the slope of the first canonical variate means and thus in terms of standard deviation units. The basis of this methodology has been discussed in the conclusion section of the Introduction. The first of the two defined stages in *N. jouseae* consisted of a general increase in the value of the first

canonical variate mean. The slopes of this trend range from 1.87–3.33 (table 3). Both the slopes and the intercepts are not significantly different ($p > .05$). This indicates that all three sites occupy relatively similar positions on the bivariate (first canonical variate mean versus time) plot. The slopes, standard errors of the slopes and r -square values of the regression (the coefficient of determination; the proportion of the total variation of the dependent variable accounted for by the regression [Zar, 1984]) for each site are listed in Table 3. The second of the two phases is a static phase, a phase in which the morphology underwent no directional change. The slope of the first canonical variate means of this phase is an order of magnitude lower than for the initial phase of evolution (table 3). The slope calculated for the easternmost site is statistically different from zero ($p < .05$) and both the slopes and intercepts are significantly different from one of the two central equatorial Pacific sites (DSDP Site 573; $p < .05$). The first stage appears to be one of directional change. The easternmost site had a relatively high standard error of the slope for the first stage of morphological change at this site (table 3). The placement of a break between the two defined stages of evolution proved difficult for the easternmost site. For the two central sites, there is a single division of the morphological sequence which yielded the lowest standard errors of the slope for both stages. The same does not hold true for the easternmost site. This may account for the differences between the easternmost and central sites in the second stage of morphological change. Since the slopes of the regressions on the second stages of the central equatorial Pacific sites are not significantly different from zero, this stage appears to be one of no directional change. The two defined stages of evolution have significantly different slopes ($p < .05$) and intercepts ($p < .05$).

The regressions over the entire morphological sequence (table 3) indicates that over the entire sequence the rates of evolution were not significantly different ($p < .05$) among the equatorial Pacific sites. The values of these slopes range from 1.13 to 1.38 and all three of the

slopes are significantly different from zero. However, the intercepts of the easternmost site and one of the central equatorial Pacific sites (RC12-66) are significantly different ($p < .05$), indicating a differential placement on the bivariate plot. With one exception (RC12-66, stage 2) the standard errors of the slopes are lowest for the overall regression, and with one exception (DSDP Site 573, stage 1) the r -square values (0.41–0.63) are highest for the overall regression. If single regressions were appropriate then the expectation would be that the two stages into which the morphological sequence has been divided would all have equal slopes and intercepts. Even with this the r -square values indicate a poor fit of the regressions. That this relationship between the overall regression and the regressions on each stage is not an artifact of the techniques used is demonstrated by regressions on *Rhizosolenia praebergonii* (Sorhannus et al., unpublished). This lineage was also divided into two morphological stages based on plots of the first canonical variate means against time. For the first of the defined stages of morphological change of this lineage the fit of the regression (r -square) is consistently higher than it is for the overall regression.

The variance about each regression attributable to mixing during a constant trend was calculated as presented in the Analysis section (equation 9). For the first of the defined stages of morphological change these variances are 0.71, 0.44 and 0.28 for RC12-66, DSDP Site 157 and DSDP Site 573, respectively. For the second stage of morphological change the variances are 0.15, 0.26 and 0.25, respectively for RC12-66, DSDP Site 157, and DSDP Site 573. For completeness I have also calculated the variance attributable to mixing for the overall regression. For the same sequence of sites, the variances are: 1.24, 0.73, 0.90. As anticipated, the variance about the regression line is higher for the period of directional morphology since the sedimentary mixing which occurred involved the mixing of a changing morphotype. The overall regressions have the highest variances attributable to mixing since the overall regression is

considering two different morphological trends.

The B.S.E. was calculated for each stage of evolution at each site (table 3). For the first stage these values range from 2.13–3.90 and for the second stage they range from 1.74–3.33. For the directional phase, the B.S.E. of DSDP Site 573 (one of the central sites) is significantly different ($p < .05$) from the easternmost site. For the second phase, the easternmost site was significantly different ($p < .05$) from the other central equatorial site (RC12–66). The speeds calculated for each stage were not significantly different between stages for both the easternmost site and one of the central sites (DSDP Site 573). This indicates that, for these two sites, the mean deviation in morphology between adjacent samples (with the time interval scaled to one million years) were equivalent. For the other central site (RC12–66) the speeds of the two stages were significantly different ($p < .05$). The B.S.E. calculated for the entire morphological sequence indicates that the easternmost equatorial site was significantly different ($p < .05$) from the two central equatorial sites. Since the B.S.E. is a measure of morphological change specifically for random sequences, it does not consider the direction of change. Therefore, it is not a useful measure of morphological change for the sequence considered in this study. However, comparison of the expected with actual deviations derived from the calculation of the B.S.E. does provide useful information (as will be discussed below).

conclusions of the analysis of patterns of morphological change

The plot of the first canonical variate means would seem to indicate that there are two distinct morphological stages. Yet, the slopes of these these individual stages account for very little of the variation in the first canonical variate mean. The test for randomness of a morphological sequence suggested by Bookstein (pers. comm.) rejects the hypothesis of a random walk for these stages. The Brownian Speed of Evolution (B.S.E. values) for each of the stages are

not significantly different for two of the three equatorial Pacific Ocean sites. Thus, the magnitude of the mean deviation between successive points in each of these stages are equivalent. The relationships of the actual to expected deviations (table 3) indicate that: (1) there are deviations in morphology within each stage; (2) in general, the magnitude of the deviations within each stage at a given site are equal; (3) during the phase of directional change, positive deviations outweigh negative deviations; (4) during the non-directional phase of morphological change (central equatorial Pacific), positive and negative deviations are in balance; and (5) with one exception (RC12-66, stage 2), all of the actual standard deviations of the B.S.E.'s are lower than the expected standard deviations. These results indicate that deviations in morphology have occurred within selective boundaries.

The pattern of morphological change does not conform to a random walk and yet time is a poor predictor of morphology. Raup and Crick (1981) proposed a model which may explain the patterns of morphological change observed for the *N. jouseae* lineage. Their model suggests that a random walk may occur within selective bounds. Since the hypothesis of a random walk has been rejected for this morphological sequence, the phrasing of the Raup and Crick model needs to be modified. Rather than stating that a random walk in morphology occurs within selective bounds, it is more appropriate to state that deviations in morphology occurred within selective bounds. The differences between these sites may be attributable to localized environmental differences interacting with the low heritabilities typical of diatoms (cf. Wood et al., 1987 and references therein). The easternmost site is found in a biogeographic province distinct from that of the two central equatorial Pacific sites. This similar, yet different in detail, pattern of evolution in the easternmost site demonstrates that selective factors operating over a wide geographic range interacted with localized selective factors to produce the observed pattern of change. Localized geographic differences morphology are discussed in the next section.

Kitchell (1983) discusses possible selective pressures which may result in an increase in diatom size such as was exhibited during the first stage of the evolution of *N. jouseae*. Autotrophic phytoplankton experience exploitative competition through the mutual utilization of the same resources. Diffusion of nutrients to the phytoplankton cell is dependent on cell surface area and shape. Laboratory experiments have shown that as the temporal patchiness of the nutrient supply increases large cells gain a competitive advantage. Competition for nutrient uptake selects for a decrease in size, while predation (primarily by copepods) simultaneously selects for size increase. Additionally, it has been shown that copepods are size-selective predators in that they feed on large prey (up to a point, beyond which the diatoms are too large to be suitable prey) or at the biomass peak. Size increase is a response to both increased nutrient availability and increased predation. The stability of the morphology of *N. jouseae* may have been initiated near the point at which the selective forces balanced out. Lande (1986) demonstrates that long-term stasis, such as is exhibited in *N. jouseae*, is caused by the action of stabilizing selection. The operation of such pressures, at varying intensities, throughout the geographic range of *N. jouseae* may provide the selective boundaries within which a fluctuations in morphology may occur.

There exist alternatives to the conclusions reached above. I have been unable to define an ancestral species for *N. jouseae*. The definition of a morphospecies does not imply validity in terms of either a biological or evolutionary species (e.g. sibling species). It then remains that the pattern of morphological change may have been the net result of the patterns of two species, or the result of an incomplete definition of the species studied (i.e. putting too narrow a limit on the morphotype considered). Support for the existence of more than one species may be drawn from the differences in loadings on the first canonical variate (table 2). The existence of either another (other) species, or incipient species (subspecies?), may provide an alternative explanation for

the differences in morphology between the central and eastern equatorial Pacific regions.

Geographic Variation

Four distinct water masses are represented by the five sites used in this study. The easternmost site was located in the Peru water mass of the Pacific Ocean, the two central equatorial Pacific sites were located in the equatorial water mass of the Pacific Ocean, the northwest Pacific site was located within the Kuroshio water mass, and the Indian Ocean site is from the Indian Ocean water mass (Collier, 1970; figure 1). In this section, the possibility that different morphotypes were found in these water masses is examined.

The equatorial Pacific Ocean is a high-productivity zone, particularly in the eastern Pacific Ocean (Theyer et al., 1985). The eastern equatorial Pacific site was raised from the southern part of the Peru Basin from beneath the high-productivity waters of the Peru current (Bukry and Foster, 1973; Dinkelman, 1973). The Peru current brings cool, Antarctic Ocean, water northward to the equator (Kennett, 1982). Thus the easternmost site in this study is located in waters which are relatively cooler than the warmer equatorial currents which accompany the more northern central sites (Dinkelman, 1973). In general, Peru water mass contains water which is cooler than the equatorial water mass and also exhibits a greater range of salinity (Collier, 1970). The sediments from both water masses are dominated by siliceous matter (Dinkelman, 1973; Theyer et al., 1985).

DSDP Site 578 was chosen since of the available northwest Pacific Ocean sites it exhibited the best preservation of *N. jouseae* (Kozumi and Tanimura, 1985). The subtropical region of the northwest Pacific typically has a higher annual evaporation than precipitation rate (Kozumi, 1985). In the Kuroshio water mass the light intensities (Kennett, 1982), temperatures and salinity are all generally lower than either of the equatorial Pacific Ocean water masses (Collier,

1970) and there is greater seasonality in these variables and a seasonality in diatom species and their abundances (Hendy, 1964) than in more tropical waters.

The major part of the Indian Ocean lies beneath the equator and its equatorial current system is located further to the south than the equatorial current system of the Pacific Ocean (Collier, 1970; figure 1). This is the only site studied within a water mass which has a land mass as a northern boundary. The monsoons which are typical of the Indian Ocean creates a surface circulation which alternates between southwest and northeast flows; the monsoons are also responsible for large influxes of freshwater and thus high variability in salinity (Collier, 1970).

With the exception of the period of time after which there was a transition in evolutionary pattern, and near the last appearance of *N. jouseae*, ANOVA's indicated few differences in univariate means ($p < .05$) at any given temporal horizon. This is demonstrated graphically in figures 4-8 (also see tables 5 and 7). Due to low samples sizes, the last temporal horizon studied was some 200,000 years earlier than the LAD of *N. jouseae*. This mandates that caution be exercised when discussing geographic variation near the LAD. Keeping this qualification in mind we may state that there are low levels of geographic variation seen near the end of the *N. jouseae* lineage. This variation is based on differences in the morphology of *N. jouseae* at the extremes of its geographic range in the equatorial Pacific Ocean (tables 5 and 7, level R: 2.83-2.81 Ma). At this time, in contrast to the period of time immediately succeeding the transition between evolutionary patterns, the covariance structure does not exhibit geographic variation. This indicates that the basic relationships between the variables studied remained constant across geographic horizons during this period of time. Within-site analysis has shown that there is no temporal heterogeneity of the covariance matrices. Levels P (2.91-2.93 Ma) and R (2.81-2.83 Ma) are the only horizons, with the exception of an approximately 0.25 Myr period of time

following the change in evolutionary pattern, for which any geographic variation is detected in the first canonical variate scores (table 7). Such geographic variation indicates a major evolutionary event (in this case, the extinction of a species and a change in evolutionary pattern). The geographic variation in means which was detected following the change in evolutionary pattern was concentrated in a 0.25 m.y. period (tables 5 and 7, levels E-I: 4.07-3.84 Ma). At this point in time there appears to be no change in either calcium carbonate or oxygen isotope mode, and thus there is no indication of either biotic or abiotic changes in the environment. Only DIFFML shows an accompanying consistent heterogeneity in its variance (table 6b) along with the differences in means observed during this transition. At each of these levels Tukey's studentized range tests conducted on the first canonical variate scores indicate that only "adjacent" sites pair together, that is, there is no leapfrog pattern of geographic variation. The first canonical variate scores show a more distinctive geographic component than do the univariate analyses. With one exception (level G: 3.94 Ma), geographic variation is detected in the covariance matrices; these are the only four horizons (levels E, F, H, and I) at which such heterogeneity is detected. A MANOVA conducted over both stages of evolution and considering all three equatorial Pacific Ocean sites indicated a significant interaction between locality and time ($p < .05$). Indicating that the morphological change through time was somewhat different at these sites. This finding may be attributable to the typically low heritabilities exhibited by diatoms. Wood et al. (1987 and references therein) have demonstrated that diatoms have a highly plastic phenotype and typically exhibit low heritabilities. Though they do conclude that there is sufficient heritability present in the diatom they studied (*Thalassiosira tumida*) for evolutionary (genetic) change to occur as a result of the selective force of the environment. The low heritabilities may explain why the MANOVA conducted on the equatorial Pacific sites indicated a significant interaction between locality and time; low heritabilities may have led populations at different sites to react in slightly different ways to

similar environmental (biotic or abiotic) changes. Differences in detail between the observed patterns are accountable for by sampling error, differences in stratigraphic completeness as well as localized environmental differences. As was discussed in the Materials and Methods chapter, the easternmost site (DSDP Site 157) is approximately 65% complete at the .01 Myr level of resolution whereas the two central sites (DSDP Site 573 and RC12-66) are 15% and 2.7% complete at this level of resolution. That the same pattern of morphological change has been observed at each of these sites despite these differences in relative completeness lends credence to the reality of the observed pattern. The changes in morphology seen on the univariate plots and the plot of the first canonical variate means (figures 5-10) demonstrate an overall similarity in evolutionary pattern, as do the results of the univariate and multivariate examination of the data for geographic heterogeneity (tables 5 and 7). This suggests that localized environmental factors may have interacted with more widespread factors (trans-Pacific Ocean) to produce the observed patterns. From this discussion it can be seen that the both the similarities and the discrepancies in evolutionary pattern between sites involve several factors. The differences in the evolutionary patterns may have been the result of several factors and their interactions. These factors include sampling error, stratigraphic completeness, localized environmental factors and differential reactions to more widely spread environmental factors. The similarity of the evolutionary pattern in each of these sites may be attributable to similar reactions to widespread factors and gene flow between sites.

In the northwest Pacific Ocean *N. jouseae* is so rare in the early part of its temporal range that no statements may be made. At the first temporal horizon studied which contained sufficient specimens from the northwest Pacific Ocean (level G: 3.94 Ma) they exhibited significantly different canonical variate scores from the equatorial Pacific population. At this time the equatorial Pacific Ocean population had completed the period of directional change and had already

entered the static period. At a relatively rapid rate the morphology of the northwest Pacific Ocean population converged with that of the equatorial populations (figure 10). However, with the exception of one character (NC) at level 0 (3.94 Ma) and one character (DIFFMW) at level P (2.91–2.93 Ma) no geographic variation is detected in relation to the northwest Pacific site. MANOVA's conducted on the original variables do show a significant difference between sites (578 vs. 573, $p < .05$; 578 vs. RC12-66, $p < .05$; 578 vs. 157, $p < .05$). However, the interaction effect between location and time was not significant for any of these combinations (578 vs. 573, $p > .05$; 578 vs. RC12-66, $p > .05$; 578 vs. 157, $p > .05$), thus indicating that the pattern of change, through time, was the same in the northwest Pacific as it was in the equatorial Pacific. This finding is biased by the the comparisons of temporal horizons being limited to the static phase of evolution of the equatorial sites. Therefore, there is a failure to compare the periods of time involving directional change and transition between the evolutionary stages. Such a limitation is due to the small sample sizes obtained from the northwest Pacific site. Sample sizes from temporal horizons that would equate to the first stage of evolution in the equatorial sites were inadequate for any statistics to be conducted. In addition, only extremely small samples were available for comparison of the second stage, a factor which must be considered when interpreting the results. However, such a pattern, along with the isochronous first and last appearances of *N. jouseae* (Burckle et al., 1985) in the northwest and equatorial Pacific Ocean suggests that what differences there are may be attributable mainly to a low level of migration between these populations (attributable to their occupying different water masses) as well as to the environmental differences between these regions. This may be considered a somewhat more extreme example of what has already been suggested as accounting for the differences between the equatorial Pacific Ocean sites.

At the bottom of the Indian Ocean core (3.88 Ma) the morphology of *N. jouseae* is already

similar its morphology in both the equatorial and northwest Pacific Ocean. The only indication of a geographic component is seen in the mean of DIFFMW (figure 9). This figure shows what may be considered a lag in the morphology of the Indian Ocean specimens; however, this lag is not reflected in the other plots and both the number of samples and the sample sizes are too small to make definitive statements. The results of MANOVA's comparing temporal horizons from the Indian Ocean site with one of the central equatorial Pacific sites (RC12-66) and the eastern equatorial Pacific site (DSDP 157) indicate no significant differences between sites ($p > .05$). The interaction of time and location was compared only between the easternmost site and the Indian Ocean site due to the loss of degrees of freedom involving such a comparison with the central equatorial Pacific site (since only two temporal horizons are available for such a comparison). The results of this comparison indicate that the pattern of morphological change was the same at both sites ($p > .05$). Although, as with the analysis of the northwest Pacific site, these results must be interpreted with caution since the comparisons have been limited to the static stage of evolution and the sample sizes available from the Indian Ocean are exceedingly low. All that can be said is that any migration into or out of the Indian Ocean, if any, had no greater influence on the observed evolutionary patterns than within Pacific Ocean migration. This is indicated by the similarity of their morphology. Support for this hypothesis is seen in the the plots of the coefficients of variation (figures 11-15) of the equatorial populations. Had migration been a factor then, even with sedimentary mixing, a geographical component could have been observed in the pattern of variation.

paleoclimatic factors

Changes in stable oxygen isotope ratios are indicators of ice volume or temperature changes. The stable isotopes of oxygen (^{16}O and ^{18}O) fractionate at different temperatures during the

precipitation and evaporation of water (Cooper et al., 1986). During evaporation, higher concentrations of the lighter isotope are fractionated in vapor and the oceans thus come to have a relatively higher concentration of the heavier isotope. Freshwater is enriched in the lighter isotope and ice caps (which are composed of freshwater) also serve to increase the concentration of the heavier isotope. The following discussion concerns the climatic events (temperature/ice volume) occurring during the lifetime of the *M. jousseaumei* lineage. The major oxygen isotope changes in the world oceans are considered to be synchronous (Prell et al., 1986). The $\delta^{18}\text{O}$ records recovered from planktonic foraminifera thus reflect both global ice volume changes as well as local surface water temperature changes. Evidence from L-D60 piston core V28-179 from the equatorial Pacific Ocean indicates that between 3.5 and 3.2 Ma the oceans were in an interglacial state and had relatively constant oxygen isotope ratios and carbonate compositions; after this there was an increase in $\delta^{18}\text{O}$ mode (Shackleton and Opdyke, 1977). In contrast to Shackleton and Opdyke's (1977) study, which based its isotopic data on benthic foraminifera, Prell's (1985) work which was based on planktonic foraminifera from equatorial Pacific Ocean DSDP Sites 572C and 573A, does not indicate an increase in $\delta^{18}\text{O}$ at 3.2 Ma (DSDP Site 572C has a high sedimentation rate and a high resolution calcium carbonate and $\delta^{18}\text{O}$ record.). According to Prell (1985), the planktonic oxygen isotope record has two $\delta^{18}\text{O}$ modes, each with different average values and variability. The change between modes occurred at 2.9 Ma and is also observed in a benthic $\delta^{18}\text{O}$ record from the North Atlantic (Shackleton et al., 1984). In the lower interval at 572C (67-44 meters depth) $\delta^{18}\text{O}$ values are lower ($x = -1.10\text{‰}$) as is variability in isotopic values. The transition to the later mode at 44 meters at an estimated age of 2.9 Ma is accompanied by higher $\delta^{18}\text{O}$ values ($x = -0.77\text{‰}$) and higher variability. Prell (1984, 1985) discusses two possible reasons for the discrepancy between the results of his study and that of Shackleton and Opdyke (1977) with regard to the 3.2 Ma event. The benthic isotopic record may

be recording a permanent, but varying, increase in global ice volume whereas the planktonic record is indicating either a warming of the surface waters or a decrease in the salinity of the surface waters. The second possibility considered by Prell (1984, 1985) is that there was no permanent addition of ice volume but that a short-term increase in ice volume may have occurred and that the benthic record is recording a cooling of bottom water temperatures resulting from an influx of cool waters from a southern source. The first of two events discussed here was a change in $\delta^{18}\text{O}$ at 3.2 Ma in the Pacific Ocean (Shackleton and Opdyke, 1977) which was not reflected in a study of $\delta^{18}\text{O}$ values conducted by Prell (1985) at central equatorial Pacific sites. The morphology of *N. jouseae* from the central equatorial sites exhibits only little, if any, geographic variation at 3.2 Ma (tables 5 and 7). The second event discussed here involved a change in $\delta^{18}\text{O}$ made at 2.9 Ma occurring in both the central equatorial Pacific (Prell, 1985) and North Atlantic Oceans (Shackleton et al., 1984). This suggests that the change in $\delta^{18}\text{O}$ at 2.9 Ma was a global event. Little geographic morphological variation was exhibited among the measured variables at this level with the exception of DIFFMW (table 5b, symbol P: 2.93–2.91 Ma).

Analysis of the scores on the first canonical variate indicates that there is some geographic variation at this temporal horizon (table 7). This geographic variation is minimal (as is most of the geographic variation discussed thus far), and the climatic change appears to have had no impact on the static phase of evolution. This geographic variation also does not seem to contain a directional component. Going from east to west the sequence of the sites studied at this level is DSDP Site 157, DSDP Site 573 and DSDP Site 578. Pairwise comparisons show that only the scores from DSDP Sites 573 and 157 are not significantly different. Thus, such geographic variation may be attributable to brief, localized reaction to a minor environmental perturbation. The two sites which did pair together (DSDP Sites 573 and 578) exhibit a similar total canonical structure in that the discrimination between successive samples within these sites is dominated by

MKW and DIFFML (table 2), both of which have been shown to exhibit no geographic variation at this level (table 5, level P: 2.93–2.91 Ma).

summary of patterns of geographic variation

In summation, outside of the equatorial Pacific Ocean the abundances of *N. jouseae* drop off too sharply to allow for conclusions to be drawn from comparison of these sites with the equatorial Pacific sites. However, these low sample sizes imply that either *N. jouseae* never established a population outside of the equatorial Pacific Ocean, or that preservation outside of the equatorial Pacific was exceedingly poor (cf. Koizumi and Tanimura, 1985). Within the equatorial Pacific Ocean there is little morphological variability with the exception of the period of time during which the transition in morphological pattern occurred and close to the LAD of the lineage. Little morphological variation occurs among the equatorial Pacific Ocean sites. However, as discussed in the section on directional change in morphology, the placement of the division between the two stages of morphological change was more difficult for the easternmost site. In addition, for the easternmost site, unlike for the central equatorial sites, the slope of the second of the stages of morphological change was significantly different from zero. Differences between the water masses from which these sites were obtained are likely to have contributed to these differences. However, these differences were either slight enough, or migration between water masses was high enough, to minimize the differences in the morphology of the specimens retrieved from these two water masses.

CONCLUSIONS

During the interval of time considered, the equatorial Pacific Ocean consisted of two partially isolated populations of *N. jouseae*, a central population and an eastern population. This is reflective of the two water masses in which these sites are located. That the isolation was incomplete is seen in that the differences between the regions are subtle, being reflected primarily as slight differences in the slopes of the first canonical variate means. Migration, as a directional phenomenon, cannot be proved or disproved due to the limits of stratigraphic resolution. Had migration been a strictly directional phenomena within the equatorial Pacific Ocean it would be expected that the curves of the morphological variables and first canonical variate means (figures 5-10) of the site(s) receiving the migrants would exhibit a time-lag relative to the site(s) from which the migrants dispersed and that there would be a directional component to this phenomenon. Similarly, had migration been an ongoing directional phenomenon a directional component would be expected with regard to the c.v.'s (figures 11-15); the sites receiving the migrants would be expected to have a consistently higher c.v.'s than the site(s) from which the migrants dispersed.

It is concluded that the historical pattern of morphological change of *N. jouseae* conforms to punctuated gradualism *sensu* Malmgren. In terms suggested by Raup and Crick (1981), these patterns may have involved directional selection acting at the borders of a zone within which the morphology was free to fluctuate. Third, at the point in time where opposing directional forces were in balance (stabilizing selection) at the borders of this zone directional change ceased. The similar, yet different, pattern of morphological change seen when contrasting the central and eastern equatorial Pacific Ocean sites indicates several possibilities: (1) levels of migration between these regions were sufficient to minimize divergence between populations in the two water masses; (2) environmental differences between these water masses did not involve factors

which effected the preserved morphology; (3) the environmental differences had some minimal effect on morphology; or (4) different species, or incipient speciation, resulted in the different patterns. As discussed in Wood et al. (1987), diatoms, while typically exhibiting low heritabilities, may also be effected by selective factors. Therefore, environmental differences between the water masses, migration between water masses, low heritability, and possibly some genetic change combined to result in this similar, yet different, pattern of morphological change.

An alternative explanation for the observed pattern of morphological change remains. Since I have been unable to identify an ancestral species, it is possible that the morphospecies which has been studied is not a species in either the biological or evolutionary sense. If this is so then the pattern of change can be the net result of the addition of several different patterns of morphological change.

The pattern of morphological change observed in the equatorial Pacific Ocean was unaffected by migrants of geographic variants from sites outside of the equatorial Pacific Ocean. Since *N. jouseae* has not been recovered from the western Pacific Ocean and because sample sizes are extremely small and the range of *N. jouseae* is truncated in the Indian Ocean (due to stratigraphic factors) I am unable make statements concerning patterns of morphological change in either the Indian or Pacific Oceans. The low number of specimens indicates that while *N. jouseae* was found in these regions it never established a population of sufficient size to leave a high-quality fossil record.

Diatom species are generally defined on the basis of valve morphology (Kennett, 1982). The extent to which valve morphology is reflective of the genome and to what extent it is reflective of phenotypic plasticity has been the subject of recent study (cf. Wood et al., 1987 and references therein). In general, it appears that valve morphology is quite plastic in response to environmental perturbation. However, the results of this study indicate that the morphology of *N.*

jouseae was relatively stable with regard to the temperature/ice volume changes which are reflected in the oxygen isotope record. This has several possible causes. One, the changes in environment reflected in the stable isotope record are not relevant to this species. Two, the suite of characters chosen for this study does not reflect other changes in *N. jouseae* which may have taken place in relation to the isotopic events.

The results of this study are consistent with the hypothesis that while there are distinct patterns of morphological change occurring within lineages there is a sufficient amount of sampling error and minor environmentally induced fluctuations in morphology (Lande, 1986) to suggest the use of slopes rather than averages of the rates between points within a stage as the measure of evolutionary rate. The Raup and Crick model (1981) of morphological change within selective boundaries is an appropriate model for the pattern of morphological change observed in the *N. jouseae* lineage.

Table 1. Distances, in kilometers, between sites.

	<u>157</u>	<u>573</u>	<u>RC12-66</u>	<u>578</u>	<u>V29-40</u>
157	-	4636	6090	7169	19041
573		-	1461	3629	14419
RC12-66			-	3008	12990
578				-	13314
V29-40					-

Table 2. Total canonical structure coefficients of the first canonical variate.

	<u>RC12-66</u>	<u>DSDP Site 157</u>	<u>DSDP Site 573</u>	<u>DSDP Site 578</u>
MKL	.2325	.2638	.0455	.1621
MKW	.2800	.7299	.4683	.6370
DIFFML	.3843	.3242	.4516	.5587
DIFFMW	.6135	.4299	.3030	.2063
NC	-.0998	.2088	-.2418	.1902

Table 3. Slopes, standard errors of the slopes and r-squares of the first canonical variate means and B.S.E. values. 157=DSDP Site 157. 573=DSDP Site 573. RC1=RC12-66. B= slope

(regression coefficient) in standard deviation units per million years. S_B = standard error of the slope. B.S.E. is the Brownian speed of evolution is the mean reduced speed ± 1 standard deviation. E.S.D. = expected standard deviation of the mean B.S.E.

STAGE 1

CORE	INTERVAL (Ma)	B	$H_0: B=0$	S_B	r^2	B.S.E.	E.S.D.
157	4.59-4.18	3.33	.01<p<.05	1.28	0.38	3.90 $\pm$ 1.62	4.89
573	4.69-4.05	1.88	p<.001	0.47	0.47	2.13 $\pm$ 2.30	2.67
RC1	4.69-4.14	3.32	p<.001	0.85	0.43	3.58 $\pm$ 2.73	4.49

H_0 : slopes are equal, .1<p<.5; H_0 : intercepts are equal, .1<p<.5; H_0 : B.S.E.'s are equal, p<.05

STAGE 2

157	4.18-2.61	0.43	.01<p<.05	0.15	0.12	3.33 $\pm$ 3.28	4.17
573	4.05-2.84	-0.27	.1<p<.5	0.24	0.04	2.35 $\pm$ 2.53	2.94
RC1	4.14-2.69	0.1	.1<p<.5	0.13	0.03	1.74 $\pm$ 1.61	2.18

H_0 : slopes are equal, .01<p<.05; H_0 : intercepts are equal, .05<p<.1; H_0 : B.S.E.'s are equal, p<.05

OVERALL

157	4.59-2.61	1.13	p<.001	0.10	0.63	3.42 $\pm$ 3.07	4.28
573	4.69-2.84	1.21	p<.001	0.20	0.41	2.27 $\pm$ 2.44	2.84
RC1	4.69-2.69	1.38	p<.001	0.63	0.54	2.37 $\pm$ 2.22	2.97

H_0 : slopes are equal, .1<p<.5; H_0 : intercepts are equal, .1<p<.5; H_0 : B.S.E.'s are equal, p<.05

Table 4. Temporal horizons examined for geographic variation.

<u>LEVELS</u>	<u>TIMES</u>	<u>MAGNETIC REVERSAL</u>	<u>CORES</u>
A	4.57	YES	RC12-66
			DSDP SITE 157
			DSDP SITE 573
B	4.47	YES	RC12-66
	4.48		DSDP SITE 157
			DSDP SITE 573
C	4.39	YES	RC12-66
	4.41		DSDP SITE 573
D	4.22	YES	RC12-66
	4.23		DSDP SITE 157
	4.24		DSDP SITE 573
E	4.07	YES	RC12-66
	4.09		DSDP SITE 157
			DSDP SITE 573
F	3.96	YES	RC12-66
	3.97		DSDP SITE 157
	3.98		DSDP SITE 573
G	3.94	NO	RC12-66
			DSDP SITE 573
			DSDP SITE 578
H	3.87	YES	RC12-66

	3.88		DSDP SITE 157
	3.90		DSDP SITE 573
I	3.82	NO	RC12-66
	3.83		DSDP SITE 157
	3.84		DSDP SITE 573
			DSDP SITE 578
J	3.48	NO	DSDP SITE 157
	3.49		DSDP SITE 578
K	3.39	YES	RC12-66
	3.40		DSDP SITE 157
	3.41		DSDP SITE 573
			DSDP SITE 578
L	3.27	NO	DSDP SITE 157
	3.28		DSDP SITE 573
	3.29		DSDP SITE 578
M	3.16	YES	RC12-66
	3.18		DSDP SITE 578
N	3.13	NO	DSDP SITE 157
			V29-40
O	3.06	YES	RC12-66
	3.07		DSDP SITE 157
	3.08		DSDP SITE 573
P	2.91	YES	DSDP SITE 157
	2.92		DSDP SITE 573

	2.93		DSDP SITE 578
Q	2.85	NO	RC12-66
	2.86		DSDP SITE 157
			V29-40
R	2.81	NO	RC12-66
	2.82		DSDP SITE 157
	2.83		DSDP SITE 573
			DSDP SITE 578

Table 5a. Results of pairwise comparisons on univariate means (Tukey's studentized range test).

n.s.=no significant differences ($p \geq .05$). Paired sites are those between which no difference was detected. HETERO= heterogenous group. 157=DSDP SITE 157; 573=DSDP SITE 573; 578=DSDP SITE 578; RC1=RC12-66; V29=V29-40. Symbols as in table 4.

CHARACTERS						
<u>LEVELS</u>	<u>MKL</u>	<u>HETERO</u>	<u>MKW</u>	<u>HETERO</u>	<u>NC</u>	<u>HETERO</u>
A	n.s.		n.s.		n.s.	
B	n.s.		n.s.		n.s.	
C	n.s.		n.s.		n.s.	
D	n.s.		n.s.		n.s.	
E	n.s.		157-RC1	573	157-RC1	573
			573-RC1	157	573-RC1	157
F	157-RC1	573	157-RC1	573	157-573	RC1
	157-573	RC1	573-RC1	157		
G	RC1-578	573	RC1-578	573		RC1
	578-573	RC1	578-573	RC1		578
						573
H	n.s.		157-573	RC1	n.s.	
I	157-RC1	573	RC1-157	573	573-157	RC1
			157-573	RC1	157-RC1	573
J	n.s.		n.s.		n.s.	
K	n.s.		n.s.		n.s.	
L	n.s.		n.s.		n.s.	

M	n.s.		n.s.		n.s.
N	n.s.		n.s.		n.s.
O	n.s.		n.s.		n.s.
P	n.s.		n.s.		n.s.
Q	n.s.		n.s.		n.s.
R	157-578-573	RC1	578-573	157-RC1	157-573-578 RC1
	578-573-RC1	157	573-157-RC1	578	573-578-RC1 157

Table 5b. Results of pairwise comparisons on univariate means. Symbols as in tables 4 and 5a.

<u>LEVELS</u>	<u>CHARACTERS</u>			
	<u>DIFFML</u>	<u>HETERO</u>	<u>DIFFMW</u>	<u>HETERO</u>
A	n.s.		n.s.	
B	n.s.		n.s.	
C	n.s.		n.s.	
D	n.s.		n.s.	
E	n.s.		157-RC1	573
			157-573	RC1
F	n.s.		157-RC1	573
			RC1-573	157
G	RC1-578	573	n.s.	
	578-573	RC1		
H	573-RC1	157	157-RC1	573
I	n.s.		n.s.	
J	n.s.		n.s.	
K	n.s.		573-157-RC1	578
			157-RC1-578	573
L	573-578	157	573-578	157
	578-157	573		
M	n.s.		n.s.	
N	n.s.			157
				V29

O	n.s.	n.s.	
P	n.s.	157-573	578
Q	n.s.	n.s.	
R	n.s.	n.s.	

Table 6a. Results of pairwise F-tests on variances. Symbols as in tables 4 and 5a.

LEVELS	CHARACTERS					
	<u>MKL</u>	<u>HETERO</u>	<u>MKW</u>	<u>HETERO</u>	<u>NC</u>	<u>HETERO</u>
A	n.s.		n.s.		n.s.	
B	RC1-573	157	n.s.		n.s.	
C	n.s.		n.s.		n.s.	
D	n.s.		n.s.		n.s.	
E	n.s.		573-RC1	157	n.s.	
F	n.s.		n.s.		RC1-573	157
G	n.s.		n.s.		n.s.	
H	n.s.		n.s.		n.s.	
I	n.s.		n.s.		n.s.	
J	n.s.		n.s.		n.s.	
K	n.s.		n.s.		n.s.	
L	n.s.		157-578	573	n.s.	
M	n.s.		n.s.		n.s.	
N	n.s.		n.s.		n.s.	
O	n.s.		n.s.		n.s.	
P	n.s.		n.s.		n.s.	
Q	n.s.		RC1-V29	157	n.s.	
			V29-157	RC1	n.s.	
R	n.s.		n.s.		RC1-573	157-578
					157-573-578	

Table 6b. Results of pairwise F-tests on variances. Symbols as in tables 4 and 5a.

<u>LEVELS</u>	<u>CHARACTERS</u>			
	<u>DIFFML</u>	<u>HETERO</u>	<u>DIFFMW</u>	<u>HETERO</u>
A	n.s.		n.s.	
B	n.s.		573-157	RC1
			573-RC1	157
C	n.s.		n.s.	
D	n.s.		n.s.	
E	RC1-157	573	n.s.	
	157-573	RC1		
F	RC1-573	157	n.s.	
G	RC1-578	573	n.s.	
	578-573	RC1		
H	n.s.		157-573	RC1
I	157-573	RC1	n.s.	
J	n.s.		n.s.	
K	RC1-157-578	573	n.s.	
	RC1-573-578	157		
L	573-578	157		
	578-157	573		
M	n.s.		n.s.	
N	n.s.			
O	n.s.		RC1-573	157

P	573-578	157	n.s.
Q	n.s.		n.s.
R	n.s.		n.s.

Table 7. Results of analysis of covariance structure and canonical variate scores. Symbols as in tables 4 and 5a.

<u>LEVELS</u>	<u>COV</u>	<u>HETERO</u>	<u>CSCORE</u>	<u>HETERO</u>
A	n.s.		n.s.	
B	n.s.		n.s.	
C	n.s.		n.s.	
D	n.s.		n.s.	
E	157-573	RC1	157-573	RC1
F	573-RC1	157	RC1-573	157
G	n.s.		RC1-573	578
H	RC1-573	157	157-573	RC1
	157-573	RC1		
I	157-573	RC1	n.s.	
J	n.s.		n.s.	
K	n.s.		n.s.	
L	n.s.		n.s.	
M	n.s.		n.s.	
N	n.s.		n.s.	
O	n.s.		n.s.	
P	n.s.		573-578	157
Q	n.s.		n.s.	
R	n.s.		RC1-573-578	157
			157-573-578	RC1

Table 8. Proportion of variance accounted for by each canonical variate.

	<u>CAN1</u>	<u>CAN2</u>	<u>CAN3</u>	<u>CAN4</u>	<u>CAN5</u>
RC12-66	.6473	.2013	.0652	.0471	.0391
DSDP 157	.4817	.1974	.1578	.0916	.0714
DSDP 573	.6047	.2069	.0955	.0585	.0344
DSDP 578	.6102	.2597	.0755	.0475	.0071
V29-40	.7071	.2929			

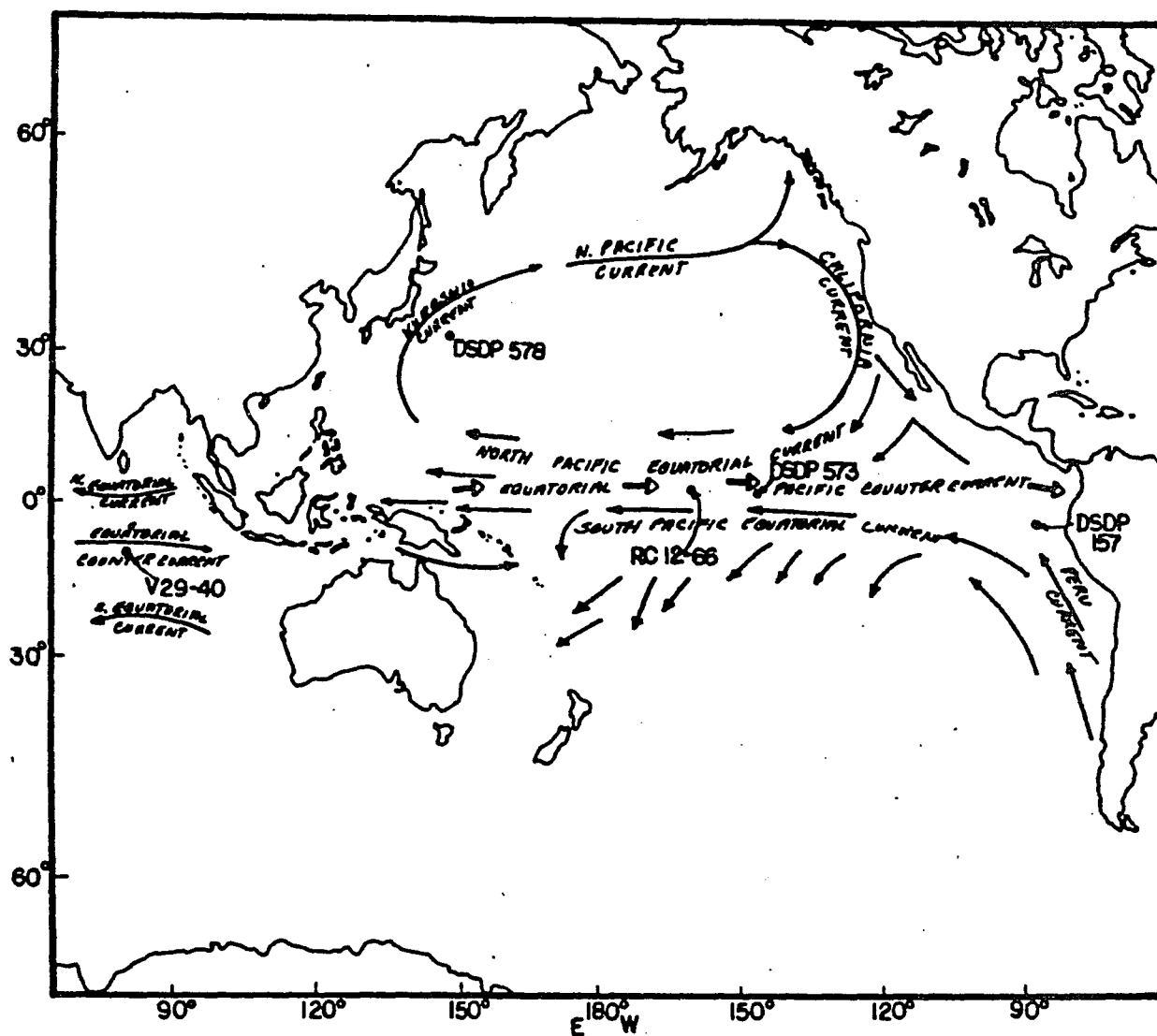
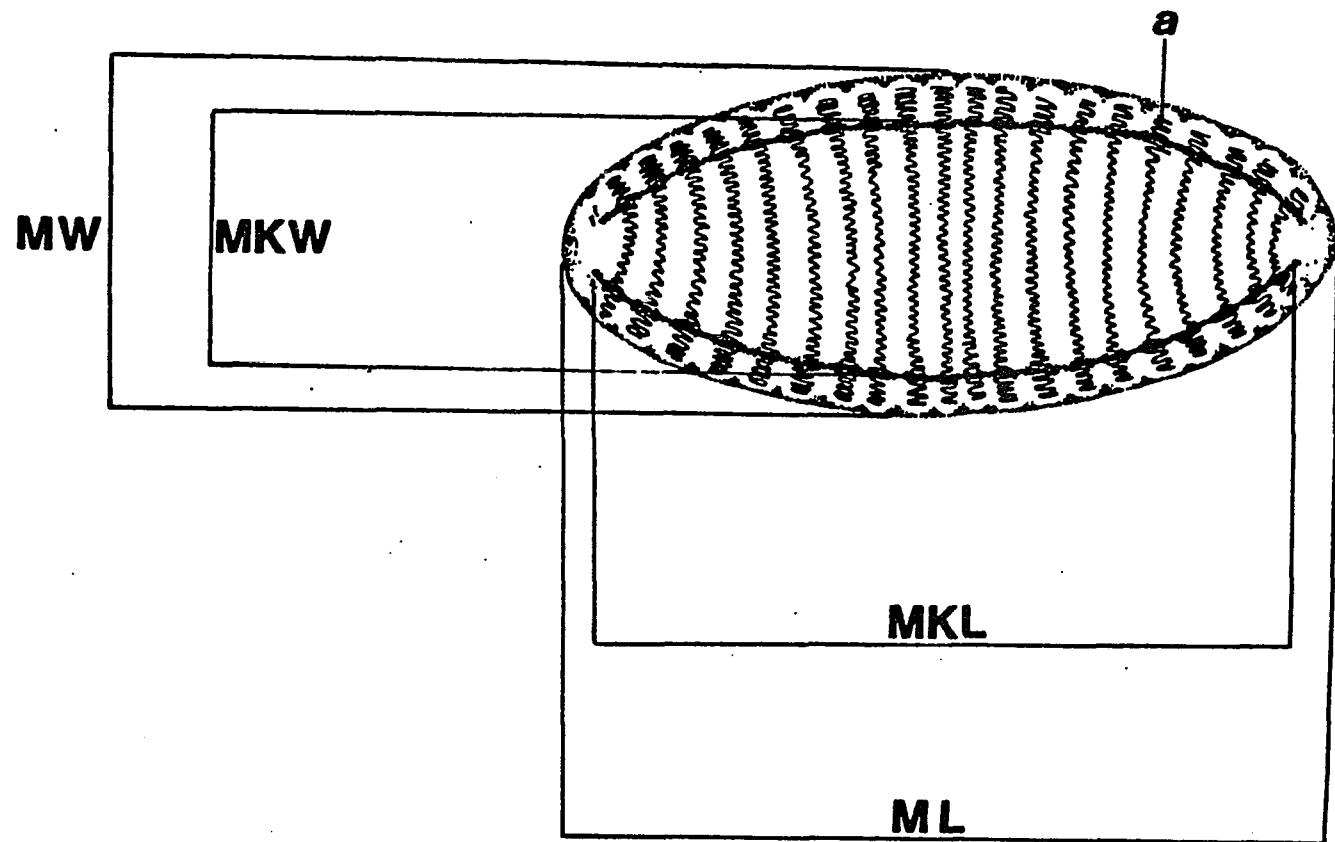


Figure 1. Map showing the locations of the sites used in this study



a—NC

Figure 2. Diagram of *N. jouseae* illustrating the characters used in this study

Figure 3. Time (Ma) versus depth (cm)

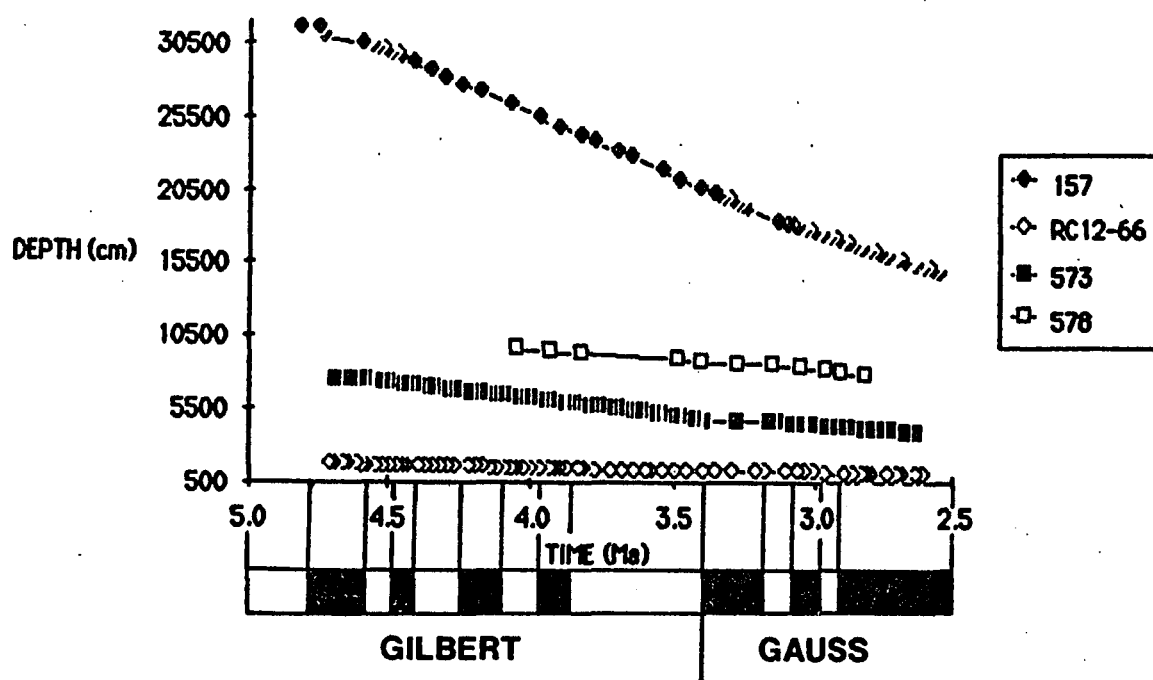
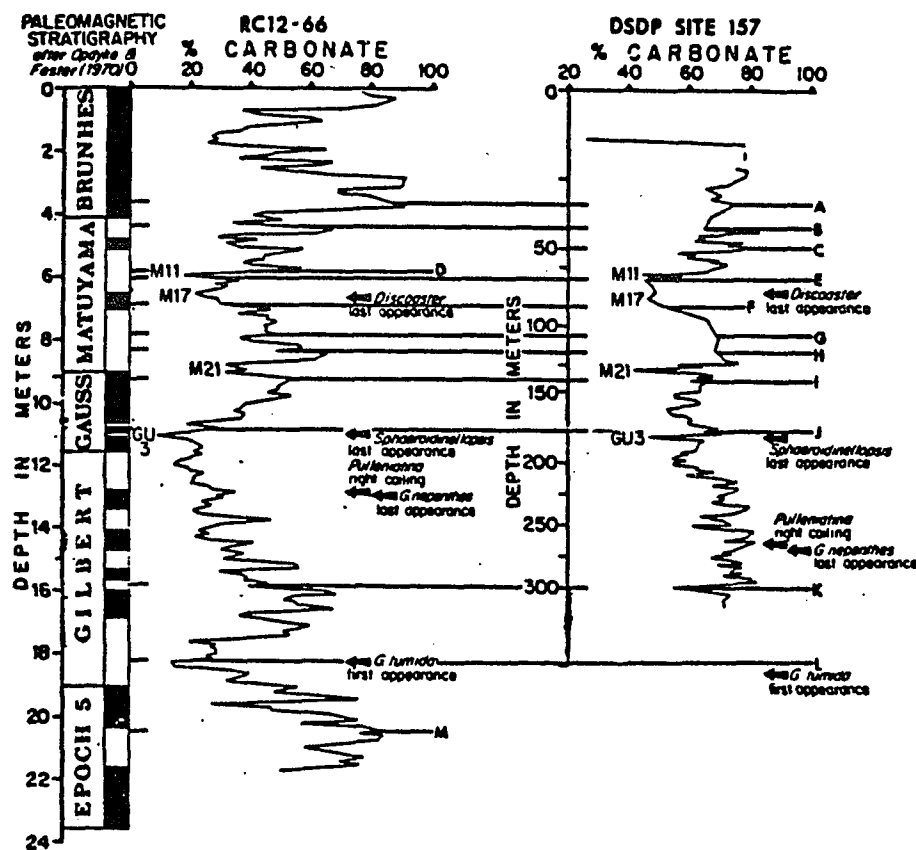


Figure 4. Chronostratigraphic correlation of DSDP Site 157 with RC12-66



Correlation between piston core RC12-66 (central Pacific) and DSDP Site 157 (eastern equatorial Pacific) using Diatoms, Foraminifera, Discoasters and calcium carbonate fluctuations. Lettered lines are Diatom datum levels (including two silicoflagellate datum levels) and are as follows :

A = last appearance of *Nitzschia reinholdii*; B = last appearance of *Mesocena elliptica*; C = last appearance of *Rhizosolenia matuyamai*; D = first appearance of *Mesocena elliptica*; E = last appearance of *Rhizosolenia praebeyronii* var. A.; F = first appearance of *Pseudoeumotis dollolus*; G = first appearance of *Rhizosolenia praebeyronii* var. A.; H = last appearance of *Thalassiosira convexa*; I = last appearance of *Nitzschia jouseae*; J = first appearance of *Rhizosolenia praebeyronii*; K = first appearance of *Nitzschia jouseae*; L = last appearance of *Thalassiosira miocenica*; M = last appearance of *Nitzschia miocenica*.

Figure 5a. Plot of MKL mean

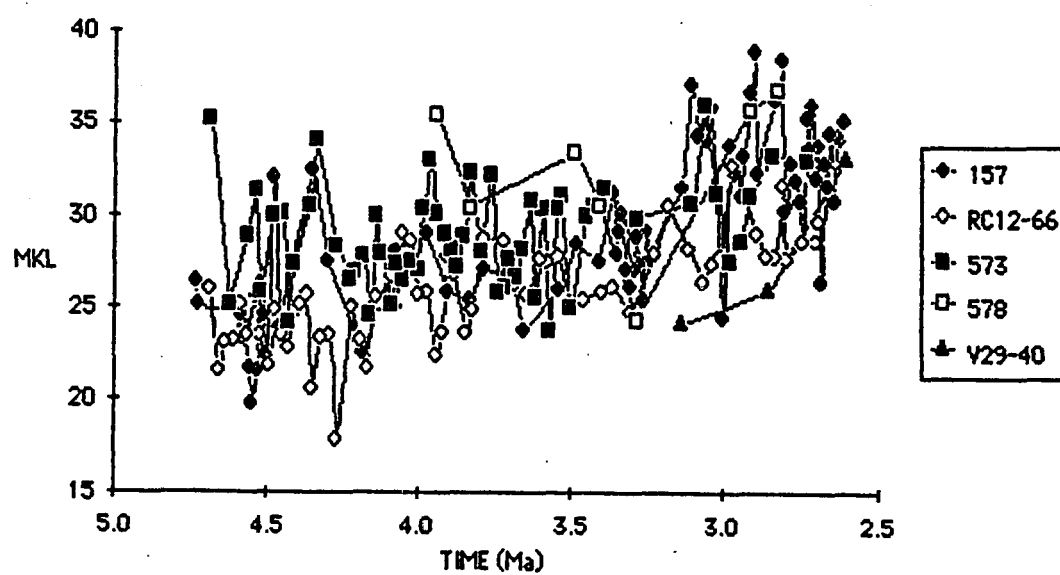


Figure 5b. Plot of MKL mean: DSDP Site 157

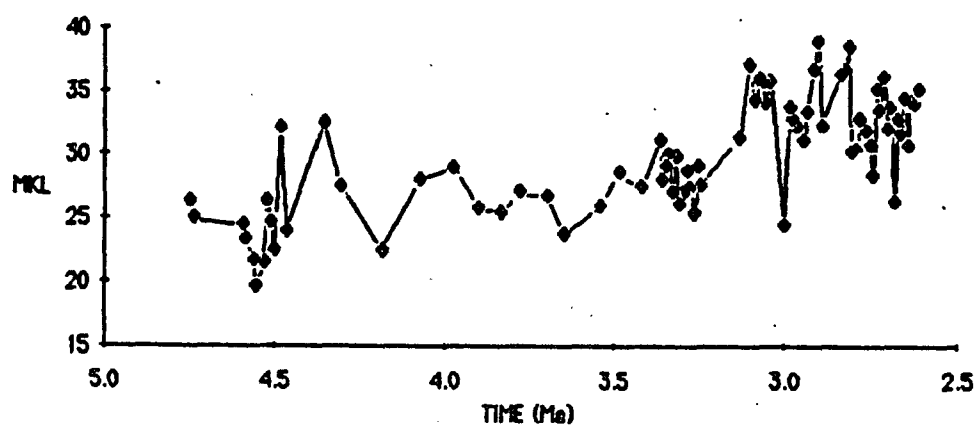


Figure 5c. Plot of MKL mean: RC12-66

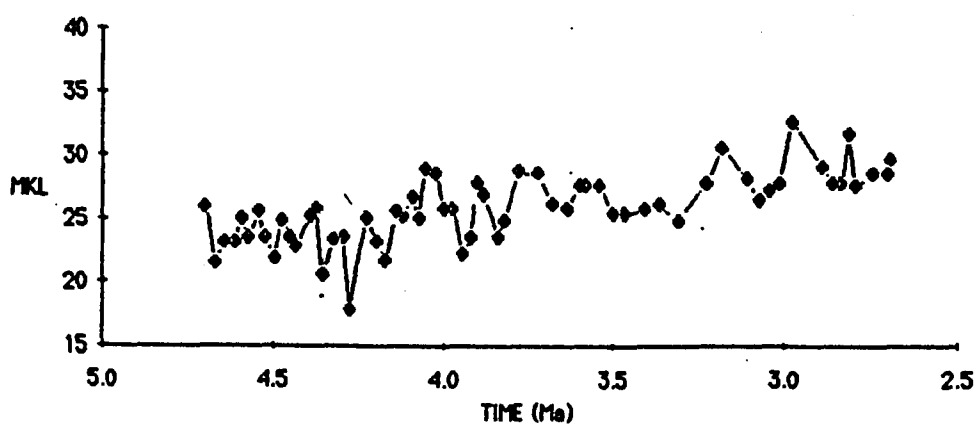


Figure 5d. Plot of MKL mean: DSDP Site 573

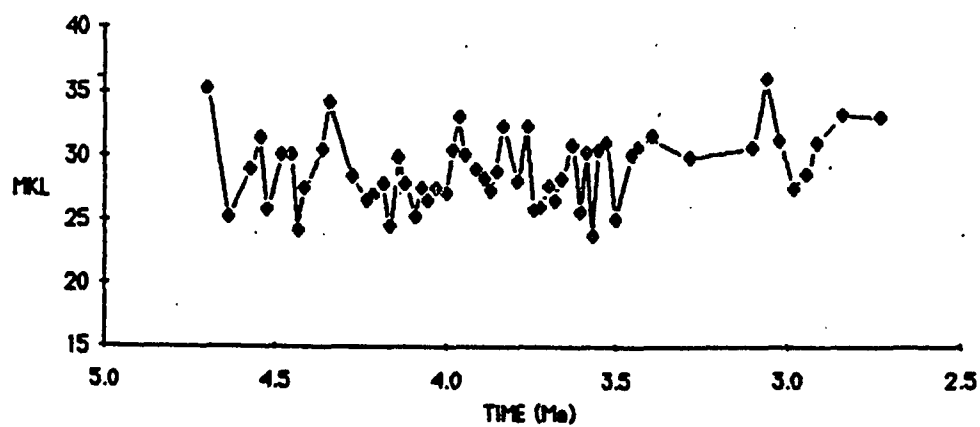


Figure 5e. Plot of MKL mean: DSDP Site 578 and V29-40

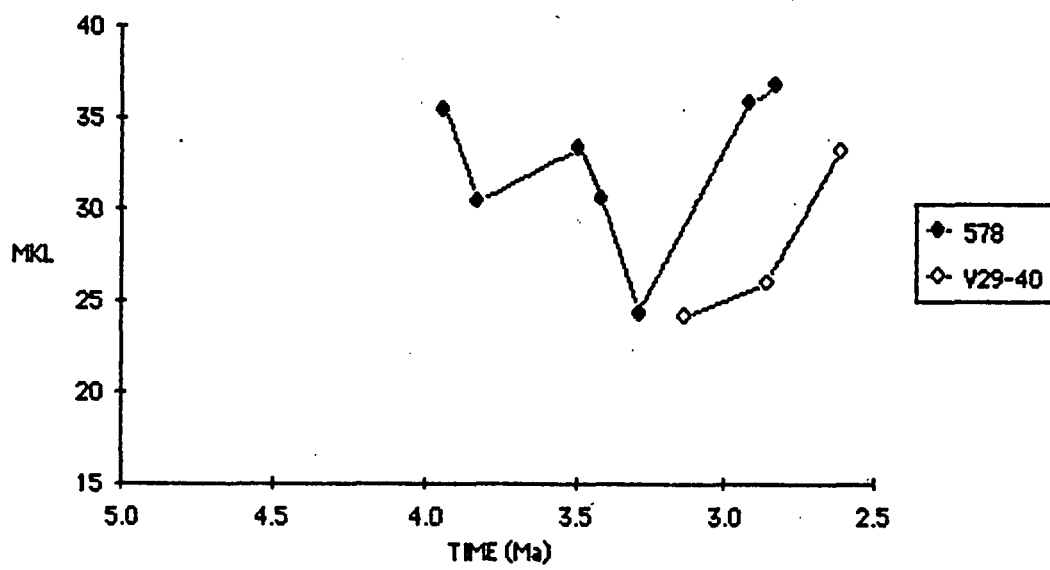


Figure 6a. Plot of DIFFML mean

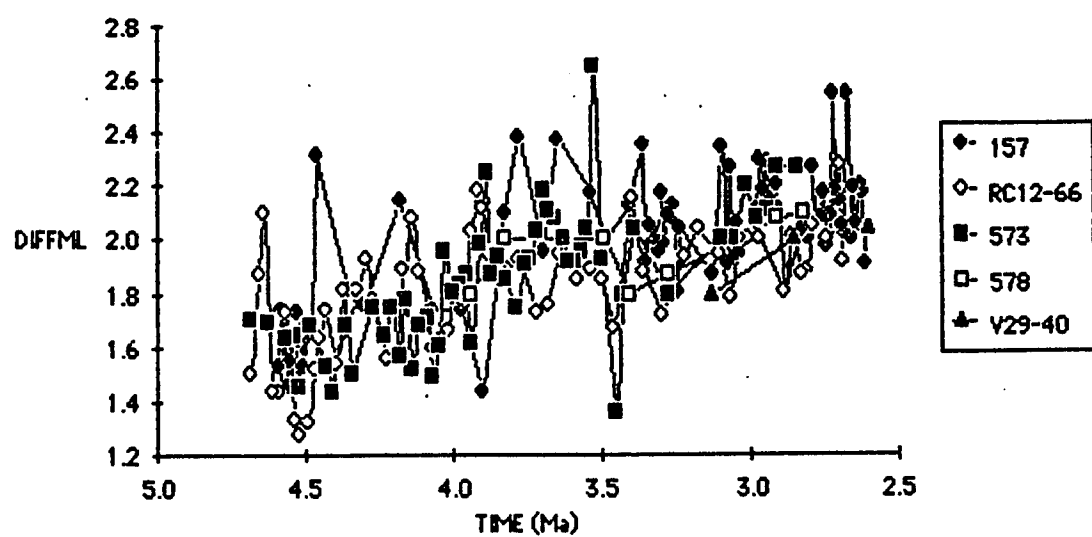


Figure 6b. Plot of DIFFML mean: DSDP Site 157

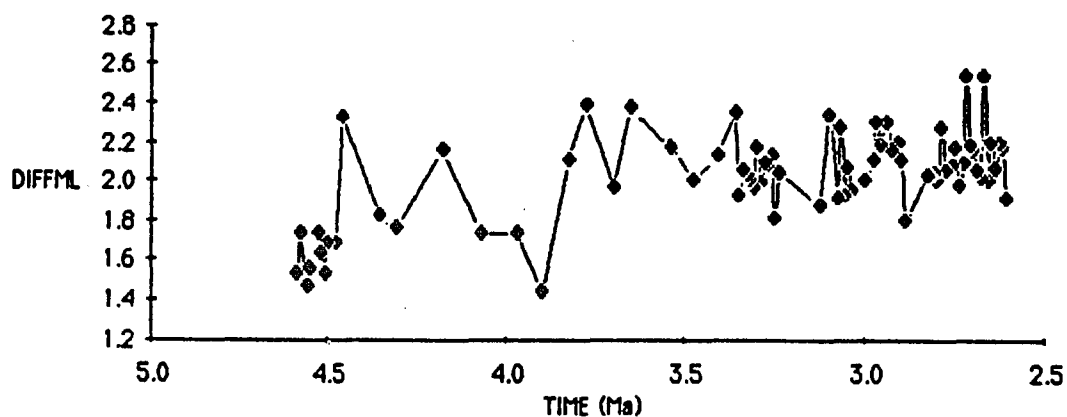


Figure 6c. Plot of DIFFML mean: RC12-66

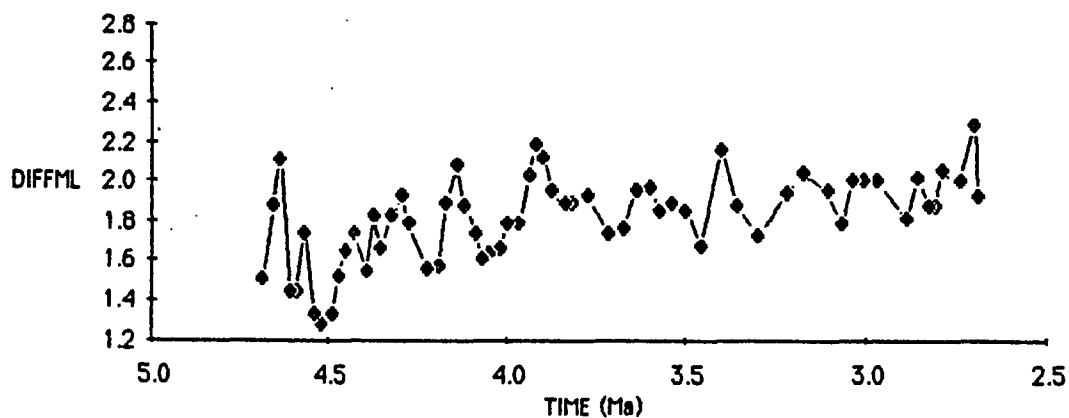


Figure 6d. Plot of DIFFML mean: DSDP Site 573

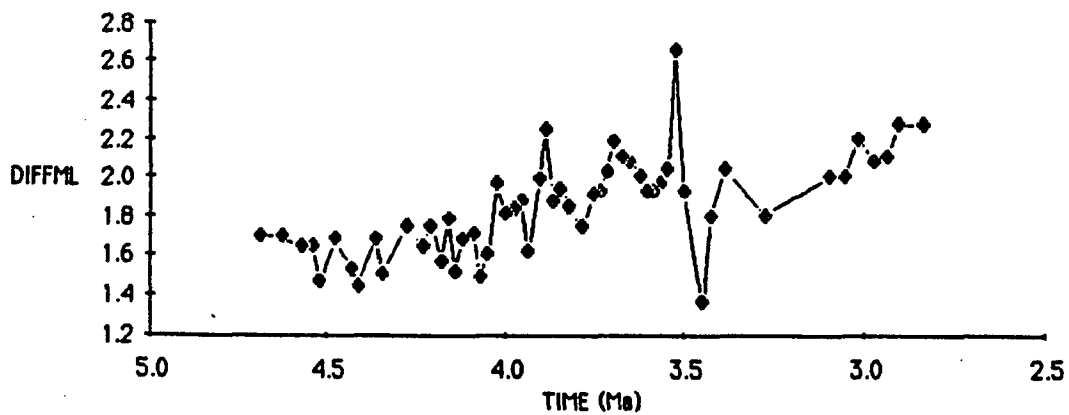


Figure 6e. Plot of DIFFML mean: DSDP Site 578 and V29-40

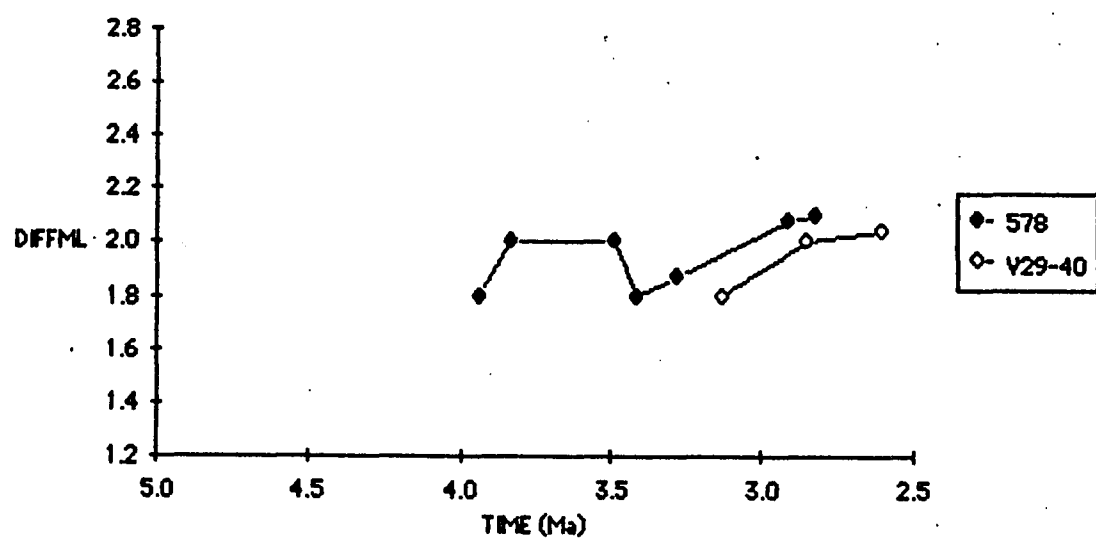


Figure 7a. Plot of NC mean

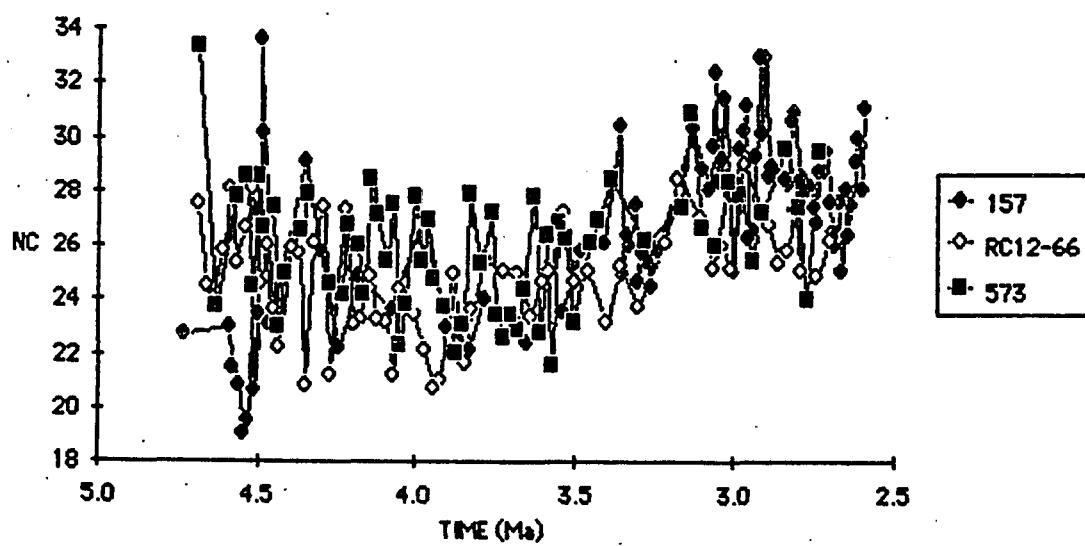


Figure 7b. Plot of NC mean: DSDP Site 157

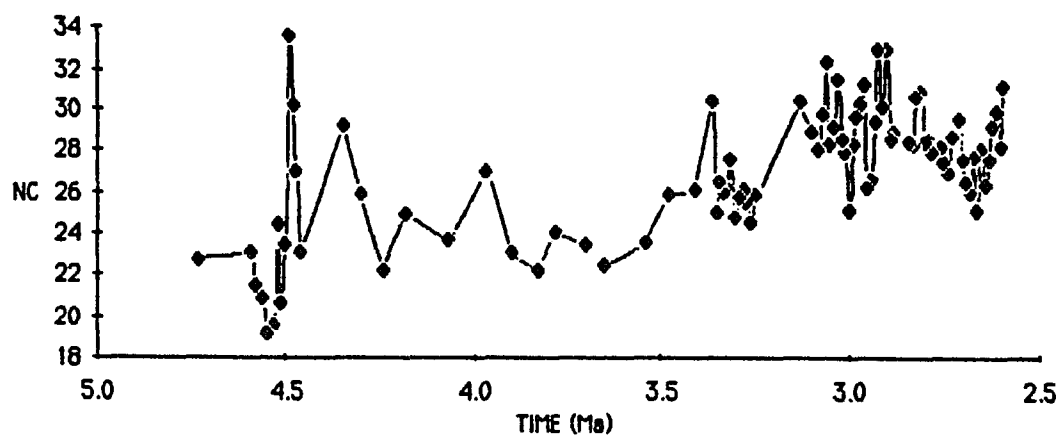


Figure 7c. Plot of NC mean: RC12-66

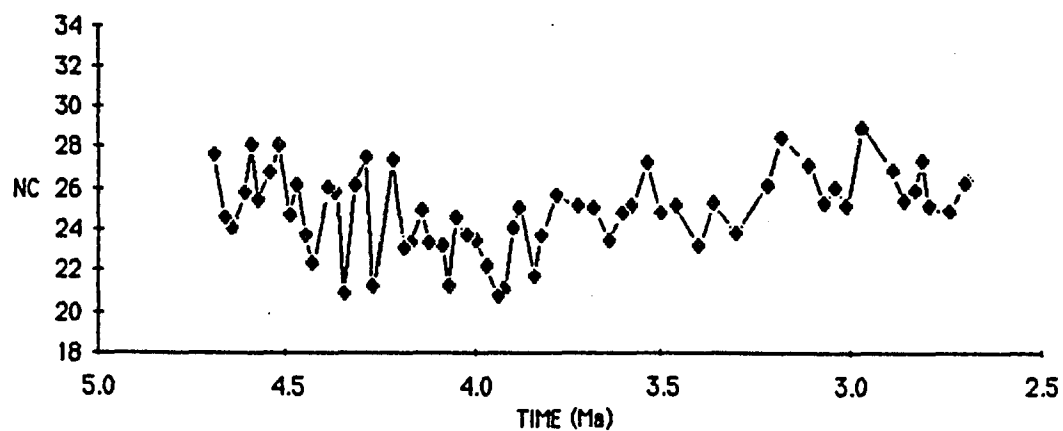


Figure 7d. Plot of NC mean: DSDP Site 573

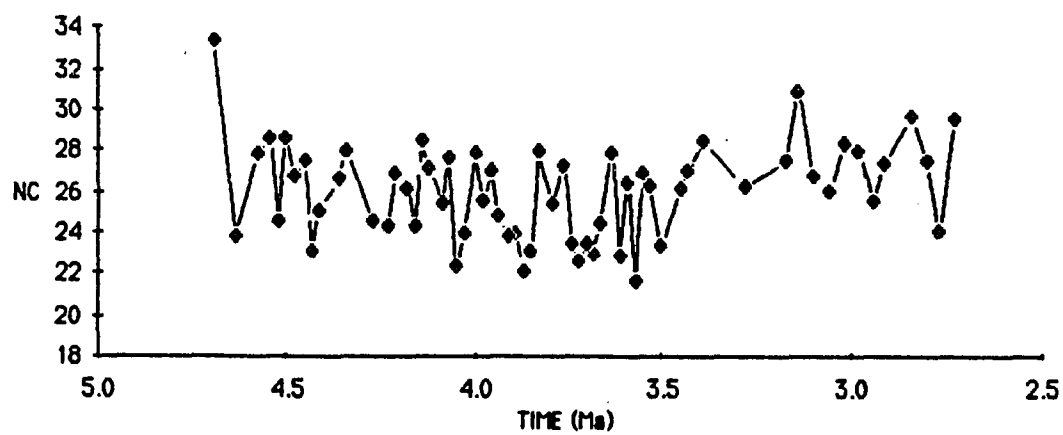


Figure 7e. Plot of NC mean: DSDP Site 578 and V29-40

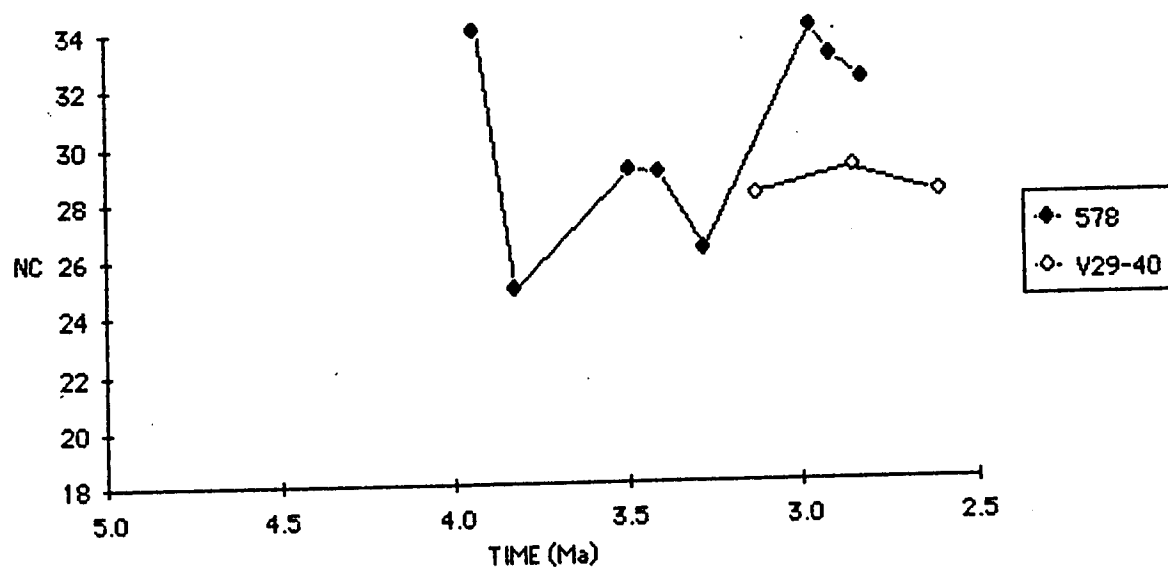


Figure 8a. Plot of MKV mean

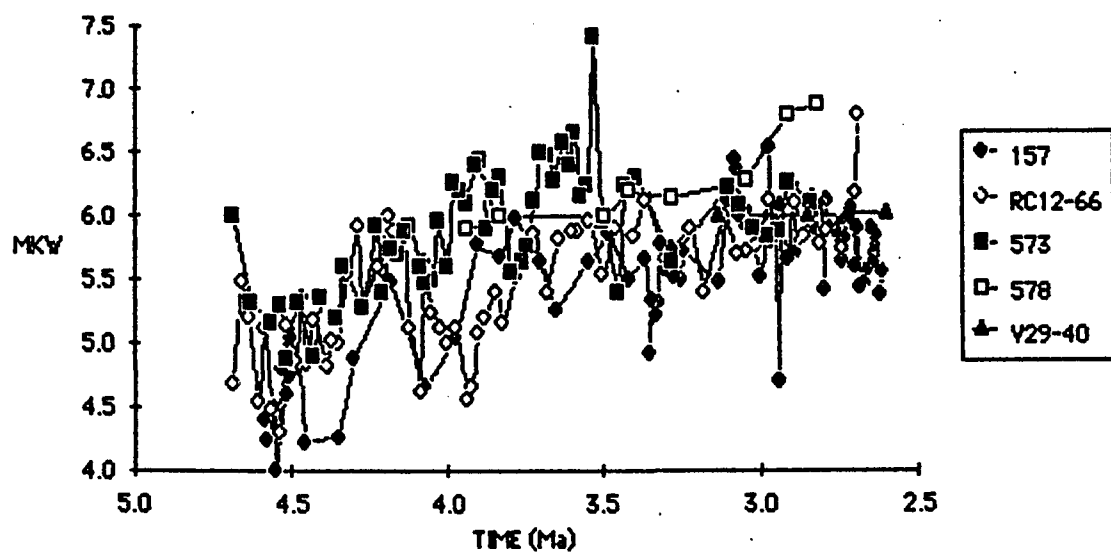


Figure 8b. Plot of MKW mean: DSDP Site 157

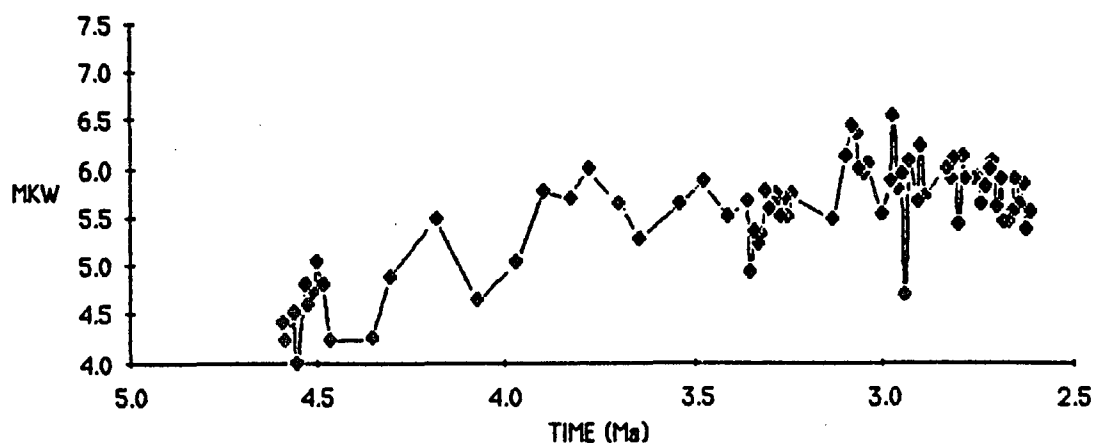


Figure 8c. Plot of MKW mean: RC12-66

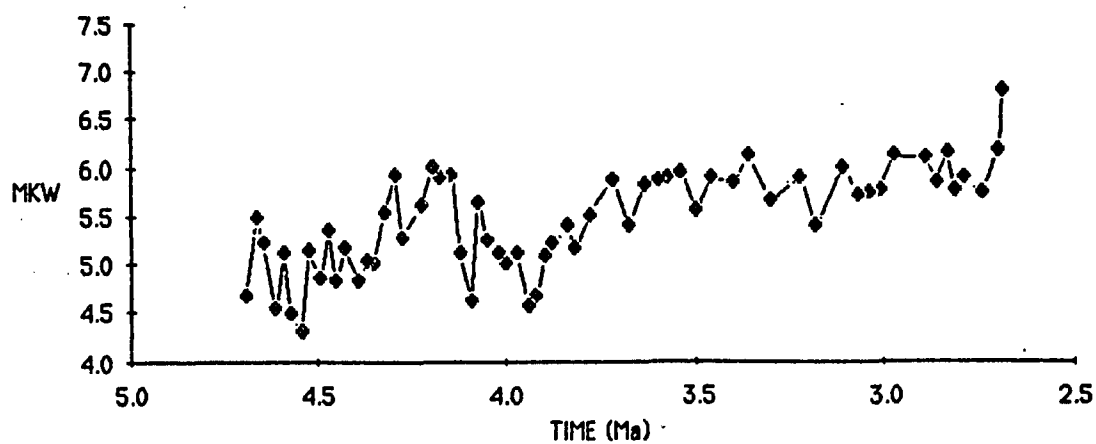


Figure 8d. Plot of MKW mean: DSDP Site 573

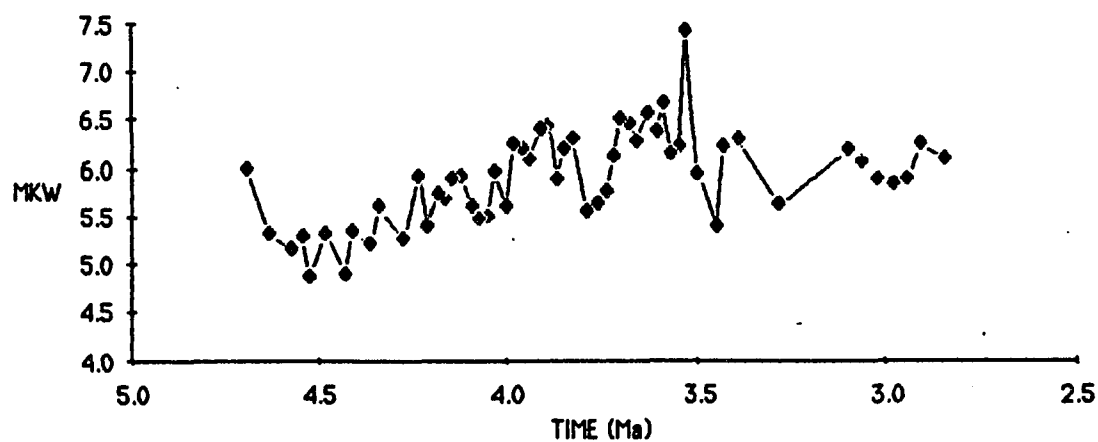


Figure 8e. Plot of MKV mean: DSDP Site 578 and V29-40

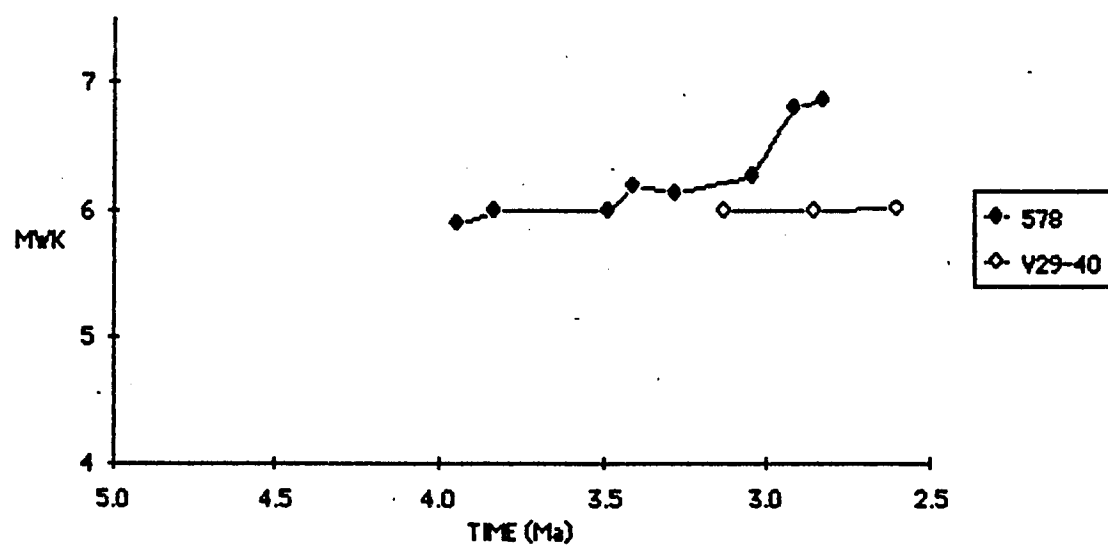


Figure 9a. Plot of DIFFMW means

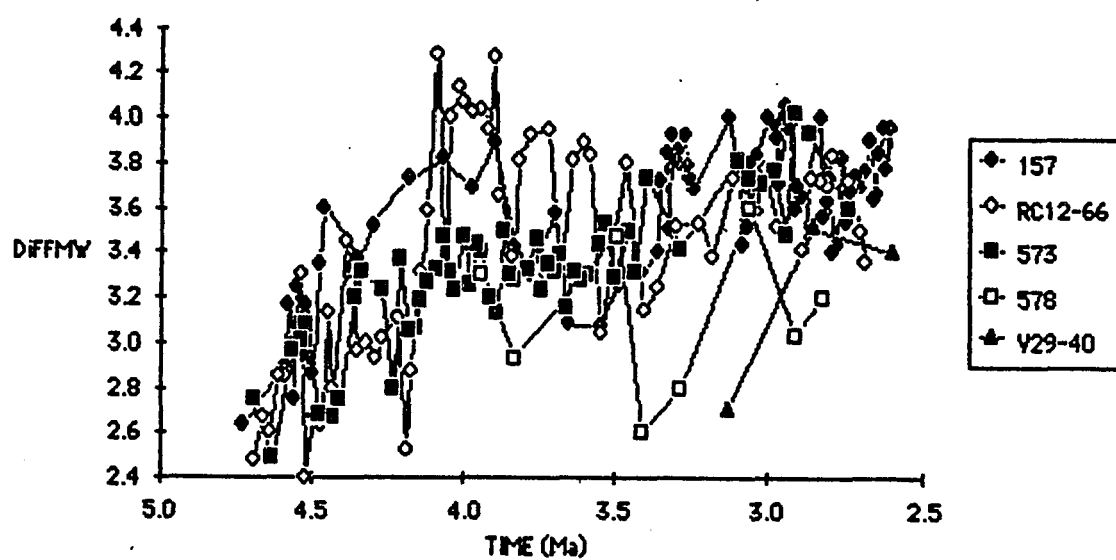


Figure 9b. Plot of DIFFMW mean: DSDP Site 157

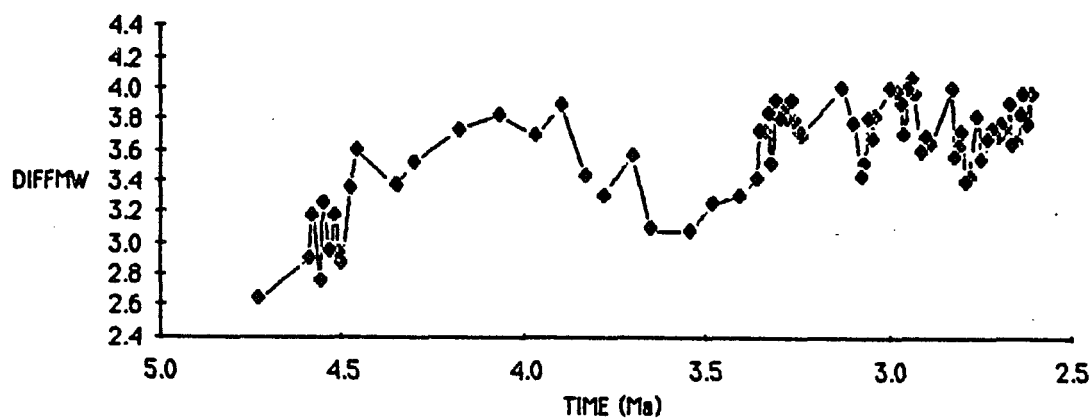


Figure 9c. Plot of DIFFMW mean: RC12-66

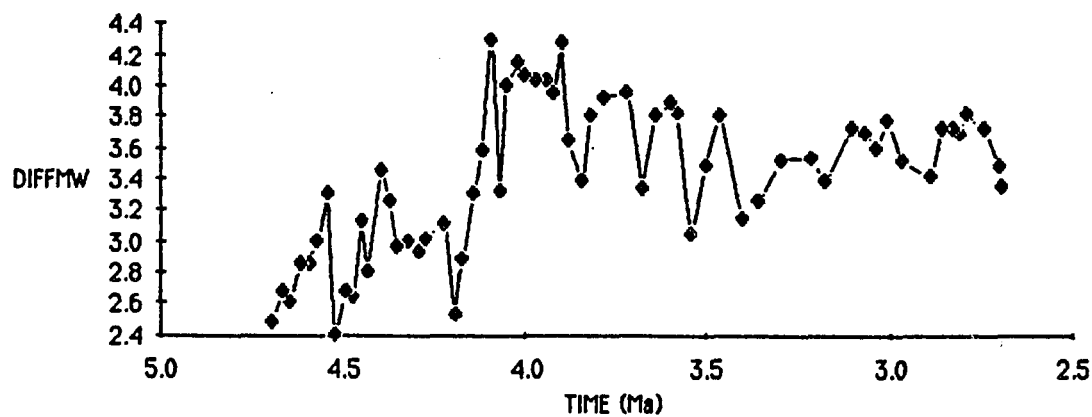


Figure 9d. Plot of DIFFMW mean: DSDP Site 573

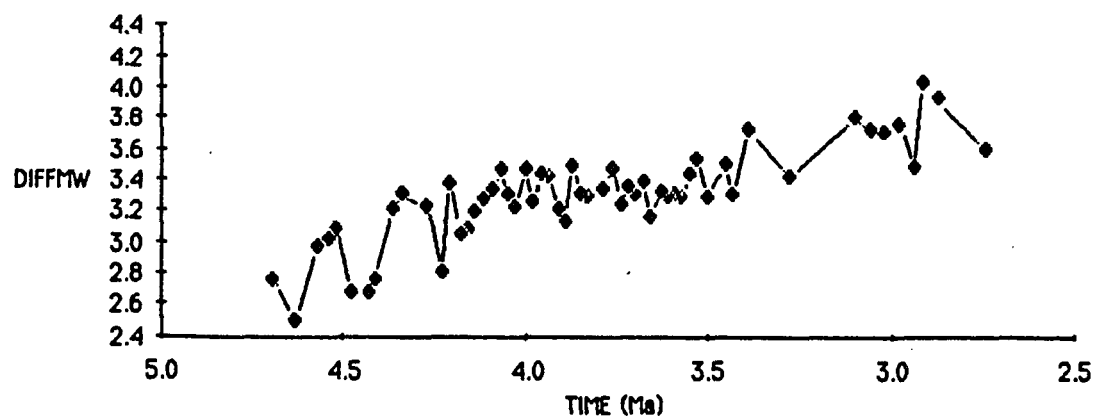


Figure 9e. Plot of DIFFMY means: DSDP Site 578 and V29-40

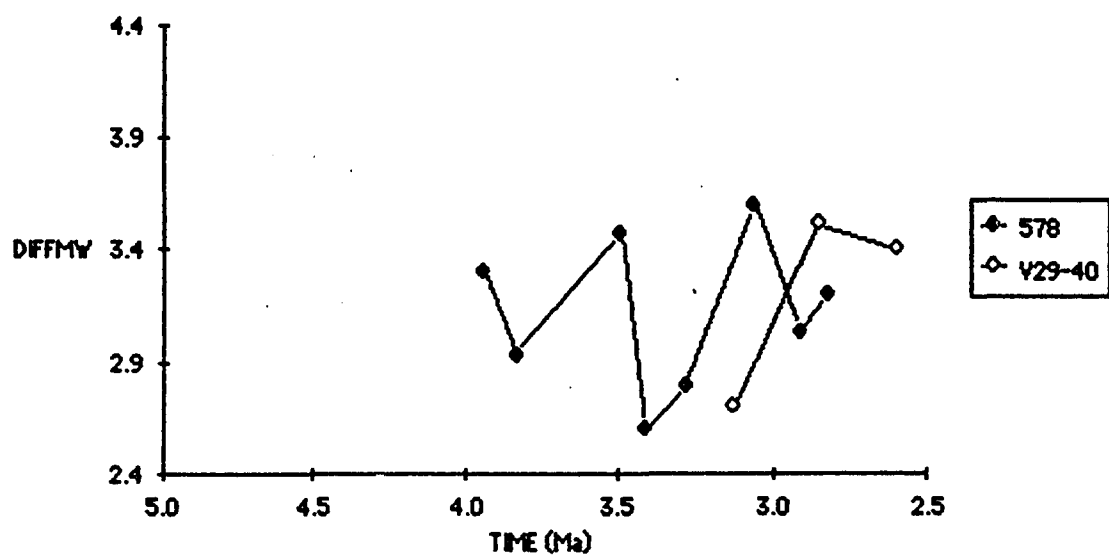


Figure 10a. Plot of the first canonical variate mean

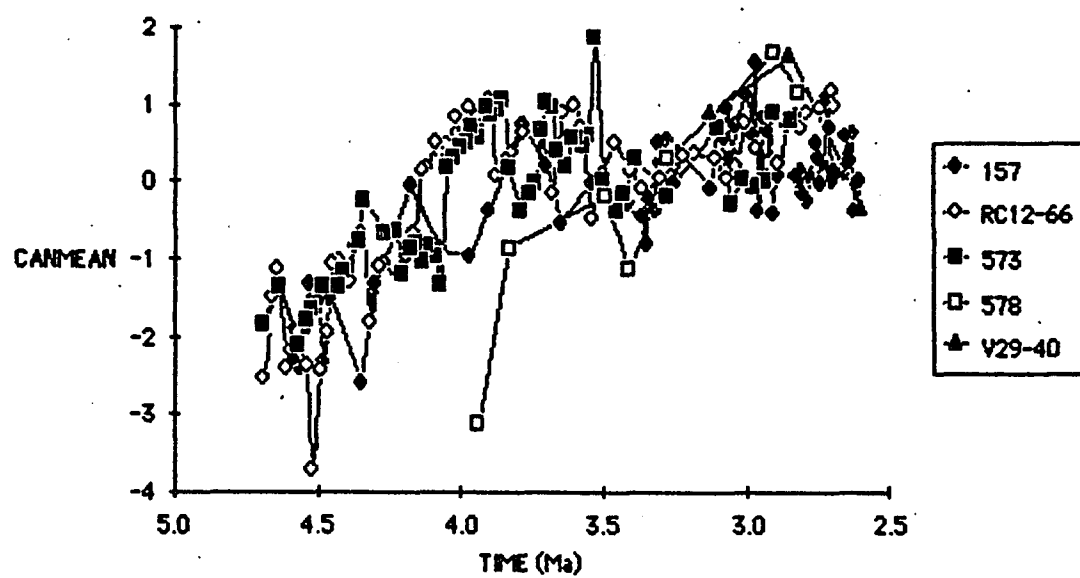


Figure 10b. Plot of the first canonical variate means: DSDP Site 157

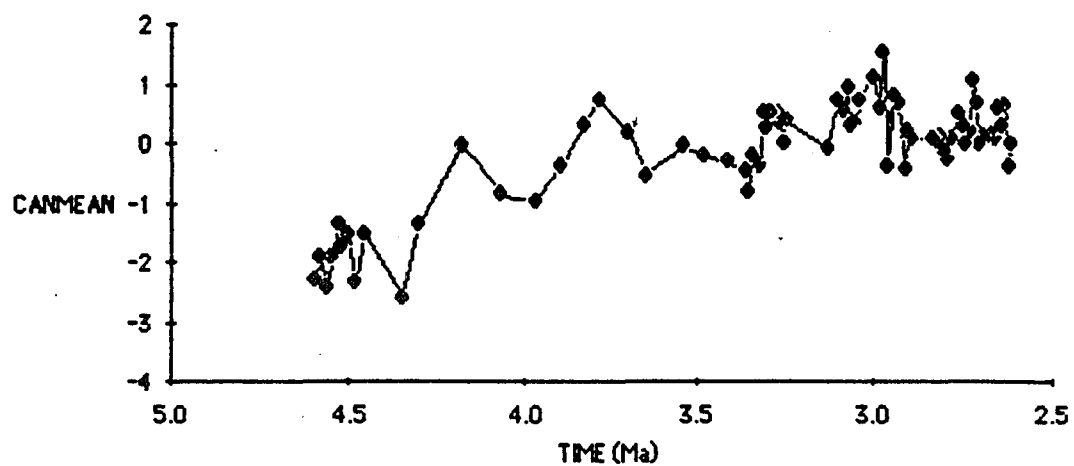


Figure 10c. Plot of the first canonical variate means: RC12-66

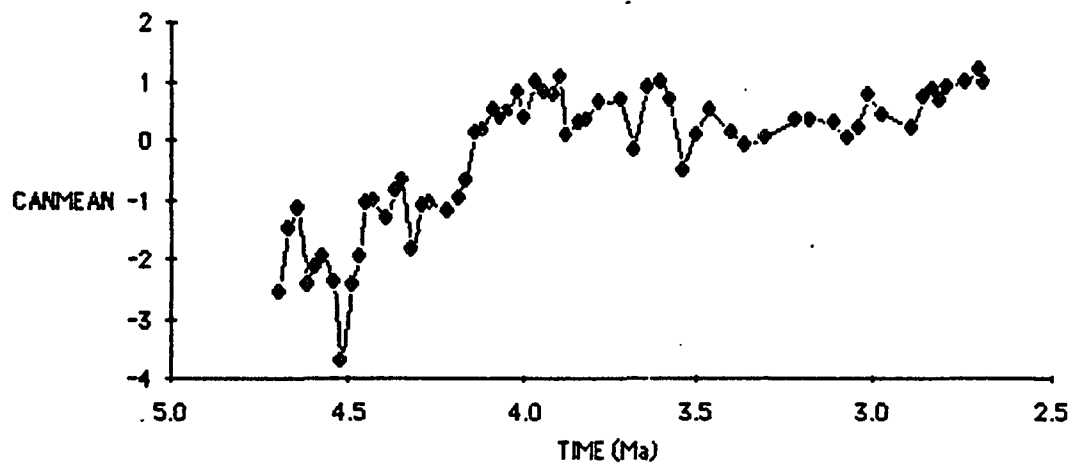


Figure 10d. Plot of the first canonical variate means: DSDP Site 573

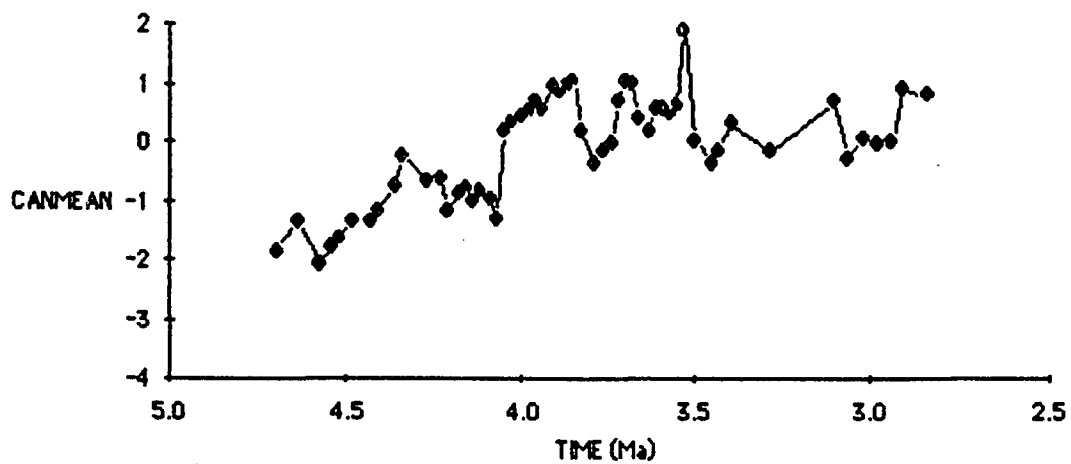


Figure 10e. Plot of the first canonical variate means: DSDP Site 578 and V29-40

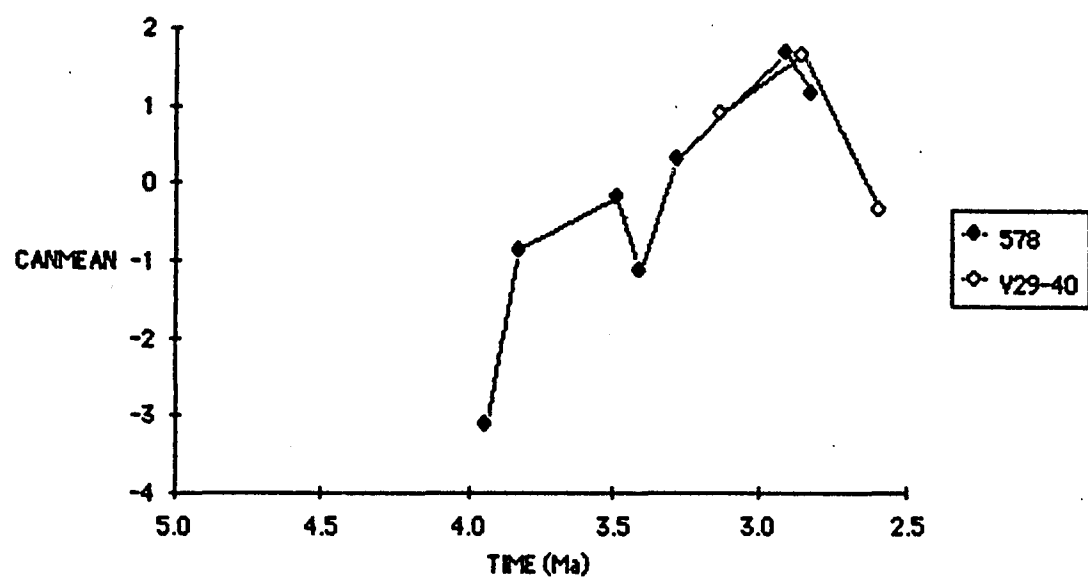


Figure 11. Plot of MKL coefficients of variation

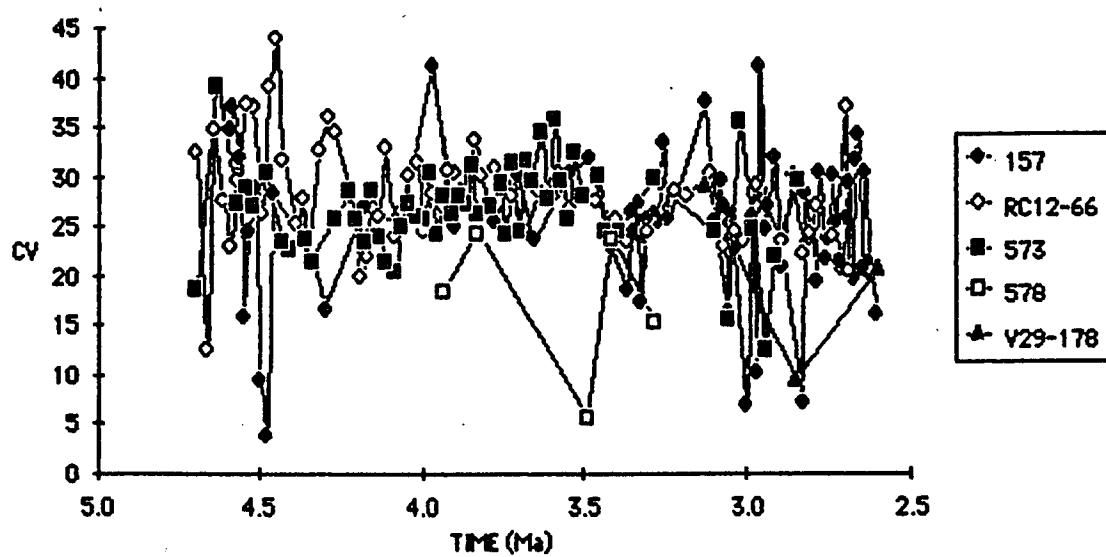


Figure 12. Plot of DIFFML coefficients of variation

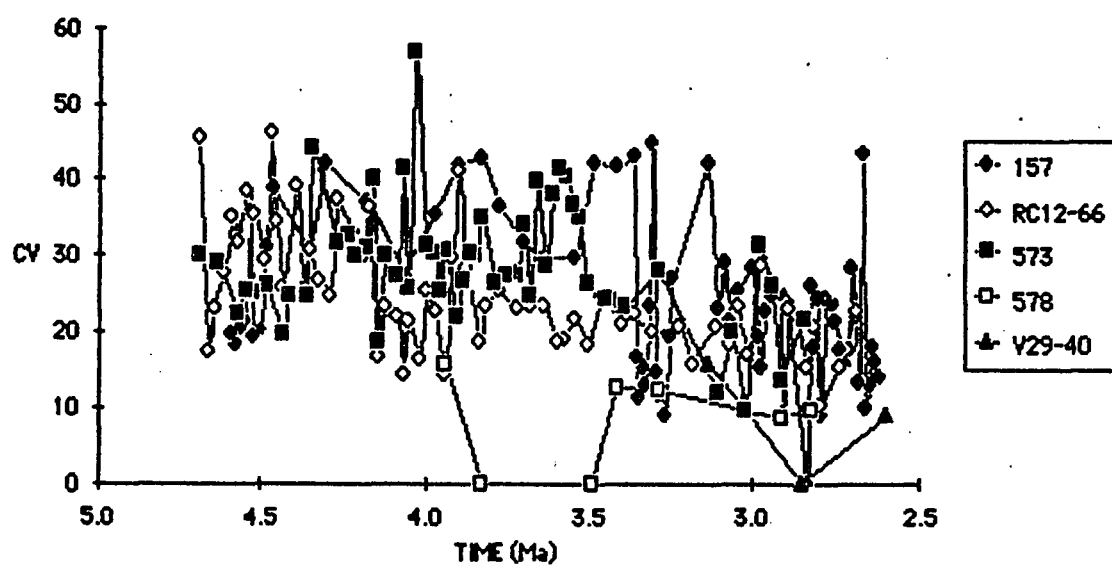


Figure 13. Plot of NC coefficients of variation

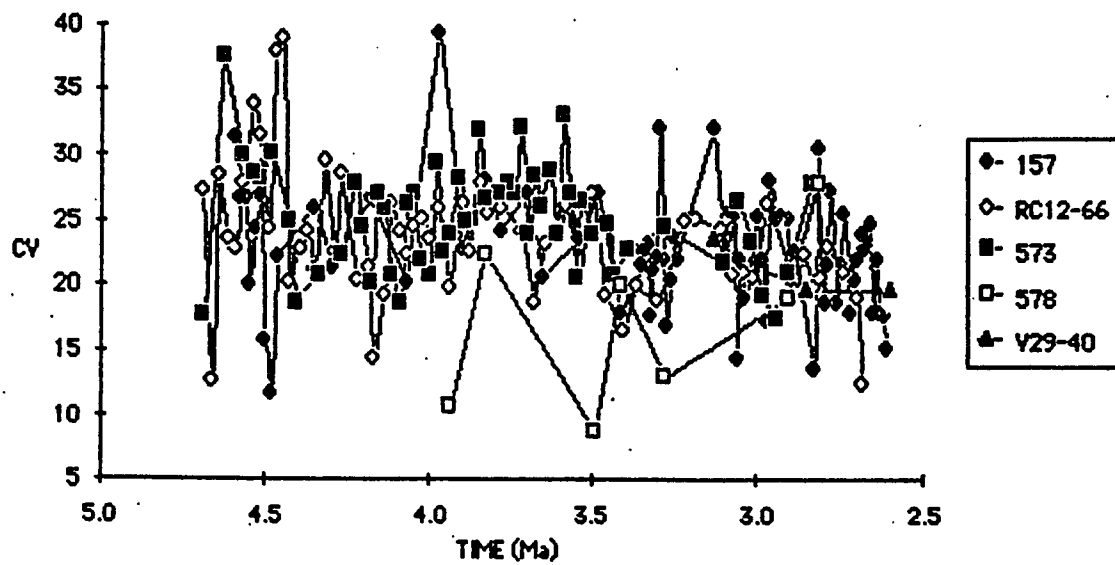


Figure 14. Plot of MKV coefficients of variation

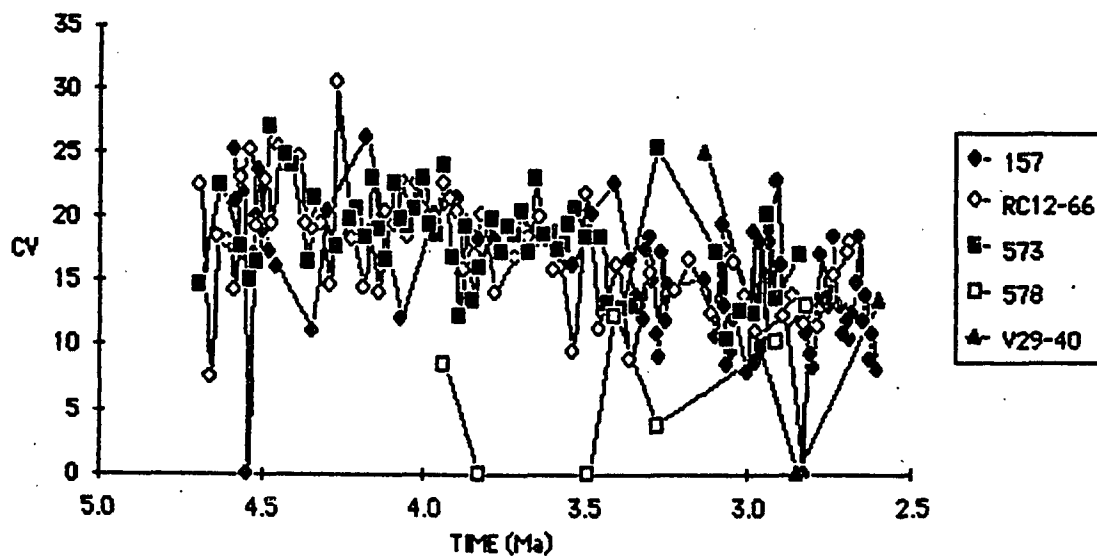
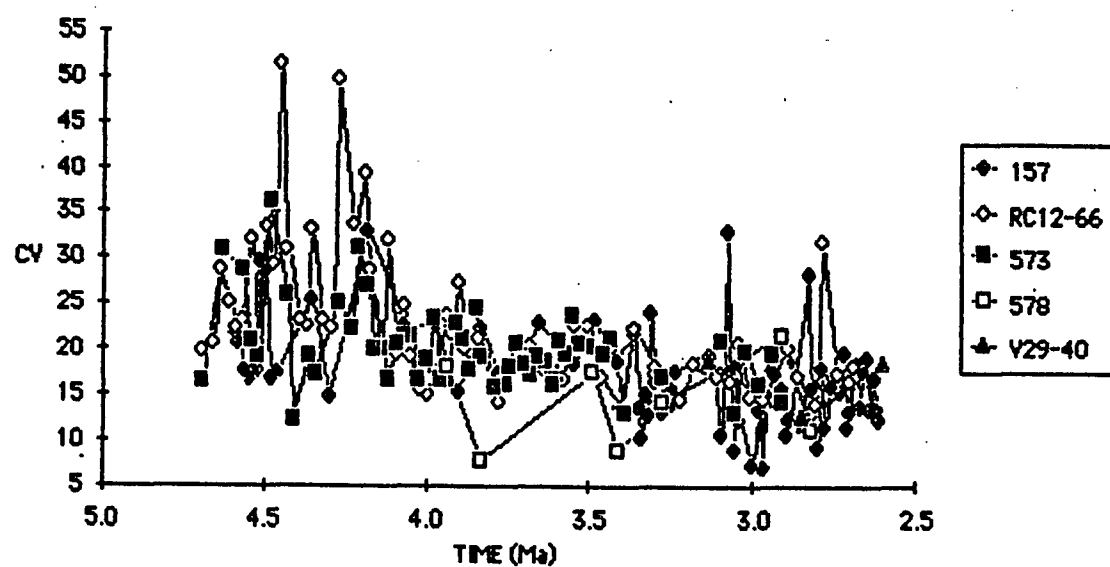


Figure 15. Plot of DIFFMW coefficients of variation



DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME=2.61 -----								
OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1	943.75	30	28.8	1.2	24	9.2	4	5.2
----- CORE-RC1 TIME=2.64 -----								
OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2	956.25	33.6	32.4	1.2	27	10.8	6.8	4.0
3	956.25	.	.	.	.	10.0	6.8	3.2
4	956.25	38.8	.	.	34	.	.	.
----- CORE-RC1 TIME=2.69 -----								
OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5	976.25	30.0	.	.	27	.	.	.
6	976.25	32.8	.	.	28	.	.	.
7	976.25	42.4	40.0	2.4	32	10.0	6.8	3.2
8	976.25	29.2	28.0	1.2	25	10.0	6.0	4.0
9	976.25	31.2	29.2	2.0	28	10.8	8.0	2.8
10	976.25	27.6	25.6	2.0	24	9.2	5.2	4.0
11	976.25	33.2	.	.	27	.	.	.
12	976.25	27.2	25.2	2.0	26	10.8	8.0	2.8
13	976.25	22.8	.	.	20	.	.	.
----- CORE-RC1 TIME 2.7 -----								
OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
14	981.25	35.2	.	.	28	.	.	.
15	981.25	30.8	.	.	29	.	.	.
16	981.25	27.6	25.6	2.0	26	8.8	5.6	3.2
17	981.25	29.6	27.2	2.4	26	10.0	6.0	4.0
18	981.25	.	.	.	.	10.0	6.8	3.2
19	981.25	35.2	.	.	28	.	.	.
20	981.25	30.8	28.8	2.0	25	10.0	6.0	4.0
21	981.25	25.2	23.2	2.0	24	9.6	6.0	3.6
22	981.25	24.4	22.4	2.0	23	10.0	7.2	2.8
23	981.25	60.8	58.0	2.8	41	10.8	8.0	2.8
24	981.25	24.8	22.4	2.4	21	10.0	7.2	2.8
25	981.25	35.2	.	.	28	.	.	.
26	981.25	27.2	24.8	2.4	22	8.0	4.4	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

CORE-RC1 TIME=2.7

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
27	981.25	30.8	28.4	2.4	25	10.0	6.0	4.0
28	981.25	27.2	24.8	2.4	21	9.2	4.8	4.4

CORE-RC1 TIME 2.74

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
29	996.75	42.0	40.0	2.0	36	10.0	6.8	3.2
30	996.75	24.0	.	.	20	.	.	.
31	996.75	25.6	23.6	2.0	20	9.2	5.2	4.0
32	996.75	26.4	.	.	22	.	.	.
33	996.75	27.2	25.2	2.0	23	9.2	5.2	4.0
34	996.75	.	.	.	.	10.0	6.0	4.0
35	996.75	42.0	.	.	31	.	.	.
36	996.75	24.8	22.8	2.0	20	8.8	6.0	2.8
37	996.75	34.8	32.8	2.0	27	8.8	6.0	2.8
38	996.75	24.8	22.4	2.4	19	9.2	5.2	4.0
39	996.75	26.8	24.8	2.0	22	8.0	5.2	2.8
40	996.75	44.8	42.0	2.8	36	10.0	6.4	3.6
41	996.75	24.8	22.8	2.0	22	7.6	4.8	2.8
42	996.75	41.2	38.8	2.4	30	10.0	6.4	3.6
43	996.75	39.2	37.2	2.0	30	10.8	6.8	4.0
44	996.75	36.8	34.8	2.0	32	11.2	8.0	3.2
45	996.75	29.2	26.8	2.4	26	9.6	6.0	3.6
46	996.75	22.0	20.0	2.0	19	7.2	4.0	3.2
47	996.75	28.0	26.0	2.0	24	9.2	5.2	4.0
48	996.75	34.0	32.0	2.0	28	10.4	6.0	4.4
49	996.75	46.8	44.8	2.0	36	10.0	6.8	3.2
50	996.75	30.8	29.6	1.2	24	9.2	6.0	3.2
51	996.75	27.2	24.8	2.4	22	10.0	5.2	4.8
52	996.75	26.8	25.2	1.6	24	9.2	6.0	3.2
53	996.75	22.0	20.0	2.0	18	8.4	4.8	3.6
54	996.75	33.2	31.2	2.0	26	10.4	6.0	4.4
55	996.75	36.0	34.4	1.6	29	10.8	6.4	4.4
56	996.75	29.6	28.0	1.6	25	10.0	6.0	4.0
57	996.75	22.0	20.0	2.0	18	8.0	5.2	2.8
58	996.75	26.4	24.4	2.0	22	9.2	4.0	5.2
59	996.75	23.2	21.6	1.6	18	8.0	4.4	3.6
60	996.75	31.2	29.6	1.6	28	10.8	6.8	4.0
61	996.75	16.0	.	.	.	.	.	.
62	996.75	26.0	24.0	2.0	23	10.0	6.0	4.0
63	996.75	32.8	30.8	2.0	25	10.8	6.0	4.8
64	996.75	25.6	23.2	2.4	21	8.8	4.8	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME-2.79 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
65	1016.25	20.8	18.4	2.4	18	9.2	4.8	4.4
66	1016.25	34.8	32.4	2.4	30	10.4	7.6	2.8
67	1016.25	26.8	24.4	2.4	23	10.0	6.0	4.0
68	1016.25	30.4	.	.	25	.	.	.
69	1016.25	22.8	.	.	18	.	.	.
70	1016.25	18.4	16.8	1.6	18	8.8	6.0	2.8
71	1016.25	25.2	23.2	2.0	21	10.0	6.0	4.0
72	1016.25	25.2	22.8	2.4	24	9.2	6.0	3.2
73	1016.25	26.4	24.4	2.0	23	9.2	5.2	4.0
74	1016.25	23.2	21.2	2.0	18	9.2	5.6	3.6
75	1016.25	20.8	18.8	2.0	21	8.0	6.0	2.0
76	1016.25	32.4	30.4	2.0	25	9.6	6.0	3.6
77	1016.25	42.0	40.0	2.0	35	10.0	6.8	3.2
78	1016.25	26.8	24.8	2.0	25	8.8	5.2	3.6
79	1016.25	32.0	30.0	2.0	28	9.2	5.2	4.0
80	1016.25	18.8	16.8	2.0	16	7.6	4.8	2.8
81	1016.25	44.0	42.0	2.0	39	15.6	6.8	8.8
82	1016.25	32.0	30.0	2.0	28	10.0	5.6	4.4
83	1016.25	25.2	23.2	2.0	22	9.2	5.2	4.0
84	1016.25	27.2	25.2	2.0	24	10.0	6.0	4.0
85	1016.25	39.2	37.6	1.6	31	9.2	5.6	3.6
86	1016.25	32.4	30.0	2.4	27	10.0	6.4	3.6
87	1016.25	43.2	41.2	2.0	35	10.0	6.8	3.2
88	1016.25	36.8	34.8	2.0	29	10.4	6.0	4.4
89	1016.25	29.6	27.6	2.0	24	9.6	5.6	4.0
90	1016.25	27.6	25.6	2.0	25	10.0	6.0	4.0

----- CORE-RC1 TIME-2.81 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
91	1023.5	22.8	.	.	22	.	.	.
92	1023.5	22.8	20.8	2.0	19	9.2	5.6	3.6
93	1023.5	25.6	.	.	23	.	.	.
94	1023.5	34.0	32.0	2.0	28	8.4	5.2	3.2
95	1023.5	41.6	.	.	35	.	.	.
96	1023.5	30.0	28.0	2.0	24	10.4	6.0	4.4
97	1023.5	32.8	30.4	2.4	28	9.2	5.6	3.6
98	1023.5	27.6	26.4	1.2	24	10.0	6.0	4.0
99	1023.5	39.6	38.4	1.2	32	9.6	6.0	3.6
100	1023.5	30.0	28.0	2.0	23	10.4	5.6	4.8
101	1023.5	35.2	33.6	1.6	28	8.8	5.6	3.2
102	1023.5	42.4	40.0	2.4	36	10.0	6.8	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME=2.81 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
103	1023.5	46.0	43.6	2.4	34	11.2	6.8	4.4
104	1023.5	37.2	35.2	2.0	28	9.2	6.0	3.2
105	1023.5	21.2	19.6	1.6	18	8.0	4.4	3.6
106	1023.5	29.2	27.2	2.0	24	8.8	5.2	3.6
107	1023.5	43.2	40.8	2.4	33	10.0	6.0	4.0
108	1023.5	28.8	27.2	1.6	26	10.0	6.8	3.2
109	1023.5	46.8	45.2	1.6	37	10.4	6.8	3.6
110	1023.5	34.8	32.8	2.0	28	9.6	5.2	4.4
111	1023.5	27.2	24.8	2.4	23	9.2	4.8	4.4
112	1023.5	24.4	22.8	1.6	24	8.8	6.0	2.8
113	1023.5	34.0	32.8	1.2	30	9.2	6.0	3.2
114	1023.5	20.4	18.4	2.0	17	7.6	4.0	3.6
115	1023.5	33.6	31.6	2.0	27	9.2	5.2	4.0
116	1023.5	44.0	42.4	1.6	37	10.0	6.8	3.2
117	1023.5	38.4	36.4	2.0	30	10.0	6.0	4.0

----- CORE-RC1 TIME=2.83 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
118	1033.75	22.8	21.2	1.6	22	9.2	6.0	3.2
119	1033.75	35.6	.	.	29	.	.	.
120	1033.75	.	.	.	43	10.8	6.8	4.0
121	1033.75	26.0	.	.	23	.	.	.
122	1033.75	24.0	.	.	21	.	.	.
123	1033.75	32.8	31.2	1.6	28	10.4	6.0	4.4
124	1033.75	29.2	.	.	26	.	.	.
125	1033.75	38.8	37.2	1.6	32	11.2	8.0	3.2
126	1033.75	42.4	40.4	2.0	35	10.0	6.8	3.2
127	1033.75	39.2	37.6	1.6	30	10.0	6.0	4.0
128	1033.75	36.4	34.0	2.4	28	10.4	6.8	3.6
129	1033.75	30.0	28.4	1.6	25	10.4	6.4	4.0
130	1033.75	20.8	18.8	2.0	20	8.0	5.2	2.8
131	1033.75	27.6	26.0	1.6	24	9.6	5.2	4.4
132	1033.75	23.2	21.2	2.0	23	10.0	6.0	4.0
133	1033.75	30.4	28.4	2.0	26	9.6	6.0	3.6
134	1033.75	24.8	23.6	1.2	23	9.2	6.0	3.2
135	1033.75	24.4	22.4	2.0	20	9.6	6.0	3.6
136	1033.75	25.6	23.6	2.0	23	10.0	6.8	3.2
137	1033.75	27.6	26.0	1.6	23	10.0	6.0	4.0
138	1033.75	37.2	35.2	2.0	31	10.4	6.0	4.4
139	1033.75	34.8	32.8	2.0	30	10.8	6.8	4.0
140	1033.75	23.2	21.2	2.0	21	9.2	6.0	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=2.83 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
141	1033.75	34.4	32.0	2.4	27	10.8	6.4	4.4
142	1033.75	22.0	20.0	2.0	18	8.8	4.8	4.0
143	1033.75	39.2	37.2	2.0	32	10.8	7.2	3.6
144	1033.75	27.6	26.0	1.6	24	10.0	6.4	3.6
145	1033.75	26.4	24.4	2.0	22	9.6	6.0	3.6
146	1033.75	20.8	18.8	2.0	18	8.4	4.4	4.0
147	1033.75	29.2	27.2	2.0	25	10.0	5.6	4.4
148	1033.75	27.6	26.4	1.2	25	9.6	6.0	3.6
149	1033.75	36.8	34.8	2.0	32	10.8	7.2	3.6
150	1033.75	26.8	24.8	2.0	25	10.0	6.0	4.0
151	1033.75	32.0	30.0	2.0	26	8.8	5.6	3.2
152	1033.75	24.8	22.8	2.0	25	9.2	6.0	3.2

----- CORE=RC1 TIME=2.86 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
153	1046.25	34.0	31.6	2.4	32	10.4	6.8	3.6
154	1046.25	22.8	21.6	1.2	20	10.4	5.2	5.2
155	1046.25	35.2	33.6	1.6	31	11.2	6.8	4.4
156	1046.25	18.0	.	.	.	.	.	.
157	1046.25	31.2	.	.	27	.	.	.
158	1046.25	20.8	18.8	2.0	21	8.4	5.2	3.2
159	1046.25	23.6	22.4	1.2	21	8.8	5.6	3.2
160	1046.25	28.0	.	.	23	.	.	.
161	1046.25	32.8	.	.	28	.	.	.
162	1046.25	29.6	27.2	2.4	25	9.6	6.0	3.6
163	1046.25	13.2	11.6	1.6	15	6.8	4.0	2.8
164	1046.25	33.2	31.2	2.0	29	10.0	6.0	4.0
165	1046.25	25.6	23.6	2.0	22	10.0	6.0	4.0
166	1046.25	29.2	27.2	2.0	26	9.2	6.0	3.2
167	1046.25	22.0	20.8	1.2	19	8.8	5.6	3.2
168	1046.25	21.6	19.6	2.0	17	9.2	4.8	4.4
169	1046.25	34.4	32.4	2.0	.	10.4	6.8	3.6
170	1046.25	34.8	32.0	2.8	31	10.4	6.4	4.0
171	1046.25	31.2	29.6	1.6	27	10.0	6.0	4.0
172	1046.25	33.6	31.6	2.0	27	10.0	6.8	3.2
173	1046.25	38.0	36.0	2.0	29	10.0	6.0	4.0
174	1046.25	24.8	22.8	2.0	21	10.0	4.4	5.6
175	1046.25	50.0	48.0	2.0	37	10.0	6.0	4.0
176	1046.25	25.6	23.2	2.4	24	9.2	6.0	3.2
177	1046.25	37.2	35.2	2.0	29	9.2	5.6	3.6
178	1046.25	20.0	17.6	2.4	20	8.0	4.8	3.2

RAW DATA

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

CORE=RC1 TIME=2.86							
OBS	DEPTH	ML	MKL	DIFFML	NC	MW	DIFFMW
179	1046.25	21.2	19.2	2.0	18	9.2	3.2
180	1046.25	20.0	18.8	1.2	18	8.0	2.8
181	1046.25	46.8	44.0	2.8	37	10.4	3.6
182	1046.25	34.0	32.0	2.0	29	8.8	3.6
183	1046.25	46.8	44.0	2.8	36	12.0	4.0
184	1046.25	22.0	19.6	2.4	21	8.8	3.6
185	1046.25	31.6	29.6	2.0	25	10.0	4.0
186	1046.25	30.8	28.8	2.0	26	10.0	4.4
187	1046.25	29.2	26.8	2.4	26	9.2	3.2
CORE=RC1 TIME=2.89							
OBS	DEPTH	ML	MKL	DIFFML	NC	MW	DIFFMW
188	1056.25				31	12.0	4.8
189	1056.25	24.8	22.8	2.0	23	9.6	3.6
190	1056.25	42.8			32		
191	1056.25	37.2			30		
192	1056.25	37.6	36.0	1.6	32	10.0	3.2
193	1056.25	22.8					
194	1056.25					9.6	3.6
195	1056.25	28.8			25		
196	1056.25	22.0			19		
197	1056.25	43.2	42.0	1.2	35	10.0	4.0
198	1056.25	21.2			18		
199	1056.25	36.0	34.4	1.6	36	10.4	2.8
200	1056.25	40.8	38.8	2.0	33	8.8	2.4
201	1056.25	22.0	20.0	2.0	23	8.0	2.4
202	1056.25	33.2	32.0	1.2	29	10.0	3.2
203	1056.25	30.8	28.8	2.0	27	9.6	3.6
204	1056.25	27.2	25.2	2.0	24	10.0	4.0
205	1056.25	30.8	29.2	1.6	26	9.2	3.2
206	1056.25	26.4	24.4	2.0	23	9.2	3.6
207	1056.25	33.6	31.6	2.0	27	10.0	4.0
208	1056.25	26.8	24.8	2.0	25	8.8	2.8
209	1056.25	16.0	14.0	2.0	15	8.0	2.8
210	1056.25	35.6	34.0	1.6	30	10.4	4.0
211	1056.25	22.0	20.8	1.2	20	8.4	3.2
212	1056.25	42.0	39.2	2.8	33	9.2	2.8
213	1056.25	30.8	29.2	1.6	28	9.2	4.4
214	1056.25	37.6	35.6	2.0	31	10.0	3.2
215	1056.25	34.4	33.2	1.2	31	10.8	4.0
216	1056.25	24.0	22.4	1.6	22	8.8	4.8

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=2.89 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
217	1056.25	29.2	28.0	1.2	26	9.6	6.0	3.6
218	1056.25	22.8	21.2	1.6	20	8.8	5.2	3.6
219	1056.25	22.8	20.8	2.0	20	7.2	4.8	2.4
220	1056.25	28.8	26.4	2.4	24	8.8	5.2	3.6
221	1056.25	33.2	31.2	2.0	29	10.0	6.0	4.0
222	1056.25	34.4	32.4	2.0	29	10.4	7.2	3.2
223	1056.25	24.4	22.8	1.6	23	9.6	6.8	2.8
224	1056.25	42.0	39.2	2.8	34	11.2	6.4	4.8
225	1056.25	32.0	30.4	1.6	31	9.2	7.2	2.0

----- CORE=RC1 TIME=2.97 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
226	1066.25	20.0	.	.	19	.	.	.
227	1066.25	.	.	.	.	10.0	6.0	4.0
228	1066.25	26.8	.	.	23	.	.	.
229	1066.25	28.0	.	.	24	.	.	.
230	1066.25	38.8	.	.	34	.	.	.
231	1066.25	36.4	34.4	2.0	31	10.0	6.0	4.0
232	1066.25	34.0	.	.	28	.	.	.
233	1066.25	.	.	.	.	8.0	5.2	2.8
234	1066.25	37.2	35.2	2.0	32	10.0	6.8	3.2
235	1066.25	24.8	23.2	1.6	23	8.4	5.2	3.2
236	1066.25	36.8	34.4	2.4	30	10.4	6.0	4.4
237	1066.25	52.0	50.0	2.0	39	10.0	6.0	4.0
238	1066.25	24.4	22.0	2.4	22	10.0	6.4	3.6
239	1066.25	35.2	33.6	1.6	36	10.4	8.0	2.4
240	1066.25	28.8	27.6	1.2	25	9.2	6.0	3.2
241	1066.25	24.4	22.8	1.6	24	10.0	6.8	3.2
242	1066.25	31.2	28.8	2.4	26	8.8	6.0	2.8
243	1066.25	32.8	30.4	2.4	27	10.0	6.8	3.2
244	1066.25	25.2	24.0	1.2	21	8.8	5.2	3.6
245	1066.25	20.8	18.8	2.0	19	8.8	4.8	4.0
246	1066.25	28.4	26.8	1.6	24	8.8	6.0	2.8
247	1066.25	48.0	46.0	2.0	38	9.6	6.8	2.8
248	1066.25	28.8	26.8	2.0	24	10.0	6.0	4.0
249	1066.25	32.4	30.4	2.0	28	10.0	6.0	4.0
250	1066.25	38.0	35.6	2.4	33	9.2	4.8	4.4
251	1066.25	27.6	26.4	1.2	23	9.2	5.6	3.6
252	1066.25	54.0	52.0	2.0	49	9.2	6.0	3.2
253	1066.25	50.0	48.0	2.0	38	10.4	6.4	4.0
254	1066.25	33.2	30.8	2.4	28	10.0	6.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=2.97 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
255	1066.25	31.6	29.6	2.0	26	10.0	6.0	4.0
256	1066.25	33.6	31.6	2.0	28	9.2	6.0	3.2
257	1066.25	43.2	41.2	2.0	35	10.4	6.8	3.6
258	1066.25	24.8	22.8	2.0	21	9.2	6.0	3.2
259	1066.25	47.2	42.8	4.4	41	10.8	6.8	4.0
260	1066.25	50.4	48.8	1.6	44	10.8	7.2	3.6
261	1066.25	18.8	17.2	1.6	17	9.2	6.0	3.2
262	1066.25	40.0	38.0	2.0	34	9.6	6.0	3.6

----- CORE=RC1 TIME=3.01 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
263	1076.25	27.2	.	.	24	.	.	.
264	1076.25	34.8	32.8	2.0	.	11.6	8.0	3.6
265	1076.25	20.0	.	.	.	8.0	4.0	4.0
266	1076.25	38.8	36.8	2.0	37	10.8	6.0	4.8
267	1076.25	23.2	21.2	2.0	23	10.0	6.0	4.0
268	1076.25	24.0	.	.	.	.	.	.
269	1076.25	33.2	31.2	2.0	28	9.6	5.2	4.4
270	1076.25	22.8	21.6	1.2	20	8.4	4.8	3.6
271	1076.25	27.6	25.6	2.0	24	9.2	5.2	4.0
272	1076.25	26.4	24.0	2.4	21	9.2	5.2	4.0
273	1076.25	24.0	22.0	2.0	24	8.8	6.0	2.8
274	1076.25	22.0	20.0	2.0	19	8.8	4.8	4.0
275	1076.25	30.0	27.6	2.4	25	9.6	6.0	3.6
276	1076.25	27.2	25.6	1.6	23	10.0	6.0	4.0
277	1076.25	31.2	28.8	2.4	26	9.6	6.0	3.6
278	1076.25	23.2	21.2	2.0	20	11.2	6.0	5.2
279	1076.25	23.2	21.2	2.0	21	8.0	5.2	2.8
280	1076.25	27.6	25.6	2.0	23	8.8	6.0	2.8
281	1076.25	38.4	36.4	2.0	33	9.2	6.4	2.8
282	1076.25	27.2	24.8	2.4	23	10.0	6.0	4.0
283	1076.25	24.8	22.4	2.4	21	9.2	5.6	3.6
284	1076.25	28.8	27.6	1.2	25	8.8	4.8	4.0
285	1076.25	27.2	25.6	1.6	22	10.0	6.4	3.6
286	1076.25	42.8	40.8	2.0	37	10.0	6.8	3.2
287	1076.25	28.8	26.4	2.4	26	10.0	6.4	3.6
288	1076.25	22.4	20.0	2.4	19	8.0	4.8	3.2
289	1076.25	42.4	40.4	2.0	33	9.6	5.6	4.0
290	1076.25	26.8	24.8	2.0	21	9.2	4.8	4.4
291	1076.25	40.0	38.0	2.0	30	10.4	6.4	4.0
292	1076.25	28.0	26.0	2.0	25	9.2	6.0	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=3.01 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
293	1076.25	32.0	30.8	1.2	26	10.0	6.0	4
294	1076.25	32.0	29.6	2.4	26	10.8	6.8	4
295	1076.25	22.4	20.4	2.0	19	8.8	4.8	4
296	1076.25	43.2	41.2	2.0	35	10.0	6.0	4

----- CORE=RC1 TIME=3.04 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
297	1086.25	34.8	32.8	2.0	29	9.2	6.0	3.2
298	1086.25	33.6	32.0	1.6	27	10.0	6.0	4.0
299	1086.25	26.0	24.8	1.2	26	11.2	6.8	4.4
300	1086.25	33.2	31.2	2.0	30	10.0	6.0	4.0
301	1086.25	42.0	39.6	2.4	40	11.2	9.2	2.0
302	1086.25	25.6	.	.	23	.	.	.
303	1086.25	.	.	.	.	9.2	5.2	4.0
304	1086.25	.	.	.	.	9.6	5.6	4.0
305	1086.25	25.2	22.8	2.4	27	8.8	6.0	2.8
306	1086.25	35.6	33.6	2.0	29	9.2	6.0	3.2
307	1086.25	28.8	26.0	2.8	26	9.2	6.0	3.2
308	1086.25	33.2	31.2	2.0	29	9.6	6.0	3.6
309	1086.25	20.0	18.0	2.0	20	8.0	4.0	4.0
310	1086.25	25.2	23.2	2.0	22	10.0	6.0	4.0
311	1086.25	19.6	16.8	2.8	17	8.0	4.0	4.0
312	1086.25	23.2	22.0	1.2	22	9.6	6.0	3.6
313	1086.25	22.4	20.8	1.6	19	7.2	5.6	1.6
314	1086.25	21.6	19.6	2.0	20	9.2	4.8	4.4
315	1086.25	20.4	18.0	2.4	19	8.0	4.0	4.0
316	1086.25	31.2	28.8	2.4	30	10.0	5.2	4.8
317	1086.25	37.2	35.6	1.6	33	10.0	6.0	4.0
318	1086.25	34.0	32.8	1.2	30	8.8	6.0	2.8
319	1086.25	39.6	37.2	2.4	32	9.2	6.0	3.2
320	1086.25	26.4	24.4	2.0	23	8.4	6.0	2.4
321	1086.25	20.4	18.0	2.4	19	8.0	4.4	3.6
322	1086.25	26.4	24.0	2.4	21	9.2	6.0	3.2
323	1086.25	34.8	32.4	2.4	30	10.0	6.0	4.0
324	1086.25	23.2	20.8	2.4	23	9.6	6.0	3.6
325	1086.25	38.4	36.0	2.4	35	10.0	6.0	4.0
326	1086.25	32.4	31.2	1.2	29	10.0	6.0	4.0
327	1086.25	38.0	36.4	1.6	30	10.8	6.0	4.8
328	1086.25	24.8	23.2	1.6	21	8.4	4.8	3.6
329	1086.25	28.4	26.8	1.6	25	8.4	5.6	2.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME-3.07 -----								
OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
330	1092.25	24.0	.	.	22	.	.	.
331	1092.25	.	.	.	.	10.4	6.0	4.4
332	1092.25	30.8	.	.	29	.	.	.
333	1092.25	36.0	34.4	1.6	29	9.2	4.8	4.4
334	1092.25	18.4	.	.	17	.	.	.
335	1092.25	21.6	20.0	1.6	19	9.2	5.2	4.0
336	1092.25	22.0	.	.	20	.	.	.
337	1092.25	33.2	30.8	2.4	33	10.4	6.0	4.4
338	1092.25	25.2	23.2	2.0	23	10.0	6.0	4.0
339	1092.25	24.8	.	.	23	.	.	.
340	1092.25	24.8	.	.	23	.	.	.
341	1092.25	26.8	24.8	2.0	23	8.0	4.0	4.0
342	1092.25	24.4	22.8	1.6	25	8.0	5.2	2.8
343	1092.25	23.2	21.2	2.0	22	8.8	4.8	4.0
344	1092.25	28.8	27.2	1.6	25	10.0	5.2	4.8
345	1092.25	29.6	28.0	1.6	26	9.2	5.2	4.0
346	1092.25	28.8	26.8	2.0	25	9.2	5.2	4.0
347	1092.25	35.2	33.2	2.0	35	10.8	7.2	3.6
348	1092.25	21.6	19.6	2.0	20	9.2	6.0	3.2
349	1092.25	42.0	40.4	1.6	38	11.6	8.0	3.6
350	1092.25	18.0	16.8	1.2	17	7.2	4.0	3.2
351	1092.25	32.4	30.4	2.0	31	10.4	7.2	3.2
352	1092.25	18.0	16.0	2.0	17	7.6	5.2	2.4
353	1092.25	26.4	24.8	1.6	24	9.6	5.6	4.0
354	1092.25	26.4	24.8	1.6	28	10.0	7.2	2.8
355	1092.25	18.4	16.4	2.0	17	7.6	4.0	3.6
356	1092.25	28.0	26.4	1.6	27	8.8	6.0	2.8
357	1092.25	34.8	32.8	2.0	29	8.8	6.0	2.8
358	1092.25	29.6	28.0	1.6	27	10.0	6.0	4.0
359	1092.25	35.6	34.4	1.2	30	9.2	6.0	3.2
360	1092.25	22.4	20.0	2.4	22	8.0	4.4	3.6
361	1092.25	22.8	20.8	2.0	20	8.0	4.8	3.2
362	1092.25	31.6	30.0	1.6	28	11.2	6.8	4.4
363	1092.25	30.8	29.2	1.6	30	11.2	6.8	4.4
364	1092.25	27.2	24.8	2.4	23	10.4	6.0	4.4
365	1092.25	35.2	33.6	1.6	30	10.0	6.0	4.0
366	1092.25	32.4	31.2	1.2	30	9.6	6.0	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

CORE-RC1 TIME-3.11								
OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
367	1106.25	43.2	40.8	2.4	37	11.2	7.2	4.0
368	1106.25	23.2			22			
369	1106.25	21.6	19.6	2.0	22	8.8	4.0	4.8
370	1106.25	18.0	16.4	1.6	18	8.0	6.0	2.0
371	1106.25	28.8	26.4	2.4	26	10.8	6.0	4.8
372	1106.25	48.0	45.2	2.8	42	10.8	7.2	3.6
373	1106.25	26.0	24.4	1.6	26	10.0	6.0	4.0
374	1106.25	26.8	25.2	1.6	22	10.0	5.2	4.8
375	1106.25	46.8	44.0	2.8	37	10.4	6.4	4.0
376	1106.25	41.2	40.0	1.2	34	10.0	6.8	3.2
377	1106.25	32.4	31.2	1.2	28	10.0	6.0	4.0
378	1106.25	27.2	25.2	2.0	28	10.0	6.0	4.0
379	1106.25	40.8	38.8	2.0	34	10.0	6.4	3.6
380	1106.25	34.4	32.8	1.6	30	9.6	6.0	3.6
381	1106.25	26.4	24.4	2.0	26	10.0	6.0	4.0
382	1106.25	21.2	19.2	2.0	20	8.8	5.2	3.6
383	1106.25	23.6	21.2	2.4	21	10.0	6.0	4.0
384	1106.25	25.2	23.2	2.0	22	8.8	5.2	3.6
385	1106.25	22.8	21.2	1.6	22	9.6	6.0	3.6
386	1106.25	23.6	22.0	1.6	22	8.8	6.0	2.8
387	1106.25	21.6	20.0	1.6	21	9.2	6.0	3.2
388	1106.25	38.4	36.4	2.0	29	10.4	6.4	4.0
389	1106.25	29.2	26.8	2.4	27	10.0	6.0	4.0
390	1106.25	29.6	27.2	2.4	29	9.2	6.0	3.2
391	1106.25	31.6	29.6	2.0	28	8.8	5.6	3.2
392	1106.25	42.4	40.4	2.0	39	10.0	6.0	4.0
393	1106.25	24.8	22.8	2.0	25	9.8	6.0	3.6
394	1106.25	20.4	18.8	1.6	19	7.2	4.8	2.4
395	1106.25	21.2	19.2	2.0	22	9.6	5.2	4.4
396	1106.25	40.4	38.8	1.6	39	12.0	8.0	4.0
397	1106.25	24.0	22.0	2.0	22	10.0	6.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=3.18 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
398	1116.25	26.8	.	.	26	.	.	.
399	1116.25	21.2	19.2	2.0	20	8.8	6.0	2.8
400	1116.25	23.2	.	.	20	.	.	.
401	1116.25	.	.	.	.	9.2	6.0	3.2
402	1116.25	42.8	40.8	2.0	40	10.8	8.0	2.8
403	1116.25	28.8	.	.	25	.	.	.
404	1116.25	28.4	26.0	2.4	23	9.6	4.8	4.8
405	1116.25	26.4	24.4	2.0	23	8.0	5.2	2.8
406	1116.25	46.0	44.0	2.0	40	9.2	5.6	3.6
407	1116.25	35.2	.	.	32	.	.	.
408	1116.25	44.0	41.2	2.8	40	11.2	8.0	3.2
409	1116.25	46.0	44.0	2.0	40	10.4	8.0	2.4
410	1116.25	25.6	23.6	2.0	20	9.2	6.0	3.2
411	1116.25	36.8	34.8	2.0	29	10.0	6.8	3.2
412	1116.25	27.2	25.2	2.0	22	8.4	5.2	3.2
413	1116.25	34.8	32.8	2.0	36	10.0	7.2	2.8
414	1116.25	43.6	42.0	1.6	39	10.4	6.8	3.6
415	1116.25	37.6	35.6	2.0	36	10.8	8.0	2.8
416	1116.25	24.4	22.4	2.0	22	9.2	5.2	4.0
417	1116.25	25.6	23.2	2.4	24	9.2	5.2	4.0
418	1116.25	27.2	24.8	2.4	25	8.8	4.8	4.0
419	1116.25	24.8	22.8	2.0	22	10.0	6.0	4.0
420	1116.25	24.0	22.0	2.0	23	8.8	5.6	3.2
421	1116.25	32.8	31.2	1.6	28	11.2	6.8	4.4
422	1116.25	30.8	28.8	2.0	27	9.6	6.0	3.6
423	1116.25	29.6	28.0	1.6	28	9.2	6.4	2.8
424	1116.25	28.0	26.0	2.0	28	10.8	8.8	2.0
425	1116.25	27.6	26.0	1.6	27	10.0	6.0	4.0
426	1116.25	30.4	28.8	1.6	26	10.0	6.0	4.0
427	1116.25	28.0	26.0	2.0	25	10.0	6.8	3.2
428	1116.25	22.4	20.4	2.0	21	9.2	6.0	3.2
429	1116.25	46.4	44.8	1.6	39	10.8	6.8	4.0
430	1116.25	24.8	22.4	2.4	19	9.2	5.6	3.6
431	1116.25	52.8	50.0	2.8	41	10.8	8.0	2.8
432	1116.25	37.2	34.8	2.4	32	10.0	6.4	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME-3.22 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
433	1126.25	27.2	25.2	2.0	22	8.4	5.2	3.2
434	1126.25	23.6	.	.	22	.	.	.
435	1126.25	44.0	.	.	37	.	.	.
436	1126.25	23.2	20.8	2.4	20	7.6	4.4	3.2
437	1126.25	22.8	21.2	1.6	.	10.0	6.0	4.0
438	1126.25	30.8	28.8	2.0	27	8.4	5.2	3.2
439	1126.25	20.0	18.0	2.0	22	8.0	4.8	3.2
440	1126.25	30.8	28.8	2.0	28	9.2	6.0	3.2
441	1126.25	.	.	.	24	9.2	5.2	4.0
442	1126.25	16.4	.	.	17	.	.	.
443	1126.25	.	.	.	24	10.0	6.4	3.6
444	1126.25	35.6	33.2	2.4	37	11.2	6.8	4.4
445	1126.25	22.4	20.0	2.4	20	9.2	6.0	3.2
446	1126.25	27.2	25.2	2.0	23	9.2	5.2	4.0
447	1126.25	34.4	32.4	2.0	29	8.0	5.2	2.8
448	1126.25	26.8	25.2	1.6	24	9.2	5.6	3.6
449	1126.25	22.8	20.8	2.0	20	8.0	5.6	2.4
450	1126.25	26.4	24.0	2.4	22	8.8	6.0	2.8
451	1126.25	24.8	22.4	2.4	21	9.2	6.0	3.2
452	1126.25	21.6	20.0	1.6	19	8.8	5.2	3.6
453	1126.25	36.4	35.2	1.2	31	9.2	5.2	4.0
454	1126.25	27.6	25.2	2.4	25	10.4	6.0	4.4
455	1126.25	44.0	42.0	2.0	36	10.0	6.8	3.2
456	1126.25	31.2	29.2	2.0	26	11.2	7.2	4.0
457	1126.25	26.0	24.0	2.0	22	10.0	6.8	3.2
458	1126.25	31.6	30.4	1.2	28	8.4	5.2	3.2
459	1126.25	54.0	52.0	2.0	46	10.4	7.2	3.2
460	1126.25	30.4	28.4	2.0	25	10.8	6.8	4.0
461	1126.25	26.4	24.0	2.4	23	8.4	4.8	3.6
462	1126.25	32.0	30.4	1.6	29	10.8	6.8	4.0
463	1126.25	23.2	22.0	1.2	22	8.0	5.2	2.8
464	1126.25	20.0	18.8	1.2	20	9.2	5.2	4.0
465	1126.25	41.2	38.8	2.4	36	11.2	6.8	4.4
466	1126.25	42.0	40.4	1.6	34	11.6	8.0	3.6
467	1126.25	38.8	36.4	2.4	31	10.0	6.0	4.0
468	1126.25	20.8	19.2	1.6	21	9.2	6.0	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=3.3 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
469	1136.25	40.0	38.4	1.6	34	11.2	8.0	3.2
470	1136.25	24.0	22.0	2.0	22	9.6	6.0	3.6
471	1136.25	18.4	.	.	19	.	.	.
472	1136.25	30.0	28.0	2.0	25	10.0	6.0	4.0
473	1136.25	18.8	17.6	1.2	21	8.4	4.8	3.6
474	1136.25	30.0	28.8	1.2	27	10.8	6.0	4.8
475	1136.25	25.2	.	.	21	.	.	.
476	1136.25	29.2	26.8	2.4	25	10.4	6.8	3.6
477	1136.25	29.6	28.0	1.6	27	10.0	6.4	3.6
478	1136.25	26.0	24.4	1.6	23	8.8	4.8	4.0
479	1136.25	21.2	19.2	2.0	21	7.6	5.2	2.4
480	1136.25	21.2	19.2	2.0	21	10.0	6.0	4.0
481	1136.25	30.4	28.8	1.6	25	9.2	6.0	3.2
482	1136.25	40.0	38.8	1.2	34	9.2	6.0	3.2
483	1136.25	22.0	20.0	2.0	20	7.6	4.4	3.2
484	1136.25	22.8	21.2	1.6	22	9.2	6.0	3.2
485	1136.25	24.8	23.2	1.6	23	9.2	5.6	3.6
486	1136.25	26.0	24.0	2.0	26	8.0	6.0	2.0
487	1136.25	20.0	18.4	1.6	20	8.0	4.0	4.0
488	1136.25	23.6	22.4	1.2	20	9.6	5.2	4.4
489	1136.25	31.6	29.6	2.0	25	9.6	6.0	3.6
490	1136.25	36.8	34.8	2.0	34	9.6	6.0	3.6
491	1136.25	21.2	19.6	1.6	19	8.0	5.2	2.8
492	1136.25	22.8	20.8	2.0	21	8.4	4.0	4.4
493	1136.25	20.4	19.2	1.2	19	8.0	5.2	2.8
494	1136.25	23.2	21.2	2.0	24	9.6	6.0	3.6

----- CORE=RC1 TIME=3.36 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
495	1156.25	41.2	40.0	1.2	38	11.2	6.4	4.8
496	1156.25	28.8	26.4	2.4	26	8.4	6.0	2.4
497	1156.25	28.4	26.8	1.6	26	9.2	5.6	3.6
498	1156.25	29.2	.	.	25	.	.	.
499	1156.25	32.8	31.2	1.6	28	10.0	6.4	3.6
500	1156.25	22.8	.	.	21	.	.	.
501	1156.25	19.2	.	.	18	.	.	.
502	1156.25	22.8	.	.	22	.	.	.
503	1156.25	25.2	23.2	2.0	21	9.2	4.8	4.4
504	1156.25	21.2	18.8	2.4	22	8.0	6.0	2.0
505	1156.25	24.4	22.8	1.6	24	9.2	6.0	3.2
506	1156.25	24.0	22.4	1.6	25	10.0	6.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME=3.36 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
507	1156.25	32.0	30.4	1.6	34	8.8	6.0	2.8
508	1156.25	41.2	39.2	2.0	35	9.2	6.0	3.2
509	1156.25	26.4	24.0	2.4	24	9.2	6.8	2.4
510	1156.25	19.6	18.4	1.2	19	9.2	6.0	3.2
511	1156.25	26.4	24.8	1.6	25	10.0	6.4	3.6
512	1156.25	22.8	20.4	2.4	22	8.4	5.6	2.8
513	1156.25	25.2	23.2	2.0	24	9.6	6.8	2.8
514	1156.25	28.8	26.4	2.4	27	10.4	7.2	3.2
515	1156.25	28.4	26.4	2.0	25	9.2	6.0	3.2

----- CORE-RC1 TIME=3.4 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
516	1153.75	26.4	.	.	23	.	.	.
517	1153.75	37.6	36.0	1.6	32	10.0	7.2	2.8
518	1153.75	25.2	.	.	23	.	.	.
519	1153.75	18.8	.	.	17	.	.	.
520	1153.75	26.4	.	.	27	.	.	.
521	1153.75	26.8	.	.	24	.	.	.
522	1153.75	22.8	.	.	21	.	.	.
523	1153.75	30.4	28.4	2.0	26	8.4	5.2	3.2
524	1153.75	26.0	23.6	2.4	24	8.4	5.2	3.2
525	1153.75	24.4	.	.	22	.	.	.
526	1153.75	26.4	.	.	22	.	.	.
527	1153.75	20.4	18.4	2.0	18	8.0	5.2	2.8
528	1153.75	.	.	.	.	9.2	6.4	2.8
529	1153.75	25.6	22.8	2.8	22	8.8	4.8	4.0
530	1153.75	.	.	.	.	10.0	6.8	3.2

----- CORE-RC1 TIME=3.46 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
531	1166.25	26.4	.	.	23	.	.	.
532	1166.25	21.2	20.0	1.2	21	9.2	6.0	3.2
533	1166.25	20.8	18.4	2.4	20	10.0	6.0	4.0
534	1166.25	33.6	.	.	32	.	.	.
535	1166.25	39.6	.	.	29	.	.	.
536	1166.25	14.8	12.8	2.0	15	7.2	4.0	3.2
537	1166.25	35.2	34.0	1.2	30	10.8	6.0	4.8
538	1166.25	35.2	33.2	2.0	28	11.2	6.8	4.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME=3.46 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
539	1166.25	25.6	23.6	2.0	24	8.8	6.0	2.8
540	1166.25	27.2	25.6	1.6	24	9.2	6.0	3.2
541	1166.25	23.2	22.0	1.2	22	10.0	6.0	4.0
542	1166.25	28.4	26.8	1.6	25	10.8	6.0	4.8
543	1166.25	30.0	28.8	1.2	27	10.0	6.4	3.6
544	1166.25	24.8	23.2	1.6	23	9.2	5.6	3.6
545	1166.25	39.2	37.2	2.0	33	10.0	6.0	4.0

----- CORE-RC1 TIME=3.5 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
546	1178.75	24.8	.	.	23	.	.	.
547	1178.75	36.4	.	.	35	.	.	.
548	1178.75	25.2	24.0	1.2	22	9.2	6.8	2.4
549	1178.75	21.6	.	.	22	.	.	.
550	1178.75	20.8	.	.	21	.	.	.
551	1178.75	40.4	.	.	41	.	.	.
552	1178.75	20.0	.	.	19	.	.	.
553	1178.75	22.8	.	.	21	.	.	.
554	1178.75	30.8	29.2	1.6	28	9.6	6.0	3.6
555	1178.75	18.8	16.8	2.0	15	7.2	4.0	3.2
556	1178.75	19.2	17.2	2.0	20	7.6	4.8	2.8
557	1178.75	36.8	34.8	2.0	30	9.2	6.8	2.4
558	1178.75	32.8	30.8	2.0	27	9.2	6.0	3.2
559	1178.75	21.2	19.2	2.0	19	8.4	4.0	4.4
560	1178.75	29.2	27.6	1.6	26	8.0	4.0	4.0
561	1178.75	20.8	19.6	1.2	20	8.4	4.4	4.0
562	1178.75	47.2	45.2	2.0	43	11.2	8.0	3.2
563	1178.75	26.0	24.0	2.0	24	8.8	6.8	2.0
564	1178.75	29.2	27.2	2.0	25	9.2	5.2	4.0
565	1178.75	25.2	23.2	2.0	22	9.2	6.0	3.2
566	1178.75	33.6	31.2	2.4	29	10.0	5.2	4.8
567	1178.75	30.4	28.4	2.0	28	12.0	8.0	4.0
568	1178.75	26.0	24.0	2.0	23	8.4	4.8	3.6
569	1178.75	26.8	25.2	1.6	23	10.0	5.2	4.8
570	1178.75	16.8	14.8	2.0	17	8.8	4.8	4.0
571	1178.75	35.2	32.8	2.4	33	9.2	6.0	3.2
572	1178.75	18.4	16.8	1.6	18	8.4	6.0	2.4
573	1178.75	24.0	22.0	2.0	19	8.4	4.0	4.4
574	1178.75	24.4	23.2	1.2	23	8.4	5.2	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=3.54 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
575	1186.25	26.4	.	.	23	.	.	.
576	1186.25	36.8	34.4	2.4	31	8.8	6.0	2.8
577	1186.25	24.4	22.8	1.6	25	8.8	6.0	2.8
578	1186.25	25.2	23.2	2.0	25	8.0	6.0	2.0
579	1186.25	38.8	37.6	1.2	36	8.8	6.0	2.8
580	1186.25	28.0	25.6	2.4	28	8.4	6.8	1.6
581	1186.25	27.6	25.2	2.4	24	10.0	6.0	4.0
582	1186.25	26.0	24.4	1.6	24	9.6	7.2	2.4
583	1186.25	34.4	32.4	2.0	34	8.8	6.0	2.8
584	1186.25	40.8	39.2	1.6	34	10.4	6.0	4.4
585	1186.25	28.8	26.8	2.0	27	9.6	6.0	3.6
586	1186.25	26.4	24.4	2.0	23	8.0	4.8	3.2
587	1186.25	20.8	18.8	2.0	20	8.0	6.0	2.0
588	1186.25	22.0	20.0	2.0	24	8.0	5.6	2.4
589	1186.25	40.0	38.0	2.0	32	8.8	5.2	3.6
590	1186.25	22.8	21.2	1.6	22	8.4	6.0	2.4
591	1186.25	33.2	31.2	2.0	32	9.2	6.0	3.2
592	1186.25	27.2	25.6	1.6	26	8.8	6.0	2.8
593	1186.25	26.4	23.6	2.8	25	8.8	5.2	3.6
594	1186.25	47.2	45.2	2.0	40	9.2	6.0	3.2
595	1186.25	27.6	26.0	1.6	22	10.0	6.0	4.0
596	1186.25	26.0	24.0	2.0	26	10.0	6.8	3.2
597	1186.25	28.4	27.2	1.2	27	8.8	5.6	3.2
598	1186.25	17.2	14.8	2.4	18	8.4	4.8	3.6
599	1186.25	40.4	38.8	1.6	37	10.4	6.8	3.6
600	1186.25	23.2	22.0	1.2	22	8.8	6.0	2.8

----- CORE=RC1 TIME=3.58 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
601	1196.25	32.8	.	.	26	.	.	.
602	1196.25	20.0	.	.	19	.	.	.
603	1196.25	20.4	18.4	2.0	20	8.0	5.2	2.8
604	1196.25	18.4	.	.	18	.	.	.
605	1196.25	.	.	.	.	9.6	6.0	3.6
606	1196.25	23.2	.	.	.	.	.	.
607	1196.25	30.0	28.8	1.2	29	10.8	6.0	4.8
608	1196.25	19.2	18.0	1.2	17	8.8	5.2	3.6
609	1196.25	48.8	47.2	1.6	40	11.6	7.2	4.4
610	1196.25	24.0	22.0	2.0	21	10.0	6.8	3.2
611	1196.25	15.6	14.0	1.6	14	8.4	4.8	3.6
612	1196.25	42.0	40.8	1.2	34	10.8	6.0	4.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME=3.58 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
613	1196.25	33.2	30.8	2.4	29	10.0	6.0	4.0
614	1196.25	43.2	40.8	2.4	36	10.4	6.0	4.4
615	1196.25	27.6	25.2	2.4	21	9.2	6.8	2.4
616	1196.25	18.8	16.8	2.0	17	8.4	4.0	4.4
617	1196.25	33.2	31.2	2.0	28	10.8	6.4	4.4
618	1196.25	41.2	39.2	2.0	32	10.0	6.0	4.0
619	1196.25	22.4	20.8	1.6	17	8.4	4.4	4.0
620	1196.25	23.2	21.2	2.0	21	9.2	5.2	4.0
621	1196.25	41.2	39.2	2.0	34	10.0	6.0	4.0
622	1196.25	29.2	27.2	2.0	26	9.2	4.8	4.4
623	1196.25	28.8	27.2	1.6	28	11.2	8.0	3.2
624	1196.25	25.6	23.6	2.0	24	10.0	6.0	4.0
625	1196.25	20.8	18.8	2.0	19	9.6	6.0	3.6
626	1196.25	36.4	34.8	1.6	30	10.0	6.0	4.0
627	1196.25	30.8	29.2	1.6	27	10.0	7.2	2.8
628	1196.25	38.8	36.8	2.0	32	10.0	5.2	4.8
629	1196.25	23.2	21.2	2.0	21	8.8	4.8	4.0
630	1196.25	33.6	32.0	1.6	33	10.8	8.0	2.8
631	1196.25	19.2	17.2	2.0	16	8.8	5.6	3.2
632	1196.25	29.2	27.2	2.0	23	10.0	5.6	4.4
633	1196.25	26.4	24.4	2.0	24	8.8	5.6	3.2
634	1196.25	30.4	28.0	2.4	28	10.0	6.4	3.6
635	1196.25	25.2	24.0	1.2	23	9.6	5.2	4.4

----- CORE-RC1 TIME=3.6 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
636	1201.25	.	.	.	.	9.6	4.8	4.8
637	1201.25	14.0	.	.	15	.	.	.
638	1201.25	30.8	28.8	2.0	25	9.6	4.8	4.8
639	1201.25	.	.	.	.	10.0	6.0	4.0
640	1201.25	.	.	.	.	9.2	6.0	3.2
641	1201.25	.	.	.	.	10.8	7.2	3.6
642	1201.25	34.8	32.8	2.0	28	10.8	7.2	3.6
643	1201.25	46.8	44.8	2.0	36	10.0	6.8	3.2
644	1201.25	.	.	.	.	10.4	6.0	4.4
645	1201.25	17.6	15.6	2.0	16	8.4	6.0	2.4
646	1201.25	26.8	.	.	26	.	.	.
647	1201.25	23.2	21.2	2.0	21	9.2	4.8	4.4
648	1201.25	24.0	21.6	2.4	21	9.2	5.2	4.0
649	1201.25	38.0	36.4	1.6	31	12.0	8.0	4.0
650	1201.25	21.2	19.2	2.0	19	8.8	5.2	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME=3.6 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
651	1201.25	40.0	38.0	2.0	30	10.4	5.6	4.8
652	1201.25	29.2	26.8	2.4	25	9.2	6.0	3.2
653	1201.25	36.4	34.4	2.0	31	10.8	8.0	2.8
654	1201.25	20.4	19.2	1.2	19	8.0	4.8	3.2
655	1201.25	24.8	23.6	1.2	22	10.0	6.8	3.2
656	1201.25	29.6	27.6	2.0	24	10.8	6.0	4.8
657	1201.25	29.2	26.8	2.4	24	10.0	5.6	4.4
658	1201.25	31.2	29.2	2.0	26	10.4	6.0	4.4
659	1201.25	43.6	41.2	2.4	34	10.0	5.2	4.8
660	1201.25	36.4	34.8	1.6	35	10.0	7.2	2.8
661	1201.25	29.2	27.2	2.0	24	9.6	5.2	4.4
662	1201.25	20.0	18.0	2.0	17	8.8	5.2	3.6
663	1201.25	17.2	15.2	2.0	15	8.4	5.2	3.2
664	1201.25	20.8	18.8	2.0	18	8.4	4.0	4.4
665	1201.25	29.2	27.6	1.6	27	10.8	6.8	4.0
666	1201.25	32.8	30.8	2.0	27	10.4	6.0	4.4
667	1201.25	29.2	28.0	1.2	24	9.2	5.2	4.0
668	1201.25	25.2	23.2	2.0	22	9.6	5.6	4.0
669	1201.25	29.6	26.8	2.8	26	9.2	5.6	3.6
670	1201.25	25.2	22.8	2.4	22	10.0	5.6	4.4
671	1201.25	42.8	40.8	2.0	36	10.0	6.0	4.0

----- CORE-RC1 TIME=3.64 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
672	1211.25	28.8	26.8	2.0	24	9.6	6.0	3.6
673	1211.25	15.6	.	.	15	.	.	.
674	1211.25	26.0	24.0	2.0	22	9.2	6.0	3.2
675	1211.25	21.2	19.2	2.0	17	9.2	4.0	5.2
676	1211.25	30.0	.	.	26	.	.	.
677	1211.25	23.6	21.2	2.4	23	9.2	6.0	3.2
678	1211.25	22.4	20.0	2.4	19	8.8	4.8	4.0
679	1211.25	20.4	.	.	18	.	.	.
680	1211.25	21.2	18.8	2.4	20	8.8	4.8	4.0
681	1211.25	16.4	15.2	1.2	15	8.0	4.4	3.6
682	1211.25	26.4	24.0	2.4	22	8.8	4.8	4.0
683	1211.25	27.2	25.2	2.0	25	10.0	6.0	4.0
684	1211.25	16.0	13.6	2.4	16	8.0	4.0	4.0
685	1211.25	39.2	38.0	1.2	31	11.6	7.2	4.4
686	1211.25	25.2	23.2	2.0	24	9.6	6.0	3.6
687	1211.25	31.2	30.0	1.2	26	10.4	6.4	4.0
688	1211.25	29.2	27.2	2.0	26	10.4	4.8	5.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME=3.64 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
689	1211.25	40.8	38.8	2.0	34	10.0	6.0	4.0
690	1211.25	46.8	45.2	1.6	38	10.4	6.4	4.0
691	1211.25	23.2	20.8	2.4	21	8.8	4.8	4.0
692	1211.25	36.0	34.8	1.2	29	11.2	8.4	2.8
693	1211.25	34.0	32.4	1.6	30	11.2	8.0	3.2
694	1211.25	20.8	18.8	2.0	20	8.0	4.8	3.2
695	1211.25	26.0	24.0	2.0	22	10.0	6.0	4.0
696	1211.25	27.6	26.0	1.6	24	9.6	6.0	3.6
697	1211.25	18.0	15.2	2.8	15	8.4	4.0	4.4
698	1211.25	27.6	26.0	1.6	23	9.6	5.2	4.4
699	1211.25	33.6	32.0	1.6	27	9.2	6.8	2.4
700	1211.25	25.6	23.2	2.4	23	9.2	6.0	3.2
701	1211.25	35.2	33.6	1.6	30	11.6	8.0	3.6
702	1211.25	29.6	28.0	1.6	24	10.0	6.8	3.2
703	1211.25	24.4	22.4	2.0	22	10.8	6.0	4.8
704	1211.25	26.0	23.2	2.8	21	9.2	6.0	3.2

----- CORE-RC1 TIME=3.68 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
705	1221.25	45.2	.	.	.	.	.	.
706	1221.25	32.0	.	.	23	.	.	.
707	1221.25	25.2	.	.	22	.	.	.
708	1221.25	21.2	19.6	1.6	20	7.2	4.0	3.2
709	1221.25	30.0	.	.	26	.	.	.
710	1221.25	41.2	39.2	2.0	35	12.0	8.0	4.0
711	1221.25	34.4	.	.	30	.	.	.
712	1221.25	26.4	24.8	1.6	26	8.8	6.0	2.8
713	1221.25	26.8	.	.	26	.	.	.
714	1221.25	30.8	.	.	28	.	.	.
715	1221.25	26.8	.	.	24	.	.	.
716	1221.25	30.4	28.8	1.6	27	9.6	5.2	4.4
717	1221.25	23.6	22.4	1.2	24	8.4	6.0	2.4
718	1221.25	37.6	36.0	1.6	30	10.0	6.4	3.6
719	1221.25	33.2	32.0	1.2	31	9.6	6.0	3.6
720	1221.25	38.0	37.2	0.8	34	10.0	6.4	3.6
721	1221.25	24.4	22.8	1.6	23	7.2	4.0	3.2
722	1221.25	22.0	20.4	1.6	19	8.4	5.2	3.2
723	1221.25	28.8	27.2	1.6	24	8.4	4.8	3.6
724	1221.25	38.8	36.8	2.0	32	9.2	6.8	2.4
725	1221.25	21.2	19.2	2.0	19	7.2	4.8	2.4
726	1221.25	31.2	29.2	2.0	27	8.4	6.0	2.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME=3.68 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
727	1221.25	26.0	24.0	2.0	24	9.2	6.0	3.2
728	1221.25	34.8	33.2	1.6	28	10.0	6.0	4.0
729	1221.25	23.6	22.0	1.6	19	8.8	4.0	4.8
730	1221.25	38.4	37.2	1.2	32	9.2	6.0	3.2
731	1221.25	16.8	14.8	2.0	15	6.8	4.0	2.8
732	1221.25	21.2	19.2	2.0	23	8.0	5.2	2.8
733	1221.25	24.8	22.0	2.8	20	8.0	4.4	3.6
734	1221.25	24.4	22.0	2.4	21	9.2	4.8	4.4
735	1221.25	26.0	24.8	1.2	22	9.6	6.0	3.6
736	1221.25	30.0	28.0	2.0	25	9.2	4.8	4.4
737	1221.25	18.8	16.8	2.0	17	7.2	4.0	3.2
738	1221.25	26.4	24.8	1.6	24	9.2	6.0	3.2
739	1221.25	29.2	27.2	2.0	24	8.4	6.0	2.4
740	1221.25	28.4	26.8	1.6	25	8.0	4.0	4.0
741	1221.25	29.6	27.2	2.4	27	8.8	6.0	2.8
742	1221.25	23.2	21.2	2.0	22	8.0	5.2	2.8

----- CORE-RC1 TIME=3.72 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
743	1233.75	.	.	.	.	8.4	4.8	3.6
744	1233.75	40.4	38.8	1.6	31	10.4	5.6	4.8
745	1233.75	21.6	.	.	22	.	.	.
746	1233.75	37.2	.	.	27	.	.	.
747	1233.75	26.0	24.8	1.2	24	10.8	8.0	2.8
748	1233.75	28.8	.	.	25	.	.	.
749	1233.75	18.8	.	.	17	.	.	.
750	1233.75	38.4	36.4	2.0	31	10.0	6.0	4.0
751	1233.75	23.2	.	.	22	.	.	.
752	1233.75	19.2	.	.	17	.	.	.
753	1233.75	.	.	.	.	10.0	6.0	4.0
754	1233.75	23.2	.	.	20	.	.	.
755	1233.75	42.0	.	.	24	.	.	.
756	1233.75	16.8	.	.	17	.	.	.
757	1233.75	18.4	16.8	1.6	15	8.0	4.0	4.0
758	1233.75	35.6	34.4	1.2	31	10.4	6.0	4.4
759	1233.75	23.2	21.2	2.0	22	10.0	6.0	4.0
760	1233.75	27.6	25.6	2.0	24	10.4	5.2	5.2
761	1233.75	42.4	40.0	2.4	37	10.8	6.8	4.0
762	1233.75	32.0	30.0	2.0	27	10.4	6.4	4.0
763	1233.75	44.0	42.0	2.0	35	10.0	6.0	4.0
764	1233.75	32.0	30.4	1.6	27	10.4	6.8	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME=3.72 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
765	1233.75	19.2	17.2	2.0	17	8.4	4.4	4.0
766	1233.75	27.2	25.2	2.0	23	9.2	5.6	3.6
767	1233.75	32.8	31.2	1.6	28	10.8	6.0	4.8
768	1233.75	25.6	24.0	1.6	22	10.0	4.8	5.2
769	1233.75	48.0	46.8	1.2	42	9.6	8.0	1.6
770	1233.75	29.6	27.2	2.4	25	9.6	4.0	5.6
771	1233.75	41.2	39.2	2.0	35	11.2	6.4	4.8
772	1233.75	30.4	28.8	1.6	25	10.4	6.0	4.4
773	1233.75	38.8	37.6	1.2	32	12.0	7.2	4.8
774	1233.75	22.8	20.8	2.0	23	8.4	6.0	2.4
775	1233.75	27.2	26.4	0.8	24	8.8	5.2	3.6
776	1233.75	29.2	26.8	2.4	27	10.0	6.0	4.0
777	1233.75	23.2	21.6	1.6	22	9.2	5.6	3.6
778	1233.75	26.8	24.8	2.0	25	9.6	6.0	3.6
779	1233.75	18.4	17.2	1.2	18	8.0	5.2	2.8
780	1233.75	26.0	24.4	1.6	22	9.2	5.2	4.0
781	1233.75	19.2	17.6	1.6	17	8.8	4.8	4.0
782	1233.75	34.8	33.2	1.6	29	10.4	6.4	4.0
783	1233.75	26.8	24.8	2.0	26	10.4	7.2	3.2

----- CORE-RC1 TIME=3.78 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
784	1248.75	24.8	22.4	2.4	22	9.6	5.2	4.4
785	1248.75	40.4	38.4	2.0	35	9.2	6.0	3.2
786	1248.75	40.0	.	.	30	.	.	.
787	1248.75	35.2	34.0	1.2	30	8.8	6.0	2.8
788	1248.75	30.8	.	.	27	.	.	.
789	1248.75	35.2	32.8	2.4	29	10.0	6.0	4.0
790	1248.75	26.4	.	.	22	.	.	.
791	1248.75	22.8	21.2	1.6	22	9.2	6.0	3.2
792	1248.75	20.4	.	.	18	.	.	.
793	1248.75	34.4	32.0	2.4	31	10.8	6.8	4.0
794	1248.75	31.2	.	.	28	.	.	.
795	1248.75	20.0	.	.	17	.	.	.
796	1248.75	30.4	28.4	2.0	25	10.0	6.0	4.0
797	1248.75	56.0	54.0	2.0	43	9.2	5.2	4.0
798	1248.75	42.0	40.0	2.0	33	10.4	6.0	4.4
799	1248.75	.	.	.	.	10.0	5.6	4.4
800	1248.75	49.2	.	.	37	.	.	.
801	1248.75	24.0	.	.	22	.	.	.
802	1248.75	24.8	.	.	20	.	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=3.78 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
803	1248.75	22.4	20.8	1.6	18	8.8	5.2	3.6
804	1248.75	27.2	25.2	2.0	23	8.8	4.8	4.0
805	1248.75	27.2	26.0	1.2	22	8.4	4.0	4.4
806	1248.75	28.0	25.2	2.8	24	10.0	6.0	4.0
807	1248.75	38.8	36.8	2.0	31	10.4	6.0	4.4
808	1248.75	21.2	18.8	2.4	18	8.4	4.0	4.4
809	1248.75	24.4	22.4	2.0	19	9.2	4.8	4.4
810	1248.75	17.6	16.4	1.2	16	7.2	4.0	3.2
811	1248.75	30.4	28.0	2.4	29	9.2	5.2	4.0
812	1248.75	21.6	19.2	2.4	20	8.0	4.8	3.2
813	1248.75	23.2	21.2	2.0	22	9.6	6.0	3.6
814	1248.75	30.4	28.4	2.0	25	11.2	6.0	5.2
815	1248.75	39.2	38.0	1.2	33	10.0	6.0	4.0
816	1248.75	34.0	32.0	2.0	28	10.4	6.0	4.4
817	1248.75	31.2	28.8	2.4	23	10.0	6.0	4.0
818	1248.75	39.2	37.2	2.0	33	9.6	5.2	4.4
819	1248.75	20.4	18.0	2.4	19	8.4	4.8	3.6
820	1248.75	23.6	22.8	0.8	19	8.8	5.2	3.6
821	1248.75	45.2	42.8	2.4	35	10.0	7.2	2.8
822	1248.75	32.8	31.2	1.6	32	10.4	6.0	4.4
823	1248.75	18.4	17.2	1.2	16	8.4	4.8	3.6

----- CORE=RC1 TIME=3.82 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
824	1246.25	22.0	.	.	19	.	.	.
825	1246.25	25.2	24.0	1.2	24	9.2	5.6	3.6
826	1246.25	38.4	.	.	33	.	.	.
827	1246.25	26.0	.	.	20	.	.	.
828	1246.25	31.2	29.2	2.0	27	10.4	6.0	4.4
829	1246.25	17.2	.	.	16	.	.	.
830	1246.25	22.0	20.8	1.2	20	10.0	6.0	4.0
831	1246.25	17.2	14.8	2.4	16	7.2	4.0	3.2
832	1246.25	36.4	34.8	1.6	30	10.0	6.0	4.0
833	1246.25	42.8	.	.	36	.	.	.
834	1246.25	.	.	.	.	6.8	4.0	2.8
835	1246.25	22.8	.	.	18	.	.	.
836	1246.25	42.0	.	.	33	.	.	.
837	1246.25	41.6	40.0	1.6	34	10.0	8.0	2.0
838	1246.25	24.8	22.4	2.4	20	9.2	5.2	4.0
839	1246.25	19.6	18.0	1.6	17	8.0	4.8	3.2
840	1246.25	21.2	18.8	2.4	19	8.0	4.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME=3.82 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
841	1246.25	30.0	27.6	2.4	26	10.0	4.8	5.2
842	1246.25	32.8	30.0	2.8	28	9.2	6.4	2.8
843	1246.25	16.8	14.4	2.4	16	7.2	4.0	3.2
844	1246.25	21.2	19.2	2.0	24	8.4	4.4	4.0
845	1246.25	20.8	19.2	1.6	18	8.4	4.4	4.0
846	1246.25	24.0	22.0	2.0	20	8.4	4.8	3.6
847	1246.25	35.2	33.6	1.6	30	9.6	4.8	4.8
848	1246.25	21.2	19.2	2.0	22	8.4	6.0	2.4
849	1246.25	33.2	31.2	2.0	25	10.0	6.0	4.0
850	1246.25	26.4	24.8	1.6	24	9.2	4.0	5.2
851	1246.25	18.8	17.2	1.6	18	8.0	4.4	3.6
852	1246.25	28.4	26.0	2.4	25	9.2	5.2	4.0
853	1246.25	36.8	34.8	2.0	30	9.2	5.6	3.6
854	1246.25	20.0	18.0	2.0	16	8.4	4.0	4.4
855	1246.25	21.2	19.2	2.0	21	8.4	4.0	4.4
856	1246.25	33.2	32.0	1.2	26	8.8	4.8	4.0
857	1246.25	24.0	22.8	1.2	23	9.6	6.0	3.6
858	1246.25	34.0	32.8	1.2	30	10.8	6.8	4.0
859	1246.25	21.6	19.2	2.4	18	8.4	4.8	3.6
860	1246.25	44.0	42.0	2.0	35	10.4	6.8	3.6
861	1246.25	20.8	18.8	2.0	18	8.8	4.0	4.8

----- CORE-RC1 TIME=3.84 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
862	1263.75	22.0	.	.	19	.	.	.
863	1263.75	23.2	.	.	20	.	.	.
864	1263.75	44.8	.	.	37	.	.	.
865	1263.75	23.2	.	.	19	.	.	.
866	1263.75	26.0	.	.	24	.	.	.
867	1263.75	16.8	14.8	2.0	17	6.4	3.6	2.8
868	1263.75	18.4	.	.	17	.	.	.
869	1263.75	17.2	.	.	18	.	.	.
870	1263.75	26.0	23.2	2.8	20	9.2	5.6	3.6
871	1263.75	22.0	.	.	20	.	.	.
872	1263.75	20.4	18.4	2.0	18	9.2	5.2	4.0
873	1263.75	43.2	41.2	2.0	37	10.0	6.8	3.2
874	1263.75	31.2	29.2	2.0	25	10.0	5.6	4.4
875	1263.75	18.8	.	.	17	.	.	.
876	1263.75	.	.	.	.	10.0	6.0	4.0
877	1263.75	13.2	11.2	2.0	13	6.4	4.0	2.4
878	1263.75	19.2	17.2	2.0	18	8.0	5.2	2.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=3.84 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
879	1263.75	22.0	20.0	2.0	20	8.0	6.0	2.0
880	1263.75	18.8	17.2	1.6	17	7.2	4.4	2.8
881	1263.75	21.2	19.6	1.6	20	9.2	6.0	3.2
882	1263.75	32.8	31.6	1.2	26	10.0	6.0	4.0
883	1263.75	34.8	33.2	1.6	29	10.0	6.0	4.0
884	1263.75	26.8	24.8	2.0	21	8.0	4.0	4.0
885	1263.75	30.0	28.4	1.6	25	10.0	6.0	4.0
886	1263.75	26.0	24.0	2.0	23	8.8	6.0	2.8

----- CORE=RC1 TIME=3.88 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
887	1273.75	22.4	.	.	20	.	.	.
888	1273.75	26.4	24.8	1.6	23	7.6	4.0	3.6
889	1273.75	19.2	16.8	2.4	16	8.4	6.0	2.4
890	1273.75	17.2	15.2	2.0	17	7.2	4.0	3.2
891	1273.75	37.2	35.2	2.0	36	9.6	4.8	4.8
892	1273.75	29.6	27.2	2.4	26	9.2	5.2	4.0
893	1273.75	29.2	.	.	26	.	.	.
894	1273.75	25.2	.	.	24	.	.	.
895	1273.75	35.2	34.0	1.2	30	10.0	6.0	4.0
896	1273.75	29.2	.	.	31	.	.	.
897	1273.75	24.0	22.4	1.6	20	9.2	4.0	5.2
898	1273.75	25.2	23.6	1.6	22	9.2	5.2	4.0
899	1273.75	28.0	.	.	27	.	.	.
900	1273.75	21.6	.	.	20	.	.	.
901	1273.75	18.0	16.4	1.6	19	8.8	5.2	3.6
902	1273.75	40.0	37.6	2.4	32	9.2	6.0	3.2
903	1273.75	28.8	26.8	2.0	26	8.8	5.2	3.6
904	1273.75	37.6	36.0	1.6	28	10.4	6.0	4.4
905	1273.75	17.6	.	.	.	.	.	.
906	1273.75	34.4	33.2	1.2	28	9.2	5.2	4.0
907	1273.75	25.6	22.8	2.8	23	8.0	4.0	4.0
908	1273.75	26.0	24.0	2.0	24	8.8	4.8	4.0
909	1273.75	23.2	20.8	2.4	24	8.0	5.2	2.8
910	1273.75	17.2	14.8	2.4	15	6.8	4.0	2.8
911	1273.75	18.4	16.4	2.0	17	8.0	4.8	3.2
912	1273.75	34.8	33.6	1.2	27	10.0	4.8	5.2
913	1273.75	36.8	34.8	2.0	33	10.0	6.8	3.2
914	1273.75	32.0	28.8	3.2	28	9.6	5.6	4.0
915	1273.75	30.8	29.6	1.2	26	9.2	5.2	4.0
916	1273.75	23.6	22.0	1.6	20	8.4	5.6	2.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME=3.88 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
917	1273.75	26.0	24.8	1.2	23	8.0	6.0	2.0
918	1273.75	35.2	33.2	2.0	33	9.2	5.2	4.0
919	1273.75	41.2	38.0	3.2	34	10.0	6.0	4.0
920	1273.75	44.0	42.4	1.6	35	9.6	6.0	3.6
921	1273.75	26.0	23.6	2.4	22	8.0	4.4	3.6
922	1273.75	29.2	27.2	2.0	25	10.0	6.8	3.2
923	1273.75	19.2	17.6	1.6	18	7.2	4.0	3.2

----- CORE-RC1 TIME=3.9 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
924	1283.75	38.0	36.8	1.2	28	9.2	8.0	1.2
925	1283.75	29.6	27.2	2.4	28	9.6	5.6	4.0
926	1283.75	36.0	.	.	29	.	.	.
927	1283.75	29.2	24.0	5.2	28	9.6	6.0	3.6
928	1283.75	38.4	37.2	1.2	31	10.0	6.0	4.0
929	1283.75	36.8	35.2	1.6	32	10.4	5.2	5.2
930	1283.75	25.6	.	.	22	.	.	.
931	1283.75	32.4	30.4	2.0	25	10.0	4.0	6.0
932	1283.75	17.6	16.0	1.6	17	7.2	5.2	2.0
933	1283.75	21.6	.	.	19	.	.	.
934	1283.75	14.4	11.6	2.8	12	7.2	4.0	3.2
935	1283.75	33.2	.	.	28	.	.	.
936	1283.75	32.8	31.2	1.6	22	9.2	4.0	5.2
937	1283.75	17.6	15.2	2.4	15	7.2	4.0	3.2
938	1283.75	31.2	29.2	2.0	23	10.4	5.2	5.2
939	1283.75	25.2	.	.	21	.	.	.
940	1283.75	38.4	34.8	3.6	27	9.6	4.8	4.8
941	1283.75	17.2	.	.	16	.	.	.
942	1283.75	38.8	36.8	2.0	31	10.4	4.8	5.6
943	1283.75	40.8	39.2	1.6	36	10.0	6.0	4.0
944	1283.75	32.8	31.2	1.6	25	10.0	4.0	6.0
945	1283.75	22.0	20.4	1.6	19	8.8	4.8	4.0
946	1283.75	23.2	20.8	2.4	18	9.6	5.2	4.4
947	1283.75	38.8	36.0	2.8	31	10.0	5.2	4.8
948	1283.75	20.8	18.4	2.4	16	8.0	3.6	4.4
949	1283.75	40.8	39.6	1.2	35	10.8	6.8	4.0
950	1283.75	28.0	26.0	2.0	23	10.0	4.8	5.2
951	1283.75	21.2	19.2	2.0	20	8.8	4.0	4.8
952	1283.75	22.0	20.0	2.0	17	8.0	4.8	3.2
953	1283.75	31.2	29.6	1.6	25	10.4	6.0	4.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME=3.92 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
954	1293.75	35.2	.	.	28	.	.	.
955	1293.75	.	.	.	14	8.8	4.8	4.0
956	1293.75	24.0	21.6	2.4	19	8.8	5.6	3.2
957	1293.75	26.0	22.4	3.6	19	8.0	4.0	4.0
958	1293.75	19.6	.	.	15	.	.	.
959	1293.75	19.2	16.8	2.4	18	8.0	4.0	4.0
960	1293.75	35.2	.	.	28	.	.	.
961	1293.75	26.8	.	.	21	.	.	.
962	1293.75	34.4	31.2	3.2	26	10.8	6.0	4.8
963	1293.75	26.0	23.2	2.8	20	9.2	4.8	4.4
964	1293.75	22.8	20.8	2.0	18	8.4	4.4	4.0
965	1293.75	35.2	33.2	2.0	26	9.2	.	.
966	1293.75	24.4	.	.	21	.	.	.
967	1293.75	27.2	.	.	20	.	.	.
968	1293.75	38.0	36.0	2.0	33	8.0	4.0	4.0
969	1293.75	27.2	.	.	22	.	.	.
970	1293.75	16.4	14.0	2.4	13	8.0	4.0	4.0
971	1293.75	23.6	21.2	2.4	18	8.4	3.2	5.2
972	1293.75	23.2	.	.	21	.	.	.
973	1293.75	18.0	16.0	2.0	17	7.6	4.8	2.8
974	1293.75	34.4	32.0	2.4	26	10.0	6.8	3.2
975	1293.75	14.8	12.4	2.4	14	7.2	4.0	3.2
976	1293.75	19.2	17.2	2.0	16	8.4	4.0	4.4
977	1293.75	28.4	26.4	2.0	23	9.6	4.8	4.8
978	1293.75	18.4	16.4	2.0	17	7.2	4.0	3.2
979	1293.75	31.2	29.6	1.6	27	8.4	6.8	1.6
980	1293.75	38.8	37.6	1.2	29	10.0	6.0	4.0
981	1293.75	28.0	25.6	2.4	24	9.6	5.6	4.0
982	1293.75	16.8	14.8	2.0	15	7.2	4.0	3.2
983	1293.75	22.4	20.4	2.0	20	8.0	4.0	4.0
984	1293.75	30.4	29.6	0.8	23	9.6	4.0	5.6
985	1293.75	18.4	16.0	2.4	15	7.2	3.6	3.6
986	1293.75	29.2	28.0	1.2	25	10.0	6.0	4.0
987	1293.75	34.8	31.2	3.6	26	9.6	4.0	5.6
988	1293.75	22.0	20.4	1.6	19	8.0	4.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=3.94 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
989	1303.75	22.8	.	.	18	.	.	.
990	1303.75	35.6	.	.	26	.	.	.
991	1303.75	22.8	.	.	20	.	.	.
992	1303.75	28.8	.	.	26	.	.	.
993	1303.75	32.0	29.6	2.4	28	.	.	.
994	1303.75	30.8	.	.	24	.	.	.
995	1303.75	16.4	14.4	2.0	14	5.6	3.2	2.4
996	1303.75	19.2	.	.	16	.	.	.
997	1303.75	22.4	.	.	21	.	.	.
998	1303.75	14.4	12.4	2.0	12	6.4	3.2	3.2
999	1303.75	22.4	20.0	2.4	19	8.8	4.8	4.0
1000	1303.75	24.0	.	.	20	.	.	.
1001	1303.75	19.6	.	.	20	.	.	.
1002	1303.75	25.6	.	.	20	.	.	.
1003	1303.75	29.2	27.2	2.0	24	10.0	6.0	4.0
1004	1303.75	30.0	27.6	2.4	23	.	.	.
1005	1303.75	22.8	20.4	2.4	21	8.8	5.2	3.6
1006	1303.75	23.2	21.2	2.0	19	9.6	.	.
1007	1303.75	25.2	.	.	21	.	.	.
1008	1303.75	24.4	22.4	2.0	20	.	.	.
1009	1303.75	17.6	15.6	2.0	16	7.2	3.6	3.6
1010	1303.75	31.2	29.6	1.6	23	8.8	4.0	4.8
1011	1303.75	32.0	30.4	1.6	25	10.4	4.8	5.6
1012	1303.75	18.4	16.8	1.6	15	8.8	4.8	4.0
1013	1303.75	27.2	25.2	2.0	20	11.2	6.0	5.2
1014	1303.75	30.8	.	.	28	.	.	.

----- CORE=RC1 TIME=3.97 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1015	1326.25	.	.	.	.	9.6	.	.
1016	1326.25	20.8	19.2	1.6	18	9.2	4.8	4.4
1017	1326.25	22.4	20.8	1.6	.	.	.	.
1018	1326.25	19.2	17.6	1.6	17	.	.	.
1019	1326.25	23.2	20.8	2.4	18	8.8	4.0	4.8
1020	1326.25	32.8	30.8	2.0	26	10.0	5.6	4.4
1021	1326.25	27.6	26.8	0.8	21	10.0	4.0	6.0
1022	1326.25	34.0	32.0	2.0	26	10.0	6.0	4.0
1023	1326.25	20.8	19.2	1.6	16	8.0	4.0	4.0
1024	1326.25	16.4	14.4	2.0	13	8.0	4.4	3.6
1025	1326.25	18.4	16.8	1.6	15	7.6	4.0	3.6
1026	1326.25	22.0	20.0	2.0	17	8.4	4.8	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME=3.97 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1027	1326.25	45.2	44.0	1.2	40	9.2	6.8	2.4
1028	1326.25	32.4	29.2	3.2	24	8.8	4.0	4.8
1029	1326.25	21.6	19.6	2.0	18	.	.	.
1030	1326.25	36.8	34.4	2.4	28	8.8	4.0	4.8
1031	1326.25	24.8	.	.	21	.	.	.
1032	1326.25	36.0	.	.	.	.	.	.
1033	1326.25	22.4	21.2	1.2	19	8.8	4.8	4.0
1034	1326.25	17.2	15.2	2.0	14	7.2	4.0	3.2
1035	1326.25	20.4	18.0	2.4	18	7.6	4.0	3.6
1036	1326.25	22.4	21.2	1.2	18	8.8	4.8	4.0
1037	1326.25	30.8	.	.	22	.	.	.
1038	1326.25	49.2	.	.	35	.	.	.
1039	1326.25	25.6	24.0	1.6	19	.	.	.
1040	1326.25	27.6	.	.	22	.	.	.
1041	1326.25	47.2	45.2	2.0	36	10.0	5.2	4.8
1042	1326.25	32.0	.	.	26	.	.	.
1043	1326.25	30.4	28.0	2.4	23	10.0	.	.
1044	1326.25	25.2	.	.	20	.	.	.
1045	1326.25	25.2	23.2	2.0	21	8.8	4.8	4.0
1046	1326.25	29.6	27.2	2.4	22	9.2	5.2	4.0
1047	1326.25	24.4	22.4	2.0	19	9.2	4.8	4.4
1048	1326.25	28.8	27.2	1.6	20	9.6	4.0	5.6
1049	1326.25	22.8	21.2	1.6	19	8.4	4.0	4.4
1050	1326.25	22.0	20.0	2.0	18	9.2	4.0	5.2
1051	1326.25	29.6	.	.	26	.	.	.
1052	1326.25	23.2	.	.	19	.	.	.
1053	1326.25	23.6	.	.	17	.	.	.
1054	1326.25	36.4	34.4	2.0	33	10.8	7.2	3.6
1055	1326.25	23.2	22.0	1.2	19	9.6	6.0	3.6
1056	1326.25	35.2	33.2	2.0	27	10.4	6.0	4.4
1057	1326.25	27.6	26.0	1.6	23	9.2	5.2	4.0
1058	1326.25	24.8	.	.	19	.	.	.
1059	1326.25	22.0	20.0	2.0	19	.	.	.
1060	1326.25	24.4	22.8	1.6	20	8.4	5.2	3.2
1061	1326.25	32.4	31.2	1.2	26	8.8	5.2	3.6
1062	1326.25	32.4	31.2	1.2	29	8.4	4.8	3.6
1063	1326.25	42.8	40.8	2.0	39	10.0	7.2	2.8
1064	1326.25	18.0	16.0	2.0	16	7.2	4.0	3.2
1065	1326.25	38.4	36.8	1.6	31	9.2	6.0	3.2
1066	1336.25	32.0	.	.	27	.	.	.
1067	1336.25	22.8	.	.	21	.	.	.
1068	1336.25	23.6	21.6	2.0	17	8.0	4.0	4.0
1069	1336.25	15.6	14.4	1.2	14	8.0	4.0	4.0
1070	1336.25	35.2	.	.	27	.	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME-3.97 -----								
OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1071	1336.25	24.8	.	.	21	.	.	.
1072	1336.25	20.8	.	.	23	.	.	.
1073	1336.25	24.8	.	.	20	.	.	.
1074	1336.25	20.0	.	.	17	.	.	.
1075	1336.25	32.8	31.2	1.6	27	10.0	6.0	4.0
1076	1336.25	40.0	.	.	30	.	.	.
1077	1336.25	37.2	35.2	2.0	27	10.0	6.4	3.6
1078	1336.25	28.0	.	.	21	.	.	.
1079	1336.25	14.8	.	.	12	.	.	.
1080	1336.25	25.6	23.6	2.0	21	8.0	4.0	4.0
1081	1336.25	25.2	22.8	2.4	19	10.0	5.6	4.4
1082	1336.25	32.4	30.8	1.6	27	9.2	6.0	3.2
1083	1336.25	18.0	16.4	1.6	16	8.0	5.2	2.8
1084	1336.25	34.0	32.0	2.0	26	10.4	6.8	3.6
1085	1336.25	22.0	20.0	2.0	17	9.2	4.8	4.4
1086	1336.25	28.4	26.8	1.6	22	8.8	6.0	2.8
1087	1336.25	32.0	30.4	1.6	29	9.6	6.0	3.6
1088	1336.25	42.0	40.0	2.0	30	10.0	5.2	4.8
1089	1336.25	25.2	22.8	2.4	20	10.0	4.8	5.2
1090	1336.25	37.2	35.2	2.0	30	10.0	6.0	4.0
1091	1336.25	22.8	21.2	1.6	18	8.8	4.0	4.8
1092	1336.25	20.0	18.4	1.6	17	7.6	4.0	3.6
1093	1336.25	22.8	21.2	1.6	18	8.8	5.2	3.6
1094	1336.25	32.0	30.4	1.6	26	10.8	6.8	4.0
1095	1336.25	24.0	22.8	1.2	19	10.0	6.0	4.0
1096	1336.25	34.8	33.2	1.6	25	10.4	6.0	4.4
1097	1336.25	21.2	19.6	1.6	17	9.2	4.0	5.2
1098	1336.25	26.8	25.2	1.6	20	10.0	6.0	4.0
1099	1336.25	29.2	27.2	2.0	25	10.0	6.8	3.2
1100	1336.25	32.8	31.2	1.6	26	11.2	7.2	4.0
1101	1336.25	26.0	24.8	1.2	23	8.8	5.2	3.6
1102	1336.25	26.8	25.2	1.6	21	10.0	5.2	4.8
1103	1336.25	31.6	29.6	2.0	18	8.4	4.0	4.4
1104	1336.25	41.2	39.2	2.0	32	10.0	4.8	5.2
1105	1336.25	17.2	16.0	1.2	15	8.0	4.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME-4 -----								
OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1106	1346.25	21.2	.	.	19	.	.	.
1107	1346.25	20.4	.	.	17	.	.	.
1108	1346.25	26.4	.	.	25	.	.	.
1109	1346.25	27.2	.	.	23	.	.	.
1110	1346.25	30.0	28.8	1.2	23	8.4	4.0	4.4
1111	1346.25	42.8	.	.	35	.	.	.
1112	1346.25	33.6	31.2	2.4	25	9.6	5.2	4.4
1113	1346.25	16.0	14.8	1.2	15	7.6	3.2	4.4
1114	1346.25	20.4	.	.	20	.	.	.
1115	1346.25	24.8	.	.	21	.	.	.
1116	1346.25	24.4	22.8	1.6	21	9.6	4.8	4.8
1117	1346.25	30.4	29.2	1.2	28	10.4	6.0	4.4
1118	1346.25	28.8	26.4	2.4	24	10.0	6.0	4.0
1119	1346.25	28.0	.	.	23	.	.	.
1120	1346.25	33.2	32.0	1.2	27	10.4	5.6	4.8
1121	1346.25	34.4	32.8	1.6	33	9.6	6.0	3.6
1122	1346.25	20.8	19.2	1.6	18	7.6	4.0	3.6
1123	1346.25	32.4	30.8	1.6	27	10.0	5.6	4.4
1124	1346.25	28.0	26.0	2.0	22	9.2	4.0	5.2
1125	1346.25	33.6	32.0	1.6	30	10.0	6.0	4.0
1126	1346.25	26.8	25.2	1.6	21	8.0	4.0	4.0
1127	1346.25	21.2	19.2	2.0	17	8.0	4.0	4.0
1128	1346.25	32.4	30.4	2.0	26	9.2	4.8	4.4
1129	1346.25	30.8	28.8	2.0	25	8.8	5.2	3.6
1130	1346.25	26.4	24.8	1.6	25	9.2	6.8	2.4
1131	1346.25	34.0	32.8	1.2	30	9.6	5.6	4.0
1132	1346.25	26.4	24.4	2.0	23	8.8	4.0	4.8
1133	1346.25	26.8	25.2	1.6	23	10.0	6.0	4.0
1134	1346.25	33.2	32.0	1.2	29	10.0	6.0	4.0
1135	1346.25	18.4	16.0	2.4	16	8.0	3.2	4.8
1136	1346.25	32.8	30.8	2.0	26	10.4	6.0	4.4
1137	1346.25	35.2	34.0	1.2	36	9.2	6.0	3.2
1138	1346.25	24.8	23.2	1.6	21	8.0	4.0	4.0
1139	1346.25	17.2	14.8	2.4	17	7.2	4.0	3.2
1140	1346.25	16.8	14.0	2.8	14	7.2	4.0	3.2
1141	1346.25	21.2	18.8	2.4	19	9.2	6.0	3.2
1142	1346.25	19.6	17.6	2.0	16	8.4	4.0	4.4
1143	1346.25	34.4	32.4	2.0	31	10.4	6.0	4.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=4.02 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1144	1356.25	28.0	.	.	24	.	.	.
1145	1356.25	18.4	17.2	1.2	17	8.0	4.0	4.0
1146	1356.25	.	.	.	.	10.8	8.0	2.8
1147	1356.25	.	.	.	.	8.8	4.0	4.8
1148	1356.25	20.0	.	.	17	.	.	.
1149	1356.25	.	.	.	.	10.0	5.6	4.4
1150	1356.25	.	.	.	.	9.2	4.0	5.2
1151	1356.25	33.2	.	.	25	.	.	.
1152	1356.25	27.2	26.0	1.2	22	9.2	5.2	4.0
1153	1356.25	24.4	.	.	21	.	.	.
1154	1356.25	.	.	.	.	7.6	3.2	4.4
1155	1356.25	18.4	16.8	1.6	15	7.2	3.2	4.0
1156	1356.25	25.6	.	.	22	.	.	.
1157	1356.25	30.0	.	.	22	.	.	.
1158	1356.25	54.0	52.0	2.0	40	10.0	6.0	4.0
1159	1356.25	18.8	17.2	1.6	15	7.2	4.0	3.2
1160	1356.25	22.0	.	.	18	.	.	.
1161	1356.25	27.2	.	.	23	.	.	.
1162	1356.25	30.8	29.6	1.2	25	9.2	4.8	4.4
1163	1356.25	21.6	.	.	20	.	.	.
1164	1356.25	22.0	.	.	18	.	.	.
1165	1356.25	35.2	.	.	26	.	.	.
1166	1356.25	29.6	27.6	2.0	23	10.0	4.8	5.2
1167	1356.25	33.6	.	.	26	.	.	.
1168	1363.75	28.0	26.0	2.0	22	10.0	6.0	4.0
1169	1363.75	30.4	28.8	1.6	26	9.6	4.8	4.8
1170	1363.75	28.4	26.4	2.0	21	8.0	4.4	3.6
1171	1363.75	40.0	38.4	1.6	31	10.8	6.0	4.8
1172	1363.75	38.0	36.4	1.6	29	11.2	7.2	4.0
1173	1363.75	43.6	41.6	2.0	37	10.0	6.0	4.0
1174	1363.75	37.2	35.2	2.0	30	9.6	5.2	4.4
1175	1363.75	21.6	19.6	2.0	17	8.8	4.0	4.8
1176	1363.75	33.2	32.0	1.2	27	9.2	4.0	5.2
1177	1363.75	22.8	21.2	1.6	22	8.0	4.0	4.0
1178	1363.75	42.0	40.0	2.0	32	10.4	6.0	4.4
1179	1363.75	26.0	24.0	2.0	22	8.8	4.0	4.8
1180	1363.75	30.0	28.0	2.0	22	8.0	4.0	4.0
1181	1363.75	30.8	29.2	1.6	24	9.2	4.4	4.8
1182	1363.75	18.8	16.8	2.0	15	8.0	4.0	4.0
1183	1363.75	38.4	36.8	1.6	29	12.0	8.0	4.0
1184	1363.75	40.8	39.2	1.6	31	10.0	6.0	4.0
1185	1363.75	32.0	30.4	1.6	26	10.0	6.4	3.6
1186	1363.75	24.0	22.4	1.6	18	10.0	6.0	4.0
1187	1363.75	20.0	18.4	1.6	18	7.2	5.2	2.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME=4.02 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1188	1363.75	47.2	45.6	1.6	37	10.4	6.0	4.4
1189	1363.75	20.0	18.4	1.6	15	8.4	4.8	3.6
1190	1363.75	20.4	19.2	1.2	17	9.6	5.2	4.4
1191	1363.75	18.0	16.8	1.2	19	8.0	4.4	3.6
1192	1363.75	32.0	30.4	1.6	26	10.0	5.2	4.8
1193	1363.75	24.8	23.2	1.6	21	8.0	4.0	4.0
1194	1363.75	41.2	39.2	2.0	30	10.0	5.2	4.8
1195	1363.75	34.8	33.2	1.6	28	9.6	6.0	3.6
1196	1363.75	28.4	26.8	1.6	25	9.2	5.2	4.0
1197	1363.75	28.0	26.4	1.6	23	9.6	6.4	3.2

----- CORE-RC1 TIME=4.05 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1198	1373.75	38.0	36.4	1.6	28	10.4	6.0	4.4
1199	1373.75	19.2	.	.	18	.	.	.
1200	1373.75	28.8	27.2	1.6	22	9.2	5.2	4.0
1201	1373.75	24.0	22.4	1.6	22	8.8	4.0	4.8
1202	1373.75	22.0	20.4	1.6	18	7.6	5.6	2.0
1203	1373.75	36.0	.	.	28	.	.	.
1204	1373.75	26.4	.	.	21	.	.	.
1205	1373.75	33.2	31.2	2.0	26	10.0	6.4	3.6
1206	1373.75	23.2	.	.	19	.	.	.
1207	1373.75	30.0	28.0	2.0	23	9.6	5.6	4.0
1208	1373.75	26.8	25.6	1.2	22	8.8	4.0	4.8
1209	1373.75	21.6	.	.	18	.	.	.
1210	1373.75	33.2	.	.	29	.	.	.
1211	1373.75	23.6	22.0	1.6	22	7.2	4.0	3.2
1212	1373.75	23.2	21.6	1.6	18	9.2	4.0	5.2
1213	1373.75	22.8	.	.	19	.	.	.
1214	1373.75	20.8	.	.	18	.	.	.
1215	1373.75	11.6	10.0	1.6	26	10.0	6.0	4.0
1216	1373.75	27.6	26.0	1.6	21	9.2	5.6	3.6
1217	1373.75	.	.	.	.	10.4	6.0	4.4
1218	1373.75	36.0	34.0	2.0	30	9.6	4.8	4.8
1219	1373.75	22.8	20.4	2.4	20	9.2	7.6	1.6
1220	1373.75	42.8	40.8	2.0	35	9.6	6.0	3.6
1221	1373.75	38.0	36.4	1.6	30	9.2	5.2	4.0
1222	1373.75	24.0	22.8	1.2	19	8.4	4.0	4.4
1223	1373.75	29.2	28.0	1.2	22	8.8	5.2	3.6
1224	1373.75	37.6	36.4	1.2	29	9.6	6.0	3.6
1225	1373.75	29.2	27.6	1.6	22	8.8	5.2	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME-4.05 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1226	1373.75	27.2	25.2	2.0	24	8.0	4.0	4.0
1227	1373.75	27.2	26.0	1.2	20	8.8	4.0	4.8
1228	1373.75	34.8	33.6	1.2	26	9.2	4.8	4.4
1229	1373.75	57.2	55.6	1.6	45	10.8	6.0	4.8
1230	1373.75	33.2	30.8	2.4	29	9.6	6.0	3.6
1231	1373.75	26.4	25.2	1.2	24	9.2	4.8	4.4
1232	1373.75	23.6	22.0	1.6	21	8.8	4.8	4.0
1233	1373.75	48.0	46.0	2.0	38	10.8	7.2	3.6
1234	1373.75	26.0	24.8	1.2	23	8.0	4.0	4.0
1235	1373.75	29.2	27.6	1.6	23	9.6	5.2	4.4
1236	1373.75	36.0	34.4	1.6	31	10.0	5.2	4.8

----- CORE-RC1 TIME-4.07 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1237	1383.75	30.8	.	.	.	.	.	.
1238	1383.75	26.0	24.0	2.0	21	10.0	5.2	4.8
1239	1383.75	38.0	36.4	1.6	30	9.2	6.0	3.2
1240	1383.75	24.8	23.2	1.6	20	7.6	5.2	2.4
1241	1383.75	.	.	.	.	10.0	7.2	2.8
1242	1383.75	32.8	31.2	1.6	26	10.0	6.0	4.0
1243	1383.75	24.8	23.2	1.6	20	8.0	4.0	4.0
1244	1383.75	19.2	17.6	1.6	15	6.8	4.0	2.8
1245	1383.75	22.4	.	.	19	.	.	.
1246	1383.75	20.4	19.2	1.2	16	7.2	4.8	2.4
1247	1383.75	.	.	.	.	10.8	8.0	2.8
1248	1383.75	25.2	.	.	24	.	.	.
1249	1383.75	.	.	.	.	10.0	6.0	4.0

----- CORE-RC1 TIME-4.09 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1250	1393.75	36.8	.	.	30	.	.	.
1251	1393.75	.	.	.	.	9.2	4.0	5.2
1252	1393.75	19.6	18.0	1.6	16	.	.	.
1253	1393.75	30.4	28.8	1.6	25	10.0	6.0	4.0
1254	1393.75	32.8	30.8	2.0	27	9.2	4.0	5.2
1255	1393.75	20.4	18.4	2.0	16	7.6	4.0	3.6
1256	1393.75	20.0	19.2	0.8	17	8.0	4.0	4.0
1257	1393.75	37.6	36.0	1.6	31	8.4	4.8	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=4.09 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1258	1393.75	25.2	.	.	23	.	.	.
1259	1393.75	18.8	.	.	15	.	.	.
1260	1393.75	38.0	35.6	2.4	29	9.6	6.0	3.6
1261	1393.75	41.2	.	.	32	.	.	.
1262	1393.75	26.8	25.2	1.6	21	8.8	4.8	4.0
1263	1393.75	35.2	33.6	1.6	28	9.2	6.0	3.2
1264	1393.75	23.6	21.6	2.0	20	8.0	4.0	4.0
1265	1393.75	22.4	.	.	20	.	.	.
1266	1393.75	19.6	18.0	1.6	17	7.6	3.6	4.0
1267	1393.75	30.0	.	.	27	.	.	.
1268	1393.75	30.0	28.4	1.6	23	9.2	4.8	4.4
1269	1393.75	22.0	.	.	18	.	.	.
1270	1393.75	26.4	24.0	2.4	22	8.0	4.0	4.0
1271	1393.75	18.4	.	.	16	.	.	.
1272	1393.75	46.0	.	.	33	10.4	4.0	6.4
1273	1393.75	22.0	20.8	1.2	17	8.8	4.4	4.4
1274	1393.75	18.8	.	.	16	.	.	.
1275	1393.75	26.8	25.6	1.2	21	9.2	4.0	5.2
1276	1393.75	38.4	36.4	2.0	31	10.0	5.2	4.8
1277	1393.75	30.0	28.0	2.0	25	9.2	5.6	3.6
1278	1393.75	.	.	.	.	8.8	4.0	4.8
1279	1393.75	32.4	.	.	27	.	.	.
1280	1393.75	23.6	22.0	1.6	20	8.8	4.0	4.8
1281	1393.75	29.2	27.2	2.0	24	8.8	4.0	4.8
1282	1393.75	40.0	38.4	1.6	30	10.0	6.8	3.2
1283	1393.75	34.0	32.0	2.0	28	9.2	6.0	3.2
1284	1393.75	21.6	20.4	1.2	18	8.0	4.0	4.0
1285	1393.75	23.2	21.2	2.0	19	7.6	4.0	3.6
1286	1393.75	32.0	30.0	2.0	30	10.0	4.0	6.0

----- CORE=RC1 TIME=4.12 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1287	1403.75	38.8	.	.	.	.	.	.
1288	1403.75	26.8	.	.	.	10.0	6.0	4.0
1289	1403.75	27.6	25.6	2.0	28	10.0	8.0	2.0
1290	1403.75	33.6	32.0	1.6	27	10.4	6.0	4.4
1291	1403.75	28.8	27.2	1.6	23	8.0	4.0	4.0
1292	1403.75	26.0	24.0	2.0	22	10.0	5.6	4.4
1293	1403.75	14.0	12.8	1.2	14	7.2	4.0	3.2
1294	1403.75	24.0	.	.	22	.	.	.
1295	1403.75	37.2	35.2	2.0	29	9.6	5.2	4.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME-4.12 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1296	1403.75	44.8	42.8	2.0	34	10.0	6.0	4.0
1297	1403.75	25.2	.	.	21	.	.	.
1298	1403.75	18.0	16.0	2.0	17	8.0	4.0	4.0
1299	1403.75	12.8	11.6	1.2	11	6.4	4.4	2.0
1300	1403.75	17.6	.	.	16	.	.	.
1301	1403.75	18.8	.	.	16	.	.	.
1302	1403.75	22.0	20.8	1.2	18	8.0	4.0	4.0
1303	1403.75	26.0	.	.	21	.	.	.
1304	1403.75	30.0	28.0	2.0	26	8.0	5.2	2.8
1305	1403.75	30.0	28.4	1.6	24	9.2	5.2	4.0
1306	1403.75	28.0	.	.	25	.	.	.
1307	1403.75	25.6	23.6	2.0	20	8.8	4.0	4.8
1308	1403.75	24.8	.	.	22	.	.	.
1309	1403.75	36.0	34.8	1.2	26	10.0	4.8	5.2
1310	1403.75	39.2	38.0	1.2	29	9.2	4.8	4.4
1311	1403.75	23.2	21.2	2.0	19	8.0	5.2	2.8
1312	1403.75	38.4	.	.	28	.	.	.
1313	1403.75	18.4	16.8	1.6	16	8.0	4.0	4.0
1314	1403.75	27.6	25.6	2.0	25	9.6	4.8	4.8
1315	1403.75	13.6	12.0	1.6	15	6.8	4.0	2.8
1316	1403.75	.	.	.	.	8.0	4.4	3.6
1317	1403.75	21.2	.	.	17	.	.	.
1318	1403.75	22.0	20.4	1.6	19	7.6	5.2	2.4
1319	1403.75	32.8	.	.	26	.	.	.
1320	1403.75	38.0	36.0	2.0	34	10.8	6.0	4.8
1321	1403.75	.	.	.	.	8.0	5.2	2.8
1322	1403.75	28.8	27.2	1.6	24	10.0	6.0	4.0
1323	1403.75	34.0	32.4	1.6	30	10.0	6.4	3.6
1324	1403.75	48.0	45.2	2.8	37	10.0	6.4	3.6
1325	1403.75	32.0	.	.	27	.	.	.
1326	1403.75	25.6	23.2	2.4	21	8.4	4.0	4.4
1327	1403.75	18.8	.	.	19	.	.	.
1328	1403.75	21.6	18.8	2.8	19	8.0	4.0	4.0
1329	1403.75	26.0	25.2	0.8	22	8.0	4.0	4.0
1330	1403.75	34.0	32.4	1.6	27	9.6	6.4	3.2
1331	1413.75	26.0	23.6	2.4	22	9.2	5.2	4.0
1332	1413.75	28.0	.	.	22	.	.	.
1333	1413.75	17.2	16.0	1.2	15	6.4	3.6	2.8
1334	1413.75	15.2	13.2	2.0	15	7.2	4.0	3.2
1335	1413.75	23.2	21.2	2.0	22	8.0	4.8	3.2
1336	1413.75	15.2	13.2	2.0	16	6.8	4.0	2.8
1337	1413.75	34.8	.	.	31	.	.	.
1338	1413.75	25.2	23.2	2.0	24	8.4	6.0	2.4
1339	1413.75	31.2	28.8	2.4	25	8.0	4.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=4.12 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1340	1413.75	23.2	20.8	2.4	19	9.2	5.2	4.0
1341	1413.75	33.2	31.2	2.0	27	8.8	5.2	3.6
1342	1413.75	41.2	.	.	37	.	.	.
1343	1413.75	21.6	19.2	2.4	24	7.6	4.8	2.8
1344	1413.75	20.4	18.4	2.0	17	8.0	4.8	3.2
1345	1413.75	18.4	16.0	2.4	17	8.8	6.0	2.8
1346	1413.75	42.0	40.0	2.0	39	10.0	8.0	2.0
1347	1413.75	30.8	28.8	2.0	30	10.0	6.0	4.0
1348	1413.75	32.8	30.8	2.0	29	9.2	5.2	4.0
1349	1413.75	25.6	23.2	2.4	23	8.0	4.4	3.6
1350	1413.75	30.4	28.8	1.6	26	10.0	6.8	3.2

----- CORE=RC1 TIME=4.14 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1351	1423.75	29.6	28.0	1.6	28	10.0	6.8	3.2
1352	1423.75	21.2	.	.	21	.	.	.
1353	1423.75	22.8	.	.	24	.	.	.
1354	1423.75	28.4	26.4	2.0	27	9.2	6.8	2.4
1355	1423.75	30.4	28.0	2.4	30	10.0	7.2	2.8
1356	1423.75	16.4	14.8	1.6	20	9.2	6.0	3.2
1357	1423.75	40.0	38.0	2.0	34	9.2	6.0	3.2
1358	1423.75	31.2	29.6	1.6	28	8.8	5.6	3.2
1359	1423.75	16.8	14.0	2.8	16	7.6	5.2	2.4
1360	1423.75	24.8	22.8	2.0	23	9.6	6.0	3.6
1361	1423.75	38.4	36.0	2.4	33	10.0	6.8	3.2
1362	1423.75	28.8	26.8	2.0	24	9.6	6.0	3.6
1363	1423.75	30.0	28.0	2.0	24	9.6	5.6	4.0
1364	1423.75	22.0	19.6	2.4	20	9.2	4.0	5.2
1365	1423.75	24.0	22.0	2.0	21	8.0	4.8	3.2
1366	1423.75	29.2	26.8	2.4	27	9.2	6.0	3.2
1367	1423.75	24.0	22.0	2.0	23	9.2	6.0	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=4.17 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1368	1433.75	23.2	22.0	1.2	24	8.0	6.0	2.0
1369	1433.75	26.0	24.0	2.0	30	10.0	8.0	2.0
1370	1433.75	30.0	29.2	0.8	26	10.8	8.0	2.8
1371	1433.75	23.6	22.4	1.2	22	8.0	6.0	2.0
1372	1433.75	34.0	32.0	2.0	28	10.0	6.8	3.2
1373	1433.75	.	.	.	.	8.4	6.0	2.4
1374	1433.75	.	.	.	.	8.0	6.4	1.6
1375	1433.75	21.2	.	.	18	8.4	.	.
1376	1433.75	31.2	28.8	2.4	.	9.2	6.8	2.4
1377	1433.75	.	.	.	.	9.2	6.0	3.2
1378	1433.75	.	.	.	.	8.4	6.0	2.4
1379	1433.75	19.6	17.6	2.0	.	7.6	4.0	3.6
1380	1433.75	16.0	12.8	3.2	16	7.6	4.0	3.6
1381	1433.75	23.2	20.4	2.8	20	9.2	6.8	2.4
1382	1433.75	.	.	.	.	9.2	5.6	3.6
1383	1433.75	23.6	.	.	.	8.8	6.4	2.4
1384	1433.75	21.6	20.0	1.6	25	8.4	6.0	2.4
1385	1433.75	22.8	20.0	2.8	20	9.2	6.8	2.4
1386	1433.75	15.2	14.4	0.8	24	6.8	4.4	2.4
1387	1433.75	22.4	20.8	1.6	20	7.6	4.8	2.8
1388	1433.75	15.6	14.0	1.6	24	6.0	4.0	2.0
1389	1433.75	21.6	19.6	2.0	23	8.8	6.0	2.8
1390	1433.75	.	.	.	.	10.0	6.0	4.0
1391	1433.75	22.4	21.6	0.8	26	8.8	5.6	3.2
1392	1433.75	22.4	20.0	2.4	23	9.2	6.4	2.8
1393	1433.75	25.6	22.8	2.8	23	8.8	4.0	4.8
1394	1433.75	.	.	.	.	9.2	4.0	5.2
1395	1433.75	28.4	26.0	2.4	27	10.0	6.8	3.2
1396	1433.75	23.6	21.6	2.0	21	10.0	6.4	3.6
1397	1433.75	26.4	24.8	1.6	24	9.2	6.4	2.8
1398	1433.75	24.0	22.4	1.6	25	8.4	6.0	2.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=4.19 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1399	1443.75	23.6	.	.	21	9.2	.	.
1400	1443.75	19.2	17.6	1.6	21	8.0	6.0	2.0
1401	1443.75	34.0	32.0	2.0	29	8.0	6.0	2.0
1402	1443.75	20.0	18.8	1.2	18	7.2	6.0	1.2
1403	1443.75	30.8	28.8	2.0	.	11.2	7.6	3.6
1404	1443.75	24.0	22.8	1.2	22	8.4	6.0	2.4
1405	1443.75	19.2	17.6	1.6	18	7.2	5.6	1.6
1406	1443.75	23.6	22.0	1.6	23	8.4	6.0	2.4
1407	1443.75	23.2	22.0	1.2	20	9.6	5.6	4.0
1408	1443.75	22.8	22.0	0.8	24	8.4	6.0	2.4
1409	1443.75	22.0	20.8	1.2	20	8.4	4.0	4.4
1410	1443.75	30.0	28.0	2.0	35	8.8	6.0	2.8
1411	1443.75	29.2	26.8	2.4	26	8.8	7.2	1.6

----- CORE=RC1 TIME=4.22 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1412	1453.75	31.6	29.2	2.4	27	11.2	5.2	6.0
1413	1453.75	36.0	34.8	1.2	35	9.6	8.0	1.6
1414	1453.75	22.4	20.8	1.6	24	7.2	4.8	2.4
1415	1453.75	36.4	34.8	1.6	31	8.8	6.0	2.8
1416	1453.75	26.4	24.0	2.4	26	9.2	5.6	3.6
1417	1453.75	29.6	28.0	1.6	32	8.8	6.0	2.8
1418	1453.75	.	.	.	.	9.6	6.8	2.8
1419	1453.75	20.4	.	.	.	7.2	4.0	3.2
1420	1453.75	29.2	27.6	1.6	29	9.2	6.0	3.2
1421	1453.75	28.8	.	.	35	10.4	.	.
1422	1453.75	.	.	.	.	7.2	.	.
1423	1453.75	16.0	14.8	1.2	20	8.0	5.6	2.4
1424	1453.75	17.6	16.8	0.8	19	8.4	4.8	3.6
1425	1453.75	.	.	.	.	8.4	4.8	3.6
1426	1453.75	20.4	19.2	1.2	23	7.6	5.2	2.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME=4.27 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1427	1473.75	18.4	17.2	1.2	20	8.0	4.0	4.0
1428	1473.75	17.2	15.2	2.0	17	7.2	4.4	2.8
1429	1473.75	16.8	15.2	1.6	22	8.0	.	.
1430	1473.75	34.4	.	.	28	9.6	2.4	7.2
1431	1473.75	.	.	.	.	9.2	6.4	2.8
1432	1473.75	26.4	24.0	2.4	28	8.4	6.0	2.4
1433	1473.75	12.4	10.8	1.6	14	5.2	3.2	2.0
1434	1473.75	22.8	20.0	2.8	25	8.8	6.0	2.8
1435	1473.75	17.2	14.8	2.4	14	8.0	5.6	2.4
1436	1473.75	32.0	30.8	1.2	29	8.8	6.0	2.8
1437	1473.75	14.0	13.2	0.8	15	8.0	6.0	2.0
1438	1473.75	.	.	.	.	10.0	8.0	2.0

----- CORE-RC1 TIME=4.29 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1439	1483.75	35.2	33.6	1.6	31	9.2	6.0	3.2
1440	1483.75	20.8	18.8	2.0	25	8.0	5.2	2.8
1441	1483.75	.	.	.	.	8.0	5.2	2.8
1442	1483.75	35.6	32.8	2.8	41	10.4	6.8	3.6
1443	1483.75	19.2	17.2	2.0	18	7.2	4.0	3.2
1444	1483.75	36.8	34.0	2.8	35	8.8	5.2	3.6
1445	1483.75	10.4	.	.	.	.	.	.
1446	1483.75	.	.	.	.	8.0	6.8	1.2
1447	1483.75	20.8	19.2	1.6	23	8.4	6.0	2.4
1448	1483.75	25.2	23.2	2.0	24	8.8	6.0	2.8
1449	1483.75	29.2	27.6	1.6	27	8.4	6.0	2.4
1450	1483.75	7.6	5.6	2.0	.	.	.	.
1451	1483.75	19.2	17.6	1.6	22	8.4	5.2	3.2
1452	1483.75	.	.	.	.	10.0	7.2	2.8
1453	1483.75	25.2	23.2	2.0	25	9.6	6.8	2.8
1454	1483.75	32.8	.	.	28	9.6	5.6	4.0
1455	1483.75	30.8	29.6	1.2	30	10.0	6.8	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=4.32 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1456	1493.75	17.6	15.6	2.0	18	7.2	5.2	2.0
1457	1493.75	.	.	.	.	7.2	4.0	3.2
1458	1493.75	37.6	35.6	2.0	35	8.8	5.2	3.6
1459	1493.75	18.4	.	.	.	8.4	5.6	2.8
1460	1493.75	31.6	30.8	0.8	34	8.8	6.0	2.8
1461	1493.75	32.4	30.4	2.0	37	8.0	4.4	3.6
1462	1493.75	.	.	.	.	8.4	4.4	4.0
1463	1493.75	20.4	18.8	1.6	25	8.8	6.8	2.0
1464	1493.75	.	.	.	.	9.2	6.0	3.2
1465	1493.75	21.2	19.6	1.6	25	8.0	4.4	3.6
1466	1493.75	16.4	14.8	1.6	16	7.6	4.8	2.8
1467	1493.75	28.0	26.4	1.6	26	8.4	6.4	2.0
1468	1493.75	.	.	.	.	9.6	6.0	3.6
1469	1493.75	.	.	.	.	8.4	5.2	3.2
1470	1493.75	20.8	18.0	2.8	.	.	.	.
1471	1493.75	17.6	15.6	2.0	19	8.0	4.8	3.2
1472	1493.75	.	.	.	.	10.0	8.0	2.0
1473	1493.75	33.2	31.2	2.0	.	9.2	5.2	4.0
1474	1493.75	.	.	.	.	9.6	7.2	2.4

----- CORE=RC1 TIME=4.35 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1475	1503.75	.	.	.	.	7.6	4.8	2.8
1476	1503.75	25.2	22.4	2.8	25	7.2	5.6	1.6
1477	1503.75	19.2	17.2	2.0	17	7.6	4.0	3.6
1478	1503.75	20.4	18.8	1.6	19	8.4	6.0	2.4
1479	1503.75	26.8	24.8	2.0	20	10.4	5.2	5.2
1480	1503.75	.	.	.	.	8.4	6.0	2.4
1481	1503.75	29.2	26.8	2.4	30	8.8	7.2	1.6
1482	1503.75	19.2	18.0	1.2	17	6.4	4.0	2.4
1483	1503.75	20.8	19.2	1.6	20	7.6	4.8	2.8
1484	1503.75	33.6	31.2	2.4	30	10.0	6.0	4.0
1485	1503.75	23.2	22.0	1.2	20	8.0	4.0	4.0
1486	1503.75	.	.	.	.	7.2	4.0	3.2
1487	1503.75	29.6	27.2	2.4	25	8.4	5.2	3.2
1488	1503.75	.	.	.	.	8.4	4.0	4.4
1489	1503.75	17.6	16.4	1.2	17	7.6	4.0	3.6
1490	1503.75	22.8	21.2	1.6	19	8.0	6.0	2.0
1491	1503.75	21.2	20.0	1.2	19	8.0	4.0	4.0
1492	1503.75	20.8	19.6	1.2	21	8.8	4.8	4.0
1493	1503.75	26.0	24.0	2.0	27	8.0	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=4.35 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1494	1503.75	16.8	15.6	1.2	18	7.2	5.2	2.0
1495	1503.75	19.2	18.0	1.2	19	7.2	5.2	2.0
1496	1503.75	15.2	13.6	1.6	16	6.8	4.8	2.0
1497	1503.75	14.4	13.2	1.2	14	6.4	3.6	2.8
1498	1503.75	.	.	.	.	8.0	5.2	2.8
1499	1503.75	28.0	26.8	1.2	24	8.4	4.8	3.6
1500	1503.75	18.4	16.8	1.6	20	8.4	6.8	1.6

----- CORE=RC1 TIME=4.37 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1501	1513.75	22.4	20.4	2.0	20	8.8	4.4	4.4
1502	1513.75	.	.	.	.	6.4	3.6	2.8
1503	1513.75	.	.	.	.	5.2	.	.
1504	1513.75	32.4	31.2	1.2	30	8.8	6.0	2.8
1505	1513.75	16.4	15.2	1.2	16	6.8	4.0	2.8
1506	1513.75	.	.	.	.	10.0	6.0	4.0
1507	1513.75	32.8	30.8	2.0	30	9.6	5.2	4.4
1508	1513.75	37.2	34.8	2.4	36	.	6.4	.
1509	1513.75	34.8	33.2	1.6	31	9.2	6.4	2.8
1510	1513.75	.	.	.	.	6.8	4.8	2.0
1511	1513.75	19.2	18.4	0.8	19	8.4	4.4	4.0
1512	1513.75	36.8	34.4	2.4	30	.	.	.
1513	1513.75	20.8	19.2	1.6	23	7.2	4.8	2.4
1514	1513.75	37.2	35.2	2.0	33	10.0	7.2	2.8
1515	1513.75	21.2	19.2	2.0	21	7.6	4.0	3.6
1516	1513.75	34.8	.	.	.	9.2	.	.
1517	1513.75	.	.	.	.	8.0	4.8	3.2
1518	1513.75	29.2	27.2	2.0	27	9.2	5.6	3.6
1519	1513.75	24.4	22.8	1.6	22	8.0	5.2	2.8
1520	1513.75	.	.	.	.	7.2	4.0	3.2
1521	1513.75	31.6	29.6	2.0	33	8.4	4.8	3.6
1522	1513.75	17.6	15.2	2.4	18	6.4	4.0	2.4
1523	1513.75	26.4	24.4	2.0	23	9.2	4.8	4.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME=4.39 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1524	1523.75	24.8	23.2	1.6	21	8.8	4.4	4.4
1525	1523.75	.	.	.	.	7.6	3.6	4.0
1526	1523.75	.	.	.	.	8.8	5.2	3.6
1527	1523.75	19.2	17.2	2.0	24	7.2	3.6	3.6
1528	1523.75	22.4	20.4	2.0	26	8.0	5.6	2.4
1529	1523.75	.	.	.	.	9.2	.	.
1530	1523.75	.	.	.	.	8.4	5.2	3.2
1531	1523.75	29.6	28.8	0.8	30	9.2	6.4	2.8
1532	1523.75	26.4	23.6	2.8	19	8.0	4.0	4.0
1533	1523.75	34.0	32.0	2.0	30	8.8	4.8	4.0
1534	1523.75	30.8	29.2	1.6	28	8.4	4.4	4.0
1535	1523.75	41.6	40.8	0.8	37	9.6	4.8	4.8
1536	1523.75	15.6	13.6	2.0	15	5.6	2.0	3.6
1537	1523.75	.	.	.	.	6.0	4.0	2.0
1538	1523.75	16.0	14.8	1.2	14	6.8	4.0	2.8
1539	1523.75	30.4	29.6	0.8	30	7.2	5.2	2.0
1540	1523.75	27.6	26.8	0.8	28	10.0	7.6	2.4
1541	1523.75	22.8	21.2	1.6	23	7.6	4.4	3.2
1542	1523.75	32.8	30.4	2.4	32	10.0	6.0	4.0
1543	1523.75	25.2	23.2	2.0	27	8.8	4.4	4.4
1544	1523.75	26.8	26.0	0.8	31	8.8	6.4	2.4
1545	1523.75	29.2	28.0	1.2	31	9.6	6.0	3.6
1546	1523.75	.	.	.	.	9.2	5.6	3.6
1547	1523.75	26.4	24.8	1.6	23	8.4	4.0	4.4
1548	1523.75	25.6	24.4	1.2	24	8.0	4.0	4.0

----- CORE-RC1 TIME=4.43 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1549	1538.75	21.2	.	.	24	.	.	.
1550	1538.75	28.8	27.6	1.2	.	.	7.6	.
1551	1538.75	18.8	.	.	17	8.0	.	.
1552	1538.75	26.8	24.8	2.0	26	8.0	4.8	3.2
1553	1538.75	.	.	.	.	7.6	6.0	1.6
1554	1538.75	24.0	22.0	2.0	21	8.0	4.8	3.2
1555	1538.75	38.4	36.8	1.6	31	8.0	6.8	1.2
1556	1538.75	24.0	22.0	2.0	22	6.8	4.0	2.8
1557	1538.75	19.2	17.6	1.6	18	7.6	4.0	3.6
1558	1538.75	14.4	13.2	1.2	18	6.8	4.0	2.8
1559	1538.75	23.2	20.8	2.4	21	9.2	4.8	4.4
1560	1538.75	22.4	.	.	.	8.0	.	.
1561	1538.75	32.8	31.2	1.6	28	8.8	6.8	2.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

CORE=RC1 TIME=4.43						
OBS	DEPTH	ML	MKL	DIFML	NC	MW
1562	1538.75	13.6	12.4	1.2	17	6.8
1563	1538.75					8.0
1564	1538.75	25.2	22.8	2.4	24	7.6
						4.8
						2.8

CORE=RC1 TIME=4.45									
OBS	DEPTH	ML	MKL	DIFML	NC	MW	MWK	DIFMW	
1565	1546.75	46.8	46.0	0.8	47	10.8	8.0	2.8	
1566	1546.75	22.0	20.8	1.2	21	8.8	6.0	2.8	
1567	1546.75	20.8	20.0	0.8	20	8.0	6.0	2.0	
1568	1546.75					10.8	6.8	4.0	
1569	1546.75	20.8	20.0	0.8	19	8.0	4.0	4.0	
1570	1546.75	18.0	16.8	1.2	20	8.0	4.8	3.2	
1571	1546.75	24.0	22.0	2.0	20	16.0	4.8	11.2	
1572	1546.75	50.0	48.0	2.0	43	8.8	6.8	2.0	
1573	1546.75	36.8	36.0	0.8	31	8.0	4.8	3.2	
1574	1546.75	20.8	18.8	2.0	18	8.0	4.0	4.0	
1575	1546.75	18.8	16.8	2.0	17	6.0	4.0	2.0	
1576	1546.75	18.0	16.8	1.2	17	8.0	6.0	2.0	
1577	1546.75					6.8	4.0	2.8	
1578	1546.75	18.0	16.0	2.0	14	6.0	4.0	2.0	
1579	1546.75	18.0	16.8	1.2	27	6.8	4.0	2.8	
1580	1546.75					8.8	4.0	4.8	
1581	1546.75	30.8	28.8	2.0	24	8.0	4.8	3.2	
1582	1546.75					6.8	4.8	2.0	
1583	1546.75					6.8	4.8	2.0	
1584	1546.75	14.8	14.0	0.8	20	6.0	4.0	2.0	
1585	1546.75	16.8	16.0	0.8	20	6.8	4.0	2.8	
1586	1546.75	28.0	26.0	2.0	25	6.8	4.0	2.8	
1587	1546.75	14.8	12.8	2.0	16	6.8	4.0	2.8	
1588	1546.75	28.0	26.0	2.0	23	8.0	4.0	4.0	
1589	1546.75	28.0	26.0	2.0		8.0	4.0	4.0	
1590	1546.75					8.0	4.8	3.2	
1591	1546.75	18.0	16.0	2.0		6.0	4.0	2.0	
1592	1546.75	20.8	18.0	2.8	17	6.8	4.0	2.8	
1593	1546.75	18.0	16.0	2.0	17	6.0	2.8	3.2	
1594	1546.75	18.8	16.8	2.0	18	6.8	4.0	2.8	
1595	1546.75	30.0	28.0	2.0	23	8.0	4.8	3.2	
1596	1546.75	52.0	50.0	2.0	47	10.0	8.0	2.0	
1597	1546.75	26.8	24.8	2.0	28	8.8	6.8	2.0	
1598	1546.75					8.0	4.8	3.2	
1599	1546.75					8.8	4.8	4.0	

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=4.47 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1600	1556.25	39.2	37.2	2.0	35	10.0	6.8	3.2
1601	1556.25	.	.	.	.	7.6	4.8	2.8
1602	1556.25	.	.	.	.	9.6	6.0	3.6
1603	1556.25	26.0	24.4	1.6	24	8.0	4.0	4.0
1604	1556.25	41.6	40.0	1.6	.	10.0	6.8	3.2
1605	1556.25	18.4	16.4	2.0	23	8.0	5.2	2.8
1606	1556.25	31.2	30.4	0.8	30	9.2	6.8	2.4
1607	1556.25	.	.	.	.	8.4	4.4	4.0
1608	1556.25	21.6	20.4	1.2	21	7.6	6.0	1.6
1609	1556.25	.	.	.	.	7.6	5.2	2.4
1610	1556.25	35.2	34.4	0.8	34	10.0	7.6	2.4
1611	1556.25	42.0	40.8	1.2	40	10.0	6.8	3.2
1612	1556.25	19.2	18.0	1.2	18	7.2	4.0	3.2
1613	1556.25	40.0	39.2	0.8	.	8.4	6.0	2.4
1614	1556.25	14.0	13.2	0.8	15	7.2	4.8	2.4
1615	1556.25	13.6	12.4	1.2	17	6.0	4.4	1.6
1616	1556.25	31.2	30.4	0.8	28	8.4	5.6	2.8
1617	1556.25	20.8	19.6	1.2	19	6.0	4.0	2.0
1618	1556.25	26.8	24.8	2.0	28	8.0	5.6	2.4
1619	1556.25	18.8	17.2	1.6	18	7.6	4.8	2.8
1620	1556.25	20.8	19.2	1.6	25	8.0	5.6	2.4
1621	1556.25	28.8	27.6	1.2	28	8.8	.	.
1622	1556.25	.	.	.	.	7.6	4.8	2.8
1623	1556.25	20.4	19.2	1.2	20	8.4	5.2	3.2
1624	1556.25	18.8	17.2	1.6	19	7.2	4.4	2.8
1625	1556.25	13.6	12.0	1.6	.	6.0	4.0	2.0
1626	1556.25	.	.	.	.	10.0	7.2	2.8
1627	1556.25	30.4	29.2	1.2	29	8.8	6.0	2.8
1628	1556.25	28.8	25.2	3.6	25	7.2	4.8	2.4
1629	1556.25	.	.	.	.	8.0	7.2	0.8
1630	1556.25	.	.	.	.	7.2	5.6	1.6
1631	1556.25	12.4	10.4	2.0	13	6.8	5.6	1.2
1632	1556.25	20.4	.	.	19	6.8	.	.
1633	1556.25	.	.	.	.	7.6	4.0	3.6
1634	1556.25	15.2	14.4	0.8	17	6.4	4.8	1.6
1635	1556.25	.	.	.	.	6.4	4.4	2.0
1636	1556.25	28.8	26.4	2.4	32	7.2	5.2	2.0
1637	1556.25	55.2	52.0	3.2	64	10.4	6.8	3.6
1638	1556.25	.	.	.	.	8.4	4.0	4.4
1639	1556.25	25.2	24.0	1.2	23	8.0	4.4	3.6
1640	1556.25	24.4	22.0	2.4	26	8.4	5.2	3.2
1641	1556.25	20.0	19.2	0.8	22	7.6	4.8	2.8
1642	1556.25	35.2	34.4	0.8	40	7.2	4.8	2.4
1643	1556.25	28.8	26.4	2.4	32	8.8	7.2	1.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=4.47 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1644	1566.25	.	.	.	.	8.4	5.2	3.2
1645	1566.25	22.4	21.2	1.2	23	7.2	4.8	2.4

----- CORE=RC1 TIME=4.49 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1646	1566.25	23.2	22.0	1.2	23	8.8	5.6	3.2
1647	1566.25	14.8	12.8	2.0	15	6.0	3.2	2.8
1648	1566.25	21.2	20.0	1.2	20	8.8	5.2	3.6
1649	1566.25	.	.	.	.	8.4	6.0	2.4
1650	1566.25	17.6	16.0	1.6	18	7.2	4.0	3.2
1651	1566.25	18.8	18.0	0.8	20	7.6	4.8	2.8
1652	1566.25	27.2	26.0	1.2	28	8.8	6.0	2.8
1653	1566.25	.	.	.	.	7.2	5.6	1.6
1654	1566.25	16.0	14.0	2.0	16	6.0	4.0	2.0
1655	1566.25	21.6	20.4	1.2	21	6.4	5.2	1.2
1656	1566.25	20.8	18.8	2.0	31	6.8	4.0	2.8
1657	1566.25	.	.	.	.	8.4	5.6	2.8
1658	1566.25	.	.	.	.	7.2	6.0	1.2
1659	1566.25	32.8	31.2	1.6	29	7.2	6.4	0.8
1660	1566.25	14.8	13.6	1.2	18	6.0	3.2	2.8
1661	1566.25	24.0	23.2	0.8	21	8.4	5.2	3.2
1662	1566.25	24.8	23.2	1.6	30	6.8	3.6	3.2
1663	1566.25	19.6	18.0	1.6	19	6.8	4.0	2.8
1664	1566.25	26.4	25.6	0.8	27	7.2	4.8	2.4
1665	1566.25	.	.	.	.	8.8	6.4	2.4
1666	1566.25	26.8	25.6	1.2	33	8.0	6.0	2.0
1667	1566.25	26.0	24.8	1.2	27	7.2	4.8	2.4
1668	1566.25	35.6	34.8	0.8	38	8.8	6.0	2.8
1669	1566.25	33.2	32.0	1.2	29	10.0	6.0	4.0
1670	1566.25	.	.	.	.	8.0	.	.
1671	1566.25	24.8	24.0	0.8	26	7.6	3.2	4.4
1672	1566.25	21.2	19.6	1.6	28	7.2	2.8	4.4
1673	1566.25	20.8	19.6	1.2	28	6.4	4.8	1.6
1674	1566.25	21.6	20.0	1.6	20	6.8	3.6	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME=4.52 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1675	1576.25	.	.	.	.	7.2	4.0	3.2
1676	1576.25	9.2	8.4	0.8	14	.	.	.
1677	1576.25	30.0	29.2	0.8	34	8.0	6.0	2.0
1678	1576.25	.	.	.	.	8.4	6.0	2.4
1679	1576.25	40.4	39.2	1.2	40	9.2	6.0	3.2
1680	1576.25	22.0	20.8	1.2	26	8.0	5.6	2.4
1681	1576.25	21.6	20.0	1.6	22	.	.	.
1682	1576.25	.	.	.	.	8.0	5.6	2.4
1683	1576.25	.	.	.	.	6.0	3.6	2.4
1684	1576.25	20.8	18.8	2.0	20	7.2	4.4	2.8
1685	1576.25	.	.	.	.	8.0	6.0	2.0
1686	1576.25	29.2	28.0	1.2	35	6.8	5.2	1.6
1687	1576.25	17.2	15.2	2.0	22	5.6	4.0	1.6
1688	1576.25	31.2	30.0	1.2	28	8.4	6.0	2.4
1689	1576.25	.	.	.	.	8.4	6.0	2.4
1690	1576.25	26.4	25.6	0.8	40	6.4	3.6	2.8

----- CORE-RC1 TIME=4.54 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1691	1586.25	14.8	13.6	1.2	17	7.6	3.2	4.4
1692	1586.25	.	.	.	.	6.4	3.2	3.2
1693	1586.25	25.6	23.6	2.0	25	7.2	.	.
1694	1586.25	29.2	27.2	2.0	29	8.0	5.6	2.4
1695	1586.25	16.8	15.2	1.6	15	6.0	2.8	3.2
1696	1586.25	23.6	23.2	0.4	23	8.4	6.0	2.4
1697	1586.25	.	.	.	.	6.8	4.0	2.8
1698	1586.25	38.4	37.2	1.2	35	8.4	5.2	3.2
1699	1586.25	22.4	20.4	2.0	18	7.2	4.0	3.2
1700	1586.25	.	.	.	.	8.0	4.0	4.0
1701	1586.25	.	.	.	.	7.2	5.2	2.0
1702	1586.25	14.4	13.6	0.8	20	6.0	3.2	2.8
1703	1586.25	23.2	22.4	0.8	20	6.8	4.0	2.8
1704	1586.25	26.8	25.6	1.2	33	6.0	3.6	2.4
1705	1586.25	18.0	17.2	0.8	22	5.6	2.8	2.8
1706	1586.25	44.0	42.0	2.0	42	8.4	4.8	3.6
1707	1586.25	16.8	15.6	1.2	16	6.8	.	.
1708	1586.25	31.2	30.0	1.2	27	8.8	4.4	4.4
1709	1586.25	38.8	38.0	0.8	35	9.2	4.8	4.4
1710	1586.25	20.4	19.2	1.2	24	8.0	6.8	1.2
1711	1586.25	.	.	.	.	9.2	3.2	6.0
1712	1586.25	37.2	35.2	2.0	46	8.4	4.8	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=4.54 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1713	1586.25	41.6	40	1.6	33	9.2	4.8	4.4

----- CORE=RC1 TIME=4.57 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1714	1596.75	16.8	14.8	2.0	20	5.6	2.8	2.8
1715	1596.75	.	.	.	.	6.4	3.2	3.2
1716	1596.75	19.6	18.0	1.6	19	7.2	3.2	4.0
1717	1596.75	.	.	.	.	8.0	4.8	3.2
1718	1596.75	28.0	26.4	1.6	25	8.4	3.2	5.2
1719	1596.75	.	.	.	.	6.0	3.2	2.8
1720	1596.75	34.8	33.2	1.6	37	8.8	6.4	2.4
1721	1596.75	26.0	24.4	1.6	27	6.8	4.4	2.4
1722	1596.75	22.8	21.6	1.2	17	8.0	6.0	2.0
1723	1596.75	.	.	.	.	7.2	4.4	2.8
1724	1596.75	20.0	18.4	1.6	18	6.8	4.0	2.8
1725	1596.75	13.6	12.0	1.6	17	6.0	3.6	2.4
1726	1596.75	21.6	20.0	1.6	23	7.6	4.8	2.8
1727	1596.75	29.6	28.8	0.8	26	8.8	5.6	3.2
1728	1596.75	28.0	26.0	2.0	35	7.6	4.0	3.6
1729	1596.75	36.4	34.0	2.4	37	8.0	4.8	3.2
1730	1596.75	26.0	24.4	1.6	26	8.4	6.0	2.4
1731	1596.75	27.6	25.6	2.0	27	8.0	5.6	2.4
1732	1596.75	20.8	18.4	2.4	21	7.2	4.8	2.4
1733	1596.75	16.8	15.2	1.6	15	6.8	4.0	2.8
1734	1596.75	.	.	.	.	8.4	4.4	4.0
1735	1596.75	39.2	36.0	3.2	34	8.4	5.2	3.2
1736	1596.75	32.4	30.8	1.6	33	8.4	5.6	2.8
1737	1596.75	18.8	18.0	0.8	25	7.2	4.8	2.4
1738	1596.75	.	.	.	.	6.8	3.2	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=RC1 TIME=4.59 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1739	1606.25	.	.	.	40	9.6	6.0	3.6
1740	1606.25	26.8	24.0	2.8	26	8.0	4.8	3.2
1741	1606.25	26.8	25.6	1.2	29	8.0	5.2	2.8
1742	1606.25	33.2	31.2	2.0	33	8.4	5.6	2.8
1743	1606.25	31.2	29.6	1.6	.	8.4	6.0	2.4
1744	1606.25	30.8	30.0	0.8	.	6.8	5.2	1.6
1745	1606.25	15.2	14.0	1.2	17	8.0	4.8	3.2
1746	1606.25	30.8	30.0	0.8	31	8.8	5.6	3.2
1747	1606.25	24.8	23.2	1.6	26	7.6	4.8	2.8
1748	1606.25	.	.	.	.	8.0	4.8	3.2
1749	1606.25	24.4	22.8	1.6	25	7.6	4.0	3.6
1750	1606.25	22.4	21.2	1.2	.	6.8	4.4	2.4
1751	1606.25	31.6	30.0	1.6	30	8.8	6.0	2.8
1752	1606.25	18.4	17.6	0.8	19	6.8	4.0	2.8
1753	1606.25	17.2	16.0	1.2	22	6.8	4.0	2.8
1754	1606.25	22.0	20.0	2.0	22	8.0	4.4	3.6
1755	1606.25	32.0	30.0	2.0	37	8.0	5.2	2.8
1756	1606.25	22.0	20.8	1.2	22	8.0	6.0	2.0
1757	1606.25	32.8	30.8	2.0	33	9.6	6.0	3.6
1758	1606.25	24.4	23.2	1.2	22	6.8	5.2	1.6
1759	1606.25	.	.	.	.	6.4	4.0	2.4
1760	1606.25	34.4	33.2	1.2	31	8.8	4.8	4.0
1761	1606.25	22.0	20.8	1.2	.	8.0	6.0	2.0
1762	1606.25	36.0	34.4	1.6	35	8.8	6.0	2.8
1763	1606.25	24.4	23.6	0.8	33	8.0	5.6	2.4
1764	1606.25	.	.	.	.	8.0	4.4	3.6

----- CORE=RC1 TIME=4.61 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1765	1616.25	21.6	.	.	.	7.6	.	.
1766	1616.25	22.4	21.2	1.2	21	7.2	4.0	3.2
1767	1616.25	32.4	31.2	1.2	34	8.4	5.2	3.2
1768	1616.25	21.2	19.6	1.6	19	7.6	4.0	3.6
1769	1616.25	.	.	.	.	5.6	3.6	2.0
1770	1616.25	30.4	28.0	2.4	28	8.4	4.8	3.6
1771	1616.25	24.0	22.0	2.0	23	7.6	6.0	1.6
1772	1616.25	12.4	11.2	1.2	15	5.6	3.6	2.0
1773	1616.25	22.4	21.6	0.8	22	6.8	4.0	2.8
1774	1616.25	26.4	24.8	1.6	30	8.4	4.0	4.4
1775	1616.25	20.8	19.2	1.6	23	8.0	4.0	4.0
1776	1616.25	.	.	.	.	7.2	5.2	2.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME=4.61 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1777	1616.25	27.2	25.6	1.6	28	7.2	4.0	3.2
1778	1616.25	18.8	17.2	1.6	25	6.4	4.0	2.4
1779	1616.25	33.2	32.0	1.2	34	7.6	5.2	2.4
1780	1616.25	.	.	.	.	8.4	6.4	2.0
1781	1616.25	37.2	35.2	2.0	39	8.4	5.6	2.8
1782	1616.25	.	.	.	.	6.8	4.0	2.8
1783	1616.25	19.2	18.4	0.8	23	7.2	4.0	3.2
1784	1616.25	18.8	17.6	1.2	.	7.6	4.0	3.6
1785	1616.25	28.4	27.2	1.2	.	6.4	4.0	2.4
1786	1616.25	17.2	15.6	1.6	21	6.4	4.0	2.4
1787	1616.25	.	.	.	.	8.0	4.8	3.2
1788	1616.25	26.4	24.8	1.6	26	7.2	4.0	3.2
1789	1616.25	33.6	32.4	1.2	31	8.4	5.2	3.2
1790	1616.25	19.6	.	.	.	.	.	.
1791	1616.25	19.6	18.4	1.2	22	8.0	6.0	2.0

----- CORE-RC1 TIME=4.64 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1792	1626.75	.	.	.	.	8.0	5.6	2.4
1793	1626.75	18.0	16.0	2.0	18	5.6	4.0	1.6
1794	1626.75	45.2	42.0	3.2	38	10.0	7.2	2.8
1795	1626.75	27.2	25.2	2.0	26	9.2	6.0	3.2
1796	1626.75	17.2	16.0	1.2	15	8.0	6.0	2.0
1797	1626.75	27.2	25.2	2.0	27	8.0	5.2	2.8
1798	1626.75	26.0	24.0	2.0	29	9.2	5.2	4.0
1799	1626.75	15.2	13.2	2.0	16	6.0	4.0	2.0
1800	1626.75	20.0	18.0	2.0	19	6.0	4.0	2.0
1801	1626.75	.	.	.	.	8.0	5.2	2.8
1802	1626.75	24.0	21.2	2.8	23	8.0	5.2	2.8
1803	1626.75	22.0	20.0	2.0	22	6.0	4.0	2.0
1804	1626.75	25.2	23.2	2.0	23	7.2	5.2	2.0
1805	1626.75	35.2	33.2	2.0	32	10.0	6.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-RC1 TIME=4.66 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1806	1636.25	20.0	18.0	2.0	22	7.2	5.2	2.0
1807	1636.25	23.2	22.0	1.2	24	9.2	6.0	3.2
1808	1636.25	22.0	20.0	2.0	27	8.0	5.2	2.8
1809	1636.25	27.2	25.2	2.0	28	7.2	5.2	2.0
1810	1636.25	22.0	20.0	2.0	20	8.0	5.2	2.8
1811	1636.25	26.0	24.0	2.0	26	9.2	6.0	3.2

----- CORE-RC1 TIME=4.69 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1812	1646.25	23.6	22.4	1.2	22	6.4	4.0	2.4
1813	1646.25	46.4	44.0	2.4	39	8.8	6.0	2.8
1814	1646.25	.	.	.	.	6.8	3.6	3.2
1815	1646.25	17.6	16.4	1.2	17	5.2	4.0	1.2
1816	1646.25	20.0	18.8	1.2	22	6.0	3.2	2.8
1817	1646.25	34.8	33.6	1.2	35	8.8	6.8	2.0
1818	1646.25	30.0	28.4	1.6	26	6.4	4.0	2.4
1819	1646.25	40.8	39.2	1.6	38	8.8	6.0	2.8
1820	1646.25	20.4	19.2	1.2	29	6.0	4.0	2.0
1821	1646.25	36.8	33.2	3.6	38	8.8	6.0	2.8
1822	1646.25	23.2	22.0	1.2	20	7.2	4.0	3.2
1823	1646.25	16.4	15.6	0.8	21	.	.	.
1824	1646.25	24.4	22.4	2.0	21	6.8	4.8	2.0
1825	1646.25	18.0	16.8	1.2	22	6.0	3.6	2.4
1826	1646.25	26.0	25.2	0.8	27	6.4	4.0	2.4
1827	1646.25	.	.	.	.	6.8	4.4	2.4
1828	1646.25	21.6	20.8	0.8	24	6.8	5.2	1.6
1829	1646.25	.	.	.	.	6.4	4.4	2.0
1830	1646.25	17.2	15.6	1.6	17	6.8	4.0	2.8
1831	1646.25	36.4	35.6	0.8	37	9.6	6.8	2.8
1832	1646.25	.	.	.	.	6.4	4.0	2.4
1833	1646.25	.	.	.	.	6.0	3.2	2.8
1834	1646.25	.	.	.	.	7.6	5.2	2.4
1835	1646.25	28.8	27.2	1.6	26	8.0	4.8	3.2
1836	1646.25	32.4	30.0	2.4	34	8.0	5.2	2.8
1837	1646.25	35.6	34.0	1.6	35	8.0	5.6	2.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=V29 TIME=2.6 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1838	1201	45.2	43.2	2.0	36	10.0	6.0	4.0
1839	1201	21.2	.	.	19	.	.	.
1840	1201	41.2	38.8	2.4	32	10.0	6.8	3.2
1841	1201	38.8	36.8	2.0	32	11.2	7.2	4.0
1842	1201	27.6	25.6	2.0	25	8.8	6.0	2.8
1843	1201	32.0	30.4	1.6	24	9.2	6.0	3.2
1844	1201	34.4	32.4	2.0	27	8.0	5.6	2.4
1845	1201	46.0	44.0	2.0	35	9.2	6.0	3.2
1846	1201	30.8	28.8	2.0	25	8.8	6.4	2.4
1847	1201	29.6	27.6	2.0	25	9.2	6.0	3.2
1848	1201	38.0	36.0	2.0	28	10.0	6.0	4.0
1849	1201	46.0	44.0	2.0	39	10.4	8.0	2.4
1850	1201	28.4	26.0	2.4	23	9.2	6.0	3.2
1851	1201	30.8	28.4	2.4	25	10.0	5.6	4.4
1852	1201	30.8	28.8	2.0	27	9.2	6.0	3.2
1853	1201	36.8	34.8	2.0	30	10.0	6.0	4.0
1854	1201	22.4	20.4	2.0	19	8.0	4.8	3.2
1855	1201	32.8	30.8	2.0	28	8.0	4.0	4.0
1856	1201	44.0	42.0	2.0	36	10.0	6.0	4.0
1857	1201	33.2	31.2	2.0	27	10.0	6.0	4.0

----- CORE=V29 TIME=2.73 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1858	1250	36	34	2	30	10	6	4

----- CORE=V29 TIME=2.85 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1859	1301	42.0	.	.	38	.	.	.
1860	1301	.	.	.	31	10.0	6	4.0
1861	1301	.	.	.	.	9.2	6	3.2
1862	1301	29.2	27.2	2	24	10.0	6	4.0
1863	1301	29.6	27.6	2	27	9.2	6	3.2
1864	1301	25.2	23.2	2	25	9.2	6	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=V29 TIME=3.13 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1865	1401	42.0	.	.	37	.	.	.
1866	1401	30.4	.	.	25	.	.	.
1867	1401	36.8	.	.	32	.	.	.
1868	1401	.	.	.	29	8.0	6.0	2.0
1869	1401	31.2	29.2	2.0	26	9.6	6.4	3.2
1870	1401	42.0	.	.	40	.	.	.
1871	1401	26.8	.	.	23	.	.	.
1872	1401	.	.	.	26	10.4	7.6	2.8
1873	1401	26.0	.	.	25	.	.	.
1874	1401	20.8	19.2	1.6	18	6.8	4.0	2.8

----- CORE=157 TIME=2.55 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1875	14900	49.2	46.0	3.2	41	10.8	6.8	4.0
1876	14900	29.2	.	.	26	.	.	.
1877	14900	31.2	29.2	2.0	26	7.6	4.0	3.6

----- CORE=157 TIME=2.57 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1878	15000	29.6	.	.	25	.	.	.
1879	15000	30.0	28	2.0	24	8.8	5.6	3.2
1880	15000	.	.	.	.	10.0	5.6	4.4
1881	15000	40.8	.	.	32	.	.	.
1882	15000	40.4	38	2.4	32	8.8	5.2	3.6

----- CORE=157 TIME=2.58 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1883	15050	32.8	.	.	29	.	.	.
1884	15050	30.4	.	.	25	.	.	.
1885	15050	.	.	.	28	9.2	6.0	3.2
1886	15050	41.2	38.8	2.4	.	10.0	6.0	4.0
1887	15050	.	.	.	.	10.0	6.4	3.6
1888	15050	40.0	.	.	33	.	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-157 TIME=2.59 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1889	15150	23.2	.	.	20	.	.	.
1890	15150	42.8	.	.	32	.	.	.
1891	15150	44.8	.	.	38	.	.	.
1892	15150	32.4	30.8	1.6	25	10.0	6.0	4.0
1893	15150	34.8	.	.	28	.	.	.
1894	15150	36.8	.	.	34	.	.	.
1895	15150	51.2	.	.	38	.	.	.
1896	15150	32.4	.	.	27	.	.	.
1897	15150	.	.	.	28	9.2	5.6	3.6
1898	15150	36.4	.	.	33	.	.	.
1899	15150	38.4	.	.	36	.	.	.
1900	15150	42.0	.	.	34	.	.	.

----- CORE-157 TIME=2.6 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1901	15200	29.6	27.6	2.0	23	8.8	5.6	3.2
1902	15200	24.4	.	.	22	.	.	.
1903	15200	44.4	.	.	39	.	.	.
1904	15200	29.6	.	.	26	.	.	.
1905	15200	34.4	32.0	2.4	28	10.0	5.6	4.4
1906	15200	50.0	47.2	2.8	37	9.6	6.0	3.6
1907	15200	39.2	37.2	2.0	28	8.8	5.2	3.6
1908	15200	27.2	.	.	22	.	.	.

----- CORE-157 TIME=2.61 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1909	15250	40.8	.	.	33	.	.	.
1910	15250	46.8	45.2	1.6	35	8.0	4.8	3.2
1911	15250	28.8	.	.	23	.	.	.
1912	15250	39.6	.	.	32	.	.	.
1913	15250	.	.	.	28	10.0	5.2	4.8
1914	15250	36.8	34.8	2.0	29	9.2	6.0	3.2
1915	15250	37.2	35.2	2.0	28	9.2	5.2	4.0
1916	15250	31.6	30.0	1.6	28	10.0	6.0	4.0
1917	15250	46.0	.	.	41	.	.	.
1918	15250	35.2	33.2	2.0	29	10.0	6.0	4.0
1919	15250	40.0	38.0	2.0	34	9.6	5.6	4.0
1920	15250	28.8	.	.	25	.	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.61 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1921	15250	27.2	25.2	2.0	24	9.6	5.2	4.4
1922	15250	40.8	39.2	1.6	33	9.6	6.0	3.6
1923	15250	.	.	.	29	9.6	5.2	4.4
1924	15250	37.6	35.2	2.4	28	10.0	6.0	4.0

----- CORE=157 TIME=2.62 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1925	15300	32.4	30.4	2.0	27	8.8	5.2	3.6
1926	15300	34.8	32.4	2.4	28	8.8	4.8	4.0
1927	15300	40.0	.	.	29	.	.	.
1928	15300	31.2	29.2	2.0	25	9.2	5.6	3.6
1929	15300	33.2	30.8	2.4	28	8.8	5.2	3.6
1930	15300	28.8	.	.	23	.	.	.
1931	15300	42.0	40.0	2.0	31	10.0	6.0	4.0
1932	15300	36.8	.	.	28	.	.	.
1933	15300	50.8	48.0	2.8	39	10.0	6.0	4.0
1934	15300	33.6	32.0	1.6	26	8.0	4.4	3.6
1935	15300	42.0	40.0	2.0	35	9.6	5.2	4.4
1936	15300	31.2	28.8	2.4	27	8.0	4.4	3.6
1937	15300	30.8	.	.	26	.	.	.
1938	15300	34.8	.	.	26	.	.	.
1939	15300	41.2	39.2	2.0	35	10.0	6.0	4.0
1940	15300	30.0	27.6	2.4	25	9.6	5.2	4.4
1941	15300	.	.	.	.	9.6	4.8	4.8
1942	15300	42.4	40.0	2.4	35	9.6	6.0	3.6
1943	15300	24.4	22.4	2.0	19	8.0	5.2	2.8
1944	15300	.	.	.	37	9.2	6.0	3.2
1945	15300	39.2	37.2	2.0	34	9.2	6.0	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.63 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1946	15350	43.2	40.8	2.4	31	10.0	6.0	4.0
1947	15350	22.0	.	.	18	.	.	.
1948	15350	40.8	38.4	2.4	30	9.6	6.0	3.6
1949	15350	32.4	.	.	29	.	.	.
1950	15350	40.0	38.0	2.0	30	11.2	6.0	5.2
1951	15350	34.0	32.0	2.0	30	8.0	5.2	2.8
1952	15350	36.8	.	.	30	.	.	.
1953	15350	35.2	.	.	30	.	.	.
1954	15350	38.0	.	.	32	.	.	.
1955	15350	46.0	43.2	2.8	34	10.0	6.8	3.2
1956	15350	32.0	30.0	2.0	25	9.2	5.2	4.0
1957	15350	26.0	.	.	23	.	.	.
1958	15350	40.0	.	.	31	.	.	.
1959	15350	.	.	.	.	10.8	7.2	3.6
1960	15350	23.2	21.2	2.0	21	8.0	5.2	2.8
1961	15350	29.2	27.2	2.0	24	9.6	5.2	4.4
1962	15350	.	.	.	26	9.2	5.6	3.6
1963	15350	29.2	.	.	23	.	.	.
1964	15350	40.8	38.8	2.0	31	9.2	6.0	3.2
1965	15350	39.6	36.8	2.8	35	10.4	6.0	4.4
1966	15350	45.2	.	.	33	.	.	.
1967	15350	26.0	23.2	2.8	23	9.6	5.6	4.0
1968	15350	27.2	.	.	25	.	.	.
1969	15350	18.8	.	.	16	.	.	.
1970	15350	34.0	.	.	27	.	.	.
1971	15350	43.2	41.2	2.0	32	10.0	6.0	4.0
1972	15350	34.8	.	.	28	.	.	.
1973	15350	32.0	.	.	27	.	.	.
1974	15350	21.2	.	.	18	.	.	.
1975	15350	36.4	34.4	2.0	27	10.0	6.0	4.0
1976	15350	49.2	47.2	2.0	37	9.6	6.0	3.6
1977	15350	41.6	40.0	1.6	32	10.0	6.0	4.0
1978	15350	31.6	29.2	2.4	26	10.8	6.0	4.8
1979	15350	39.6	36.8	2.8	30	11.2	6.0	5.2
1980	15350	28.0	26.0	2.0	23	10.0	6.0	4.0
1981	15350	26.0	24.0	2.0	23	10.0	5.2	4.8
1982	15350	40.0	38.0	2.0	31	9.2	5.2	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.64 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
1983	15425	40.4	.	.	30	.	.	.
1984	15425	40.0	.	.	34	.	.	.
1985	15425	20.4	18.4	2.0	17	8.8	4.8	4.0
1986	15425	.	.	.	27	9.6	6.0	3.6
1987	15425	44.0	42.0	2.0	33	10.0	5.6	4.4
1988	15425	29.2	.	.	23	.	.	.
1989	15425	27.2	.	.	23	.	.	.
1990	15425	34.0	32.0	2.0	25	9.6	5.2	4.4
1991	15425	42.0	.	.	36	.	.	.
1992	15425	33.2	.	.	27	.	.	.
1993	15425	34.8	.	.	26	.	.	.
1994	15425	44.0	41.6	2.4	32	10.4	6.8	3.6
1995	15425	34.0	31.2	2.8	26	10.0	5.2	4.8
1996	15425	35.6	33.2	2.4	27	10.0	6.0	4.0
1997	15425	30.8	.	.	26	.	.	.
1998	15425	22.4	20.8	1.6	18	8.0	4.8	3.2
1999	15425	27.2	.	.	21	.	.	.
2000	15425	33.6	31.2	2.4	28	10.8	6.8	4.0
2001	15425	.	.	.	29	10.0	6.0	4.0
2002	15425	26.0	24.0	2.0	22	8.0	4.8	3.2
2003	15425	22.8	21.2	1.6	19	8.8	5.2	3.6
2004	15425	.	.	.	41	10.0	6.0	4.0
2005	15425	20.8	19.2	1.6	17	7.6	4.0	3.6
2006	15425	19.2	.	.	16	.	.	.
2007	15425	33.2	30.8	2.4	25	9.6	6.0	3.6
2008	15425	41.2	38.8	2.4	31	10.0	5.6	4.4
2009	15425	29.6	27.2	2.4	23	9.2	5.2	4.0
2010	15425	17.6	15.6	2.0	17	7.2	4.0	3.2
2011	15425	22.4	.	.	20	.	.	.
2012	15425	26.4	.	.	22	.	.	.
2013	15425	35.2	.	.	27	.	.	.
2014	15425	21.2	19.2	2.0	29	9.2	4.8	4.4
2015	15425	29.6	.	.	25	.	.	.
2016	15425	46.0	44.0	2.0	35	9.6	6.4	3.2
2017	15425	.	.	.	.	10.4	6.0	4.4
2018	15425	40.0	.	.	32	.	.	.
2019	15425	35.2	34.0	1.2	26	9.6	6.0	3.6
2020	15425	39.2	37.6	1.6	36	10.0	6.8	3.2
2021	15425	48.8	46.0	2.8	36	10.0	6.0	4.0
2022	15425	30.8	.	.	26	.	.	.
2023	15425	45.6	43.6	2.0	34	9.2	6.0	3.2
2024	15425	29.6	.	.	26	.	.	.
2025	15425	37.2	35.2	2.0	28	11.2	6.8	4.4
2026	15425	47.2	45.2	2.0	36	10.8	6.4	4.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.64 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2027	15425	33.2	31.2	2.0	27	8.8	5.2	3.6
2028	15425	22.4	.	.	20	.	.	.
2029	15425	41.2	.	.	30	.	.	.
2030	15425	28.0	.	.	23	.	.	.
2031	15425	30.8	28.8	2.0	26	9.2	6.0	3.2
2032	15425	32.8	.	.	25	.	.	.
2033	15425	18.0	16.4	1.6	16	7.2	4.4	2.8
2034	15425	33.2	.	.	27	.	.	.
2035	15425	24.0	22.0	2.0	23	9.6	5.2	4.4
2036	15425	27.2	.	.	24	.	.	.
2037	15425	34.4	32.0	2.4	27	10.4	6.0	4.4

----- CORE=157 TIME=2.65 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2038	15500	.	.	.	21	8.0	6.0	2.0
2039	15500	34.4	.	.	28	.	.	.
2040	15500	38.8	36.4	2.4	29	10.0	6.0	4.0
2041	15500	26.4	.	.	20	.	.	.
2042	15500	44.0	.	.	35	.	.	.
2043	15500	.	.	.	.	8.8	6.0	2.8
2044	15500	38.8	36.8	2.0	28	11.6	7.6	4.0
2045	15500	42.8	.	.	37	.	.	.
2046	15500	44.0	41.6	2.4	33	8.8	6.0	2.8
2047	15500	41.2	.	.	29	.	.	.
2048	15500	32.8	30.4	2.4	28	10.0	6.0	4.0
2049	15500	26.8	.	.	22	.	.	.
2050	15500	34.8	32.8	2.0	28	9.6	6.0	3.6
2051	15500	40.0	.	.	32	.	.	.
2052	15500	41.2	.	.	34	.	.	.
2053	15500	.	.	.	.	9.6	6.0	3.6
2054	15500	38.4	36.4	2.0	28	8.8	6.0	2.8
2055	15500	35.2	.	.	27	.	.	.
2056	15500	34.0	.	.	26	.	.	.
2057	15500	34.8	.	.	27	.	.	.
2058	15500	40.8	.	.	33	.	.	.
2059	15500	29.2	26.8	2.4	22	10.0	6.0	4.0
2060	15500	31.2	.	.	25	.	.	.
2061	15500	34.8	.	.	28	.	.	.
2062	15500	29.6	27.6	2.0	27	9.2	6.0	3.2
2063	15500	51.2	48.8	2.4	39	9.2	6.0	3.2
2064	15500	26.4	.	.	22	.	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.65 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2065	15500	29.6	28.0	1.6	23	8.8	4.8	4.0
2066	15500	31.2	.	.	27	.	.	.
2067	15500	30.4	.	.	24	.	.	.
2068	15500	29.6	27.6	2.0	24	9.6	5.2	4.4
2069	15500	26.8	24.4	2.4	22	8.4	4.8	3.6
2070	15500	49.6	47.2	2.4	38	10.4	6.8	3.6
2071	15500	30.8	28.8	2.0	24	9.2	4.8	4.4
2072	15500	38.0	36.0	2.0	30	10.4	6.0	4.4
2073	15500	42.8	40.8	2.0	35	10.8	6.8	4.0
2074	15500	37.2	34.4	2.8	27	10.0	5.2	4.8

----- CORE=157 TIME=2.66 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2075	15550	42.8	40.8	2.0	34	10.0	6.0	4.0
2076	15550	28.4	26.4	2.0	21	9.2	5.2	4.0
2077	15550	22.4	.	.	20	.	.	.
2078	15550	35.2	.	.	28	.	.	.
2079	15550	22.8	.	.	19	.	.	.
2080	15550	20.0	18.0	2.0	16	8.0	4.8	3.2
2081	15550	32.8	31.2	1.6	26	9.6	6.0	3.6
2082	15550	22.8	.	.	19	.	.	.
2083	15550	56.0	54.0	2.0	42	10.0	6.0	4.0
2084	15550	34.4	.	.	28	.	.	.
2085	15550	.	.	.	27	8.8	4.8	4.0
2086	15550	34.0	32.0	2.0	28	9.2	5.2	4.0
2087	15550	28.8	.	.	24	.	.	.
2088	15550	27.2	.	.	21	.	.	.
2089	15550	26.4	.	.	22	.	.	.
2090	15550	26.4	24.4	2.0	23	8.0	4.4	3.6
2091	15550	37.2	34.8	2.4	30	10.0	8.0	2.0
2092	15550	24.0	.	.	21	.	.	.
2093	15550	31.2	.	.	26	.	.	.
2094	15550	42.8	.	.	33	.	.	.
2095	15550	24.8	22.8	2.0	19	9.2	5.2	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.67 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2096	15600	44.0	.	.	33	.	.	.
2097	15600	50.0	44.0	6.0	40	9.2	6.0	3.2
2098	15600	24.4	.	.	22	.	.	.
2099	15600	20.0	.	.	17	.	.	.
2100	15600	.	.	.	21	9.2	4.8	4.4
2101	15600	.	.	.	23	8.0	4.0	4.0
2102	15600	19.6	.	.	18	.	.	.
2103	15600	41.2	38.8	2.4	32	10.0	5.2	4.8
2104	15600	25.2	23.2	2.0	21	7.6	4.0	3.6
2105	15600	30.4	.	.	24	.	.	.
2106	15600	32.8	.	.	26	.	.	.
2107	15600	30.4	28.8	1.6	26	9.2	5.2	4.0
2108	15600	40.8	.	.	31	.	.	.
2109	15600	54.0	51.2	2.8	40	10.0	6.0	4.0
2110	15600	.	.	.	33	10.0	6.0	4.0
2111	15600	.	.	.	35	10.0	5.6	4.4
2112	15600	42.4	.	.	33	.	.	.
2113	15600	.	.	.	27	10.0	6.8	3.2
2114	15600	48.8	.	.	40	.	.	.
2115	15600	.	.	.	29	9.2	6.4	2.8
2116	15600	.	.	.	27	9.6	6.0	3.6
2117	15600	29.6	.	.	23	.	.	.
2118	15600	46.0	.	.	34	.	.	.
2119	15600	34.8	.	.	26	.	.	.
2120	15600	39.2	.	.	31	.	.	.
2121	15600	32.8	30.0	2.8	26	9.6	5.6	4.0
2122	15600	33.2	.	.	25	.	.	.
2123	15600	50.4	47.2	3.2	36	10.8	6.8	4.0
2124	15600	28.8	.	.	24	.	.	.
2125	15600	30.8	28.8	2.0	24	8.0	4.8	3.2
2126	15600	28.4	26.0	2.4	25	9.6	6.0	3.6
2127	15600	48.0	46.0	2.0	36	10.0	5.6	4.4
2128	15600	30.0	27.2	2.8	25	9.2	5.2	4.0
2129	15600	22.4	20.8	1.6	21	8.8	5.2	3.6
2130	15600	26.8	24.8	2.0	21	8.8	4.4	4.4
2131	15600	24.0	22.0	2.0	20	9.6	4.8	4.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

CORE=157 TIME=2.68

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2132	15650	26.4	24.4	2.0	20	9.2	4.8	4.4
2133	15650	34.4	.	.	28	.	.	.
2134	15650	33.2	31.2	2.0	25	8.0	5.6	2.4
2135	15650	22.0	.	.	18	.	.	.
2136	15650	45.2	.	.	35	.	.	.
2137	15650	.	.	.	40	11.2	6.8	4.4
2138	15650	52.8	.	.	37	.	.	.
2139	15650	20.4	18.8	1.6	19	8.0	4.8	3.2
2140	15650	35.6	33.6	2.0	27	10.0	5.2	4.8
2141	15650	35.2	33.2	2.0	26	9.2	5.2	4.0
2142	15650	43.6	.	.	33	.	.	.
2143	15650	34.4	.	.	27	.	.	.
2144	15650	46.8	.	.	38	.	.	.
2145	15650	34.8	.	.	28	.	.	.
2146	15650	31.2	.	.	27	.	.	.
2147	15650	37.2	.	.	28	.	.	.
2148	15650	27.2	.	.	21	.	.	.
2149	15650	23.2	21.2	2.0	20	10.0	5.2	4.8
2150	15650	26.4	24.0	2.4	25	9.6	6.0	3.6
2151	15650	32.8	.	.	27	.	.	.
2152	15650	22.8	21.2	1.6	21	8.0	4.8	3.2
2153	15650	36.4	34.4	2.0	30	10.8	6.8	4.0
2154	15650	22.4	.	.	19	.	.	.
2155	15650	40.0	.	.	31	.	.	.
2156	15650	20.8	.	.	18	.	.	.
2157	15650	23.2	21.2	2.0	20	8.0	4.8	3.2
2158	15650	21.2	19.6	1.6	19	7.6	4.8	2.8
2159	15650	31.2	.	.	27	.	.	.
2160	15650	32.4	30.0	2.4	27	9.2	5.2	4.0
2161	15650	27.2	24.8	2.4	23	9.2	4.8	4.4
2162	15650	30.4	28.0	2.4	22	10.0	6.0	4.0
2163	15650	30.8	28.8	2.0	26	9.2	5.6	3.6
2164	15650	29.2	27.2	2.0	25	9.2	6.0	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.69 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2165	15700	42.8	41.2	1.6	35	10.8	6.4	4.4
2166	15700	36.4	.	.	27	.	.	.
2167	15700	24.8	22.8	2.0	22	8.0	5.2	2.8
2168	15700	30.4	.	.	23	.	.	.
2169	15700	.	.	.	.	10.0	6.0	4.0
2170	15700	18.4	.	.	18	.	.	.
2171	15700	27.2	.	.	22	.	.	.
2172	15700	19.2	.	.	17	.	.	.
2173	15700	26.8	25.2	1.6	24	9.2	5.2	4.0
2174	15700	34.8	.	.	28	.	.	.
2175	15700	22.4	20.8	1.6	19	9.2	4.8	4.4
2176	15700	24.8	.	.	21	.	.	.
2177	15700	24.8	.	.	21	.	.	.
2178	15700	33.2	.	.	25	.	.	.
2179	15700	24.8	.	.	22	.	.	.
2180	15700	28.8	.	.	23	.	.	.
2181	15700	48.4	.	.	37	.	.	.
2182	15700	33.2	.	.	26	.	.	.
2183	15700	23.2	.	.	20	.	.	.
2184	15700	47.2	45.6	1.6	37	10.0	6.8	3.2
2185	15700	.	.	.	.	10.0	6.8	3.2
2186	15700	42.0	40.0	2.0	32	10.0	6.0	4.0
2187	15700	.	.	.	25	10.0	6.0	4.0
2188	15700	39.6	37.2	2.4	32	9.2	6.0	3.2
2189	15700	27.6	.	.	23	.	.	.
2190	15700	37.2	.	.	28	.	.	.
2191	15700	38.4	.	.	29	.	.	.
2192	15700	24.0	.	.	20	.	.	.
2193	15700	29.6	.	.	24	.	.	.
2194	15700	.	.	.	34	11.6	6.0	5.6
2195	15700	55.2	52.0	3.2	43	10.0	6.8	3.2
2196	15700	30.8	28.8	2.0	27	10.0	6.4	3.6
2197	15700	38.4	36.4	2.0	31	9.6	6.0	3.6
2198	15700	21.6	19.2	2.4	18	8.4	4.8	3.6
2199	15700	28.8	26.4	2.4	23	8.4	5.2	3.2
2200	15700	45.2	42.8	2.4	35	10.4	5.6	4.8
2201	15700	29.6	28.0	1.6	27	9.6	6.0	3.6
2202	15700	41.6	39.6	2.0	34	9.2	6.0	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.7 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2203	15775	30.4	.	.	26	.	.	.
2204	15775	27.2	.	.	25	.	.	.
2205	15775	26.8	24.4	2.4	23	8.4	4.8	3.6
2206	15775	18.8	16.8	2.0	17	8.0	5.2	2.8
2207	15775	.	.	.	36	10.0	6.0	4.0
2208	15775	40.0	38.0	2.0	32	9.2	6.0	3.2
2209	15775	39.2	37.2	2.0	30	9.6	6.0	3.6
2210	15775	26.4	.	.	21	.	.	.
2211	15775	37.6	36.0	1.6	34	9.6	6.0	3.6
2212	15775	50.0	47.2	2.8	36	10.8	6.4	4.4
2213	15775	37.2	34.0	3.2	29	9.2	6.0	3.2
2214	15775	32.0	.	.	24	.	.	.
2215	15775	20.0	18.4	1.6	17	8.0	4.0	4.0
2216	15775	24.8	.	.	21	.	.	.
2217	15775	26.8	.	.	24	.	.	.
2218	15775	38.0	36.0	2.0	28	10.0	5.6	4.4
2219	15775	.	.	.	33	9.6	6.0	3.6
2220	15775	45.2	42.8	2.4	35	9.2	6.0	3.2
2221	15775	.	.	.	36	10.4	6.0	4.4
2222	15775	.	.	.	38	10.0	6.0	4.0
2223	15775	30.0	28.0	2.0	23	8.0	4.8	3.2
2224	15775	32.4	30.4	2.0	26	8.8	5.2	3.6
2225	15775	29.2	.	.	23	.	.	.
2226	15775	29.2	27.6	1.6	22	9.2	5.6	3.6
2227	15775	35.2	33.2	2.0	26	8.8	5.2	3.6
2228	15775	.	.	.	45	9.6	6.0	3.6
2229	15775	42.8	.	.	34	.	.	.
2230	15775	36.0	34.0	2.0	27	9.2	5.2	4.0
2231	15775	31.2	.	.	23	.	.	.
2232	15775	36.8	.	.	29	.	.	.
2233	15775	34.4	32.4	2.0	27	10.0	6.8	3.2
2234	15775	21.2	18.8	2.4	18	9.2	4.8	4.4
2235	15775	40.0	38.0	2.0	33	9.2	6.0	3.2
2236	15775	34.0	32.0	2.0	26	8.8	5.6	3.2
2237	15775	34.8	33.2	1.6	30	8.8	6.0	2.8
2238	15775	44.0	42.0	2.0	33	10.0	6.8	3.2
2239	15775	22.8	20.8	2.0	19	10.0	5.2	4.8
2240	15775	32.8	30.8	2.0	26	8.8	4.8	4.0
2241	15775	30.4	28.4	2.0	27	10.4	5.6	4.8
2242	15775	27.6	26.0	1.6	26	9.2	5.6	3.6
2243	15775	23.2	20.8	2.4	20	8.0	4.0	4.0
2244	15775	22.8	.	.	20	.	.	.
2245	15775	41.6	40.0	1.6	32	8.8	5.2	3.6
2246	15775	25.6	24.0	1.6	23	8.8	4.8	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-157 TIME=2.7 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2247	15775	33.2	.	.	28	.	.	.
2248	15775	18.4	16.4	2.0	17	8.0	4.8	3.2
2249	15775	26.4	.	.	23	.	.	.
2250	15775	45.2	43.2	2.0	37	9.2	6.8	2.4
2251	15775	51.2	48.8	2.4	38	9.6	6.0	3.6
2252	15775	.	.	.	33	10.4	6.0	4.4
2253	15775	44.0	.	.	37	.	.	.
2254	15775	31.2	29.2	2.0	25	8.8	4.8	4.0
2255	15775	29.2	27.2	2.0	23	10.0	6.0	4.0
2256	15775	27.2	25.2	2.0	20	8.8	5.2	3.6
2257	15775	.	.	.	.	10.0	6.8	3.2
2258	15775	42.8	.	.	33	.	.	.
2259	15775	29.2	26.8	2.4	24	9.6	5.6	4.0
2260	15775	32.8	.	.	28	.	.	.
2261	15775	40.4	38.4	2.0	30	10.0	6.0	4.0
2262	15775	26.8	.	.	23	.	.	.
2263	15775	26.8	.	.	22	.	.	.
2264	15775	24.4	.	.	22	.	.	.
2265	15775	35.6	34.0	1.6	29	10.4	6.4	4.0
2266	15775	26.8	.	.	22	.	.	.
2267	15775	40.8	38.8	2.0	37	10.0	6.4	3.6
2268	15775	.	.	.	22	8.8	4.8	4.0
2269	15775	38.8	36.8	2.0	31	9.2	5.2	4.0
2270	15775	.	.	.	29	9.2	6.0	3.2
2271	15775	35.2	.	.	29	.	.	.
2272	15775	38.4	.	.	30	.	.	.
2273	15775	45.2	42.8	2.4	36	8.4	5.2	3.2
2274	15775	31.2	29.2	2.0	26	9.6	5.6	4.0
2275	15775	37.2	35.2	2.0	31	10.0	6.8	3.2
2276	15775	31.6	29.2	2.4	27	8.8	5.2	3.6
2277	15775	22.0	20.0	2.0	19	8.0	4.4	3.6
2278	15775	48.0	45.2	2.8	39	10.0	6.0	4.0
2279	15775	25.2	22.8	2.4	21	8.0	4.8	3.2
2280	15775	29.6	27.2	2.4	25	9.2	5.6	3.6
2281	15775	29.6	28.0	1.6	25	10.0	5.6	4.4
2282	15775	49.2	47.2	2.0	37	9.6	6.0	3.6
2283	15775	44.0	38.4	5.6	28	10.0	6.0	4.0
2284	15775	30.0	26.8	3.2	22	8.4	4.8	3.6
2285	15775	40.4	38.4	2.0	30	10.0	6.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.71 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2286	15850	38.0	35.2	2.8	30	10.4	6.0	4.4
2287	15850	26.8	25.2	1.6	23	10.0	6.8	3.2
2288	15850	.	.	.	39	9.2	6.0	3.2
2289	15850	47.2	.	.	36	.	.	.
2290	15850	.	.	.	34	9.6	5.6	4.0
2291	15850	47.2	44.8	2.4	41	10.0	6.8	3.2
2292	15850	.	.	.	27	8.8	4.8	4.0
2293	15850	44.8	42.8	2.0	36	10.0	6.0	4.0
2294	15850	47.2	45.2	2.0	37	9.6	6.4	3.2
2295	15850	40.0	.	.	30	.	.	.
2296	15850	.	.	.	31	10.0	6.0	4.0
2297	15850	20.8	.	.	18	.	.	.
2298	15850	38.4	.	.	34	.	.	.
2299	15850	30.8	.	.	24	.	.	.
2300	15850	32.8	.	.	28	.	.	.
2301	15850	37.2	34.8	2.4	31	11.2	8.0	3.2
2302	15850	44.0	42.4	1.6	36	10.0	6.0	4.0
2303	15850	28.8	.	.	24	.	.	.
2304	15850	44.0	.	.	33	.	.	.
2305	15850	32.0	.	.	26	.	.	.
2306	15850	44.8	42.8	2.0	33	10.0	6.0	4.0
2307	15850	41.6	39.2	2.4	34	10.0	6.0	4.0
2308	15850	22.0	.	.	20	.	.	.
2309	15850	.	.	.	.	9.2	6.0	3.2
2310	15850	.	.	.	29	9.6	5.6	4.0
2311	15850	28.4	26.4	2.0	23	9.2	6.0	3.2
2312	15850	37.2	34.8	2.4	28	10.0	6.0	4.0
2313	15850	24.8	.	.	20	.	.	.
2314	15850	29.2	27.2	2.0	25	10.0	6.0	4.0
2315	15850	30.4	27.6	2.8	25	8.8	5.2	3.6

----- CORE=157 TIME=2.72 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2316	15900	40.0	.	.	36	.	.	.
2317	15900	30.4	.	.	24	.	.	.
2318	15900	28.8	.	.	27	.	.	.
2319	15900	36.4	34.0	2.4	30	10.0	6.0	4.0
2320	15900	35.2	32.8	2.4	27	11.2	6.8	4.4
2321	15900	52.0	48.4	3.6	36	10.8	6.4	4.4
2322	15900	41.2	.	.	35	.	.	.
2323	15900	37.2	34.8	2.4	29	10.0	6.0	4.0

RAW DATA

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-157 TIME-2.72 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2324	15900	.	.	.	.	8.0	4.8	3.2
2325	15900	38.8	36.0	2.8	34	9.6	6.0	3.6
2326	15900	25.2	23.2	2.0	21	9.6	6.0	3.6
2327	15900	48.4	.	.	38	.	.	.
2328	15900	26.8	.	.	25	.	.	.
2329	15900	32.8	30.0	2.8	30	10.0	6.8	3.2
2330	15900	22.4	.	.	18	.	.	.
2331	15900	.	.	.	.	9.2	6.0	3.2
2332	15900	45.2	.	.	34	.	.	.
2333	15900	38.8	.	.	28	.	.	.
2334	15900	30.4	28.0	2.4	28	9.2	5.6	3.6
2335	15900	37.2	.	.	31	.	.	.
2336	15900	33.6	.	.	29	.	.	.
2337	15900	49.2	46.8	2.4	35	10.0	8.0	2.0
2338	15900	38.0	35.2	2.8	28	11.2	6.0	5.2
2339	15900	25.6	23.2	2.4	21	9.2	6.0	3.2
2340	15900	33.2	31.2	2.0	26	10.0	6.0	4.0
2341	15900	34.0	31.6	2.4	26	8.8	5.2	3.6
2342	15900	.	35.2	2.8	.	8.4	4.8	3.6
2343	15900	38.0	.	.	28	10.0	5.2	4.8
2344	15900	36.8	.	.	30	.	.	.
2345	15900	24.8	.	.	21	.	.	.

----- CORE-157 TIME-2.73 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2346	15950	32.0	.	.	26	.	.	.
2347	15950	23.2	21.2	2.0	20	9.2	5.2	4.0
2348	15950	.	.	.	36	10.4	6.0	4.4
2349	15950	30.0	.	.	25	.	.	.
2350	15950	27.2	25.2	2.0	24	9.2	6.0	3.2
2351	15950	37.2	.	.	29	.	.	.
2352	15950	.	.	.	24	8.0	6.0	2.0
2353	15950	.	.	.	20	7.2	4.0	3.2
2354	15950	34.8	33.2	1.6	28	9.2	5.2	4.0
2355	15950	45.2	.	.	37	.	.	.
2356	15950	35.2	33.2	2.0	32	9.2	5.6	3.6
2357	15950	30.0	28.0	2.0	27	10.0	6.0	4.0
2358	15950	.	.	.	28	9.6	5.2	4.4
2359	15950	.	.	.	22	8.0	4.8	3.2
2360	15950	46.8	44.8	2.0	38	10.0	6.0	4.0
2361	15950	21.6	20.0	1.6	20	8.4	5.2	3.2

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.73 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2362	15950	31.2	.	.	23	.	.	.
2363	15950	36.0	.	.	28	.	.	.
2364	15950	51.2	48.0	3.2	39	10.4	7.2	3.2
2365	15950	34.0	.	.	27	.	.	.
2366	15950	38.4	36.4	2.0	30	9.2	6.0	3.2
2367	15950	31.2	.	.	26	.	.	.
2368	15950	25.2	.	.	20	.	.	.
2369	15950	31.2	.	.	25	.	.	.
2370	15950	38.8	.	.	31	.	.	.
2371	15950	28.4	.	.	23	.	.	.
2372	15950	37.2	.	.	29	.	.	.
2373	15950	.	.	.	.	10.8	6.8	4.0
2374	15950	37.6	35.2	2.4	31	9.2	5.2	4.0
2375	15950	23.2	.	.	20	.	.	.
2376	15950	50.0	48.0	2.0	40	10.4	6.0	4.4
2377	15950	40.8	38.8	2.0	33	11.2	7.2	4.0
2378	15950	46.8	44.0	2.8	38	10.0	6.0	4.0
2379	15950	20.0	18.0	2.0	19	7.2	4.0	3.2
2380	15950	27.2	25.2	2.0	24	9.6	6.0	3.6
2381	15950	38.8	37.2	1.6	32	10.4	6.0	4.4
2382	15950	38.8	36.8	2.0	33	10.4	6.0	4.4
2383	15950	44.4	42.0	2.4	33	9.2	6.0	3.2
2384	15950	42.0	40.0	2.0	37	10.0	6.0	4.0
2385	15950	42.0	40.0	2.0	30	10.0	6.4	3.6
2386	15950	46.0	44.0	2.0	37	10.0	6.8	3.2
2387	15950	38.8	36.4	2.4	33	9.6	6.0	3.6

----- CORE=157 TIME=2.74 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2388	16000	.	.	.	23	8.0	4.8	3.2
2389	16000	.	.	.	44	11.2	7.6	3.6
2390	16000	23.2	.	.	22	.	.	.
2391	16000	.	.	.	27	10.0	6.0	4.0
2392	16000	23.2	.	.	20	.	.	.
2393	16000	42.0	.	.	34	.	.	.
2394	16000	32.4	.	.	27	.	.	.
2395	16000	26.8	.	.	21	.	.	.
2396	16000	43.2	.	.	36	.	.	.
2397	16000	.	.	.	18	8.0	5.2	2.8
2398	16000	31.2	29.2	2.0	26	9.2	5.2	4.0
2399	16000	40.8	39.2	1.6	31	9.6	6.0	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.74 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2400	16000	25.2	22.8	2.4	20	8.8	6.0	2.8
2401	16000	.	.	.	25	10.0	6.4	3.6
2402	16000	20.4	18.4	2.0	19	7.2	4.8	2.4
2403	16000	.	.	.	34	9.2	4.8	4.4
2404	16000	28.8	27.2	1.6	25	10.0	6.0	4.0
2405	16000	32.4	30.8	1.6	25	9.2	6.0	3.2
2406	16000	20.8	18.8	2.0	17	7.2	4.0	3.2
2407	16000	35.2	.	.	29	.	.	.
2408	16000	39.2	36.8	2.4	30	10.8	6.0	4.8
2409	16000	28.0	26.0	2.0	24	8.8	6.0	2.8
2410	16000	33.2	31.2	2.0	27	9.6	6.0	3.6
2411	16000	32.8	31.2	1.6	27	9.2	6.0	3.2
2412	16000	32.8	30.0	2.8	29	10.0	6.4	3.6
2413	16000	.	.	.	20	8.0	4.0	4.0
2414	16000	45.2	.	.	35	.	.	.
2415	16000	42.8	.	.	36	.	.	.
2416	16000	.	.	.	35	10.8	7.2	3.6
2417	16000	32.8	.	.	31	.	.	.
2418	16000	24.8	22.4	2.4	22	8.8	6.0	2.8
2419	16000	28.0	26.4	1.6	23	9.2	6.0	3.2
2420	16000	21.6	20.0	1.6	20	8.0	4.0	4.0
2421	16000	40.0	38.0	2.0	35	10.4	6.0	4.4
2422	16000	16.8	14.8	2.0	14	7.2	3.2	4.0
2423	16000	50.8	48.8	2.0	37	10.0	6.8	3.2

----- CORE=157 TIME=2.75 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2424	16050	30.4	27.2	3.2	25	8.8	5.6	3.2
2425	16050	.	.	.	26	10.0	5.6	4.4
2426	16050	36.8	.	.	27	.	.	.
2427	16050	34.8	.	.	29	.	.	.
2428	16050	29.2	.	.	26	.	.	.
2429	16050	34.0	32.0	2.0	28	10.0	6.0	4.0
2430	16050	29.6	.	.	25	.	.	.
2431	16050	46.4	44.0	2.4	37	9.2	6.8	2.4
2432	16050	29.2	.	.	23	.	.	.
2433	16050	42.0	.	.	37	.	.	.
2434	16050	38.8	36.8	2.0	29	9.2	6.0	3.2
2435	16050	.	.	.	.	9.2	6.0	3.2
2436	16050	30.0	.	.	26	.	.	.
2437	16050	34.0	.	.	29	.	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.75 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2438	16050	45.2	43.2	2.0	36	10.0	6.0	4.0
2439	16050	.	.	.	24	8.8	5.2	3.6
2440	16050	.	.	.	39	11.2	8.0	3.2
2441	16050	24.4	23.2	1.2	21	9.2	5.2	4.0
2442	16050	47.2	.	.	40	.	.	.
2443	16050	34.0	.	.	29	.	.	.
2444	16050	29.2	.	.	22	.	.	.
2445	16050	25.2	.	.	22	.	.	.
2446	16050	38.0	.	.	29	.	.	.
2447	16050	25.2	22.8	2.4	20	8.4	5.2	3.2
2448	16050	28.0	.	.	25	.	.	.
2449	16050	.	.	.	39	9.6	6.8	2.8
2450	16050	32.4	30.0	2.4	26	9.2	5.2	4.0
2451	16050	24.4	.	.	22	.	.	.
2452	16050	26.4	24.0	2.4	22	9.6	6.0	3.6
2453	16050	21.2	.	.	21	.	.	.
2454	16050	.	.	.	37	10.0	6.0	4.0
2455	16050	23.2	.	.	19	.	.	.
2456	16050	26.8	24.8	2.0	23	10.0	5.2	4.8
2457	16050	36.8	.	.	28	.	.	.
2458	16050	31.2	29.2	2.0	27	8.8	6.0	2.8
2459	16050	.	.	.	22	8.4	4.8	3.6
2460	16050	33.2	31.2	2.0	28	10.0	6.8	3.2

----- CORE=157 TIME=2.76 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2461	16125	31.2	.	.	25	.	.	.
2462	16125	28.8	26.4	2.4	25	9.6	6.0	3.6
2463	16125	.	.	.	29	10.8	7.2	3.6
2464	16125	44.0	.	.	38	.	.	.
2465	16125	27.2	.	.	24	.	.	.
2466	16125	24.4	.	.	21	.	.	.
2467	16125	22.4	20.8	1.6	20	8.0	5.6	2.4
2468	16125	28.0	.	.	23	.	.	.
2469	16125	30.8	28.4	2.4	25	11.2	6.4	4.8
2470	16125	28.4	.	.	23	.	.	.
2471	16125	.	.	.	29	10.0	6.0	4.0
2472	16125	.	.	.	19	8.0	4.8	3.2
2473	16125	37.2	34.8	2.4	28	11.2	6.4	4.8
2474	16125	38.8	.	.	30	.	.	.
2475	16125	23.2	21.2	2.0	20	7.2	4.8	2.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

CORE=157 TIME=2.76

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2476	16125	34.0	.	.	26	.	.	.
2477	16125	40.8	.	.	32	.	.	.
2478	16125	44.8	.	.	38	.	.	.
2479	16125	32.4	.	.	26	.	.	.
2480	16125	.	.	.	26	9.2	5.6	3.6
2481	16125	.	.	.	.	10.0	6.0	4.0
2482	16125	37.2	36.0	1.2	27	10.8	6.8	4.0
2483	16125	31.2	29.2	2.0	26	8.0	4.0	4.0
2484	16125	40.8	38.8	2.0	30	10.0	6.0	4.0
2485	16125	27.2	25.2	2.0	23	8.4	4.8	3.6
2486	16125	30.8	28.0	2.8	25	10.4	6.0	4.4
2487	16125	.	.	.	33	11.2	7.2	4.0
2488	16125	24.8	.	.	21	.	.	.
2489	16125	30.8	.	.	25	.	.	.
2490	16125	32.4	30.4	2.0	27	9.6	5.2	4.4
2491	16125	28.8	26.4	2.4	27	8.8	5.6	3.2
2492	16125	35.6	34.0	1.6	30	10.0	6.8	3.2
2493	16125	50.0	48.0	2.0	36	10.0	6.0	4.0
2494	16125	31.2	29.2	2.0	28	10.4	6.8	3.6
2495	16125	38.8	36.4	2.4	30	9.6	6.8	2.8
2496	16125	34.0	32.8	1.2	30	9.2	6.0	3.2
2497	16125	37.2	.	.	.	10.0	6.0	4.0
2498	16125	32.0	.	.	25	.	.	.
2499	16125	.	.	.	.	10.0	6.0	4.0
2500	16125	50.0	47.2	2.8	39	10.4	7.2	3.2
2501	16125	30.4	.	.	26	.	.	.
2502	16125	32.8	.	.	26	.	.	.
2503	16125	34.8	.	.	29	.	.	.
2504	16125	28.4	.	.	24	.	.	.
2505	16125	35.2	33.2	2.0	29	11.2	6.0	5.2
2506	16125	.	.	.	32	10.4	6.4	4.0
2507	16125	44.8	.	.	35	.	.	.
2508	16125	.	.	.	22	9.6	5.6	4.0
2509	16125	36.0	.	.	32	.	.	.
2510	16125	.	.	.	29	10.4	6.4	4.0
2511	16125	41.6	.	.	32	.	.	.
2512	16125	33.2	30.4	2.8	29	10.0	6.0	4.0
2513	16125	48.0	.	.	38	.	.	.
2514	16125	.	.	.	.	8.0	4.0	4.0
2515	16125	23.6	22.0	1.6	20	9.2	4.8	4.4
2516	16125	38.0	36.0	2.0	30	9.6	5.6	4.0
2517	16125	.	.	.	21	9.6	6.0	3.6
2518	16125	.	.	.	26	9.2	6.0	3.2
2519	16125	38.0	36.0	2.0	29	10.0	6.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.76 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2520	16125	.	.	.	29	9.6	6.0	3.6
2521	16125	54.0	.	.	45	.	.	.
2522	16125	.	.	.	29	8.8	4.0	4.8
2523	16125	.	.	.	38	11.6	6.8	4.8
2524	16125	34.8	33.6	1.2	31	10.0	6.8	3.2
2525	16125	37.2	.	.	30	.	.	.
2526	16125	31.2	.	.	25	.	.	.
2527	16125	33.2	31.6	1.6	28	8.8	4.8	4.0
2528	16125	28.4	26.0	2.4	25	8.0	5.2	2.8
2529	16125	47.2	44.0	3.2	38	10.0	6.0	4.0
2530	16125	34.8	32.4	2.4	29	10.0	6.0	4.0
2531	16125	26.8	24.8	2.0	23	10.0	6.0	4.0

----- CORE=157 TIME=2.78 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2532	16250	53.2	.	.	42	.	.	.
2533	16250	20.8	.	.	16	.	.	.
2534	16250	36.0	.	.	28	.	.	.
2535	16250	28.8	26.4	2.4	24	9.6	6.0	3.6
2536	16250	.	.	.	.	10.0	6.0	4.0
2537	16250	41.2	39.2	2.0	36	9.6	6.0	3.6
2538	16250	40.4	38.4	2.0	35	10.8	8.0	2.8
2539	16250	35.6	.	.	31	.	.	.
2540	16250	44.8	.	.	33	.	.	.
2541	16250	21.6	19.2	2.4	19	8.4	4.8	3.6
2542	16250	21.2	.	.	18	.	.	.
2543	16250	30.8	28.4	2.4	27	10.0	6.0	4.0
2544	16250	46.0	44.0	2.0	35	10.4	6.4	4.0
2545	16250	26.4	24.4	2.0	22	8.0	4.0	4.0
2546	16250	24.0	.	.	22	.	.	.
2547	16250	.	.	.	.	8.0	4.8	3.2
2548	16250	39.2	38.0	1.2	30	8.8	5.2	3.6
2549	16250	44.0	42.0	2.0	37	10.0	7.2	2.8
2550	16250	22.8	20.0	2.8	19	8.0	4.8	3.2
2551	16250	20.0	18.0	2.0	19	8.0	4.8	3.2
2552	16250	42.8	40.4	2.4	33	10.0	6.4	3.6
2553	16250	25.2	.	.	21	.	.	.
2554	16250	51.6	49.2	2.4	38	10.0	6.8	3.2
2555	16250	29.6	.	.	25	.	.	.
2556	16250	42.0	41.2	0.8	38	10.0	6.8	3.2
2557	16250	34.4	32.8	1.6	28	9.2	6.0	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.78 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2558	16250	25.6	23.2	2.4	21	9.2	6	3.2

----- CORE=157 TIME=2.79 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2559	16300	29.2	.	.	25	.	.	.
2560	16300	34.8	.	.	28	.	.	.
2561	16300	28.8	26.4	2.4	24	8.0	5.6	2.4
2562	16300	.	.	.	36	10.0	6.0	4.0
2563	16300	34.4	.	.	27	.	.	.
2564	16300	23.6	.	.	20	.	.	.
2565	16300	52.0	.	.	43	.	.	.
2566	16300	34.0	.	.	29	.	.	.
2567	16300	29.2	.	.	24	.	.	.
2568	16300	35.6	.	.	25	.	.	.
2569	16300	44.0	.	.	34	.	.	.
2570	16300	24.4	22.0	2.4	21	9.2	6.0	3.2
2571	16300	28.4	.	.	21	.	.	.
2572	16300	26.0	.	.	21	.	.	.
2573	16300	.	.	.	31	10.8	6.8	4.0
2574	16300	32.0	.	.	24	.	.	.
2575	16300	.	.	.	.	10.8	8.0	2.8
2576	16300	38.4	36.0	2.4	33	8.8	6.0	2.8
2577	16300	.	.	.	30	10.0	6.0	4.0
2578	16300	50.0	.	.	39	.	.	.
2579	16300	47.2	.	.	36	.	.	.
2580	16300	35.2	32.8	2.4	29	9.6	6.0	3.6
2581	16300	30.4	28.4	2.0	25	9.2	6.0	3.2
2582	16300	39.2	37.2	2.0	31	8.8	4.8	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.8 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2583	16350	.	.	.	31	9.6	6.0	3.6
2584	16350	30.8	28.4	2.4	23	9.2	5.2	4.0
2585	16350	33.2	.	.	26	.	.	.
2586	16350	39.6	.	.	29	.	.	.
2587	16350	24.0	.	.	21	.	.	.
2588	16350	.	.	.	34	9.2	5.2	4.0
2589	16350	38.4	36.0	2.4	32	9.2	5.2	4.0
2590	16350	23.2	22.0	1.2	19	8.8	5.2	3.6
2591	16350	41.2	39.2	2.0	35	9.2	6.0	3.2
2592	16350	.	.	.	.	8.0	4.8	3.2
2593	16350	.	.	.	33	10.0	6.0	4.0
2594	16350	27.2	25.2	2.0	24	9.2	5.2	4.0
2595	16350	28.8	.	.	25	.	.	.
2596	16350	38.4	.	.	31	.	.	.
2597	16350	41.6	.	.	34	.	.	.

----- CORE=157 TIME=2.81 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2598	16400	36.0	.	.	27	.	.	.
2599	16400	42.4	.	.	34	.	.	.
2600	16400	26.8	.	.	21	.	.	.
2601	16400	51.2	.	.	36	.	.	.
2602	16400	.	.	.	38	10.0	6.0	4.0
2603	16400	44.0	42.0	2.0	36	10.0	6.0	4.0
2604	16400	26.8	25.2	1.6	23	8.4	5.6	2.8
2605	16400	42.4	40.8	1.6	33	11.2	6.8	4.4
2606	16400	44.8	42.0	2.8	36	10.0	6.0	4.0
2607	16400	48.0	46.0	2.0	37	9.2	6.0	3.2
2608	16400	32.4	30.4	2.0	27	8.8	6.0	2.8
2609	16400	.	.	.	23	10.0	6.0	4.0
2610	16400	26.8	24.8	2.0	20	8.0	5.2	2.8
2611	16400	46.0	.	.	32	.	.	.
2612	16400	.	.	.	28	10.0	6.0	4.0
2613	16400	50.0	48.0	2.0	38	10.8	7.6	3.2
2614	16400	.	.	.	29	10.0	6.0	4.0
2615	16400	49.2	46.8	2.4	38	10.0	6.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.82 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2616	16450	29.2	26.8	2.4	26	8.8	5.6	3.2
2617	16450	38.8	37.6	1.2	32	10.8	6.8	4.0
2618	16450	35.2	32.8	2.4	28	9.2	4.8	4.4
2619	16450	.	.	.	21	8.4	6.0	2.4
2620	16450	34.0	32.0	2.0	27	8.4	4.8	3.6
2621	16450	42.0	40.0	2.0	35	10.0	6.4	3.6
2622	16450	19.2	.	.	17	.	.	.
2623	16450	.	.	.	21	8.0	5.2	2.8
2624	16450	.	.	.	34	10.8	6.8	4.0
2625	16450	42.0	40.0	2.0	37	10.4	6.8	3.6
2626	16450	.	.	.	23	8.8	6.0	2.8
2627	16450	.	.	.	43	10.0	6.0	4.0
2628	16450	37.2	36.0	1.2	32	9.2	6.0	3.2
2629	16450	24.8	.	.	22	.	.	.
2630	16450	34.8	32.4	2.4	28	9.2	5.2	4.0
2631	16450	.	.	.	.	10.0	6.0	4.0
2632	16450	.	.	.	30	8.8	5.2	3.6
2633	16450	21.6	19.2	2.4	17	8.0	5.6	2.4
2634	16450	.	.	.	39	9.2	5.6	3.6
2635	16450	46.0	43.2	2.8	35	10.0	6.0	4.0
2636	16450	48.0	.	.	36	.	.	.
2637	16450	38.4	36.0	2.4	32	10.0	6.0	4.0
2638	16450	42.0	.	.	31	.	.	.
2639	16450	59.2	58.0	1.2	45	10.0	6.8	3.2
2640	16450	26.8	25.2	1.6	21	9.2	5.2	4.0
2641	16450	.	.	.	.	9.6	5.6	4.0
2642	16450	19.2	.	.	17	.	.	.
2643	16450	56.4	54.0	2.4	47	10.4	6.8	3.6
2644	16450	54.0	.	.	41	.	.	.
2645	16450	56.0	.	.	50	.	.	.
2646	16450	24.0	.	.	20	.	.	.

----- CORE=157 TIME=2.83 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2647	16550	40.4	38.0	2.4	32	9.2	6	3.2
2648	16550	28.8	.	.	23	.	.	.
2649	16550	36.0	.	.	30	.	.	.
2650	16550	36.8	34.4	2.4	28	10.8	6	4.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.84 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2651	16600	41.2	.	.	33	.	.	.
2652	16600	26.4	24.0	2.4	21	9.6	6.0	3.6
2653	16600	.	.	.	23	10.0	5.6	4.4
2654	16600	44.8	.	.	33	.	.	.
2655	16600	38.4	36.4	2.0	29	10.0	6.0	4.0
2656	16600	36.8	.	.	31	.	.	.
2657	16600	36.8	.	.	29	.	.	.

----- CORE=157 TIME=2.85 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2658	16650	.	.	.	24	8.0	3.2	4.8
2659	16650	22.0	19.6	2.4	19	9.2	4.8	4.4
2660	16650	29.2	26.8	2.4	23	8.8	6.0	2.8

----- CORE=157 TIME=2.86 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2661	16700	24.0	.	.	19	.	.	.
2662	16700	41.6	.	.	.	.	.	.
2663	16700	22.4	20.4	2	19	9.2	5.2	4

----- CORE=157 TIME=2.87 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2664	16750	.	.	.	.	8.8	5.6	3.2
2665	16750	.	.	.	.	9.2	6.0	3.2
2666	16750	34.4	.	.	31	.	.	.
2667	16750	18.8	.	.	17	.	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.88 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2668	16850	30.0	.	.	27	.	.	.
2669	16850	42.0	40.4	1.6	34	10.8	6.8	4.0
2670	16850	28.0	.	.	22	.	.	.
2671	16850	46.8	.	.	43	.	.	.
2672	16850	30.0	.	.	23	.	.	.
2673	16850	.	.	.	.	10.0	6.0	4.0
2674	16850	.	.	.	33	11.2	6.4	4.8
2675	16850	22.8	.	.	18	.	.	.
2676	16850	27.6	26.0	1.6	26	9.2	5.6	3.6
2677	16850	45.6	44.0	1.6	34	10.4	6.4	4.0

----- CORE=157 TIME=2.89 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2678	16900	26.8	.	.	21	.	.	.
2679	16900	34.0	32.0	2.0	27	10.0	6.0	4.0
2680	16900	38.4	36.8	1.6	34	10.0	6.0	4.0
2681	16900	53.2	.	.	42	.	.	.
2682	16900	38.4	36.8	1.6	29	10.0	6.0	4.0
2683	16900	44.0	41.6	2.4	32	10.4	6.8	3.6
2684	16900	40.8	.	.	32	.	.	.
2685	16900	31.2	29.6	1.6	25	8.0	4.8	3.2
2686	16900	29.2	26.8	2.4	24	9.6	6.0	3.6
2687	16900	21.2	20.0	1.2	19	7.6	4.8	2.8
2688	16900	36.4	34.8	1.6	29	9.2	5.2	4.0

----- CORE=157 TIME=2.9 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2689	16950	42.8	40.4	2.4	36	10.8	6.8	4.0
2690	16950	.	.	.	.	8.0	4.0	4.0
2691	16950	29.6	.	.	.	.	.	.
2692	16950	.	.	.	.	10.8	7.2	3.6
2693	16950	.	.	.	.	11.2	8.0	3.2
2694	16950	40.0	.	.	33	.	.	.
2695	16950	26.0	.	.	24	.	.	.
2696	16950	48.0	46.0	2.0	36	10.0	6.0	4.0
2697	16950	42.0	40.0	2.0	36	8.4	5.2	3.2
2698	16950	35.6	.	.	29	.	.	.
2699	16950	44.0	.	.	37	.	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.9 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2700	16950	.	.	.	43	10.8	6.8	4.0
2701	16950	52.0	50.0	2.0	42	10.0	6.0	4.0
2702	16950	42.0	40.0	2.0	36	10.8	6.8	4.0
2703	16950	29.2	.	.	22	.	.	.
2704	16950	.	.	.	34	9.2	6.0	3.2
2705	16950	36.4	34.4	2.0	33	10.0	6.0	4.0
2706	16950	24.0	21.6	2.4	21	9.2	6.0	3.2

----- CORE=157 TIME=2.91 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2707	17000	36.0	.	.	30	.	.	.
2708	17000	25.2	.	.	25	.	.	.
2709	17000	32.8	31.2	1.6	26	8.4	4.0	4.4
2710	17000	48.0	45.2	2.8	39	10.0	6.8	3.2
2711	17000	34.0	32.0	2.0	26	10.0	6.0	4.0
2712	17000	32.4	30.8	1.6	25	8.0	5.2	2.8
2713	17000	58.8	56.0	2.8	46	11.2	7.2	4.0
2714	17000	26.8	24.4	2.4	24	7.2	4.0	3.2
2715	17000	.	.	.	30	10.0	6.4	3.6

----- CORE=157 TIME=2.92 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2716	17050	31.2	.	.	27	.	.	.
2717	17050	49.2	.	.	39	.	.	.
2718	17050	.	.	.	40	10.8	6.8	4.0
2719	17050	21.2	19.2	2	18	7.2	4.0	3.2
2720	17050	.	.	.	41	12.0	7.2	4.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.93 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2721	17125	31.2	.	.	23	.	.	.
2722	17125	46.0	.	.	38	.	.	.
2723	17125	42.0	40.0	2.0	34	10.0	6.0	4.0
2724	17125	35.6	32.8	2.8	29	9.6	5.2	4.4
2725	17125	32.0	.	.	30	.	.	.
2726	17125	24.4	.	.	20	.	.	.
2727	17125	.	.	.	34	11.2	8.0	3.2
2728	17125	38.4	35.2	3.2	32	9.2	6.0	3.2
2729	17125	30.8	28.4	2.4	24	10.4	6.0	4.4
2730	17125	46.4	.	.	44	.	.	.
2731	17125	19.2	17.6	1.6	17	8.0	4.0	4.0
2732	17125	.	.	.	38	11.2	7.2	4.0
2733	17125	26.0	.	.	21	.	.	.
2734	17125	39.6	.	.	32	.	.	.
2735	17125	.	.	.	.	10.0	7.2	2.8
2736	17125	26.4	.	.	24	.	.	.
2737	17125	30.4	.	.	25	.	.	.
2738	17125	38.0	.	.	28	.	.	.
2739	17125	27.2	.	.	27	.	.	.
2740	17125	43.2	.	.	33	.	.	.
2741	17125	21.2	.	.	17	.	.	.
2742	17125	48.4	46.0	2.4	38	10.0	7.6	2.4
2743	17125	23.2	22.0	1.2	20	8.0	4.0	4.0
2744	17125	37.2	.	.	31	.	.	.
2745	17125	.	.	.	36	10.0	6.0	4.0
2746	17125	22.8	.	.	19	.	.	.
2747	17125	52.0	50.0	2.0	41	12.0	6.8	5.2
2748	17125	40.8	39.2	1.6	32	11.2	6.8	4.4
2749	17125	35.2	32.8	2.4	30	10.0	6.0	4.0
2750	17125	34.8	32.4	2.4	28	10.8	6.0	4.8
2751	17125	28.8	26.4	2.4	23	9.6	5.2	4.4
2752	17125	.	.	.	37	10.0	6.0	4.0
2753	17125	41.2	.	.	34	.	.	.
2754	17125	31.2	29.6	1.6	26	9.2	5.2	4.0
2755	17125	48.4	.	.	42	.	.	.
2756	17125	20.0	.	.	20	.	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=2.94 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2757	17200	47.2	44.0	3.2	39	10.0	6.0	4.0
2758	17200	24.4	.	.	22	.	.	.
2759	17200	22.8	.	.	22	.	.	.
2760	17200	25.2	22.8	2.4	21	9.2	4.8	4.4
2761	17200	32.0	29.2	2.8	25	9.6	5.6	4.0
2762	17200	.	.	.	17	8.4	4.8	3.6
2763	17200	31.2	28.8	2.4	24	9.6	5.2	4.4
2764	17200	45.2	.	.	37	.	.	.
2765	17200	22.0	20.8	1.2	19	9.2	5.2	4.0
2766	17200	42.0	40.0	2.0	34	10.8	6.0	4.8
2767	17200	42.0	.	.	34	.	.	.
2768	17200	29.2	.	.	24	.	.	.
2769	17200	.	.	.	24	10.8	5.6	5.2
2770	17200	30.8	28.4	2.4	25	10.4	6.0	4.4
2771	17200	36.0	34.0	2.0	27	9.6	6.0	3.6
2772	17200	30.8	28.4	2.4	25	10.0	6.0	4.0
2773	17200	42.4	40.8	1.6	37	10.0	6.8	3.2
2774	17200	27.2	24.4	2.8	22	9.2	6.0	3.2

----- CORE=157 TIME=2.95 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2775	17250	30.0	.	.	25	.	.	.
2776	17250	23.2	20.8	2.4	20	9.6	5.2	4.4
2777	17250	30.8	.	.	23	.	.	.
2778	17250	.	.	.	32	9.6	6.0	3.6
2779	17250	39.6	38.4	1.2	32	10.4	6.4	4.0
2780	17250	.	.	.	30	10.8	6.8	4.0
2781	17250	32.4	30.0	2.4	27	10.0	6.0	4.0
2782	17250	28.0	.	.	24	.	.	.
2783	17250	20.8	18.8	2.0	20	9.2	5.2	4.0
2784	17250	35.2	.	.	30	.	.	.
2785	17250	32.0	.	.	26	.	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-157 TIME=2.96 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2786	17300	40.0	.	.	34	.	.	.
2787	17300	.	.	.	.	10.0	5.2	4.8
2788	17300	.	.	.	42	10.0	6.0	4.0
2789	17300	.	.	.	33	10.4	7.2	3.2
2790	17300	34.8	33.2	1.6	31	10.0	6.8	3.2
2791	17300	.	.	.	42	10.4	7.2	3.2
2792	17300	42.4	40.0	2.4	34	10.0	6.0	4.0
2793	17300	24.8	22.8	2.0	22	8.4	4.0	4.4
2794	17300	.	.	.	.	10.0	6.0	4.0
2795	17300	.	.	.	30	10.0	6.0	4.0
2796	17300	51.2	48.0	3.2	43	10.0	6.4	3.6
2797	17300	42.0	.	.	31	.	.	.
2798	17300	34.8	.	.	27	.	.	.
2799	17300	35.2	.	.	28	.	.	.
2800	17300	22.8	20.4	2.4	19	7.2	4.0	3.2
2801	17300	56.8	55.2	1.6	48	10.0	6.8	3.2
2802	17300	21.2	19.2	2.0	20	8.0	4.8	3.2
2803	17300	34.8	32.8	2.0	27	10.0	5.6	4.4
2804	17300	21.2	18.8	2.4	19	8.0	4.8	3.2

----- CORE=157 TIME=2.97 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2805	17350	42.8	.	.	32	.	.	.
2806	17350	38.4	36.8	1.6	31	10.0	6.4	3.6
2807	17350	47.2	.	.	38	.	.	.
2808	17350	36.8	.	.	29	.	.	.
2809	17350	33.6	31.2	2.4	29	.	.	.
2810	17350	15.6	.	.	22	.	.	.
2811	17350	27.2	.	.	25	.	.	.
2812	17350	36.8	34.4	2.4	32	10.4	6.8	3.6
2813	17350	28.8	26.4	2.4	23	10.0	6.0	4.0
2814	17350	36.0	34.0	2.0	28	11.2	7.2	4.0
2815	17350	.	.	.	34	10.0	6.0	4.0
2816	17350	34.4	32.0	2.4	31	9.6	6.0	3.6
2817	17350	.	.	.	42	11.2	7.2	4.0
2818	17350	38.8	36.0	2.8	30	11.2	7.2	4.0
2819	17350	33.6	31.2	2.4	27	10.4	6.0	4.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

CORE=157 TIME=2.98

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2820	17425	39.2	36.8	2.4	31	10.8	7.2	3.6
2821	17425	26.0	.	.	20	.	.	.
2822	17425	.	.	.	45	11.6	8.0	3.6
2823	17425	27.2	25.2	2.0	23	9.2	5.6	3.6
2824	17425	34.0	.	.	28	.	.	.
2825	17425	23.2	.	.	23	.	.	.
2826	17425	42.0	40.0	2.0	31	10.8	6.0	4.8
2827	17425	32.8	.	.	27	.	.	.
2828	17425	43.2	.	.	37	.	.	.
2829	17425	46.8	.	.	38	.	.	.
2830	17425	36.8	34.8	2.0	33	11.2	7.2	4.0
2831	17425	45.2	42.8	2.4	33	11.2	6.4	4.8
2832	17425	29.6	27.6	2.0	24	9.2	4.0	5.2
2833	17425	35.6	32.8	2.8	27	9.6	6.0	3.6
2834	17425	43.2	.	.	33	.	.	.
2835	17425	31.2	28.8	2.4	27	9.6	5.2	4.4
2836	17425	17.2	16.4	0.8	18	6.0	2.0	4.0
2837	17425	.	.	.	31	9.2	4.8	4.4
2838	17425	21.2	19.2	2.0	20	8.4	4.8	3.6
2839	17425	49.2	47.2	2.0	39	10.0	6.8	3.2
2840	17425	30.8	29.2	1.6	24	9.6	5.6	4.0
2841	17425	23.2	21.2	2.0	20	9.6	6.0	3.6
2842	17425	48.4	46.4	2.0	36	10.4	6.4	4.0
2843	17425	32.4	30.0	2.4	27	9.2	5.6	3.6
2844	17425	38.4	36.0	2.4	32	10.4	6.4	4.0
2845	17425	26.0	.	.	21	.	.	.
2846	17425	32.8	30.8	2.0	25	10.4	6.4	4.0
2847	17425	27.2	25.2	2.0	22	9.2	5.2	4.0
2848	17425	50.0	.	.	34	.	.	.
2849	17425	.	.	.	.	8.4	4.0	4.4
2850	17425	.	.	.	.	9.2	6.0	3.2
2851	17425	40.0	38.0	2.0	34	9.6	6.0	3.6
2852	17425	48.0	46.0	2.0	37	11.2	8.0	3.2
2853	17425	40.0	37.6	2.4	.	.	.	.
2854	17425	44.4	42.4	2.0	32	10.8	6.8	4.0
2855	17425	.	.	.	31	10.0	6.0	4.0
2856	17425	38.4	.	.	33	.	.	.
2857	17425	25.6	23.2	2.4	21	10.0	5.2	4.8
2858	17425	29.2	27.2	2.0	25	8.8	5.6	3.2
2859	17425	31.2	.	.	26	.	.	.
2860	17425	45.6	.	.	35	.	.	.
2861	17425	.	.	.	25	10.8	6.0	4.8
2862	17425	46.4	44.8	1.6	41	9.6	5.6	4.0
2863	17425	46.0	43.2	2.8	38	10.8	6.0	4.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-157 TIME-2.98 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2864	17425	48.0	46.0	2.0	40	10.0	6	4.0
2865	17425	36.0	33.2	2.8	28	10.0	6	4.0
2866	17425	28.8	26.4	2.4	26	9.2	6	3.2
2867	17425	34.8	33.2	1.6	31	10.0	6	4.0

----- CORE-157 TIME-2.99 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2868	17500	.	.	.	27	7.2	4.0	3.2
2869	17500	30.4	.	.	25	.	.	.
2870	17500	42.0	.	.	34	.	.	.
2871	17500	44.0	.	.	33	.	.	.
2872	17500	23.2	.	.	21	.	.	.
2873	17500	.	.	.	38	9.6	6.0	3.6
2874	17500	.	.	.	22	10.0	6.0	4.0
2875	17500	25.2	24	1.2	22	8.8	4.8	4.0
2876	17500	41.2	.	.	34	.	.	.
2877	17500	37.2	.	.	.	.	.	.
2878	17500	31.2	.	.	25	.	.	.
2879	17500	38.0	36	2.0	30	11.2	7.6	3.6

----- CORE-157 TIME-3 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2880	17550	34.4	.	.	30	.	.	.
2881	17550	40.8	.	.	34	.	.	.
2882	17550	28.0	25.6	2.4	22	9.6	5.2	4.4
2883	17550	29.2	.	.	26	.	.	.
2884	17550	24.8	.	.	22	.	.	.
2885	17550	40.0	.	.	34	.	.	.
2886	17550	26.0	.	.	20	.	.	.
2887	17550	.	.	.	21	9.2	5.2	4.0
2888	17550	42.8	.	.	34	.	.	.
2889	17550	18.8	.	.	18	.	.	.
2890	17550	24.8	23.2	1.6	23	10.0	6.0	4.0
2891	17550	18.4	.	.	15	.	.	.
2892	17550	33.2	.	.	27	.	.	.
2893	17550	.	.	.	.	10.0	6.0	4.0
2894	17550	.	.	.	.	8.8	5.2	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.01 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2895	17600	36.0	.	.	28	.	.	.
2896	17600	33.2	.	.	30	.	.	.
2897	17600	26.0	.	.	26	.	.	.
2898	17600	34.0	32.0	2.0	30	10.0	6	4.0
2899	17600	26.0	23.2	2.8	26	8.4	4	4.4
2900	17600	45.2	.	.	34	.	.	.
2901	17600	37.2	34.8	2.4	27	10.0	6	4.0
2902	17600	24.4	.	.	22	.	.	.

----- CORE=157 TIME=3.02 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2903	17650	47.2	45.2	2	37	9.2	6.0	3.2
2904	17650	33.2	.	.	25	.	.	.
2905	17650	.	.	.	.	10.0	6.0	4.0
2906	17650	28.8	.	.	22	.	.	.
2907	17650	.	.	.	.	10.0	6.0	4.0
2908	17650	38.8	36.8	2	31	10.0	6.4	3.6
2909	17650	25.2	.	.	21	.	.	.
2910	17650	30.8	.	.	26	.	.	.
2911	17650	24.4	22.4	2	19	8.8	4.8	4.0
2912	17650	46.8	.	.	37	.	.	.
2913	17650	.	.	.	34	10.0	6.0	4.0
2914	17650	35.2	.	.	31	.	.	.
2915	17650	28.8	.	.	27	.	.	.
2916	17650	40.0	.	.	32	.	.	.

----- CORE=157 TIME=3.03 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2917	17700	30.0	.	.	24	.	.	.
2918	17700	52.0	49.6	2.4	40	10.8	6.8	4.0
2919	17700	42.8	.	.	33	.	.	.
2920	17700	41.2	38.8	2.4	30	10.8	6.8	4.0
2921	17700	.	.	.	.	10.8	7.2	3.6
2922	17700	28.4	.	.	26	.	.	.
2923	17700	39.2	37.6	1.6	30	9.6	6.0	3.6
2924	17700	40.8	39.2	1.6	31	10.0	6.0	4.0
2925	17700	.	.	.	38	10.8	6.8	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

CORE=157 TIME=3.04

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2926	17775	40.4	38.8	1.6	30	10.8	7.2	3.6
2927	17775	46.8	.	.	37	.	.	.
2928	17775	38.8	36.8	2.0	29	9.6	5.2	4.4
2929	17775	.	.	.	22	8.0	4.0	4.0
2930	17775	.	.	.	35	10.0	6.0	4.0
2931	17775	41.2	39.6	1.6	30	11.2	6.8	4.4
2932	17775	30.0	.	.	23	.	.	.
2933	17775	29.2	.	.	24	.	.	.
2934	17775	26.4	.	.	23	.	.	.
2935	17775	.	.	.	29	8.8	4.8	4.0
2936	17775	.	.	.	33	10.0	6.0	4.0
2937	17775	37.6	35.6	2.0	30	10.4	6.0	4.4
2938	17775	21.2	20.0	1.2	21	9.2	6.0	3.2
2939	17775	24.8	.	.	20	.	.	.
2940	17775	42.8	.	.	31	.	.	.
2941	17775	.	.	.	29	9.2	6.0	3.2
2942	17775	30.8	.	.	28	.	.	.
2943	17775	34.8	.	.	27	.	.	.
2944	17775	38.8	37.2	1.6	32	10.0	6.0	4.0
2945	17775	45.2	43.2	2.0	34	9.2	6.0	3.2
2946	17775	31.2	28.8	2.4	25	10.8	6.8	4.0
2947	17775	52.0	50.4	1.6	42	10.0	6.0	4.0
2948	17775	56.0	53.2	2.8	43	10.8	7.2	3.6
2949	17775	.	.	.	.	10.0	5.2	4.8
2950	17775	38.0	36.8	1.2	27	10.0	5.2	4.8
2951	17775	38.4	36.8	1.6	27	10.0	6.0	4.0
2952	17775	47.2	44.0	3.2	39	9.6	6.0	3.6
2953	17775	.	.	.	.	10.0	6.0	4.0
2954	17775	.	.	.	.	10.4	6.8	3.6
2955	17775	26.8	.	.	26	.	.	.
2956	17775	40.0	38.0	2.0	30	10.0	6.0	4.0
2957	17775	40.0	37.2	2.8	30	10.0	7.2	2.8
2958	17775	41.2	40.0	1.2	31	10.0	6.0	4.0
2959	17775	31.2	.	.	25	.	.	.
2960	17775	41.2	.	.	33	.	.	.
2961	17775	32.4	.	.	27	.	.	.
2962	17775	.	.	.	.	10.0	7.2	2.8
2963	17775	27.2	.	.	25	.	.	.
2964	17775	26.4	.	.	24	.	.	.
2965	17775	.	.	.	41	10.4	6.4	4.0
2966	17775	43.2	.	.	.	.	.	.
2967	17775	44.0	.	.	36	.	.	.
2968	17775	34.0	32.0	2.0	28	10.0	6.4	3.6
2969	17775	40.0	38.0	2.0	31	10.0	6.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.04 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2970	17775	44.8	.	.	36	.	.	.
2971	17775	41.2	39.6	1.6	32	10.8	6.8	4.0
2972	17775	39.2	.	.	28	.	.	.
2973	17775	21.2	19.2	2.0	19	8.0	4.8	3.2
2974	17775	36.8	34.8	2.0	28	10.0	6.0	4.0
2975	17775	36.8	34.8	2.0	28	9.6	6.0	3.6
2976	17775	30.8	28.8	2.0	27	9.6	6.0	3.6
2977	17775	31.2	28.8	2.4	25	9.2	5.2	4.0
2978	17775	24.0	22.0	2.0	22	9.6	6.0	3.6

----- CORE=157 TIME=3.05 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2979	17850	48.8	46.0	2.8	37	9.2	6.0	3.2
2980	17850	30.0	.	.	.	.	.	.
2981	17850	24.4	.	.	20	.	.	.
2982	17850	.	.	.	24	10.0	6.0	4.0
2983	17850	35.2	33.6	1.6	30	10.0	6.0	4.0
2984	17850	48.0	46.0	2.0	37	11.2	6.8	4.4
2985	17850	30.4	.	.	23	.	.	.
2986	17850	36.0	34.0	2.0	28	9.6	5.2	4.4
2987	17850	28.4	26.4	2.0	24	9.6	5.2	4.4
2988	17850	42.0	.	.	33	.	.	.
2989	17850	.	.	.	.	10.0	6.8	3.2
2990	17850	32.0	30.4	1.6	26	9.2	5.2	4.0
2991	17850	.	.	.	.	9.2	6.0	3.2
2992	17850	24.8	22.4	2.4	21	8.4	6.0	2.4
2993	17850	35.2	.	.	27	.	.	.
2994	17850	.	.	.	.	9.2	6.0	3.2
2995	17850	44.4	.	.	38	.	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.06 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
2996	17900	36.8	34.4	2.4	37	10.0	6.8	3.2
2997	17900	29.2	28.0	1.2	24	9.2	5.2	4.0
2998	17900	46.0	44.0	2.0	37	10.0	6.0	4.0
2999	17900	39.2	37.2	2.0	34	9.6	6.0	3.6
3000	17900	42.0	40.0	2.0	30	10.0	6.0	4.0
3001	17900	51.2	.	.	36	.	.	.
3002	17900	40.0	.	.	33	.	.	.
3003	17900	33.2	31.2	2.0	28	10.0	6.0	4.0

----- CORE=157 TIME=3.07 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3004	17950	.	.	.	.	9.2	6.0	3.2
3005	17950	35.2	.	.	27	.	.	.
3006	17950	.	.	.	.	9.2	6.0	3.2
3007	17950	.	.	.	.	9.2	5.6	3.6
3008	17950	25.2	.	.	21	.	.	.
3009	17950	40.8	38.0	2.8	35	11.6	7.2	4.4
3010	17950	37.2	34.8	2.4	29	10.4	6.0	4.4
3011	17950	30.4	.	.	28	.	.	.
3012	17950	26.4	.	.	24	.	.	.
3013	17950	33.2	.	.	27	.	.	.
3014	17950	.	.	.	39	10.0	7.6	2.4
3015	17950	37.2	.	.	29	.	.	.
3016	17950	34.8	.	.	29	.	.	.
3017	17950	56.0	53.2	2.8	50	10.0	6.8	3.2
3018	17950	36.8	35.2	1.6	31	10.4	6.8	3.6
3019	17950	26.8	24.8	2.0	22	8.0	4.8	3.2
3020	17950	31.2	29.2	2.0	25	10.8	6.8	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.08 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3021	18000	31.2	28.8	2.4	27	10.4	6.4	4.0
3022	18000	34.8	.	.	29	.	.	.
3023	18000	26.4	.	.	22	.	.	.
3024	18000	58.0	.	.	43	.	.	.
3025	18000	32.8	.	.	32	.	.	.
3026	18000	29.2	.	.	24	.	.	.
3027	18000	30.0	27.2	2.8	27	10.8	6.4	4.4
3028	18000	.	.	.	.	10.0	9.6	0.4
3029	18000	16.0	.	.	16	.	.	.
3030	18000	32.0	.	.	26	.	.	.
3031	18000	28.4	.	.	24	.	.	.
3032	18000	30.8	.	.	26	.	.	.
3033	18000	26.4	24.4	2.0	22	8.4	5.2	3.2
3034	18000	50.0	47.6	2.4	38	9.6	6.0	3.6
3035	18000	48.0	46.8	1.2	40	10.8	7.2	3.6
3036	18000	30.0	.	.	23	.	.	.
3037	18000	31.2	.	.	27	.	.	.
3038	18000	26.4	24.8	1.6	22	8.4	5.2	3.2
3039	18000	31.2	29.6	1.6	26	10.0	6.0	4.0
3040	18000	49.2	48.0	1.2	41	10.4	6.4	4.0
3041	18000	33.2	31.2	2.0	26	10.0	6.0	4.0

----- CORE=157 TIME=3.1 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3042	18125	27.6	.	.	25	.	.	.
3043	18125	22.8	.	.	20	.	.	.
3044	18125	42.8	.	.	34	.	.	.
3045	18125	24.4	.	.	20	.	.	.
3046	18125	42.0	38.8	3.2	34	9.2	6.0	3.2
3047	18125	26.4	24.4	2.0	21	9.2	6.0	3.2
3048	18125	.	.	.	.	10.0	6.0	4.0
3049	18125	40.8	38.4	2.4	31	10.0	6.0	4.0
3050	18125	27.6	.	.	24	.	.	.
3051	18125	33.2	.	.	28	.	.	.
3052	18125	37.2	34.8	2.4	29	10.0	6.0	4.0
3053	18125	46.0	44.0	2.0	36	10.0	6.4	3.6
3054	18125	.	.	.	35	10.8	6.4	4.4
3055	18125	45.2	43.2	2.0	35	10.0	6.0	4.0
3056	18125	42.0	.	.	32	.	.	.
3057	18125	33.2	.	.	27	.	.	.
3058	18125	34.8	.	.	27	.	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.1 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3059	18125	47.2	44.0	3.2	35	10.8	7.2	3.6
3060	18125	33.6	.	.	27	.	.	.
3061	18125	24.8	23.2	1.6	22	9.2	5.2	4.0
3062	18125	25.2	.	.	22	.	.	.
3063	18125	33.2	.	.	28	.	.	.
3064	18125	48.0	44.8	3.2	27	10.4	6.4	4.0
3065	18125	38.8	36.8	2.0	30	9.6	6.0	3.6
3066	18125	20.4	18.0	2.4	20	8.8	4.8	4.0
3067	18125	55.2	.	.	42	.	.	.
3068	18125	46.0	44.0	2.0	34	10.0	7.2	2.8
3069	18125	.	.	.	.	8.8	5.2	3.6
3070	18125	.	.	.	.	10.0	6.0	4.0
3071	18125	.	.	.	.	10.0	6.0	4.0
3072	18125	22.8	.	.	19	.	.	.
3073	18125	50.0	48.0	2.0	44	11.2	7.2	4.0

----- CORE=157 TIME=3.13 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3074	18250	20.8	17.6	3.2	22	8.4	4.0	4.4
3075	18250	42.4	40.8	1.6	42	11.2	6.4	4.8
3076	18250	38.8	37.6	1.2	29	10.4	5.6	4.8
3077	18250	47.2	46.0	1.2	43	10.4	6.0	4.4
3078	18250	28.8	27.2	1.6	23	8.8	5.6	3.2
3079	18250	.	.	.	.	9.2	6.0	3.2
3080	18250	21.6	19.2	2.4	23	8.0	4.8	3.2

----- CORE=157 TIME=3.24 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3081	19175	.	.	.	.	10.0	7.2	2.8
3082	19175	34.4	32.4	2.0	30	8.8	6.0	2.8
3083	19175	23.6	21.6	2.0	20	10.0	4.8	5.2
3084	19175	.	.	.	.	9.2	6.0	3.2
3085	19175	32.8	29.2	3.6	28	9.6	6.0	3.6
3086	19175	24.0	22.0	2.0	24	10.0	6.8	3.2
3087	19175	28.0	25.2	2.8	25	9.2	6.0	3.2
3088	19175	34.0	30.8	3.2	27	11.2	8.0	3.2
3089	19175	26.4	23.2	3.2	24	8.8	4.8	4.0
3090	19175	24.8	23.2	1.6	19	9.2	6.0	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-157 TIME=3.24 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3091	19175	28.8	26.8	2.0	24	10.8	6.8	4.0
3092	19175	26.4	24.0	2.4	30	9.6	7.2	2.4
3093	19175	29.2	.	.	30	.	.	.
3094	19175	48.8	46.0	2.8	39	10.0	6.4	3.6
3095	19175	.	.	.	.	10.0	7.2	2.8
3096	19175	34.8	32.8	2.0	28	11.6	8.0	3.6
3097	19175	29.6	28.8	0.8	26	9.2	6.0	3.2
3098	19175	22.4	20.8	1.6	20	8.8	5.2	3.6
3099	19175	.	.	.	.	10.0	6.0	4.0
3100	19175	.	.	.	.	8.8	4.8	4.0
3101	19175	25.6	23.2	2.4	22	10.0	6.8	3.2
3102	19175	28.4	26.8	1.6	24	9.2	5.2	4.0
3103	19175	20.0	18.0	2.0	17	8.4	4.8	3.6
3104	19175	21.2	19.6	1.6	17	8.4	6.0	2.4
3105	19175	24.0	22.0	2.0	22	9.6	5.6	4.0
3106	19175	22.0	18.8	3.2	20	8.4	6.0	2.4
3107	19175	25.2	24.0	1.2	23	10.0	7.2	2.8
3108	19175	23.2	20.8	2.4	21	8.8	6.4	2.4
3109	19175	22.8	21.2	1.6	19	8.4	6.0	2.4
3110	19175	30.4	29.2	1.2	23	10.0	6.8	3.2
3111	19175	40.0	.	.	34	.	.	.
3112	19175	27.2	25.2	2.0	27	9.6	5.6	4.0
3113	19175	36.4	.	.	31	.	.	.
3114	19175	31.6	29.6	2.0	26	10.0	6.0	4.0
3115	19175	22.8	21.2	1.6	21	8.0	4.4	3.6
3116	19175	39.2	.	.	30	.	.	.
3117	19175	32.0	30.0	2.0	25	8.4	5.6	2.8
3118	19175	16.8	15.2	1.6	14	7.6	4.0	3.6
3119	19175	40.8	.	.	34	.	.	.
3120	19175	23.6	21.6	2.0	21	8.8	4.8	4.0
3121	19175	23.2	21.2	2.0	21	10.0	6.0	4.0
3122	19175	24.8	22.8	2.0	22	9.2	4.0	5.2
3123	19175	41.2	.	.	32	.	.	.
3124	19175	41.6	40.0	1.6	34	10.0	6.0	4.0
3125	19175	38.8	36.4	2.4	30	10.8	6.4	4.4
3126	19175	40.4	38.4	2.0	32	8.8	4.8	4.0
3127	19175	24.4	.	.	21	.	.	.
3128	19175	28.0	.	.	26	.	.	.
3129	19175	33.2	31.2	2.0	29	10.0	5.2	4.8
3130	19175	38.0	.	.	32	.	.	.
3131	19175	22.8	20.8	2.0	21	8.8	5.2	3.6
3132	19175	27.2	25.2	2.0	25	10.0	6.0	4.0
3133	19175	26.8	24.8	2.0	23	8.8	4.4	4.4
3134	19175	34.8	32.8	2.0	30	10.0	6.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.24 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3135	19175	35.2	33.6	1.6	30	10.4	6.4	4.0
3136	19175	34.8	32.8	2.0	30	9.6	6.4	3.2
3137	19175	36.8	.	.	31	.	.	.
3138	19175	29.6	27.6	2.0	23	9.6	5.6	4.0
3139	19175	40.8	38.0	2.8	35	10.0	6.8	3.2
3140	19175	23.2	21.2	2.0	19	10.0	5.2	4.8
3141	19175	28.4	26.4	2.0	24	9.6	6.0	3.6
3142	19175	24.8	22.8	2.0	21	9.2	5.6	3.6
3143	19175	40.8	38.8	2.0	32	10.0	6.0	4.0
3144	19175	27.2	25.2	2.0	24	9.2	6.0	3.2
3145	19175	36.8	34.8	2.0	30	9.6	5.2	4.4
3146	19175	42.8	40.8	2.0	40	10.0	6.0	4.0
3147	19175	22.8	20.8	2.0	20	8.8	4.8	4.0
3148	19175	21.2	19.2	2.0	20	8.4	5.2	3.2
3149	19175	22.8	20.8	2.0	19	8.0	4.4	3.6
3150	19175	.	.	.	25	8.8	4.8	4.0
3151	19175	19.2	17.6	1.6	18	7.6	4.0	3.6
3152	19175	24.8	.	.	21	.	.	.
3153	19175	21.6	.	.	19	.	.	.
3154	19175	26.8	24.8	2.0	21	10.0	5.2	4.8
3155	19175	16.8	.	.	15	.	.	.
3156	19175	25.6	.	.	21	.	.	.
3157	19175	.	.	.	.	9.6	5.6	4.0
3158	19175	22.0	20.0	2.0	19	8.4	4.8	3.6
3159	19175	30.4	.	.	25	.	.	.
3160	19175	37.6	.	.	29	.	.	.
3161	19175	27.2	25.2	2.0	24	9.2	4.0	5.2
3162	19175	26.0	.	.	23	.	.	.
3163	19175	34.0	32.0	2.0	31	10.0	6.0	4.0
3164	19175	41.2	38.8	2.4	34	9.2	6.0	3.2
3165	19175	36.8	.	.	31	.	.	.
3166	19175	27.2	.	.	23	.	.	.
3167	19175	40.8	.	.	34	.	.	.
3168	19175	33.2	31.2	2.0	29	9.6	5.2	4.4
3169	19175	39.2	34.0	5.2	34	10.4	6.8	3.6
3170	19175	23.6	21.6	2.0	20	8.8	5.2	3.6
3171	19175	.	.	.	23	9.2	6.0	3.2
3172	19175	19.2	17.2	2.0	19	7.2	4.8	2.4
3173	19175	38.8	.	.	37	.	.	.
3174	19175	26.0	24.0	2.0	24	8.8	4.8	4.0
3175	19175	27.6	26.0	1.6	24	8.8	6.0	2.8
3176	19175	30.4	.	.	24	.	.	.
3177	19175	38.8	.	.	31	.	.	.
3178	19175	.	.	.	.	10.4	6.4	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.24 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3179	19175	29.6	27.6	2.0	25	10.0	6.0	4.0
3180	19175	44.0	42.0	2.0	37	9.2	6.8	2.4
3181	19175	21.2	19.2	2.0	17	8.8	5.2	3.6
3182	19175	28.8	26.8	2.0	27	10.0	6.0	4.0
3183	19175	28.0	26.0	2.0	25	9.6	5.2	4.4
3184	19175	38.8	37.2	1.6	33	9.6	5.6	4.0
3185	19175	24.8	22.8	2.0	24	9.2	5.2	4.0
3186	19175	35.6	34.0	1.6	32	9.6	6.0	3.6
3187	19175	34.4	33.2	1.2	30	10.0	6.0	4.0
3188	19175	39.6	38.0	1.6	31	10.8	6.4	4.4
3189	19175	32.8	30.8	2.0	26	10.0	6.0	4.0
3190	19175	33.6	31.6	2.0	27	10.0	6.0	4.0
3191	19175	25.2	23.2	2.0	23	9.6	5.2	4.4
3192	19175	45.2	42.8	2.4	35	9.6	6.0	3.6
3193	19175	40.4	38.8	1.6	34	8.0	5.2	2.8
3194	19175	22.0	20.0	2.0	19	8.8	4.8	4.0
3195	19175	42.0	40.0	2.0	35	10.0	5.6	4.4
3196	19175	22.8	20.8	2.0	19	9.2	5.2	4.0

----- CORE=157 TIME=3.25 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3197	19250	28.8	26.4	2.4	25	9.2	6.0	3.2
3198	19250	26.4	24.0	2.4	22	9.2	5.2	4.0
3199	19250	21.2	19.2	2.0	21	8.4	5.2	3.2
3200	19250	24.8	22.8	2.0	22	9.2	5.2	4.0
3201	19250	19.2	18.0	1.2	19	8.8	5.6	3.2
3202	19250	19.6	18.0	1.6	19	8.4	4.8	3.6
3203	19250	33.2	.	.	28	.	.	.
3204	19250	30.0	.	.	27	.	.	.
3205	19250	27.2	25.6	1.6	24	9.2	6.0	3.2
3206	19250	20.4	.	.	19	.	.	.
3207	19250	29.2	27.2	2.0	27	9.6	6.0	3.6
3208	19250	32.0	30.0	2.0	26	9.2	4.8	4.4
3209	19250	28.8	.	.	25	.	.	.
3210	19250	42.4	40.8	1.6	35	8.8	5.2	3.6
3211	19250	19.2	.	.	18	.	.	.
3212	19250	22.0	.	.	21	.	.	.
3213	19250	39.2	38.0	1.2	32	10.0	6.0	4.0
3214	19250	31.6	.	.	24	.	.	.
3215	19250	26.0	24.0	2.0	24	10.0	5.2	4.8
3216	19250	.	.	.	.	8.4	4.8	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.25 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3217	19250	38.8	37.2	1.6	32	10.8	6.0	4.8
3218	19250	45.2	43.2	2.0	37	10.0	6.8	3.2
3219	19250	27.2	.	.	24	.	.	.
3220	19250	34.4	.	.	32	.	.	.
3221	19250	29.2	.	.	23	.	.	.
3222	19250	31.2	.	.	25	.	.	.
3223	19250	36.0	.	.	31	.	.	.
3224	19250	.	.	.	.	8.8	6.0	2.8
3225	19250	27.6	.	.	24	.	.	.
3226	19250	16.8	15.2	1.6	16	7.2	4.0	3.2
3227	19250	49.2	47.2	2.0	43	10.0	6.0	4.0
3228	19250	38.8	37.2	1.6	32	10.0	5.6	4.4

----- CORE=157 TIME=3.26 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3229	19400	40.4	38.4	2.0	31	10.0	6.0	4.0
3230	19400	39.2	36.8	2.4	32	9.6	6.0	3.6
3231	19400	.	.	.	38	11.6	8.0	3.6
3232	19400	28.4	.	.	23	.	.	.
3233	19400	.	.	.	.	10.8	6.4	4.4
3234	19400	35.2	32.8	2.4	30	11.2	6.8	4.4
3235	19400	37.2	34.8	2.4	29	10.4	6.0	4.4
3236	19400	24.8	22.4	2.4	22	9.2	5.6	3.6
3237	19400	23.2	21.2	2.0	22	8.8	5.6	3.2
3238	19400	25.6	.	.	22	.	.	.
3239	19400	20.8	18.8	2.0	19	9.2	5.6	3.6
3240	19400	40.0	.	.	30	.	.	.
3241	19400	23.2	.	.	19	.	.	.
3242	19400	36.0	.	.	29	.	.	.
3243	19400	23.2	.	.	21	.	.	.
3244	19400	26.8	.	.	21	.	.	.
3245	19400	25.6	.	.	22	.	.	.
3246	19400	28.0	.	.	25	.	.	.
3247	19400	16.4	14.4	2.0	14	7.2	4.0	3.2
3248	19400	35.6	.	.	34	.	.	.
3249	19400	28.8	.	.	25	.	.	.
3250	19400	32.8	.	.	26	.	.	.
3251	19400	31.2	29.2	2.0	27	10.0	6.4	3.6
3252	19400	31.6	.	.	26	.	.	.
3253	19400	24.4	.	.	22	.	.	.
3254	19400	19.2	17.2	2.0	18	7.6	4.8	2.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.26 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3255	19400	25.2	.	.	23	.	.	.
3256	19400	24.0	22.0	2.0	22	9.6	4.8	4.8
3257	19400	27.2	.	.	26	.	.	.
3258	19400	24.0	.	.	20	.	.	.
3259	19400	28.8	26.8	2.0	23	8.8	5.2	3.6
3260	19400	20.8	18.8	2.0	21	9.6	5.6	4.0
3261	19400	25.6	23.2	2.4	25	9.6	6.0	3.6
3262	19400	26.0	24.0	2.0	22	8.0	4.0	4.0

----- CORE=157 TIME=3.27 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3263	19450	27.2	.	.	24	.	.	.
3264	19450	26.4	.	.	24	.	.	.
3265	19450	26.8	24.8	2.0	23	9.6	6.0	3.6
3266	19450	29.2	.	.	26	.	.	.
3267	19450	21.6	20.0	1.6	21	9.2	6.0	3.2
3268	19450	33.2	.	.	28	.	.	.
3269	19450	43.2	.	.	33	.	.	.
3270	19450	23.2	20.8	2.4	19	8.8	4.8	4.0
3271	19450	25.2	.	.	22	.	.	.
3272	19450	38.8	36.8	2.0	32	10.0	5.2	4.8
3273	19450	30.0	.	.	27	.	.	.
3274	19450	.	.	.	31	8.8	5.2	3.6
3275	19450	35.6	.	.	32	.	.	.
3276	19450	22.0	20.0	2.0	20	8.8	6.0	2.8
3277	19450	20.8	19.2	1.6	18	8.4	4.8	3.6
3278	19450	.	.	.	.	9.6	5.2	4.4
3279	19450	33.2	.	.	27	.	.	.
3280	19450	28.8	.	.	.	.	.	.
3281	19450	30.0	.	.	27	.	.	.
3282	19450	35.2	33.2	2.0	27	10.4	6.0	4.4
3283	19450	35.6	.	.	29	.	.	.
3284	19450	30.8	.	.	24	.	.	.
3285	19450	40.4	38.0	2.4	31	9.6	6.0	3.6
3286	19450	28.0	.	.	25	.	.	.
3287	19450	26.0	.	.	21	.	.	.
3288	19450	30.0	.	.	26	.	.	.
3289	19450	30.4	.	.	26	.	.	.
3290	19450	31.2	.	.	28	.	.	.
3291	19450	40.0	38.0	2.0	31	10.0	6.0	4.0
3292	19450	22.8	20.8	2.0	18	8.8	4.8	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.27 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3293	19450	31.6	29.6	2.0	22	10.0	5.2	4.8
3294	19450	34.4	31.6	2.8	28	9.6	5.2	4.4
3295	19450	23.2	21.2	2.0	20	8.8	5.2	3.6
3296	19450	29.2	26.8	2.4	25	10.0	6.0	4.0
3297	19450	40.0	38.0	2.0	31	10.0	6.0	4.0
3298	19450	18.4	16.4	2.0	17	8.0	4.8	3.2
3299	19450	28.8	26.8	2.0	24	9.6	5.2	4.4
3300	19450	24.8	22.8	2.0	24	9.2	6.0	3.2
3301	19450	28.4	26.4	2.0	25	8.8	6.0	2.8
3302	19450	26.4	24.4	2.0	21	9.6	5.2	4.4
3303	19450	37.2	35.2	2.0	31	10.4	5.6	4.8
3304	19450	29.2	27.2	2.0	27	9.2	4.8	4.4
3305	19450	24.8	22.4	2.4	22	10.0	6.0	4.0
3306	19450	38.8	36.4	2.4	31	10.0	6.0	4.0

----- CORE=157 TIME=3.28 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3307	19525	31.2	.	.	25	.	.	.
3308	19525	32.8	.	.	27	.	.	.
3309	19525	26.0	24.0	2.0	23	8.8	4.4	4.4
3310	19525	27.2	25.2	2.0	24	8.4	5.2	3.2
3311	19525	25.2	.	.	21	.	.	.
3312	19525	33.2	30.8	2.4	28	10.0	5.2	4.8
3313	19525	33.6	31.6	2.0	28	9.6	5.2	4.4
3314	19525	18.4	.	.	16	.	.	.
3315	19525	42.0	.	.	39	.	.	.
3316	19525	40.0	.	.	31	.	.	.
3317	19525	28.4	.	.	24	.	.	.
3318	19525	17.6	16.0	1.6	18	7.2	4.4	2.8
3319	19525	28.4	26.4	2.0	24	9.2	6.0	3.2
3320	19525	21.2	.	.	18	.	.	.
3321	19525	30.8	28.4	2.4	26	9.6	5.6	4.0
3322	19525	30.4	.	.	29	.	.	.
3323	19525	22.8	20.8	2.0	18	10.0	5.6	4.4
3324	19525	27.6	.	.	26	.	.	.
3325	19525	24.0	.	.	20	.	.	.
3326	19525	36.4	.	.	30	.	.	.
3327	19525	42.0	.	.	35	.	.	.
3328	19525	27.2	25.2	2.0	23	9.6	6.0	3.6
3329	19525	36.8	.	.	32	.	.	.
3330	19525	25.2	.	.	24	.	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-157 TIME-3.28 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3331	19525	25.6	.	.	22	.	.	.
3332	19525	22.0	20.0	2.0	22	8.8	5.2	3.6
3333	19525	29.2	.	.	26	.	.	.
3334	19525	28.8	26.8	2.0	23	9.2	6.0	3.2
3335	19525	22.8	.	.	20	.	.	.
3336	19525	40.0	38.0	2.0	34	10.0	5.2	4.8
3337	19525	42.0	40.0	2.0	35	9.6	6.0	3.6
3338	19525	26.4	24.4	2.0	23	9.2	5.2	4.0
3339	19525	25.2	23.2	2.0	22	8.8	4.8	4.0
3340	19525	31.2	29.2	2.0	26	10.0	6.0	4.0
3341	19525	22.4	20.4	2.0	20	8.0	4.8	3.2
3342	19525	32.0	30.0	2.0	27	10.0	5.6	4.4
3343	19525	42.4	40.0	2.4	34	10.4	6.4	4.0
3344	19525	38.4	36.4	2.0	29	11.2	6.8	4.4
3345	19525	29.2	27.2	2.0	28	9.2	5.6	3.6
3346	19525	24.0	22.0	2.0	22	8.8	5.2	3.6
3347	19525	24.0	22.0	2.0	20	9.2	5.6	3.6
3348	19525	34.8	32.8	2.0	31	9.6	6.0	3.6
3349	19525	25.2	22.8	2.4	21	9.2	6.0	3.2
3350	19525	28.4	26.4	2.0	24	10.0	6.0	4.0
3351	19525	30.0	28.0	2.0	26	10.8	6.8	4.0
3352	19525	47.6	45.2	2.4	36	10.4	6.8	3.6
3353	19525	24.4	22.4	2.0	22	10.0	5.2	4.8
3354	19525	33.6	31.2	2.4	28	9.6	6.4	3.2
3355	19525	26.0	24.0	2.0	23	9.6	6.0	3.6
3356	19525	42.8	.	.	35	.	.	.
3357	19525	35.2	.	.	29	.	.	.
3358	19525	28.4	.	.	22	.	.	.
3359	19525	27.2	.	.	22	.	.	.
3360	19525	41.6	38.8	2.8	34	10.4	6.4	4.0
3361	19525	27.2	25.2	2.0	23	9.2	4.8	4.4
3362	19525	37.2	.	.	34	.	.	.
3363	19525	29.2	.	.	25	.	.	.
3364	19525	37.2	35.2	2.0	29	10.0	6.0	4.0
3365	19525	27.2	.	.	23	.	.	.
3366	19525	23.6	21.2	2.4	21	10.0	6.0	4.0
3367	19525	25.6	23.2	2.4	21	9.2	5.2	4.0
3368	19525	41.6	39.2	2.4	38	10.0	6.0	4.0
3369	19525	24.0	.	.	21	.	.	.
3370	19525	26.8	.	.	23	.	.	.
3371	19525	34.4	.	.	29	.	.	.
3372	19525	28.0	25.6	2.4	26	10.0	6.0	4.0
3373	19525	29.2	27.2	2.0	24	10.4	6.0	4.4
3374	19525	27.6	25.6	2.0	26	10.0	6.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-157 TIME=3.28 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3375	19525	29.2	.	.	25	.	.	.
3376	19525	.	.	.	16	7.2	4.0	3.2
3377	19525	36.8	34.4	2.4	31	9.6	6.0	3.6
3378	19525	28.8	26.8	2.0	26	10.0	6.0	4.0
3379	19525	53.6	51.2	2.4	47	10.0	6.0	4.0
3380	19525	18.4	.	.	18	.	.	.
3381	19525	32.8	31.2	1.6	27	10.0	6.0	4.0
3382	19525	24.4	22.4	2.0	23	9.6	5.6	4.0
3383	19525	21.6	20.0	1.6	21	9.2	5.6	3.6
3384	19525	36.4	34.4	2.0	29	10.0	5.6	4.4
3385	19525	43.2	41.2	2.0	35	10.0	6.0	4.0
3386	19525	36.4	34.0	2.4	31	10.0	6.4	3.6
3387	19525	29.6	27.6	2.0	27	9.2	6.0	3.2
3388	19525	25.6	24.0	1.6	23	8.8	5.2	3.6
3389	19525	48.0	46.0	2.0	37	10.4	7.2	3.2
3390	19525	29.2	27.2	2.0	25	9.2	6.0	3.2
3391	19525	26.0	24.0	2.0	22	9.2	5.2	4.0
3392	19525	42.8	40.8	2.0	34	9.6	6.8	2.8
3393	19525	18.8	16.8	2.0	18	8.4	6.0	2.4
3394	19525	25.2	23.2	2.0	22	10.0	6.0	4.0
3395	19525	25.2	23.2	2.0	22	9.2	5.2	4.0
3396	19525	24.8	22.8	2.0	22	8.8	5.2	3.6
3397	19525	38.0	35.2	2.8	31	10.0	6.0	4.0

RAW DATA

----- CORE-157 TIME=3.29 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3398	19625	44.8	.	.	41	.	.	.
3399	19625	26.0	.	.	21	.	.	.
3400	19625	20.8	18.4	2.4	20	8.4	4.8	3.6
3401	19625	28.4	.	.	26	.	.	.
3402	19625	33.2	.	.	25	.	.	.
3403	19625	22.4	20.8	1.6	20	8.4	5.2	3.2
3404	19625	28.8	26.8	2.0	26	9.6	6.0	3.6
3405	19625	40.8	.	.	32	.	.	.
3406	19625	35.2	.	.	29	.	.	.
3407	19625	26.4	.	.	23	.	.	.
3408	19625	22.8	.	.	18	.	.	.
3409	19625	32.0	30.0	2.0	26	9.2	4.0	5.2
3410	19625	33.2	31.2	2.0	26	9.2	6.0	3.2
3411	19625	32.0	30.0	2.0	26	9.6	6.0	3.6
3412	19625	36.4	.	.	30	.	.	.

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.29 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3413	19625	37.2	35.2	2.0	24	10.8	6.8	4.0
3414	19625	.	.	.	35	9.2	6.0	3.2
3415	19625	32.0	.	.	27	.	.	.
3416	19625	24.0	22.0	2.0	19	9.6	6.0	3.6
3417	19625	32.8	.	.	27	.	.	.
3418	19625	32.4	.	.	28	.	.	.
3419	19625	19.2	.	.	17	.	.	.
3420	19625	26.8	24.8	2.0	26	8.8	5.2	3.6
3421	19625	22.8	20.8	2.0	21	9.2	5.2	4.0
3422	19625	22.8	20.8	2.0	21	9.2	6.0	3.2
3423	19625	40.4	38.0	2.4	33	9.2	5.2	4.0
3424	19625	34.0	30.8	3.2	26	10.0	6.4	3.6
3425	19625	.	.	.	.	8.0	4.8	3.2
3426	19625	.	.	.	22	10.0	5.6	4.4
3427	19625	.	.	.	27	8.8	4.8	4.0
3428	19625	23.6	21.6	2.0	22	8.0	4.8	3.2
3429	19625	30.4	28.0	2.4	26	9.2	5.2	4.0
3430	19625	40.8	39.2	1.6	33	9.6	6.0	3.6
3431	19625	28.0	26.0	2.0	25	9.6	6.0	3.6
3432	19625	38.8	37.2	1.6	34	11.2	6.8	4.4
3433	19625	35.2	33.2	2.0	30	10.0	6.8	3.2
3434	19625	31.2	29.2	2.0	26	10.0	6.0	4.0
3435	19625	31.2	28.8	2.4	29	10.0	6.0	4.0
3436	19625	20.8	18.8	2.0	18	8.8	4.8	4.0
3437	19625	26.8	24.8	2.0	22	9.6	5.6	4.0
3438	19625	30.4	28.8	1.6	28	11.2	6.8	4.4
3439	19625	25.2	23.6	1.6	22	9.2	4.4	4.8
3440	19625	18.8	16.8	2.0	18	9.2	5.2	4.0
3441	19625	26.4	24.4	2.0	24	10.4	6.4	4.0
3442	19625	21.2	19.2	2.0	19	8.0	4.8	3.2
3443	19625	26.8	24.8	2.0	22	9.6	5.2	4.4
3444	19625	18.8	16.8	2.0	18	8.4	4.4	4.0
3445	19625	29.2	.	.	25	.	.	.
3446	19625	28.8	.	.	24	.	.	.
3447	19625	35.2	33.2	2.0	29	10.4	6.4	4.0
3448	19625	34.8	33.2	1.6	28	11.2	6.8	4.4
3449	19625	22.8	.	.	21	.	.	.
3450	19625	19.2	.	.	18	.	.	.
3451	19625	26.4	.	.	23	.	.	.
3452	19625	25.2	23.2	2.0	22	9.6	5.2	4.4
3453	19625	26.0	24.0	2.0	22	8.8	4.4	4.4
3454	19625	27.2	.	.	24	.	.	.
3455	19625	23.2	21.6	1.6	20	8.0	4.8	3.2
3456	19625	23.2	21.2	2.0	21	9.2	6.0	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

CORE-157 TIME-3.29

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3457	19625	29.6	28.0	1.6	23	8.8	4.8	4.0
3458	19625	21.2	.	.	19	.	.	.
3459	19625	32.8	30.8	2.0	28	10.8	6.0	4.8
3460	19625	43.2	40.8	2.4	32	9.6	5.6	4.0
3461	19625	.	.	.	36	10.0	6.0	4.0
3462	19625	29.6	.	.	27	.	.	.
3463	19625	26.4	24.4	2.0	24	9.2	4.8	4.4
3464	19625	25.2	23.2	2.0	23	9.2	4.8	4.4
3465	19625	24.4	22.0	2.4	21	9.2	5.2	4.0
3466	19625	36.8	.	.	29	.	.	.
3467	19625	30.0	.	.	26	.	.	.
3468	19625	36.8	.	.	87	12.0	9.6	2.4
3469	19625	29.2	27.2	2.0	28	10.0	6.0	4.0
3470	19625	24.0	.	.	20	.	.	.
3471	19625	22.0	.	.	21	.	.	.
3472	19625	23.6	.	.	21	.	.	.
3473	19625	26.4	24.4	2.0	25	9.6	5.2	4.4
3474	19625	23.2	21.2	2.0	20	9.2	6.0	3.2
3475	19625	29.6	27.6	2.0	24	10.0	6.0	4.0
3476	19625	31.6	29.6	2.0	29	10.0	6.0	4.0
3477	19625	38.0	36.0	2.0	31	10.0	5.6	4.4
3478	19625	38.4	35.6	2.8	31	10.0	6.0	4.0
3479	19625	37.6	36.0	1.6	31	10.0	5.2	4.8
3480	19625	21.6	20.0	1.6	19	8.8	5.2	3.6
3481	19625	24.8	22.8	2.0	22	10.0	6.0	4.0
3482	19625	27.6	26.0	1.6	26	9.6	5.6	4.0
3483	19625	19.2	17.2	2.0	17	7.6	4.8	2.8
3484	19625	18.8	16.8	2.0	18	7.6	4.8	2.8
3485	19625	26.4	24.8	1.6	22	9.2	6.0	3.2
3486	19625	45.2	43.2	2.0	37	10.0	6.8	3.2
3487	19625	33.2	31.2	2.0	30	10.0	6.0	4.0
3488	19625	42.0	40.0	2.0	33	10.8	6.0	4.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.3 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3489	19725	17.2	15.2	2.0	16	8.0	3.6	4.4
3490	19725	30.8	23.6	7.2	.	8.8	6.0	2.8
3491	19725	25.6	23.2	2.4	26	10.0	6.0	4.0
3492	19725	34.4	30.8	3.6	28	11.6	6.8	4.8
3493	19725	34.0	31.2	2.8	28	10.0	6.0	4.0
3494	19725	.	.	.	.	10.0	6.0	4.0
3495	19725	33.2	32.8	0.4	28	10.4	5.6	4.8
3496	19725	.	.	.	.	10.4	6.8	3.6
3497	19725	29.2	27.2	2.0	28	10.0	6.8	3.2
3498	19725	24.8	.	.	20	8.4	4.8	3.6
3499	19725	.	.	.	.	9.2	6.4	2.8
3500	19725	.	.	.	.	8.8	6.0	2.8
3501	19725	.	.	.	.	10.0	6.0	4.0
3502	19725	.	.	.	.	12.0	8.8	3.2
3503	19725	28.0	25.2	2.8	26	9.6	6.8	2.8
3504	19725	34.8	32.4	2.4	32	10.4	6.0	4.4
3505	19725	15.2	14.0	1.2	16	7.2	3.6	3.6
3506	19725	.	.	.	.	10.0	7.2	2.8
3507	19725	.	.	.	.	9.6	6.0	3.6
3508	19725	31.2	27.6	3.6	24	9.2	4.4	4.8
3509	19725	.	.	.	.	10.4	6.0	4.4
3510	19725	34.8	31.6	3.2	33	11.2	8.0	3.2
3511	19725	.	.	.	.	8.0	4.0	4.0
3512	19725	.	.	.	.	9.6	6.0	3.6
3513	19725	.	.	.	.	9.6	6.8	2.8
3514	19725	.	.	.	.	9.2	5.2	4.0
3515	19725	27.2	24.4	2.8	23	10.0	6.0	4.0
3516	19725	27.2	26.4	0.8	25	10.0	6.0	4.0
3517	19725	25.6	23.6	2.0	22	8.8	6.4	2.4
3518	19725	17.2	15.2	2.0	16	8.0	4.0	4.0
3519	19725	30.0	28.0	2.0	26	10.0	6.0	4.0
3520	19725	.	.	.	.	10.8	6.8	4.0
3521	19725	23.2	21.2	2.0	20	8.8	4.8	4.0
3522	19725	29.6	.	.	26	.	.	.
3523	19725	34.4	.	.	29	.	.	.
3524	19725	26.4	.	.	24	.	.	.
3525	19725	24.4	.	.	21	.	.	.
3526	19725	28.8	.	.	25	.	.	.
3527	19725	40.0	38.0	2.0	32	8.4	5.2	3.2
3528	19725	18.8	16.8	2.0	16	7.6	5.2	2.4
3529	19725	.	.	.	27	10.0	6.0	4.0
3530	19725	32.8	.	.	28	.	.	.
3531	19725	22.8	.	.	21	.	.	.
3532	19725	.	.	.	38	10.0	5.6	4.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

-----CORE=157 TIME=3.3-----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3533	19725	23.2	.	.	20	.	.	.
3534	19725	26.4	24.0	2.4	22	9.6	4.8	4.8
3535	19725	.	.	.	.	8.0	4.0	4.0
3536	19725	15.2	.	.	13	.	.	.
3537	19725	22.4	20.4	2.0	22	9.2	4.8	4.4
3538	19725	30.0	28.0	2.0	24	10.0	6.0	4.0
3539	19725	38.4	.	.	31	.	.	.
3540	19725	26.8	.	.	24	.	.	.
3541	19725	41.6	39.2	2.4	34	10.4	6.4	4.0
3542	19725	22.4	20.4	2.0	18	8.0	4.8	3.2
3543	19725	38.4	.	.	32	.	.	.
3544	19725	39.2	37.2	2.0	33	10.0	6.0	4.0
3545	19725	42.4	40.0	2.4	34	8.0	4.8	3.2
3546	19725	.	.	.	24	10.0	6.0	4.0
3547	19725	35.2	33.2	2.0	31	10.0	6.0	4.0
3548	19725	42.8	40.8	2.0	36	10.0	6.4	3.6
3549	19725	22.8	21.2	1.6	20	8.0	4.0	4.0
3550	19725	26.0	24.4	1.6	22	8.0	4.4	3.6
3551	19725	20.8	18.8	2.0	18	9.6	5.2	4.4
3552	19725	25.2	22.8	2.4	21	8.8	4.0	4.8
3553	19725	31.2	29.2	2.0	27	9.6	6.0	3.6
3554	19725	28.0	26.0	2.0	24	9.2	5.2	4.0
3555	19725	21.2	19.6	1.6	20	8.8	4.8	4.0
3556	19725	35.2	34.0	1.2	29	10.0	4.8	5.2
3557	19725	20.8	19.2	1.6	20	8.4	4.8	3.6
3558	19725	26.8	25.2	1.6	24	9.2	5.2	4.0
3559	19725	24.8	22.8	2.0	20	8.8	5.2	3.6
3560	19725	30.0	28.0	2.0	28	10.4	6.0	4.4
3561	19725	26.8	24.8	2.0	22	9.6	5.2	4.4
3562	19725	20.0	18.4	1.6	20	7.2	4.0	3.2
3563	19725	24.0	22.0	2.0	23	8.0	4.8	3.2
3564	19725	28.0	26.0	2.0	23	10.4	6.0	4.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.31 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3565	19800	35.2	33.2	2.0	30	9.6	5.2	4.4
3566	19800	38.8	.	.	30	.	.	.
3567	19800	29.6	27.6	2.0	26	9.6	4.8	4.8
3568	19800	28.0	26.0	2.0	23	9.6	5.2	4.4
3569	19800	30.0	.	.	24	.	.	.
3570	19800	28.0	25.6	2.4	23	10.0	4.8	5.2
3571	19800	24.8	23.2	1.6	22	8.8	6.0	2.8
3572	19800	31.6	29.6	2.0	25	10.0	6.0	4.0
3573	19800	34.0	32.0	2.0	30	11.2	6.4	4.8
3574	19800	46.0	43.6	2.4	37	10.0	6.0	4.0
3575	19800	45.2	42.8	2.4	37	10.8	6.4	4.4
3576	19800	38.4	36.4	2.0	35	10.0	6.0	4.0
3577	19800	25.2	23.2	2.0	22	9.2	6.0	3.2
3578	19800	22.8	20.8	2.0	20	8.0	4.0	4.0
3579	19800	33.2	32.0	1.2	28	8.4	5.2	3.2
3580	19800	31.2	29.2	2.0	26	10.0	5.2	4.8
3581	19800	29.6	.	.	28	.	.	.
3582	19800	28.8	26.8	2.0	28	10.0	6.4	3.6
3583	19800	34.4	.	.	28	.	.	.
3584	19800	26.4	.	.	23	.	.	.
3585	19800	19.2	18.0	1.2	17	8.4	5.2	3.2
3586	19800	39.2	.	.	31	.	.	.
3587	19800	40.8	.	.	33	.	.	.
3588	19800	16.8	.	.	16	.	.	.
3589	19800	27.2	25.6	1.6	22	10.0	6.0	4.0
3590	19800	38.4	.	.	32	.	.	.
3591	19800	36.8	.	.	31	.	.	.
3592	19800	31.2	29.2	2.0	25	9.6	6.0	3.6
3593	19800	49.6	46.0	3.6	41	10.0	10.0	0.0
3594	19800	34.8	32.8	2.0	31	10.0	6.0	4.0
3595	19800	27.6	26.0	1.6	25	9.2	5.2	4.0
3596	19800	31.2	29.2	2.0	30	10.0	6.0	4.0
3597	19800	30.0	28.0	2.0	27	9.2	5.2	4.0
3598	19800	33.2	31.2	2.0	28	10.0	6.0	4.0
3599	19800	19.2	18.0	1.2	18	8.4	4.8	3.6
3600	19800	44.0	42.8	1.2	38	10.4	6.0	4.4
3601	19800	35.2	33.2	2.0	35	11.2	6.0	5.2
3602	19800	32.4	30.4	2.0	28	10.0	6.0	4.0
3603	19800	22.8	20.8	2.0	20	9.2	4.8	4.4
3604	19800	31.6	29.6	2.0	29	10.0	6.4	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.32 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3605	19900	40.0	.	.	31	.	.	.
3606	19900	22.0	.	.	19	.	.	.
3607	19900	28.8	26.8	2.0	22	9.2	6.0	3.2
3608	19900	34.8	32.8	2.0	28	9.2	4.8	4.4
3609	19900	44.0	.	.	36	.	.	.
3610	19900	27.2	.	.	21	.	.	.
3611	19900	26.8	25.2	1.6	22	8.8	5.2	3.6
3612	19900	.	.	.	30	9.2	5.2	4.0
3613	19900	27.2	.	.	24	.	.	.
3614	19900	28.4	26.4	2.0	24	8.8	5.2	3.6
3615	19900	.	.	.	26	8.0	4.8	3.2
3616	19900	34.8	32.8	2.0	28	9.2	6.0	3.2
3617	19900	27.6	26.0	1.6	26	8.4	5.2	3.2
3618	19900	25.2	23.2	2.0	21	7.6	4.0	3.6
3619	19900	21.2	.	.	19	.	.	.
3620	19900	30.8	.	.	26	.	.	.
3621	19900	36.0	.	.	29	.	.	.
3622	19900	38.8	.	.	32	.	.	.
3623	19900	24.4	22.4	2.0	22	8.8	4.8	4.0
3624	19900	28.4	.	.	25	.	.	.
3625	19900	32.8	30.0	2.8	29	10.0	6.0	4.0
3626	19900	25.2	23.2	2.0	22	8.0	4.8	3.2
3627	19900	30.8	.	.	25	.	.	.
3628	19900	40.4	.	.	32	.	.	.
3629	19900	24.4	.	.	23	.	.	.
3630	19900	42.4	.	.	34	.	.	.
3631	19900	29.6	27.6	2.0	26	10.0	6.8	3.2
3632	19900	28.8	.	.	27	.	.	.
3633	19900	28.4	26.0	2.4	25	8.8	5.2	3.6
3634	19900	30.8	28.8	2.0	27	8.4	5.2	3.2
3635	19900	20.8	18.8	2.0	18	8.4	5.2	3.2
3636	19900	32.0	30.0	2.0	26	8.0	5.2	2.8
3637	19900	24.8	22.8	2.0	23	8.0	4.8	3.2
3638	19900	22.8	21.2	1.6	22	8.8	4.8	4.0
3639	19900	31.2	29.2	2.0	28	8.0	5.2	2.8
3640	19900	31.2	29.2	2.0	29	10.0	6.0	4.0
3641	19900	41.2	39.2	2.0	37	10.4	6.4	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-157 TIME-3.33 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3642	19950	.	.	.	39	9.6	6.0	3.6
3643	19950	26.0	24.0	2.0	22	8.4	4.8	3.6
3644	19950	.	.	.	.	8.4	4.4	4.0
3645	19950	29.2	.	.	25	.	.	.
3646	19950	26.4	.	.	24	.	.	.
3647	19950	30.4	.	.	26	.	.	.
3648	19950	40.0	.	.	33	.	.	.
3649	19950	34.0	32.0	2.0	31	10.0	5.2	4.8
3650	19950	32.4	30.0	2.4	28	10.0	5.6	4.4
3651	19950	18.0	.	.	17	.	.	.
3652	19950	48.8	46.0	2.8	35	9.2	6.0	3.2
3653	19950	26.0	24.0	2.0	22	8.0	5.2	2.8
3654	19950	24.0	.	.	22	.	.	.
3655	19950	23.6	22.0	1.6	20	8.0	4.0	4.0
3656	19950	.	.	.	.	10.4	6.0	4.4
3657	19950	33.6	32.0	1.6	26	10.0	5.2	4.8
3658	19950	34.8	32.8	2.0	28	9.2	4.8	4.4
3659	19950	42.0	40.0	2.0	35	8.8	5.2	3.6
3660	19950	35.2	32.8	2.4	30	10.0	6.0	4.0
3661	19950	33.2	31.6	1.6	27	9.2	5.2	4.0
3662	19950	22.8	20.0	2.8	19	8.4	4.0	4.4
3663	20000	27.2	.	.	22	.	.	.
3664	20000	33.2	.	.	26	.	.	.
3665	20000	30.8	28.4	2.4	26	8.4	4.8	3.6
3666	20000	51.6	49.6	2.0	40	9.6	6.0	3.6
3667	20000	27.2	.	.	23	.	.	.
3668	20000	34.0	32.0	2.0	27	8.0	5.2	2.8
3669	20000	18.8	.	.	17	.	.	.
3670	20000	38.8	37.2	1.6	33	10.0	6.0	4.0
3671	20000	27.6	25.6	2.0	23	8.0	4.0	4.0
3672	20000	28.8	27.2	1.6	23	9.2	4.8	4.4
3673	20000	45.2	43.2	2.0	38	10.0	6.8	3.2
3674	20000	27.2	.	.	22	.	.	.
3675	20000	26.4	.	.	25	.	.	.
3676	20000	30.4	28.4	2.0	25	10.0	5.6	4.4
3677	20000	27.2	.	.	22	.	.	.
3678	20000	22.4	20.4	2.0	19	8.4	4.8	3.6
3679	20000	25.2	23.2	2.0	23	8.0	4.8	3.2
3680	20000	26.8	.	.	21	.	.	.
3681	20000	37.2	35.2	2.0	30	9.2	6.0	3.2
3682	20000	18.4	.	.	17	.	.	.
3683	20000	35.2	33.2	2.0	31	10.0	5.2	4.8
3684	20000	32.8	.	.	25	.	.	.
3685	20000	22.0	20.0	2.0	19	8.4	4.4	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.33 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3686	20000	43.2	.	.	35	.	.	.
3687	20000	21.2	19.2	2	19	8.0	5.2	2.8
3688	20000	.	.	.	35	9.6	5.6	4.0
3689	20000	22.8	20.8	2	20	8.8	5.2	3.6
3690	20000	29.2	.	.	27	.	.	.
3691	20000	32.0	.	.	26	.	.	.

----- CORE=157 TIME=3.34 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3692	20050	32.8	.	.	27	.	.	.
3693	20050	28.8	.	.	25	.	.	.
3694	20050	27.2	.	.	23	.	.	.
3695	20050	24.8	.	.	21	.	.	.
3696	20050	34.8	32.4	2.4	27	9.6	5.6	4.0
3697	20050	28.4	26.4	2.0	24	8.8	4.8	4.0
3698	20050	30.8	.	.	26	.	.	.
3699	20050	19.2	.	.	18	.	.	.
3700	20050	21.6	.	.	19	.	.	.
3701	20050	27.2	.	.	25	.	.	.
3702	20050	50.0	.	.	43	.	.	.
3703	20050	34.0	.	.	26	.	.	.
3704	20050	28.8	27.2	1.6	25	9.2	6.0	3.2
3705	20050	22.0	20.0	2.0	19	8.4	4.4	4.0
3706	20050	37.2	35.2	2.0	36	10.4	6.8	3.6
3707	20050	44.0	.	.	37	.	.	.
3708	20050	24.8	.	.	21	.	.	.
3709	20050	28.8	26.8	2.0	24	9.2	5.2	4.0
3710	20050	32.8	30.4	2.4	28	9.2	5.6	3.6
3711	20050	37.2	35.2	2.0	30	9.2	6.0	3.2
3712	20050	30.0	.	.	23	.	.	.
3713	20050	26.0	24.0	2.0	22	8.8	5.2	3.6
3714	20050	22.8	20.8	2.0	20	8.0	4.0	4.0
3715	20050	24.0	22.0	2.0	21	8.4	5.2	3.2
3716	20050	28.0	.	.	22	.	.	.
3717	20050	34.8	.	.	28	.	.	.
3718	20050	36.0	.	.	31	.	.	.
3719	20050	35.2	32.8	2.4	30	9.6	5.6	4.0
3720	20050	.	.	.	22	8.0	3.6	4.4
3721	20050	23.2	21.6	1.6	22	8.4	5.2	3.2
3722	20050	38.8	36.8	2.0	33	9.2	5.6	3.6
3723	20050	25.2	22.8	2.4	23	8.8	4.8	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.34 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3724	20050	41.2	39.2	2.0	34	9.2	6.0	3.2
3725	20050	40.8	39.2	1.6	34	9.6	6.0	3.6
3726	20050	37.2	34.8	2.4	34	10.0	6.0	4.0
3727	20050	17.6	15.6	2.0	16	7.2	4.0	3.2
3728	20050	46.4	44.4	2.0	36	9.2	5.2	4.0
3729	20050	35.2	33.2	2.0	30	10.0	6.0	4.0
3730	20050	32.0	30.0	2.0	31	9.6	6.0	3.6
3731	20050	34.0	32.0	2.0	30	9.2	6.0	3.2
3732	20050	26.8	24.4	2.4	23	9.2	4.8	4.4
3733	20050	22.0	20.0	2.0	20	8.8	5.2	3.6
3734	20050	31.2	29.2	2.0	27	9.2	5.2	4.0

----- CORE=157 TIME=3.35 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3735	20150	33.2	.	.	25	.	.	.
3736	20150	17.2	.	.	17	.	.	.
3737	20150	20.8	.	.	20	.	.	.
3738	20150	32.4	30.4	2.0	30	8.8	5.2	3.6
3739	20150	33.2	31.2	2.0	28	8.0	4.8	3.2
3740	20150	30.0	.	.	25	.	.	.
3741	20150	25.2	23.2	2.0	20	8.8	4.8	4.0
3742	20150	22.4	20.4	2.0	20	8.0	4.0	4.0
3743	20150	22.0	20.0	2.0	19	8.0	4.0	4.0
3744	20150	21.6	.	.	20	.	.	.
3745	20150	32.4	.	.	29	.	.	.
3746	20150	38.4	37.2	1.2	31	10.0	6.0	4.0
3747	20150	30.0	28.0	2.0	26	8.0	4.0	4.0
3748	20150	24.0	.	.	21	.	.	.
3749	20150	.	.	.	.	10.0	6.0	4.0
3750	20150	.	.	.	30	8.0	4.8	3.2
3751	20150	38.4	36.0	2.4	28	9.6	5.6	4.0
3752	20150	24.0	.	.	20	.	.	.
3753	20150	.	.	.	20	9.2	4.0	5.2
3754	20150	40.8	38.0	2.8	34	9.2	5.2	4.0
3755	20150	22.8	20.8	2.0	19	9.2	5.2	4.0
3756	20150	25.6	.	.	21	.	.	.
3757	20150	27.2	.	.	26	.	.	.
3758	20150	21.2	.	.	18	.	.	.
3759	20150	23.6	21.2	2.4	22	8.0	4.8	3.2
3760	20150	.	.	.	27	8.8	4.8	4.0
3761	20150	24.0	22.0	2.0	23	8.0	4.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-157 TIME-3.35 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3762	20150	21.2	.	.	21	.	.	.
3763	20150	.	.	.	28	8.8	6.0	2.8
3764	20150	46.0	43.2	2.8	38	9.2	5.2	4.0
3765	20150	22.0	20.0	2.0	22	8.0	4.4	3.6
3766	20150	31.6	30.0	1.6	29	9.6	5.2	4.4
3767	20150	39.2	37.2	2.0	33	10.0	6.0	4.0
3768	20150	34.0	32.0	2.0	29	9.2	5.2	4.0
3769	20150	34.8	32.8	2.0	29	8.8	4.8	4.0
3770	20150	32.0	30.0	2.0	29	8.8	4.8	4.0
3771	20150	20.8	18.8	2.0	18	8.0	4.8	3.2
3772	20150	23.2	21.2	2.0	21	7.6	5.2	2.4
3773	20150	25.6	24.0	1.6	23	8.4	4.8	3.6
3774	20100	25.2	23.2	2.0	23	8.0	4.8	3.2
3775	20100	28.8	27.2	1.6	25	9.2	5.2	4.0
3776	20100	24.4	.	.	21	.	.	.
3777	20100	43.2	42.0	1.2	36	8.4	4.8	3.6
3778	20100	38.0	36.4	1.6	29	8.8	4.8	4.0
3779	20100	40.0	38.0	2.0	32	8.0	4.0	4.0
3780	20100	20.4	18.8	1.6	18	7.2	4.0	3.2
3781	20100	24.4	.	.	21	.	.	.
3782	20100	32.8	.	.	28	.	.	.
3783	20100	34.4	.	.	27	.	.	.
3784	20100	38.8	36.4	2.4	32	9.6	5.2	4.4
3785	20100	.	.	.	30	8.8	5.2	3.6
3786	20100	20.0	18.4	1.6	17	7.6	4.0	3.6
3787	20100	27.2	25.2	2.0	24	8.4	5.2	3.2
3788	20100	44.0	.	.	35	.	.	.
3789	20100	23.6	.	.	20	.	.	.
3790	20100	26.8	.	.	24	.	.	.
3791	20100	23.2	21.2	2.0	21	7.6	4.4	3.2
3792	20100	17.6	16.0	1.6	17	7.6	4.0	3.6
3793	20100	44.8	43.2	1.6	33	9.2	5.2	4.0
3794	20100	26.4	24.8	1.6	22	8.4	5.2	3.2
3795	20100	34.0	32.0	2.0	31	8.8	4.8	4.0
3796	20100	31.2	.	.	25	.	.	.
3797	20100	39.2	37.2	2.0	34	9.2	6.0	3.2
3798	20100	22.0	.	.	18	.	.	.
3799	20100	17.2	16.0	1.2	15	6.8	4.0	2.8
3800	20100	30.8	28.8	2.0	26	8.4	4.8	3.6
3801	20100	23.6	21.6	2.0	20	8.0	4.0	4.0
3802	20100	35.2	33.2	2.0	29	10.0	6.0	4.0
3803	20100	23.2	21.2	2.0	23	8.4	5.2	3.2
3804	20100	38.0	36.0	2.0	35	9.6	6.0	3.6
3805	20100	26.0	24.0	2.0	23	8.8	5.2	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.35 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3806	20100	22.0	20.0	2.0	18	7.2	4.0	3.2
3807	20100	26.8	24.8	2.0	22	9.2	4.4	4.8
3808	20100	37.6	35.6	2.0	30	8.4	4.8	3.6
3809	20100	24.0	22.0	2.0	20	9.2	4.8	4.4
3810	20100	30.0	28.0	2.0	28	9.2	6.0	3.2
3811	20100	30.0	28.4	1.6	28	9.2	4.8	4.4
3812	20100	25.6	24.0	1.6	21	8.8	5.2	3.6
3813	20100	32.4	30.8	1.6	26	9.2	6.0	3.2

----- CORE=157 TIME=3.36 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3814	20200	47.2	42.0	5.2	48	10.4	7.2	3.2
3815	20200	30.8	26.8	4.0	28	8.0	4.4	3.6
3816	20200	45.6	44.0	1.6	40	9.6	6.8	2.8
3817	20200	.	.	.	.	9.2	6.0	3.2
3818	20200	37.2	34.8	2.4	31	9.2	6.0	3.2
3819	20200	38.4	35.2	3.2	34	9.6	6.4	3.2
3820	20200	.	.	.	.	8.8	6.0	2.8
3821	20200	33.2	30.8	2.4	29	10.4	6.0	4.4
3822	20200	29.2	26.8	2.4	28	8.0	6.0	2.0
3823	20200	30.0	28.4	1.6	27	8.8	4.0	4.8
3824	20200	38.8	37.6	1.2	39	10.0	8.0	2.0
3825	20200	.	.	.	.	10.0	6.4	3.6
3826	20200	29.2	26.8	2.4	25	8.4	4.0	4.4
3827	20200	35.2	33.6	1.6	37	9.2	5.6	3.6
3828	20200	26.4	22.8	3.6	25	8.4	5.2	3.2
3829	20200	30.4	28.0	2.4	27	8.0	6.0	2.0
3830	20200	33.2	30.0	3.2	26	8.0	4.0	4.0
3831	20200	40.4	38.8	1.6	35	9.2	5.2	4.0
3832	20200	30.8	28.4	2.4	28	9.2	6.0	3.2
3833	20200	.	.	.	.	8.0	6.0	2.0
3834	20200	30.4	28.4	2.0	28	9.2	5.2	4.0
3835	20200	27.2	25.6	1.6	24	8.8	4.4	4.4
3836	20200	25.6	22.4	3.2	24	10.8	6.8	4.0
3837	20200	.	.	.	.	9.2	5.2	4.0
3838	20200	36.4	33.2	3.2	33	9.6	6.0	3.6
3839	20200	34.8	34.0	0.8	32	8.8	5.2	3.6
3840	20200	.	.	.	.	8.4	5.2	3.2
3841	20200	.	.	.	.	9.2	6.0	3.2
3842	20200	27.2	26.0	1.2	25	9.2	6.0	3.2
3843	20200	32.8	30.8	2.0	26	8.4	5.2	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-157 TIME=3.36 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3844	20200	41.2	38.8	2.4	37	9.2	6.0	3.2
3845	20200	26.8	25.6	1.2	25	8.8	4.4	4.4

----- CORE-157 TIME=3.41 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3846	20650	.	.	.	.	6.8	4.0	2.8
3847	20650	.	.	.	.	9.2	6.4	2.8
3848	20650	.	.	.	.	8.0	4.8	3.2
3849	20650	.	.	.	.	8.8	4.4	4.4
3850	20650	25.2	22.4	2.8	28	7.2	4.0	3.2
3851	20650	44.0	40.4	3.6	35	9.2	6.0	3.2
3852	20650	41.2	38.8	2.4	33	8.4	6.0	2.4
3853	20650	32.0	29.6	2.4	29	9.2	5.2	4.0
3854	20650	28.0	25.2	2.8	26	10.0	6.8	3.2
3855	20650	25.2	21.2	4.0	20	8.4	4.0	4.4
3856	20650	30.4	28.8	1.6	25	9.6	6.0	3.6
3857	20650	26.8	25.2	1.6	25	8.8	5.2	3.6
3858	20650	28.4	26.8	1.6	26	8.0	4.0	4.0
3859	20650	23.6	22.4	1.2	22	8.8	5.2	3.6
3860	20650	36.8	35.2	1.6	32	10.4	8.0	2.4
3861	20650	24.8	22.4	2.4	20	8.8	5.6	3.2
3862	20650	21.2	19.6	1.6	21	7.6	5.2	2.4
3863	20650	29.2	27.6	1.6	26	9.6	6.8	2.8
3864	20650	26.8	26.0	0.8	23	9.6	6.0	3.6
3865	20650	.	.	.	.	12.0	8.0	4.0
3866	20650	.	.	.	.	6.8	4.0	2.8

----- CORE-157 TIME=3.48 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3867	21200	34.4	31.6	2.8	28	9.2	6.0	3.2
3868	21200	.	.	.	.	9.2	6.0	3.2
3869	21200	26.8	25.2	1.6	23	8.4	6.0	2.4
3870	21200	15.6	14.4	1.2	14	8.0	4.4	3.6
3871	21200	.	.	.	.	10.0	6.0	4.0
3872	21200	20.8	18.8	2.0	20	8.4	6.0	2.4
3873	21200	40.8	37.2	3.6	30	10.4	6.0	4.4
3874	21200	46.0	45.2	0.8	38	9.6	8.0	1.6
3875	21200	34.8	33.2	1.6	34	8.8	5.2	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.48 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3876	21200	34.0	31.2	2.8	24	10.8	8.0	2.8
3877	21200	.	.	.	.	8.8	4.8	4.0
3878	21200	24.4	22.8	1.6	25	7.2	4.0	3.2
3879	21200	27.2	25.2	2.0	22	8.4	4.8	3.6
3880	21200	.	.	.	.	10.4	6.8	3.6

----- CORE=157 TIME=3.54 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3881	21800	36.8	34.8	2.0	31	9.2	6.8	2.4
3882	21800	20.4	17.2	3.2	.	8.0	4.8	3.2
3883	21800	.	.	.	.	8.4	6.0	2.4
3884	21800	22.8	20.8	2.0	20	8.8	6.0	2.8
3885	21800	24.0	21.2	2.8	21	8.4	4.8	3.6
3886	21800	34.8	32.8	2.0	25	9.2	6.0	3.2
3887	21800	20.8	19.6	1.2	18	8.8	5.2	3.6
3888	21800	37.2	35.2	2.0	31	9.2	6.8	2.4
3889	21800	.	.	.	.	9.2	6.0	3.2
3890	21800	21.6	.	.	19	8.4	.	.
3891	21800	.	.	.	.	8.0	4.0	4.0

----- CORE=157 TIME=3.65 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3892	22700	34.4	31.2	3.2	27	8.8	6.0	2.8
3893	22700	28.0	.	.	23	7.2	.	.
3894	22700	21.2	19.6	1.6	19	8.8	6.0	2.8
3895	22700	.	.	.	.	8.0	5.2	2.8
3896	22700	29.2	26.8	2.4	21	8.4	4.8	3.6
3897	22700	20.4	17.6	2.8	15	9.2	6.8	2.4
3898	22700	28.8	26.8	2.0	21	10.0	6.0	4.0
3899	22700	.	.	.	.	10.0	6.8	3.2
3900	22700	24.0	22.8	1.2	20	7.2	4.0	3.2
3901	22700	30.8	27.2	3.6	24	9.6	.	.
3902	22700	.	.	.	30	8.0	4.8	3.2
3903	22700	.	.	.	.	8.0	4.0	4.0
3904	22700	14.8	11.6	3.2	14	6.8	5.2	1.6
3905	22700	23.6	.	.	25	6.8	.	.
3906	22700	24.4	21.6	2.8	20	6.8	4.8	2.0
3907	22700	22.0	20.4	1.6	17	8.4	4.8	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.65 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3908	22700	.	.	.	.	8.0	5.2	2.8
3909	22700	28.8	26.0	2.8	26	8.0	4.0	4.0
3910	22700	27.6	25.6	2.0	24	8.0	4.0	4.0
3911	22700	22.4	20.0	2.4	21	7.6	4.8	2.8
3912	22700	25.6	24.0	1.6	25	8.0	5.6	2.4
3913	22700	26.8	.	.	22	7.6	.	.
3914	22700	36.8	34.4	2.4	32	10.8	7.2	3.6

----- CORE=157 TIME=3.7 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3915	23150	26.0	24.4	1.6	22	10.8	7.2	3.6
3916	23150	.	.	.	.	7.2	4.8	2.4
3917	23150	.	.	.	.	10.4	7.2	3.2
3918	23150	33.6	31.2	2.4	29	10.8	6.8	4.0
3919	23150	22.4	20.8	1.6	20	9.2	4.8	4.4
3920	23150	25.6	.	.	22	7.2	.	.
3921	23150	21.2	20.0	1.2	19	8.0	5.2	2.8
3922	23150	27.2	.	.	22	8.4	.	.
3923	23150	37.2	34.0	3.2	29	10.8	6.8	4.0
3924	23150	.	.	.	.	10.0	6.4	3.6
3925	23150	50.0	48.0	2.0	42	10.0	6.4	3.6
3926	23150	15.2	13.2	2.0	13	7.6	4.0	3.6
3927	23150	32.0	30.4	1.6	24	8.4	4.0	4.4
3928	23150	15.2	.	.	13	9.2	.	.
3929	23150	17.2	15.6	1.6	17	7.2	4.0	3.2
3930	23150	30.4	27.2	3.2	25	9.6	6.0	3.6
3931	23150	33.2	30.8	2.4	27	10.0	6.0	4.0
3932	23150	22.8	21.2	1.6	20	8.8	4.0	4.8
3933	23150	23.2	21.6	1.6	21	8.4	4.0	4.4
3934	23150	36.4	33.6	2.8	29	10.0	6.0	4.0
3935	23150	31.2	28.8	2.4	25	10.4	6.0	4.4
3936	23150	37.2	35.2	2.0	31	10.0	7.2	2.8
3937	23150	24.8	23.6	1.2	21	8.0	4.0	4.0
3938	23150	22.8	21.6	1.2	20	8.8	6.0	2.8
3939	23150	16.8	.	.	.	6.4	.	.
3940	23150	.	.	.	.	9.6	6.8	2.8
3941	23150	.	.	.	.	9.2	6.4	2.8
3942	23150	.	.	.	.	8.8	5.6	3.2
3943	23150	28.8	27.2	1.6	24	8.0	5.2	2.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-157 TIME=3.78 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3944	23800	30.0	28.8	1.2	27	10.8	7.6	3.2
3945	23800	34.0	31.2	2.8	.	9.2	5.6	3.6
3946	23800	31.2	29.2	2.0	25	11.2	7.2	4.0
3947	23800	21.6	19.2	2.4	16	9.2	6.0	3.2
3948	23800	32.0	29.2	2.8	24	10.0	7.2	2.8
3949	23800	20.8	.	.	.	8.4	5.2	3.2
3950	23800	.	.	.	.	9.2	6.4	2.8
3951	23800	24.4	22.4	2.0	21	8.0	5.2	2.8
3952	23800	20.4	19.2	1.2	19	7.6	4.0	3.6
3953	23800	.	.	.	.	10.0	6.8	3.2
3954	23800	18.0	17.2	0.8	15	8.0	4.0	4.0
3955	23800	.	.	.	.	8.0	4.8	3.2
3956	23800	30.0	26.8	3.2	25	9.2	5.6	3.6
3957	23800	30.4	27.6	2.8	23	10.0	6.8	3.2
3958	23800	.	.	.	.	9.6	6.0	3.6
3959	23800	46.0	42.0	4.0	37	10.0	6.0	4.0
3960	23800	16.8	14.0	2.8	17	7.2	4.0	3.2
3961	23800	33.2	31.2	2.0	25	10.0	6.4	3.6
3962	23800	.	.	.	.	7.6	4.8	2.8
3963	23800	33.2	30.4	2.8	26	9.6	6.8	2.8
3964	23800	.	.	.	.	10.0	6.4	3.6
3965	23800	34.8	31.2	3.6	32	10.0	6.8	3.2
3966	23800	.	.	.	.	8.4	4.8	3.6
3967	23800	25.2	22.8	2.4	.	8.0	5.2	2.8
3968	23800	34.0	30.8	3.2	.	9.6	5.2	4.4
3969	23800	.	.	.	.	10.8	6.8	4.0
3970	23800	29.2	28.0	1.2	24	8.8	7.2	1.6
3971	23800	26.8	23.2	3.6	19	10.4	6.8	3.6
3972	23800	23.2	21.2	2.0	23	8.8	4.8	4.0
3973	23800	33.2	30.4	2.8	27	10.8	8.0	2.8
3974	23800	24.8	23.2	1.6	21	8.4	6.0	2.4
3975	23800	43.6	42.0	1.6	35	10.0	6.8	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

CORE=157 TIME=3.83

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
3976	24250	30.0	.	.	23	9.2	.	.
3977	24250	22.4	20.4	2.0	19	10.0	6.8	3.2
3978	24250	25.6	22.0	3.6	19	9.2	6.0	3.2
3979	24250	26.0	24.8	1.2	21	8.4	4.4	4.0
3980	24250	16.4	14.8	1.6	14	6.4	4.0	2.4
3981	24250	22.8	18.4	4.4	18	8.4	4.0	4.4
3982	24250	28.0	25.2	2.8	25	10.0	6.4	3.6
3983	24250	24.8	22.8	2.0	18	7.2	5.2	2.0
3984	24250	.	.	.	.	7.6	4.8	2.8
3985	24250	25.2	.	.	20	8.8	.	.
3986	24250	26.4	24.4	2.0	18	10.4	7.2	3.2
3987	24250	42.0	38.8	3.2	35	10.0	6.8	3.2
3988	24250	19.2	18.0	1.2	17	9.2	4.4	4.8
3989	24250	.	.	.	.	9.2	6.0	3.2
3990	24250	31.2	29.2	2.0	26	10.0	6.0	4.0
3991	24250	40.0	37.6	2.4	32	10.4	5.6	4.8
3992	24250	37.6	35.6	2.0	29	10.0	6.8	3.2
3993	24250	21.6	20.0	1.6	17	7.2	4.0	3.2
3994	24250	.	.	.	.	9.2	6.0	3.2
3995	24250	18.8	17.6	1.2	15	7.2	5.2	2.0
3996	24250	34.0	31.2	2.8	28	10.4	6.8	3.6
3997	24250	20.0	18.8	1.2	17	8.4	4.8	3.6
3998	24250	43.2	40.0	3.2	31	10.4	7.2	3.2
3999	24250	26.8	25.2	1.6	21	8.8	4.8	4.0
4000	24250	21.2	19.2	2.0	18	9.2	6.0	3.2
4001	24250	27.6	26.0	1.6	23	8.8	6.4	2.4
4002	24250	20.0	17.2	2.8	17	8.4	5.2	3.2
4003	24250	44.0	41.6	2.4	37	10.0	6.0	4.0
4004	24250	.	.	.	.	9.2	6.8	2.4
4005	24250	.	.	.	.	11.2	7.2	4.0
4006	24250	25.6	24.8	0.8	19	9.2	5.2	4.0
4007	24250	20.8	20.0	0.8	21	9.2	4.4	4.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=3.9 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4008	24800	.	.	.	.	10.0	6.0	4.0
4009	24800	.	.	.	.	7.6	4.0	3.6
4010	24800	.	.	.	.	11.2	7.2	4.0
4011	24800	.	.	.	.	10.0	6.0	4.0
4012	24800	22.8	21.6	1.2	18	8.4	4.4	4.0
4013	24800	22.4	21.2	1.2	19	8.8	6.0	2.8
4014	24800	30.4	29.2	1.2	26	10.0	5.6	4.4
4015	24800	.	.	.	.	10.4	5.6	4.8
4016	24800	22.8	20.4	2.4	18	9.2	5.2	4.0
4017	24800	29.2	28.0	1.2	23	10.0	7.2	2.8
4018	24800	44.0	42.8	1.2	36	10.4	5.6	4.8
4019	24800	22.4	21.2	1.2	17	8.0	4.0	4.0
4020	24800	.	.	.	.	10.4	6.0	4.4
4021	24800	29.6	26.8	2.8	24	10.0	6.4	3.6
4022	24800	24.0	23.2	0.8	22	10.4	7.2	3.2
4023	24800	19.2	18.0	1.2	17	8.0	3.2	4.8
4024	24800	30.4	28.0	2.4	26	9.2	4.8	4.4
4025	24800	.	.	.	.	11.2	8.0	3.2
4026	24800	26.0	25.2	0.8	22	8.4	5.2	3.2
4027	24800	.	.	.	.	10.8	6.0	4.8
4028	24800	27.2	25.2	2.0	26	10.0	6.4	3.6
4029	24800	32.0	31.2	0.8	27	10.4	6.8	3.6
4030	24800	20.8	19.2	1.6	19	8.4	5.2	3.2
4031	24800	37.2	36.0	1.2	31	12.0	8.0	4.0
4032	24800	22.4	21.2	1.2	20	8.0	4.0	4.0
4033	24800	.	.	.	.	10.0	6.0	4.0

----- CORE=157 TIME=3.97 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4034	25400	21.6	19.2	2.4	21	7.2	5.2	2.0
4035	25400	23.2	.	.	.	8.8	.	.
4036	25400	23.2	21.2	2.0	20	8.8	4.0	4.8
4037	25400	.	.	.	.	8.0	4.0	4.0
4038	25400	.	.	.	.	8.4	5.2	3.2
4039	25400	24.8	22.4	2.4	19	8.0	4.0	4.0
4040	25400	26.4	24.0	2.4	20	8.4	4.8	3.6
4041	25400	26.0	25.2	0.8	20	8.0	4.0	4.0
4042	25400	56.0	54.0	2.0	47	9.2	5.2	4.0
4043	25400	38.0	36.4	1.6	29	10.0	6.0	4.0
4044	25400	.	.	.	.	10.0	7.2	2.8
4045	25400	20.4	19.2	1.2	21	8.4	4.0	4.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-157 TIME=3.97 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4046	25400	28.0	27.2	0.8	24	8.0	4.8	3.2
4047	25400	26.8	25.2	1.6	25	9.2	5.6	3.6
4048	25400	54.8	54.0	0.8	52	10.0	7.2	2.8
4049	25400	27.2	25.2	2.0	24	9.2	4.0	5.2
4050	25400	19.6	17.2	2.4	20	7.2	4.8	2.4
4051	25400	36.8	34.8	2.0	36	9.6	5.2	4.4
4052	25400	.	.	.	.	9.6	5.6	4.0

----- CORE-157 TIME=4.07 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4053	26300	20.0	.	.	21	6.4	.	.
4054	26300	.	.	.	.	9.2	4.8	4.4
4055	26300	44.0	42.0	2.0	34	8.8	4.4	4.4
4056	26300	32.8	31.2	1.6	24	8.0	4.8	3.2
4057	26300	19.6	17.6	2.0	17	8.8	4.8	4.0
4058	26300	.	.	.	.	9.2	4.0	5.2
4059	26300	20.4	.	.	23	7.2	.	.
4060	26300	28.0	.	.	20	10.0	.	.
4061	26300	26.0	24.4	1.6	23	9.2	4.0	5.2
4062	26300	24.4	23.2	1.2	20	8.0	4.8	3.2
4063	26300	32.8	31.2	1.6	26	8.0	5.2	2.8
4064	26300	29.6	27.6	2.0	21	10.0	6.0	4.0
4065	26300	27.2	.	.	24	7.6	.	.
4066	26300	29.2	27.2	2.0	22	8.0	4.0	4.0
4067	26300	24.8	22.0	2.8	20	8.8	4.0	4.8
4068	26300	28.4	.	.	25	7.6	4.8	2.8
4069	26300	.	.	.	.	8.0	4.8	3.2
4070	26300	25.2	24.0	1.2	23	8.4	4.0	4.4
4071	26300	38.8	37.6	1.2	35	7.6	4.8	2.8
4072	26300	.	.	.	.	8.0	5.2	2.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=4.18 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4073	27200	.	.	.	.	8.0	5.2	2.8
4074	27200	42.0	.	.	32	10.4	.	.
4075	27200	28.0	.	.	29	8.4	.	.
4076	27200	41.2	40.0	1.2	33	10.8	8.0	2.8
4077	27200	27.2	25.2	2.0	23	8.0	4.0	4.0
4078	27200	20.0	.	.	16	7.6	.	.
4079	27200	31.2	30.0	1.2	27	8.8	4.0	4.8
4080	27200	14.8	.	.	16	7.6	.	.
4081	27200	29.2	26.8	2.4	24	8.4	4.0	4.4
4082	27200	20.0	.	.	23	6.0	.	.
4083	27200	48.0	46.0	2.0	38	10.4	6.0	4.4
4084	27200	32.4	28.8	3.6	26	10.4	7.2	3.2
4085	27200	24.0	.	.	21	8.4	.	.
4086	27200	35.2	32.4	2.8	.	10.8	5.2	5.6
4087	27200	31.6	.	.	24	7.6	.	.
4088	27200	21.6	19.6	2.0	16	7.2	5.6	1.6

----- CORE=157 TIME=4.24 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4089	27700	.	.	.	.	10.0	6.0	4.0
4090	27700	19.6	17.2	2.4	16	8.8	4.8	4.0
4091	27700	33.6	31.2	2.4	27	9.6	6.8	2.8
4092	27700	19.2	17.6	1.6	16	7.2	4.0	3.2
4093	27700	38.0	.	.	28	9.6	.	.
4094	27700	25.6	24.0	1.6	24	8.8	6.0	2.8

----- CORE=157 TIME=4.3 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4095	28250	.	.	.	.	8.0	.	.
4096	28250	35.2	33.6	1.6	35	8.0	.	.
4097	28250	24.8	22.8	2.0	21	7.2	4.0	3.2
4098	28250	24.8	23.6	1.2	22	9.2	4.8	4.4
4099	28250	.	.	.	.	9.6	6.4	3.2
4100	28250	31.2	30.4	0.8	25	8.4	5.2	3.2
4101	28250	30.0	26.8	3.2	26	7.6	4.0	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=4.35 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4102	28700	42.0	40.4	1.6	43	9.2	4.0	5.2
4103	28700	27.2	26.0	1.2	23	7.6	4.0	3.6
4104	28700	48.0	46.0	2.0	43	8.4	5.2	3.2
4105	28700	20.4	17.6	2.8	19	6.8	4.0	2.8
4106	28700	22.8	21.6	1.2	21	7.6	5.2	2.4
4107	28700	25.6	.	.	22	.	.	.
4108	28700	32.8	30.4	2.4	30	.	.	.
4109	28700	31.6	30.8	0.8	20	8.0	4.0	4.0
4110	28700	39.6	38.0	1.6	36	7.2	4.0	3.2
4111	28700	33.2	.	.	30	8.0	.	.
4112	28700	35.2	34.0	1.2	31	7.6	4.0	3.6
4113	28700	25.6	23.2	2.4	22	7.2	4.8	2.4
4114	28700	41.6	39.6	2.0	.	8.0	5.2	2.8
4115	28700	33.2	30.8	2.4	26	8.0	4.0	4.0
4116	28700	31.6	29.6	2.0	20	7.2	4.0	3.2
4117	28700	40.0	37.2	2.8	33	8.0	5.2	2.8
4118	28700	20.0	17.2	2.8	17	6.4	4.8	1.6
4119	28700	34.0	32.4	1.6	29	8.0	3.6	4.4
4120	28700	43.2	.	.	39	8.0	4.0	4.0
4121	28700	33.6	32.0	1.6	28	8.0	4.0	4.0
4122	28700	.	.	.	.	7.2	4.8	2.4
4123	28700	.	.	.	.	8.4	4.0	4.4
4124	28700	37.2	35.6	1.6	33	7.2	4.8	2.4
4125	28700	40.8	39.2	1.6	39	8.0	4.0	4.0
4126	28700	.	.	.	.	8.0	4.0	4.0
4127	28700	.	.	.	.	7.2	4.0	3.2
4128	28700	34.0	32.4	1.6	33	8.0	4.0	4.0
4129	28700	42.8	41.2	1.6	38	8.0	4.0	4.0
4130	28700	25.2	.	.	23	7.6	4.0	3.6
4131	28700	29.6	27.6	2.0	25	6.0	4.0	2.0
4132	28700	.	.	.	.	8.0	4.0	4.0
4133	28700	41.6	40.4	1.2	35	8.0	4.0	4.0
4134	28700	34.8	33.2	1.6	28	6.0	4.0	2.0

----- CORE=157 TIME=4.41 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4135	29200	14.8	.	.	12	6.0	.	.
4136	29200	.	.	.	.	7.6	4	3.6
4137	29200	18.0	.	.	16	7.6	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=4.46 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4138	29650	33.6	30.4	3.2	29	8.0	4.0	4.0
4139	29650	21.6	19.2	2.4	19	8.4	5.2	3.2
4140	29650	26.0	23.6	2.4	21	6.8	4.0	2.8
4141	29650	26.0	22.8	3.2	23	7.6	5.2	2.4
4142	29650	.	.	.	23	8.0	4.0	4.0
4143	29650	16.0	14.4	1.6	15	6.4	3.2	3.2
4144	29650	32.4	30.8	1.6	27	8.0	4.0	4.0
4145	29650	36.8	.	.	.	5.2	.	.
4146	29650	20.8	18.8	2.0	17	7.6	3.6	4.0
4147	29650	21.2	19.6	1.6	20	8.0	4.0	4.0
4148	29650	25.6	.	.	26	.	.	.
4149	29650	26.8	22.8	4.0	24	8.4	4.0	4.4
4150	29650	38.0	36.8	1.2	33	8.8	5.2	3.6

----- CORE=157 TIME=4.47 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4151	29750	24.4	23.2	1.2	24	7.2	4.8	2.4
4152	29750	42.8	.	.	41	.	.	.
4153	29750	.	.	.	.	8.0	4.0	4.0
4154	29750	24.8	23.2	1.6	23	6.8	4.0	2.8
4155	29750	21.6	.	.	18	.	.	.
4156	29750	31.2	29.6	1.6	29	8.0	4.0	4.0

----- CORE=157 TIME=4.48 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4157	29800	.	.	.	.	9.2	6.0	3.2
4158	29800	33.2	31.6	1.6	29	8.0	5.2	2.8
4159	29800	36.8	.	.	31	.	.	.
4160	29800	.	.	.	.	9.2	6.0	3.2
4161	29800	34.0	.	.	34	.	.	.
4162	29800	34.8	32.4	2.4	33	8.0	4.0	4.0
4163	29800	35.2	33.2	2.0	32	8.8	4.8	4.0
4164	29800	34.0	32.8	1.2	26	8.0	4.0	4.0
4165	29800	28.0	.	.	24	8.0	5.2	2.8
4166	29800	31.2	30.0	1.2	32	6.8	4.0	2.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=4.49 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4167	29850	30.0	.	.	32	.	.	.
4168	29850	41.2	40.0	1.2	36	.	.	.
4169	29850	40.0	38.8	1.2	36	8.0	5.2	2.8
4170	29850	23.6	22.4	1.2	27	6.8	4.4	2.4
4171	29850	40.8	38.8	2.0	37	8.0	4.8	3.2
4172	29850	.	.	.	.	7.6	4.0	3.6

----- CORE=157 TIME=4.5 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4173	29950	26.0	24.4	1.6	25	8.8	5.2	3.6
4174	29950	25.2	23.2	2.0	21	6.8	4.0	2.8
4175	29950	.	.	.	.	7.2	4.0	3.2
4176	29950	19.2	.	.	17	.	.	.
4177	29950	24.8	23.2	1.6	22	9.2	6.8	2.4
4178	29950	26.8	.	.	22	.	.	.
4179	29950	.	.	.	.	8.8	4.8	4.0
4180	29950	34.0	.	.	29	.	.	.
4181	29950	20.8	18.8	2.0	25	6.8	5.2	1.6
4182	29950	30.0	.	.	28	.	.	.
4183	29950	23.6	22.4	1.2	22	7.6	5.2	2.4

----- CORE=157 TIME=4.51 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4184	30000	22.8	21.2	1.6	15	6.8	4.0	2.8
4185	30000	17.2	16.0	1.2	14	6.8	5.2	1.6
4186	30000	32.0	30.4	1.6	26	9.2	6.8	2.4
4187	30000	24.4	23.2	1.2	22	8.0	4.4	3.6
4188	30000	20.0	.	.	19	.	.	.
4189	30000	37.2	35.6	1.6	32	8.0	4.0	4.0
4190	30000	20.8	.	.	17	.	.	.
4191	30000	23.2	21.2	2.0	20	7.2	4.0	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=4.52 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4192	30075	24.4	.	.	21	.	.	.
4193	30075	33.2	31.2	2.0	27	8.4	4.4	4.0
4194	30075	27.6	.	.	30	.	.	.
4195	30075	18.0	16.0	2.0	16	6.8	4.0	2.8
4196	30075	25.6	24.0	1.6	20	8.0	4.0	4.0
4197	30075	31.2	.	.	26	.	.	.
4198	30075	31.2	.	.	27	.	.	.
4199	30075	20.8	.	.	18	.	.	.
4200	30075	36.4	34.4	2.0	30	8.0	5.6	2.4
4201	30075	18.4	17.2	1.2	16	6.8	4.0	2.8
4202	30075	26.8	25.2	1.6	21	7.2	4.0	3.2
4203	30075	45.2	.	.	38	.	.	.
4204	30075	37.6	36.0	1.6	32	9.2	5.2	4.0
4205	30075	21.2	20.0	1.2	18	7.2	4.0	3.2
4206	30075	25.6	24.0	1.6	21	7.2	4.0	3.2
4207	30075	31.2	29.6	1.6	23	.	6.0	.
4208	30075	22.8	21.6	1.2	20	7.2	4.0	3.2
4209	30075	.	.	.	.	7.2	4.0	3.2
4210	30075	.	.	.	.	6.8	4.4	2.4
4211	30075	38.0	36.0	2.0	35	9.6	6.8	2.8

----- CORE=157 TIME=4.53 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4212	30150	27.2	.	.	23	.	.	.
4213	30150	35.2	33.2	2.0	31	9.2	6.0	3.2
4214	30150	23.2	21.6	1.6	21	.	.	.
4215	30150	25.6	24.0	1.6	23	8.0	4.0	4.0
4216	30150	25.2	23.6	1.6	22	8.0	5.2	2.8
4217	30150	18.4	17.2	1.2	15	7.6	4.0	3.6
4218	30150	16.8	14.4	2.4	15	6.8	4.0	2.8
4219	30150	22.0	21.2	0.8	17	7.6	5.2	2.4
4220	30150	29.6	28.0	1.6	23	8.4	6.0	2.4
4221	30150	15.2	.	.	14	.	.	.
4222	30150	17.2	15.2	2.0	14	7.2	4.0	3.2
4223	30150	21.2	20.0	1.2	19	6.8	4.0	2.8
4224	30150	22.0	20.4	1.6	19	7.6	5.2	2.4
4225	30150	22.4	19.2	3.2	17	8.0	5.2	2.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=4.54 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4226	30200	21.2	19.6	1.6	20	6.0	4.0	2.0
4227	30200	.	.	.	.	9.6	7.2	2.4

----- CORE=157 TIME=4.55 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4228	30300	20.8	18.8	2.0	19	7.2	4	3.2
4229	30300	22.8	.	.	19	8.0	.	.
4230	30300	.	.	.	20	6.4	4	2.4
4231	30300	15.6	.	.	15	.	.	.
4232	30300	20.8	19.6	1.2	19	8.0	4	4.0
4233	30300	32.8	.	.	29	.	.	.
4234	30300	26.8	24.8	2.0	.	.	.	.
4235	30300	26.0	24.4	1.6	22	7.2	4	3.2
4236	30300	18.8	17.2	1.6	16	8.0	4	4.0
4237	30300	18.8	17.2	1.6	17	6.8	4	2.8
4238	30300	20.0	18.8	1.2	17	7.2	4	3.2
4239	30300	18.4	17.2	1.2	17	7.2	4	3.2

----- CORE=157 TIME=4.56 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4240	30375	20.4	18.8	1.6	19	7.2	4.0	3.2
4241	30375	.	.	.	.	8.0	5.6	2.4
4242	30375	23.2	21.6	1.6	23	8.4	6.0	2.4
4243	30375	26.4	25.2	1.2	21	8.0	5.2	2.8
4244	30375	42.8	40.8	2.0	34	8.4	5.2	3.2
4245	30375	23.2	21.6	1.6	20	6.8	3.2	3.6
4246	30375	16.4	.	.	14	.	.	.
4247	30375	15.2	13.6	1.6	14	5.6	3.2	2.4
4248	30375	24.8	23.2	1.6	21	6.8	4.0	2.8
4249	30375	16.4	15.2	1.2	16	6.0	4.0	2.0
4250	30375	29.2	.	.	26	.	.	.
4251	30375	28.0	27.2	0.8	24	7.2	4.0	3.2
4252	30375	23.2	.	.	20	.	.	.
4253	30375	21.2	19.6	1.6	21	6.0	3.2	2.8
4254	30375	14.0	.	.	14	.	.	.
4255	30375	.	.	.	.	8.0	5.6	2.4
4256	30375	25.2	23.6	1.6	23	8.0	4.8	3.2
4257	30375	20.8	.	.	.	.	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=4.56 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4258	30375	14.0	12.8	1.2	12	6.0	4	2.0
4259	30375	33.2	.	.	30	.	.	.
4260	30375	23.2	21.6	1.6	20	8.4	6	2.4
4261	30375	20.0	18.8	1.2	23	7.2	4	3.2

----- CORE=157 TIME=4.57 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4262	30450	34.0	32.8	1.2	30	9.2	5.2	4.0
4263	30450	26.4	25.2	1.2	23	7.2	4.0	3.2
4264	30450	24.0	22.0	2.0	20	8.4	4.8	3.6
4265	30450	16.0	14.8	1.2	14	7.2	4.0	3.2

----- CORE=157 TIME=4.58 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4266	30550	27.2	.	.	23	.	.	.
4267	30550	.	.	.	.	6.8	3.2	3.6
4268	30550	13.6	11.6	2.0	13	6.0	4.0	2.0
4269	30550	26.8	.	.	22	.	.	.
4270	30550	38.0	.	.	.	.	.	.
4271	30550	29.2	.	.	.	.	.	.
4272	30550	24.0	22.0	2.0	20	8.0	4.0	4.0
4273	30550	21.2	19.6	1.6	16	6.8	4.0	2.8
4274	30550	28.8	.	.	23	.	.	.
4275	30550	18.4	.	.	17	.	.	.
4276	30550	20.0	.	.	20	.	.	.
4277	30550	21.2	.	.	21	.	.	.
4278	30550	14.0	12.0	2.0	11	6.0	3.2	2.8
4279	30550	31.2	.	.	27	.	.	.
4280	30550	22.0	20.0	2.0	20	7.2	4.4	2.8
4281	30550	16.8	.	.	16	.	.	.
4282	30550	40.0	38.8	1.2	35	9.2	6.0	3.2
4283	30550	38.8	37.6	1.2	31	8.4	5.2	3.2
4284	30550	28.4	.	.	23	.	.	.
4285	30550	26.0	24.0	2.0	21	8.0	4.0	4.0
4286	30550	23.2	21.6	1.6	21	6.8	4.0	2.8
4287	30550	25.2	.	.	23	.	.	.
4288	30550	24.8	22.8	2.0	21	8.0	5.2	2.8
4289	30550	34.0	.	.	31	9.2	5.2	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=4.58 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4290	30550	.	.	.	.	5.2	2.8	2.4
4291	30550	16.8	.	.	15	.	.	.
4292	30550	28.0	26.4	1.6	24	8.0	4.0	4.0

----- CORE=157 TIME=4.59 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4293	30590	.	.	.	.	6.8	3.2	3.6
4294	30590	20.8	.	.	19	.	.	.
4295	30590	25.2	23.6	1.6	22	8.0	4.0	4.0
4296	30590	30.4	.	.	26	7.6	5.2	2.4
4297	30590	18.4	16.8	1.6	16	6.4	4.0	2.4
4298	30590	21.6	20.4	1.2	20	6.8	4.0	2.8
4299	30590	24.8	22.8	2.0	20	6.4	4.0	2.4
4300	30590	42.8	41.2	1.6	40	9.2	6.8	2.4
4301	30590	23.6	22.4	1.2	18	7.2	4.0	3.2
4302	30590	28.8	.	.	26	.	.	.

----- CORE=157 TIME=4.73 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4303	31050	17.2	.	.	16	.	.	.
4304	31050	.	.	.	.	6.0	4.0	2.0
4305	31050	26.0	.	.	25	.	.	.
4306	31050	18.8	16.8	2.0	20	7.2	4.4	2.8
4307	31050	25.6	24.0	1.6	27	6.8	4.0	2.8
4308	31050	16.8	.	.	18	.	.	.
4309	31050	.	.	.	.	6.4	4.0	2.4
4310	31050	36.8	34.4	2.4	33	8.0	4.8	3.2
4311	31050	20.4	.	.	20	.	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=157 TIME=4.74 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4312	31550	22.4	20.4	2.0	26	7.2	5.2	2.0
4313	31550	.	.	.	.	7.2	4.0	3.2
4314	31550	34.8	32.4	2.4	34	7.6	4.8	2.8
4315	31550	.	.	.	30	7.2	4.0	3.2
4316	31550	14.8	.	.	16	.	.	.

----- CORE=157 TIME=4.75 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4317	31600	18.8	.	.	19	.	.	.

----- CORE=157 TIME=4.81 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4318	31640	34.0	.	.	.	.	.	.
4319	31640	27.2	.	.	.	.	.	.
4320	31640	24.4	.	.	27	.	.	.

----- CORE=573 TIME=2.68 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4321	3890	29.2	27.2	2	24	.	.	.
4322	3890	36.8	34.8	2	31	10	6.4	3.6
4323	3890	.	.	.	.	10	6.0	4.0

----- CORE=573 TIME=2.73 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4324	3960	.	.	.	38	11.2	7.2	4.0
4325	3960	.	.	.	32	10.0	6.0	4.0
4326	3960	34.8	32.8	2	28	10.0	6.8	3.2
4327	3960	54.8	52.8	2	44	10.4	7.2	3.2
4328	3960	31.2	.	.	27	.	.	.
4329	3960	28.8	.	.	26	.	.	.
4330	3960	30.8	28.8	2	24	10.0	6.0	4.0
4331	3960	19.2	17.2	2	17	7.6	4.4	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-573 TIME=2.77 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4332	4010	30.0	.	.	25	.	.	.
4333	4010	25.2	22.8	2.4	22	9.2	6.0	3.2
4334	4010	30.4	28.8	1.6	25	10.0	5.2	4.8
4335	4010	24.4	.	.	21	.	.	.
4336	4010	.	.	.	.	10.8	6.4	4.4
4337	4010	.	.	.	.	9.2	5.2	4.0
4338	4010	21.2	19.2	2.0	19	8.4	6.0	2.4
4339	4010	20.4	18.0	2.4	18	8.4	6.0	2.4
4340	4010	.	.	.	38	10.0	6.8	3.2
4341	4010	26.8	.	.	.	.	.	.

----- CORE-573 TIME=2.8 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4342	4060	.	.	.	.	11.2	8.0	3.2
4343	4060	.	.	.	23	10.0	6.0	4.0
4344	4060	28.0	.	.	24	.	.	.
4345	4060	34.8	.	.	27	.	.	.
4346	4060	46.0	44.0	2	36	10.8	6.0	4.8
4347	4060	34.0	.	.	32	.	.	.
4348	4060	32.8	.	.	26	.	.	.
4349	4060	41.2	.	.	36	.	.	.
4350	4060	37.6	.	.	29	.	.	.
4351	4060	28.4	.	.	26	.	.	.
4352	4060	36.8	34.8	2	27	10.4	7.2	3.2
4353	4060	23.6	.	.	22	.	.	.
4354	4060	.	.	.	29	10.0	6.0	4.0
4355	4060	22.0	20.0	2	20	8.4	5.2	3.2

----- CORE-573 TIME=2.84 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4356	4110	20.4	.	.	17	.	.	.
4357	4110	22.4	20.0	2.4	18	8.0	4.0	4.0
4358	4110	21.2	20.0	1.2	18	8.4	4.0	4.4
4359	4110	49.6	.	.	43	.	.	.
4360	4110	.	.	.	45	9.6	6.8	2.8
4361	4110	42.4	40.0	2.4	34	10.0	6.8	3.2
4362	4110	.	.	.	39	12.0	8.0	4.0
4363	4110	47.2	44.0	3.2	39	10.0	6.4	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=2.84 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4364	4110	27.2	.	.	21	.	.	.
4365	4110	26.4	24.4	2.0	22	8.0	4.0	4.0
4366	4110	48.8	47.2	1.6	38	11.2	6.8	4.4
4367	4110	26.4	24.8	1.6	22	10.0	6.0	4.0
4368	4110	32.4	.	.	27	.	.	.

----- CORE=573 TIME=2.88 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4369	4160	30.8	28.4	2.4	24	10.0	5.6	4.4
4370	4160	29.2	.	.	24	.	.	.
4371	4160	34.8	32.0	2.8	27	11.6	7.2	4.4
4372	4160	43.2	40.8	2.4	33	12.0	8.0	4.0
4373	4160	46.0	.	.	36	.	.	.
4374	4160	32.8	.	.	28	.	.	.
4375	4160	32.0	30.0	2.0	27	9.6	6.0	3.6
4376	4160	32.8	30.4	2.4	26	10.0	6.0	4.0
4377	4160	31.2	29.2	2.0	29	10.4	6.0	4.4
4378	4160	54.0	52.0	2.0	42	10.4	6.4	4.0
4379	4160	44.0	41.6	2.4	31	10.0	6.0	4.0
4380	4160	46.0	.	.	39	.	.	.
4381	4160	.	.	.	.	10.4	6.0	4.4
4382	4160	46.0	43.2	2.8	35	10.0	6.0	4.0
4383	4160	46.0	.	.	34	.	.	.
4384	4160	.	.	.	22	10.0	6.0	4.0
4385	4160	28.0	25.2	2.8	23	10.0	6.0	4.0
4386	4160	26.8	.	.	21	.	.	.
4387	4160	.	.	.	41	10.0	6.0	4.0
4388	4160	26.4	24.0	2.4	22	8.8	6.0	2.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=2.91 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4389	4210	32.8	30.8	2.0	26	10.8	6.0	4.8
4390	4210	31.2	28.8	2.4	26	10.4	6.0	4.4
4391	4210	33.2	30.4	2.8	26	10.0	6.0	4.0
4392	4210	42.4	40.4	2.0	32	9.6	4.8	4.8
4393	4210	25.6	.	.	23	.	.	.
4394	4210	37.6	.	.	34	.	.	.
4395	4210	28.0	25.2	2.8	24	11.2	7.2	4.0
4396	4210	30.4	.	.	24	.	.	.
4397	4210	32.4	30.0	2.4	27	10.0	6.0	4.0
4398	4210	38.4	36.0	2.4	33	10.0	6.0	4.0
4399	4210	28.0	.	.	21	.	.	.
4400	4210	.	.	.	36	11.2	6.8	4.4
4401	4210	31.6	29.2	2.4	27	10.8	6.0	4.8
4402	4210	24.8	.	.	20	.	.	.
4403	4210	44.8	42.8	2.0	34	11.2	8.0	3.2
4404	4210	38.0	.	.	34	.	.	.
4405	4210	28.8	.	.	25	.	.	.
4406	4210	33.2	31.2	2.0	31	10.0	6.8	3.2
4407	4210	18.4	16.4	2.0	16	8.0	4.8	3.2
4408	4210	33.2	31.2	2.0	26	10.4	6.4	4.0
4409	4210	28.0	.	.	23	.	.	.
4410	4210	45.2	.	.	37	.	.	.
4411	4210	.	.	.	36	10.4	6.8	3.6
4412	4210	28.8	.	.	24	.	.	.
4413	4210	25.6	.	.	20	.	.	.
4414	4210	28.8	.	.	24	.	.	.

----- CORE=573 TIME=2.94 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4415	4260	30.8	.	.	29	.	.	.
4416	4260	41.2	.	.	32	.	.	.
4417	4260	29.6	.	.	26	.	.	.
4418	4260	25.2	.	.	20	.	.	.
4419	4260	24.8	.	.	21	.	.	.
4420	4260	30.0	28.0	2.0	25	9.2	6.0	3.2
4421	4260	34.8	32.4	2.4	28	9.2	5.2	4.0
4422	4260	22.4	.	.	20	.	.	.
4423	4260	30.8	29.2	1.6	25	8.0	4.0	4.0
4424	4260	24.0	.	.	22	.	.	.
4425	4260	33.2	30.8	2.4	27	.	.	.
4426	4260	24.4	22.0	2.4	23	8.4	6.0	2.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=2.94 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4427	4260	23.6	.	.	21	.	.	.
4428	4260	31.2	.	.	28	.	.	.
4429	4260	35.2	.	.	30	.	.	.
4430	4260	54.0	.	.	38	.	.	.
4431	4260	29.6	.	.	23	.	.	.
4432	4260	.	.	.	.	10.8	8	2.8
4433	4260	27.2	26.0	1.2	26	10.0	6	4.0
4434	4260	26.4	.	.	21	.	.	.
4435	4260	28.0	.	.	23	.	.	.
4436	4260	34.0	31.2	2.8	26	10.0	6	4.0

----- CORE=573 TIME=2.98 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4437	4310	33.2	32.0	1.2	29	9.6	6.0	3.6
4438	4310	22.0	19.2	2.8	21	8.8	5.6	3.2
4439	4310	34.8	32.4	2.4	29	9.2	4.8	4.4
4440	4310	28.0	.	.	25	.	.	.
4441	4310	45.2	.	.	37	.	.	.
4442	4310	29.2	.	.	24	.	.	.
4443	4310	34.4	32.8	1.6	30	11.2	6.8	4.4
4444	4310	23.2	20.8	2.4	22	9.2	6.0	3.2
4445	4310	38.8	.	.	34	.	.	.

----- CORE=573 TIME=3.02 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4446	4360	50.0	48.0	2.0	42	10.4	6.4	4.0
4447	4360	44.8	.	.	34	.	.	.
4448	4360	33.2	.	.	.	.	.	.
4449	4360	27.2	25.2	2.0	26	10.0	6.4	3.6
4450	4360	54.0	52.0	2.0	44	8.8	6.0	2.8
4451	4360	25.2	22.8	2.4	21	8.8	6.0	2.8
4452	4360	43.2	.	.	36	.	.	.
4453	4360	36.0	.	.	29	.	.	.
4454	4360	.	.	.	.	10.0	6.0	4.0
4455	4360	32.4	.	.	27	.	.	.
4456	4360	32.8	30.4	2.4	27	10.4	7.2	3.2
4457	4360	36.8	.	.	30	.	.	.
4458	4360	34.8	32.4	2.4	29	10.4	6.8	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=3.02 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4459	4360	26.8	24.8	2.0	24	9.2	6.0	3.2
4460	4360	31.6	.	.	.	.	.	.
4461	4360	.	.	.	26	10.0	6.0	4.0
4462	4360	28.4	26.0	2.4	23	9.2	5.6	3.6
4463	4360	26.0	24.0	2.0	23	8.0	4.8	3.2
4464	4360	27.2	.	.	22	.	.	.
4465	4360	24.0	.	.	23	.	.	.
4466	4360	37.2	.	.	31	.	.	.
4467	4360	47.6	45.2	2.4	37	11.2	6.0	5.2
4468	4360	26.8	24.8	2.0	23	8.0	4.8	3.2
4469	4360	20.8	18.4	2.4	18	8.4	4.4	4.0
4470	4360	.	.	.	27	11.2	6.0	5.2
4471	4360	38.4	.	.	30	.	.	.

----- CORE=573 TIME=3.06 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4472	4410	36.0	34.4	1.6	33	10.0	6.0	4.0
4473	4410	30.8	.	.	26	.	.	.
4474	4410	28.0	.	.	.	10.0	6.0	4.0
4475	4410	33.2	.	.	28	.	.	.
4476	4410	22.4	.	.	21	.	.	.
4477	4410	29.2	.	.	21	.	.	.
4478	4410	48.0	.	.	38	.	.	.
4479	4410	38.4	36.0	2.4	31	10.0	6.0	4.0
4480	4410	26.4	.	.	22	.	.	.
4481	4410	21.2	.	.	18	.	.	.
4482	4410	26.0	.	.	22	.	.	.
4483	4410	42.0	40.0	2.0	35	11.2	7.2	4.0
4484	4410	26.8	.	.	22	.	.	.
4485	4410	44.4	42.0	2.4	36	8.8	6.0	2.8
4486	4410	19.2	.	.	17	.	.	.
4487	4410	29.2	27.6	1.6	28	8.8	5.2	3.6
4488	4410	23.2	.	.	18	.	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=3.1 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4489	4460	33.2	31.2	2.0	27	10.0	6.8	3.2
4490	4460	28.0	26.0	2.0	23	9.2	4.0	5.2
4491	4460	20.0	.	.	20	.	.	.
4492	4460	44.0	.	.	.	.	.	.
4493	4460	32.0	.	.	28	.	.	.
4494	4460	19.2	17.2	2.0	17	8.0	5.2	2.8
4495	4460	20.4	.	.	18	.	.	.
4496	4460	22.4	.	.	20	.	.	.
4497	4460	40.4	38.4	2.0	34	10.0	6.0	4.0
4498	4460	38.8	36.4	2.4	32	12.0	8.0	4.0
4499	4460	27.2	.	.	23	.	.	.
4500	4460	34.0	32.4	1.6	28	10.0	6.0	4.0
4501	4460	30.4	28.4	2.0	25	10.8	6.4	4.4
4502	4460	35.6	.	.	31	.	.	.
4503	4460	30.8	28.8	2.0	27	10.8	6.0	4.8
4504	4460	.	.	.	.	8.8	6.0	2.8
4505	4460	.	.	.	.	10.0	6.0	4.0
4506	4460	.	.	.	30	10.8	8.0	2.8
4507	4460	28.0	.	.	24	.	.	.
4508	4460	41.6	40.0	1.6	36	10.0	7.2	2.8
4509	4460	38.4	36.0	2.4	29	11.6	6.8	4.8
4510	4460	37.6	.	.	31	.	.	.
4511	4460	19.2	17.2	2.0	15	8.4	4.8	3.6
4512	4460	25.2	.	.	22	.	.	.
4513	4460	36.0	.	.	34	.	.	.
4514	4460	44.0	.	.	37	.	.	.
4515	4460	36.8	34.8	2.0	29	10.0	6.0	4.0
4516	4460	28.8	.	.	25	.	.	.
4517	4460	34.0	.	.	29	.	.	.

----- CORE=573 TIME=3.14 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4518	4510	39.2	.	.	33	.	.	.
4519	4510	35.2	33.6	1.6	30	11.2	7.2	4.0
4520	4510	33.2	31.2	2.0	30	9.2	6.0	3.2
4521	4510	38.0	.	.	29	.	.	.
4522	4510	42.0	.	.	34	.	.	.
4523	4510	41.2	39.2	2.0	37	11.2	6.8	4.4
4524	4510	26.4	.	.	25	.	.	.
4525	4510	26.4	.	.	30	.	.	.
4526	4510	31.2	.	.	27	.	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=3.14 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4527	4510	.	.	.	34	11.2	7.2	4

----- CORE=573 TIME=3.17 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4528	4560	30.8	.	.	26	.	.	.
4529	4560	33.2	.	.	29	.	.	.
4530	4560	32.4	.	.	29	.	.	.
4531	4560	26.0	.	.	22	.	.	.
4532	4560	36.4	.	.	.	.	.	.
4533	4560	39.2	.	.	34	.	.	.
4534	4560	25.2	22.8	2.4	22	9.2	6	3.2
4535	4560	35.2	.	.	30	.	.	.

----- CORE=573 TIME=3.28 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4536	4610	37.2	36.0	1.2	30	10.8	8.0	2.8
4537	4610	35.6	32.8	2.8	29	10.8	8.0	2.8
4538	4610	27.2	26.0	1.2	21	7.6	4.0	3.6
4539	4610	42.0	40.4	1.6	37	10.0	6.8	3.2
4540	4610	30.8	.	.	.	9.2	6.0	3.2
4541	4610	.	.	.	.	10.0	6.4	3.6
4542	4610	28.0	26.8	1.2	23	8.8	4.0	4.8
4543	4610	31.6	29.6	2.0	25	9.2	6.0	3.2
4544	4610	30.0	.	.	25	.	.	.
4545	4610	26.0	24.0	2.0	22	8.8	5.6	3.2
4546	4610	47.2	45.2	2.0	37	9.2	5.2	4.0
4547	4610	18.8	16.8	2.0	17	7.2	4.0	3.2
4548	4610	22.4	20.4	2.0	22	8.0	5.2	2.8
4549	4610	.	.	.	.	8.0	4.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=3.39 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4550	4660	34.0	32.4	1.6	27	.	.	.
4551	4660	29.2	27.2	2.0	23	10.0	6.0	4.0
4552	4660	20.0	.	.	17	.	.	.
4553	4660	30.8	29.2	1.6	26	.	.	.
4554	4660	49.2	48.0	1.2	40	11.2	6.4	4.8
4555	4660	40.0	.	.	31	.	.	.
4556	4660	46.0	44.8	1.2	37	10.0	6.0	4.0
4557	4660	30.0	.	.	22	.	.	.
4558	4660	.	.	.	39	10.0	6.0	4.0
4559	4660	21.6	20.0	1.6	18	9.2	6.0	3.2
4560	4660	38.4	37.2	1.2	29	10.8	8.0	2.8
4561	4660	32.0	29.6	2.4	29	10.0	6.4	3.6
4562	4660	33.2	31.2	2.0	29	10.0	6.4	3.6
4563	4660	28.8	26.4	2.4	26	10.0	6.0	4.0
4564	4660	.	.	.	.	10.0	7.2	2.8
4565	4660	32.8	30.4	2.4	27	10.0	6.0	4.0
4566	4660	32.8	30.0	2.8	26	10.0	6.0	4.0
4567	4660	38.0	36.0	2.0	33	10.8	8.0	2.8
4568	4660	36.8	.	.	31	.	.	.
4569	4660	30.8	.	.	27	.	.	.
4570	4660	31.2	29.2	2.0	26	10.8	6.8	4.0
4571	4660	36.0	34.4	1.6	32	11.2	6.8	4.4
4572	4660	38.8	36.8	2.0	33	10.0	6.0	4.0
4573	4660	46.4	44.0	2.4	46	10.4	6.8	3.6
4574	4660	37.2	35.2	2.0	32	10.0	6.0	4.0
4575	4660	42.0	.	.	36	.	.	.
4576	4660	38.0	36.0	2.0	32	12.0	8.0	4.0
4577	4660	24.0	22.0	2.0	19	8.4	5.2	3.2
4578	4660	36.8	.	.	32	.	.	.
4579	4660	24.4	.	.	22	.	.	.
4580	4660	34.0	31.6	2.4	27	10.0	6.0	4.0
4581	4660	28.8	26.0	2.8	26	10.0	6.0	4.0
4582	4660	18.8	16.8	2.0	20	8.0	4.4	3.6
4583	4660	33.2	30.8	2.4	26	9.2	5.2	4.0
4584	4660	46.8	44.0	2.8	37	10.0	6.8	3.2
4585	4660	26.8	24.0	2.8	24	9.6	6.0	3.6
4586	4660	25.6	24.0	1.6	22	10.0	6.0	4.0
4587	4660	24.8	22.8	2.0	23	9.2	6.0	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=3.43 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4588	4750	.	.	.	.	10.0	6.0	4.0
4589	4750	29.6	28.0	1.6	25	9.6	6.8	2.8
4590	4750	20.4	18.8	1.6	21	8.4	6.0	2.4
4591	4750	30.4	28.4	2.0	23	.	.	.
4592	4750	25.2	23.2	2.0	20	.	.	.
4593	4750	38.8	37.2	1.6	34	.	.	.
4594	4750	38.4	36.4	2.0	31	10.4	7.2	3.2
4595	4750	34.0	32.0	2.0	26	.	.	.
4596	4750	37.2	35.2	2.0	30	.	.	.
4597	4750	.	.	.	.	10.0	6.8	3.2
4598	4750	32.0	30.4	1.6	27	10.0	6.8	3.2
4599	4750	20.8	18.4	2.4	21	.	.	.
4600	4750	32.8	31.2	1.6	27	.	.	.
4601	4750	29.6	28.4	1.2	26	9.6	7.2	2.4
4602	4750	33.2	31.6	1.6	28	10.0	6.8	3.2
4603	4750	33.2	31.6	1.6	28	8.8	4.8	4.0
4604	4750	37.2	.	.	32	.	.	.
4605	4750	49.2	48.0	1.2	38	9.6	7.2	2.4
4606	4750	22.0	20.0	2.0	21	8.0	4.0	4.0
4607	4750	24.0	22.4	1.6	21	.	.	.
4608	4750	22.0	.	.	19	.	.	.
4609	4750	26.0	24.0	2.0	29	10.8	7.2	3.6
4610	4750	36.8	35.6	1.2	32	10.0	6.0	4.0
4611	4750	20.0	.	.	20	6.0	.	.
4612	4710	44.0	42.0	2.0	36	.	.	.
4613	4710	31.6	30.0	1.6	27	.	.	.
4614	4710	22.0	21.2	0.8	18	.	.	.
4615	4710	38.8	37.2	1.6	29	10.4	7.2	3.2
4616	4710	28.0	.	.	25	.	.	.
4617	4710	37.2	.	.	30	.	.	.
4618	4710	26.0	24.0	2.0	21	9.2	6.0	3.2
4619	4710	30.0	28.0	2.0	26	10.0	8.0	2.0
4620	4710	30.0	27.2	2.8	24	10.0	6.0	4.0
4621	4710	40.8	39.2	1.6	33	9.2	6.8	2.4
4622	4710	33.2	32.0	1.2	28	10.8	6.8	4.0
4623	4710	29.6	28.0	1.6	27	.	.	.
4624	4710	37.2	35.2	2.0	30	.	.	.
4625	4710	36.0	34.0	2.0	.	9.6	5.2	4.4
4626	4710	20.8	19.2	1.6	17	8.4	5.2	3.2
4627	4760	26.8	.	.	23	.	.	.
4628	4760	42.0	40.0	2.0	33	10.8	6.0	4.8
4629	4760	35.6	33.6	2.0	27	8.0	6.0	2.0
4630	4760	25.2	22.0	3.2	23	9.6	6.0	3.6
4631	4760	.	.	.	32	8.0	5.2	2.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=3.43 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4632	4760	18.8	.	.	18	.	.	.
4633	4760	42.4	40.8	1.6	39	9.2	6.0	3.2
4634	4760	27.2	.	.	23	.	.	.
4635	4760	46.0	44.0	2.0	36	9.2	6.0	3.2
4636	4710	.	.	.	34	10.0	6.4	3.6
4637	4710	30.0	.	.	29	.	.	.
4638	4710	41.2	40.0	1.2	36	10.4	7.2	3.2
4639	4710	19.2	18.0	1.2	17	8.4	4.8	3.6
4640	4710	33.2	31.2	2.0	29	9.2	6.0	3.2
4641	4710	23.2	.	.	19	.	.	.
4642	4710	.	.	.	.	10.0	6.0	4.0
4643	4710	32.0	.	.	28	.	.	.
4644	4710	36.8	34.8	2.0	31	10.0	6.0	4.0
4645	4710	32.8	30.4	2.4	31	10.0	6.0	4.0
4646	4710	32.8	30.8	2.0	29	10.0	6.8	3.2
4647	4710	22.8	20.8	2.0	21	8.0	6.0	2.0

----- CORE=573 TIME=3.45 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4648	4808	29.2	28.0	1.2	26	8.8	6.0	2.8
4649	4808	23.6	22.4	1.2	19	.	.	.
4650	4808	.	.	.	.	6.8	4.0	2.8
4651	4808	24.0	22.8	1.2	20	8.0	4.0	4.0
4652	4808	.	.	.	.	9.2	6.0	3.2
4653	4808	27.6	26.4	1.2	24	8.0	5.2	2.8
4654	4808	18.0	16.8	1.2	17	7.2	4.0	3.2
4655	4808	21.6	20.0	1.6	20	8.8	6.4	2.4
4656	4808	26.0	25.2	0.8	23	.	.	.
4657	4808	32.8	31.2	1.6	28	10.0	6.0	4.0
4658	4808	42.0	40.4	1.6	32	8.4	4.4	4.0
4659	4808	38.8	37.2	1.6	31	10.0	6.0	4.0
4660	4808	23.6	22.0	1.6	20	8.0	4.0	4.0
4661	4808	40.4	39.6	0.8	31	10.0	6.0	4.0
4662	4808	48.0	46.0	2.0	38	10.0	6.8	3.2
4663	4808	30.8	29.6	1.2	26	9.2	6.4	2.8
4664	4808	44.0	42.4	1.6	36	10.0	6.0	4.0
4665	4808	.	.	.	.	10.0	5.2	4.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-573 TIME-3.5 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4666	4930	17.2	14.8	2.4	16	8.0	4.0	4.0
4667	4930	20.8	18.0	2.8	20	8.0	4.8	3.2
4668	4930	17.2	16.0	1.2	16	7.6	4.0	3.6
4669	4930	.	.	.	.	10.0	5.2	4.8
4670	4930	40.0	37.6	2.4	31	10.4	8.0	2.4
4671	4930	17.2	16.0	1.2	14	8.4	4.8	3.6
4672	4930	22.8	21.2	1.6	20	9.2	6.4	2.8
4673	4930	.	.	.	.	8.0	4.8	3.2
4674	4930	24.8	22.8	2.0	19	8.8	6.0	2.8
4675	4930	26.4	24.4	2.0	25	10.0	6.0	4.0
4676	4930	27.2	26.0	1.2	23	8.4	6.0	2.4
4677	4930	21.2	18.8	2.4	20	8.0	5.2	2.8
4678	4930	21.6	20.0	1.6	20	8.4	4.8	3.6
4679	4930	36.8	34.8	2.0	30	8.8	6.0	2.8
4680	4930	34.0	32.0	2.0	29	10.0	6.8	3.2
4681	4930	23.2	20.8	2.4	20	8.4	5.6	2.8
4682	4930	26.4	24.8	1.6	22	10.0	6.0	4.0
4683	4930	24.4	22.8	1.6	21	8.4	4.8	3.6
4684	4930	18.8	17.2	1.6	19	8.0	4.0	4.0
4685	4930	23.6	22.0	1.6	21	8.0	4.0	4.0
4686	4930	21.2	18.8	2.4	19	8.4	6.0	2.4
4687	4930	24.8	23.2	1.6	21	8.4	5.6	2.8
4688	4930	36.0	34.4	1.6	35	10.0	7.6	2.4
4689	4930	29.2	26.8	2.4	24	9.6	6.0	3.6
4690	4930	28.0	25.2	2.8	25	9.6	6.0	3.6
4691	4930	28.0	26.4	1.6	23	10.0	6.8	3.2
4692	4980	.	.	.	.	11.2	6.0	5.2
4693	4980	24.0	22.4	1.6	20	8.8	6.4	2.4
4694	4980	31.2	30.0	1.2	26	10.4	8.0	2.4
4695	4980	23.6	21.6	2.0	21	8.0	4.0	4.0
4696	4980	38.4	.	.	29	10.0	.	.
4697	4980	26.8	25.2	1.6	23	9.6	6.8	2.8
4698	4980	25.2	22.8	2.4	19	10.0	6.8	3.2
4699	4980	44.8	42.0	2.8	35	9.6	6.0	3.6
4700	4980	26.0	23.2	2.8	20	10.0	6.8	3.2
4701	4980	.	.	.	.	10.0	6.8	3.2
4702	4980	24.0	22.0	2.0	19	9.6	6.0	3.6
4703	4980	.	.	.	.	10.0	6.4	3.6
4704	4980	.	.	.	.	10.4	8.0	2.4
4705	4980	42.8	41.2	1.6	36	10.0	7.2	2.8
4706	4980	38.0	36.8	1.2	32	9.6	6.8	2.8
4707	4980	25.6	23.2	2.4	23	10.8	6.8	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-573 TIME=3.53 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4708	5030	24.8	23.2	1.6	20	10.0	4.8	5.2
4709	5030	39.2	36.8	2.4	30	10.0	7.2	2.8
4710	5030	23.2	20.0	3.2	22	10.0	6.0	4.0
4711	5030	24.0	20.8	3.2	18	10.0	6.0	4.0
4712	5030	52.8	51.2	1.6	41	12.0	8.0	4.0
4713	5030	36.0	32.8	3.2	31	12.0	7.2	4.8
4714	5030	34.0	32.0	2.0	24	11.2	6.0	5.2
4715	5030	16.8	14.0	2.8	20	11.2	8.0	3.2
4716	5030	30.0	27.2	2.8	23	10.0	6.0	4.0
4717	5030	43.2	39.2	4.0	29	12.8	10.0	2.8
4718	5030	52.8	50.0	2.8	36	12.0	9.2	2.8
4719	5030	27.2	24.0	3.2	22	11.2	8.0	3.2
4720	5030	32.0	28.8	3.2	25	10.0	7.2	2.8
4721	5030	27.2	24.8	2.4	22	10.0	6.0	4.0
4722	5030	40.0	36.8	3.2	29	11.2	7.2	4.0
4723	5030	26.0	23.2	2.8	19	10.0	7.2	2.8
4724	5030	35.2	32.8	2.4	29	12.0	8.0	4.0
4725	5030	20.8	19.2	1.6	17	9.2	6.0	3.2
4726	5030	20.0	19.2	0.8	18	9.2	6.0	3.2
4727	5030	52.8	51.2	1.6	39	11.2	8.0	3.2
4728	5030	40.0	36.0	4.0	29	12.8	9.2	3.6
4729	5030	27.2	24.8	2.4	21	9.2	5.2	4.0
4730	5030	24.8	24.0	0.8	22	11.2	8.0	3.2
4731	5030	28.8	26.0	2.8	24	10.0	6.0	4.0
4732	5030	32.8	30.0	2.8	22	9.2	5.2	4.0
4733	5030	52.0	47.2	4.8	40	12.0	9.2	2.8
4734	5030	40.0	36.0	4.0	29	12.0	9.2	2.8
4735	5030	28.0	24.8	3.2	22	12.0	9.2	2.8
4736	5030	34.0	32.0	2.0	26	12.8	10.0	2.8
4737	5030	44.0	42.0	2.0	39	12.0	9.2	2.8

----- CORE-573 TIME=3.55 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4738	5080	26.8	24.0	2.8	22	10.0	6.0	4.0
4739	5080	42.0	40.0	2.0	31	11.2	6.0	5.2
4740	5080	23.6	22.0	1.6	21	10.0	6.4	3.6
4741	5080	42.0	40.0	2.0	37	10.0	6.0	4.0
4742	5080	42.8	40.4	2.4	31	10.8	8.0	2.8
4743	5080	26.4	25.2	1.2	21	8.8	6.0	2.8
4744	5080	28.4	26.8	1.6	22	8.8	5.2	3.6
4745	5080	23.2	22.4	0.8	21	10.0	7.6	2.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=3.55 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4746	5080	29.2	26.8	2.4	23	10.8	8.0	2.8
4747	5080	30.0	28.0	2.0	27	10.4	8.0	2.4
4748	5080	33.6	32.0	1.6	28	9.2	6.0	3.2
4749	5080	33.2	31.2	2.0	28	11.2	7.2	4.0
4750	5080	38.0	36.8	1.2	31	11.2	8.0	3.2
4751	5080	25.2	22.4	2.8	23	9.6	6.8	2.8
4752	5080	27.6	26.0	1.6	28	10.0	6.8	3.2
4753	5080	37.2	35.2	2.0	29	12.0	8.8	3.2
4754	5080	36.0	34.0	2.0	33	10.4	7.6	2.8
4755	5080	41.2	40.0	1.2	32	11.2	7.2	4.0
4756	5080	26.8	25.6	1.2	22	8.0	4.0	4.0
4757	5080	26.8	24.8	2.0	21	9.6	4.8	4.8
4758	5080	26.4	23.6	2.8	22	9.6	4.0	5.6
4759	5080	41.6	39.2	2.4	32	10.0	6.4	3.6
4760	5080	26.8	24.8	2.0	23	10.0	6.0	4.0
4761	5080	18.4	15.6	2.8	20	7.2	4.8	2.4
4762	5080	44.0	42.0	2.0	34	10.8	6.8	4.0
4763	5080	33.2	31.2	2.0	28	10.8	8.0	2.8
4764	5080	48.0	44.0	4.0	37	11.6	8.0	3.6
4765	5080	18.8	17.2	1.6	17	8.4	5.2	3.2
4766	5080	30.4	29.2	1.2	26	10.4	8.0	2.4
4767	5080	44.0	40.0	4.0	35	10.0	7.2	2.8

----- CORE=573 TIME=3.57 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4768	5130	27.2	25.2	2.0	18	8.8	6.0	2.8
4769	5130	18.8	17.2	1.6	14	8.8	6.0	2.8
4770	5130	14.0	12.0	2.0	13	7.6	4.0	3.6
4771	5130	22.8	21.6	1.2	19	10.8	8.0	2.8
4772	5130	.	.	.	.	10.0	6.4	3.6
4773	5130	23.2	21.2	2.0	18	9.2	6.0	3.2
4774	5130	36.4	34.0	2.4	31	10.0	6.0	4.0
4775	5130	.	.	.	.	8.4	6.0	2.4
4776	5130	.	.	.	.	9.2	6.0	3.2
4777	5130	21.2	20.4	0.8	22	10.0	6.0	4.0
4778	5130	18.8	17.6	1.2	15	8.8	6.4	2.4
4779	5130	.	.	.	.	10.4	7.6	2.8
4780	5130	24.4	21.2	3.2	18	10.0	6.0	4.0
4781	5130	23.2	21.6	1.6	23	9.2	5.2	4.0
4782	5130	20.8	19.2	1.6	18	8.4	6.0	2.4
4783	5130	20.4	17.6	2.8	16	8.0	4.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=3.57 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4784	5130	35.2	34.0	1.2	30	10.0	7.2	2.8
4785	5130	48.0	43.2	4.8	37	10.0	6.0	4.0
4786	5130	32.8	30.0	2.8	26	10.4	6.0	4.4
4787	5130	22.4	20.4	2.0	21	9.6	7.2	2.4
4788	5130	19.2	17.2	2.0	17	9.6	6.0	3.6
4789	5130	33.2	31.6	1.6	27	11.2	7.2	4.0
4790	5130	30.0	28.4	1.6	25	10.4	8.0	2.4
4791	5130	25.2	23.2	2.0	21	9.2	6.0	3.2
4792	5130	24.8	22.8	2.0	23	8.8	4.8	4.0
4793	5130	18.4	17.2	1.2	16	8.0	4.0	4.0
4794	5130	18.8	17.6	1.2	16	7.6	4.0	3.6
4795	5130	38.0	36.0	2.0	31	10.4	7.2	3.2
4796	5130	28.8	27.2	1.6	24	10.0	7.2	2.8
4797	5130	29.2	27.2	2.0	25	10.0	7.2	2.8
4798	5130	25.2	22.4	2.8	21	10.0	6.4	3.6
4799	5130	20.8	19.2	1.6	19	9.2	6.8	2.4

----- CORE=573 TIME=3.59 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4800	5180	26.4	23.2	3.2	20	10.0	6.0	4.0
4801	5180	41.2	40.0	1.2	34	10.8	6.8	4.0
4802	5180	23.2	21.2	2.0	19	9.6	7.2	2.4
4803	5180	42.0	41.2	0.8	36	10.0	6.0	4.0
4804	5180	23.6	22.0	1.6	20	8.0	4.0	4.0
4805	5180	44.0	41.2	2.8	35	10.0	6.0	4.0
4806	5180	23.2	22.0	1.2	21	9.2	6.8	2.4
4807	5180	21.2	19.2	2.0	15	8.8	6.0	2.8
4808	5180	52.0	50.0	2.0	42	10.0	7.2	2.8
4809	5180	25.2	24.0	1.2	21	8.8	6.8	2.0
4810	5180	32.8	30.8	2.0	26	10.8	6.4	4.4
4811	5180	27.2	26.0	1.2	24	9.6	7.2	2.4
4812	5180	30.8	27.6	3.2	24	10.0	6.0	4.0
4813	5180	32.0	.	.	26	.	.	.
4814	5180	40.8	39.6	1.2	32	11.2	7.2	4.0
4815	5180	30.4	29.2	1.2	27	12.0	9.2	2.8
4816	5180	55.2	52.0	3.2	44	11.2	8.0	3.2
4817	5180	31.6	30.0	1.6	26	10.0	6.0	4.0
4818	5180	18.0	17.6	0.4	15	8.0	5.2	2.8
4819	5180	32.0	29.2	2.8	24	12.0	8.4	3.6
4820	5180	34.0	31.6	2.4	28	10.0	6.4	3.6
4821	5180	30.4	26.8	3.6	26	10.8	7.2	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=3.59 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4822	5180	50.0	48.0	2.0	41	8.8	4.8	4.0
4823	5180	17.2	15.6	1.6	15	8.0	5.2	2.8
4824	5180	30.0	27.2	2.8	25	10.0	7.2	2.8
4825	5180	27.2	25.2	2.0	20	10.0	7.2	2.8
4826	5180	18.8	17.2	1.6	17	10.0	6.0	4.0
4827	5180	28.0	26.4	1.6	23	12.4	9.2	3.2
4828	5180	54.8	53.2	1.6	46	9.2	6.8	2.4
4829	5180	22.8	21.2	1.6	19	9.6	6.8	2.8

----- CORE=573 TIME=3.61 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4830	5230	20.0	17.6	2.4	17	10.0	6.0	4.0
4831	5230	40.8	40.0	0.8	35	9.6	6.8	2.8
4832	5230	18.8	18.0	0.8	18	9.2	5.6	3.6
4833	5230	25.2	24.0	1.2	23	9.6	6.0	3.6
4834	5230	34.8	30.8	4.0	27	10.8	6.8	4.0
4835	5230	34.0	31.6	2.4	27	10.8	8.0	2.8
4836	5230	26.4	24.4	2.0	22	10.8	7.2	3.6
4837	5230	22.4	20.4	2.0	20	8.8	6.0	2.8
4838	5230	25.2	23.2	2.0	23	9.2	6.0	3.2
4839	5230	24.0	22.0	2.0	21	10.0	6.0	4.0
4840	5230	20.0	17.2	2.8	15	8.4	5.6	2.8
4841	5230	16.0	14.8	1.2	18	6.0	3.2	2.8
4842	5230	26.0	24.8	1.2	20	10.4	8.0	2.4
4843	5230	25.6	23.2	2.4	22	10.0	7.2	2.8
4844	5230	24.4	21.6	2.8	19	10.0	7.2	2.8
4845	5230	23.2	21.6	1.6	18	9.6	6.0	3.6
4846	5230	30.4	28.8	1.6	24	10.0	7.6	2.4
4847	5230	30.0	28.8	1.2	27	10.0	7.2	2.8
4848	5230	26.0	24.0	2.0	22	10.0	6.0	4.0
4849	5230	26.8	25.6	1.2	21	7.6	4.0	3.6
4850	5230	28.4	27.2	1.2	21	11.2	7.2	4.0
4851	5230	48.0	46.0	2.0	38	11.2	8.0	3.2
4852	5230	30.0	28.4	1.6	25	9.2	6.0	3.2
4853	5230	28.0	24.8	3.2	24	8.4	5.2	3.2
4854	5230	22.8	20.4	2.4	17	10.0	6.8	3.2
4855	5230	30.0	28.4	1.6	24	11.6	8.0	3.6
4856	5230	26.4	24.8	1.6	21	10.8	6.8	4.0
4857	5230	17.2	15.2	2.0	14	6.8	4.0	2.8
4858	5230	34.0	31.2	2.8	29	10.0	7.2	2.8
4859	5230	41.2	39.6	1.6	31	10.0	6.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=3.63 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4860	5280	28.8	27.2	1.6	23	8.8	6.0	2.8
4861	5280	33.6	32.4	1.2	29	10.8	7.2	3.6
4862	5280	37.2	35.2	2.0	28	10.8	6.0	4.8
4863	5280	39.2	37.2	2.0	31	10.4	7.2	3.2
4864	5280	36.4	34.4	2.0	30	10.0	6.0	4.0
4865	5280	33.2	30.8	2.4	27	10.0	7.2	2.8
4866	5280	31.2	30.4	0.8	27	10.0	6.8	3.2
4867	5280	46.0	42.8	3.2	36	11.2	8.0	3.2
4868	5280	37.2	35.2	2.0	31	10.4	7.6	2.8
4869	5280	25.2	22.8	2.4	21	10.0	6.0	4.0
4870	5280	26.0	23.2	2.8	24	10.0	6.8	3.2
4871	5280	31.2	29.2	2.0	33	12.0	9.2	2.8
4872	5280	17.2	15.2	2.0	14	8.8	4.8	4.0
4873	5280	37.2	35.6	1.6	31	9.6	6.0	3.6
4874	5280	19.2	17.2	2.0	17	9.2	6.8	2.4
4875	5280	30.8	29.2	1.6	27	10.0	7.2	2.8
4876	5280	18.4	16.0	2.4	17	8.0	4.0	4.0
4877	5280	26.0	24.8	1.2	22	10.0	7.6	2.4
4878	5280	52.8	50.0	2.8	43	10.0	6.0	4.0
4879	5280	29.2	27.6	1.6	38	6.8	4.0	2.8
4880	5280	60.8	58.0	2.8	44	11.2	8.0	3.2
4881	5280	26.8	25.2	1.6	22	10.0	7.2	2.8
4882	5280	44.0	42.0	2.0	35	10.0	6.0	4.0
4883	5280	18.0	16.0	2.0	17	9.2	6.0	3.2

----- CORE=573 TIME=3.66 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4884	5330	.	.	.	.	8.8	6.0	2.8
4885	5330	38.4	36.8	1.6	27	10.4	8.0	2.4
4886	5330	36.0	33.2	2.8	25	11.2	8.0	3.2
4887	5330	43.2	41.2	2.0	34	8.4	5.2	3.2
4888	5330	22.4	19.6	2.8	19	8.4	5.2	3.2
4889	5330	29.2	26.0	3.2	22	11.2	8.0	3.2
4890	5330	44.0	42.0	2.0	41	10.8	8.0	2.8
4891	5330	19.2	17.2	2.0	17	8.4	6.0	2.4
4892	5330	33.2	.	.	26	.	.	.
4893	5330	.	.	.	.	8.0	5.2	2.8
4894	5330	18.8	17.6	1.2	18	6.8	4.0	2.8
4895	5330	.	.	.	.	10.0	6.0	4.0
4896	5330	25.2	24.4	0.8	22	10.0	6.0	4.0
4897	5330	20.0	.	.	22	5.2	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=3.66 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4898	5330	16.8	.	.	17	8.4	.	.
4899	5330	23.2	21.6	1.6	20	10.0	6.0	4.0
4900	5330	36.0	34.4	1.6	30	10.0	6.0	4.0
4901	5330	26.4	25.2	1.2	31	7.2	3.2	4.0
4902	5330	21.6	18.8	2.8	18	8.4	6.0	2.4
4903	5330	36.4	32.8	3.6	26	9.6	7.2	2.4
4904	5330	28.0	25.2	2.8	21	10.0	6.4	3.6
4905	5330	36.4	35.2	1.2	27	11.6	8.8	2.8

----- CORE=573 TIME=3.68 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4906	5380	34.4	32.8	1.6	28	10.0	6.0	4.0
4907	5380	15.2	13.2	2.0	13	7.6	4.0	3.6
4908	5380	32.8	31.2	1.6	29	10.0	7.2	2.8
4909	5380	32.8	29.6	3.2	27	11.6	7.2	4.4
4910	5380	25.6	23.6	2.0	18	10.0	6.0	4.0
4911	5380	17.2	15.2	2.0	14	7.6	4.0	3.6
4912	5380	17.2	14.4	2.8	14	6.8	4.0	2.8
4913	5380	26.8	24.4	2.4	21	10.0	7.2	2.8
4914	5380	29.2	28.0	1.2	22	10.0	6.8	3.2
4915	5380	34.8	32.8	2.0	30	10.4	6.4	4.0
4916	5380	22.8	20.8	2.0	19	10.0	7.2	2.8
4917	5380	32.0	29.2	2.8	23	11.2	8.0	3.2
4918	5380	36.4	34.4	2.0	28	11.6	8.0	3.6
4919	5380	36.4	33.6	2.8	29	11.6	7.2	4.4
4920	5380	18.8	17.6	1.2	14	8.0	5.2	2.8
4921	5380	33.2	30.8	2.4	25	9.2	5.6	3.6
4922	5380	30.4	27.6	2.8	25	11.6	7.2	4.4
4923	5380	29.2	26.4	2.8	21	10.0	6.8	3.2
4924	5380	17.2	15.2	2.0	15	9.6	6.0	3.6
4925	5380	29.6	27.6	2.0	28	9.6	7.2	2.4
4926	5380	34.0	32.4	1.6	28	10.0	6.4	3.6
4927	5380	60.0	57.2	2.8	43	10.0	6.0	4.0
4928	5380	24.4	22.0	2.4	19	10.0	7.2	2.8
4929	5380	25.2	23.6	1.6	18	10.0	6.8	3.2
4930	5380	32.8	31.2	1.6	25	10.0	6.8	3.2
4931	5380	26.8	24.4	2.4	21	10.0	7.2	2.8
4932	5380	24.4	22.8	1.6	22	10.0	6.8	3.2
4933	5380	24.0	22.0	2.0	19	10.0	7.6	2.4
4934	5380	33.6	32.0	1.6	30	11.2	7.2	4.0
4935	5380	24.0	22.0	2.0	20	8.0	4.8	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=3.7 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4936	5430	30.0	27.2	2.8	24	10.8	7.2	3.6
4937	5430	42.0	40.0	2.0	33	11.2	8.0	3.2
4938	5430	38.8	36.8	2.0	29	12.0	8.0	4.0
4939	5430	30.0	27.2	2.8	25	10.0	6.0	4.0
4940	5430	25.2	23.2	2.0	20	8.0	4.0	4.0
4941	5430	29.2	26.4	2.8	20	10.0	7.2	2.8
4942	5430	28.0	25.2	2.8	23	10.0	6.0	4.0
4943	5430	21.2	19.2	2.0	17	7.2	4.0	3.2
4944	5430	23.2	21.6	1.6	20	9.6	6.8	2.8
4945	5430	30.0	26.8	3.2	24	10.4	8.0	2.4
4946	5430	39.2	37.6	1.6	30	10.0	7.2	2.8
4947	5430	43.2	41.2	2.0	34	10.8	6.8	4.0
4948	5430	25.2	22.0	3.2	18	10.0	6.8	3.2
4949	5430	43.2	40.0	3.2	34	9.2	5.2	4.0
4950	5430	22.0	20.0	2.0	17	8.8	5.6	3.2
4951	5430	27.2	24.8	2.4	21	10.8	7.2	3.6
4952	5430	29.6	27.2	2.4	26	10.0	6.4	3.6
4953	5430	22.4	21.6	0.8	15	9.2	7.2	2.0
4954	5430	30.4	28.8	1.6	24	12.0	8.8	3.2
4955	5430	26.0	24.8	1.2	18	10.0	6.8	3.2
4956	5430	32.0	29.6	2.4	27	9.6	7.2	2.4
4957	5430	34.0	30.4	3.6	25	10.0	6.0	4.0
4958	5430	18.4	17.2	1.2	17	6.0	3.2	2.8
4959	5430	30.8	29.6	1.2	27	9.6	6.8	2.8
4960	5430	23.6	22.0	1.6	18	10.0	6.0	4.0

----- CORE=573 TIME=3.72 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4961	5480	41.2	39.6	1.6	39	10.8	7.2	3.6
4962	5480	34.0	31.2	2.8	28	10.4	6.0	4.4
4963	5480	21.2	19.6	1.6	18	8.4	6.0	2.4
4964	5480	25.2	22.4	2.8	19	10.4	6.0	4.4
4965	5480	37.2	34.8	2.4	28	10.0	6.0	4.0
4966	5480	34.4	33.2	1.2	26	9.2	6.0	3.2
4967	5480	30.8	29.2	1.6	24	10.0	6.0	4.0
4968	5480	25.6	22.8	2.8	20	9.2	6.8	2.4
4969	5480	26.0	24.0	2.0	22	9.6	6.8	2.8
4970	5480	41.2	40.0	1.2	31	10.0	6.0	4.0
4971	5480	37.2	34.0	3.2	27	10.8	7.2	3.6
4972	5480	20.0	18.4	1.6	16	8.4	4.8	3.6
4973	5480	25.2	23.6	1.6	21	10.0	6.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-573 TIME-3.72 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4974	5480	29.2	26.4	2.8	23	9.6	6.8	2.8
4975	5480	32.8	31.6	1.2	27	10.0	6.0	4.0
4976	5480	48.0	46.4	1.6	44	11.6	9.2	2.4
4977	5480	18.0	16.0	2.0	15	8.0	5.2	2.8
4978	5480	22.4	20.0	2.4	18	8.0	5.6	2.4
4979	5480	24.8	22.4	2.4	20	8.4	6.0	2.4
4980	5480	22.0	20.0	2.0	18	8.0	4.0	4.0
4981	5480	23.2	21.2	2.0	18	9.2	6.0	3.2
4982	5480	25.2	23.2	2.0	19	10.0	6.0	4.0
4983	5480	20.0	17.6	2.4	15	8.8	6.0	2.8
4984	5480	33.6	32.0	1.6	27	12.0	8.8	3.2
4985	5480	23.6	21.2	2.4	17	8.0	4.0	4.0
4986	5480	21.2	19.2	2.0	17	9.6	6.0	3.6
4987	5480	14.8	13.2	1.6	13	7.2	4.8	2.4

----- CORE-573 TIME-3.74 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
4988	5520	24.4	23.2	1.2	21	8.4	6.0	2.4
4989	5520	23.6	22.0	1.6	21	8.0	4.0	4.0
4990	5520	22.0	20.0	2.0	17	8.0	5.2	2.8
4991	5520	21.2	18.8	2.4	19	8.0	4.0	4.0
4992	5520	34.0	31.6	2.4	32	9.6	6.0	3.6
4993	5520	25.6	23.6	2.0	22	9.2	6.0	3.2
4994	5520	32.0	30.0	2.0	40	6.4	4.0	2.4
4995	5520	48.0	45.2	2.8	38	9.2	6.0	3.2
4996	5520	22.4	20.8	1.6	18	9.2	6.0	3.2
4997	5520	29.2	27.6	1.6	24	9.2	6.0	3.2
4998	5520	33.2	31.2	2.0	28	10.0	7.2	2.8
4999	5520	34.0	31.2	2.8	28	10.0	6.4	3.6
5000	5520	23.2	22.4	0.8	19	8.8	6.0	2.8
5001	5520	18.0	17.2	0.8	16	8.0	4.0	4.0
5002	5520	18.0	15.6	2.4	16	8.0	4.8	3.2
5003	5520	20.0	17.6	2.4	15	8.0	5.2	2.8
5004	5520	33.2	31.6	1.6	30	10.0	7.2	2.8
5005	5520	30.4	28.0	2.4	26	9.2	6.0	3.2
5006	5520	32.8	30.0	2.8	26	10.8	8.4	2.4
5007	5520	24.8	22.8	2.0	20	10.0	6.4	3.6
5008	5520	24.0	22.4	1.6	20	8.4	6.0	2.4
5009	5520	25.2	23.6	1.6	18	9.2	6.0	3.2
5010	5520	23.6	22.0	1.6	19	8.0	4.0	4.0
5011	5520	26.4	24.4	2.0	20	9.2	5.2	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=3.74 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5012	5520	37.6	35.6	2.0	30	10.4	6.4	4.0
5013	5520	30.0	28.8	1.2	23	10.0	6.0	4.0
5014	5520	29.2	26.8	2.4	25	10.0	7.2	2.8
5015	5520	31.2	29.2	2.0	28	9.2	6.8	2.4
5016	5520	26.8	24.8	2.0	21	8.8	4.8	4.0

----- CORE=573 TIME=3.76 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5017	5580	35.2	32.8	2.4	29	10.0	6.4	3.6
5018	5580	28.0	26.8	1.2	25	8.4	6.0	2.4
5019	5580	36.4	34.8	1.6	42	7.6	4.0	3.6
5020	5580	56.8	54.8	2.0	43	7.6	4.0	3.6
5021	5580	34.8	32.4	2.4	29	10.0	6.0	4.0
5022	5580	40.8	38.4	2.4	30	10.0	6.0	4.0
5023	5580	22.0	.	.	19	10.0	.	.
5024	5580	23.2	21.2	2.0	20	8.0	5.2	2.8
5025	5580	.	.	.	.	8.0	4.0	4.0
5026	5580	22.0	20.0	2.0	18	9.2	6.0	3.2
5027	5580	36.0	34.8	1.2	28	10.0	6.0	4.0
5028	5580	26.8	24.0	2.8	21	10.0	7.2	2.8
5029	5580	43.2	42.0	1.2	35	10.0	6.0	4.0
5030	5580	33.2	.	.	29	9.6	.	.
5031	5580	33.2	31.2	2.0	25	9.6	6.0	3.6
5032	5580	26.8	.	.	21	10.0	.	.
5033	5580	26.4	24.8	1.6	22	8.8	6.0	2.8

----- CORE=573 TIME=3.79 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5034	5630	22.8	21.2	1.6	21	9.2	6.0	3.2
5035	5630	37.2	35.6	1.6	31	10.0	7.2	2.8
5036	5630	24.0	22.8	1.2	20	8.0	5.2	2.8
5037	5630	18.8	17.6	1.2	17	7.6	4.0	3.6
5038	5630	30.8	29.2	1.6	26	10.0	6.0	4.0
5039	5630	34.0	32.0	2.0	27	10.0	6.8	3.2
5040	5630	48.0	46.0	2.0	40	8.8	6.0	2.8
5041	5630	29.2	28.0	1.2	23	10.0	6.0	4.0
5042	5630	38.0	36.8	1.2	31	10.0	6.8	3.2
5043	5630	28.0	26.4	1.6	25	10.0	7.2	2.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=3.79 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5044	5630	20.0	17.6	2.4	15	6.8	4.0	2.8
5045	5630	38.0	36.0	2.0	36	9.2	5.2	4.0
5046	5630	23.2	21.6	1.6	20	9.2	6.0	3.2
5047	5630	19.2	17.2	2.0	15	8.0	4.0	4.0
5048	5630	30.4	29.2	1.2	36	7.6	4.8	2.8
5049	5630	22.0	20.4	1.6	19	7.6	4.0	3.6
5050	5630	38.4	36.8	1.6	33	8.0	4.0	4.0
5051	5630	30.0	27.2	2.8	24	8.0	5.2	2.8
5052	5630	28.8	26.8	2.0	26	8.0	5.2	2.8
5053	5630	29.2	26.8	2.4	25	8.8	6.0	2.8
5054	5630	21.2	20.0	1.2	17	8.4	5.2	3.2
5055	5630	33.2	30.8	2.4	27	10.8	7.2	3.6
5056	5630	27.2	26.0	1.2	23	8.4	4.8	3.6
5057	5630	26.8	25.2	1.6	23	10.0	6.0	4.0
5058	5630	46.0	44.0	2.0	38	10.0	6.0	4.0
5059	5630	32.0	29.6	2.4	25	9.6	7.2	2.4
5060	5630	26.0	24.4	1.6	22	8.0	4.0	4.0

----- CORE=573 TIME=3.83 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5061	5720	49.2	46.0	3.2	37	10.0	6.0	4.0
5062	5720	38.0	36.8	1.2	31	10.0	6.0	4.0
5063	5720	26.0	24.4	1.6	25	10.0	7.6	2.4
5064	5720	27.2	25.2	2.0	23	10.0	7.2	2.8
5065	5720	50.0	47.2	2.8	42	9.6	6.0	3.6
5066	5720	27.6	26.0	1.6	23	8.0	4.8	3.2
5067	5720	37.6	36.0	1.6	29	10.8	6.8	4.0
5068	5720	26.8	25.2	1.6	15	10.0	8.0	2.0
5069	5720	28.4	25.6	2.8	24	11.2	8.0	3.2
5070	5720	26.0	25.2	0.8	22	9.2	6.8	2.4
5071	5720	47.2	44.0	3.2	45	10.0	7.2	2.8
5072	5720	31.2	29.2	2.0	27	10.0	6.8	3.2
5073	5720	28.0	26.8	1.2	23	8.0	4.0	4.0
5074	5720	46.0	44.4	1.6	42	10.0	6.0	4.0
5075	5720	28.4	25.6	2.8	22	10.0	6.0	4.0
5076	5720	45.2	44.0	1.2	37	10.0	7.2	2.8
5077	5720	25.2	23.2	2.0	22	9.6	6.0	3.6
5078	5720	48.0	46.8	1.2	38	10.0	6.8	3.2
5079	5720	29.2	26.8	2.4	23	8.0	4.8	3.2
5080	5720	31.2	30.0	1.2	24	10.0	6.0	4.0
5081	5720	24.4	22.4	2.0	22	8.0	5.6	2.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=3.83 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5082	5720	21.6	20.8	0.8	19	8.0	4.0	4.0
5083	5720	44.0	42.0	2.0	34	10.0	6.0	4.0
5084	5720	27.2	25.2	2.0	23	10.0	7.2	2.8
5085	5720	42.0	40.0	2.0	32	10.0	6.0	4.0
5086	5720	39.2	36.8	2.4	30	10.0	7.2	2.8
5087	5720	30.8	29.2	1.6	26	8.0	5.6	2.4
5088	5720	36.8	35.2	1.6	30	9.6	6.0	3.6
5089	5720	28.4	27.2	1.2	22	9.2	6.4	2.8
5090	5720	32.0	30.0	2.0	26	10.0	6.8	3.2

----- CORE=573 TIME=3.85 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5091	5770	41.2	39.2	2.0	27	9.2	6.0	3.2
5092	5770	46.8	44.0	2.8	36	10.0	6.0	4.0
5093	5770	34.0	33.2	0.8	25	10.0	6.0	4.0
5094	5770	22.4	21.2	1.2	17	9.2	5.6	3.6
5095	5770	25.2	23.2	2.0	19	10.0	6.0	4.0
5096	5770	25.2	23.2	2.0	19	9.2	5.2	4.0
5097	5770	42.0	39.2	2.8	37	9.6	7.2	2.4
5098	5770	45.2	44.0	1.2	34	10.0	6.0	4.0
5099	5770	20.8	18.8	2.0	11	8.0	6.4	1.6
5100	5770	21.6	19.2	2.4	16	8.4	6.0	2.4
5101	5770	26.0	23.6	2.4	19	10.0	6.0	4.0
5102	5770	46.8	45.2	1.6	37	10.4	8.0	2.4
5103	5770	16.0	14.4	1.6	12	11.6	6.0	5.6
5104	5770	27.6	24.4	3.2	20	10.0	6.0	4.0
5105	5770	27.2	25.2	2.0	21	9.6	6.8	2.8
5106	5770	40.0	38.8	1.2	31	10.0	7.2	2.8
5107	5770	22.8	20.8	2.0	18	9.6	7.2	2.4
5108	5770	36.4	34.0	2.4	25	10.4	6.8	3.6
5109	5770	34.8	33.6	1.2	25	9.6	6.8	2.8
5110	5770	36.8	35.2	1.6	26	9.2	5.2	4.0
5111	5770	20.0	18.0	2.0	15	8.8	6.0	2.8
5112	5770	26.0	24.4	1.6	19	8.0	4.4	3.6
5113	5770	24.0	22.4	1.6	17	9.2	6.4	2.8
5114	5770	42.0	39.2	2.8	33	10.0	6.0	4.0
5115	5770	29.2	27.2	2.0	25	10.0	6.8	3.2
5116	5770	29.2	26.8	2.4	24	8.4	6.0	2.4
5117	5770	37.2	34.8	2.4	25	10.0	6.8	3.2
5118	5770	26.8	24.8	2.0	21	10.0	6.8	3.2
5119	5770	18.8	17.6	1.2	15	6.8	4.0	2.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=3.87 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5120	5820	26.0	23.2	2.8	19	8.8	6.0	2.8
5121	5820	25.6	22.8	2.8	19	10.0	6.8	3.2
5122	5820	23.6	22.4	1.2	18	9.6	5.6	4.0
5123	5820	38.8	37.2	1.6	28	10.8	8.0	2.8
5124	5820	18.0	16.4	1.6	14	8.4	5.2	3.2
5125	5820	27.2	25.6	1.6	22	10.0	6.4	3.6
5126	5820	28.0	25.6	2.4	23	10.0	6.0	4.0
5127	5820	22.0	19.2	2.8	16	9.6	5.6	4.0
5128	5820	46.8	44.4	2.4	37	10.0	6.0	4.0
5129	5820	33.6	32.0	1.6	23	9.2	6.8	2.4
5130	5820	29.2	27.2	2.0	21	10.0	6.0	4.0
5131	5820	28.4	26.8	1.6	22	10.0	6.0	4.0
5132	5820	16.4	14.8	1.6	13	8.0	4.0	4.0
5133	5820	23.6	22.4	1.2	18	8.8	6.0	2.8
5134	5820	30.4	29.2	1.2	26	7.6	5.2	2.4
5135	5820	38.0	36.4	1.6	29	9.6	7.2	2.4
5136	5820	22.0	21.2	0.8	21	8.4	4.4	4.0
5137	5820	27.2	25.2	2.0	21	10.0	6.8	3.2
5138	5820	41.6	38.8	2.8	31	10.0	6.0	4.0
5139	5820	26.0	24.0	2.0	21	10.0	6.0	4.0
5140	5820	32.0	30.0	2.0	23	10.0	6.0	4.0
5141	5820	36.4	34.8	1.6	25	10.0	6.0	4.0
5142	5820	34.0	32.0	2.0	26	10.0	7.6	2.4
5143	5820	45.2	42.8	2.4	33	11.6	8.0	3.6
5144	5820	24.8	22.0	2.8	19	8.0	4.0	4.0
5145	5820	30.0	28.4	1.6	24	10.0	7.2	2.8
5146	5820	30.4	29.2	1.2	19	8.0	4.0	4.0
5147	5820	19.2	18.0	1.2	14	8.0	4.8	3.2
5148	5820	25.2	23.2	2.0	19	9.2	5.2	4.0
5149	5820	22.8	21.2	1.6	19	8.0	4.0	4.0

----- CORE=573 TIME=3.89 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5150	5680	22.8	21.6	1.2	19	10.0	6.0	4.0
5151	5680	29.2	26.0	3.2	23	10.0	7.2	2.8
5152	5680	40.8	38.8	2.0	35	9.6	6.8	2.8
5153	5680	24.8	22.0	2.8	23	10.0	6.0	4.0
5154	5680	31.2	29.2	2.0	21	8.4	6.0	2.4
5155	5680	32.0	30.0	2.0	26	10.0	6.8	3.2
5156	5680	23.6	20.8	2.8	18	7.2	4.8	2.4
5157	5680	18.8	17.2	1.6	16	8.4	6.0	2.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=3.89 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5158	5680	44.0	42.0	2.0	32	11.2	7.6	3.6
5159	5680	28.8	26.4	2.4	21	10.0	7.2	2.8
5160	5680	38.0	35.2	2.8	28	10.4	6.4	4.0

----- CORE=573 TIME=3.91 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5161	5920	23.2	21.6	1.6	12	8.8	6.8	2.0
5162	5920	34.0	32.8	1.2	24	10.0	6.8	3.2
5163	5920	44.0	42.0	2.0	34	11.6	8.0	3.6
5164	5920	42.0	40.0	2.0	34	10.0	7.6	2.4
5165	5920	38.8	37.2	1.6	30	10.0	6.0	4.0
5166	5920	21.6	19.6	2.0	15	8.0	4.0	4.0
5167	5920	25.2	23.2	2.0	16	10.4	8.4	2.0
5168	5920	31.2	29.2	2.0	24	10.0	6.0	4.0
5169	5920	27.2	25.6	1.6	21	9.2	6.0	3.2
5170	5920	36.0	34.0	2.0	29	10.0	7.6	2.4
5171	5920	24.8	22.8	2.0	17	10.0	6.8	3.2
5172	5920	28.8	27.2	1.6	25	9.6	6.0	3.6
5173	5920	21.2	18.4	2.8	16	8.8	6.0	2.8
5174	5920	38.0	35.2	2.8	30	8.8	6.0	2.8
5175	5920	23.6	22.0	1.6	18	9.6	7.2	2.4
5176	5920	29.6	27.2	2.4	24	8.8	6.0	2.8
5177	5920	38.0	36.4	1.6	28	10.0	6.0	4.0
5178	5920	32.0	30.0	2.0	25	10.0	6.8	3.2
5179	5920	24.4	22.4	2.0	18	8.8	4.8	4.0
5180	5920	28.0	26.0	2.0	23	10.4	6.0	4.4
5181	5920	43.2	40.0	3.2	35	9.2	5.2	4.0
5182	5920	19.2	17.6	1.6	14	8.8	6.4	2.4
5183	5920	40.0	38.0	2.0	31	10.4	8.0	2.4
5184	5920	40.8	38.4	2.4	32	10.4	8.0	2.4
5185	5920	42.4	41.2	1.2	32	10.0	6.0	4.0
5186	5920	24.0	22.0	2.0	19	8.0	4.0	4.0
5187	5920	24.0	22.0	2.0	19	9.2	6.8	2.4
5188	5920	34.4	32.4	2.0	28	10.0	6.8	3.2
5189	5920	24.8	22.8	2.0	19	10.0	6.0	4.0
5190	5920	25.2	22.8	2.4	20	9.2	6.0	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=3.94 -----

QBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5191	5970	24.0	22.0	2.0	19	10.0	7.2	2.8
5192	5970	28.0	26.0	2.0	22	8.0	5.2	2.8
5193	5970	42.8	41.6	1.2	33	9.2	5.2	4.0
5194	5970	20.0	19.2	0.8	20	8.0	4.0	4.0
5195	5970	25.6	23.6	2.0	23	8.8	4.8	4.0
5196	5970	34.8	33.2	1.6	25	11.2	8.0	3.2
5197	5970	32.0	30.0	2.0	25	9.6	6.0	3.6
5198	5970	34.0	32.8	1.2	24	10.0	7.6	2.4
5199	5970	24.0	22.0	2.0	20	9.2	6.0	3.2
5200	5970	30.0	28.0	2.0	24	11.2	8.0	3.2
5201	5970	38.8	38.0	0.8	32	10.0	7.2	2.8
5202	5970	45.2	44.0	1.2	35	10.0	6.0	4.0
5203	5970	38.8	36.8	2.0	28	10.0	7.2	2.8
5204	5970	33.2	32.0	1.2	24	9.2	5.2	4.0
5205	5970	27.6	25.6	2.0	19	8.0	4.0	4.0
5206	5970	17.2	14.8	2.4	14	7.2	4.0	3.2
5207	5970	42.0	40.8	1.2	34	12.0	8.0	4.0

----- CORE=573 TIME=3.96 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5208	6020	40.0	38.0	2.0	31	10.8	8.4	2.4
5209	6020	39.6	38.0	1.6	33	8.8	6.0	2.8
5210	6020	26.0	24.0	2.0	19	8.0	5.2	2.8
5211	6020	22.0	20.8	1.2	19	8.8	6.0	2.8
5212	6020	36.0	35.2	0.8	27	10.0	6.0	4.0
5213	6020	34.8	33.2	1.6	27	10.8	7.6	3.2
5214	6020	36.0	34.0	2.0	23	9.2	6.0	3.2
5215	6020	40.0	38.0	2.0	31	10.8	8.0	2.8
5216	6020	43.2	42.0	1.2	34	11.2	7.6	3.6
5217	6020	20.0	18.0	2.0	16	8.0	4.0	4.0
5218	6020	50.0	48.0	2.0	38	11.2	8.0	3.2
5219	6020	30.0	28.4	1.6	23	10.0	6.0	4.0
5220	6020	29.2	28.0	1.2	23	9.2	5.2	4.0
5221	6020	44.8	42.8	2.0	36	10.0	6.0	4.0
5222	6020	28.4	26.8	1.6	23	10.0	6.0	4.0
5223	6020	50.4	48.0	2.4	38	11.2	8.0	3.2
5224	6020	21.2	19.6	1.6	15	8.8	6.0	2.8
5225	6020	31.2	28.8	2.4	23	10.0	6.0	4.0
5226	6020	34.0	31.2	2.8	25	10.0	7.2	2.8
5227	6020	43.2	40.8	2.4	31	10.0	6.0	4.0
5228	6020	33.2	31.2	2.0	26	8.8	5.2	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=3.96 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5229	6020	34.0	32.4	1.6	24	10.0	7.2	2.8
5230	6020	37.2	35.2	2.0	28	9.2	6.0	3.2
5231	6020	38.8	37.2	1.6	29	10.0	6.0	4.0
5232	6020	36.0	34.0	2.0	29	10.0	6.0	4.0
5233	6020	25.2	24.0	1.2	23	8.0	4.0	4.0
5234	6020	40.0	38.0	2.0	31	9.6	6.0	3.6
5235	6020	28.0	25.2	2.8	25	8.4	6.0	2.4
5236	6020	44.4	42.4	2.0	36	10.0	6.0	4.0
5237	6020	28.0	25.6	2.4	23	8.0	4.0	4.0

----- CORE=573 TIME=3.98 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5238	6070	16.0	14.8	1.2	14	6.4	4.0	2.4
5239	6070	33.6	31.6	2.0	26	10.0	6.8	3.2
5240	6070	44.8	42.0	2.8	34	10.0	7.2	2.8
5241	6070	30.0	27.2	2.8	24	8.8	5.2	3.6
5242	6070	46.0	44.0	2.0	36	12.0	7.2	4.8
5243	6070	28.0	26.0	2.0	24	9.2	6.0	3.2
5244	6070	49.2	48.0	1.2	43	10.8	6.8	4.0
5245	6070	26.0	24.0	2.0	21	10.0	7.2	2.8
5246	6070	27.6	26.0	1.6	23	10.0	7.2	2.8
5247	6070	33.2	32.0	1.2	24	8.8	4.4	4.4
5248	6070	35.2	34.0	1.2	28	10.8	8.0	2.8
5249	6070	34.0	32.4	1.6	27	11.2	6.8	4.4
5250	6070	34.0	32.0	2.0	26	10.0	7.6	2.4
5251	6070	22.0	20.8	1.2	19	8.4	6.0	2.4
5252	6070	27.6	26.0	1.6	21	8.8	6.0	2.8
5253	6070	23.6	22.0	1.6	18	8.0	4.8	3.2
5254	6070	23.2	21.2	2.0	16	8.4	6.0	2.4
5255	6070	33.2	31.6	1.6	27	9.6	6.0	3.6
5256	6070	53.2	50.0	3.2	40	10.0	6.0	4.0
5257	6070	24.4	22.8	1.6	19	8.0	4.0	4.0
5258	6070	31.2	29.2	2.0	25	10.4	8.0	2.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-573 TIME=4 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5259	6120	41.2	39.2	2.0	33	10.0	6.8	3.2
5260	6120	16.4	14.0	2.4	13	7.6	4.0	3.6
5261	6120	26.0	24.4	1.6	21	8.0	4.8	3.2
5262	6120	25.6	24.0	1.6	20	8.0	4.0	4.0
5263	6120	36.0	34.8	1.2	29	10.4	8.0	2.4
5264	6120	41.2	38.8	2.4	29	10.0	7.2	2.8
5265	6120	23.6	21.6	2.0	22	8.4	6.0	2.4
5266	6120	38.8	37.2	1.6	28	10.0	6.0	4.0
5267	6120	28.0	26.4	1.6	23	9.2	6.0	3.2
5268	6120	20.0	18.8	1.2	17	8.0	4.0	4.0
5269	6120	27.2	24.0	3.2	21	10.0	5.2	4.8
5270	6120	22.0	19.2	2.8	18	8.0	4.0	4.0
5271	6120	31.6	30.0	1.6	25	10.0	7.2	2.8
5272	6120	31.2	29.2	2.0	22	10.0	6.8	3.2
5273	6120	26.0	24.0	2.0	20	8.0	5.2	2.8
5274	6120	31.6	30.4	1.2	26	9.2	5.2	4.0
5275	6120	28.4	27.2	1.2	22	8.0	4.0	4.0
5276	6120	30.4	28.8	1.6	24	10.4	6.8	3.6
5277	6120	22.0	20.8	1.2	20	9.2	5.2	4.0

----- CORE-573 TIME=4.03 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5278	6170	38.4	36.8	1.6	29	10.0	6.8	3.2
5279	6170	30.0	28.8	1.2	25	8.0	4.8	3.2
5280	6170	29.2	28.0	1.2	24	10.4	6.8	3.6
5281	6170	45.2	44.0	1.2	38	10.0	6.0	4.0
5282	6170	20.0	18.0	2.0	16	8.0	5.2	2.8
5283	6170	20.8	19.6	1.2	17	8.0	4.8	3.2
5284	6170	18.0	16.0	2.0	16	6.8	4.0	2.8
5285	6170	30.4	28.4	2.0	23	10.0	6.0	4.0
5286	6170	26.0	23.2	2.8	20	9.2	6.0	3.2
5287	6170	24.8	22.8	2.0	27	8.0	5.2	2.8
5288	6170	33.2	32.0	1.2	26	10.8	8.0	2.8
5289	6170	27.2	21.6	5.6	24	8.0	4.0	4.0
5290	6170	33.2	31.2	2.0	26	9.6	6.0	3.6
5291	6170	21.2	20.0	1.2	17	7.6	5.2	2.4
5292	6170	31.2	29.2	2.0	25	10.0	7.2	2.8
5293	6170	38.8	37.2	1.6	30	10.0	7.2	2.8
5294	6170	26.4	24.8	1.6	22	8.0	4.4	3.6
5295	6170	40.0	38.4	1.6	30	10.8	8.4	2.4
5296	6170	30.0	28.0	2.0	23	9.6	6.0	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=4.03 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5297	6170	25.2	23.2	2.0	20	8.8	6.0	2.8
5298	6170	23.2	22.0	1.2	20	9.2	5.6	3.6
5299	6170	32.4	30.8	1.6	26	10.0	7.2	2.8
5300	6170	38.4	36.4	2.0	29	10.0	7.2	2.8
5301	6170	37.2	35.6	1.6	29	8.0	4.0	4.0
5302	6170	16.8	14.8	2.0	14	8.0	4.0	4.0
5303	6170	31.2	29.6	1.6	25	10.0	7.2	2.8
5304	6170	27.2	21.2	6.0	22	10.0	6.8	3.2
5305	6170	24.4	22.8	1.6	19	10.0	6.0	4.0
5306	6170	30.0	28.0	2.0	25	9.6	7.2	2.4
5307	6170	32.0	30.8	1.2	29	9.2	5.6	3.6

----- CORE=573 TIME=4.05 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5308	6220	36.0	34.8	1.2	28	9.2	5.2	4.0
5309	6220	33.6	32.0	1.6	26	9.2	6.0	3.2
5310	6220	19.2	17.6	1.6	14	8.0	4.0	4.0
5311	6220	29.6	28.4	1.2	23	8.8	5.2	3.6
5312	6220	25.2	23.2	2.0	20	8.4	6.0	2.4
5313	6220	31.2	29.2	2.0	25	8.0	5.2	2.8
5314	6220	16.4	14.8	1.6	14	7.2	4.0	3.2
5315	6220	31.2	30.4	0.8	26	8.8	5.2	3.6
5316	6220	33.2	31.2	2.0	27	10.0	6.0	4.0
5317	6220	29.6	28.0	1.6	26	9.6	6.8	2.8
5318	6220	22.0	21.2	0.8	18	8.8	4.8	4.0
5319	6220	21.2	19.2	2.0	16	7.2	4.0	3.2
5320	6220	20.8	18.8	2.0	17	8.0	4.0	4.0
5321	6220	30.0	28.8	1.2	23	9.2	6.0	3.2
5322	6220	20.8	18.8	2.0	16	8.0	4.0	4.0
5323	6220	31.2	30.0	1.2	26	10.0	7.2	2.8
5324	6220	21.2	20.0	1.2	12	8.0	6.8	1.2
5325	6220	44.0	42.0	2.0	35	10.0	6.0	4.0
5326	6220	24.0	22.0	2.0	19	9.2	6.8	2.4
5327	6220	34.0	32.0	2.0	27	10.0	6.0	4.0
5328	6220	44.0	42.0	2.0	32	8.8	6.0	2.8
5329	6220	29.2	27.2	2.0	24	8.4	6.0	2.4
5330	6220	26.4	24.8	1.6	22	8.8	5.6	3.2
5331	6220	28.0	26.0	2.0	24	10.0	6.0	4.0
5332	6220	34.8	33.6	1.2	31	10.0	6.0	4.0
5333	6220	34.0	32.0	2.0	25	10.0	7.2	2.8
5334	6220	19.2	18.0	1.2	14	8.0	4.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=4.05 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5335	6220	18	16.8	1.2	15	7.2	4	3.2

----- CORE=573 TIME=4.07 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5336	6270	31.2	28.8	2.4	32	11.2	6.0	5.2
5337	6270	21.2	20.0	1.2	17	8.0	4.8	3.2
5338	6270	28.0	27.2	0.8	26	9.2	6.8	2.4
5339	6270	24.0	22.0	2.0	24	8.4	6.0	2.4
5340	6270	24.0	22.4	1.6	23	8.0	4.0	4.0
5341	6270	26.0	24.4	1.6	30	10.0	6.8	3.2
5342	6270	26.8	25.6	1.2	26	9.6	6.8	2.8
5343	6270	36.0	34.8	1.2	33	10.0	7.2	2.8
5344	6270	22.0	21.2	0.8	21	8.0	4.0	4.0
5345	6270	30.0	29.2	0.8	29	10.0	6.0	4.0
5346	6270	27.6	26.0	1.6	24	10.0	6.0	4.0
5347	6270	38.4	36.4	2.0	34	9.2	5.2	4.0
5348	6270	50.0	49.2	0.8	46	8.0	4.8	3.2
5349	6270	28.0	26.0	2.0	26	10.0	6.0	4.0
5350	6270	27.2	23.2	4.0	26	8.0	4.8	3.2
5351	6270	25.6	24.4	1.2	23	10.0	6.0	4.0
5352	6270	20.0	18.8	1.2	15	8.0	4.0	4.0
5353	6270	22.0	20.8	1.2	22	8.0	5.6	2.4
5354	6270	22.4	21.2	1.2	22	8.0	4.0	4.0
5355	6270	24.0	22.0	2.0	19	8.0	4.0	4.0
5356	6270	42.8	41.2	1.6	43	9.2	5.2	4.0
5357	6270	32.0	30.8	1.2	32	10.4	6.8	3.6
5358	6270	27.2	25.6	1.6	38	6.0	4.0	2.0
5359	6270	31.2	29.6	1.6	29	9.2	5.2	4.0
5360	6270	34.4	33.2	1.2	31	10.0	6.0	4.0
5361	6270	24.4	23.2	1.2	19	6.8	4.4	2.4
5362	6270	28.0	26.4	1.6	27	10.0	6.8	3.2
5363	6270	22.0	20.8	1.2	22	8.0	4.0	4.0
5364	6270	33.2	32.0	1.2	34	10.0	6.4	3.6
5365	6270	36.8	35.2	1.6	33	9.2	6.8	2.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-573 TIME=4.09 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5366	6318	22.8	21.6	1.2	22	7.6	4.0	3.6
5367	6318	26.0	24.4	1.6	24	8.0	4.0	4.0
5368	6318	23.6	21.6	2.0	19	6.0	3.6	2.4
5369	6318	26.0	24.4	1.6	24	9.2	5.2	4.0
5370	6318	24.8	23.6	1.2	23	8.4	6.0	2.4
5371	6318	21.2	20.0	1.2	21	10.0	6.8	3.2
5372	6318	33.2	31.2	2.0	30	8.0	4.0	4.0
5373	6318	33.6	31.2	2.4	31	8.8	4.8	4.0
5374	6318	31.2	28.8	2.4	28	9.2	5.2	4.0
5375	6318	27.6	26.0	1.6	27	9.6	6.0	3.6
5376	6318	38.0	36.4	1.6	37	10.0	7.2	2.8
5377	6318	24.0	23.2	0.8	24	8.8	4.8	4.0
5378	6318	20.0	18.4	1.6	19	9.6	7.2	2.4
5379	6318	26.8	25.2	1.6	27	9.2	5.2	4.0
5380	6318	28.0	26.8	1.2	28	9.2	5.2	4.0
5381	6318	24.0	22.0	2.0	23	9.2	6.8	2.4
5382	6318	24.8	23.2	1.6	23	8.8	5.6	3.2
5383	6318	25.2	23.2	2.0	24	9.2	6.8	2.4
5384	6318	28.0	26.0	2.0	28	10.0	7.6	2.4
5385	6318	28.0	26.0	2.0	28	10.0	6.0	4.0
5386	6318	29.2	28.0	1.2	24	9.6	6.0	3.6
5387	6318	25.2	23.6	1.6	30	6.0	2.8	3.2
5388	6318	28.0	26.8	1.2	26	9.6	6.8	2.8
5389	6318	26.8	24.8	2.0	26	9.2	6.8	2.4
5390	6318	25.6	24.4	1.2	24	10.0	6.0	4.0
5391	6318	22.0	20.0	2.0	21	8.4	6.0	2.4
5392	6318	22.0	19.6	2.4	21	8.0	4.0	4.0
5393	6318	42.0	40.8	1.2	37	10.0	6.0	4.0
5394	6318	32.0	29.2	2.8	27	10.0	7.2	2.8
5395	6318	17.2	15.2	2.0	16	8.0	4.0	4.0

----- CORE-573 TIME=4.12 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5396	6370	29.2	26.8	2.4	24	9.2	6.8	2.4
5397	6370	27.2	25.2	2.0	26	9.2	6.0	3.2
5398	6370	26.8	25.6	1.2	28	10.0	6.0	4.0
5399	6370	23.6	21.6	2.0	21	10.0	6.8	3.2
5400	6370	37.2	35.2	2.0	34	9.2	5.2	4.0
5401	6370	32.0	30.8	1.2	26	8.0	5.2	2.8
5402	6370	27.2	26.4	0.8	27	8.8	4.8	4.0
5403	6370	24.0	22.0	2.0	20	9.6	6.8	2.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=4.12 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5404	6370	32.4	31.2	1.2	28	9.6	6.0	3.6
5405	6370	31.6	30.0	1.6	31	9.2	6.0	3.2
5406	6370	32.0	30.8	1.2	29	9.2	5.2	4.0
5407	6370	18.4	17.2	1.2	16	7.2	4.0	3.2
5408	6370	31.6	30.0	1.6	29	8.4	5.2	3.2
5409	6370	46.4	44.4	2.0	45	8.8	6.0	2.8
5410	6370	23.6	21.2	2.4	21	8.4	6.0	2.4
5411	6370	34.0	33.2	0.8	29	8.4	5.2	3.2
5412	6370	26.0	24.0	2.0	24	10.0	7.2	2.8
5413	6370	34.0	32.4	1.6	29	8.4	4.4	4.0
5414	6370	25.2	24.0	1.2	26	9.2	6.0	3.2
5415	6370	20.0	18.0	2.0	19	7.2	4.0	3.2
5416	6370	34.0	32.4	1.6	31	9.6	7.2	2.4
5417	6370	27.2	25.2	2.0	27	9.2	6.0	3.2
5418	6370	25.2	23.2	2.0	25	10.0	6.8	3.2
5419	6370	34.8	32.8	2.0	31	10.0	6.0	4.0
5420	6370	24.8	23.2	1.6	24	9.2	6.8	2.4
5421	6370	31.6	28.8	2.8	30	9.2	5.2	4.0
5422	6370	29.2	28.4	0.8	28	9.2	5.6	3.6
5423	6370	42.0	40.0	2.0	38	11.2	8.4	2.8
5424	6370	27.2	26.0	1.2	24	10.0	6.0	4.0
5425	6370	26.8	24.8	2.0	24	10.0	6.8	3.2

----- CORE=573 TIME=4.14 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5426	6420	30.0	28.0	2.0	27	10.0	6.0	4.0
5427	6420	26.8	25.6	1.2	24	10.0	7.2	2.8
5428	6420	28.0	26.0	2.0	25	7.2	4.0	3.2
5429	6420	50.0	48.8	1.2	47	8.0	5.2	2.8
5430	6420	34.8	33.2	1.6	29	10.0	7.6	2.4
5431	6420	22.8	21.2	1.6	19	8.0	5.6	2.4
5432	6420	20.8	19.6	1.2	21	9.2	6.8	2.4
5433	6420	33.2	31.2	2.0	28	10.0	5.2	4.8
5434	6420	32.0	30.4	1.6	31	9.6	7.2	2.4
5435	6420	30.0	28.4	1.6	26	10.0	7.2	2.8
5436	6420	43.6	42.0	1.6	40	8.4	4.8	3.6
5437	6420	32.8	31.2	1.6	31	9.6	6.0	3.6
5438	6420	30.8	29.6	1.2	27	10.0	6.8	3.2
5439	6420	32.8	30.8	2.0	25	10.0	6.8	3.2
5440	6420	28.4	27.2	1.2	28	8.0	4.8	3.2
5441	6420	21.2	20.0	1.2	19	8.0	4.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-573 TIME=4.14 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5442	6420	34.4	32.8	1.6	36	9.2	6.4	2.8
5443	6420	42.8	41.2	1.6	37	10.0	7.2	2.8
5444	6420	27.2	25.6	1.6	25	8.8	6.0	2.8
5445	6420	34.8	33.2	1.6	32	9.6	6.0	3.6
5446	6420	30.8	29.6	1.2	24	10.0	6.4	3.6
5447	6420	26.8	25.6	1.2	23	8.0	4.0	4.0
5448	6420	25.2	23.6	1.6	21	8.8	6.0	2.8
5449	6420	44.8	43.6	1.2	44	9.2	6.8	2.4
5450	6420	29.6	28.0	1.6	29	8.0	4.0	4.0
5451	6420	21.2	20.0	1.2	20	9.2	6.8	2.4
5452	6420	37.2	35.6	1.6	31	10.0	6.4	3.6
5453	6420	22.0	20.4	1.6	17	7.2	4.0	3.2
5454	6420	31.2	29.2	2.0	29	8.0	5.2	2.8
5455	6420	36.8	35.6	1.2	38	10.0	6.0	4.0

----- CORE-573 TIME=4.16 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5456	6470	27.2	22.4	4.8	23	9.2	4.8	4.4
5457	6470	36.4	35.2	1.2	33	10.0	7.6	2.4
5458	6470	26.8	25.2	1.6	26	10.0	6.8	3.2
5459	6470	21.2	19.6	1.6	20	7.2	4.0	3.2
5460	6470	24.0	22.0	2.0	22	8.0	5.2	2.8
5461	6470	34.0	32.0	2.0	30	10.0	6.4	3.6
5462	6470	16.0	14.8	1.2	16	7.2	4.0	3.2
5463	6470	42.8	41.2	1.6	40	10.8	8.0	2.8
5464	6470	32.8	30.8	2.0	33	9.2	6.0	3.2
5465	6470	18.8	16.8	2.0	16	8.4	6.0	2.4
5466	6470	34.4	32.0	2.4	32	10.0	6.8	3.2
5467	6470	30.0	27.2	2.8	31	9.2	6.0	3.2
5468	6470	36.0	34.0	2.0	34	10.8	8.0	2.8
5469	6470	24.8	23.2	1.6	22	8.8	6.4	2.4
5470	6470	38.0	36.8	1.2	36	9.6	6.8	2.8
5471	6470	21.2	19.6	1.6	20	8.0	5.2	2.8
5472	6470	33.2	32.0	1.2	28	8.4	4.4	4.0
5473	6470	24.0	22.0	2.0	23	8.0	5.6	2.4
5474	6470	34.0	32.0	2.0	27	10.0	6.8	3.2
5475	6470	18.0	16.4	1.6	16	8.0	4.0	4.0
5476	6470	18.8	17.2	1.6	20	8.4	6.0	2.4
5477	6470	27.2	26.0	1.2	24	10.0	7.6	2.4
5478	6470	20.4	19.2	1.2	18	7.2	4.8	2.4
5479	6470	25.6	24.0	1.6	22	8.4	5.2	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-573 TIME=4.16 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5480	6470	26.0	25.2	0.8	23	10.0	7.2	2.8
5481	6470	24.8	23.2	1.6	22	8.8	4.8	4.0
5482	6470	18.8	16.8	2.0	18	6.8	4.0	2.8
5483	6470	20.8	18.8	2.0	19	8.0	4.0	4.0
5484	6470	21.2	19.2	2.0	21	8.0	6.0	2.0
5485	6470	20.8	18.8	2.0	17	8.0	4.0	4.0
5486	6470	18.4	17.6	0.8	18	7.2	4.0	3.2

----- CORE-573 TIME=4.18 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5487	6520	23.6	21.2	2.4	23	8.0	4.8	3.2
5488	6520	31.2	29.2	2.0	25	6.8	5.2	1.6
5489	6520	36.0	34.0	2.0	31	10.8	6.8	4.0
5490	6520	28.8	27.2	1.6	25	8.8	6.0	2.8
5491	6520	32.0	30.8	1.2	27	9.2	6.0	3.2
5492	6520	27.2	25.2	2.0	24	8.0	6.0	2.0
5493	6520	38.4	37.2	1.2	37	10.0	8.0	2.0
5494	6520	37.2	36.0	1.2	33	10.4	6.4	4.0
5495	6520	33.6	32.0	1.6	29	10.0	7.2	2.8
5496	6520	26.0	24.0	2.0	25	8.0	3.6	4.4
5497	6520	25.2	23.2	2.0	24	8.0	4.0	4.0
5498	6520	22.0	21.2	0.8	23	8.0	4.8	3.2
5499	6520	31.2	29.2	2.0	25	8.4	4.8	3.6
5500	6520	43.2	42.0	1.2	35	10.0	6.0	4.0
5501	6520	24.0	23.2	0.8	21	8.8	6.0	2.8
5502	6520	32.0	31.2	0.8	27	8.4	6.0	2.4
5503	6520	22.8	21.2	1.6	19	8.4	6.0	2.4
5504	6520	29.6	28.0	1.6	28	9.6	6.8	2.8
5505	6520	18.8	17.6	1.2	16	7.2	4.0	3.2
5506	6520	29.2	27.2	2.0	26	9.2	6.8	2.4
5507	6520	17.2	16.0	1.2	17	6.8	5.2	1.6
5508	6520	36.0	34.8	1.2	31	10.0	6.0	4.0
5509	6520	24.8	22.4	2.4	23	8.0	5.2	2.8
5510	6520	34.0	32.4	1.6	31	10.0	6.0	4.0

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-573 TIME-4.21 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5511	6570	40.0	38.8	1.2	40	10.0	6.8	3.2
5512	6570	26.4	24.0	2.4	24	9.2	6.4	2.8
5513	6570	40.0	38.4	1.6	39	9.2	6.4	2.8
5514	6570	29.6	27.6	2.0	24	10.0	6.4	3.6
5515	6570	23.2	22.0	1.2	25	8.0	4.8	3.2
5516	6570	25.2	23.2	2.0	26	8.0	5.6	2.4
5517	6570	22.4	21.2	1.2	21	8.0	4.0	4.0
5518	6570	25.6	23.2	2.4	22	8.4	4.4	4.0
5519	6570	17.6	15.6	2.0	17	6.4	4.8	1.6
5520	6570	37.2	35.6	1.6	31	10.0	6.0	4.0
5521	6570	.	.	.	.	10.0	6.8	3.2
5522	6570	28.4	26.0	2.4	25	10.0	4.0	6.0
5523	6570	26.4	25.6	0.8	28	6.0	3.6	2.4
5524	6570	30.0	28.0	2.0	26	9.6	5.6	4.0

----- CORE-573 TIME-4.23 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5525	6620	24.8	23.2	1.6	20	8.0	5.2	2.8
5526	6620	33.2	31.6	1.6	27	9.2	7.2	2.0
5527	6620	18.4	17.2	1.2	17	6.8	3.6	3.2
5528	6620	17.2	.	.	.	.	.	.
5529	6620	.	.	.	.	10.0	6.0	4.0
5530	6620	38.8	.	.	.	.	.	.
5531	6620	18.4	17.2	1.2	16	7.6	5.2	2.4
5532	6620	38.0	36.0	2.0	33	.	.	.
5533	6620	19.2	.	.	.	.	.	.
5534	6620	34.0	32.4	1.6	30	8.8	6.0	2.8
5535	6620	24.0	21.2	2.8	20	9.2	6.0	3.2
5536	6620	.	.	.	.	9.2	6.0	3.2
5537	6620	34.0	32.8	1.2	31	10.0	8.0	2.0
5538	6620	.	.	.	.	8.4	6.0	2.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-573 TIME-4.27 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5539	6720	34.8	33.6	1.2	32	8.0	5.2	2.8
5540	6720	29.2	.	.	23	8.8	.	.
5541	6720	26.8	25.6	1.2	24	.	.	.
5542	6720	48.0	46.4	1.6	40	8.8	5.2	3.6
5543	6720	25.2	.	.	22	.	.	.
5544	6720	.	.	.	.	10.0	6.0	4.0
5545	6720	36.0	34.0	2.0	28	.	.	.
5546	6720	30.8	29.2	1.6	27	8.4	5.2	3.2
5547	6720	22.4	.	.	19	.	.	.
5548	6720	19.6	18.0	1.6	18	7.6	5.2	2.4
5549	6720	32.8	30.8	2.0	26	8.0	4.8	3.2
5550	6720	29.2	26.8	2.4	24	10.0	6.8	3.2
5551	6720	29.2	27.2	2.0	24	8.8	4.8	4.0
5552	6720	28.8	.	.	23	9.2	.	.
5553	6720	37.2	35.6	1.6	31	.	.	.
5554	6720	38.0	.	.	29	.	.	.
5555	6720	.	.	.	.	8.8	4.0	4.8
5556	6720	.	.	.	.	8.4	4.0	4.4
5557	6720	40.0	38.0	2.0	34	10.0	6.0	4.0
5558	6720	23.2	21.2	2.0	22	8.0	4.0	4.0
5559	6720	22.0	19.6	2.4	18	8.0	6.0	2.0
5560	6720	20.0	.	.	18	.	.	.
5561	6720	25.2	24.4	0.8	22	7.2	4.8	2.4
5562	6720	22.8	.	.	21	.	.	.
5563	6720	.	.	.	.	8.4	6.0	2.4
5564	6720	26.8	.	.	22	.	.	.
5565	6720	30.0	28.0	2.0	26	.	.	.
5566	6720	23.6	22.8	0.8	20	8.0	4.0	4.0
5567	6720	32.0	30.4	1.6	27	8.8	5.2	3.6
5568	6720	.	.	.	.	10.0	6.0	4.0
5569	6720	32.0	28.8	3.2	26	9.2	7.2	2.0
5570	6720	14.8	13.6	1.2	13	6.0	4.0	2.0
5571	6720	29.6	27.6	2.0	26	.	.	.
5572	6720	34.0	32.4	1.6	27	9.2	5.6	3.6
5573	6720	.	.	.	.	9.6	6.0	3.6

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-573 TIME=4.32 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5574	6820	37.2	34.4	2.8	29	8.4	4.8	3.6
5575	6820	.	.	.	.	10.0	6.0	4.0
5576	6820	21.6	.	.	19	.	.	.
5577	6820	32.0	30.0	2.0	25	8.0	4.0	4.0
5578	6820	21.6	20.0	1.6	19	.	.	.

----- CORE-573 TIME=4.34 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5579	6870	.	.	.	.	7.6	4.0	3.6
5580	6870	36.8	34.8	2.0	28	9.2	5.6	3.6
5581	6870	26.8	.	.	22	.	.	.
5582	6870	37.2	.	.	31	.	.	.
5583	6870	41.2	39.2	2.0	32	9.2	6.0	3.2
5584	6870	34.8	34.0	0.8	30	8.4	6.0	2.4
5585	6870	40.0	38.8	1.2	33	10.8	8.0	2.8
5586	6870	35.2	34.4	0.8	29	10.0	6.0	4.0
5587	6870	23.2	.	.	18	8.0	.	.
5588	6870	28.0	27.2	0.8	26	8.4	6.0	2.4
5589	6870	.	.	.	.	7.2	4.0	3.2
5590	6870	46.8	44.0	2.8	34	10.0	6.0	4.0
5591	6870	32.0	30.0	2.0	26	8.0	4.0	4.0
5592	6870	43.2	41.2	2.0	35	10.0	6.0	4.0
5593	6870	32.8	31.2	1.6	27	10.0	6.8	3.2
5594	6870	38.4	37.6	0.8	32	9.2	6.0	3.2
5595	6870	17.6	16.4	1.2	15	6.8	4.0	2.8

----- CORE-573 TIME 4.36 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5596	6920	34.0	.	.	28	.	.	.
5597	6920	36.0	34.4	1.6	29	.	6.0	.
5598	6920	36.0	34.4	1.6	27	.	.	.
5599	6920	18.4	17.2	1.2	16	6.8	4.0	2.8
5600	6920	42.0	40.4	1.6	35	10.0	6.0	4.0
5601	6920	20.8	19.2	1.6	18	8.0	4.0	4.0
5602	6920	34.0	32.4	1.6	27	8.0	5.2	2.8
5603	6920	32.8	30.4	2.4	27	.	.	.
5604	6920	30.8	29.2	1.6	24	8.0	4.8	3.2
5605	6920	37.2	36.0	1.2	30	8.0	5.6	2.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=4.36 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5606	6920	33.2	30.8	2.4	31	9.2	6	3.2

----- CORE=573 TIME=4.39 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5607	6970	30.4	.	.	27	.	.	.
5608	6970	.	.	.	.	8.8	6.4	2.4
5609	6970	32.4	.	.	29	.	.	.
5610	6970	32.0	30.4	1.6	28	8.0	5.6	2.4
5611	6970	22.0	20.0	2.0	20	8.0	4.0	4.0

----- CORE=573 TIME=4.41 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5612	7020	.	.	.	.	9.2	6.8	2.4
5613	7020	38.4	37.2	1.2	32	9.2	6.8	2.4
5614	7020	.	.	.	.	6.4	4.0	2.4
5615	7020	.	.	.	.	8.8	6.0	2.8
5616	7020	25.2	23.6	1.6	20	7.2	4.0	3.2
5617	7020	32.0	30.0	2.0	27	9.2	6.4	2.8
5618	7020	24.4	23.2	1.2	22	7.2	4.0	3.2
5619	7020	24.0	22.8	1.2	24	7.6	4.8	2.8

----- CORE=573 TIME=4.43 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5620	7070	26.4	25.2	1.2	25	7.6	4.0	3.6
5621	7070	24.8	23.6	1.2	18	8.0	4.0	4.0
5622	7070	20.0	18.4	1.6	20	7.2	4.8	2.4
5623	7070	18.4	16.4	2.0	17	6.8	4.8	2.0
5624	7070	36.4	.	.	34	.	.	.
5625	7070	25.2	.	.	19	.	.	.
5626	7070	34.0	32.8	1.2	28	7.2	4.8	2.4
5627	7070	28.0	26.4	1.6	25	.	.	.
5628	7070	26.0	24.8	1.2	22	6.4	4.0	2.4
5629	7070	30.0	28.0	2.0	26	9.6	7.6	2.0
5630	7070	23.2	21.6	1.6	19	6.8	4.0	2.8
5631	7070	33.6	32.0	1.6	31	8.4	6.0	2.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=4.43 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5632	7070	17.6	16	1.6	15	.	.	.

----- CORE=573 TIME=4.45 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5633	7120	46.0	44.0	2.0	38	9.2	6	3.2
5634	7120	29.2	27.6	1.6	23	.	4	.
5635	7120	23.2	21.6	1.6	19	.	.	.
5636	7120	33.2	.	.	.	.	.	.
5637	7120	30.4	29.2	1.2	27	.	.	.
5638	7120	29.6	27.6	2.0	26	.	.	.
5639	7120	54.8	50.8	4.0	46	8.8	6	2.8
5640	7120	23.6	22.0	1.6	18	.	.	.
5641	7120	40.0	.	.	33	7.6	.	.
5642	7120	20.0	18.0	2.0	17	8.0	4	4.0

----- CORE=573 TIME=4.48 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5643	7170	23.2	.	.	19	8.0	.	.
5644	7170	41.2	39.2	2.0	37	9.2	6.8	2.4
5645	7170	36.0	34.0	2.0	33	8.8	7.2	1.6
5646	7170	.	.	.	.	8.0	4.0	4.0
5647	7170	31.2	30.0	1.2	26	9.2	6.4	2.8
5648	7170	.	.	.	.	6.0	4.0	2.0
5649	7170	16.0	14.8	1.2	16	6.8	4.8	2.0
5650	7170	34.0	32.0	2.0	29	8.0	4.0	4.0

----- CORE=573 TIME=4.5 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5651	7220	38.4	37.2	1.2	33	8.0	5.2	2.8
5652	7220	24.4	.	.	19	.	.	.
5653	7220	24.0	22.0	2.0	24	.	.	.
5654	7220	38.4	37.2	1.2	30	8.4	4.8	3.6
5655	7220	44.8	43.2	1.6	37	8.0	5.2	2.8
5656	7220	32.0	30.0	2.0	28	.	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=573 TIME=4.52 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5657	7270	44.0	42.4	1.6	40	9.2	6.0	3.2
5658	7270	27.6	26.4	1.2	23	7.2	4.0	3.2
5659	7270	46.8	44.8	2.0	46	8.8	6.8	2.0
5660	7270	20.0	19.2	0.8	19	.	.	.
5661	7270	22.8	21.2	1.6	21	.	.	.
5662	7270	25.2	24.0	1.2	25	7.6	4.8	2.8
5663	7270	29.2	.	.	28	.	.	.
5664	7270	29.2	27.6	1.6	27	8.4	5.2	3.2
5665	7270	25.2	23.6	1.6	21	8.0	5.2	2.8
5666	7270	31.2	29.2	2.0	25	.	.	.
5667	7270	26.4	.	.	24	.	.	.
5668	7270	.	.	.	.	8.0	4.8	3.2
5669	7270	27.6	26.8	0.8	28	8.0	4.8	3.2
5670	7270	26.8	25.2	1.6	24	9.2	4.8	4.4
5671	7270	22.0	20.4	1.6	18	7.6	5.2	2.4
5672	7270	33.2	32.0	1.2	30	7.2	4.0	3.2
5673	7270	18.4	17.6	0.8	17	7.6	4.0	3.6
5674	7270	32.0	30.4	1.6	30	.	.	.
5675	7270	22.0	20.8	1.2	18	.	.	.
5676	7270	22.8	21.6	1.2	19	7.6	4.0	3.6
5677	7270	23.6	22.0	1.6	21	.	.	.
5678	7270	21.6	.	.	19	.	.	.
5679	7270	30.4	29.2	1.2	26	7.2	4.8	2.4
5680	7270	22.8	21.2	1.6	21	.	.	.
5681	7270	34.0	32.0	2.0	31	.	.	.
5682	7270	26.4	25.2	1.2	23	.	.	.
5683	7270	14.8	13.2	1.6	13	.	.	.
5684	7270	24.4	22.8	1.6	21	.	.	.
5685	7270	27.2	25.2	2.0	29	.	.	.

----- CORE=573 TIME=4.54 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5686	7320	21.6	.	.	21	.	.	.
5687	7320	18.0	16.4	1.6	17	.	.	.
5688	7320	.	.	.	26	7.2	5.2	2.0
5689	7320	26.0	.	.	23	.	.	.
5690	7320	37.2	35.2	2.0	32	8.0	5.6	2.4
5691	7320	18.8	.	.	19	.	.	.
5692	7320	24.0	22.0	2.0	21	6.8	4.0	2.8
5693	7320	26.8	25.2	1.6	23	7.6	5.2	2.4
5694	7320	40.8	39.6	1.2	37	9.2	6.8	2.4

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-573 TIME=4.54 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5695	7320	26.4	24.4	2.0	24	.	.	.
5696	7320	24.8	22.8	2.0	22	8.0	4.0	4.0
5697	7320	32.4	30.8	1.6	30	8.4	5.2	3.2
5698	7320	30.0	28.0	2.0	30	8.0	5.6	2.4
5699	7320	24.4	.	.	24	.	.	.
5700	7320	34.8	33.2	1.6	32	9.2	6.0	3.2
5701	7320	.	.	.	41	9.2	5.2	4.0
5702	7320	30.8	28.8	2.0	28	8.0	4.8	3.2
5703	7320	33.6	32.0	1.6	31	8.0	5.2	2.8
5704	7320	23.6	.	.	20	.	.	.
5705	7320	42.4	41.2	1.2	37	8.8	6.0	2.8
5706	7320	40.4	39.6	0.8	34	9.6	5.6	4.0
5707	7320	32.4	30.0	2.4	26	7.6	5.2	2.4
5708	7320	30.8	28.8	2.0	27	8.0	4.0	4.0
5709	7320	24.0	22.8	1.2	21	8.0	5.2	2.8
5710	7320	28.0	26.4	1.6	22	.	.	.
5711	7320	39.2	38.0	1.2	39	9.2	6.8	2.4
5712	7320	53.2	52.0	1.2	46	9.2	6.0	3.2
5713	7320	32.4	.	.	27	.	.	.
5714	7320	54.0	52.0	2.0	51	8.8	6.0	2.8
5715	7320	21.2	18.8	2.4	19	.	.	.
5716	7320	36.4	35.2	1.2	37	8.0	4.0	4.0
5717	7320	26.8	25.6	1.2	25	8.0	4.8	3.2
5718	7320	35.2	33.6	1.6	31	8.0	5.2	2.8

RAW DATA

----- CORE-573 TIME=4.57 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5719	7370	44.0	42.0	2.0	37	9.2	6.0	3.2
5720	7370	25.2	23.2	2.0	22	6.8	4.4	2.4
5721	7370	38.0	36.0	2.0	34	9.2	6.0	3.2
5722	7370	43.2	40.8	2.4	47	8.8	6.0	2.8
5723	7370	.	.	.	.	10.8	4.4	6.4
5724	7370	31.2	29.2	2.0	27	.	.	.
5725	7370	24.8	23.2	1.6	25	7.2	4.8	2.4
5726	7370	35.6	34.4	1.2	33	8.0	4.0	4.0
5727	7370	25.6	24.4	1.2	24	7.6	5.2	2.4
5728	7370	32.4	31.2	1.2	35	8.8	7.2	1.6
5729	7370	26.0	24.8	1.2	24	8.0	5.2	2.8
5730	7370	14.8	.	.	14	.	.	.
5731	7370	34.0	.	.	29	.	.	.
5732	7370	33.6	32.0	1.6	33	8.8	6.0	2.8

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE-573 TIME-4.57 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5733	7370	26.4	25.2	1.2	24	8.4	5.2	3.2
5734	7370	17.2	.	.	16	.	.	.
5735	7370	20.8	19.2	1.6	20	.	.	.
5736	7370	44.0	42.0	2.0	42	10.0	6.0	4.0
5737	7370	17.2	15.2	2.0	16	6.0	3.2	2.8
5738	7370	36.0	34.4	1.6	34	8.0	5.2	2.8
5739	7370	14.4	13.2	1.2	14	6.0	4.0	2.0
5740	7370	36.8	35.2	1.6	32	.	.	.
5741	7370	17.2	16.0	1.2	14	6.8	4.0	2.8
5742	7370	21.2	20.0	1.2	20	.	.	.
5743	7370	31.2	30.0	1.2	28	8.8	6.0	2.8
5744	7370	33.2	31.6	1.6	27	8.4	5.2	3.2
5745	7410	32.0	30.4	1.6	32	.	.	.
5746	7410	24.0	22.8	1.2	20	.	.	.
5747	7410	30.4	28.8	1.6	28	.	.	.
5748	7410	38.0	36.4	1.6	42	8.0	5.6	2.4
5749	7410	34.4	33.2	1.2	32	7.6	5.2	2.4
5750	7410	34.0	32.0	2.0	34	9.2	6.0	3.2
5751	7410	25.2	23.2	2.0	20	.	.	.
5752	7410	46.0	44.0	2.0	42	.	.	.
5753	7410	41.2	39.2	2.0	39	9.6	6.0	3.6
5754	7410	32.0	30.0	2.0	29	8.0	5.6	2.4
5755	7410	22.4	.	.	20	.	.	.
5756	7410	31.2	.	.	29	.	.	.
5757	7410	23.2	22.0	1.2	21	7.2	4.0	3.2
5758	7410	31.2	29.2	2.0	29	8.0	5.2	2.8
5759	7410	23.6	21.6	2.0	24	6.8	4.0	2.8
5760	7410	24.0	22.0	2.0	26	7.6	4.8	2.8

----- CORE-573 TIME-4.63 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5761	7470	42.8	40.4	2.4	38	9.6	6.8	2.8
5762	7470	38.4	37.2	1.2	34	8.0	4.0	4.0
5763	7470	33.2	31.2	2.0	32	.	.	.
5764	7470	15.2	14.0	1.2	12	6.4	4.8	1.6
5765	7470	26.4	25.2	1.2	21	8.0	6.8	1.2
5766	7470	38.0	37.2	0.8	34	8.4	6.0	2.4
5767	7470	17.6	15.2	2.4	17	6.4	4.0	2.4
5768	7470	.	.	.	.	7.6	4.8	2.8
5769	7470	22.0	20.0	2.0	19	8.0	4.8	3.2
5770	7470	18.0	.	.	17	.	.	.

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

CORE=573 TIME=4.63

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5771	7470	18.0	16.0	2.0	18	7.6	6.0	1.6
5772	7470	17.6	16.0	1.6	16	6.4	4.0	2.4
5773	7470	15.6	14.0	1.6	14	7.2	4.0	3.2
5774	7470	29.6	28.0	1.6	27	8.8	6.0	2.8
5775	7470	35.2	33.2	2.0	34	9.2	7.2	2.0

CORE=573 TIME=4.69

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5776	7522	34.8	.	.	29	.	.	.
5777	7522	38.8	37.2	1.6	34	8.0	5.2	2.8
5778	7522	44.8	43.6	1.2	41	9.2	7.2	2.0
5779	7522	42.0	40.0	2.0	40	9.2	6.0	3.2
5780	7522	42.8	40.4	2.4	39	9.2	6.0	3.2
5781	7522	34.8	33.2	1.6	32	9.2	6.8	2.4
5782	7522	34.4	33.6	0.8	30	8.0	5.2	2.8
5783	7522	32.8	30.8	2.0	32	9.2	6.8	2.4
5784	7522	24.8	22.8	2.0	23	8.0	4.8	3.2

CORE=578 TIME=2.82

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5785	7880	.	.	.	35	11.2	8.0	3.2
5786	7880	20.8	.	.	18	9.2	5.6	3.6
5787	7880	43.2	41.2	2.0	36	10.4	7.2	3.2
5788	7880	35.2	.	.	29	.	.	.
5789	7880	45.2	42.8	2.4	37	10.0	7.2	2.8
5790	7880	51.2	.	.	.	.	.	.
5791	7880	52.0	.	.	45	.	.	.
5792	7880	44.0	42.0	2.0	36	10.8	7.2	3.6
5793	7880	23.2	21.2	2.0	21	8.8	6.0	2.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=578 TIME=2.91 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5794	8030	28.0	26.0	2.0	27	9.2	7.2	2.0
5795	8030	.	.	.	25	9.2	6.0	3.2
5796	8030	46.8	44.4	2.4	43	10.0	6.8	3.2
5797	8030	38.4	.	.	33	.	.	.
5798	8030	30.4	28.4	2.0	29	9.2	6.8	2.4
5799	8030	48.0	46.0	2.0	41	11.2	8.0	3.2
5800	8030	.	.	.	33	10.0	6.8	3.2
5801	8030	36.0	34.0	2.0	33	10.0	6.0	4.0

----- CORE=578 TIME=2.97 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5802	8180	42.0	.	.	34	.	.	.
5803	8180	42.0	.	.	38	.	.	.
5804	8180	38.0	36.0	2.0	31	10.0	6.0	4.0
5805	8180	.	.	.	.	10.0	6.8	3.2
5806	8180	44.8	.	.	36	.	.	.
5807	8180	.	.	.	31	9.6	6.8	2.8
5808	8180	45.2	42.8	2.4	35	10.8	6.8	4.0

----- CORE=578 TIME=3.06 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5809	8330	39.2	37.2	2	29	9.6	6.8	2.8
5810	8330	21.2	.	.	19	.	.	.
5811	8330	.	.	.	36	10.0	6.0	4.0
5812	8330	21.2	.	.	19	.	.	.
5813	8330	.	.	.	.	10.0	6.0	4.0

----- CORE=578 TIME=3.16 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5814	8480	47.2	45.2	2	42	10	6.8	3.2

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

CORE 578 TIME 3.28

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5815	8630	22.0	20.0	2.0	21	8.8	6.0	2.8
5816	8630	28.8	26.8	2.0	25	9.2	6.0	3.2
5817	8630	27.6	26.0	1.6	27	8.8	6.4	2.4
5818	8630	33.6	.	.	28	.	.	.
5819	8630	34.0	.	.	30	.	.	.

CORE-578 TIME-3.41

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5820	8780	38.0	.	.	31	.	.	.
5821	8780	36.8	34.8	2.0	34	9.2	6.8	2.4
5822	8780	22.4	20.8	1.6	21	8.0	5.2	2.8
5823	8780	27.2	.	.	25	.	.	.
5824	8780	29.6	.	.	29	.	.	.
5825	8780	39.2	37.2	2.0	39	9.2	6.8	2.4
5826	8780	25.2	.	.	24	.	.	.
5827	8780	30.8	29.2	1.6	28	8.8	6.0	2.8

CORE-578 TIME-3.49

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5828	8880	30.4	.	.	29	.	.	.
5829	8880	33.2	31.2	2	32	8.8	6	2.8
5830	8880	36.8	34.8	2	31	9.6	6	3.6
5831	8880	30.4	.	.	26	.	.	.
5832	8880	36.0	34.0	2	27	10.0	6	4.0

CORE-578 TIME-3.83

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5833	9280	18.0	.	.	16	.	.	.
5834	9280	25.2	23.2	2	22	9.2	6	3.2
5835	9280	33.2	.	.	28	.	.	.
5836	9280	40.0	38.0	2	33	8.8	6	2.8
5837	9280	28.0	.	.	21	.	.	.
5838	9280	30.0	.	.	27	.	.	.
5839	9280	32.0	30.0	2	27	8.8	6	2.8

RAW DATA

DEPTH IN CENTIMETERS AND TIME IN MILLIONS OF YEARS AGO

----- CORE=578 TIME=3.94 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5840	9430	41.2	.	.	37	.	.	.
5841	9430	.	.	.	35	9.6	6.0	3.6
5842	9430	41.6	40.0	1.6	36	9.2	6.4	2.8
5843	9430	32.8	30.8	2.0	29	8.0	5.2	2.8
5844	9430	.	.	.	39	10.0	6.0	4.0

----- CORE=578 TIME=4.05 -----

OBS	DEPTH	ML	MKL	DIFFML	NC	MW	MWK	DIFFMW
5845	9580	24.8	.	.	22	.	.	.
5846	9580	30.0	.	.	26	.	.	.
5847	9580	30.8	.	.	26	.	.	.

RAW DATA

REFERENCES

- Atchley, W.R. 1980. M-statistics and morphometric divergence. *Science* 208:1059-1060
- Bader, R.S. 1955. Variability and evolutionary rate in the oreodonts. *Evol.* 9:119-140
- Baldauf, J.O. 1985. A high resolution late Miocene-Pliocene diatom biostratigraphy for the eastern equatorial Pacific. In: Mayer, L. et al. Init. Repts. DSDP, 85 Washington (U.S. Gov't Printing Office). pp. 457-475
- Barron, J.A., C.A. Nigrini, A. Pujos, T. Saito, F. Theyer and E. Thomas. 1985. Synthesis of biostratigraphy, central equatorial Pacific, Deep Sea Drilling Project Leg 85: refinement of Oligocene to Quaternary biochronology. In: Mayer, L. et al. Init. Repts. DSDP, 85 Washington (U.S. Gov't Printing Office). pp. 905-933
- Bell, M.A., J.V. Baumgartner, and E.C. Olson. 1985. Patterns of temporal change in single morphological characters of a Miocene stickleback. *Paleobiol.* 11(3):258-271
- Bell, M.A. and T.R. Haglund. 1982. Fine-scale temporal variation in the Miocene stickleback *Gasterosteus doryssus*. *Paleobiol.* 8(3):282-292
- Benson, R.H. 1983. Biomechanical stability and sudden change in the evolution of the deep-sea ostracode *Poseidonamicus*. *Paleobiol.* 9(4):398-413
- Berggren, W.H. and R.E. Casey. 1983. Introduction to the symposium on tempo and mode of evolution from micropaleontological data. *Paleobiol.* 9(4):328
- Berggren, W.H., N. Hamilton, D.A. Johnson, C. Pujal, W. Weiss, P. Cepek and A.M. Gombos. 1983. Magnetobiostratigraphy of Deep Sea Drilling Project Leg 72, Sites 515-518, Rio Grande Rise (South Atlantic). In: Barker, P.F. et al. Init. Repts. DSDP, 72 Washington (U.S. Gov't Printing Office) pp.939-948
- Billsborough, A. 1973. A multivariate study of evolutionary change in the hominid cranial vault and some evolutionary rates. *J. Human Evol.* 2:387-403
- Billsborough, A. 1976. Patterns of evolution in Middle Miocene hominids. *J. Human Evol.* 5:423-439
- Bleil, U. 1985. The magnetostratigraphy of northwest Pacific sediments, Deep Sea Drilling Project Leg 86. In: Heath, G.R. et al. Init. Repts. DSDP, 86. Washington (U.S. Gov't Printing Office). pp. 441-458
- Blumenberg, B. 1980. Rates of evolutionary change during the radiation of late Neogene hominoids. *J. Human Evol.* 9:299-323
- Bookstein, F.L., P.D. Gingerich, and A.G. Kluge. 1978. Hierarchical linear modeling of the tempo and mode of evolution. *Paleobiol.* 4(2):120-134

- Boucot, A.J. 1982a. Rates of behavioral evolution, community evolution, biogeographic history, and the constraints on the evolution of species imposed by these classes of data obtained from the fossil record. *Modalities et rythmes de l'evolution mechanisms de speciation*. pp.19-28
- Boucot, A.J. 1982b. Ecophenotypic or genotypic? *Nature* 296:609
- Bukry, D. and J.H. Foster. 1973. Silicoflagellate and diatom stratigraphy, Leg 16, Deep Sea Drilling Project. In: van Andel, T.H. et al. Init. Repts. DSDP, 16 Washington (U.S. Gov't Printing Office) pp.815-837
- Burckle, L.H. 1972. Late Cenozoic planktonic diatom zones from the eastern equatorial Pacific. *Nova Hedwigia* 39:217-246
- Burckle, L.H. 1978. Early Miocene to Pliocene diatom datum levels for the equatorial Pacific. Proceedings of the Second Working Group Meeting Biostratigraphic Datum-Planes of the Pacific Neogene. IGCP Project 114. Republic of Indonesia. Ministry of Mines. Directorate General of Mines. Geological Research and Development Centre Special Publication No. 1. Bandung, Indonesia. pp.25-44
- Burckle, L.H and J.J. Morley, I. Koizumi and U. Bleil. 1985. Assessment of diatom and radiolarian high- and low-latitude zonations in northwest Pacific sediments: comparison based upon magnetostratigraphy. In: Heath, G.R. et al. Init. Repts. DSDP, 86. Washington (U.S. Gov't Printing Office). pp.781-785
- Burckle, L.H and N.D. Opdyke. 1977. Late Neogene diatom correlations in the circum-Pacific. Proc. Int. Congr. Pacific Neogene Strat., 1st, Tokyo. pp.255-284
- Burckle, L.H and J. Trainer. 1979. Middle and Late Pliocene diatom datum levels from the central Pacific. *Micropaleont.* 25(3):281-293
- Buzas, M.A. and S.J. Culver. 1986. Geographic origin of benthic foraminiferal species. *Science* 232:775-776
- Chaline, J. and B. Laurin. 1986. Phyletic gradualism in a European Plio-Pleistocene *Mimomys* lineage (Arvicolidae, Rodentia). *Paleobiol.* 12(2):203-216
- Charlesworth, B. 1980. The cost of meiosis with alternation of sexual and asexual generations. *J. Theor. Biol.* 87:517-528
- Charlesworth, B. 1984. Some quantitative methods for studying evolutionary patterns in single characters. *Paleobiol.* 10(3):308-318
- Cheetham, A.H. 1986. Tempo of evolution in a Neogene bryozoan: rates of morphologic change within and across species boundaries. *Paleobiol.* 12(2):190-202
- Ciesielski, P.F. 1983. The Neogene and Quaternary diatom biostratigraphy of subantarctic sediments, Deep Sea Drilling Project Leg 71. In: Ludwig, W.J. et al. Init. Repts. DSDP, 71 Washington (U.S. Gov't Printing Office). pp.635-665

- Colbert, E.H. 1948. Evolution of the horned dinosaurs. *Evol.* 2:145-163
- Collier, A.W. 1970. Oceans and coastal waters as life-supporting environments. In: A. Kinne, ed. Marine Ecology. Volume 1. Environmental Factors. Part 1. pp.1-93
- Cooper, J.D., R.H. Miller, and J. Patterson. 1986. A Trip Through Time: Principles of Historical Geology. Merrill Publishing Company. Toronto
- Cracraft, J. 1984. Conceptual and methodological aspects of the study of evolutionary rates, with some comments on bradytely in birds. In: Living Fossils. N. Eldredge and S.M. Stanley, eds. pp.95-104. Springer-Verlag. New York
- Dobzhansky, T. 1970. Genetics of the Evolutionary Process. Columbia University Press. New York.
- Dingus, L. 1984. Effects of stratigraphic completeness on interpretations of extinction rates across the Cretaceous-Tertiary boundary. *Paleobiol.* 10(4):420-438
- Dingus, L. and P.M. Sadler. 1982. The effects of stratigraphic completeness on estimates of evolutionary rates. *Sys. Zoo.* 31(4):400-412
- Dinkelman, M.G. 1973. Correlation between microfossil groups Panama Basin, eastern equatorial Pacific. In: van Andel, T.H. et al. Init. Repts. DSDP, 16 Washington (U.S. Gov't Printing Office) p.897
- Drebes, G. 1977. Sexuality. In: The Biology of Diatoms. Werner, D., ed. pp.250-283 University of California Press. Berkely.
- Fisher, D.C. 1986. Progress in organismal design. In: Patterns and Processes in the History of Life. D.M. Raup and D. Jablonski eds. pp.99-117. Dahlem Konferenzen 1986. Springer-Verlag. Berlin
- Flessa, K.W. and R.G. Bray. 1977. On the measurement of size-independent morphological variability: an example using successive populations of a Devonian spiriferid brachiopod. *Paleobiol.* 3:350-359
- Foster, J.H. and N.D. Opdyke. 1970. Upper Miocene to Recent magnetic stratigraphy in deep-sea sediments. *J. Geophys. Res.* 75(23):4465-4473
- Futuyma, D.J. 1979. Evolutionary Biology. Sinauer Associates, Inc. Sunderland, Mass.
- Gingerich, P.D. 1976. Paleontology and phylogeny: patterns of evolution at the species level in Early Tertiary mammals. *Am. J. Sci.* 276:1-28
- Gingerich, P.D. 1980. Evolutionary patterns in early Cenozoic mammals. *Ann. Rev. Earth Planet. Sci.* 8:407-424
- Gingerich, P.D. 1982. Origin and evolution of species: evidence from the fossil record. *Modalities et rythmes de l'évolution mechanisms de speciation.* p.85-92

- Gingerich, P.D. 1983. Rates of evolution: effects of time and temporal scaling. *Science* 222:159-161
- Gingerich, P.D. 1984. Reply to Gould. *Science* 226:995
- Ginzburg, L.V. and J.D. Rost. 1982. Are 'punctuations' artefacts of time-scales? *Nature* 296:610
- Gould, S.J. 1976. The genomic metronome as a null hypothesis. *Paleobiol.* 2(2):177-179
- Gould, S.J. 1984. Smooth curve of evolutionary rate: a psychological and mathematical artifact. *Science* 226:994-995
- Gould, S.J. and N. Eldredge. 1977. Punctuated equilibria: the tempo and mode of evolution reconsidered. *Paleobiol.* 3:115-151
- Gower, J.C. 1966. A Q-technique for calculation of canonical variates. *Biometrika* 53:588-590
- Haldane, J.B.S. 1949. Suggestions as to a quantitative measurement of rates of evolution. *Evol.* 3:51-56
- Heath, G.R. and T.H. van Andel. 1973. Tectonic and sedimentation in the Panama Basin: geologic results of Leg 16. In: van Andel, T. H. et al. Init. Repts. DSDP, 16 Washington (U.S. Gov't Printing Office) pp.899-913
- Heath, G.R., Burckle, L.H., Bleil, U., and others. 1985a. Site 578. In: Heath, G.R. et al. Init. Repts. DSDP, 86. Washington (U.S. Gov't Printing Office). pp.139-173
- Heath, G.R., D.H. Rea and S. Levi. 1985b. Paleomagnetism and accumulation rates of sediments at site 576 and 578, Deep Sea Drilling Project Leg 86, western North Pacific. In: Heath, G.R. et al. Init. Repts. DSDP, 86. Washington (U.S. Gov't Printing Office). pp.459-502
- Hecht, M.K. 1965. The role of natural selection and evolutionary rates in the origin of higher levels of organization. *Sys. Zoa.* 14:301-317
- Hendy, N.I. 1964. An Introductory Account of the Smaller Algae of British Coastal Water. Part V: Bacillariophyceae (Diatoms) London: Her Majesty's Stationary Office
- Kelley, P.H. 1984. Multivariate analysis of evolutionary patterns of seven Miocene Chesapeake Group molluscs. *J. Paleo.* 58(5):1235-1250
- Kennett, J.P. 1982. Marine Geology. Prentice-Hall, Inc. New Jersey.
- Kimura, M. 1969. The rate of molecular evolution considered from the standpoint of population genetics. *Proc. Nat. Acad. Sci.* 63:1181-1188
- Kitchell, J.A. 1983. Biotic interactions and and siliceous marine phytoplankton: an ecological and evolutionary perspective. In: Biotic Interactions In Recent and Fossil Benthic Communities. M.J.S. Tovesz and L. McCall eds. pp. 285-329. Plenum Publishing Corporation. New York

- Klecka, W.R. 1980. Discriminant Analysis. Sage University Paper Series on Quantitative Applications in the Social Sciences, 07-019. Beverly Hills and London. Sage Publications
- Koch, P.L. 1985. Clinal geographic variation in mammals: implications for the study of chronoclines. *Paleobiol.* 12(3):269-281
- Koizumi, I. 1985. Late Neogene paleoceanography in the western North Pacific. In: Heath, G.R. et al. Init. Repts. DSDP, 86. Washington (U.S. Gov't Printing Office). pp.429-438
- Koizumi, I. and Y. Tanimura. 1986. Neogene diatom biostratigraphy of the middle latitude western North Pacific, Deep Sea Drilling Project Leg 86. In: Heath, G.R. et al. Init. Repts. DSDP, 86. Washington (U.S. Gov't Printing Office). pp.269-295
- Kurten, B. 1960. Rates of evolution in fossil mammals. *Cold Spring Harbor Sym. Quant. Biol.* 24:201-215
- Lande, R. 1976. Natural selection and random genetic drift in phenotypic evolution. *Evol.* 30:314-334
- Lande, R. 1979. Quantitative genetic analysis of multivariate evolution, applied to brain:body size allometry. *Evol.* 33(1):402-416
- Lande, R. 1980a. Genetic variation and phenotypic evolution during allopatric speciation. *Amer. Nat.* 116(4):463-479
- Lande, R. 1980b. Sexual dimorphism, sexual selection, and adaptation in polygenic characters. *Evol.* 34(2):292-305
- Lande, R. 1982. A quantitative genetic theory of life history evolution. *Ecology* 63(3):607-615
- Lande, R. 1986. The dynamics of peak shifts and the pattern of morphological evolution. *Paleobiol.* 12(4):343-354
- Lande, R. and S.J. Arnold. 1983. The measurement of selection on correlated characters. *Evol.* 37(6):1210-1226
- Lazarus, D. 1983. Speciation in pelagic protista and its study in the planktonic microfossil record: a review. *Paleobiol.* 9(9):327-340
- Lazarus, D. 1986. Tempo and mode of morphologic evolution near the origin of the radiolarian lineage *Pterocanium prismatium*. *Paleobiol.* 12(2):175-189
- Lazarus, D. and D.R. Prothero. 1984. The role of stratigraphic and morphologic data in phylogeny. *J. Paleo.* 58(1):163-172
- Lazarus, D., R.P. Scherer and D.R. Prothero. 1985. Evolution of the radiolarian species-complex *Pterocanium*: a preliminary survey. *J. Paleo.* 59(1):183-220

- Lee, J.J., M.E. McEnery, R. Rottger, and C.W. Reimer. 1980. The isolation, culture and identification of endosymbiotic diatoms from *Heterostegina depressa* D'Orbigny and *Amphistegina lessonii* D'Orbigny (larger foraminifera) from Hawaii. *Botanica Marina* 23:297-302
- Lerman, A. 1965a. On rates of evolution of unit characters and character complexes. *Evol.* 19:16-25
- Lerman, A. 1965b. Evolution of *Exogyra* in the Late Cretaceous of the southeastern United States. *J. Paleol.* 39(3):414-435
- Levinton, J.S. 1983. Stasis in progress: The empirical basis of macroevolution. *Ann. Rev. Ecol. Syst.* 14:103-137
- Levinton, J.S. and C.M. Simon. 1980. A critique of the punctuated equilibria model and implications for the detection of speciation in the fossil record. *Sys. Zool.* 29(2):130-142
- Lewis, Jr., W.M. 1984. The diatom sex clock and its evolutionary significance. *Amer. Nat.* 123(1):73-80
- Malmgren, B.A. 1984. Species formation through punctuated gradualism in planktonic foraminifera. *Science* 225:317-319
- Malmgren, B.A., W.A. Berggren, and G.P. Lohmann. 1983. Evidence for punctuated gradualism in the Late Neogene *Globorotalia tumida* lineage of planktonic foraminifera. *Paleobiol.* 9(4):377-384
- Malmgren, B.A. and J.P. Kennett. 1981. Phyletic gradualism in a Late Cenozoic planktonic foraminiferal lineage; DSDP Site 284, southwest Pacific. *Paleobiol.* 7(2):230-240
- McKinney, M.L. 1985. Distinguishing patterns of evolution from patterns of deposition. *J. Paleol.* 59(3):561-567
- McKinney, M.L. and R.M. Schoh. 1983. A composite terrestrial Paleocene section with completeness estimates, based upon magnetostratigraphy. *Am. J. Sci.* 283:801-814
- Neff, N.A. and L.F. Marcus. 1980. A Survey of Multivariate Methods for Systematics. New York: privately published
- Patterson, B. 1949. Rates of evolution in Taeniodonts. In: Genetics, Paleontology, and Evolution. G.L. Jepsen, G.G. Simpson, and E. Mayr, eds. pp.243-278. Athneum. New York. reprinted 1963
- Prell, W.L. 1984. Covariance patterns of foraminiferal $\delta^{18}O$: an evaluation of Pliocene ice volume changes near 3.2 million years ago. *Science* 236:692-694
- Prell, W.L. 1985. Pliocene stable isotopes and carbonate stratigraphy (Holes 572C and 573A): paleoceanography data bearing on the question of Pliocene glaciation. In: Mayer, L. et al. Init. Repts. DSDP, 85. Washington (U.S. Gov't Printing Office). pp.723-734

- Prell, W.L., J. Imbrie, D.G. Martinson, J.J. Morely, N.G. Pistas, N.J. Shackleton and H.F. Streeter. 1986. Graphic correlation of oxygen isotope stratigraphy application to the Late Quaternary. *Paleocean.* 1(2):137-162
- Prothero, D.R. and D.B. Lazarus. 1980. Planktonic microfossils and the recognition of ancestors. *Sys. Zoo.* 29(2):119-129
- Raup, D.M. 1972. Approaches to morphologic analysis. In: Models In Paleobiology. T.J.M. Schopf, ed. pp.28-44. Freeman, Cooper and Company. San Francisco
- Raup, D.M. and R.E. Crick. 1981. Evolution of single characters in the Jurassic ammonite *Kosmoceras*. *Paleobiol.* 7(2):200-215
- Raup, D.M. and R.E. Crick. 1982. *Kosmoceras*: evolutionary jumps and sedimentary breaks. *Paleobiol.* 8(2):90-100
- Rensch, B. 1959. Evolution Above the Species Level. Columbia University Press. New York.
- Reyment, R.A. 1979. On the interpretation of the smallest principal component. *Bull. Geol. Inst. Univ. Uppsala.* 8:1-4
- Reyment, R.A. 1980. Morphometric Methods in Biostratigraphy. Academic Press. London.
- Reyment, R.A. 1982a. Phenotypic evolution in a Cretaceous foraminifer. *Evol.* 36(6):1182-1199
- Reyment, R.A. 1982b. Analysis of trans-specific evolution in Cretaceous ostracods. *Paleobiol.* 8(3):293-306
- Reyment, R.A. 1982c. Application of quantitative genetics to evolutionary series of microfossils. Nordic Symposium in Applied Statistics and Data Processing. "Statistik og Genetik", Forlag NEUCC, Copenhagen: pp.307-325
- Reyment, R.A. 1982d. Quantitative-genetic analysis of evolution in two Late Cretaceous species of ostracods. Third North American Paleontological Convention, Proceedings Vol. 2, August. pp.423-428
- Reyment, R.A. 1983. Phenotypic evolution in microfossils. In: Evolutionary Biology, Vol. 16. M.K. Hecht, B. Wallace and G.T. Prance, eds. Plenum Press. New York. pp.201-254
- Reyment, R.A. 1985. Phenotypic evolution in a lineage of the Eocene ostracod *Echinothereis*. *Paleobiol.* 11(2):174-194
- SAS Institute Inc. 1985. SAS User's Guide: Statistics, Version 5 Edition. Cary, NC: SAS Institute Inc.
- Sadler, P.M. 1981. Sediment accumulation and the completeness of stratigraphic sections. *J. Geo.* 89:569-584

- Schaeffer, B., M.K. Hecht and N. Eldredge. 1972. Phylogeny and paleontology. In: Evolutionary Biology, Vol. 6. T. Dobzhansky, M.K. Hecht and W.C. Steere, eds. pp.31-46
Appleton-Century-Crofts. New York
- Schindel, D.E. 1980. Microstratigraphic sampling and the limits of paleontological resolution. *Paleobiol.* 6(4):408-426
- Schindel, D.E. 1982. Resolution analysis: a new approach to gaps in the fossil record. *Paleobiol.* 8(4):340-353
- Schopf, T.J.M. 1982. A critical assessment of punctuated equilibria. 1. duration of taxa. *Evol.* 36(6):1144-1147
- Schopf, T.J.M. 1984. Rates of evolution and the notion of "living fossils". *Ann. Rev. Earth and Planet. Sci.* 12:245-292
- Schopf, T.J.M., D.M. Raup, S.J. Gould, and D.S. Simberloff. 1975. Genomic versus morphologic rates of evolution: influence of morphologic complexity. *Paleobiol.* 1:63-70
- Schrader, H.J. 1977. Cenozoic marine planktonic diatom stratigraphy of the tropical Indian Ocean. In: Fisher, R.L. et al. Init. Repts. DSDP, 24. Washington (U.S. Gov't Printing Office). pp.887-968
- Shackleton, N.J. 1977. The oxygen isotope stratigraphic record of the Late Pleistocene. *Phil. Trans. R. Soc. Lond. B.* 280:169-186
- Shackleton, N.J., J. Backman, H. Zimmerman, and others. 1984. Oxygen isotope calibration of the onset of ice rafting and history of glaciation in the North Atlantic region. *Nature* 307:620-623
- Shackleton, N.J. and N.D. Opdyke. 1977. Oxygen isotopic and paleomagnetic evidence for early Northern Hemisphere glaciation. *Nature* 270:216-219
- Simpson, G.G. 1944. Tempo and Mode in Evolution. Columbia University Press. New York. reprinted 1984
- Simpson, G.G. 1949. Rate of evolution in animals. In: Genetics, Paleontology and Evolution. G.L. Jepsen, G.G. Simpson and E. Mayr, eds. pp.205-228. Athneum. New York. Reprinted 1963
- Simpson, G.G. 1953. The Major Features of Evolution. Columbia University Press. New York.
- Sokal, R.R. and F.J. Rohlf. 1981. Biometry, 2nd edition. W.H. Freeman and Co. New York.
- Stanley, S.M. 1985. Rates of evolution. *Paleobiol.* 11:13-26
- Stebbins, Jr., G.L. 1947. Evidence on rates of evolution from the distribution of existing and fossil plant species. *Ecol. Monog.* 17(2):150-158

- Stebbins, Jr., G.L. 1949. Rates of evolution in plants. In: Genetics, The Physiological Ecology, G.L. Jepsen, G.G. Simpson and E. Mayr, eds. pp.229-242. Athneum. New York. Reprinted 1963
- Taylor, F.J.R. 1980. Basic biological features of phytoplankton cells. In: The Physiological Ecology of Phytoplankton. I. Morris, ed. pp.3-55. University of California Press. Berkely
- Theyer, F. L.A. Mayer, J.A. Barron, and E. Thomas. 1985. The equatorial Pacific high-productivity belt: elements for a synthesis of Deep Sea Drilling Project Leg 85 results. In: Mayer, L. et al. Init. Repts. DSDP, 85 Washington (U.S. Gov't Printing Office). pp.971-985
- Van Valen, L. 1974. Multivariate structural statistics in natural history. *J. Theor. Biol.* 45:235-247
- Weinreich, N. and F. Theyer. 1985. Paleomagnetism of Deep Sea Drilling Project Leg 85 sediments: Neogene magnetostratigraphy and tectonic history of the central equatorial Pacific. In: Mayer, L. et al. Init. Repts. DSDP, 85. Washington (U.S. Gov't Printing Office). pp.849-901
- Wood, A.M., R. Lande and G.A. Fryxell. 1987. Quantitative genetic analysis of morphological variation in an antarctic diatom at two light intensities. *J. Phycol.* 23(1):42-54
- Wood, II, H.E. 1949. Evolutionary rates and trends in rhinoceroses. In: Genetics, Paleontology and Evolution. G.L. Jepsen, G.G. Simpson and E. Mayr, eds. pp.185-189. Athneum. New York. Reprinted 1963
- Wright, S. 1977. Evolution and the Genetics of Populations. Volume 3. Experimental Results and Evolutionary Deductions. University of Chicago Press. Chicago
- Zar, J.H. 1984. Biostatistical Analysis, 2nd Edition. Prentice-Hall, Inc. Englewood Cliffs, New Jersey