

OPTiMAL: A new machine learning approach for GDGT-based palaeothermometry

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Supplementary Information

This document provides more detail on the forward model described briefly in the main text. We focus on transformations for compositional data and their use, diffusion maps and the forward model. We also evaluate the performance of our nearest neighbour screening tool ($D_{nearest}$) in light of previously available indices used to interrogate GDGT data such as the BIT, MI and RI (refs).

1. Compositional data analysis and coordinate transformations

Composition data are data that lie in a simplex. In other words, each datapoint must contain strictly positive entries which sum to a constant, often one. The dataset of fractional abundances of GDGTs is a compositional dataset. We refer to a single point as a composition.

The majority of multivariate statistics are designed for data that lie in Euclidean space, i.e. unconstrained space. Problems in compositional spaces may arise due to the inherent correlation between compositional parts, or models producing non-compositional predictions (e.g. uncertainty intervals extending beyond 1 for a given compositional part). For that reason, finding a mapping between the simplex and Euclidean space which allows standard multivariate techniques to be applied to compositional data has been the focus of research for decades (e.g. REFS).

There are a number of options based on log-ratio transformations. We choose the isometric log-ratio transformation for this work for the reasons laid out by Egozcue et al (2003) [1], the main reasons being that it reflects the true dimensionality of compositional data and provides a one-to-one mapping between the simplex and Euclidean space.

Given a compositional vector $x \in \mathbb{S}^d$ where \mathbb{S}^d is the d -dimensional unit simplex, the isometric log-ratio transformation $ilr : \mathbb{S}^d \rightarrow \mathbb{R}^{(d-1)}$ is given by

$$(ilr(x))^\top = (clr(x))^\top \Phi$$

where Φ is a $d \times (d - 1)$ matrix, $\text{clr}(\mathbf{x})_i = \ln\left(\frac{x_i}{g(\mathbf{x})}\right)$ is the centred log-ratio transformation, and $g(\mathbf{x})$ is the geometric mean of \mathbf{x} .

We use the ilr transformation as implemented by the function `pivotCoord` in the R package `robCompositions`. Note that ilr-transformation is unsuitable for data containing zero components. A commonly used strategy is to assume that zero values are not true zeros, but are below some detection limit imposed by the measurement technology. Thus zeros are treated as missing values and a variety of imputation methods can be employed (Martín-Fernández et al., 2012). We use the `impCoda` function in the R package `robCompositions` for this purpose.

2. Diffusion maps for data visualisation

Diffusion maps (Coifman et al, 2006) are a method for nonlinear dimensionality reduction and visualisation. The building block of a diffusion map is a graph representing the data, in which the vertices are datapoints. These vertices are joined by weighted edges, and a variety of choices exist for assigning weights to these edges. For the implementation we use in the main text, we represent the data as a fully connected graph (i.e., each edge has non-zero weight). The weight assigned to each edge between two points x_i and x_j is given by

$$W_{ij} = \exp\left(-\frac{d^2(x_i, x_j)}{2\sigma^2}\right)$$

where d is some distance function and σ is a lengthscale parameter to be set later. Essentially this builds a graph in which points which are ‘close’ subject to d and σ have heavily weighted edges and points which are distant have small weights on their edges.

To properly account for the compositional nature of the data, we use a simplicial distance measure rather than the typical Euclidean distance. We choose the Aitchison distance, which is simply the Euclidean distance between ilr-transformed datapoints (Egozcue et al., 2003).

We then used these weights to define a discrete-time, discrete-distance Markov process on the data, with some transition matrix P which depends on W (for full details of the choice of the transition matrix we use in the main text see Haghverdi et al., 2015).

The eigenvectors of this transition matrix are referred to as diffusion components. They represent the dominant modes of variation in the data. The diffusion distance between two points reflects their connectivity in the graph and is related to the probability that one point can be reached from the other in some specified time. The advantage of representing the points by their diffusion components for visualisation purposes is that Euclidean distance in the diffusion space is approximately equivalent to diffusion

distance in the original space (Nadler et al., 2006).

3. Details of the forward model

The forward model is built on multi-output (or vector-valued) Gaussian Processes. We call this model a forward model in the sense of Haslet et al. (2006), i.e., the basic building block of the model is the assumption that measured compositions arise via some unknown function of temperature plus additional temperature-independent noise. The more traditional regression strategy would be to model the outcome of interest (temperature) as a function of measured predictions (compositions), and indeed this is the approach of the Gaussian Process Regression model described in the main text.

Let $\mathbf{x}_i \in \mathbb{S}^d$ denote the i^{th} measured composition, and let $\mathbf{x}_i^* \in \mathbb{R}^{(d-1)}$ denote the ilr-transformation of \mathbf{x}_i . We begin with the very general model

$$\mathbf{x}_i^* = \mathbf{f}(T_i) + \boldsymbol{\varepsilon}_i$$

where $\mathbf{f} : \mathbb{R} \rightarrow \mathbb{R}^{(d-1)}$ is a function to be specified/determined and $\boldsymbol{\varepsilon}_i$ is a zero-mean random variable independent of temperature.

The function \mathbf{f} describes the way in which sea surface temperatures give rise to steady-state GDGT compositions in populations of marine archaeota. It is clear that temperature has some effect, but a well-reasoned mechanistic model has, to our knowledge, not been developed.

In order to capture the model uncertainty associated with the lack of a mechanistic model, we take a Bayesian approach and place a multi-output Gaussian process prior on the function \mathbf{f} . We also assume that $\boldsymbol{\varepsilon}$ is Gaussian with diagonal covariance matrix Σ .

In other words, the forward model is as follows

$$\begin{aligned} \mathbf{x}^* | T, \mathbf{f}, \Sigma &\sim \mathcal{N}(\mathbf{f}(T), \Sigma), \\ \mathbf{f} &\sim \text{MOGP}(\mathbf{K}), \\ \sigma_i &\propto 1, \quad i = 1, \dots, d-1, \\ \Sigma &= \text{diag}(\sigma) \end{aligned}$$

MOGP refers to a zero-mean, multi-output Gaussian process with kernel \mathbf{K} . There are a number of choices for kernels in multi-output Gaussian process regression models (Alvarez et al., 2012). We choose perhaps the simplest option, the Intrinsic Coregionalisation Model (ICM) with a Matern 3/2 base kernel. The model is implemented in Python 3.6 via the GPy library – the kernel hyperparameters are optimised by maximising the marginal likelihood, and probabilistic predictions are subsequently made using the exact form for the posterior. The code is available as part of the Github repository detailed in the main text.

The most useful outcome of estimating this model is gaining access to the conditional density $p(\mathbf{x}^*|T)$, i.e. gaining the ability to predict a distribution over compositions, given a temperature.

Armed with this distribution, a simple application of Bayes' rule allows the model to be inverted and we gain access to $p(T|\mathbf{x}^*)$, i.e. a distribution over temperatures given a new composition. In other words, we compute

$$p(T|\mathbf{x}^*) = \frac{p(\mathbf{x}^*|T)p(T)}{p(\mathbf{x}^*)} \quad (1)$$

Here $p(T)$ is a prior distribution over temperatures and reflects our prior beliefs about 'reasonable' sea surface temperatures. For example, we know that sea surface temperatures below $\sim -5^\circ\text{C}$ or above $\sim 50^\circ\text{C}$ are unreasonable, and our prior should reflect this. If a uniform prior over all temperatures is assumed (i.e. any temperature is possible a priori), the posterior is improper (i.e. does not integrate to 1) due to the large probability mass assigned to all compositions at temperatures far outside the modern temperature range.

Note that the normalising factor $p(\mathbf{x}^*) = \int_{\mathbb{R}} p(\mathbf{x}^*|T)p(T) dT$ is required to ensure that the probability distribution is properly normalised and to allow the computation of quantities of interest such as the predictive mean, $\int_{\mathbb{R}} T p(T|\mathbf{x}^*) dT$, and variance, $\int_{\mathbb{R}} (T - \mu)^2 p(T|\mathbf{x}^*) dT$, of the distribution.

Since the integrals are one dimensional, it is straightforward and computationally cheap to use numerical quadrature to evaluate them.

For the applications in the paper, $p(T)$ is chosen to be a Gaussian distribution, and so the natural choice is Gauss-Hermite quadrature. We use 500 point Gauss-Hermite quadrature. For more details on quadrature in general and numerical methods for integration see Press et al. (2007).

For further details on the implementation of the model see the accompanying code. A schematic of the model is presented in Figure 1.

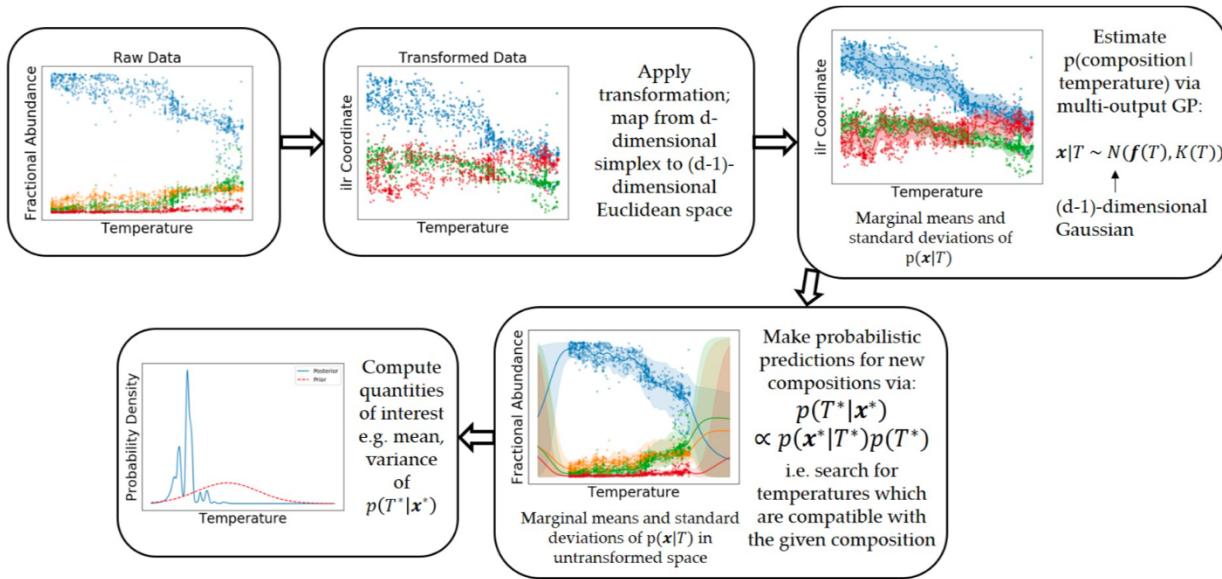


Figure 1: Schematic representation of the forward model

4. Comparison of screening methods for GDGT assemblages

Existing approaches make use of a range of calculated indices to evaluate GDGT assemblages and identify any potential biases that could influence SST reconstructions. Examples of this include BIT, MI and RI (refs). While most studies report these values, it is noteworthy that they are not always used as a definitive screening process and values significantly above the respective thresholds have been deemed acceptable (e.g., Super et al., 2018). Here, we use existing compilations of Eocene and Cretaceous GDGTs (Inglis et al., 2015; O'Brien et al., 2017) to demonstrate the value of our nearest neighbour (symbol) screening tool and OPTiMAL.

We first calculated $D_{nearest}$ (as described in the main text) for the entirety of the published Eocene and Cretaceous datasets, including all values that the original studies discounted due to BIT, MI and RI exceeding their respective thresholds. We identified that 67% of Eocene and 97% of Cretaceous data fail our $D_{nearest}$ quality check (Figure 2A). We then repeated this exercise using Eocene and Cretaceous data that had passed the screening tests in the original publications (Figure 2B). From these plots it is clear that existing screening methodologies do remove samples with strongly non-analogue compositions, as defined by $D_{nearest}$ values, especially at the most extreme end with $D_{nearest} > 100$. However, existing screening protocols fail to exclude many of the samples which, in our methodology, fail the $D_{nearest}$ criteria (< 0.5). Conversely, there are a few (quantify?) samples which pass our $D_{nearest}$ criteria (< 0.5) but have been excluded previously on the basis of BIT, MI or RI criteria. For the moment, we suggest that a combined approach using

BIT, MI, RI and $D_{nearest}$ provides the greatest potential for identifying non-analogue behaviour in fossil GDGT assemblages.

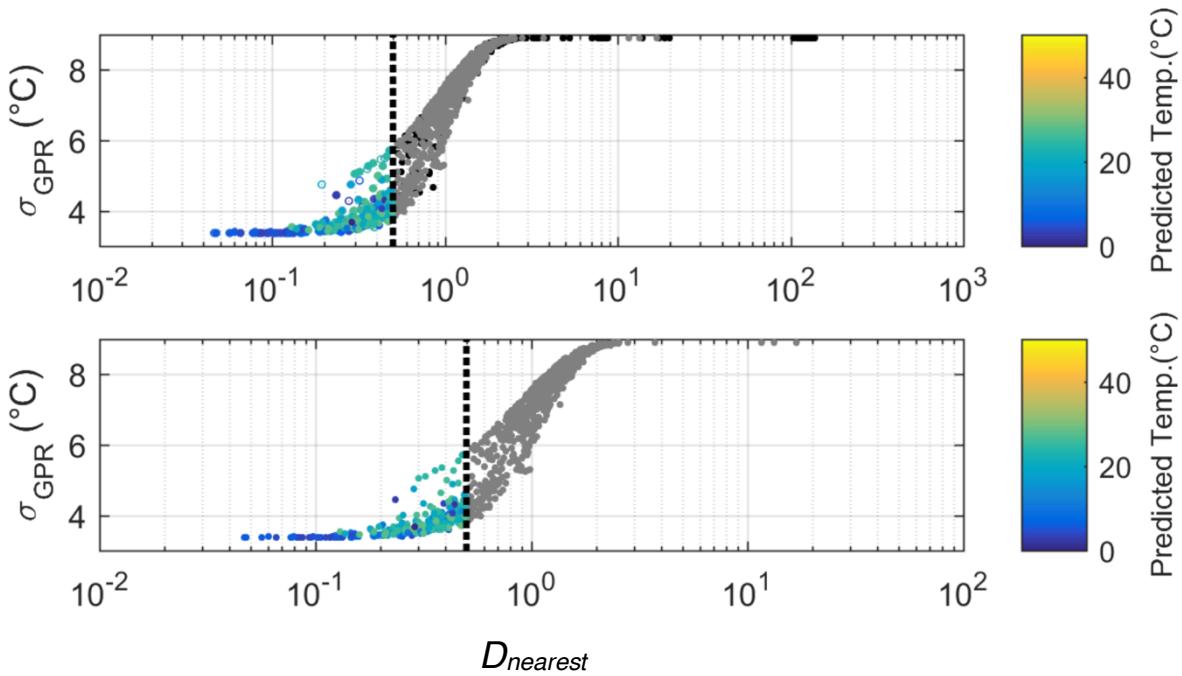


Figure 2: Top panel shows $D_{nearest}$ for all Eocene and Cretaceous data, bottom panel shows $D_{nearest}$ for those datapoints that passed screening in the original submissions (Inglis et al., 2015; O'Brien et al., 2017). Filled circles pass both $D_{nearest}$ and existing screening tests; grey circles pass existing screening tests but fail $D_{nearest}$; black circles fail both existing screening tests and $D_{nearest}$; and open circles pass $D_{nearest}$ but fail existing screening tests.

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Modern Calibration Dataset for OPTiMAL

GDGT-0	GDGT-1	GDGT-2	GDGT-3	renarchaeo	Cren'	longitude	latitude	Sea Surface Temp	water depth	Core name	Source
0.285	0.059	0.039	0.015	0.596	0.006	122.67	32	16	30	1	Tierney and Tingley 2015
0.283	0.065	0.043	0.022	0.587	0	123	32	16	37	2	Tierney and Tingley 2016
0.257	0.053	0.037	0.013	0.635	0.005	122.33	31.75	16.8	23	3	Tierney and Tingley 2017
0.3073	0.0561	0.041	0.014	0.5756	0.006	123	31.75	16.8	36	4	Tierney and Tingley 2018
0.3046	0.0581	0.0431	0.014	0.5731	0.007	123.33	31.75	17.8	33	5	Tierney and Tingley 2019
0.432	0.115	0.057	0.021	0.37	0.005	122.17	31.5	16.8	7	6	Tierney and Tingley 2020
0.449	0.029	0.015	0.005	0.5	0.002	122.33	31.5	16.8	16	7	Tierney and Tingley 2021
0.2667	0.0599	0.041	0.015	0.6094	0.008	122.5	31.5	16.8	28	8	Tierney and Tingley 2022
0.273	0.064	0.045	0.018	0.591	0.009	122.67	31.5	16.8	38	9	Tierney and Tingley 2023
0.2767	0.0629	0.043	0.016	0.5944	0.007	123	31.5	16.8	32	10	Tierney and Tingley 2024
0.283	0.05	0.034	0.012	0.613	0.008	122.5	31.5	16.8	22	11	Tierney and Tingley 2025
0.263	0.057	0.04	0.014	0.619	0.007	122.67	31.25	16.8	37	12	Tierney and Tingley 2026
0.2807	0.0599	0.049	0.017	0.5854	0.008	122	31.25	16.8	7	13	Tierney and Tingley 2027
0.273	0.059	0.044	0.015	0.602	0.007	122.17	31	16.8	8	14	Tierney and Tingley 2028
0.2687	0.0519	0.038	0.013	0.6214	0.007	122.33	31	16.8	8	15	Tierney and Tingley 2029
0.2677	0.0539	0.036	0.013	0.6224	0.007	122.67	31	16.8	20	16	Tierney and Tingley 2030
0.264	0.038	0.046	0.015	0.63	0.007	122	30.75	19.7	10	17	Tierney and Tingley 2031
0.2557	0.0529	0.037	0.014	0.6314	0.009	122.5	30.75	19.7	14	18	Tierney and Tingley 2032
0.27	0.06	0.041	0.015	0.606	0.008	122.67	30.75	19.7	38	19	Tierney and Tingley 2033
0.4456	0.0639	0.0639	0.022	0.3896	0.015	123	30.75	19.7	46	20	Tierney and Tingley 2034
0.2882	0.0808	0.0861	0.0141	0.4886	0.0422	-48.35	4.04	27.4	1088	20	Tierney and Tingley 2035
0.278	0.056	0.043	0.015	0.601	0.007	122	31	16.8	11	21	Tierney and Tingley 2036
0.2606	0.0745	0.0824	0.0133	0.5319	0.0372	-48.54	3.96	27.4	738	21	Tierney and Tingley 2037
0.2322	0.0521	0.042	0.015	0.6517	0.007	122.33	30.5	19.7	24	22	Tierney and Tingley 2038
0.243	0.055	0.04	0.014	0.64	0.008	122.67	30.5	19.7	33	23	Tierney and Tingley 2039
0.2993	0.0743	0.075	0.0102	0.5085	0.0327	-49.06	3.68	27.5	107	23	Tierney and Tingley 2040
0.3606	0.0599	0.038	0.014	0.5175	0.01	124.5	32	17.7	39	24	Tierney and Tingley 2041
0.3263	0.0581	0.039	0.013	0.5546	0.009	125	32	17.8	47	25	Tierney and Tingley 2042
0.1533	0.0499	0.072	0.0441	0.6527	0.0279	-49.86	3.19	27.5	32	25	Tierney and Tingley 2043
0.295	0.052	0.035	0.011	0.6	0.007	124.5	31.5	17.7	44	26	Tierney and Tingley 2044
0.272	0.056	0.04	0.014	0.607	0.011	125	31.5	17.7	48	27	Tierney and Tingley 2045
0.2448	0.0569	0.041	0.015	0.6354	0.007	122.5	31	19.7	18	28	Tierney and Tingley 2046
0.2378	0.0559	0.043	0.016	0.6394	0.008	122.5	30	20.2	18	29	Tierney and Tingley 2047
0.269	0.063	0.047	0.017	0.594	0.01	124.5	30	20.5	68	30	Tierney and Tingley 2048
0.2478	0.0629	0.047	0.018	0.6114	0.013	123.11	29.47	20.8	63	31	Tierney and Tingley 2049
0.241	0.063	0.048	0.018	0.615	0.015	123.38	29.32	20.8	71	32	Tierney and Tingley 2050
0.2527	0.0649	0.049	0.018	0.6014	0.014	123.8	29.09	20.8	77	33	Tierney and Tingley 2051
0.241	0.062	0.046	0.017	0.62	0.014	122.43	28.29	21.6	66	34	Tierney and Tingley 2052
0.39	0.054	0.03	0.01	0.509	0.007	123.01	33	16.7	32	35	Tierney and Tingley 2053
0.387	0.056	0.029	0.011	0.512	0.005	119.67	35	13.9	21	36	Tierney and Tingley 2054
0.424	0.042	0.019	0.006	0.505	0.004	121	35	13.9	37	37	Tierney and Tingley 2055
0.428	0.035	0.016	0.005	0.512	0.004	123.5	35.01	15.4	77	38	Tierney and Tingley 2056
0.432	0.041	0.02	0.005	0.498	0.004	121.99	36	15.2	39	39	Tierney and Tingley 2057
0.3197	0.047	0.027	0.009	0.5914	0.006	124.01	33.01	17.5	49	40	Tierney and Tingley 2058
0.4625	0.03	0.012	0.004	0.4885	0.003	124	36	14.9	77	41	Tierney and Tingley 2059
0.471	0.031	0.013	0.004	0.478	0.003	125.12	36.92	13.8	51	42	Tierney and Tingley 2060
0.4635	0.025	0.009	0.004	0.4965	0.002	124.12	36.92	14.6	76	43	Tierney and Tingley 2061
0.0894	0.0531	0.0761	0.0534	0.7057	0.0224	-48.05	2.09	27.8	65	43	Tierney and Tingley 2062
0.521	0.03	0.015	0.005	0.426	0.003	123.62	36.92	14.9	72	44	Tierney and Tingley 2063
0.436	0.027	0.01	0.004	0.519	0.004	125.03	35.85	14.9	53	45	Tierney and Tingley 2064
0.39	0.04	0.023	0.007	0.535	0.005	124.03	35.85	15.2	77	46	Tierney and Tingley 2065
0.391	0.034	0.016	0.005	0.551	0.003	121.53	35.85	15.2	38	47	Tierney and Tingley 2066
0.4264	0.033	0.014	0.004	0.5185	0.004	124.82	34.72	15.7	81	48	Tierney and Tingley 2067
0.4625	0.034	0.015	0.005	0.4795	0.004	123.52	34.72	16	77	49	Tierney and Tingley 2068
0.3023	0.0766	0.0766	0.0104	0.5031	0.0311	-45.36	1.64	27.4	-999	49	Tierney and Tingley 2069
0.39	0.031	0.013	0.004	0.56	0.002	121.53	34.72	15.2	42	50	Tierney and Tingley 2070
0.3666	0.042	0.023	0.006	0.5594	0.003	121.03	34.72	15.2	23	51	Tierney and Tingley 2071
0.385	0.069	0.044	0.015	0.477	0.01	125	32.5	17.8	58	52	Tierney and Tingley 2072
0.4016	0.0619	0.034	0.012	0.4815	0.009	125.53	33.57	18	87	53	Tierney and Tingley 2073
0.421	0.055	0.028	0.006	0.481	0.009	124.03	33.57	17.5	71	54	Tierney and Tingley 2074
0.3659	0.064	0.0579	0.0091	0.4787	0.0244	-44.35	0.66	27.4	2372	54	Tierney and Tingley 2075
0.4494	0.043	0.02	0.007	0.4745	0.006	123.53	33.57	16.7	66	55	Tierney and Tingley 2076
0.3734	0.038	0.019	0.006	0.5596	0.004	122.53	33.57	15.8	39	56	Tierney and Tingley 2077
0.3257	0.046	0.029	0.009	0.5864	0.004	122.03	33.57	15.8	24	57	Tierney and Tingley 2078
0.247	0.053	0.044	0.011	0.641	0.004	121.53	33.57	15.1	17	58	Tierney and Tingley 2079
0.2947	0.0801	0.0883	0.0154	0.4795	0.0421	-48.61	4.46	27.4	1711	13a	Tierney and Tingley 2080
0.2995	0.0887	0.0973	0.0171	0.4548	0.0427	-48.61	3.95	27.4	640	22b	Tierney and Tingley 2081
0.2737	0.0721	0.0792	0.0113	0.5283	0.0354	-48.17	3.78	27.4	1014	28b	Tierney and Tingley 2082
0.272	0.0772	0.0868	0.0127	0.5111	0.0402	-47.64	3.07	27.3	1028	32b	Tierney and Tingley 2083
0.2705	0.0691	0.0763	0.0115	0.5381	0.0345	-47.31	3.65	27.3	2079	32c	Tierney and Tingley 2084
0.2693	0.0666	0.0712	0.0155	0.5433	0.0341	-47.74	2.85	27.3	609	42b	Tierney and Tingley 2085
0.1235	0.0671	0.0859	0.0494	0.6459	0.0282	-47.85	2.57	27.3	110	42d	Tierney and Tingley 2086
0.277	0.0741	0.0748	0.0104	0.5281	0.0356	-46.25	3.39	27.4	3375	44c	Tierney and Tingley 2087
0.2872	0.0749	0.0769	0.0103	0.519	0.0318	-42.74	-1.03	27.1	3113	60b	Tierney and Tingley 2088
0.17	0.0597	0.0518	0.0159	0.6826	0.0201	114.98	21.00	25.8	102	A5	Tierney and Tingley 2089
0.1943	0.0548	0.0397	0.0136	0.6863	0.0114	114.50	21.50	25.1	73	A7	Tierney and Tingley 2090
0.2156	0.0465	0.0297	0.0111	0.69	0.007	114.00	22.01	25.1	33	A9	Tierney and Tingley 2091
0.5008	0.0565	0.0232	0.0054	0.4006	0.0134	-22.182	-55.278	0.8	3926	AII-107-6-17	Tierney and Tingley 2092
0.4994	0.06	0.0267	0.0046	0.3962	0.0132	-21.975	-55.27	1	4119	AII-107-6-18	Tierney and Tingley 2093
0.4539	0.0613	0.0295	0.0065	0.4284	0.0205	-17.952	-54.857	1.8	4119	AII-107-6-20	Tierney and Tingley 2094
0.5112	0.0676	0.0207	0.0032	0.3883	0.0091	-8.718	-54.857	0.8	3255	AII-107-6-24	Tierney and Tingley 2095
0.5152	0.0698	0.0209	0.0042	0.3832	0.0068	-3.518	-54.753	0.7	2921	AII-107-6-27	Tierney and Tingley 2096
0.4745	0.0658	0.0303	0.0053	0.4134	0.0106	7.763	-47.535	5.3	2473	AII-107-6-70	Tierney and Tingley 2097
0.4833	0.0662	0.032	0.0052	0.4039	0.0096	8.008	-46.822	6.5	2270	AII-107-6-72	Tierney and Tingley 2098
0.5461	0.0608	0.0197	0.0034	0.3622	0.0078	-3.33	-54.792	0.7	2768	AII-GGC-22	Tierney and Tingley 2099
0.5143	0.06	0.0249	0.0031	0.38							

Modern Calibration Dataset for OPTiMAL

GDGT-0	GDGT-1	GDGT-2	GDGT-3	renarchaeo	Cren'	longitude	latitude	Sea Surface Temp	water depth	Core name	Source
0.4733	0.023	0.0092	0.0054	0.4846	0.0045	74.0033	75.4019	1.4	50	BP00-02	Tierney and Tingley 2107
0.4866	0.0212	0.0084	0.0047	0.475	0.0039	77.9598	75.7085	1.8	68	BP00-26	Tierney and Tingley 2108
0.4956	0.0206	0.009	0.0056	0.4655	0.0037	81.9632	76.9618	1.1	66	BP00-36/04	Tierney and Tingley 2109
0.4699	0.0278	0.0107	0.0075	0.4794	0.0048	73.2385	73.1968	1.7	20	BP00-38	Tierney and Tingley 2110
0.489	0.0213	0.0101	0.0061	0.4694	0.0042	75.8825	76.2156	1	111	BP01-61	Tierney and Tingley 2111
0.4749	0.0222	0.0072	0.0049	0.4865	0.0042	79.0245	74.0007	2.3	30	BP97-19	Tierney and Tingley 2112
0.5341	0.0683	0.0264	0.015	0.346	0.0102	81.4812	72.0932	1.7	10	BP97-32	Tierney and Tingley 2113
0.4968	0.0465	0.015	0.0106	0.4235	0.0075	80.3287	72.5087	1.7	14	BP97-35	Tierney and Tingley 2114
0.4759	0.023	0.0075	0.0063	0.4828	0.0046	79.9175	73.536	1.7	40	BP97-39	Tierney and Tingley 2115
0.4965	0.0358	0.0139	0.0097	0.4392	0.0049	73.7485	72.5835	3.3	18	BP97-47	Tierney and Tingley 2116
0.4828	0.0245	0.0088	0.0071	0.4716	0.0053	72.8947	73.2095	1.5	29	BP97-49	Tierney and Tingley 2117
0.4912	0.0224	0.0065	0.0061	0.4691	0.0046	72.9513	73.611	1.5	28	BP97-50	Tierney and Tingley 2118
0.4835	0.0209	0.0066	0.0065	0.4772	0.0053	72.662	74.0003	2	30	BP97-52	Tierney and Tingley 2119
0.474	0.0293	0.012	0.0067	0.4721	0.0059	79.9897	72.9295	1.7	35	BP99-08	Tierney and Tingley 2120
0.4697	0.0199	0.0079	0.0049	0.494	0.0036	78	74.4973	3.4	36	BP99-13	Tierney and Tingley 2121
0.4941	0.0457	0.0186	0.011	0.4258	0.0048	74	72.333	3.3	35	BP99-18	Tierney and Tingley 2122
0.4859	0.0464	0.0213	0.0103	0.4297	0.0064	74.1858	72.189	3.3	35	BP99-19	Tierney and Tingley 2123
0.4871	0.034	0.0137	0.0082	0.4524	0.0046	74.7317	72.5135	3.3	35	BP99-20	Tierney and Tingley 2124
0.4646	0.0232	0.0079	0.0067	0.4926	0.0049	73.996	74.001	3.6	35	BP99-25	Tierney and Tingley 2125
0.4764	0.0375	0.015	0.0082	0.457	0.0059	79.761	72.486	1.7	35	BP99-31	Tierney and Tingley 2126
0.4773	0.0249	0.0099	0.0061	0.4778	0.004	79.954	73.1345	1.7	35	BP99-32	Tierney and Tingley 2127
0.46	0.0202	0.0055	0.0055	0.5034	0.0055	78.334	74.3008	2.4	29	BP99-35	Tierney and Tingley 2128
0.4788	0.0227	0.0076	0.0065	0.4791	0.0053	74.3342	74.3005	2.9	35	BP99-37	Tierney and Tingley 2129
0.4482	0.0434	0.0254	0.0116	0.4596	0.0118	29.5	45.5	13.3	27	BS 01E-27	Tierney and Tingley 2130
0.3918	0.0361	0.0134	0.0053	0.5428	0.0107	32	45	13.4	105	BS 02E-105	Tierney and Tingley 2131
0.3767	0.0369	0.0147	0.0061	0.5565	0.0091	30	44.5	13.8	114	BS 04E-114	Tierney and Tingley 2132
0.4058	0.0328	0.015	0.0035	0.5319	0.0109	30.5	44	14.4	564	BS 05E-564	Tierney and Tingley 2133
0.3819	0.0332	0.0175	0.0035	0.5527	0.0111	35	44.5	14.8	335	BS 06E-335	Tierney and Tingley 2134
0.4148	0.0306	0.0141	0.0038	0.529	0.0078	34	44	14.2	1288	BS 07E-1288	Tierney and Tingley 2135
0.365	0.0368	0.0218	0.0055	0.5582	0.0128	34	45.5	14.1	2129	BS 09E-2129	Tierney and Tingley 2136
0.3462	0.0186	0.0065	0.0035	0.6216	0.0035	14.712	54.621	8.9	47	S2 Arkona basi	Tierney and Tingley 2137
0.4688	0.0233	0.0078	0.0029	0.4936	0.0036	16.712	55.621	8.4	66	BS3	Tierney and Tingley 2138
0.4519	0.018	0.0066	0.0026	0.5173	0.0036	19.712	57.621	7.8	115	S4 Gotland dee	Tierney and Tingley 2139
0.4333	0.0216	0.0072	0.0022	0.5319	0.0037	20.712	57.621	7.8	240	S5 Gotland dee	Tierney and Tingley 2140
0.4062	0.0218	0.0077	0.0021	0.558	0.0042	20.712	58.621	7.7	175	S6 Baltic prope	Tierney and Tingley 2141
0.5419	0.0398	0.0117	0.0053	0.3975	0.0038	21.75	71.721	6.6	360	BS625	Tierney and Tingley 2142
0.5492	0.0329	0.0092	0.0042	0.4016	0.003	24.048	72.322	5.9	264	BS627	Tierney and Tingley 2143
0.5574	0.0261	0.0077	0.0037	0.4023	0.0028	24.251	73	5	404	BS629	Tierney and Tingley 2144
0.5517	0.0195	0.0057	0.0031	0.4178	0.0023	24.46	73.663	5	451	BS631	Tierney and Tingley 2145
0.5591	0.0189	0.006	0.0033	0.4106	0.0021	24.683	74.331	2.9	373	BS633	Tierney and Tingley 2146
0.4776	0.0135	0.0043	0.0029	0.4994	0.0022	24.938	75.001	0.5	182	BS635	Tierney and Tingley 2147
0.4971	0.0142	0.0045	0.0029	0.4794	0.0018	27.893	75.563	1.8	263	BS639	Tierney and Tingley 2148
0.5258	0.0148	0.0043	0.0026	0.4504	0.0021	29.905	76.486	0.7	291	BS643	Tierney and Tingley 2149
0.5124	0.0145	0.0044	0.0027	0.464	0.002	29.45	75.853	2.1	296	BS645	Tierney and Tingley 2150
0.5067	0.0153	0.0047	0.0028	0.4683	0.0023	29	75.201	2	343	BS647	Tierney and Tingley 2151
0.55	0.0172	0.0052	0.003	0.4225	0.002	28.566	74.535	3.8	394	BS649	Tierney and Tingley 2152
0.5596	0.0176	0.0053	0.0031	0.4126	0.0017	26.065	74.63	3.7	317	BS651	Tierney and Tingley 2153
0.5515	0.0198	0.0058	0.0031	0.4178	0.0021	25.798	73.972	4.8	441	BS653	Tierney and Tingley 2154
0.5642	0.0242	0.0068	0.0034	0.3991	0.0022	25.532	73.297	4.8	412	BS655	Tierney and Tingley 2155
0.5486	0.0281	0.0091	0.0042	0.4072	0.0028	25.269	72.634	5.7	268	BS657	Tierney and Tingley 2156
0.5421	0.0341	0.0104	0.0047	0.4057	0.0029	25.047	71.972	6.2	256	BS659	Tierney and Tingley 2157
0.5258	0.0389	0.0118	0.0053	0.4145	0.0037	22.758	71.371	6.4	408	BS661	Tierney and Tingley 2158
0.5436	0.0282	0.0085	0.0042	0.4126	0.0031	28.399	72.167	5.4	289	BS665	Tierney and Tingley 2159
0.5681	0.0274	0.0084	0.0037	0.3898	0.0026	28.754	72.832	5.4	305	BS667	Tierney and Tingley 2160
0.5527	0.021	0.0062	0.0032	0.4143	0.0025	29.146	73.501	4.7	414	BS669	Tierney and Tingley 2161
0.5431	0.019	0.0057	0.0032	0.4267	0.0024	-1.315	62.643	8.6	1702	BS671	Tierney and Tingley 2162
0.4712	0.0125	0.0042	0.003	0.5069	0.0022	32.49	74.667	2.9	165	BS673	Tierney and Tingley 2163
0.4798	0.0127	0.0042	0.003	0.4977	0.0025	33.069	75.315	2.1	209	BS675	Tierney and Tingley 2164
0.5127	0.0148	0.0048	0.0029	0.4624	0.0025	33.733	75.967	2.1	276	BS677	Tierney and Tingley 2165
0.5107	0.0158	0.0047	0.003	0.4639	0.0019	34.45	76.617	0.2	193	BS679	Tierney and Tingley 2166
0.5306	0.0154	0.0046	0.0027	0.4445	0.0021	37.167	76.433	0.7	249	BS681	Tierney and Tingley 2167
0.5295	0.0234	0.007	0.0035	0.4339	0.0028	30.947	71.013	5.8	283	BS690	Tierney and Tingley 2168
0.5183	0.0256	0.0078	0.0037	0.4415	0.003	31.712	70.621	5.5	252	BS692	Tierney and Tingley 2169
0.4429	0.0215	0.0082	0.0025	0.5211	0.0038	18.712	58.621	7.3	466	31 Landsort de	Tierney and Tingley 2170
0.4957	0.0233	0.0073	0.0028	0.4676	0.0034	17.712	58.621	7.3	54	31 Landsort dee	Tierney and Tingley 2171
0.4313	0.0234	0.0085	0.0028	0.5308	0.0032	15.712	55.621	8.4	89	BY5 Bornholm	Tierney and Tingley 2172
0.1624	0.0651	0.0937	0.0237	0.6034	0.0516	-65.6	10.667	26.6		Cariaco Basin	Tierney and Tingley 2173
0.434	0.0846	0.0547	0.0035	0.4062	0.0169	-128	46.75	12.2	2700	CB1 MC15	Tierney and Tingley 2174
0.4052	0.0704	0.0466	0.0037	0.4606	0.0135	-125.833	46.767	12.4	2700	CB2 MC19	Tierney and Tingley 2175
0.0894	0.0411	0.1019	0.0264	0.6366	0.1047	40.167	17.65	29.3	1470	CHN-043-1-4	Tierney and Tingley 2176
0.1397	0.0478	0.0931	0.0256	0.6034	0.0904	40.167	17.65	29.3	1296	CHN-043-1-5	Tierney and Tingley 2177
0.4471	0.0779	0.0337	0.0109	0.4201	0.0103	5.33	-51	2.4	3788	CHN-115-4-34	Tierney and Tingley 2178
0.5434	0.061	0.0192	0.0039	0.3655	0.0069	0.1	-53.6	0.7	2643	CHN-115-4-35	Tierney and Tingley 2179
0.4461	0.0578	0.0334	0.0096	0.4461	0.007	0.08	-54.592	-0.1	1260	CHN-115-4-43	Tierney and Tingley 2180
0.4682	0.034	0.0127	0.0032	0.4773	0.0047	-58.712	46.621	6.3	370	CL03-35 BC	Tierney and Tingley 2181
0.4141	0.0584	0.0268	0.0096	0.4683	0.0228	17.9736	-30.197	15.7	242	D357 St. 0	Tierney and Tingley 2182
0.3988	0.0759	0.0503	0.0078	0.4456	0.0217	17.0363	-34.6213	17.9	2620	D357 St. 1	Tierney and Tingley 2183
0.3716	0.0713	0.0544	0.0088	0.4631	0.0307	7.6704	-39.2945	12.8	5269	D357 St. 11	Tierney and Tingley 2184
0.399	0.0399	0.0267	0.005	0.516	0.0133	17.5695	-34.3878	17.9	1168	D357 St. 13	Tierney and Tingley 2185
0.3508	0.0783	0.0623	0.0086	0.4705	0.0295	13.1091	-36.4956	18	4900	D357 St. 3	Tierney and Tingley 2186
0.412	0.0783	0.0462	0								

Modern Calibration Dataset for OPTiMAL

GDGT-0	GDGT-1	GDGT-2	GDGT-3	renarchaeo	Cren'	longitude	latitude	Sea Surface Temp	water depth	Core name	Source
0.2366	0.0663	0.0781	0.0148	0.5488	0.0553	117.193	-10.152	28.3	1182	G6-3 0-1	Tierney and Tingley 2199
0.2172	0.0643	0.0942	0.0177	0.5573	0.0494	96.66	1.597	28.7	1900	GeoB10016-2	Tierney and Tingley 2200
0.2074	0.0763	0.1012	0.0184	0.5411	0.0556	99.521	-0.944	28.7	1641	GeoB10026-2	Tierney and Tingley 2201
0.2145	0.0729	0.0941	0.0179	0.5477	0.053	99.681	-1.667	28.7	1758	GeoB10032-1	Tierney and Tingley 2202
0.2311	0.0734	0.0933	0.017	0.5364	0.0488	101.499	-4.165	28.2	995	GeoB10034-3	Tierney and Tingley 2203
0.2877	0.0702	0.0831	0.014	0.503	0.0419	103.246	-5.937	27.6	1891	GeoB10038-3	Tierney and Tingley 2204
0.2899	0.0724	0.0829	0.0143	0.4977	0.0427	102.859	-6.476	27.9	2605	GeoB10040-3	Tierney and Tingley 2205
0.2477	0.071	0.0803	0.0187	0.5368	0.0455	104.643	-7.113	28	2457	GeoB10042-2	Tierney and Tingley 2206
0.285	0.074	0.08	0.015	0.515	0.031	17.467	40	18.9	1186	GeoB10701-4	Tierney and Tingley 2207
0.356	0.054	0.04	0.01	0.509	0.03	17.742	40	18.9	277	GeoB10703-3	Tierney and Tingley 2208
0.356	0.062	0.038	0.013	0.521	0.01	17.833	40	18.9	219	GeoB10704-3	Tierney and Tingley 2209
0.354	0.062	0.039	0.011	0.525	0.009	17.913	39.853	18.9	128	GeoB10705-3	Tierney and Tingley 2210
0.295	0.064	0.064	0.011	0.54	0.026	17.583	39.783	18.9	1598	GeoB10707-4	Tierney and Tingley 2211
0.306	0.07	0.061	0.011	0.533	0.02	17.733	39.808	18.9	686	GeoB10708-3	Tierney and Tingley 2212
0.363	0.059	0.036	0.01	0.516	0.016	17.893	39.757	18.9	173	GeoB10709-4	Tierney and Tingley 2213
0.298	0.067	0.065	0.011	0.527	0.031	17.683	39.592	18.9	2040	GeoB10710-4	Tierney and Tingley 2214
0.293	0.073	0.067	0.014	0.52	0.035	17.8	39.683	18.9	1049	GeoB10711-3	Tierney and Tingley 2215
0.328	0.063	0.054	0.012	0.519	0.024	17.862	39.727	18.9	618	GeoB10712-3	Tierney and Tingley 2216
0.37	0.059	0.039	0.014	0.507	0.012	18.283	39.692	18.9	127	GeoB10713-3	Tierney and Tingley 2217
0.34	0.066	0.044	0.012	0.521	0.017	18.283	39.64	18.9	207	GeoB10714-3	Tierney and Tingley 2218
0.274	0.078	0.066	0.014	0.537	0.03	18.283	39.559	18.9	697	GeoB10715-3	Tierney and Tingley 2219
0.275	0.071	0.076	0.011	0.523	0.044	18.283	39.345	18.9	1328	GeoB10716-3	Tierney and Tingley 2220
0.359	0.063	0.036	0.013	0.524	0.005	18.08	39.742	18.9	96	GeoB10717-3	Tierney and Tingley 2221
0.347	0.066	0.039	0.013	0.525	0.01	18.058	39.693	18.9	219	GeoB10718-3	Tierney and Tingley 2222
0.302	0.068	0.055	0.013	0.528	0.034	18.042	39.653	18.9	616	GeoB10719-3	Tierney and Tingley 2223
0.253	0.095	0.087	0.012	0.503	0.051	17.978	39.507	18.9	1387	GeoB10720-5	Tierney and Tingley 2224
0.34	0.069	0.046	0.013	0.516	0.015	16.767	42.166	18.1	203	GeoB10721-3	Tierney and Tingley 2225
0.371	0.069	0.037	0.012	0.503	0.008	16.5	42.167	18.1	142	GeoB10722-3	Tierney and Tingley 2226
0.375	0.058	0.029	0.011	0.51	0.017	16	42.167	17.8	114	GeoB10723-3	Tierney and Tingley 2227
0.387	0.052	0.023	0.01	0.51	0.018	16.217	42.001	18.1	50	GeoB10724-3	Tierney and Tingley 2228
0.403	0.048	0.021	0.009	0.507	0.011	16.216	42.05	18.1	94	GeoB10725-3	Tierney and Tingley 2229
0.382	0.051	0.024	0.008	0.526	0.009	16.717	42	18.1	183	GeoB10726-3	Tierney and Tingley 2230
0.373	0.067	0.029	0.01	0.511	0.01	16.617	41.801	18.1	101	GeoB10727-3	Tierney and Tingley 2231
0.351	0.072	0.048	0.013	0.496	0.02	16.858	41.783	18.1	194	GeoB10728-3	Tierney and Tingley 2232
0.305	0.071	0.057	0.014	0.525	0.029	17.191	41.647	18.1	712	GeoB10729-4	Tierney and Tingley 2233
0.326	0.073	0.048	0.013	0.527	0.012	17.05	41.5	18.1	183	GeoB10730-3	Tierney and Tingley 2234
0.377	0.055	0.027	0.009	0.523	0.01	16.658	41.5	18.1	96	GeoB10731-3	Tierney and Tingley 2235
0.376	0.046	0.019	0.007	0.549	0.003	16.407	41.5	18.1	51	GeoB10732-3	Tierney and Tingley 2236
0.379	0.055	0.029	0.01	0.522	0.006	16.225	41.5	18.1	22	GeoB10733-3	Tierney and Tingley 2237
0.382	0.044	0.021	0.008	0.54	0.005	16.242	41.667	18.1	18	GeoB10734-3	Tierney and Tingley 2238
0.305	0.07	0.059	0.012	0.528	0.025	17.308	41.5	18.1	733	GeoB10735-3	Tierney and Tingley 2239
0.356	0.062	0.035	0.011	0.524	0.013	18.192	40.758	18.8	123	GeoB10736-3	Tierney and Tingley 2240
0.37	0.06	0.034	0.01	0.515	0.01	18.329	40.625	18.8	113	GeoB10737-3	Tierney and Tingley 2241
0.357	0.061	0.035	0.013	0.511	0.023	18.467	40.546	18.8	112	GeoB10738-3	Tierney and Tingley 2242
0.324	0.07	0.051	0.011	0.521	0.023	18.642	40.5	18.8	565	GeoB10739-3	Tierney and Tingley 2243
0.345	0.062	0.037	0.012	0.531	0.011	18.583	40.392	18.9	128	GeoB10740-3	Tierney and Tingley 2244
0.352	0.063	0.039	0.011	0.521	0.013	18.667	40.233	18.9	287	GeoB10741-3	Tierney and Tingley 2245
0.3	0.07	0.059	0.012	0.534	0.024	18.776	39.716	18.9	599	GeoB10742-3	Tierney and Tingley 2246
0.346	0.061	0.04	0.014	0.539	0	18.642	39.825	18.9	124	GeoB10743-3	Tierney and Tingley 2247
0.341	0.063	0.038	0.012	0.535	0.011	18.6	39.85	18.9	117	GeoB10744-3	Tierney and Tingley 2248
0.338	0.062	0.037	0.011	0.539	0.014	16.758	39.908	18.9	157	GeoB10746-3	Tierney and Tingley 2249
0.323	0.064	0.041	0.013	0.54	0.018	16.975	39.725	18.9	246	GeoB10747-3	Tierney and Tingley 2250
0.328	0.065	0.05	0.012	0.53	0.016	17.05	39.667	18.9	288	GeoB10748-3	Tierney and Tingley 2251
0.308	0.07	0.049	0.012	0.533	0.027	17.183	39.6	18.9	278	GeoB10749-3	Tierney and Tingley 2252
0.3144	0.0844	0.0815	0.0081	0.4764	0.0351	-32.012	-3.682	27.3	4258	GeoB1501-1	Tierney and Tingley 2253
0.3162	0.0822	0.0802	0.0082	0.4808	0.0323	-30.648	2.31	27.6	2298	GeoB1503-2	Tierney and Tingley 2254
0.3121	0.0806	0.0769	0.0082	0.4872	0.035	-31.287	2.288	27.5	2980	GeoB1504-1	Tierney and Tingley 2255
0.3076	0.0823	0.0772	0.0078	0.4888	0.0364	-35.182	2.205	27.6	4267	GeoB1506-1	Tierney and Tingley 2256
0.2972	0.0815	0.0797	0.0101	0.4949	0.0367	-43.665	4.238	27.6	3125	GeoB1515-2	Tierney and Tingley 2257
0.365	0.0852	0.0687	0.0081	0.4466	0.0263	-20.908	-34.435	18.6	4016	GeoB2022-3	Tierney and Tingley 2258
0.2721	0.0665	0.0771	0.0113	0.5377	0.0353	-41.2	-23.983	23.5	1805	GeoB2102-1	Tierney and Tingley 2259
0.2617	0.0694	0.0823	0.0114	0.5358	0.0394	-46.378	-27.29	23.7	1505	GeoB2104-1	Tierney and Tingley 2260
0.2664	0.0732	0.0655	0.0155	0.5539	0.0254	-46.738	-26.738	23.9	202	GeoB2105-3	Tierney and Tingley 2261
0.2959	0.0673	0.0659	0.0116	0.5305	0.0287	-46.497	-27.098	23.7	502	GeoB2106-1	Tierney and Tingley 2262
0.2723	0.0701	0.0783	0.0116	0.5336	0.034	-46.457	-27.18	23.7	1052	GeoB2107-5	Tierney and Tingley 2263
0.291	0.0743	0.0832	0.0112	0.5028	0.0375	-46.23	-27.487	23.7	1991	GeoB2108-1	Tierney and Tingley 2264
0.2828	0.0708	0.0856	0.0099	0.5122	0.0387	-45.522	-28.65	23.5	3003	GeoB2110-1	Tierney and Tingley 2265
0.2889	0.0728	0.0821	0.0091	0.5099	0.0373	-45.223	-29.112	22.8	3498	GeoB2111-2	Tierney and Tingley 2266
0.2884	0.0715	0.0768	0.0085	0.5167	0.038	-43.377	-29.135	22.1	4009	GeoB2112-1	Tierney and Tingley 2267
0.2759	0.0677	0.0842	0.0104	0.5269	0.0349	-39.56	-20.958	25.7	2003	GeoB2124-1	Tierney and Tingley 2268
0.275	0.0652	0.0749	0.0116	0.5395	0.0339	-39.857	-20.82	25.7	1542	GeoB2125-2	Tierney and Tingley 2269
0.2909	0.0713	0.0872	0.0114	0.5001	0.0391	-38.933	-21.27	25.5	2537	GeoB2126-1	Tierney and Tingley 2270
0.2993	0.0748	0.0931	0.0179	0.4775	0.0375	-37.103	-20.615	26	2113	GeoB2130-1	Tierney and Tingley 2271
0.2506	0.0651	0.086	0.0175	0.5453	0.0355	-34.463	-8.168	27.3	794	GeoB2201-1	Tierney and Tingley 2272
0.2394	0.0902	0.1557	0.017	0.4646	0.0331	-34.263	-8.197	27.3	1128	GeoB2202-5	Tierney and Tingley 2273
0.2596	0.073	0.0907	0.0098	0.5291	0.0378	-34.345	-8.573	27.3	1790	GeoB2205-4	Tierney and Tingley 2274
0.2633	0.0712	0.0948	0.0125	0.5182	0.0399	-34.48	-8.558	27.3	1442	GeoB2206-1	Tierney and Tingley 2275
0.2739	0.0812	0.0915	0.0084	0.5085	0.0365	-34.135	-8.735	27.3	2585	GeoB2207-2	Tierney and Tingley 2276
0.3274	0.082	0.0749	0.0062	0.4784	0.0311	-33.7	-8.917	27.3	3977	GeoB2208-1	Tierney and Tingley 2277
0.3427	0.0851	0.0742	0.006	0.4574	0.0346	-25.623	-4.032	26.7	5521	GeoB2212-1	Tierney and Tingley 2278
0											

Modern Calibration Dataset for OPTiMAL

GDGT-0	GDGT-1	GDGT-2	GDGT-3	renarchaeo	Cren'	longitude	latitude	Sea Surface Temp	water depth	Core name	Source
0.4928	0.0606	0.0248	0.0032	0.4093	0.0094	-56.487	-47.162	8.7	4479	GeoB2717-8	Tierney and Tingley 2291
0.4872	0.0603	0.0261	0.0035	0.4151	0.0077	-58.175	-47.307	7.7	2990	GeoB2718-1	Tierney and Tingley 2292
0.5404	0.0342	0.011	0.003	0.4074	0.004	-60.093	-47.442	8.2	684	GeoB2719-3	Tierney and Tingley 2293
0.5004	0.0613	0.0291	0.0035	0.3992	0.0065	-58.62	-47.327	7.7	2351	GeoB2722-2	Tierney and Tingley 2294
0.5261	0.0325	0.0108	0.0031	0.4232	0.0044	-57.875	-48.912	7.3	569	GeoB2723-2	Tierney and Tingley 2295
0.4948	0.0636	0.0262	0.0032	0.4035	0.0087	-56.175	-47.963	8.7	4799	GeoB2724-7	Tierney and Tingley 2296
0.4921	0.0592	0.0243	0.0035	0.413	0.008	-56.538	-48.013	7	2803	GeoB2727-1	Tierney and Tingley 2297
0.4738	0.0557	0.0254	0.0035	0.4314	0.0102	-53.248	-44.475	12.4	5817	GeoB2730-1	Tierney and Tingley 2298
0.4615	0.0566	0.0267	0.004	0.4393	0.012	-51.423	-44.207	13.2	5691	GeoB2731-1	Tierney and Tingley 2299
0.4995	0.0472	0.0191	0.0032	0.4247	0.0063	-54.342	-39.29	11.3	2272	GeoB2734-2	Tierney and Tingley 2300
0.4961	0.0324	0.014	0.0034	0.4481	0.006	-55.015	-37.807	13.3	576	GeoB2802-2	Tierney and Tingley 2301
0.4737	0.0377	0.0183	0.0039	0.4586	0.0078	-53.703	-37.407	16.5	1162	GeoB2803-1	Tierney and Tingley 2302
0.4645	0.0421	0.0229	0.0042	0.4577	0.0087	-53.537	-37.537	16.5	1836	GeoB2804-2	Tierney and Tingley 2303
0.4531	0.0447	0.0249	0.0043	0.4629	0.0101	-53.443	-37.605	16.5	2743	GeoB2805-1	Tierney and Tingley 2304
0.4456	0.0491	0.0308	0.0052	0.4567	0.0126	-53.137	-37.832	16.5	3542	GeoB2806-6	Tierney and Tingley 2305
0.4045	0.0532	0.0395	0.0061	0.4803	0.0163	-51.522	-36.332	19.6	3539	GeoB2809-2	Tierney and Tingley 2306
0.3929	0.0493	0.0382	0.0065	0.4964	0.0166	-51.978	-35.98	19.7	2909	GeoB2810-2	Tierney and Tingley 2307
0.4131	0.0395	0.0261	0.0052	0.5033	0.0128	-52.27	-35.753	17.1	1789	GeoB2811-1	Tierney and Tingley 2308
0.4058	0.0261	0.0137	0.0038	0.5438	0.0069	-52.387	-35.602	17.1	1041	GeoB2812-3	Tierney and Tingley 2309
0.4318	0.0238	0.011	0.0037	0.5242	0.0056	-52.562	-35.532	17.1	508	GeoB2813-1	Tierney and Tingley 2310
0.3201	0.0763	0.0744	0.0077	0.4886	0.0329	-40.97	-31.902	20.6	3959	GeoB2817-3	Tierney and Tingley 2311
0.314	0.077	0.078	0.008	0.4916	0.0314	-38.17	-30.873	22	3110	GeoB2818-1	Tierney and Tingley 2312
0.3167	0.0783	0.0765	0.0089	0.4847	0.0349	-38.343	-30.848	22	3435	GeoB2819-2	Tierney and Tingley 2313
0.3145	0.0813	0.0815	0.0078	0.4836	0.0312	-38.438	-30.822	22	3606	GeoB2820-1	Tierney and Tingley 2314
0.3173	0.0785	0.0759	0.0079	0.4876	0.0328	-38.817	-30.453	22	3936	GeoB2821-2	Tierney and Tingley 2315
0.3785	0.0674	0.0502	0.0068	0.4759	0.0212	-42.498	-33.498	20.4	4512	GeoB2824-1	Tierney and Tingley 2316
0.3717	0.0665	0.0514	0.0071	0.4784	0.0249	-41.432	-32.5	20.2	4352	GeoB2825-3	Tierney and Tingley 2317
0.3309	0.0693	0.0657	0.0081	0.4953	0.0307	-38.073	-30.915	22	2943	GeoB2826-1	Tierney and Tingley 2318
0.3176	0.0737	0.0723	0.0078	0.494	0.0346	-40.728	-31.478	20.6	3702	GeoB2827-2	Tierney and Tingley 2319
0.3088	0.075	0.0745	0.0079	0.5013	0.0325	-40.718	-31.475	20.6	3741	GeoB2828-1	Tierney and Tingley 2320
0.3037	0.0736	0.0781	0.0087	0.5005	0.0354	-43.43	-30.873	21	3523	GeoB2829-3	Tierney and Tingley 2321
0.2946	0.0728	0.0808	0.0081	0.5072	0.0364	-44	-29.02	21.9	3815	GeoB2830-1	Tierney and Tingley 2322
0.4372	0.0705	0.0388	0.0065	0.4328	0.0142	-22.757	-39.743	14.1	3878	GeoB6402-9	Tierney and Tingley 2323
0.4527	0.0684	0.0332	0.0047	0.4286	0.0123	-23.465	-41.506	13	4223	GeoB6404-3	Tierney and Tingley 2324
0.4499	0.0674	0.0338	0.0051	0.429	0.0148	-21.853	-42	13.6	3863	GeoB6405-8	Tierney and Tingley 2325
0.4576	0.0699	0.0346	0.005	0.4212	0.0117	-20.784	-42	11.3	3514	GeoB6406-1	Tierney and Tingley 2326
0.471	0.0684	0.0312	0.0043	0.4148	0.0103	-19.5	-42.045	11.5	3384	GeoB6407-2	Tierney and Tingley 2327
0.4704	0.0667	0.0294	0.0042	0.4186	0.0106	-20.441	-43.614	10.5	3797	GeoB6408-3	Tierney and Tingley 2328
0.5015	0.0642	0.0262	0.0034	0.3966	0.0081	-21.717	-44.507	9.6	4296	GeoB6409-2	Tierney and Tingley 2329
0.4709	0.0599	0.0316	0.0054	0.4166	0.0156	-21.717	-44.507	9.6	4296	GeoB6409-3	Tierney and Tingley 2330
0.4789	0.0648	0.0274	0.0034	0.4164	0.0091	-20.9	-44.517	9.8	4038	GeoB6410-1	Tierney and Tingley 2331
0.4968	0.057	0.0255	0.004	0.408	0.0087	-17.647	-44.254	9.4	3475	GeoB6412-1	Tierney and Tingley 2332
0.4786	0.0627	0.0271	0.0038	0.4189	0.009	-17.34	-44.207	9.4	3768	GeoB6413-4	Tierney and Tingley 2333
0.4871	0.0637	0.0288	0.0037	0.4077	0.0092	-13.07	-43.999	11	3830	GeoB6414-1	Tierney and Tingley 2334
0.4519	0.0693	0.0381	0.0059	0.4209	0.0138	-18.163	-39.955	13.4	3525	GeoB6416-2	Tierney and Tingley 2335
0.4224	0.0719	0.0401	0.0063	0.4443	0.015	-21.042	-39.093	14.2	4024	GeoB6417-2	Tierney and Tingley 2336
0.4194	0.0723	0.0417	0.0068	0.443	0.0169	-21.535	-38.427	13.3	4126	GeoB6418-3	Tierney and Tingley 2337
0.4392	0.0685	0.0436	0.009	0.4231	0.0166	-21.864	-37.774	18.5	3568	GeoB6419-1	Tierney and Tingley 2338
0.3929	0.0761	0.0488	0.0072	0.4567	0.0182	-22.148	-37.158	17.5	3998	GeoB6420-2	Tierney and Tingley 2339
0.3914	0.0745	0.0493	0.0083	0.4551	0.0214	-22.445	-36.448	16.4	4216	GeoB6421-1	Tierney and Tingley 2340
0.3763	0.0795	0.0581	0.0088	0.4554	0.0218	-22.733	-35.707	18.6	3972	GeoB6422-5	Tierney and Tingley 2341
0.3667	0.0766	0.057	0.009	0.4665	0.0241	-22.992	-35.253	18.6	3963	GeoB6423-1	Tierney and Tingley 2342
0.3562	0.077	0.0589	0.009	0.4729	0.0259	-23.276	-34.608	18.2	3820	GeoB6424-2	Tierney and Tingley 2343
0.3454	0.0798	0.0652	0.0086	0.4724	0.0286	-23.588	-33.825	19.7	4352	GeoB6425-1	Tierney and Tingley 2344
0.3397	0.0777	0.0655	0.0074	0.4826	0.0271	-24.024	-33.499	20	4381	GeoB6426-2	Tierney and Tingley 2345
0.3413	0.0762	0.0674	0.0072	0.4804	0.0274	-24.248	-33.182	20	4491	GeoB6427-1	Tierney and Tingley 2346
0.3272	0.0776	0.0693	0.0075	0.4883	0.0301	-24.248	-32.51	20.5	4022	GeoB6428-3	Tierney and Tingley 2347
0.2985	0.0751	0.0714	0.0113	0.5087	0.0351	-24.248	-31.95	21.4	4335	GeoB6429-1	Tierney and Tingley 2348
0.5178	0.0769	0.0496	0.0077	0.3303	0.0177	17.699	-34.775	17.9	1941	GeoB8301-5	Tierney and Tingley 2349
0.4635	0.0758	0.0502	0.0072	0.386	0.0173	16.785	-34.261	18.4	3447	GeoB8303-5	Tierney and Tingley 2350
0.4954	0.0649	0.0382	0.0068	0.3808	0.0138	17.177	-33.478	16	712	GeoB8305-1	Tierney and Tingley 2351
0.4806	0.0709	0.045	0.0071	0.381	0.0154	16.843	-33.741	18.1	1924	GeoB8306-1	Tierney and Tingley 2352
0.4551	0.0748	0.0494	0.0076	0.3951	0.0181	16.5	-33.834	18.1	2668	GeoB8307-5	Tierney and Tingley 2353
0.4523	0.078	0.053	0.0078	0.3906	0.0184	16.268	-33.92	18.1	3162	GeoB8308-2	Tierney and Tingley 2354
0.5038	0.0694	0.0417	0.007	0.3616	0.0165	16.382	-32.909	17.1	1995	GeoB8310-1	Tierney and Tingley 2355
0.492	0.0705	0.0454	0.0073	0.3674	0.0174	16.31	-32.365	17.1	2535	GeoB8311-1	Tierney and Tingley 2356
0.489	0.0726	0.0439	0.0073	0.3714	0.0157	15.944	-32.123	18.1	1090	GeoB8313-1	Tierney and Tingley 2357
0.496	0.0763	0.0457	0.0075	0.3585	0.016	15.813	-32.499	18.1	1977	GeoB8314-1	Tierney and Tingley 2358
0.463	0.0748	0.0507	0.0074	0.386	0.0181	15.695	-32.888	18.1	2996	GeoB8315-5	Tierney and Tingley 2359
0.4617	0.0768	0.0512	0.0074	0.3849	0.018	15.734	-32.74	18.1	2667	GeoB8316-1	Tierney and Tingley 2360
0.4508	0.0787	0.054	0.008	0.3891	0.0193	15.163	-32.329	18.1	2930	GeoB8317-1	Tierney and Tingley 2361
0.5819	0.0569	0.0244	0.0064	0.3203	0.0101	16.805	-32.152	17.1	307	GeoB8318-1	Tierney and Tingley 2362
0.5377	0.0359	0.015	0.0043	0.4024	0.0047	18.078	-32.496	14.9	69	GeoB8319-1	Tierney and Tingley 2363
0.5166	0.0393	0.0166	0.0045	0.4168	0.0062	18.117	-31.864	14.8	104	GeoB8321-1	Tierney and Tingley 2364
0.5209	0.0397	0.0165	0.0045	0.4129	0.0055	18.118	-31.954	14.8	105	GeoB8322-1	Tierney and Tingley 2365
0.5214	0.0378	0.0162	0.0046	0.4146	0.0055	18.222	-32.032	14.9	90	GeoB8323-1	Tierney and Tingley 2366
0.5263	0.04	0.0168	0.0048	0.406	0.0061	18.091	-31.747	14.8	100	GeoB8324-1	Tierney and Tingley 2367
0.5753	0.044	0.0186	0.0044	0.3512	0.0066	17.279	-30.595	15.7	134	GeoB8325-1	Tierney and Tingley 2368
0.5											

Modern Calibration Dataset for OPTiMAL

GDGT-0	GDGT-1	GDGT-2	GDGT-3	renarchaeo	Cren'	longitude	latitude	Sea Surface Temp	water depth	Core name	Source
0.3368	0.0779	0.0718	0.0091	0.4736	0.0308	-17.948	15.498	23.4	2385	GeoB9508-4	Tierney and Tingley 2383
0.3357	0.0793	0.0685	0.0101	0.477	0.0293	-17.653	15.417	23.4	1567	GeoB9510-3	Tierney and Tingley 2384
0.3142	0.0702	0.0583	0.0124	0.5157	0.0291	-17.485	15.376	23.4	787	GeoB9512-4	Tierney and Tingley 2385
0.3251	0.0702	0.0576	0.014	0.5073	0.0258	-17.294	15.318	23.4	498	GeoB9513-5	Tierney and Tingley 2386
0.3135	0.0754	0.0637	0.011	0.5069	0.0294	-17.591	13.829	24.2	1102	GeoB9520-4	Tierney and Tingley 2387
0.3131	0.0684	0.0579	0.0144	0.5216	0.0246	-17.49	13.849	24.2	522	GeoB9521-3	Tierney and Tingley 2388
0.3329	0.0805	0.0738	0.0111	0.4726	0.0291	-17.88	12.64	24.8	2648	GeoB9525-5	Tierney and Tingley 2389
0.3381	0.0776	0.0738	0.0099	0.4704	0.0302	-18.056	12.435	25.3	3223	GeoB9526-4	Tierney and Tingley 2390
0.3225	0.0798	0.0785	0.0074	0.4752	0.0366	-17.664	9.166	27	3053	GeoB9528-1	Tierney and Tingley 2391
0.3296	0.0797	0.0796	0.0085	0.4682	0.0344	-17.369	8.352	27.4	1234	GeoB9529-1	Tierney and Tingley 2392
0.2958	0.0721	0.072	0.0135	0.5176	0.0289	-14.936	8.901	27.3	493	GeoB9534-4	Tierney and Tingley 2393
0.3009	0.0741	0.0743	0.0124	0.5081	0.0302	-14.961	8.876	27.3	666	GeoB9535-5	Tierney and Tingley 2394
0.4317	0.0237	0.0086	0.0037	0.5291	0.0032	11.5	58.333	9.1	110	Gullmarsfjord	Tierney and Tingley 2395
0.5356	0.0273	0.0113	0.0038	0.4192	0.0028	-87.712	60.621	6.3	205	HB-4	Tierney and Tingley 2396
0.4967	0.0204	0.0049	0.0025	0.4724	0.003	-90.712	60.621	5.3	128	HB-5	Tierney and Tingley 2397
0.5002	0.0145	0.0045	0.0026	0.4763	0.0019	-91.712	60.621	6.8	120	HB-6	Tierney and Tingley 2398
0.4966	0.0389	0.0141	0.0031	0.4427	0.0046	-63.712	49.621	5.5	395	ION02-015 BEI	Tierney and Tingley 2399
0.2286	0.0575	0.0696	0.01	0.592	0.0424	110.53	16.96	27	1474	HQ08-48PC	Tierney and Tingley 2400
0.411	0.0211	0.0129	0.0074	0.5408	0.0067	131.2967	72.55	3	21	IK9307-3	Tierney and Tingley 2401
0.4342	0.0204	0.0108	0.0066	0.5223	0.0058	131.5017	73.0017	2.1	28	IK9316-6	Tierney and Tingley 2402
0.4585	0.0279	0.0099	0.0061	0.4928	0.0049	137.5517	73.4967	0.9	24	IK9318-5	Tierney and Tingley 2403
0.4927	0.0209	0.0064	0.0047	0.4715	0.0038	119.86	73.9983	2.2	30	IK9327-6	Tierney and Tingley 2404
0.485	0.0217	0.0062	0.0045	0.4782	0.0043	127.5033	74	3.3	27	IK9330-5	Tierney and Tingley 2405
0.5038	0.021	0.005	0.0045	0.4619	0.0038	119.955	74.4917	1.9	34	IK9338-5	Tierney and Tingley 2406
0.5333	0.0235	0.0113	0.0054	0.4217	0.0049	122.9933	74.5	2.8	16	IK9340-GKG	Tierney and Tingley 2407
0.5001	0.0218	0.0057	0.0042	0.4641	0.0041	127.3483	74.51	3.3	34	IK9342-6	Tierney and Tingley 2408
0.4486	0.0225	0.0088	0.0053	0.5105	0.0044	136.03	75.01	1.2	31	IK9350-6	Tierney and Tingley 2409
0.4491	0.018	0.0052	0.0044	0.5183	0.0049	123.015	74.9967	3.2	33	IK9356-2	Tierney and Tingley 2410
0.4537	0.0191	0.0055	0.0045	0.5133	0.0038	123.8417	75.4817	3.2	44	IK9367-2	Tierney and Tingley 2411
0.4853	0.0203	0.0072	0.0043	0.4789	0.004	134.5833	75.81	0.1	46	IK9373A-6	Tierney and Tingley 2412
0.4966	0.0462	0.0365	0.019	0.391	0.0107	113.9967	73.6667	2.6	9	IK9322-8	Tierney and Tingley 2413
0.4731	0.0348	0.0166	0.012	0.4559	0.0076	119.8283	73.2917	2.2	12	IK9323-2	Tierney and Tingley 2414
0.4658	0.0428	0.0191	0.0154	0.449	0.0079	130.1267	72.0333	2.9	14	IK9324-4	Tierney and Tingley 2415
0.5291	0.0357	0.0167	0.0102	0.4019	0.0063	137.0067	71.69	2.4	11	IK9325-3	Tierney and Tingley 2416
0.3757	0.0686	0.0575	0.0089	0.4677	0.0216	-9.852	48.062	13.4	2006	IS-S1	Tierney and Tingley 2417
0.3909	0.0662	0.0486	0.0098	0.4662	0.0184	-9.707	48.178	13.4	1035	IS-S2	Tierney and Tingley 2418
0.4116	0.0678	0.0427	0.0106	0.4525	0.0147	-9.709	48.267	13.4	497	IS-S3	Tierney and Tingley 2419
0.4635	0.0373	0.0127	0.0049	0.4779	0.0037	-6.099	51.218	11.9	106	IS-S4	Tierney and Tingley 2420
0.4588	0.0345	0.0103	0.0038	0.4891	0.0036	-5.593	53.883	10.8	104	IS-S5	Tierney and Tingley 2421
0.4886	0.0279	0.0087	0.0037	0.4686	0.0025	-5.584	54.119	10.8	54	IS-S6	Tierney and Tingley 2422
0.384	0.059	0.047	0.004	0.494	0.013	-160	0	27.6	5142	KH01-3 St. 01	Tierney and Tingley 2423
0.388	0.056	0.043	0.003	0.494	0.015	-160	-35	17.6	5098	KH01-3 St. 08	Tierney and Tingley 2424
0.251	0.051	0.063	0.006	0.586	0.042	-160	-47	11.1	5118	KH01-3 St. 10	Tierney and Tingley 2425
0.365	0.058	0.051	0.003	0.498	0.024	140	-60	0.9	4483	KH01-3 St. 17	Tierney and Tingley 2426
0.34	0.063	0.059	0.007	0.506	0.026	140	-50	7.7	3755	KH01-3 St. 19	Tierney and Tingley 2427
0.345	0.067	0.063	0.006	0.49	0.031	-94.95	8.0333	27.7	3661	KH03-1 HY03	Tierney and Tingley 2428
0.34	0.062	0.061	0.005	0.503	0.029	-95.05	4.0333	27.5	3563	KH03-1 HY04	Tierney and Tingley 2429
0.224	0.06	0.066	0.007	0.598	0.045	-95.5	2.0167	26.3	2886	KH03-1 HY05	Tierney and Tingley 2430
0.342	0.066	0.059	0.006	0.499	0.029	-95.4333	0.0167	23.8	3246	KH03-1 HY06	Tierney and Tingley 2431
0.359	0.068	0.062	0.004	0.48	0.026	-95	-2.0333	23	3331	KH03-1 HY07	Tierney and Tingley 2432
0.369	0.062	0.055	0.006	0.482	0.027	-95	-3.9667	24.2	3657	KH03-1 HY08	Tierney and Tingley 2433
0.344	0.071	0.069	0.004	0.481	0.032	-94.9167	-5.95	24.4	3852	KH03-1 HY08B	Tierney and Tingley 2434
0.23	0.045	0.067	0.007	0.603	0.047	-95.0167	-7.9833	24.3	3910	KH03-1 HY09	Tierney and Tingley 2435
0.548	0.041	0.012	0.002	0.392	0.005	157.5167	-0.6667	29.3	2098	KH04-5 SX02	Tierney and Tingley 2436
0.543	0.031	0.009	0.002	0.41	0.005	174.2	-65.15	-0.2	3393	KH04-5 SX09	Tierney and Tingley 2437
0.54	0.042	0.014	0.002	0.396	0.007	-172.65	-67.2167	0.2	3884	KH04-5 SX10	Tierney and Tingley 2438
0.432	0.046	0.025	0.003	0.484	0.011	-170	-50.0167	9.8	5388	KH04-5 SX14	Tierney and Tingley 2439
0.452	0.049	0.025	0.002	0.462	0.009	-170	-45	12.6	5165	KH04-5 SX15	Tierney and Tingley 2440
0.426	0.053	0.028	0.003	0.479	0.011	-171	-43.1833	14.1	2313	KH04-5 SX16	Tierney and Tingley 2441
0.419	0.055	0.033	0.003	0.479	0.011	-170	-40	15.5	4635	KH04-5 SX17	Tierney and Tingley 2442
0.4703	0.012	0.004	0.0027	0.5084	0.0026	11.383	79.012	1.9	380	LMG0404-16	Tierney and Tingley 2443
0.4576	0.0125	0.0041	0.0029	0.5203	0.0026	-55.313	-63.136	-1.1	758	LMG0404-3	Tierney and Tingley 2444
0.5037	0.0126	0.0036	0.0022	0.4754	0.0025	-60.383	-64.797	-1.3	861	LMG0502-25	Tierney and Tingley 2445
0.5221	0.0248	0.0067	0.0019	0.4411	0.0034	-66.884	-67.216	-0.8	650	LMG9802-6	Tierney and Tingley 2446
0.5262	0.0368	0.013	0.0039	0.4145	0.0056	-1.966	62.001	8.6	1602	M2003-01	Tierney and Tingley 2447
0.5312	0.0328	0.0107	0.0035	0.4165	0.0052	29.553	74.146	3.8	366	M2003-06	Tierney and Tingley 2448
0.5303	0.0337	0.0109	0.0036	0.4167	0.0048	-1.125	62.767	8.6	1601	M2003-08	Tierney and Tingley 2449
0.4821	0.0394	0.0176	0.0041	0.4511	0.0056	141.546	41.3	12.1	1002	MC-1	Tierney and Tingley 2450
0.5328	0.0367	0.0108	0.0039	0.4104	0.0053	138.597	41.251	12.8	1268	MC-3	Tierney and Tingley 2451
0.2393	0.0721	0.0885	0.0128	0.5367	0.0506	-90.3	27.5	25.4	1100	MC3K	Tierney and Tingley 2452
0.2369	0.0699	0.0854	0.012	0.5491	0.0468	-90.3	27.5	25.4	1100	MC4R	Tierney and Tingley 2453
0.2264	0.0747	0.0959	0.0125	0.537	0.0534	-90.3	27.5	25.4	1100	MC4S	Tierney and Tingley 2454
0.5283	0.0365	0.0133	0.0051	0.4123	0.0045	139.211	39.32	15.5	856	MC-6	Tierney and Tingley 2455
0.5824	0.0179	0.006	0.0034	0.3882	0.0021	138.557	-66.051	-0.4	750	MD03-2601	Tierney and Tingley 2456
0.5319	0.0361	0.0116	0.0027	0.411	0.0068	139.375	-64.285	-0.2	3331	MD03-2603	Tierney and Tingley 2457
0.565	0.0373	0.0123	0.0025	0.376	0.0068	139.375	-64.285	-0.2	3331	MD03-2604	Tierney and Tingley 2458
0.1637	0.0535	0.0787	0.0142	0.6414	0.0485	111.55	7.04	28.2	1982	MD05-2894	Tierney and Tingley 2459
0.2178	0.0587	0.0804	0.0098	0.5938	0.0395	111.4412	8.825	28.5	1657	MD05-2896	Tierney and Tingley 2460
0.2218	0.0617	0.0802	0.0115	0.5795	0.0453	112.18	13.79	27.7	2395	MD05-2898	Tierney and Tingley 2461
0.2101	0.0603	0.0768	0.0116	0.5949	0.0464	110.7	14.39	27.1	1455	MD05-2900	Tierney and Tingley 2462

Modern Calibration Dataset for OPTiMAL

GDGT-0	GDGT-1	GDGT-2	GDGT-3	renarchaeo	Cren'	longitude	latitude	Sea Surface Temp	water depth	Core name	Source
0.2248	0.0656	0.0802	0.012	0.5547	0.0627	158.9	0	29.3	2322	IW91-9 GGC-2	Tierney and Tingley 2475
0.2802	0.0634	0.0791	0.0123	0.5097	0.0553	159.4	0	29.4	2456	IW91-9 GGC-3	Tierney and Tingley 2476
0.2411	0.0633	0.0804	0.0121	0.5427	0.0604	160.6	0	29.5	3160	IW91-9 GGC-4	Tierney and Tingley 2477
0.2348	0.0652	0.077	0.0117	0.5485	0.0627	161.8	0	29.6	4025	IW91-9 GGC-5	Tierney and Tingley 2478
0.2508	0.0671	0.0871	0.0117	0.5258	0.0576	156.99	-2.3	29.3	1618	IW91-9 GGC-6	Tierney and Tingley 2479
0.2557	0.0638	0.076	0.0115	0.5319	0.0611	162.7	0	29.5	4449	IW91-9 GGC-6	Tierney and Tingley 2480
0.2441	0.0678	0.0861	0.0125	0.533	0.0564	156.9	-2.2	29.3	1625	IW91-9 GGC-6	Tierney and Tingley 2481
0.5002	0.0137	0.0038	0.002	0.4774	0.0028	-58.578	-64.294	-1.3	768	NBP0003-1	Tierney and Tingley 2482
0.4931	0.0146	0.0044	0.0021	0.4821	0.0037	-58.516	-64.367	-1.3	794	NBP0003-28	Tierney and Tingley 2483
0.502	0.0131	0.0037	0.002	0.4784	0.0008	-58.444	-64.356	-1.3	690	NBP0003-29	Tierney and Tingley 2484
0.5082	0.0122	0.0034	0.002	0.4719	0.0023	-58.45	-64.281	-1.3	843	NBP0003-30	Tierney and Tingley 2485
0.541	0.0234	0.0068	0.0024	0.4237	0.0027	-61.491	-63.135	0	704	NBP0107 JPC3:	Tierney and Tingley 2486
0.4461	0.0237	0.0067	0.0023	0.5167	0.0045	-65.401	-64.849	-0.2	657	NBP0107-17	Tierney and Tingley 2487
0.5435	0.017	0.0047	0.0021	0.4302	0.0025	-62.046	-64.317	0.4	1014	NBP0107-28	Tierney and Tingley 2488
0.4704	0.0121	0.0041	0.0026	0.5081	0.0027	-56.382	-63.667	-1.3	638	NBP0107-49	Tierney and Tingley 2489
0.5173	0.0162	0.0042	0.0017	0.4579	0.0028	-61.565	-65.768	-1.3	772	NBP0603-3	Tierney and Tingley 2490
0.5208	0.015	0.004	0.0018	0.4555	0.0029	-108.61	-74.1	-1.7	730	NBP0702-10	Tierney and Tingley 2491
0.5152	0.0206	0.0057	0.003	0.4527	0.0029	-134.52	-73.94	-1.8	470	NBP0702-13	Tierney and Tingley 2492
0.5056	0.0232	0.0064	0.0027	0.459	0.0032	-125.81	-72.56	-1.6	425	NBP0702-15	Tierney and Tingley 2493
0.531	0.0204	0.0056	0.0021	0.4378	0.0031	-114.99	-71.54	-1.8	424	NBP0702-17	Tierney and Tingley 2494
0.5164	0.0328	0.0097	0.0027	0.4341	0.0043	-106.01	-71.13	-1.8	512	NBP0702-20	Tierney and Tingley 2495
0.4778	0.0345	0.0113	0.003	0.4683	0.005	-104.01	-71.75	-1.8	665	NBP0702-22	Tierney and Tingley 2496
0.5414	0.0219	0.0068	0.0024	0.4248	0.0026	-158.27	-77.47	-0.9	1081	NBP0702-3	Tierney and Tingley 2497
0.4367	0.013	0.0038	0.0017	0.542	0.0027	-57.494	-62.208	-0.5	300	NBP9507-2	Tierney and Tingley 2498
0.4943	0.0148	0.0047	0.0024	0.4811	0.0028	-62.916	-64.844	-0.2	301	NBP9903-20	Tierney and Tingley 2499
0.5227	0.0161	0.005	0.0025	0.4512	0.0025	-62.976	-64.844	-0.2	282	NBP9903-21	Tierney and Tingley 2500
0.2791	0.0729	0.0924	0.0108	0.4953	0.0495	53.55	10.683	26.6	4065	NIOP 325	Tierney and Tingley 2501
0.2249	0.062	0.0614	0.0165	0.5924	0.0428	51.577	10.779	26.1	459	NIOP 902	Tierney and Tingley 2502
0.2229	0.0675	0.0794	0.0166	0.5636	0.0501	51.658	10.783	26.1	789	NIOP 903	Tierney and Tingley 2503
0.2319	0.0693	0.0761	0.0138	0.5611	0.0477	51.771	10.788	26.1	1194	NIOP 904	Tierney and Tingley 2504
0.2466	0.0682	0.0852	0.0155	0.5313	0.0531	51.944	10.916	26.1	1567	NIOP 905	Tierney and Tingley 2505
0.2443	0.0636	0.077	0.012	0.5429	0.0601	52.129	10.812	26.1	2020	NIOP 906	Tierney and Tingley 2506
0.2607	0.0649	0.0798	0.0128	0.5285	0.0533	52.249	10.804	26.1	2807	NIOP 907	Tierney and Tingley 2507
0.2863	0.0715	0.0842	0.0127	0.4941	0.0513	52.915	10.778	26.1	3572	NIOP 908	Tierney and Tingley 2508
0.2824	0.0717	0.0879	0.0121	0.4919	0.0541	53.524	10.69	26.6	4035	NIOP 915	Tierney and Tingley 2509
0.1955	0.0599	0.072	0.0139	0.5988	0.0599	52.53	16.17	26.6	201	NIOP 922	Tierney and Tingley 2510
0.5059	0.0345	0.0131	0.0048	0.4381	0.0036	4.5	54	10.6	42	North Frisian Fro	Tierney and Tingley 2511
0.4563	0.0532	0.0188	0.0071	0.4605	0.0041	3.733	52.908	11.3	-999	Sea Breeveerti	Tierney and Tingley 2512
0.4572	0.0445	0.0196	0.0071	0.4676	0.0041	3	53	10.3	40	Central South	Tierney and Tingley 2513
0.4792	0.0495	0.0167	0.0057	0.4436	0.0051	4.5	53	11	24	North Sea Dutch C	Tierney and Tingley 2514
0.4896	0.014	0.0048	0.0031	0.486	0.0025	10.749	79.029	1.9	328	NP-07-13-08	Tierney and Tingley 2515
0.4771	0.0132	0.0049	0.0031	0.4989	0.0028	10.666	79.059	1.9	326	NP-07-13-09	Tierney and Tingley 2516
0.4563	0.0117	0.0043	0.0031	0.5225	0.002	10.847	79.065	1.9	325	NP-07-13-10	Tierney and Tingley 2517
0.5652	0.0147	0.0048	0.0029	0.4109	0.0016	11.661	79.118	1.9	313	NP-07-13-11	Tierney and Tingley 2518
0.5621	0.0175	0.0065	0.004	0.4073	0.0026	11.622	79.295	1.9	205	NP-07-13-13	Tierney and Tingley 2519
0.5789	0.0182	0.0056	0.0031	0.3921	0.0022	11.668	79.266	1.9	245	NP-07-13-14	Tierney and Tingley 2520
0.5814	0.0174	0.0054	0.003	0.3906	0.0022	11.706	79.228	1.9	269	NP-07-13-15	Tierney and Tingley 2521
0.5641	0.0147	0.005	0.0031	0.4107	0.0023	11.761	79.186	1.9	374	NP-07-13-16	Tierney and Tingley 2522
0.5511	0.0152	0.0051	0.0031	0.4231	0.0023	11.924	79.225	1.9	279	NP-07-13-21	Tierney and Tingley 2523
0.4911	0.0133	0.0047	0.0031	0.486	0.0018	11.028	79.015	1.9	336	NP-07-13-23	Tierney and Tingley 2524
0.4687	0.0123	0.0044	0.0031	0.5095	0.002	10.859	79.013	1.9	326	NP-07-13-24	Tierney and Tingley 2525
0.483	0.0134	0.0047	0.0031	0.4936	0.0022	10.87	79.04	1.9	340	NP-07-13-25	Tierney and Tingley 2526
0.4784	0.013	0.0046	0.0032	0.4983	0.0024	11.086	79.051	1.9	334	NP-07-13-26	Tierney and Tingley 2527
0.5182	0.0161	0.0053	0.003	0.455	0.0023	16.714	-29.136	13.7	88	NP-07-13-30	Tierney and Tingley 2528
0.5301	0.0157	0.0051	0.0028	0.4444	0.0019	16.28	80.362	1.1	398	NP-07-13-31	Tierney and Tingley 2529
0.5033	0.015	0.0051	0.0032	0.4711	0.0024	16.955	80.214	1.1	451	NP-07-13-32	Tierney and Tingley 2530
0.5115	0.0149	0.0052	0.0031	0.463	0.0024	17.173	80.099	1.2	416	NP-07-13-33	Tierney and Tingley 2531
0.5132	0.0148	0.0051	0.0032	0.4612	0.0025	17.764	79.949	1.2	400	NP-07-13-34	Tierney and Tingley 2532
0.5524	0.0154	0.005	0.0031	0.4221	0.0021	18.134	79.798	1.2	446	NP-07-13-35	Tierney and Tingley 2533
0.5478	0.0163	0.0055	0.0033	0.425	0.0021	18.859	79.614	1.2	339	NP-07-13-36	Tierney and Tingley 2534
0.5492	0.0151	0.0052	0.0031	0.4256	0.0018	11.952	78.956	1.9	342	NP-07-13-40	Tierney and Tingley 2535
0.5462	0.0146	0.005	0.003	0.4295	0.0018	11.491	79.064	1.9	307	NP-07-13-41	Tierney and Tingley 2536
0.5433	0.0153	0.0049	0.0031	0.4316	0.0018	11.837	78.986	1.9	320	NP-07-13-42	Tierney and Tingley 2537
0.5475	0.015	0.005	0.0031	0.4278	0.0016	11.726	79.012	1.9	285	NP-07-13-44	Tierney and Tingley 2538
0.5304	0.0149	0.0049	0.0031	0.4447	0.0019	11.493	79.029	1.9	267	NP-07-13-46	Tierney and Tingley 2539
0.5327	0.0159	0.0052	0.0031	0.441	0.0022	11.599	79.016	1.9	252	NP-07-13-47	Tierney and Tingley 2540
0.4924	0.0129	0.0045	0.003	0.4852	0.0019	11.505	79	1.9	359	NP-07-13-48	Tierney and Tingley 2541
0.4763	0.0124	0.0045	0.003	0.5017	0.0021	-55.823	-63.071	-0.7	743	NP-07-13-49	Tierney and Tingley 2542
0.4888	0.013	0.0044	0.0029	0.4888	0.0021	11.31	79.032	1.9	330	NP-07-13-50	Tierney and Tingley 2543
0.5015	0.0136	0.0051	0.0032	0.4749	0.0018	11.37	79.044	1.9	335	NP-07-13-51	Tierney and Tingley 2544
0.3788	0.0113	0.004	0.0028	0.6	0.0031	11.377	79.073	1.9	295	NP-07-13-52	Tierney and Tingley 2545
0.5358	0.0152	0.0052	0.0031	0.4387	0.002	11.653	78.986	1.9	286	NP-07-13-53	Tierney and Tingley 2546
0.5767	0.0147	0.0047	0.0027	0.3996	0.0016	11.744	79.149	1.9	340	NP-07-13-55	Tierney and Tingley 2547
0.551	0.0151	0.0051	0.0033	0.424	0.0015	12.062	78.928	1.9	204	NP-07-13-60	Tierney and Tingley 2548
0.5472	0.0171	0.0088	0.0045	0.4198	0.0025	12.405	78.907	1.9	73	NP-07-13-61	Tierney and Tingley 2549
0.5382	0.0145	0.0047	0.0029	0.4376	0.002	11.807	78.965	1.9	299	NP-07-13-64	Tierney and Tingley 2550
0.1854	0.0667	0.0771	0.0376	0.6004	0.0328	-77.7	26.2	26.4	-999	OCE205	Tierney and Tingley 2551
0.307	0.0673	0.0593	0.0132	0.5256	0.0277	-9.0653	36.3901	18.1	596	CE437-7 MC11	Tierney and Tingley 2552
0.2896	0.0697	0.0772	0.0115	0.5157	0.0362	-7.5315	35.8903	19.2	11		

Modern Calibration Dataset for OPTiMAL

GDGT-0	GDGT-1	GDGT-2	GDGT-3	renarchaeo	Cren'	longitude	latitude	Sea Surface Temp	water depth	Core name	Source
0.3278	0.0682	0.0565	0.0084	0.5055	0.0335	-17.8708	21.797	18.4	1276	CE437-7 MC51	Tierney and Tingley 2567
0.3331	0.0643	0.0504	0.0094	0.5123	0.0304	-17.8028	21.2393	18.4	798	CE437-7 MC55	Tierney and Tingley 2568
0.3426	0.0701	0.0614	0.0093	0.4837	0.0329	-18.5512	20.7463	20.2	2106	CE437-7 MC65	Tierney and Tingley 2569
0.3315	0.0699	0.0565	0.0101	0.4994	0.0325	-17.8607	19.9434	20.1	1455	CE437-7 MC65	Tierney and Tingley 2570
0.3279	0.0721	0.0593	0.0095	0.4982	0.0329	-17.2767	19.3567	20.1	1393	CE437-7 MC67	Tierney and Tingley 2571
0.3401	0.0727	0.0639	0.0097	0.48	0.0336	-17.3348	18.6388	22.2	2282	CE437-7 MC69	Tierney and Tingley 2572
0.2814	0.0726	0.0794	0.0103	0.5158	0.0405	-23.4132	15.31	24.2	944	CE437-7 MC78	Tierney and Tingley 2573
0.2878	0.063	0.0749	0.0098	0.526	0.0384	-9.8672	36.7722	18.1	2735	CE437-7 MC71	Tierney and Tingley 2574
0.3804	0.0671	0.0484	0.0114	0.4737	0.019	9.29	41.38	17.8	765	OMEX 98-5	Tierney and Tingley 2575
0.4117	0.0592	0.0357	0.0102	0.4663	0.0168	9.37	39.35	18.4	-999	OMEX 99-15	Tierney and Tingley 2576
0.5028	0.0331	0.0123	0.0049	0.4438	0.0032	4.5	54.5	10.6	47	Oyster grounds	Tierney and Tingley 2577
0.5256	0.0161	0.0057	0.0025	0.4474	0.0026	-62.599	-64.907	-0.2	240	PD90-7-21	Tierney and Tingley 2578
0.5165	0.0192	0.0061	0.0025	0.4524	0.0033	-63.191	-65.121	-0.2	171	PD90-7-6	Tierney and Tingley 2579
0.5426	0.0207	0.0062	0.0024	0.4246	0.0035	-63.22	-65.155	-0.2	493	PD90-7-8	Tierney and Tingley 2580
0.5472	0.0195	0.006	0.0023	0.4226	0.0025	-63.228	-65.166	-0.2	490	PD90-7-9	Tierney and Tingley 2581
0.3144	0.0481	0.0326	0.0102	0.5806	0.014	-77.317	-11.983	18.5	100	eru Margin PM	Tierney and Tingley 2582
0.2854	0.0516	0.0496	0.0133	0.5812	0.0189	-78.067	-11.05	19.9	250	eru Margin PM	Tierney and Tingley 2583
0.496	0.0225	0.0055	0.0026	0.4707	0.0027	29.202	78.308	0.3	303	PLS-91-1-1	Tierney and Tingley 2584
0.494	0.0554	0.0175	0.0029	0.4217	0.0085	32.377	83.706	-1.7	4004	PLS-91-1-10	Tierney and Tingley 2585
0.4962	0.0609	0.0179	0.0027	0.4146	0.0077	33.94	84.185	-1.1	4052	PLS-91-1-12	Tierney and Tingley 2586
0.497	0.0481	0.014	0.0031	0.4307	0.0071	40.599	84.807	-1	4018	PLS-91-1-14	Tierney and Tingley 2587
0.5214	0.0371	0.0121	0.0043	0.4194	0.0057	140.498	-65.468	-1.2	1567	PLS-91-1-17	Tierney and Tingley 2588
0.503	0.0342	0.0099	0.003	0.4446	0.0052	48.229	83.017	-1.7	2900	PLS-91-1-20	Tierney and Tingley 2589
0.49	0.0383	0.0152	0.0038	0.4473	0.0053	47.889	82.662	-0.8	1345	PLS-91-1-21	Tierney and Tingley 2590
0.5049	0.0218	0.0058	0.006	0.4578	0.0037	43.432	81.118	-1.3	466	PLS-91-1-23	Tierney and Tingley 2591
0.5506	0.0245	0.0062	0.0059	0.4103	0.0025	42.874	81.021	-0.8	472	PLS-91-1-24	Tierney and Tingley 2592
0.5336	0.0275	0.0078	0.0035	0.4238	0.0038	21.273	73.724	5.3	1536	PLS-91-1-31	Tierney and Tingley 2593
0.5053	0.0248	0.0066	0.0035	0.4559	0.0039	29.021	80.867	-0.8	4018	PLS-91-1-5	Tierney and Tingley 2594
0.5111	0.0208	0.0052	0.0025	0.4566	0.0038	28.534	81.487	0	628	PLS-91-1-6	Tierney and Tingley 2595
0.541	0.0527	0.0221	0.0033	0.371	0.0099	-52	-57.9175	2.3	4557	PS2334-1	Tierney and Tingley 2596
0.5614	0.0533	0.0226	0	0.3539	0.0089	-53.9885	-57.1518	2.7	4006	PS2336-1	Tierney and Tingley 2597
0.5265	0.0611	0.0232	0.0046	0.372	0.0126	-56.9433	-56.0308	4	4542	PS2339-1	Tierney and Tingley 2598
0.4988	0.0659	0.0259	0.0047	0.3917	0.0131	-57.9843	-55.2582	5.1	4372	PS2342-1	Tierney and Tingley 2599
0.4952	0.0242	0.0255	0.0067	0.4423	0.0061	133.355	76.5083	2	38	PS2453-2	Tierney and Tingley 2600
0.4942	0.0415	0.0128	0.0063	0.4388	0.0063	130.535	79.6517	-1.7	3429	PS2455-3	Tierney and Tingley 2601
0.4911	0.0238	0.0136	0.0046	0.4626	0.0044	133.3983	78.1667	-1.3	983	PS2458-4	Tierney and Tingley 2602
0.4878	0.0214	0.0152	0.0047	0.4671	0.0036	133.555	77.91	-0.4	73	PS2461-2	Tierney and Tingley 2603
0.4756	0.022	0.0179	0.0058	0.4735	0.0052	133.5567	77.405	-0.4	54	PS2462-3	Tierney and Tingley 2604
0.4903	0.0409	0.0164	0.0056	0.4401	0.0067	122.855	79.2267	-1.8	3237	PS2470-1	Tierney and Tingley 2605
0.4891	0.0306	0.0118	0.0043	0.4591	0.0051	118.7383	78.6667	-1.8	2620	PS2472-3	Tierney and Tingley 2606
0.5031	0.0272	0.016	0.0044	0.4444	0.0048	118.5717	77.9817	-1.8	1927	PS2473-3	Tierney and Tingley 2607
0.4938	0.0266	0.0137	0.004	0.4569	0.005	118.575	77.67	-1.8	1497	PS2474-2	Tierney and Tingley 2608
0.5034	0.02	0.0119	0.004	0.4566	0.004	118.71	77.1717	-1.8	101	PS2478-3	Tierney and Tingley 2609
0.4497	0.068	0.044	0.0037	0.4187	0.0159	8.9733	-42.8733	10.1	3794	PS2489-2	Tierney and Tingley 2610
0.6066	0.0459	0.0149	0.0025	0.3221	0.0079	7.7717	-62.9583	-0.4	5305	PS2579-1	Tierney and Tingley 2611
0.5795	0.0552	0.0178	0.0029	0.3372	0.0075	24.9767	-66.0017	-1.5	4641	PS2589-2	Tierney and Tingley 2612
0.5006	0.0674	0.0389	0.0016	0.3815	0.0101	-85.688	-50.749	6.8	4579	PS2659-2	Tierney and Tingley 2613
0.5546	0.0547	0.0277	0.0022	0.3541	0.0067	-89.547	-53.287	7.4	4972	PS2663-4	Tierney and Tingley 2614
0.5462	0.0565	0.0321	0.0024	0.3518	0.0109	-92.556	-68.074	-0.5	4454	PS2687-5	Tierney and Tingley 2615
0.5339	0.0659	0.0216	0.0011	0.3713	0.0061	-91.171	-65.395	1	4715	PS2691-1	Tierney and Tingley 2616
0.4546	0.0795	0.0335	0.0038	0.418	0.0106	-89.493	-62.997	2.6	4783	PS2697-1	Tierney and Tingley 2617
0.5447	0.0662	0.0277	0.0017	0.3526	0.007	-88.008	-57.041	6.2	5190	PS2715-3	Tierney and Tingley 2618
0.5028	0.0233	0.0324	0.0067	0.4295	0.0053	135.0083	77.25	-1.5	44	PS2728-2	Tierney and Tingley 2619
0.5256	0.0292	0.0132	0.0045	0.4223	0.0052	133.715	78.5133	-1.3	1995	PS2747-8	Tierney and Tingley 2620
0.5121	0.0331	0.0121	0.0043	0.4329	0.0056	135.1133	79.1266	-1.6	2783	PS2749-3	Tierney and Tingley 2621
0.5794	0.0538	0.0193	0.0023	0.3387	0.0064	23.0009	-61.4995	0.8	5220	PS63/130-2	Tierney and Tingley 2622
0.577	0.057	0.0188	0.0036	0.3356	0.008	23.0008	-58.2994	0.5	5413	PS63/139-2	Tierney and Tingley 2623
0.5816	0.0496	0.0156	0.0029	0.3428	0.0074	23.0141	-56.5071	1.6	4872	PS63/143-2	Tierney and Tingley 2624
0.5585	0.0169	0.006	0.0042	0.3825	0.032	18.5339	77.4587	1.8	105	PS68/206-2	Tierney and Tingley 2625
0.5603	0.0169	0.0058	0.0027	0.3815	0.0328	18.838	77.1491	1.8	124	PS68/211-2	Tierney and Tingley 2626
0.5425	0.0598	0.0221	0.0054	0.348	0.0221	2.8424	79.1336	0.6	5571	PS68/242-2	Tierney and Tingley 2627
0.581	0.0323	0.01	0.0026	0.3443	0.0299	5.1719	79.6038	2.7	2784	PS68/250-2	Tierney and Tingley 2628
0.5818	0.0341	0.0107	0.0034	0.3468	0.0232	4.3276	79.2829	1.9	2401	PS68/251-2	Tierney and Tingley 2629
0.5675	0.0315	0.0098	0.0034	0.3642	0.0236	4.6004	79.1081	1.9	1914	PS68/271-2	Tierney and Tingley 2630
0.5649	0.0353	0.0111	0.003	0.3504	0.0353	8.6337	81.0972	-1.7	1078	PS68/314-1	Tierney and Tingley 2631
0.5805	0.0273	0.0091	0.0029	0.3557	0.0245	5.8851	80.4783	0.1	604	PS68/328-2	Tierney and Tingley 2632
0.5846	0.0301	0.0087	0.0036	0.3401	0.0329	3.7054	80.1563	1.3	1613	PS68/331-2	Tierney and Tingley 2633
0.5744	0.0381	0.0147	0.0033	0.3457	0.0239	-3.9842	78.8321	-1.1	1934	PS68/338-3	Tierney and Tingley 2634
0.6003	0.0331	0.0113	0.0037	0.331	0.0207	-4.9754	78.8124	-1.3	1029	PS68/341-2	Tierney and Tingley 2635
0.612	0.0301	0.0102	0.004	0.3116	0.0322	-5.663	78.8302	-1.1	436	PS68/343-2	Tierney and Tingley 2636
0.6201	0.0226	0.0063	0.0022	0.331	0.0178	-10.0561	78.8344	-0.5	311	PS68/352-2	Tierney and Tingley 2637
0.5652	0.0214	0.0061	0.0034	0.375	0.0289	-12.515	78.829	-0.7	195	PS68/357-2	Tierney and Tingley 2638
0.5504	0.0386	0.0135	0.0038	0.3704	0.0233	14.6632	71.9604	6.9	1352	PS68/371-2	Tierney and Tingley 2639
0.4931	0.0159	0.0041	0.0024	0.4829	0.0016	72.8878	-68.0113	-0.5	703	PS69/793-1	Tierney and Tingley 2640
0.4912	0.0307	0.0079	0	0.4702	0	69.2178	-65.998	0.2	2365	PS69/853-2	Tierney and Tingley 2641
0.5653	0.0358	0.0109	0.0023	0.3858	0	82.6562	-65.3425	-1	3093	PS69/878-4	Tierney and Tingley 2642
0.5226	0.0407	0.0128	0.0027	0.4175	0.0037	82.8733	-63.8372	0.6	3702	PS69/885-1	Tierney and Tingley 2643
0.5127	0.0618	0.0215	0.0033	0.3955	0.0053	82.836	-62.6557	0.7	2295	PS69/891-3	

Modern Calibration Dataset for OPTiMAL

GDGT-0	GDGT-1	GDGT-2	GDGT-3	renarchaeo	Cren'	longitude	latitude	Sea Surface Temp	water depth	Core name	Source
0.5682	0.0462	0.0178	0.0019	0.3573	0.0086	-144.115	-64.9334	-1.5	3727	PS75/068-1	Tierney and Tingley 2659
0.5807	0.0632	0.0193	0.0023	0.3232	0.0114	-145.619	-62.2055	-0.2	4328	PS75/069-2	Tierney and Tingley 2660
0.5516	0.0614	0.0226	0.0028	0.3524	0.0092	-150.066	-58.5814	0.2	2839	PS75/070-1	Tierney and Tingley 2661
0.563	0.0672	0.026	0.0035	0.3307	0.0097	-151.219	-57.5599	1	3096	PS75/072-3	Tierney and Tingley 2662
0.5296	0.0703	0.0301	0.0027	0.3522	0.0152	-152.655	-56.2445	2.1	3318	PS75/074-1	Tierney and Tingley 2663
0.4954	0.0719	0.0347	0.0029	0.3845	0.0105	-156.141	-55.5285	4.7	3745	PS75/076-1	Tierney and Tingley 2664
0.5449	0.0641	0.0272	0.0027	0.3531	0.008	-157.637	-58.1774	2	3870	PS75/080-2	Tierney and Tingley 2665
0.5387	0.0712	0.03	0.0033	0.3479	0.0088	-158.364	-59.0417	3.1	4004	PS75/082-2	Tierney and Tingley 2666
0.5464	0.0592	0.0268	0.0034	0.357	0.0072	-159.587	-61.0498	0.6	3313	PS75/084-1	Tierney and Tingley 2667
0.5371	0.0638	0.0264	0.0029	0.3599	0.0099	-160.119	-61.9394	0.6	3724	PS75/085-2	Tierney and Tingley 2668
0.5915	0.0545	0.0194	0.0023	0.3258	0.0064	-161.904	-64.744	-1.1	4064	PS75/086-1	Tierney and Tingley 2669
0.5809	0.0484	0.0175	0.0026	0.3421	0.0085	-163.325	-66.7879	-0.5	4411	PS75/087-2	Tierney and Tingley 2670
0.5497	0.0502	0.019	0.0028	0.3677	0.0106	-164.801	-68.7303	-0.2	3849	PS75/088-3	Tierney and Tingley 2671
0.5576	0.0562	0.018	0.0027	0.3541	0.0114	-165.542	-67.083	0	4121	PS75/089-6	Tierney and Tingley 2672
0.5626	0.0578	0.0204	0.0025	0.3483	0.0085	-166.155	-65.411	0.2	3480	PS75/090-6	Tierney and Tingley 2673
0.5707	0.0684	0.0246	0.003	0.323	0.0103	-169.075	-63.6938	0.7	2944	PS75/091-6	Tierney and Tingley 2674
0.5065	0.0798	0.0342	0.0028	0.3633	0.0133	-169.502	-60.6673	1.7	3833	PS75/092-1	Tierney and Tingley 2675
0.5406	0.0653	0.0271	0.0026	0.3547	0.0096	-169.741	-61.8224	1.2	3274	PS75/094-3	Tierney and Tingley 2676
0.516	0.0699	0.0316	0.0039	0.3681	0.0105	-174.431	-57.0196	4.5	4857	PS75/095-6	Tierney and Tingley 2677
0.5314	0.0673	0.0341	0.0027	0.3528	0.0116	-171.358	-59.7004	4	4675	PS75/097-5	Tierney and Tingley 2678
0.5074	0.0677	0.0349	0.0037	0.3712	0.0153	-179.01	-52.9663	8.3	5187	PS75/098-6	Tierney and Tingley 2679
0.5105	0.0639	0.0346	0.0045	0.3719	0.0147	177.2732	-48.2618	8.9	1270	PS75/099-1	Tierney and Tingley 2680
0.4991	0.0653	0.0364	0.0035	0.383	0.0127	177.1489	-45.7576	12	2502	PS75/100-1	Tierney and Tingley 2681
0.5046	0.0692	0.0316	0.0044	0.3769	0.0133	175.8757	-45.8062	10.9	1773	PS75/101-2	Tierney and Tingley 2682
0.5052	0.0582	0.029	0.0071	0.3917	0.0088	174.5258	-44.7693	11.4	835	PS75/104-2	Tierney and Tingley 2683
0.5133	0.0502	0.0231	0.0066	0.3953	0.0115	174.6245	-44.4086	11.4	669	PS75/105-1	Tierney and Tingley 2684
0.1013	0.0459	0.0906	0.0226	0.6541	0.0855	34.597	27.687	25.3	1018	RS01-MC359	Tierney and Tingley 2685
0.1705	0.0584	0.0995	0.02	0.5709	0.0807	35.047	27.712	25.3	863	RS08-MC601	Tierney and Tingley 2686
0.0989	0.047	0.0962	0.0222	0.654	0.0816	35.405	27.053	25.7	628	RS09-MC596	Tierney and Tingley 2687
0.1231	0.0545	0.1113	0.0241	0.5947	0.0924	35.36	26.292	25.7	1175	RS13-MC360	Tierney and Tingley 2688
0.1112	0.0477	0.0924	0.0213	0.6395	0.0878	35.085	25.75	25.9	666	RS15-MC362	Tierney and Tingley 2689
0.1137	0.0497	0.1137	0.022	0.6022	0.0988	35.608	25.522	25.9	941	RS17-MC363	Tierney and Tingley 2690
0.1061	0.0458	0.1216	0.021	0.6056	0.0999	36.23	24.76	26.6	1185	RS19-MC364	Tierney and Tingley 2691
0.0828	0.0393	0.1143	0.0215	0.6269	0.1152	36.712	23.312	26.8	1024	RS23-MC365	Tierney and Tingley 2692
0.0874	0.0402	0.1155	0.0205	0.6156	0.1207	36.982	23.392	26.8	1387	RS24-MC71	Tierney and Tingley 2693
0.0771	0.0373	0.1111	0.0236	0.6423	0.1086	37.377	22.915	27.4	1324	RS26-MC73	Tierney and Tingley 2694
0.0768	0.0327	0.1125	0.0226	0.6377	0.1177	37.782	22.252	27.4	1521	RS29-MC79	Tierney and Tingley 2695
0.0795	0.0377	0.1249	0.0236	0.6174	0.1169	37.98	21.428	28	1538	RS31-MC85	Tierney and Tingley 2696
0.0721	0.0368	0.1015	0.0208	0.6691	0.0996	38.012	19.907	28.8	713	RS39-MC95	Tierney and Tingley 2697
0.0841	0.0401	0.1228	0.0238	0.617	0.1122	38.423	20.105	28.6	2309	RS41-MC101	Tierney and Tingley 2698
0.0749	0.0385	0.1079	0.0231	0.639	0.1167	38.608	19.64	28.8	1991	RS42-MC113	Tierney and Tingley 2699
0.0781	0.0372	0.1074	0.0211	0.6565	0.0998	38.722	19.458	28.8	1825	RS44-MC111	Tierney and Tingley 2700
0.0747	0.0367	0.1016	0.0194	0.6622	0.1054	39.053	19.135	29.1	1657	RS46-MC108	Tierney and Tingley 2701
0.0808	0.0422	0.1028	0.0186	0.6564	0.0992	39.057	18.602	29.2	501	RS50-MC105	Tierney and Tingley 2702
0.0904	0.043	0.0983	0.0195	0.6583	0.0905	40.022	17.362	29.3	475	RS51-MC366	Tierney and Tingley 2703
0.1146	0.0457	0.0807	0.019	0.6577	0.0823	41.67	15.56	29	604	RS53-MC367	Tierney and Tingley 2704
0.182	0.05	0.064	0.011	0.635	0.058	119.5	20.25	26.9	2800	S017	Tierney and Tingley 2705
0.176	0.051	0.07	0.011	0.63	0.061	111	10.5	27.9	2521	S031	Tierney and Tingley 2706
0.152	0.046	0.068	0.016	0.66	0.059	115.5	7.25	28.5	1609	S052	Tierney and Tingley 2707
0.204	0.057	0.07	0.012	0.602	0.055	119.09	20.65	26.9	3447	S072	Tierney and Tingley 2708
0.181	0.048	0.065	0.012	0.642	0.051	119.88	19.31	27.2	4182	S098	Tierney and Tingley 2709
0.194	0.05	0.063	0.009	0.625	0.06	118.36	17.28	27.3	3986	S137	Tierney and Tingley 2710
0.18	0.049	0.072	0.009	0.628	0.061	117.84	17.29	27.2	3960	S181	Tierney and Tingley 2711
0.177	0.052	0.076	0.009	0.622	0.063	118.93	16.17	27.9	3675	S199	Tierney and Tingley 2712
0.4363	0.0824	0.0507	0.0021	0.4135	0.0151	-120.017	34.217	14.8	530	Santa Barbara ba:	Tierney and Tingley 2713
0.4892	0.0156	0.0052	0.003	0.4848	0.0021	-66.712	50.621	5.5	214	SEPT01-07 BEN	Tierney and Tingley 2714
0.4824	0.073	0.0388	0.004	0.3894	0.0124	152.9199	44.0259	6	5282	SO202-01-3	Tierney and Tingley 2715
0.4922	0.0798	0.0409	0.0035	0.3726	0.0109	156.9821	46.9689	5.3	4822	SO202-02-4	Tierney and Tingley 2716
0.4359	0.082	0.0535	0	0.4286	0	160.379	49.6141	4.9	5429	SO202-03-4	Tierney and Tingley 2717
0.4306	0.0924	0.041	0	0.4222	0.0138	163.1604	51.8633	5.1	5273	SO202-04-3	Tierney and Tingley 2718
0.4564	0.0873	0.0533	0.0037	0.3981	0.0013	164.9193	52.6961	5.3	3362	SO202-05-3	Tierney and Tingley 2719
0.4448	0.0736	0.0462	0.0038	0.4182	0.0134	167.6993	51.2716	5.3	2349	SO202-07-2	Tierney and Tingley 2720
0.4852	0.0735	0.0378	0.004	0.3981	0.0013	170.8213	50.5422	5.9	3630	SO202-08-1	Tierney and Tingley 2721
0.463	0.0649	0.0407	0.0067	0.4089	0.0158	175.1615	49.6635	6.2	5028	SO202-09-2	Tierney and Tingley 2722
0.4877	0.0559	0.0327	0.0037	0.4088	0.0112	179.8478	52.7427	5.3	1488	SO202-10-2	Tierney and Tingley 2723
0.7588	0.1155	0.0583	0	0.674	0	178.8999	53.1113	5.3	2704	SO202-11-1	Tierney and Tingley 2724
0.4475	0.07	0.043	0.0033	0.4241	0.0121	177.9572	54.9788	5.5	1383	SO202-13-4	Tierney and Tingley 2725
0.4682	0.0602	0.0337	0.0036	0.4242	0.0102	-179.849	59.5124	4.4	3137	SO202-15-4	Tierney and Tingley 2726
0.447	0.0356	0.0165	0.003	0.4891	0.0088	-179.11	60.403	4.6	548	SO202-16-1	Tierney and Tingley 2727
0.4577	0.0751	0.0421	0.0032	0.4101	0.0118	-179.443	60.1263	4.6	1108	SO202-18-1	Tierney and Tingley 2728
0.4388	0.0687	0.028	0.0074	0.4461	0.0111	-170.328	54.7888	5.5	1911	SO202-21-2	Tierney and Tingley 2729
0.4963	0.0556	0.0275	0.0036	0.4093	0.0078	-168.812	54.5737	5.5	1478	SO202-22-1	Tierney and Tingley 2730
0.4385	0.0779	0.0555	0	0.4102	0.018	-160.504	52.1727	7.1	4613	SO202-23-4	Tierney and Tingley 2731
0.4415	0.0714	0.0533	0	0.421	0.0128	-157.193	53.0025	6.8	4565	SO202-24-2	Tierney and Tingley 2732
0.4447	0.0851	0.0521	0	0.4012	0.017	-152.686	54.0985	6.9	4588	SO202-25-1	Tierney and Tingley 2733
0.4467	0.0702	0.0467	0	0.4205	0.016	-150.384	54.6378	6.9	742	SO202-26-1	Tierney and Tingley 2734
0.4279	0.0794	0.0516	0.004	0.4229	0.0142	-149.597	54.2962	7	2916	SO202-27-1	Tierney and Tingley 2735
0.4391	0.0803	0.0512	0.0038	0.4121	0.0136	-148.884	54.4185	7.1	3710	SO202-28-1	Tierney and Tingley 2736
0.7312</											

Modern Calibration Dataset for OPTiMAL

GDGT-0	GDGT-1	GDGT-2	GDGT-3	renarchaeo	Cren'	longitude	latitude	Sea Surface Temp	water depth	Core name	Source
0.197	0.061	0.073	0.01	0.604	0.054	113.64	18.66	26.8	1219	S095-17944	Tierney and Tingley 2751
0.193	0.066	0.07	0.009	0.613	0.048	113.78	18.13	26.8	2404	S095-17945	Tierney and Tingley 2752
0.217	0.055	0.073	0.009	0.592	0.054	114.25	18.13	26.8	3465	S095-17946	Tierney and Tingley 2753
0.2	0.063	0.086	0.012	0.575	0.065	116.03	18.47	26.9	3765	S095-17947	Tierney and Tingley 2754
0.213	0.057	0.073	0.011	0.592	0.054	114.9	16.71	27.1	2841	S095-17948	Tierney and Tingley 2755
0.203	0.064	0.087	0.011	0.573	0.06	115.17	17.35	26.9	2195	S095-17949	Tierney and Tingley 2756
0.193	0.062	0.085	0.011	0.591	0.059	112.9	16.09	28	1868	S095-17950	Tierney and Tingley 2757
0.183	0.057	0.077	0.01	0.625	0.049	113.41	16.29	27.3	2340	S095-17951	Tierney and Tingley 2758
0.212	0.06	0.078	0.01	0.584	0.057	114.47	16.67	27.1	2864	S095-17952	Tierney and Tingley 2759
0.205	0.061	0.078	0.012	0.586	0.058	111.53	14.8	27.4	1517	S095-17954	Tierney and Tingley 2760
0.201	0.058	0.075	0.01	0.604	0.053	112.18	14.12	27.6	2404	S095-17955	Tierney and Tingley 2761
0.213	0.062	0.085	0.01	0.571	0.059	112.59	13.85	27.7	3387	S095-17956	Tierney and Tingley 2762
0.218	0.055	0.079	0.009	0.577	0.061	115.3	10.9	28.1	2197	S095-17957	Tierney and Tingley 2763
0.199	0.052	0.076	0.009	0.606	0.058	115.08	11.62	28.2	2581	S095-17958	Tierney and Tingley 2764
0.179	0.05	0.08	0.01	0.63	0.051	115.29	11.14	28.2	1957	S095-17959	Tierney and Tingley 2765
0.179	0.052	0.077	0.01	0.633	0.049	115.56	10.12	28.1	1707	S095-17960	Tierney and Tingley 2766
0.145	0.05	0.071	0.013	0.663	0.058	112.08	7.18	28.9	1970	S095-17962	Tierney and Tingley 2767
0.135	0.05	0.077	0.014	0.667	0.058	112.67	6.17	28.5	1233	S095-17963	Tierney and Tingley 2768
0.119	0.047	0.072	0.015	0.7	0.046	112.21	6.16	28.5	1556	S095-17964	Tierney and Tingley 2769
0.137	0.049	0.07	0.013	0.67	0.06	112.55	6.16	28.5	889	S095-17965	Tierney and Tingley 2770
0.4781	0.043	0.0174	0.0068	0.4498	0.0049	4.5	53.5	10.6	24	uth Frisian Fro	Tierney and Tingley 2771
0.5112	0.0533	0.022	0.0038	0.3923	0.0174	143.682	-56.002	2.3	3429	ST-32	Tierney and Tingley 2772
0.5417	0.0505	0.0176	0.003	0.3781	0.0092	142.002	-60.045	1.5	4354	ST-34	Tierney and Tingley 2773
0.5119	0.0597	0.0233	0.0038	0.3865	0.0148	141.675	-62.013	0.4	4265	ST-35	Tierney and Tingley 2774
0.5317	0.0235	0.0069	0.0027	0.4308	0.0044	46.722	84.009	1.3	3960	ST-45	Tierney and Tingley 2775
0.4826	0.0197	0.0051	0.0025	0.487	0.0031	-79.712	60.621	6.8	129	Station A	Tierney and Tingley 2776
0.4794	0.0181	0.0048	0.0025	0.4917	0.0035	-81.712	60.621	8.7	156	Station B	Tierney and Tingley 2777
0.175	0.05	0.069	0.012	0.64	0.054	119.5	21.25	27	2500	SX15	Tierney and Tingley 2778
0.3429	0.0696	0.0654	0.0088	0.4751	0.0381	1.322	-2.077	25	2088	T89-10	Tierney and Tingley 2779
0.3484	0.0695	0.0632	0.0035	0.4421	0.0733	7.973	-5.2	26.5	4068	T89-12	Tierney and Tingley 2780
0.1884	0.0503	0.0652	0.0102	0.6468	0.0391	9.238	-4.107	25.4	3092	T89-13	Tierney and Tingley 2781
0.2911	0.0759	0.0732	0.0142	0.5139	0.0318	9.69	-3.509	25.3	868	T89-14	Tierney and Tingley 2782
0.2987	0.0774	0.0816	0.0133	0.4918	0.0373	10.022	-4.213	25.2	1930	T89-15	Tierney and Tingley 2783
0.2723	0.0743	0.0804	0.0173	0.5192	0.0363	11.228	-5.705	25	826	T89-16	Tierney and Tingley 2784
0.3191	0.0734	0.0738	0.0164	0.4724	0.0447	7.805	-6.818	26.3	4253	T89-17	Tierney and Tingley 2785
0.3389	0.0778	0.0765	0.0126	0.4624	0.0318	9.955	-6.043	26.1	3140	T89-19	Tierney and Tingley 2786
0.2737	0.0661	0.0746	0.0109	0.5372	0.0375	11.537	-7.307	25.9	1080	T89-20	Tierney and Tingley 2787
0.2628	0.0708	0.0743	0.0158	0.5438	0.0324	11.993	-7.275	25.9	490	T89-21	Tierney and Tingley 2788
0.2571	0.074	0.0754	0.0137	0.5483	0.0315	12.067	-7.13	25.9	200	T89-22	Tierney and Tingley 2789
0.2758	0.0678	0.0733	0.014	0.5384	0.0307	12.108	-8.513	24.9	796	T89-23	Tierney and Tingley 2790
0.3241	0.0813	0.0848	0.01	0.4627	0.0371	12.058	-8.908	24.9	2157	T89-24	Tierney and Tingley 2791
0.2383	0.0581	0.0735	0.0118	0.5901	0.0283	10.608	-9.368	25.7	4164	T89-25	Tierney and Tingley 2792
0.1695	0.0709	0.0892	0.0113	0.6436	0.0157	5.637	-10.387	24.6	5307	T89-28	Tierney and Tingley 2793
0.3931	0.0796	0.0613	0.0051	0.4273	0.0336	8.22	-14.877	22.1	4752	T89-30	Tierney and Tingley 2794
0.335	0.0896	0.0627	0.0087	0.4717	0.0324	10.668	-14.893	21.9	3342	T89-32	Tierney and Tingley 2795
0.3645	0.0895	0.0729	0.0126	0.4322	0.0284	11.62	-14.96	23.2	2027	T89-33	Tierney and Tingley 2796
0.322	0.0759	0.0599	0.01	0.5052	0.0269	11.967	-15.127	20.8	999	T89-34	Tierney and Tingley 2797
0.3168	0.0642	0.0499	0.0097	0.534	0.0254	11.62	-17.293	18.5	802	T89-35	Tierney and Tingley 2798
0.3522	0.0556	0.0336	0.0111	0.5269	0.0206	13.838	-14.96	23.2	131	T89-36	Tierney and Tingley 2799
0.3533	0.0909	0.0732	0.0068	0.4476	0.0282	6.782	-21.617	20	3060	T89-40	Tierney and Tingley 2800
0.3473	0.0911	0.0716	0.0058	0.4471	0.0371	6	-20.8	20.2	4282	T89-41	Tierney and Tingley 2801
0.3528	0.0878	0.0719	0.0055	0.4494	0.0326	4.427	-8.787	25.1	5362	T89-47	Tierney and Tingley 2802
0.3961	0.0619	0.0392	0.006	0.4718	0.0251	147.49	-47.572	10.2	1301	TSP-1	Tierney and Tingley 2803
0.4492	0.0709	0.0411	0.0055	0.4167	0.0166	146.9	-48.127	9.7	2283	TSP-2	Tierney and Tingley 2804
0.454	0.0675	0.04	0.0043	0.4194	0.0149	146.41	-48.558	9.7	2897	TSP-3	Tierney and Tingley 2805
0.5034	0.0266	0.0123	0.0042	0.4472	0.0063	-124.3	46.333	11.8	70	WM1 MC33	Tierney and Tingley 2806
0.4653	0.0275	0.0153	0.0055	0.4781	0.0083	-124.383	46.5	11.8	90	WM2 MC30	Tierney and Tingley 2807
0.472	0.0255	0.0109	0.0021	0.4842	0.0054	-124.633	46.667	11.8	150	WM3 MC28	Tierney and Tingley 2808
0.4461	0.053	0.0288	0.0038	0.4565	0.0117	-125	46.817	12.4	600	WM4 MC21	Tierney and Tingley 2809
0.4304	0.0617	0.0385	0.0038	0.451	0.0147	-125.2	46.75	12.4	1000	WM5 MC20	Tierney and Tingley 2810
0.2102	0.0669	0.0783	0.0125	0.5662	0.066	47.915	13.078	28.1	2215	XGA7-MC123	Tierney and Tingley 2811
0.6513	0.0659	0.0254	0.0041	0.2463	0.0071	152.023	50.987	4.8	1102	XP98-MC1	Seki et al. 2014
0.6548	0.0578	0.0219	0.0030	0.2554	0.0070	148.292	50.392	5.5	1258	XP98-MC2	Seki et al. 2014
0.5894	0.0736	0.0359	0.0033	0.2901	0.0077	146.333	53.767	6.9	1576	XP98-MC3	Seki et al. 2015
0.5899	0.0864	0.0405	0.0052	0.2695	0.0085	152.536	46.557	4.5	2625	XP99 St.2MC	Seki et al. 2016
0.6677	0.0668	0.0251	0.0036	0.2306	0.0063	151.108	47.202	3.8	3362	XP99 St.16MC	Seki et al. 2017
0.8165	0.0969	0.0407	0.0039	0.0324	0.0096	149.69	48.591	4.7	1613	XP99 St.19MC	Seki et al. 2018
0.7602	0.0296	0.0078	0.0030	0.1958	0.0035	145.671	49.521	5.8	490	XP99 St.22MC	Seki et al. 2019
0.6775	0.0381	0.0125	0.0046	0.2617	0.0055	145.051	51.459	5.6	787	XP99 St.MC5	Seki et al. 2020
0.6828	0.0394	0.0148	0.0030	0.2551	0.0050	144.017	55.503	4.5	923	XP99-MC8	Seki et al. 2021
0.6728	0.0201	0.0061	0.0030	0.2924	0.0056	140.841	55.586	7.4	184	XP99 St.50MC	Seki et al. 2022
0.1671	0.0456	0.0136	0.0115	0.7532	0.0090	139.858	55.65	8	141	XP99 St.53MC	Seki et al. 2023
0.6624	0.0188	0.0065	0.0044	0.3038	0.0040	138.902	55.741	8.2	108	XP99 St.59MC	Seki et al. 2024
0.6856	0.0207	0.0059	0.0044	0.2800	0.0034	141.001	54.987	7.8	134	XP99 St.63MC	Seki et al. 2025
0.6515	0.0211	0.0069	0.0049	0.3124	0.0032	141.991	54.986	7.4	117	XP99 St.68MC	Seki et al. 2026
0.6607	0.0585	0.0274	0.0035	0.2431	0.0067	147.473	49.538	6.6	1242	XP00 St.31MC	Seki et al. 2027
0.6888	0.0205	0.0067	0.0044	0.2758	0.0038	144.133	51.251	5.9	154	XP00 MC5	Seki et al. 2028
0.6648	0.0217	0.0068	0.0040	0.2984	0.0044	143.839	52.972	6.1	72	XP00 MC6	Seki et al. 2029
0.6352	0.0193	0.0064	0.0049	0.3300	0.0042	144.39	52.976	6	444	XP00 MC7	Seki et al. 2030
0.6602	0.0158	0.0042	0.0030	0.3125	0.0042	143.006	55.005	6.1	105	XP00 MC14	Seki et al. 2031
0.1593	0.0654	0.0196	0.0083	0.7371	0.0103	141.988					

Modern Calibration Dataset for OPTiMAL

GDGT-0	GDGT-1	GDGT-2	GDGT-3	<code>renarchaeo</code>	<code>Cren'</code>	<code>longitude</code>	<code>latitude</code>	<code>Sea Surface Temp</code>	<code>water depth</code>	<code>Core name</code>	<code>Source</code>
0.6265	0.0590	0.0302	0.0038	0.2710	0.0096	150.074	53.276	4.7	1140	YK07-12 St8	Seki et al. 2044
0.7289	0.0321	0.0089	0.0027	0.2225	0.0050	149.323	54.751	4.7	600	YK07-12 St10	Seki et al. 2045
0.2378	0.0625	0.0824	0.0148	0.5533	0.0493	123.3	4.47	28.9	4095	ODP767	Seki et al. 2046
0.1515	0.0491	0.0891	0.0155	0.6439	0.0510	119.421	16.391	28.3	1529	ODP772	Seki et al. 2047
0.3011	0.0667	0.0660	0.0096	0.5230	0.0336	141.189	30.517	22.9	2958	ODP782	Seki et al. 2048
0.2633	0.0553	0.0557	0.0106	0.5788	0.0364	140.533	31.635	22.7	2964	ODP793	Seki et al. 2049
0.4809	0.0507	0.0233	0.0037	0.4323	0.0092	139.247	42.509	12	2570	ODP796	Seki et al. 2050
0.4830	0.0331	0.0172	0.0063	0.4515	0.0090	133.52	39.132	13.4	2073	ODP799	Seki et al. 2051
0.2908	0.0608	0.0655	0.0129	0.5331	0.0369	134.567	32.211	23.1	4676	ODP808	Seki et al. 2052
0.2734	0.0662	0.0763	0.0128	0.5383	0.0330	172.207	5.334	28.8	1254	ODP871	Seki et al. 2053
0.2581	0.0707	0.0817	0.0117	0.5350	0.0429	167.36	50.218	5.5	3244	ODP882	Seki et al. 2054
0.4689	0.0680	0.0302	0.0031	0.4192	0.0106	167.4613	51.11898	5.5	3826	ODP883	Seki et al. 2055
0.4305	0.0724	0.0343	0.0039	0.4460	0.0130	168.202	51.27	5.5	3826	ODP884	Seki et al. 2056
0.4510	0.0567	0.0438	0.0031	0.4327	0.0128	-148.268	54.219	7.2	3631	ODP887	Seki et al. 2057
0.2480	0.0710	0.0906	0.0142	0.5206	0.0556	117.251	20.318	26.4	2035	ODP1144	Seki et al. 2058
0.2346	0.0634	0.0816	0.0120	0.5533	0.0551	116.339	18.502	27	3297	ODP1148	Seki et al. 2059
0.3514	0.0502	0.0530	0.0102	0.4996	0.0357	143.211	31.205	22.5	5817	ODP1149	Seki et al. 2060
0.2448	0.0556	0.0581	0.0122	0.5940	0.0354	135.151	32.147	22.9	4790	ODP1173	Seki et al. 2061
0.3779	0.0811	0.0603	0.0087	0.4507	0.0213	134.387	32.359	23.1	2997	ODP1175	Seki et al. 2062
0.2878	0.0703	0.0738	0.0131	0.5134	0.0416	134.288	32.439	23.3	1741	ODP1178	Seki et al. 2063
0.4647	0.0628	0.0273	0.0040	0.4284	0.0127	159.578	41.479	11.5	5565	ODP1179	Seki et al. 2064
0.2949	0.0557	0.0676	0.0141	0.5288	0.0389	122.3	24.482	26.2	1274	ODP1202	Seki et al. 2065
0.3564	0.0487	0.0364	0.0042	0.5174	0.0369	162.451	37.474	17.1	3100	ODP1207	Seki et al. 2066
0.3339	0.0567	0.0511	0.0080	0.5180	0.0324	158.121	36.763	18.3	3345	ODP1208	Seki et al. 2067
0.2990	0.0575	0.0540	0.0097	0.5381	0.0417	157.51	32.013	21.4	2907	ODP1211	Seki et al. 2068
0.3020	0.0584	0.0523	0.0087	0.5408	0.0378	157.427	32.269	21.4	2682	ODP1212	Seki et al. 2069

Eocene dataset for OPTiMAL

SITE	AGE	1302	1300	1298	1296	1292	1292'	Fr.1302	Fr.1300	Fr.1298	Fr.1296	Fr.1292	Fr.1292'	TEX	OPTIMAL	OPTIMAL	
		GDGT0	GDGT1	GDGT2	GDGT3	CREN	CREN'							(published)	D_nearest	SST	StDev
277	33.60	399262	72276	64028	12946	548757	39613	0.35	0.06	0.06	0.01	0.48	0.03	0.62	0.34	21.33	3.56
277	33.62	455976	97219	88849	17494	665582	57692	0.33	0.07	0.06	0.01	0.48	0.04	0.63	0.29	23.27	3.57
277	33.64	529802	125675	133551	27576	944662	81286	0.29	0.07	0.07	0.01	0.51	0.04	0.66	0.29	25.87	3.49
277	33.64	95110	21042	22104	4411	158033	14683	0.30	0.07	0.07	0.01	0.50	0.05	0.66	0.29	25.51	3.54
277	33.66	26399	5661	5666	1442	38412	3464	0.33	0.07	0.07	0.02	0.47	0.04	0.65	0.34	25.02	4.24
277	33.69	290097	59779	76566	12952	395740	41152	0.33	0.07	0.09	0.01	0.45	0.05	0.69	0.50	28.01	4.15
277	33.73	81897	15575	17157	3172	91606	9753	0.37	0.07	0.08	0.01	0.42	0.04	0.66	0.63	25.52	4.73
277	33.83	556111	117435	120342	25453	828508	73815	0.32	0.07	0.07	0.01	0.48	0.04	0.65	0.40	25.50	3.68
277	34.57	270004	59050	60130	10788	396784	37311	0.32	0.07	0.07	0.01	0.48	0.04	0.65	0.38	24.97	3.59
277	34.69	34760	7243	7964	1584	46453	4557	0.34	0.07	0.08	0.02	0.45	0.04	0.66	0.32	26.62	4.03
277	34.75	82836	17912	20483	3429	121929	12402	0.32	0.07	0.08	0.01	0.47	0.05	0.67	0.38	26.53	3.67
277	35.53	243204	51087	66343	11881	322185	40008	0.33	0.07	0.09	0.02	0.44	0.05	0.70	0.42	28.14	4.48
925	28.567	371885	37159	43559	8972	217396	30547	0.52	0.05	0.06	0.01	0.31	0.04	0.69	1.17	12.50	7.00
925	29.272	4393864	276324	374266	78956	2164039	283752	0.60	0.03	0.05	0.01	0.27	0.04	0.73	1.13	13.57	7.05
925	29.287	222691	47899	59474	13105	348407	51332	0.30	0.06	0.08	0.02	0.47	0.07	0.72	0.61	27.69	4.85
925	30.008	101302	27034	40719	8673	204521	33873	0.24	0.06	0.10	0.02	0.49	0.08	0.75	0.71	26.32	5.48
925	30.560	235590	23178	28433	5256	127073	17324	0.54	0.05	0.07	0.01	0.29	0.04	0.69	1.22	14.93	7.13
925	30.570	104847	25389	36046	7295	181854	29247	0.27	0.07	0.09	0.02	0.47	0.08	0.74	0.64	27.58	5.16
925	30.779	461034	66172	99174	20818	552761	87526	0.36	0.05	0.08	0.02	0.43	0.07	0.76	0.96	25.76	6.34
925	31.103	65752	15286	23368	4890	121458	18461	0.26	0.06	0.09	0.02	0.49	0.07	0.75	0.68	27.02	5.35
925	31.724	139022	17935	22236	5010	137589	22126	0.40	0.05	0.06	0.01	0.40	0.06	0.73	1.08	22.15	6.54
925	32.68	10931241	1465161	2096084	421840	14254692	1955273	0.35	0.05	0.07	0.01	0.46	0.06	0.75	0.79	25.89	5.50
925	32.78	12687958	2572163	3977902	833161	26261962	3393341	0.26	0.05	0.08	0.02	0.53	0.07	0.76	0.67	28.50	4.81
925	33.04	21001648	6201187	8310747	1751582	53691244	6885830	0.21	0.06	0.08	0.02	0.55	0.07	0.73	0.38	28.58	3.90
925	33.27	162683	20988	29854	5632	275923	26313	0.31	0.04	0.06	0.01	0.53	0.05	0.75	0.62	22.80	4.72
925	33.46	4724260	1234661	1813649	368949	12215482	1533550	0.22	0.06	0.08	0.02	0.56	0.07	0.75	0.51	28.94	4.11
925	33.64	267958	73001	106371	22481	681789	107786	0.21	0.06	0.08	0.02	0.54	0.09	0.76	0.64	27.85	4.66
925	33.80	2592947	1152029	888343	177766	5507807	828296	0.23	0.10	0.08	0.02	0.49	0.07	0.62	1.00	18.38	6.42
925	35.71	529883	102749	144066	27470	832557	122555	0.30	0.06	0.08	0.02	0.47	0.07	0.74	0.66	28.93	4.72
925	35.70	872446	134704	183633	37166	1160097	168026	0.34	0.05	0.07	0.01	0.45	0.07	0.74	0.68	27.01	5.32
925	35.75	2060238	357384	400825	81708	2741852	387629	0.34	0.06	0.07	0.01	0.45	0.06	0.71	0.67	26.25	4.68
925	35.85	3783069	468151	454857	94610	2795988	439607	0.47	0.06	0.06	0.01	0.35	0.05	0.68	1.01	15.14	6.27
925	36.00	935909	18247	26068	6027	165456	29825	0.79	0.02	0.02	0.01	0.14	0.03	0.77	0.85	9.99	6.71
925	36.24	989460	262906	366016	76437	1893992	282011	0.26	0.07	0.09	0.02	0.49	0.07	0.73	0.57	27.55	4.87
925	36.43	2601828	772026	1104442	243000	7674369	1045100	0.19	0.06	0.08	0.02	0.57	0.08	0.76	0.59	28.01	4.21
925	36.74	3114479	1041854	1186804	288160	8315579	1233779	0.21	0.07	0.08	0.02	0.55	0.08	0.72	0.44	27.34	4.39
925	37.01	253526	75267	134389	30143	88383	156556	0.17	0.05	0.09	0.02	0.58	0.10	0.81	0.54	25.71	4.92
925	37.25	1160453	369832	442288	99963	2606991	440453	0.22	0.07	0.08	0.02	0.53	0.08	0.73	0.45	27.59	4.37
925	37.51	11812031	3448737	5030909	854215	33264954	4902532	0.20	0.06	0.08	0.01	0.56	0.08	0.76	0.45	28.96	4.12
925	38.02	23210	2442	5020	1117	31718	6115	0.33	0.04	0.07	0.02	0.46	0.09	0.83	1.21	23.88	7.61
925	38.27	2102060	451032	646792	144756	4601664	708418	0.24	0.05	0.07	0.02	0.53	0.08	0.77	0.77	28.31	5.14
925	38.54	707844	192124	310691	58687	1672801	273167	0.22	0.06	0.10	0.02	0.52	0.08	0.77	0.59	27.48	4.77
925	38.49	161284	51575	79878	19309	525104	92933	0.17	0.06	0.09	0.02	0.56	0.10	0.79	0.46	25.39	4.91
925	38.33	189644	49185	69933	13000	331586	53212	0.27	0.07	0.10	0.02	0.47	0.08	0.73	0.65	28.05	4.91
925	38.69	26977	3856	7053	1430	49692	10170	0.27	0.04	0.07	0.01	0.50	0.10	0.83	1.19	26.78	6.97
511	31.836	7585985	995499	558441	100994	5516933	305485	0.50	0.07	0.04	0.01	0.37	0.02	0.49	0.15	12.61	3.51
511	32.412	16804794	1598778	665883	136655	9806814	297738	0.57	0.05	0.02	0.00	0.33	0.01	0.41	0.26	6.90	3.49
511	32.58	3097348	3238354	1446366	254525	20519746	477670	0.54	0.06	0.03	0.00	0.36	0.01	0.43	0.20	6.45	3.43
511	32.76	27495930	3341567	1575671	303175	18968080	775932	0.52	0.06	0.03	0.01	0.36	0.01	0.44	0.31	9.27	3.48
511	32.89	10398928	1091973	499850	95828	6616941	251331	0.55	0.06	0.03	0.01	0.35	0.01	0.44	0.21	7.94	3.48
511	33.17	21264646	1631833	629846	147125	12274376	305591	0.59	0.05	0.02	0.00	0.34	0.01	0.40	0.15	5.93	3.47
511	33.28	14619175	1257344	548795	125863	9649294	293331	0.55	0.05	0.02	0.00	0.36	0.01	0.43	0.24	8.03	3.43
511	33.45	18397468	2007194	937665	181289	12311290	439843	0.54	0.06	0.03	0.01	0.36	0.01	0.44	0.20	8.76	3.47
511	33.48	11184109	838291	337519	79050	5470280	160447	0.62	0.05	0.02	0.00	0.30	0.01	0.41	0.41	6.22	3.60
511	33.59	26244844	2225182	885846	207003	14617906	398521	0.59	0.05	0.02	0.00	0.33	0.01	0.40	0.27	7.19	3.53
511	33.61	17122232	1642815	681837	143143	9388046	299333	0.58	0.06	0.02	0.00	0.32	0.01	0.41	0.31	7.22	3.56
511	34.04	3776361	425820	194989	33837	2184045	91636	0.56	0.06	0.03	0.01	0.33	0.01	0.43	0.34	7.28	3.56
511	34.19	125902696	14547180	7688243	2071190	116072024	4565806	0.46	0.05	0.03	0.01	0.43	0.02	0.50	0.32	10.57	3.52
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Eocene dataset for OPTiMAL

SITE	AGE	1302 GDGT0	1300 GDGT1	1298 GDGT2	1296 GDGT3	1292 CREN	1292' CREN'	Fr.1302	Fr.1300	Fr.1298	Fr.1296	Fr.1292	Fr.1292'	TEX (published)	OPTIMAL D_nearest	OPTIMAL SST	OPTIMAL StDev
929	49.84	1992415	13190	40102	22270	85480	14475	0.92	0.01	0.02	0.01	0.04	0.01	0.85	2.48	15.10	8.89
929	52.97	24658	2120	4993	1970	13689	1124	0.51	0.04	0.10	0.04	0.28	0.02	0.79	3.73	15.55	8.91
929	54.12	182070	32153	58059	11531	351952	49574	0.27	0.05	0.08	0.02	0.51	0.07	0.79	0.85	27.74	5.61
929	36.64	4780792	172648	149235	26302	1008010	173110	0.76	0.03	0.02	0.00	0.16	0.03	0.67	0.56	7.54	5.53
929	37.83	6313019	1624554	2668454	552932	14169613	2689438	0.23	0.06	0.10	0.02	0.51	0.10	0.78	0.66	25.69	5.58
Mid Waipara	42.00	6070000	1560000	1140000	417000	1200000	477000	0.28	0.07	0.05	0.02	0.55	0.02	0.57	0.47	20.86	4.03
Mid Waipara	45.78	1050000	390000	500000	205000	380000	359000	0.17	0.06	0.08	0.03	0.60	0.06	0.73	1.17	22.61	7.52
Mid Waipara	45.85	683000	268000	341000	140000	245000	213000	0.17	0.07	0.08	0.03	0.60	0.05	0.72	0.82	23.00	6.84
Mid Waipara	46.15	3910000	1270000	1470000	603000	1040000	812000	0.21	0.07	0.08	0.03	0.56	0.04	0.69	1.11	21.55	7.64
Mid Waipara	46.52	3670000	319000	327000	145000	199000	131000	0.56	0.05	0.05	0.02	0.30	0.02	0.65	0.98	10.15	7.28
Mid Waipara	46.64	5410000	1930000	230000	1070000	1510000	1200000	0.20	0.07	0.09	0.04	0.56	0.04	0.70	0.55	24.74	5.84
Mid Waipara	46.88	3920000	1340000	1470000	573000	1150000	846000	0.20	0.07	0.07	0.03	0.59	0.04	0.68	1.22	21.60	7.57
Mid Waipara	47.16	713000	266000	307000	131000	2390000	195000	0.18	0.07	0.08	0.03	0.60	0.05	0.70	1.07	22.30	7.41
Mid Waipara	47.53	13300000	4800000	5460000	2310000	3970000	3200000	0.19	0.07	0.08	0.03	0.58	0.05	0.70	0.89	22.35	7.07
Mid Waipara	47.89	13500000	6330000	7050000	2880000	49500000	4650000	0.16	0.08	0.08	0.03	0.59	0.06	0.70	0.89	22.18	7.13
Mid Waipara	48.26	3110000	1260000	1750000	740000	1280000	1530000	0.15	0.06	0.08	0.03	0.60	0.07	0.76	0.98	22.56	7.41
Mid Waipara	48.63	368000	173000	244000	109000	181000	225000	0.13	0.06	0.08	0.04	0.62	0.08	0.77	1.00	22.23	7.56
Mid Waipara	49.00	5660000	2170000	2850000	1230000	1970000	1990000	0.17	0.06	0.08	0.04	0.59	0.06	0.74	0.53	23.99	5.90
Mid Waipara	49.41	2520000	1080000	1510000	514000	1080000	1300000	0.14	0.06	0.09	0.03	0.61	0.07	0.75	0.72	24.41	6.15
Mid Waipara	49.86	1380000	564000	838000	347000	6230000	805000	0.14	0.06	0.08	0.03	0.61	0.08	0.78	1.24	22.08	7.90
Mid Waipara	50.31	176000	76000	111000	44900	84900	117000	0.13	0.06	0.08	0.03	0.62	0.09	0.78	1.51	22.31	7.92
Mid Waipara	50.77	4290000	1750000	2400000	918000	1770000	1900000	0.15	0.06	0.08	0.03	0.61	0.07	0.75	1.30	22.88	7.55
Mid Waipara	51.22	1750000	883000	1440000	645000	1180000	1540000	0.10	0.05	0.08	0.04	0.65	0.09	0.80	1.47	20.28	8.44
Mid Waipara	51.52	122000	49100	75700	33100	648000	95400	0.12	0.05	0.07	0.03	0.63	0.09	0.81	1.46	22.03	7.99
Mid Waipara	51.67	2320000	1080000	1780000	716000	1320000	1840000	0.11	0.05	0.09	0.03	0.63	0.09	0.80	1.50	21.20	8.27
Mid Waipara	53.18	0.108	0.048	0.084	0.030	0.635	0.096	0.11	0.05	0.08	0.03	0.63	0.10	0.82	0.94	24.59	6.68
Mid Waipara	54.83	0.231	0.065	0.072	0.021	0.563	0.049	0.23	0.07	0.07	0.02	0.56	0.05	0.68	0.35	26.95	4.20
Mid Waipara	55.23	0.223	0.065	0.071	0.024	0.573	0.045	0.22	0.06	0.07	0.02	0.57	0.04	0.68	0.82	24.60	5.54
Hampden Beach	41.20	7030000	1970000	1620000	814000	1450000	571000	0.27	0.07	0.06	0.03	0.55	0.02	0.60	1.77	18.08	8.58
Hampden Beach	41.21	6860000	1910000	1580000	747000	1430000	577000	0.26	0.07	0.06	0.03	0.55	0.02	0.60	1.57	18.06	8.32
Hampden Beach	41.22	2870000	775000	645000	305000	619000	280000	0.26	0.07	0.06	0.03	0.56	0.03	0.61	1.32	18.54	7.87
Hampden Beach	41.23	3100000	903000	762000	362000	694000	290000	0.25	0.07	0.06	0.03	0.56	0.02	0.61	1.70	18.48	8.38
Hampden Beach	41.24	2980000	887000	743000	379000	6840000	303000	0.25	0.07	0.06	0.03	0.56	0.02	0.62	1.56	18.92	8.44
Hampden Beach	41.25	2270000	645000	552000	263000	5010000	210000	0.25	0.07	0.06	0.03	0.56	0.02	0.61	1.71	18.43	8.39
Hampden Beach	41.28	4020000	1180000	1040000	490000	942000	415000	0.24	0.07	0.06	0.03	0.57	0.03	0.62	1.72	18.88	8.35
Hampden Beach	41.30	1030000	303000	263000	132000	255000	117000	0.23	0.07	0.06	0.03	0.58	0.03	0.63	1.74	19.13	8.35
Hampden Beach	41.31	4940000	1400000	1170000	602000	1040000	419000	0.26	0.07	0.06	0.03	0.55	0.02	0.61	1.55	18.57	8.50
Hampden Beach	41.32	2190000	579000	457000	231000	453000	200000	0.27	0.07	0.06	0.03	0.55	0.02	0.61	1.42	17.94	8.15
Hampden Beach	41.33	8950000	2560000	2150000	1010000	1920000	817000	0.26	0.07	0.06	0.03	0.55	0.02	0.61	1.66	18.28	8.38
Hampden Beach	41.35	1050000	289000	258000	130000	233000	105000	0.25	0.07	0.06	0.03	0.56	0.03	0.63	1.58	18.87	8.46
Hampden Beach	41.36	7060000	2050000	1750000	955000	1600000	708000	0.25	0.07	0.06	0.03	0.56	0.02	0.62	1.18	19.97	7.98
Hampden Beach	41.37	5530000	1490000	1320000	700000	1130000	487000	0.27	0.07	0.06	0.03	0.54	0.02	0.63	1.27	19.40	8.18
Hampden Beach	41.38	7329000	2030000	1710000	897000	1410000	676000	0.27	0.08	0.06	0.03	0.53	0.03	0.62	1.37	18.90	8.35
Hampden Beach	45.67	4060000	1260000	1080000	482000	9460000	438000	0.24	0.08	0.06	0.03	0.56	0.03	0.61	1.60	18.96	8.23
Hampden Beach	45.84	3850000	1280000	1230000	658000	9650000	496000	0.22	0.07	0.07	0.04	0.56	0.03	0.65	0.55	23.60	5.99
Hampden Beach	46.22	1283867	322491	535613	421640	6215649	382291	0.14	0.04	0.06	0.05	0.68	0.04	0.81	0.76	23.64	6.72
Hampden Beach	46.40	1175196	414128	450987	244098	4044745	310179	0.18	0.06	0.07	0.04	0.61	0.05	0.71	0.38	24.50	5.35
Hampden Beach	46.59	1288854	445187	479881	196107	4703904	334938	0.17	0.06	0.06	0.03	0.63	0.04	0.69	0.78	23.04	6.12
Hampden Beach	46.78	1191714	407108	519632	184301	4562637	416880	0.16	0.06	0.07	0.03	0.63	0.06	0.73	0.53	24.67	5.11
Hampden Beach	46.96	1125696	463469	468625	295960	5000014	471417	0.14	0.06	0.06	0.04	0.64	0.06	0.73	0.77	23.58	6.75
Hampden Beach	47.15	1711414	686173	701210	546647	9946854	664597	0.12	0.05	0.05	0.04	0.70	0.05	0.74	1.17	22.03	7.75
Hampden Beach	47.53	1352045	510448	803195	513114	7474245	473567	0.12	0.05	0.07	0.05	0.67	0.04	0.78	0.63	25.86	5.83
Hampden Beach	47.71	1392619	510526	615196	412472	6518477	575394	0.14	0.05	0.06	0.04	0.65	0.06	0.76	0.82	24.47	6.56
Hampden Beach	47.90	1407503	482860	580741	367693	5776392	490957	0.15	0.05	0.06	0.04	0.63	0.05	0.75	0.91	25.05	6.27
Hampden Beach	48.09	1424701	434910	507929	275620	5478357	470181	0.17	0.05	0.06	0.03	0.64	0.05	0.74	1.42	21.49	7.98
Hampden Beach	48.27	737271	297579	482906	234064	5429912	647766	0.09	0.04	0.06	0.03	0.69	0.08	0.82	1.18	22.09	7.56
Hampden Beach	48.46	1084672	374330	416591	387788	4536460	413287	0.15	0.05	0.06	0.05	0.63	0.06	0.76	0.95	22.94	7.39
Hampden Beach	48.83	1345295	453393	541320	416256	6471650	600933	0.14	0.05	0.06	0.04	0.66	0.06	0.77	0.76</		

Eocene dataset for OPTiMAL

SITE	AGE	1302 GDGT0	1300 GDGT1	1298 GDGT2	1296 GDGT3	1292 CREN	1292' CREN'	Fr.1302	Fr.1300	Fr.1298	Fr.1296	Fr.1292	Fr.1292'	TEX (published)	D_nearest	OPTIMAL SST	OPTIMAL StDev
Hampden Beach	54.74	366204	131034	150714	92879	1421454	149933	0.17	0.06	0.06	0.04	0.61	0.06	0.75	0.85	24.57	6.51
1172	37.01	16700000	28200000	1990000	686000	19500000	851000	0.39	0.07	0.05	0.02	0.46	0.02	0.56	0.32	18.24	4.32
1172	38.21	10500000	1770000	1300000	454000	12600000	650000	0.38	0.06	0.05	0.02	0.46	0.02	0.58	0.44	19.38	4.46
1172	38.54	3720000	695000	492000	164000	4430000	262000	0.38	0.07	0.05	0.02	0.45	0.03	0.57	0.49	19.98	4.58
1172	38.73	8360000	1620000	1150000	385000	999000	553000	0.38	0.07	0.05	0.02	0.45	0.03	0.56	0.62	20.22	4.80
1172	38.97	11100000	2170000	1670000	657000	13800000	807000	0.37	0.07	0.06	0.02	0.46	0.03	0.59	0.94	20.48	5.88
1172	39.20	14200000	3520000	2680000	923000	17400000	1470000	0.35	0.09	0.07	0.02	0.43	0.04	0.59	1.36	20.28	7.14
1172	39.48	9050000	1980000	1710000	633000	12500000	857000	0.34	0.07	0.06	0.02	0.47	0.03	0.62	1.02	20.13	6.73
1172	39.78	9750000	2090000	1990000	738000	13600000	1080000	0.33	0.07	0.07	0.03	0.46	0.04	0.65	1.20	19.37	7.51
1172	39.98	14700000	3300000	3500000	1120000	24300000	1980000	0.30	0.07	0.07	0.02	0.50	0.04	0.67	0.91	22.11	6.11
1172	40.03	9250000	2290000	2280000	669000	15700000	1410000	0.29	0.07	0.07	0.02	0.50	0.04	0.66	0.73	24.17	5.07
1172	40.24	18100000	3360000	2430000	774000	23700000	1350000	0.36	0.07	0.05	0.02	0.48	0.03	0.58	0.39	20.78	3.95
1172	40.41	72800000	17200000	14700000	5430000	100000000	7890000	0.33	0.08	0.07	0.02	0.46	0.04	0.62	1.23	19.45	7.54
1172	40.58	35400000	8210000	7280000	2260000	52200000	3900000	0.32	0.08	0.07	0.02	0.48	0.04	0.62	0.86	22.62	5.30
1172	40.75	50100000	10800000	8950000	3180000	66500000	4790000	0.35	0.07	0.06	0.02	0.46	0.03	0.61	1.02	21.14	6.12
1172	40.91	8180000	1860000	1580000	503000	11700000	875000	0.33	0.08	0.06	0.02	0.47	0.04	0.61	0.88	22.44	5.30
1172	41.47	32200000	7620000	7420000	2390000	49300000	4320000	0.31	0.07	0.07	0.02	0.48	0.04	0.65	1.02	21.75	6.47
1172	41.81	5890000	1400000	1290000	439000	8540000	676000	0.32	0.08	0.07	0.02	0.47	0.04	0.63	1.11	20.44	7.07
1172	42.31	38800000	8810000	7940000	2620000	56100000	4240000	0.33	0.07	0.07	0.02	0.47	0.04	0.63	0.95	21.70	5.99
1172	42.73	3930000	988000	994000	309000	6340000	542000	0.30	0.08	0.08	0.02	0.48	0.04	0.65	1.08	21.87	6.64
1172	43.07	4610000	1030000	904000	259000	6660000	518000	0.33	0.07	0.06	0.02	0.48	0.04	0.62	0.52	23.49	4.52
1172	43.35	34400000	6950000	5650000	1870000	46700000	3010000	0.35	0.07	0.06	0.02	0.47	0.03	0.60	0.76	21.94	4.91
1172	43.55	4940000	1200000	1160000	351000	7740000	650000	0.31	0.07	0.07	0.02	0.48	0.04	0.64	0.96	22.88	5.70
1172	43.88	6030000	1450000	1440000	467000	9640000	831000	0.30	0.07	0.07	0.02	0.49	0.04	0.65	1.02	21.68	6.56
1172	43.93	5970000	1450000	1280000	412000	8840000	650000	0.32	0.08	0.07	0.02	0.48	0.03	0.62	0.99	21.75	6.06
1172	44.03	3770000	896000	790000	242000	5390000	398000	0.33	0.08	0.07	0.02	0.47	0.03	0.61	0.91	22.36	5.63
1172	44.20	4430000	974000	801000	245000	6340000	419000	0.34	0.07	0.06	0.02	0.48	0.03	0.60	0.60	22.55	4.61
1172	44.34	19400000	4070000	3300000	1210000	2710000	1770000	0.34	0.07	0.06	0.02	0.48	0.03	0.61	0.91	21.13	5.65
1172	44.44	6410000	1270000	988000	348000	8170000	457000	0.36	0.07	0.06	0.02	0.46	0.03	0.59	0.98	21.12	5.29
1172	44.56	5510000	1260000	1110000	381000	7800000	569000	0.33	0.08	0.07	0.02	0.47	0.03	0.62	1.00	20.95	6.44
1172	44.66	2850000	688000	637000	201000	4270000	345000	0.32	0.08	0.07	0.02	0.47	0.04	0.63	1.00	22.03	6.12
1172	44.81	29600000	6760000	6300000	2180000	46400000	3320000	0.31	0.07	0.07	0.02	0.49	0.04	0.64	0.87	21.13	6.18
1172	44.87	45400000	1000000	836000	258000	6730000	440000	0.33	0.07	0.06	0.02	0.49	0.03	0.61	0.60	22.57	4.53
1172	44.95	1140000	255000	216000	69600	1630000	115000	0.33	0.07	0.06	0.02	0.48	0.03	0.61	0.89	22.27	5.26
1172	45.15	33100000	7900000	7260000	2010000	5120000	4190000	0.31	0.07	0.07	0.02	0.48	0.04	0.63	0.58	24.08	4.43
1172	45.28	10100000	2500000	2340000	547000	16400000	1420000	0.30	0.08	0.07	0.02	0.49	0.04	0.63	0.20	24.98	3.69
1172	45.44	9010000	2310000	2330000	569000	1550000	146000	0.29	0.07	0.07	0.02	0.50	0.05	0.65	0.34	25.94	3.88
1172	45.50	12900000	3140000	3230000	812000	2200000	205000	0.29	0.07	0.07	0.02	0.50	0.05	0.66	0.40	25.84	3.97
1172	45.52	5214510	1315890	1480820	376629	10362200	1045540	0.26	0.07	0.07	0.02	0.52	0.05	0.69	0.29	27.07	4.00
1172	45.56	9880000	2500000	2860000	823000	1930000	193000	0.26	0.07	0.08	0.02	0.52	0.05	0.69	0.68	25.15	5.31
1172	45.60	8461870	1989970	2064300	582459	15203900	1354530	0.29	0.07	0.07	0.02	0.51	0.05	0.67	0.53	25.19	4.35
1172	45.76	7388080	1724360	1672210	456184	13350600	1124530	0.29	0.07	0.07	0.02	0.52	0.04	0.65	0.47	24.99	3.88
1172	45.85	19000000	4680000	5430000	1620000	34200000	3550000	0.28	0.07	0.08	0.02	0.50	0.05	0.69	1.02	23.22	6.49
1172	46.08	5640000	1390000	1540000	434000	10400000	1010000	0.28	0.07	0.08	0.02	0.51	0.05	0.68	0.61	25.21	4.97
1172	46.19	8360000	2090000	2380000	714000	15000000	1490000	0.28	0.07	0.08	0.02	0.50	0.05	0.69	1.04	23.02	6.52
1172	46.42	9140000	2580000	3680000	1150000	22200000	2580000	0.22	0.06	0.09	0.03	0.54	0.06	0.74	1.09	22.91	7.19
1172	46.76	14700000	3590000	4300000	1440000	26200000	2740000	0.28	0.07	0.08	0.03	0.49	0.05	0.70	1.49	20.15	8.08
1172	47.04	3100000	919000	1230000	412000	7460000	824000	0.22	0.07	0.09	0.03	0.53	0.06	0.73	1.33	21.66	7.87
1172	47.34	7480000	1810000	2220000	705000	13500000	1400000	0.28	0.07	0.08	0.03	0.50	0.05	0.70	1.36	21.14	7.65
1172	47.38	3870000	1070000	1570000	483000	9300000	1100000	0.22	0.06	0.09	0.03	0.53	0.06	0.75	1.09	22.94	7.20
1172	47.57	5610000	1630000	2240000	737000	13300000	1560000	0.22	0.06	0.09	0.03	0.53	0.06	0.74	1.30	21.78	7.84
1172	47.60	20600000	5760000	7910000	2620000	46500000	5320000	0.23	0.06	0.09	0.03	0.52	0.06	0.73	1.40	21.30	8.02
1172	47.84	2780000	691000	943000	325000	5390000	621000	0.26	0.06	0.09	0.03	0.50	0.06	0.73	1.71	19.86	8.45
1172	47.92	2320000	688000	879000	304000	5260000	590000	0.23	0.07	0.09	0.03	0.52	0.06	0.72	1.52	20.88	8.17
1172	47.96	4390000	1100000	1370000	485000	7650000	851000	0.28	0.07	0.09	0.03	0.48	0.05	0.71	1.84	18.84	8.62
1172	48.07	5200000	1470000	2100000	756000	11600000	1370000	0.23	0.07	0.09	0.03	0.52	0.06	0.74	1.13	21.13	7.82
1172	48.11	11100000	3160000	4770000	1730000	26000000	3190000	0.22	0.06	0.10</td							

Eocene dataset for OPTiMAL

SITE	AGE	1302	1300	1298	1296	1292	1292'	Fr.1302	Fr.1300	Fr.1298	Fr.1296	Fr.1292	Fr.1292'	TEX	OPTIMAL sst	OPTIMAL StDev	
		GDGT0	GDGT1	GDGT2	GDGT3	CREN	CREN'							(published)	D_nearest		
1172	49.30	3240000	1090000	1740000	679000	9710000	1270000	0.18	0.06	0.10	0.04	0.55	0.07	0.77	0.79	23.18	6.87
1172	49.43	2470000	892000	1390000	566000	7370000	1160000	0.18	0.06	0.10	0.04	0.53	0.08	0.78	1.17	22.22	7.77
1172	49.65	6430000	1960000	2960000	1180000	15900000	2090000	0.21	0.06	0.10	0.04	0.52	0.07	0.76	0.79	22.96	6.88
1172	50.09	2060000	614000	1070000	418000	6500000	1010000	0.18	0.05	0.09	0.04	0.56	0.09	0.80	1.09	21.71	7.80
1172	50.16	5240000	1360000	2290000	1010000	11700000	1610000	0.23	0.06	0.10	0.04	0.50	0.07	0.78	1.21	21.69	7.98
1172	50.33	2190000	632000	1010000	376000	5970000	777000	0.20	0.06	0.09	0.03	0.54	0.07	0.77	1.03	22.12	7.55
1172	50.63	544000	175000	288000	119000	1480000	224000	0.19	0.06	0.10	0.04	0.52	0.08	0.78	1.26	22.26	7.83
1172	50.78	3870000	836000	1330000	601000	7540000	1020000	0.25	0.06	0.09	0.04	0.50	0.07	0.78	1.12	21.33	7.85
1172	51.41	4190000	1060000	1620000	753000	8560000	1160000	0.24	0.06	0.09	0.04	0.49	0.07	0.77	1.30	21.27	8.12
1172	52.74	1470000	487000	639000	279000	2960000	398000	0.24	0.08	0.10	0.04	0.47	0.06	0.73	1.60	19.72	8.51
1172	53.08	1520000	535000	865000	426000	4460000	631000	0.18	0.06	0.10	0.05	0.53	0.07	0.78	1.05	21.54	7.74
1172	53.19	342000	741000	1180000	537000	5860000	804000	0.04	0.08	0.12	0.06	0.62	0.08	0.77	1.90	17.20	8.82
1172	53.53	6190000	1790000	2450000	915000	14800000	1570000	0.22	0.06	0.09	0.03	0.53	0.06	0.73	1.15	21.43	7.79
1172	53.63	4880000	1540000	2540000	1170000	13800000	1710000	0.19	0.06	0.10	0.05	0.54	0.07	0.78	1.04	22.92	7.44
1172	53.99	2480000	758000	1080000	486000	6080000	704000	0.21	0.07	0.09	0.04	0.52	0.06	0.75	1.12	23.30	7.39
1172	54.06	2480000	759000	1030000	396000	5960000	627000	0.22	0.07	0.09	0.04	0.53	0.06	0.73	0.79	22.29	6.86
1172	54.17	2480000	660000	794000	257000	5750000	546000	0.24	0.06	0.08	0.02	0.55	0.05	0.71	0.92	23.96	6.19
1172	54.29	1110000	333000	425000	142000	287000	311000	0.21	0.06	0.08	0.03	0.55	0.06	0.73	1.00	23.21	6.83
1172	54.44	2320000	623000	692000	214000	3930000	432000	0.28	0.08	0.08	0.03	0.48	0.05	0.68	1.48	20.72	7.88
1172	54.63	3880000	862000	976000	271000	6930000	632000	0.29	0.06	0.07	0.02	0.51	0.05	0.69	0.60	25.12	4.70
1172	54.77	3730000	861000	816000	229000	6650000	496000	0.29	0.07	0.06	0.02	0.52	0.04	0.64	0.49	24.26	3.87
1172	54.87	1640000	414000	426000	122000	3180000	262000	0.27	0.07	0.07	0.02	0.53	0.04	0.66	0.45	25.36	4.24
1172	54.98	4070000	881000	801000	210000	6230000	447000	0.32	0.07	0.06	0.02	0.49	0.04	0.62	0.30	23.82	3.82
1172	55.10	3850000	969000	1020000	326000	7450000	672000	0.27	0.07	0.07	0.02	0.52	0.05	0.68	0.82	23.78	5.67
1172	55.30	6040000	1290000	1120000	344000	9210000	599000	0.32	0.07	0.06	0.02	0.50	0.03	0.62	0.58	22.70	4.37
1172	55.56	2030000	409000	359000	98500	3030000	208000	0.33	0.07	0.06	0.02	0.49	0.03	0.62	0.43	23.17	3.83
1172	55.68	4100000	837000	781000	203000	6320000	460000	0.32	0.07	0.06	0.02	0.50	0.04	0.63	0.40	23.84	3.78
1172	55.86	1780000	357000	337000	86200	2700000	192000	0.33	0.07	0.06	0.02	0.50	0.04	0.63	0.39	23.85	3.77
1172	56.01	5550000	1170000	1050000	260000	8570000	592000	0.32	0.07	0.06	0.02	0.50	0.03	0.62	0.25	23.38	3.60
1172	56.24	1580000	313000	320000	88800	2440000	207000	0.32	0.06	0.06	0.02	0.49	0.04	0.66	0.52	24.40	4.42
1172	56.37	1830000	358000	320000	87000	2650000	181000	0.34	0.07	0.06	0.02	0.49	0.03	0.62	0.47	23.26	3.89
1172	56.84	1180000	253000	216000	64400	2080000	143000	0.30	0.06	0.05	0.02	0.53	0.04	0.63	0.46	22.73	3.77
1172	55.29	0.00	0.09	0.09	0.03	0.73	0.05	0.00	0.09	0.09	0.03	0.73	0.05	0.65	2.02	16.26	8.83
1172	55.31	0.29	0.07	0.06	0.02	0.52	0.04	0.29	0.07	0.06	0.02	0.52	0.04	0.65	0.57	24.24	4.07
1172	55.33	0.00	0.09	0.09	0.03	0.73	0.05	0.00	0.09	0.09	0.03	0.73	0.05	0.65	2.12	16.25	8.85
1172	55.34	0.00	0.10	0.09	0.03	0.73	0.05	0.00	0.10	0.09	0.03	0.73	0.05	0.64	2.07	16.14	8.84
1172	55.35	0.00	0.09	0.09	0.03	0.73	0.06	0.00	0.09	0.09	0.03	0.73	0.06	0.65	2.09	16.26	8.85
1172	55.36	0.27	0.07	0.07	0.02	0.54	0.04	0.27	0.07	0.07	0.02	0.54	0.04	0.66	0.48	24.92	4.41
1172	55.38	0.29	0.07	0.06	0.02	0.52	0.04	0.29	0.07	0.06	0.02	0.52	0.04	0.64	0.64	23.71	4.22
1172	55.39	0.31	0.07	0.06	0.02	0.51	0.03	0.31	0.07	0.06	0.02	0.51	0.03	0.63	0.64	22.90	4.28
1172	55.41	0.27	0.06	0.07	0.02	0.53	0.04	0.27	0.06	0.07	0.02	0.53	0.04	0.67	0.67	24.00	5.04
1172	55.43	0.27	0.06	0.06	0.02	0.54	0.04	0.27	0.06	0.06	0.02	0.54	0.04	0.67	0.63	24.11	4.89
1172	55.45	0.27	0.06	0.07	0.02	0.53	0.05	0.27	0.06	0.07	0.02	0.53	0.05	0.68	0.70	24.02	5.24
1172	55.45	0.26	0.06	0.07	0.02	0.54	0.05	0.26	0.06	0.07	0.02	0.54	0.05	0.69	0.65	24.71	5.19
1172	55.47	0.23	0.06	0.07	0.02	0.55	0.06	0.23	0.06	0.07	0.02	0.55	0.06	0.73	0.96	23.69	6.47
1172	55.48	0.18	0.06	0.08	0.03	0.59	0.07	0.18	0.06	0.08	0.03	0.59	0.07	0.76	0.63	24.88	5.65
1172	55.49	0.18	0.06	0.07	0.03	0.59	0.07	0.18	0.06	0.07	0.03	0.59	0.07	0.76	0.74	24.35	6.11
1172	55.50	0.16	0.05	0.07	0.03	0.60	0.08	0.16	0.05	0.07	0.03	0.60	0.08	0.79	0.87	24.47	6.45
1172	55.51	0.11	0.04	0.07	0.03	0.65	0.09	0.11	0.04	0.07	0.03	0.65	0.09	0.82	1.06	23.61	7.13
1172	55.52	0.12	0.05	0.08	0.03	0.63	0.09	0.12	0.05	0.08	0.03	0.63	0.09	0.81	1.12	23.84	7.09
1172	55.53	0.15	0.05	0.07	0.03	0.61	0.09	0.15	0.05	0.07	0.03	0.61	0.09	0.80	0.94	24.43	6.69
1172	55.53	0.16	0.05	0.07	0.03	0.61	0.08	0.16	0.05	0.07	0.03	0.61	0.08	0.78	0.89	24.30	6.56
1172	55.53	0.62	0.02	0.03	0.01	0.28	0.04	0.62	0.02	0.03	0.01	0.28	0.04	0.78	1.31	10.15	7.93
1172	55.54	0.00	0.07	0.09	0.03	0.73	0.08	0.00	0.07	0.09	0.03	0.73	0.08	0.75	1.88	17.60	8.75
1172	55.55	0.33	0.05	0.06	0.02	0.49	0.06	0.33	0.05	0.06	0.02	0.49	0.06	0.75	1.27	20.69	7.32
1172	55.55	0.31	0.06	0.06	0.02	0.51	0.04	0.31	0.06	0.06	0.02	0.51	0.04	0.63	0.40	22.88	3.82
1172	55.56	0.30	0.06	0.06	0.02	0.53	0.04	0.30	0.06	0.06	0.02	0.53	0.04	0.66	0.61	23.92	4.26
1172	55.56	0.31	0.06	0.06	0.02	0.52	0.04	0.31	0.06	0.06	0.02	0.52	0.04	0.64	0.43	23.10	3.90
1172	55.57	0.29	0.06	0.06	0.02	0.52	0.04	0.29	0.06								

Eocene dataset for OPTiMAL

SITE	AGE	1302 GDT0	1300 GDT1	1298 GDT2	1296 GDT3	1292 CREN	1292' CREN'	Fr.1302	Fr.1300	Fr.1298	Fr.1296	Fr.1292	Fr.1292'	TEX (published)	OPTIMAL D_nearest	OPTIMAL SST	OPTIMAL StDev
1172	55.71	0.44	0.05	0.05	0.01	0.41	0.03	0.44	0.05	0.05	0.01	0.41	0.03	0.65	0.87	13.54	5.35
1172	55.72	0.29	0.06	0.06	0.02	0.53	0.04	0.29	0.06	0.06	0.02	0.53	0.04	0.65	0.58	24.07	3.97
1172	55.73	0.30	0.06	0.06	0.02	0.52	0.04	0.30	0.06	0.06	0.02	0.52	0.04	0.64	0.47	23.62	3.74
1172	55.76	0.31	0.06	0.06	0.02	0.52	0.04	0.31	0.06	0.06	0.02	0.52	0.04	0.63	0.47	23.48	3.75
1172	55.78	0.31	0.06	0.06	0.02	0.52	0.03	0.31	0.06	0.06	0.02	0.52	0.03	0.63	0.35	22.76	3.66
1172	55.81	0.30	0.06	0.06	0.02	0.53	0.04	0.30	0.06	0.06	0.02	0.53	0.04	0.64	0.49	23.55	3.77
1172	55.86	0.29	0.06	0.06	0.02	0.53	0.04	0.29	0.06	0.06	0.02	0.53	0.04	0.64	0.36	23.80	3.61
1172	55.91	0.30	0.06	0.06	0.02	0.53	0.04	0.30	0.06	0.06	0.02	0.53	0.04	0.63	0.33	22.86	3.60
1172	55.96	0.28	0.06	0.06	0.02	0.54	0.04	0.28	0.06	0.06	0.02	0.54	0.04	0.64	0.40	23.98	3.71
1172	56.01	0.31	0.06	0.06	0.01	0.51	0.03	0.31	0.06	0.06	0.01	0.51	0.03	0.63	0.21	22.98	3.55
1172	56.06	0.37	0.06	0.06	0.01	0.46	0.03	0.37	0.06	0.06	0.01	0.46	0.03	0.64	0.53	22.39	4.14
1172	56.11	0.24	0.06	0.07	0.02	0.55	0.05	0.24	0.06	0.07	0.02	0.55	0.05	0.69	0.27	27.65	3.75
1172	56.16	0.31	0.06	0.07	0.02	0.50	0.04	0.31	0.06	0.07	0.02	0.50	0.04	0.68	0.48	25.30	4.01
1172	56.24	0.30	0.06	0.06	0.02	0.52	0.04	0.30	0.06	0.06	0.02	0.52	0.04	0.67	0.62	24.46	4.21
1172	56.34	0.33	0.06	0.05	0.01	0.52	0.03	0.33	0.06	0.05	0.01	0.52	0.03	0.62	0.37	22.07	3.59
Tanzania	33.60	293300	92750	153600	85050	1581500	229000	0.12	0.04	0.06	0.03	0.65	0.09	0.83	1.69	19.57	8.61
Tanzania	39.00	327000	84000	105000	73000	1650000	324000	0.13	0.03	0.04	0.03	0.64	0.13	0.86	1.48	20.11	8.28
Tanzania	41.40	81000	15755	32300	12220	308000	55750	0.16	0.03	0.06	0.02	0.61	0.11	0.86	0.98	23.17	7.05
Tanzania	44.60	353000	119000	264000	87400	2700000	502000	0.09	0.03	0.07	0.02	0.67	0.12	0.88	0.92	24.22	6.49
Tanzania	46.30	22100	7980	13700	5050	182000	44800	0.08	0.03	0.05	0.02	0.66	0.16	0.89	1.45	20.05	8.29
Tanzania	46.60	0	2469809	330119	1311667	37900	10886696	0.00	0.16	0.02	0.09	0.02	0.71	0.84	13.29	15.54	8.91
Tanzania	53.00	0	426943	324386	208736	7960	793875	0.00	0.24	0.18	0.12	0.00	0.45	0.76	16.92	15.54	8.91
Hatchigbee Fm.	51.00	0	23207	30345	22276	407824	13472	0.00	0.05	0.06	0.04	0.82	0.03	0.74	1.71	18.72	8.69
Hatchigbee Fm.	51.00	0	30728	38437	26255	470024	19694	0.00	0.05	0.07	0.04	0.80	0.03	0.73	1.70	18.96	8.66
Hatchigbee Fm.	51.00	0	137457	173166	180355	2473728	103844	0.00	0.04	0.06	0.06	0.81	0.03	0.77	1.60	17.93	8.60
Hatchigbee Fm.	51.00	0	107248	144800	91399	2361537	105902	0.00	0.04	0.05	0.03	0.84	0.04	0.76	2.21	16.67	8.86
Hatchigbee Fm.	51.00	0	37895	39775	18491	676895	26369	0.00	0.05	0.05	0.02	0.85	0.03	0.69	1.63	17.61	8.49
Hatchigbee Fm.	51.00	0	100784	140873	68089	1701328	80133	0.00	0.05	0.07	0.03	0.81	0.04	0.74	2.08	17.10	8.82
ACEX	Post-Azolla	22000000	1080000	521000	182000	2030000	151000	0.50	0.02	0.01	0.00	0.46	0.00	0.44	0.10	5.10	3.38
ACEX	Post-Azolla	35400000	1850000	937000	312000	3220000	248000	0.50	0.03	0.01	0.00	0.45	0.00	0.45	0.08	5.83	3.38
ACEX	Post-Azolla	19800000	946000	477000	161000	1780000	131000	0.50	0.02	0.01	0.00	0.45	0.00	0.45	0.10	4.83	3.38
ACEX	Post-Azolla	28400000	1540000	740000	249000	2630000	204000	0.49	0.03	0.01	0.00	0.46	0.00	0.44	0.08	6.24	3.38
ACEX	Post-Azolla	30100000	1560000	773000	237000	2650000	201000	0.51	0.03	0.01	0.00	0.45	0.00	0.44	0.08	5.70	3.38
ACEX	Azolla	3670000	191000	99600	29900	347000	33500	0.49	0.03	0.01	0.00	0.46	0.00	0.46	0.06	6.02	3.39
ACEX	Azolla	36100000	2130000	1140000	350000	3780000	335000	0.46	0.03	0.01	0.00	0.49	0.00	0.46	0.15	8.73	3.40
ACEX	Azolla	4840000	280000	161000	45000	5010000	46300	0.47	0.03	0.02	0.00	0.48	0.00	0.47	0.16	8.65	3.41
ACEX	Azolla	8720000	515000	301000	85900	960000	80200	0.45	0.03	0.02	0.00	0.50	0.00	0.48	0.15	9.83	3.42
ACEX	Azolla	4030000	297000	154000	40600	447000	41900	0.45	0.03	0.02	0.00	0.49	0.00	0.44	0.19	12.71	3.40
ACEX	Azolla	3390000	199000	112000	31400	347000	26900	0.47	0.03	0.02	0.00	0.48	0.00	0.46	0.15	8.77	3.40
ACEX	Azolla	21800000	1470000	888000	249000	2490000	235000	0.44	0.03	0.02	0.01	0.50	0.00	0.48	0.13	11.88	3.44
ACEX	Azolla	11700000	866000	537000	139000	1470000	148000	0.42	0.03	0.02	0.00	0.52	0.01	0.49	0.21	14.43	3.46
ACEX	Azolla	17300000	1310000	796000	221000	2240000	221000	0.41	0.03	0.02	0.01	0.53	0.01	0.49	0.24	14.57	3.47
ACEX	Azolla	21400000	1410000	841000	238000	2450000	252000	0.44	0.03	0.02	0.00	0.50	0.01	0.49	0.12	11.58	3.43
ACEX	Azolla	4500000	245000	140000	38700	457000	46400	0.47	0.03	0.01	0.00	0.48	0.00	0.48	0.16	7.59	3.40
ACEX	Azolla	4680000	263000	128000	35100	4120000	40300	0.51	0.03	0.01	0.00	0.44	0.00	0.44	0.12	6.36	3.38
ACEX	Azolla	3580000	177000	89900	26900	308000	32100	0.51	0.03	0.01	0.00	0.44	0.00	0.46	0.13	4.93	3.39
ACEX	Azolla	57400000	2910000	1280000	454000	4970000	455000	0.51	0.03	0.01	0.00	0.44	0.00	0.43	0.11	4.99	3.37
ACEX	Azolla	4950000	257000	109000	34100	425000	33500	0.51	0.03	0.01	0.00	0.44	0.00	0.41	0.10	5.06	3.37
ACEX	Azolla	25600000	1260000	575000	205000	2360000	187000	0.50	0.02	0.01	0.00	0.46	0.00	0.43	0.10	4.99	3.37
ACEX	Azolla	59000000	2780000	1320000	4740	5000000	413000	0.52	0.02	0.01	0.00	0.44	0.00	0.38	0.39	-0.42	3.91
ACEX	Azolla	39400000	1920000	908000	302000	3400000	289000	0.51	0.02	0.01	0.00	0.44	0.00	0.44	0.12	4.79	3.38
ACEX	Azolla	21200000	977000	470000	157000	1900000	148000	0.51	0.02	0.01	0.00	0.45	0.00	0.44	0.12	4.31	3.38
ACEX	Azolla	3340000	170000	93800	28900	2710000	25900	0.52	0.03	0.01	0.00	0.43	0.00	0.47	0.10	5.86	3.41
ACEX	Azolla	49100000	2550000	1260000	406000	4420000	418000	0.50	0.03	0.01	0.00	0.45	0.00	0.45	0.05	5.58	3.38
ACEX	Azolla	46900000	2460000	1140000	375000	4150000	361000	0.51	0.03	0.01	0.00	0.45	0.00	0.43	0.06	5.56	3.38
ACEX	Azolla	31100000	1670000	77500	254000	2930000	259000	0.49	0.03	0.01	0.00	0.46	0.00	0.44	0.05	6.12	3.38
ACEX	Azolla	25400000	1200000	556000	188000	2280000	195000	0.50	0.02	0.01	0.00	0.45	0.00	0.44	0.11	4.43	3.38
ACEX	Azolla	5890000	305000	123000	41500	503000	44300	0.52	0.03	0.01	0.00	0.44	0.00	0.41	0.08	4.88	3.37
ACEX	Azolla	4070000	198000	80800	28500	3400000	27100	0.52	0.03	0.01	0.00	0.44	0.00	0.41	0.07	4.42	3.37
ACEX	Azolla	3320000	145000	67100	21400	2660000	23000	0.53	0.02	0.01	0.00	0.43	0.00	0.43	0.09	3.64	3.38
ACEX	Azolla	8760000	436000	211000													

Eocene dataset for OPTiMAL

SITE	AGE	1302 GDT0	1300 GDT1	1298 GDT2	1296 GDT3	1292 CREN	1292' CREN'	Fr.1302	Fr.1300	Fr.1298	Fr.1296	Fr.1292	Fr.1292'	TEX (published)	OPTIMAL D_nearest	OPTIMAL SST	OPTIMAL StDev
ACEX	Pre-Azolla/post-ETM2	944000	57500	27300	10100	835000	9920	0.50	0.03	0.01	0.01	0.44	0.01	0.45	0.15	6.59	3.38
ACEX	Pre-Azolla/post-ETM2	2310000	125000	65700	22600	2100000	23100	0.50	0.03	0.01	0.00	0.45	0.00	0.47	0.12	5.76	3.38
ACEX	Pre-Azolla/post-ETM2	817000	48900	23700	9560	704000	9280	0.51	0.03	0.01	0.01	0.44	0.01	0.47	0.25	5.74	3.40
ACEX	Pre-Azolla/post-ETM2	1830000	99200	45600	16700	1500000	11900	0.52	0.03	0.01	0.00	0.43	0.00	0.43	0.08	6.19	3.39
ACEX	Pre-Azolla/post-ETM2	4320000	203000	119000	47800	3500000	37300	0.53	0.02	0.01	0.01	0.43	0.00	0.50	0.15	4.02	3.46
ACEX	Pre-Azolla/post-ETM2	2190000	87100	49000	22400	1560000	14700	0.56	0.02	0.01	0.01	0.40	0.00	0.50	0.18	4.82	3.60
ACEX	ETM2	4010000	492000	403000	92300	3620000	125000	0.46	0.06	0.05	0.01	0.41	0.01	0.56	0.38	13.18	4.10
ACEX	ETM2	3420000	398000	315000	78700	2770000	94000	0.48	0.06	0.04	0.01	0.39	0.01	0.55	0.58	10.77	4.36
ACEX	ETM2	1400000	177000	156000	33300	1220000	46800	0.46	0.06	0.05	0.01	0.40	0.02	0.57	0.52	13.94	4.41
ACEX	ETM2	6980000	1010000	908000	181000	6770000	285000	0.43	0.06	0.06	0.01	0.42	0.02	0.58	0.43	16.70	4.22
ACEX	ETM2	2880000	393000	352000	72400	2570000	120000	0.45	0.06	0.06	0.01	0.40	0.02	0.58	0.58	15.13	4.48
ACEX	ETM2	1550000	211000	192000	40400	1350000	71100	0.45	0.06	0.06	0.01	0.40	0.02	0.59	0.65	14.62	4.73
ACEX	ETM2	739000	82100	71500	17400	707000	23200	0.45	0.05	0.04	0.01	0.43	0.01	0.58	0.43	12.83	4.13
ACEX	ETM2	3250000	295000	201000	63100	3510000	83600	0.44	0.04	0.03	0.01	0.47	0.01	0.54	0.40	11.11	3.65
ACEX	ETM2	1190000	178000	155000	30300	961000	51700	0.46	0.07	0.06	0.01	0.37	0.02	0.57	0.71	15.46	4.90
ACEX	ETM2	6000000	1070000	1080000	220000	5570000	353000	0.42	0.07	0.08	0.02	0.39	0.02	0.61	0.83	20.25	5.75
ACEX	ETM2	5210000	839000	851000	136000	5310000	263000	0.41	0.07	0.07	0.01	0.42	0.02	0.60	0.51	20.59	4.28
ACEX	ETM2	8180000	1470000	1500000	219000	8910000	482000	0.39	0.07	0.07	0.01	0.43	0.02	0.60	0.51	22.19	4.05
ACEX	ETM2	765000	154000	206000	32700	1030000	83100	0.34	0.07	0.09	0.01	0.45	0.04	0.68	0.57	27.57	4.33
ACEX	ETM2	7270000	1520000	2070000	258000	9900000	661000	0.34	0.07	0.10	0.01	0.46	0.03	0.66	0.51	26.45	4.26
ACEX	ETM2	4430000	667000	534000	128000	5260000	201000	0.39	0.06	0.05	0.01	0.47	0.02	0.56	0.31	18.35	3.66
ACEX	ETM2	6360000	697000	478000	185000	6670000	148000	0.44	0.05	0.03	0.01	0.46	0.01	0.54	0.35	10.85	3.94
ACEX	ETM2	3420000	369000	235000	87800	3530000	77300	0.44	0.05	0.03	0.01	0.46	0.01	0.52	0.20	10.11	3.73
ACEX	ETM2	4020000	547000	428000	141000	4540000	129000	0.41	0.06	0.04	0.01	0.46	0.01	0.56	0.47	15.94	4.18
ACEX	ETM2	4070000	767000	993000	140000	6150000	406000	0.32	0.06	0.08	0.01	0.49	0.03	0.67	0.47	22.90	3.80
ACEX	ETM2	469000	94700	127000	17500	665000	50400	0.33	0.07	0.09	0.01	0.47	0.04	0.67	0.50	26.02	4.01
ACEX	ETM2	3060000	736000	862000	92100	4120000	286000	0.33	0.08	0.09	0.01	0.45	0.03	0.63	0.25	26.80	3.92
ACEX	ETM2	4590000	790000	834000	111000	5400000	271000	0.38	0.07	0.07	0.01	0.45	0.02	0.61	0.29	21.76	3.85
ACEX	ETM2	7170000	1250000	1280000	169000	7930000	356000	0.39	0.07	0.07	0.01	0.44	0.02	0.59	0.36	21.90	3.95
ACEX	ETM2	1560000	253000	240000	27200	1430000	76500	0.43	0.07	0.07	0.01	0.40	0.02	0.58	0.44	22.29	3.97
ACEX	between PETM and ETM	695000	104000	77900	11700	558000	25800	0.47	0.07	0.05	0.01	0.38	0.02	0.53	0.22	18.87	3.58
ACEX	between PETM and ETM	2800000	487000	485000	51300	3280000	195000	0.38	0.07	0.07	0.01	0.45	0.03	0.60	0.34	22.03	3.71
ACEX	between PETM and ETM	6350000	1070000	1020000	99800	6860000	321000	0.40	0.07	0.06	0.01	0.44	0.02	0.57	0.43	21.24	3.79
ACEX	between PETM and ETM	4800000	685000	567000	75200	4340000	192000	0.45	0.06	0.05	0.01	0.41	0.02	0.55	0.31	19.01	3.68
ACEX	between PETM and ETM	4870000	796000	781000	74400	5200000	238000	0.41	0.07	0.07	0.01	0.43	0.02	0.58	0.46	21.37	3.88
ACEX	between PETM and ETM	1340000	244000	278000	28400	1460000	86700	0.39	0.07	0.08	0.01	0.42	0.03	0.62	0.54	24.20	4.26
ACEX	between PETM and ETM	6470000	935000	862000	87200	6960000	260000	0.42	0.06	0.06	0.01	0.45	0.02	0.56	0.36	19.74	3.73
ACEX	between PETM and ETM	1430000	242000	241000	28500	1340000	71600	0.43	0.07	0.07	0.01	0.40	0.02	0.58	0.46	23.00	4.14
ACEX	between PETM and ETM	14100000	2190000	2130000	230000	14200000	641000	0.42	0.07	0.06	0.01	0.42	0.02	0.58	0.45	21.45	3.92
ACEX	between PETM and ETM	7140000	1170000	1110000	116000	6880000	316000	0.43	0.07	0.07	0.01	0.41	0.02	0.57	0.52	21.71	3.93
ACEX	between PETM and ETM	2070000	313000	287000	38400	2420000	101000	0.40	0.06	0.05	0.01	0.46	0.02	0.58	0.36	20.22	3.64
ACEX	between PETM and ETM	5960000	998000	1110000	116000	6290000	324000	0.40	0.07	0.08	0.01	0.43	0.02	0.61	0.52	23.34	4.24
ACEX	between PETM and ETM	900000	115000	77300	16600	780000	27800	0.47	0.06	0.04	0.01	0.41	0.01	0.51	0.38	13.87	3.62
ACEX	between PETM and ETM	9400000	1360000	1230000	155000	9160000	357000	0.43	0.06	0.06	0.01	0.42	0.02	0.56	0.38	20.16	3.80
ACEX	between PETM and ETM	1260000	195000	176000	27600	1180000	50000	0.44	0.07	0.06	0.01	0.41	0.02	0.57	0.38	19.48	3.99
ACEX	between PETM and ETM	1250000	224000	248000	31400	1370000	75300	0.39	0.07	0.08	0.01	0.43	0.02	0.61	0.49	23.24	4.19
ACEX	between PETM and ETM	6990000	1030000	1020000	105000	6930000	262000	0.43	0.06	0.06	0.01	0.42	0.02	0.57	0.43	21.19	4.00
ACEX	between PETM and ETM	531000	77700	61800	10900	476000	19100	0.45	0.07	0.05	0.01	0.40	0.02	0.54	0.25	17.26	3.77
ACEX	between PETM and ETM	1450000	186000	152000	37100	1180000	43600	0.48	0.06	0.05	0.01	0.39	0.01	0.56	0.74	10.69	4.72
ACEX	between PETM and ETM	576000	86400	73300	13900	505000	23400	0.45	0.07	0.06	0.01	0.40	0.02	0.56	0.51	16.43	4.27
ACEX	between PETM and ETM	1450000	231000	225000	32500	1350000	58800	0.43	0.07	0.07	0.01	0.40	0.02	0.58	0.52	20.92	4.24
ACEX	between PETM and ETM	2320000	363000	374000	49200	2460000	97700	0.41	0.06	0.07	0.01	0.43	0.02	0.59	0.45	21.42	4.04
ACEX	between PETM and ETM	803000	118000	111000	16300	800000	36100	0.43	0.06	0.06	0.01	0.42	0.02	0.58	0.42	20.12	3.89
ACEX	between PETM and ETM	731000	102000	83100	12700	672000	25400	0.45	0.06	0.05	0.01	0.41	0.02	0.54	0.36	18.37	3.69
ACEX	between PETM and ETM	1360000	175000	122000	26400	1170000	35600	0.47	0.06	0.04	0.01	0.40	0.01	0.51	0.37	13.99	3.71
ACEX	between PETM and ETM	178000	25800	22900	9030	175000	5270	0.43	0.06	0.06	0.02	0.42	0.01	0.59	0.29	17.85	4.75
ACEX	between PETM and ETM	282000	38000	29200	17000	236000	5570	0.46	0.06	0.05	0.03	0.39	0.01	0.58	1.33	17.39	8.28
ACEX	between PETM and ETM	136000	21500	18400	8810	127000	3370	0.43	0.07	0.06	0.03	0.40	0.01	0.59	1.29	18.00	8.18
ACEX	between PETM and ETM	667000	79800	68800	20300	636000	16300	0.45	0.05	0.05	0.01	0.43	0.01	0.57	0.71	10.71</	

Eocene dataset for OPTiMAL

SITE	AGE	1302	1300	1298	1296	1292	1292'	Fr.1302	Fr.1300	Fr.1298	Fr.1296	Fr.1292	Fr.1292'	TEX	OPTIMAL	OPTIMAL	
		GDGT0	GDGT1	GDGT2	GDGT3	CREN	CREN'							(published)	D_nearest	SST	StDev
ACEX	PETM	304000	54000	58100	17000	369000	13000	0.37	0.07	0.07	0.02	0.45	0.02	0.62	0.85	21.28	5.55
ACEX	PETM	400000	72700	64900	21700	506000	14800	0.37	0.07	0.06	0.02	0.47	0.01	0.58	0.93	20.49	5.25
ACEX	PETM	441000	86700	85800	28200	709000	21600	0.32	0.06	0.06	0.02	0.52	0.02	0.61	0.71	20.39	4.96
ACEX	PETM	306000	45000	42500	17600	457000	11700	0.35	0.05	0.05	0.02	0.52	0.01	0.61	0.96	18.03	5.80
ACEX	PETM	241000	42600	35500	12800	410000	10600	0.32	0.06	0.05	0.02	0.54	0.01	0.58	0.25	19.33	4.00
ACEX	PETM	249000	46300	45900	17300	503000	16000	0.28	0.05	0.05	0.02	0.57	0.02	0.63	0.59	19.67	4.76
ACEX	PETM	646000	131000	126000	49200	1340000	41500	0.28	0.06	0.05	0.02	0.57	0.02	0.62	0.52	19.75	4.81
ACEX	PETM	214000	37300	37000	13200	400000	11900	0.30	0.05	0.05	0.02	0.56	0.02	0.62	0.49	19.50	4.56
ACEX	PETM	348000	62200	64200	23500	685000	23600	0.29	0.05	0.05	0.02	0.57	0.02	0.64	0.61	19.80	4.88
ACEX	PETM	151000	30100	27600	11200	290000	8330	0.29	0.06	0.05	0.02	0.56	0.02	0.61	0.43	18.99	4.89
ACEX	PETM	204000	36000	35400	13900	395000	10900	0.29	0.05	0.05	0.02	0.57	0.02	0.63	0.67	18.81	5.01
ACEX	PETM	266000	41400	41500	16200	463000	14200	0.32	0.05	0.05	0.02	0.55	0.02	0.63	0.73	18.64	5.33
ACEX	PETM	447000	80000	78700	28800	845000	25000	0.30	0.05	0.05	0.02	0.56	0.02	0.62	0.56	19.41	4.66
913	35.86	44576470	8328164	9417640	907768	49985696	4211650	0.38	0.07	0.08	0.01	0.43	0.04	0.64	0.52	24.73	4.14
913	36.27	6890376	1140417	1104032	11412	6922606	443907	0.41	0.07	0.07	0.01	0.42	0.03	0.59	0.50	22.18	3.90
913	36.53	53091672	9368211	9241054	958133	54796136	4081748	0.40	0.07	0.07	0.01	0.42	0.03	0.60	0.49	23.17	3.92
913	36.60	100744648	17147320	18184278	1731557	111029776	6905992	0.39	0.07	0.07	0.01	0.43	0.03	0.61	0.48	22.98	3.98
913	37.21	56034512	8776230	8507421	831286	46583224	3493627	0.45	0.07	0.07	0.01	0.37	0.03	0.59	0.47	22.88	4.21
913	37.47	168004	29740	25849	2415	193216	13431	0.39	0.07	0.06	0.01	0.45	0.03	0.58	0.35	20.73	3.58
913	37.88	45748195	7174086	6217027	844961	50059292	2998621	0.40	0.06	0.05	0.01	0.44	0.03	0.58	0.37	20.06	3.61
913	37.99	22726800	3902315	3296297	335639	16642844	1200340	0.47	0.08	0.07	0.01	0.35	0.02	0.55	0.38	22.78	4.07
913	38.16	32221629	5530647	4261322	440398	34149808	2183935	0.41	0.07	0.05	0.01	0.43	0.03	0.55	0.32	18.29	3.54
913	38.28	9584836	1526568	1109356	91793	5410909	380441	0.53	0.08	0.06	0.01	0.30	0.02	0.51	0.68	15.87	4.49
913	38.60	22452614	4463983	3748336	367957	19762438	1745071	0.43	0.08	0.07	0.01	0.38	0.03	0.57	0.39	22.43	4.01
913	39.63	387530	46022	31462	3432	163385	10952	0.60	0.07	0.05	0.01	0.25	0.02	0.50	0.56	11.75	4.39
913	39.69	2921030	227384	224845	18594	475567	43394	0.75	0.06	0.06	0.00	0.12	0.01	0.56	1.17	11.38	7.21
913	40.01	21787654	2966410	2426934	309836	17309324	1292353	0.47	0.06	0.05	0.01	0.38	0.03	0.58	0.33	18.55	3.85
913	40.13	84060898	14490079	13780120	1359260	82842848	6537485	0.41	0.07	0.07	0.01	0.41	0.03	0.60	0.52	22.66	3.95
913	40.30	170353	54768	17578	1407	58378	4546	0.55	0.18	0.06	0.00	0.19	0.01	0.30	2.79	15.47	8.90
913	41.40	75817696	15240714	17597154	1850374	111595012	10218329	0.33	0.07	0.08	0.01	0.48	0.04	0.66	0.31	22.28	3.65
913	41.79	49396877	9953333	11984820	1435266	7504410	5982444	0.32	0.06	0.08	0.01	0.49	0.04	0.66	0.33	22.04	3.60
913	42.31	35586708	5783732	5336602	661690	44389373	3353989	0.37	0.06	0.06	0.01	0.47	0.04	0.62	0.25	20.81	3.61
913	43.55	41558577	10489195	14217098	1625232	84779494	7534865	0.26	0.07	0.09	0.01	0.53	0.05	0.69	0.29	25.24	3.50
913	43.98	16903132	3050618	2814344	471878	25448972	1766424	0.34	0.06	0.06	0.01	0.50	0.04	0.62	0.19	19.87	3.46
913	44.66	574026	125370	136948	15873	830854	74652	0.33	0.07	0.08	0.01	0.47	0.04	0.64	0.29	23.40	3.53
South Dover Bridge	41.45	631090347	250934590	259894705	143331291	1830058006	133757639	0.19	0.08	0.08	0.04	0.56	0.04	0.68	1.10	23.35	7.49
South Dover Bridge	41.77	93582437	32063068	32378905	15980422	255918611	19358572	0.21	0.07	0.07	0.04	0.57	0.04	0.68	0.56	23.14	5.97
South Dover Bridge	41.99	81722801	318757578	323986559	189013738	234544767	189498983	0.19	0.08	0.08	0.05	0.56	0.05	0.69	1.11	23.12	7.45
South Dover Bridge	42.20	1104411664	343861929	397893290	216979426	2375373968	230584690	0.24	0.07	0.09	0.05	0.51	0.05	0.71	1.41	20.72	8.20
South Dover Bridge	42.44	688031310	249975718	271870744	156165695	1741241491	161455372	0.21	0.08	0.08	0.05	0.53	0.05	0.70	1.12	21.51	7.72
South Dover Bridge	42.71	447175311	203630240	264697153	140570131	217429972	192868995	0.15	0.07	0.09	0.05	0.58	0.07	0.75	0.78	24.05	6.53
South Dover Bridge	43.61	368063515	158615858	198376222	112527942	1393543898	144347473	0.15	0.07	0.08	0.05	0.59	0.06	0.74	0.75	24.70	6.28
South Dover Bridge	44.62	618578980	268354811	325996667	176951487	2162293435	233883560	0.16	0.07	0.09	0.05	0.57	0.06	0.73	0.90	23.86	6.76
South Dover Bridge	45.83	297286057	126033144	150200353	75941378	1134979963	82103959	0.16	0.07	0.08	0.04	0.61	0.04	0.71	0.74	25.74	5.92
South Dover Bridge	46.99	327765781	12097531	153932798	9180850	1205903151	127282447	0.16	0.06	0.08	0.05	0.59	0.06	0.76	0.70	25.11	6.27
South Dover Bridge	49.07	332019599	166669336	256268595	139380682	1631876927	192173277	0.12	0.06	0.09	0.05	0.60	0.07	0.78	0.82	24.18	6.74
South Dover Bridge	50.31	99869098	50827785	76777727	39564776	510268312	67989856	0.12	0.06	0.09	0.05	0.60	0.08	0.78	1.02	23.25	7.29
South Dover Bridge	50.74	1476637	651633	852462	553640	9687308	1206009	0.10	0.05	0.06	0.04	0.67	0.08	0.80	1.49	20.12	8.40
South Dover Bridge	51.47	558542193	281012427	481170584	249995533	267401237	385701576	0.12	0.06	0.10	0.05	0.58	0.08	0.80	1.20	21.30	7.96
South Dover Bridge	52.26	397170268	211527521	355766291	175441158	2237162034	310332203	0.11	0.06	0.10	0.05	0.61	0.08	0.80	1.05	22.62	7.58
South Dover Bridge	54.03	443190011	174272223	248151800	120419431	1541093835	20237195	0.16	0.06	0.09	0.04	0.56	0.07	0.77	0.96	23.59	7.28
South Dover Bridge	54.65	244464780	111992190	178504295	85183888	1161543034	152645880	0.13	0.06	0.09	0.04	0.60	0.08	0.79	0.99	23.07	7.43
Seymour Island	37.40	7314084	496162	241649	93928	7901663	146629	0.45	0.03	0.01	0.01	0.49	0.01	0.49	0.19	8.51	3.43
Seymour Island	37.50	5530358	378985	143855	71918	6245573	74424	0.44	0.03	0.01	0.01	0.50	0.01	0.43	0.20	9.03	3.42
Seymour Island	38.40	2202550	128925	70439	28631	1904370	29122	0.50	0.03	0.02	0.01	0.44	0.01	0.50	0.28	4.51	3.43
Seymour Island	43.50	2428920	229762	175734	73174	1640330	71234	0.53	0.05	0.04	0.02	0.36	0.02	0.58	0.73	2.30	5.08
Wilson Lake	PETM	0.18	0.05	0.													

Eocene dataset for OPTiMAL

SITE	AGE	1302 GDGT0	1300 GDGT1	1298 GDGT2	1296 GDGT3	1292 CREN	1292' CREN'	Fr.1302	Fr.1300	Fr.1298	Fr.1296	Fr.1292	Fr.1292'	TEX (published)	D_nearest	OPTIMAL SST	OPTIMAL StDev
Wilson Lake	PETM	0.19	0.06	0.09	0.03	0.55	0.08	0.19	0.06	0.09	0.03	0.55	0.08	0.78	1.40	22.60	7.82
Wilson Lake	PETM	0.20	0.08	0.08	0.04	0.54	0.06	0.20	0.08	0.08	0.04	0.54	0.06	0.70	0.67	23.67	6.44
Wilson Lake	PETM	0.28	0.08	0.07	0.03	0.49	0.04	0.28	0.08	0.07	0.03	0.49	0.04	0.66	1.71	18.29	8.65
Wilson Lake	PETM	0.18	0.08	0.09	0.05	0.55	0.07	0.18	0.08	0.09	0.05	0.55	0.07	0.72	1.24	22.35	7.67
Wilson Lake	PETM	0.18	0.08	0.09	0.05	0.54	0.07	0.18	0.08	0.09	0.05	0.54	0.07	0.73	1.25	21.89	7.80
Wilson Lake	PETM	0.21	0.08	0.09	0.04	0.53	0.05	0.21	0.08	0.09	0.04	0.53	0.05	0.70	1.33	22.19	7.91
1218	33.07	49454	9302	7179	1405	60702	3285	0.38	0.07	0.05	0.01	0.46	0.03	0.56	0.26	19.14	3.50
1218	33.26	31907	6171	4772	847	41242	2289	0.37	0.07	0.05	0.01	0.47	0.03	0.56	0.22	19.22	3.42
998	33.229	47654	3212	5289	580	14660	2750	0.64	0.04	0.07	0.01	0.20	0.04	0.73	1.38	17.13	7.89
998	33.322	338527	18728	29979	3056	110680	17159	0.65	0.04	0.06	0.01	0.21	0.03	0.73	1.11	12.72	7.07
998	33.369	213019	16778	29858	2971	105871	21685	0.55	0.04	0.08	0.01	0.27	0.06	0.76	1.40	17.34	7.61
998	33.463	31199	3129	3872	700	13353	4880	0.55	0.05	0.07	0.01	0.23	0.09	0.75	1.65	15.35	8.37
998	33.510	415782	39363	67061	7441	198170	36185	0.54	0.05	0.09	0.01	0.26	0.05	0.74	1.39	20.54	7.92
998	33.560	353098	32353	66179	6817	226600	43127	0.48	0.04	0.09	0.01	0.31	0.06	0.78	1.54	18.83	7.95
998	33.611	306680	26715	53172	5865	183613	35222	0.50	0.04	0.09	0.01	0.30	0.06	0.78	1.52	17.95	7.94
998	33.669	80860	6164	13320	1056	34661	6622	0.57	0.04	0.09	0.01	0.24	0.05	0.77	1.65	18.72	8.21
998	33.726	30577	4652	2614	0	21599	1254	0.50	0.08	0.04	0.00	0.36	0.02	0.45	0.51	6.95	4.19
998	33.783	45479	5783	3777	0	32377	1929	0.51	0.06	0.04	0.00	0.36	0.02	0.50	0.41	7.89	4.04
998	33.886	283064	31190	41763	8536	141513	25343	0.53	0.06	0.08	0.02	0.27	0.05	0.71	1.30	11.91	7.94
998	33.972	24963	3237	2208	200	16464	827	0.52	0.07	0.05	0.00	0.34	0.02	0.50	0.30	11.15	3.68
998	34.147	42568	5626	3725	723	28941	1370	0.51	0.07	0.04	0.01	0.35	0.02	0.51	0.39	17.15	3.85
998	34.235	49602	6467	5441	400	32704	2099	0.51	0.07	0.06	0.00	0.34	0.02	0.55	0.47	14.46	4.12
998	34.411	18719	1425	2264	0	7910	1219	0.59	0.05	0.07	0.00	0.25	0.04	0.71	1.14	9.94	7.36
803	28.987	412013	56372	42951	3996	98633	15077	0.65	0.09	0.07	0.01	0.16	0.02	0.52	0.93	11.80	6.35
803	30.416	476338	64884	83359	11419	436176	73181	0.42	0.06	0.07	0.01	0.38	0.06	0.72	0.94	22.54	5.96
803	33.241	29592	7076	7784	580	22786	3736	0.41	0.10	0.11	0.01	0.32	0.05	0.63	1.14	23.98	6.96
803	33.321	380168	145607	113055	12702	488966	64354	0.32	0.12	0.09	0.01	0.41	0.05	0.57	1.19	19.41	7.28
803	33.355	34489	12575	7360	860	25325	2711	0.41	0.15	0.09	0.01	0.30	0.03	0.47	2.32	15.49	8.85
803	33.399	44018	18782	12410	990	32940	4741	0.39	0.16	0.11	0.01	0.29	0.04	0.49	2.79	15.43	8.90
803	33.600	354394	93071	99677	7717	312905	41031	0.39	0.10	0.11	0.01	0.34	0.05	0.61	1.05	23.95	6.73
803	33.639	29288	4691	3739	618	20812	1665	0.48	0.08	0.06	0.01	0.34	0.03	0.56	0.61	19.85	4.55
803	33.657	122414	29866	30808	2616	94218	13382	0.42	0.10	0.11	0.01	0.32	0.05	0.61	1.17	23.46	6.85
803	73187	16781	21786	2000	58675	9407	0.40	0.09	0.12	0.01	0.32	0.05	0.66	1.18	25.00	7.25	
803	107996	19762	22052	2319	84829	11009	0.44	0.08	0.09	0.01	0.34	0.04	0.64	0.75	26.19	5.63	
803	211755	48250	65701	6450	181373	35687	0.39	0.09	0.12	0.01	0.33	0.06	0.69	1.17	25.53	7.11	
803	245491	70511	105569	9823	309589	62635	0.31	0.09	0.13	0.01	0.39	0.08	0.72	1.15	25.12	6.71	
803	499539	118341	170631	16215	528077	95625	0.35	0.08	0.12	0.01	0.37	0.07	0.70	0.95	26.87	6.32	
803	402542	107438	157601	15594	503329	80177	0.32	0.08	0.12	0.01	0.40	0.06	0.70	0.98	27.22	5.96	
628	32.118	274282	46758	76973	29566	403070	52021	0.31	0.05	0.09	0.03	0.46	0.06	0.77	1.76	17.74	8.74
628	32.226	101251	14688	11979	1762	76007	5552	0.48	0.07	0.06	0.01	0.36	0.03	0.57	0.37	20.39	3.91
628	32.284	120713	27377	64538	8514	206080	41183	0.26	0.06	0.14	0.02	0.44	0.09	0.81	1.20	23.51	7.28
628	32.703	309769	44728	55885	7965	267192	33686	0.43	0.06	0.08	0.01	0.37	0.05	0.69	0.92	22.41	5.82
628	32.757	54781	9394	19258	2142	56056	10363	0.36	0.06	0.13	0.01	0.37	0.07	0.77	1.31	25.00	7.41
628	32.807	73706	12077	17571	2070	67898	9011	0.40	0.07	0.10	0.01	0.37	0.05	0.70	1.00	25.19	6.19
628	32.861	75501	11513	9587	1282	66007	3983	0.45	0.07	0.06	0.01	0.39	0.02	0.56	0.29	19.99	3.71
628	32.905	241995	40066	42415	14599	249118	22447	0.40	0.07	0.07	0.02	0.41	0.04	0.66	0.77	20.44	6.48
628	33.392	73193	13378	31635	3656	104341	19616	0.30	0.05	0.13	0.01	0.42	0.08	0.80	1.20	25.96	7.12
628	33.446	131321	24138	55126	8210	202149	37084	0.29	0.05	0.12	0.02	0.44	0.08	0.81	1.14	24.79	7.05
628	33.500	235860	39449	79728	10553	306535	51676	0.33	0.05	0.11	0.01	0.42	0.07	0.78	1.02	27.45	6.39
628	33.554	207632	38418	99025	13433	390490	74224	0.25	0.05	0.12	0.02	0.47	0.09	0.83	1.15	25.19	7.04
628	33.609	130100	21365	23532	3859	134179	13060	0.40	0.07	0.07	0.01	0.41	0.04	0.65	0.64	22.75	4.72
628	33.645	97250	15864	38084	5860	149686	28336	0.29	0.05	0.11	0.02	0.45	0.08	0.82	1.21	24.75	7.22
628	33923	6472	14699	2209	53938	10263	0.28	0.05	0.12	0.02	0.44	0.08	0.81	1.11	24.56	7.05	
628	124219	20750	52454	9075	225531	39997	0.26	0.04	0.11	0.02	0.48	0.08	0.83	1.14	23.16	7.22	

Cretaceous dataset for OPTiMAL

SITE	AGE (GTS 2012)	1302 GDGT0	1300 GDGT1	1298 GDGT2	1296 GDGT3	1292 CREN ^a	1292' CREN'	Fr.1302	Fr.1300	Fr.1298	Fr.1296	Fr.1292	Fr.1292'	TEX86 (calculated)	OPTIMAL SST	OPTIMAL StDev	
ODP 1049	112.57	446000	118000	726000	95300	5011000	786000	0.062080	0.016425	0.101054	0.013265	0.697493	0.109684	0.93	1.48	21.39	8.14
ODP 1049	112.57	161000	72800	277000	20000	193000	399000	0.056298	0.025456	0.096860	0.006993	0.674872	0.139520	0.91	2.11	16.87	8.80
DSDP 603	131.90	165787	100790	303922	108330	2706610	521683	0.042432	0.025795	0.077787	0.027726	0.692738	0.133521	0.90	1.05	22.30	7.39
DSDP 603	132.20	184312	105467	285168	98675	2396660	476112	0.051972	0.029739	0.080411	0.027824	0.675802	0.134252	0.89	0.91	23.28	7.02
DSDP 603	132.46	144025	92422	297226	130920	2627850	513216	0.037845	0.024285	0.078101	0.034401	0.690511	0.134856	0.91	2.01	17.18	8.81
DSDP 603	132.53	111171	68499	200851	83902	2014230	398922	0.038634	0.023804	0.069799	0.029157	0.699975	0.138631	0.91	1.33	20.20	8.14
DSDP 603	133.03	312378	172041	483747	216011	5564390	1086560	0.038969	0.021958	0.061741	0.027570	0.710185	0.138678	0.91	1.34	20.20	8.13
DSDP 603	133.03	48072	28614	77531	32759	909294	158836	0.038301	0.022798	0.061772	0.026101	0.724476	0.126552	0.90	1.25	21.07	7.78
DSDP 603	133.16	126022	80304	247989	121993	2771460	571954	0.032151	0.020487	0.063267	0.031123	0.707055	0.145917	0.92	1.73	17.99	8.67
DSDP 603	133.42	35479	21482	62823	31801	677610	132721	0.036884	0.022333	0.065310	0.030360	0.704438	0.137976	0.91	1.91	17.40	8.77
DSDP 603	133.55	87178	57698	143778	62685	1505120	296720	0.040488	0.026797	0.066775	0.029113	0.696922	0.137806	0.90	1.30	20.35	8.09
DSDP 603	134.22	83644	52603	159036	70345	1658240	328509	0.035557	0.022362	0.067607	0.029904	0.704921	0.139650	0.91	1.47	19.32	8.38
DSDP 603	135.47	28429	15942	40258	15214	449802	90997	0.044376	0.024884	0.062848	0.023748	0.702111	0.142040	0.90	1.19	21.57	7.58
DSDP 603	135.62	20250	12111	35974	17577	425736	82585	0.034078	0.020381	0.060530	0.029579	0.716446	0.138977	0.92	1.55	18.85	8.49
DSDP 603	135.90	24351	15844	35515	21309	480880	88566	0.036538	0.023773	0.053289	0.031973	0.721538	0.132889	0.90	1.83	17.63	8.73
DSDP 603	136.18	30025	23069	49333	27022	512579	96082	0.040678	0.031254	0.066837	0.036610	0.694448	0.130173	0.88	2.41	16.61	8.88
DSDP 603	136.30	19268	12874	28719	21050	383234	71733	0.035889	0.023979	0.053493	0.039208	0.713820	0.133611	0.90	2.54	16.06	8.90
DSDP 603	136.55	25843	16120	27836	18062	349337	61372	0.051834	0.032332	0.055832	0.036228	0.700678	0.123098	0.87	2.37	16.81	8.87
DSDP 603	136.92	34935	20643	50896	29594	669404	126414	0.037488	0.022152	0.054616	0.031757	0.718332	0.135654	0.91	1.81	17.69	8.72
DSDP 603	136.97	32904	22742	45981	24883	584841	107838	0.040167	0.027762	0.056130	0.030375	0.713927	0.131640	0.89	1.52	18.97	8.47
DSDP 367	94.17	242000	44900	25100	63600	2270000	377000	0.080064	0.014855	0.080304	0.021041	0.751009	0.124727	0.91	2.06	17.00	8.81
DSDP 367	94.21	385000	67200	65400	39200	2840000	484000	0.101522	0.017227	0.016809	0.0201075	0.729927	0.124396	0.90	2.01	15.85	8.74
DSDP 367	94.22	223000	45600	50700	31400	145000	286000	0.106867	0.021853	0.024297	0.015048	0.694877	0.137059	0.89	1.83	17.83	8.62
DSDP 367	94.25	1230000	200000	364000	100000	618000	1070000	0.134367	0.021848	0.039764	0.010924	0.676207	0.116889	0.88	1.52	18.44	8.13
DSDP 367	94.29	148000	24000	42000	50000	245000	386000	0.047742	0.027744	0.051346	0.016129	0.790323	0.124516	0.95	2.26	16.73	8.85
DSDP 367	94.31	167000	26400	98000	46500	243000	434000	0.052157	0.008245	0.030607	0.014523	0.758924	0.135545	0.96	2.14	17.21	8.81
DSDP 367	94.33	214000	55300	108000	75800	302000	454000	0.054521	0.014089	0.027008	0.019312	0.769407	0.151666	0.92	1.78	18.52	8.62
DSDP 367	94.38	236000	28700	52600	52100	208000	322000	0.085156	0.010356	0.018980	0.018799	0.750523	0.116187	0.94	1.90	17.67	8.73
DSDP 367	94.40	569000	191000	338000	246000	669000	1030000	0.062776	0.021072	0.037290	0.027140	0.738085	0.113636	0.89	1.57	18.83	8.48
DSDP 367	94.52	180000	112000	115000	87400	405000	696000	0.034349	0.021372	0.021945	0.016678	0.772842	0.132814	0.89	1.95	17.89	8.74
DSDP 367	94.53	233000	166000	250000	156000	732000	1050000	0.025395	0.018093	0.027248	0.017003	0.797820	0.114441	0.90	1.85	18.40	8.68
DSDP 367	94.56	199000	66000	194000	107000	276000	526000	0.051661	0.017134	0.050363	0.027778	0.716511	0.136552	0.93	1.54	19.00	8.47
DSDP 367	94.61	132000	51900	89400	18700	316000	391000	0.034348	0.013505	0.023263	0.008466	0.822274	0.101743	0.91	2.52	15.45	8.89
DSDP 367	94.68	254000	92000	261000	151000	569000	1180000	0.030328	0.016021	0.034216	0.019795	0.745936	0.154693	0.95	1.88	17.69	8.74
DSDP 463	124.26	58900	28700	40800	16100	35600	57800	0.105499	0.051406	0.073078	0.028838	0.637650	0.103529	0.80	0.89	24.46	6.39
DSDP 463	124.32	21000	5820	4620	4760	56400	16800	0.191956	0.053199	0.044230	0.043510	0.515539	0.153563	0.82	2.10	16.78	8.86
DSDP 463	124.53	16400	5800	7300	2940	46700	11900	0.180141	0.063708	0.080185	0.032293	0.512961	0.130712	0.79	1.73	19.86	8.54
DSDP 463	124.67	32400	22200	55800	12900	406000	51100	0.055824	0.038249	0.096141	0.022226	0.699518	0.088043	0.84	0.41	26.93	4.38
DSDP 463	124.91	17200	8530	5990	1000	65000	25300	0.139928	0.069395	0.047917	0.008135	0.528799	0.205825	0.79	2.42	16.40	8.88
DSDP 534	130.01	846515	500681	1761720	500009	15318200	3105780	0.038420	0.022724	0.079959	0.022694	0.695242	0.140961	0.91	0.95	23.13	6.81
DSDP 534	130.13	178080	935218	349770	102950	3087800	6371840	0.040038	0.020163	0.020727	0.0178642	0.694259	0.143260	0.92	1.00	22.69	7.02
DSDP 534	130.96	1386550	774860	241070	4894910	367379	0.039122	0.021863	0.076374	0.021668	0.702862	0.138111	0.92	1.01	23.07	6.92	
DSDP 534	131.19	474030	275915	924414	274295	1709550	1095500	0.040615	0.020908	0.079204	0.023502	0.686108	0.146474	0.92	1.01	22.59	7.07
DSDP 534	131.94	282054	170959	555242	179401	5407060	1109240	0.036612	0.022191	0.072072	0.023287	0.701855	0.143983	0.92	1.11	22.00	7.36
DSDP 534	132.27	247352	137766	477186	177089	5405200	1087060	0.032842	0.018292	0.063357	0.023513	0.717665	0.144332	0.93	1.33	20.53	7.93
DSDP 534	132.29	46175	22125	64592	20550	68993	154852	0.046259	0.022165	0.064700	0.020587	0.691146	0.155133	0.92	1.27	21.18	7.81
DSDP 534	132.46	206396	92395	280987	104947	2803530	600750	0.050476	0.022596	0.068718	0.025666	0.685626	0.146918	0.91	1.25	21.54	7.67
DSDP 534	132.52	67927	27862	83663	31713	1038450	203851	0.046734	0.019158	0.057560	0.021619	0.714455	0.140250	0.92	1.33	20.90	7.88
DSDP 534	132.59	86357	37562	93776	30062	1072270	208855	0.056482	0.024581	0.061334	0.019662	0.701320	0.136622	0.90	1.08	22.70	7.40
DSDP 534	132.80	188983	102627	337897	121432	3338640	695108	0.039497	0.021449	0.070261	0.023539	0.697776	0.145278	0.92	1.25	21.39	7.67
DSDP 534	133.27	31639	15840	52304													

Cretaceous dataset for OPTiMAL

SITE	AGE (GTS 2012)	1302 GDGT0	1300 GDGT1	1298 GDGT2	1296 GDGT3	1292 CREN ^a	1292' CREN'	Fr.1302	Fr.1300	Fr.1298	Fr.1296	Fr.1292	Fr.1292'	TEX86 (calculated)	OPTIMAL SST	OPTIMAL StDev		
ODP 766	132.33	1049630	214822	204380	46633	2066070	158360	0.280658	0.057441	0.054649	0.012469	0.0552441	0.042343	0.66	0.31	22.88	3.60	
ODP 766	132.62	26627500	4939940	4754800	903806	54697500	3660080	0.28758	0.051682	0.049745	0.009456	0.0572248	0.038292	0.65	0.33	19.65	3.69	
ODP 766	132.62	1633380	281058	55708	2908520	194326	0.303942	0.056009	0.052300	0.010366	0.0541222	0.036161	0.64	0.19	20.11	3.51		
ODP 766	132.92	2948470	555034	526316	96007	5674650	405369	0.288900	0.054384	0.051570	0.009407	0.0556020	0.039719	0.65	0.18	19.57	3.61	
ODP 766	133.01	2549210	442331	418076	77254	4342220	293751	0.313832	0.054455	0.051469	0.009511	0.0534569	0.036164	0.64	0.22	19.48	3.55	
ODP 766	133.29	1731010	348603	340270	74023	3844390	274397	0.261771	0.052717	0.051457	0.011194	0.0581365	0.041495	0.66	0.20	22.54	3.68	
ODP 766	133.39	1023360	236608	226271	50985	2383640	199976	0.248338	0.057417	0.054909	0.012372	0.0578435	0.048528	0.67	0.23	24.45	3.68	
ODP 766	133.53	629211	155195	167859	33597	1516680	150986	0.237122	0.058486	0.063259	0.012661	0.0571571	0.056900	0.69	0.38	26.81	3.60	
ODP 766	133.89	704781	173953	189757	45257	209470	191471	0.212624	0.052479	0.057247	0.013653	0.0606232	0.0576764	0.71	0.45	27.30	3.85	
ODP 766	134.02	1264760	242626	217775	49757	2512560	174355	0.283462	0.054378	0.048808	0.011152	0.0563123	0.039077	0.65	0.29	21.19	3.64	
ODP 766	134.14	1742780	290702	250295	51157	3274650	198219	0.297355	0.050287	0.043298	0.008849	0.0561799	0.034289	0.63	0.35	18.26	3.72	
ODP 766	134.22	884430	149402	127772	31171	1674790	106784	0.297355	0.050230	0.042959	0.010480	0.0563076	0.035902	0.64	0.39	20.27	3.73	
ODP 766	134.42	862650	157955	134648	30488	2052890	1767890	116484	0.280973	0.051447	0.043856	0.009964	0.0575819	0.037940	0.64	0.37	19.86	3.77
ODP 766	134.64	1750980	320285	280563	67422	3395660	226640	0.289823	0.053014	0.046439	0.011160	0.0562051	0.037514	0.64	0.38	20.96	3.66	
ODP 766	134.88	987194	182151	161807	42334	208600	137031	0.274899	0.050723	0.045058	0.017189	0.0579374	0.038158	0.65	0.40	21.83	3.79	
ODP 766	135.32	319586	64615	57113	14272	638480	44867	0.280601	0.056733	0.050146	0.012531	0.0560595	0.039394	0.64	0.38	22.10	3.63	
ODP 766	135.84	272478	61403	56943	13192	609977	51201	0.255801	0.057645	0.053458	0.012385	0.0572644	0.048067	0.66	0.26	23.91	3.71	
DSDP 249	I- Barremian (137.85 12053400)	3156570	3394930	756898	2819580	2298990	241761	0.063313	0.068094	0.051582	0.0565538	0.046112	0.67	0.29	26.48	3.52		
DSDP 249	I- Barremian (137.85 7080530)	1554280	1218900	33213	14038200	786822	283098	0.062144	0.048735	0.0513280	0.0561284	0.031459	0.60	0.33	20.54	3.53		
DSDP 249	I- Barremian (137.85 23042900)	4902420	3888420	1052890	4548230	2637120	287655	0.061199	0.048541	0.051344	0.0556541	0.032920	0.61	0.32	20.77	3.55		
DSDP 249	I- Barremian (137.85 9646530)	1987370	1451430	501633	17282900	454093	0.304198	0.062556	0.045770	0.015819	0.0545007	0.026650	0.59	0.24	20.37	3.68		
DSDP 249	I- Barremian (137.85 328584)	76608	53908	18312	590562	33870	0.298213	0.069527	0.048925	0.016619	0.0535976	0.030739	0.58	0.47	20.76	3.84		
DSDP 249	I- Barremian (137.85 4151870)	900890	657679	236232	7565330	378840	0.298893	0.064855	0.047346	0.017006	0.0546427	0.027273	0.59	0.37	20.52	3.81		
ODP 692	Valanginian-Hauter	2794570	740938	1057630	179090	8413080	914001	0.198203	0.052551	0.075026	0.012702	0.0596693	0.064825	0.74	0.28	29.38	3.61	
ODP 692	Valanginian-Hauter	1813720	434352	549255	104197	4469520	487626	0.230748	0.056724	0.069896	0.013260	0.058770	0.062053	0.72	0.41	28.72	3.66	
ODP 692	Valanginian-Hauter	2359520	609615	747339	145017	6628410	768691	0.209575	0.054147	0.066379	0.012881	0.0587842	0.068276	0.73	0.31	28.71	3.73	
ODP 692	Valanginian-Hauter	882901	229401	272458	42487	2670310	259479	0.205611	0.053432	0.063450	0.009894	0.0607193	0.0604248	0.71	0.26	27.13	3.59	
ODP 692	Valanginian-Hauter	918187	221563	247054	51744	2470700	189759	0.227499	0.054897	0.061212	0.012821	0.0596555	0.047017	0.69	0.30	26.51	3.57	
ODP 692	Valanginian-Hauter	2080570	493834	557777	88192	5298720	466659	0.231541	0.04957	0.062073	0.009918	0.0589680	0.051933	0.69	0.24	25.10	3.57	
ODP 692	Valanginian-Hauter	803797	171634	184087	25013	1877940	177561	0.248083	0.052973	0.056816	0.007720	0.0579605	0.054802	0.69	0.44	21.44	3.87	
ODP 692	Valanginian-Hauter	617630	141333	136944	33565	1582010	128257	0.233974	0.053541	0.051878	0.012715	0.0593005	0.048587	0.68	0.30	25.14	3.80	
ODP 692	Valanginian-Hauter	1048090	230879	249910	43362	484200	232914	0.244347	0.053826	0.058283	0.010109	0.0579155	0.054300	0.70	0.37	24.57	3.71	
ODP 692	Valanginian-Hauter	539164	144850	152067	28317	1552060	204609	0.204259	0.054876	0.064633	0.010728	0.058799	0.077515	0.74	0.43	28.24	3.93	
ODP 692	Valanginian-Hauter	356723	92971	111257	22087	1107670	113937	0.197669	0.051518	0.061650	0.012239	0.0613788	0.063135	0.73	0.30	28.00	3.69	
ODP 692	Valanginian-Hauter	379720	95857	120484	18571	1069230	124003	0.207967	0.052500	0.065987	0.010171	0.0585602	0.077773	0.75	0.42	28.35	3.97	
FL 533	71.05(+/- 1)	927000	828000	549000	66600	790000	294000	0.490279	0.043792	0.029036	0.003522	0.0471821	0.015549	0.52	0.31	10.63	3.54	
FL 533	71.05(+/- 1)	602000	598000	363000	50800	4810000	226600	0.499884	0.049553	0.030080	0.004210	0.039851	0.018728	0.52	0.27	9.68	3.51	
FL 533	71.05(+/- 1)	540000	535000	325000	41100	4450000	137000	0.495954	0.049138	0.029849	0.003735	0.0408703	0.012583	0.48	0.23	10.65	3.46	
FL 533	71.05(+/- 1)	454000	420000	288000	36900	368000	122000	0.490971	0.046170	0.031659	0.004056	0.0405633	0.013411	0.52	0.33	11.80	3.54	
DSDP 511	124.13	1200000	345000	417000	65700	3230000	354000	0.213869	0.061479	0.074309	0.011708	0.0575583	0.063082	0.71	0.16	28.08	3.44	
DSDP 511	124.16	2920000	838000	985000	174000	7190000	847000	0.249027	0.067401	0.076030	0.014379	0.055041	0.0605385	0.71	0.21	28.03	3.50	
DSDP 511	124.16	1480000	463000	583000	99200	4010000	395000	0.210520	0.065859	0.082928	0.014111	0.0570396	0.056186	0.70	0.31	27.85	3.49	
DSDP 511	124.22	1740000	520000	621000	122000	4650000	531000	0.212610	0.063539	0.057880	0.014907	0.0568182	0.064883	0.71	0.32	28.28	3.61	
DSDP 511	124.24	425000	118000	137000	24100	103000	105000	0.231091	0.064162	0.074493	0.013104	0.0560057	0.057093	0.69	0.21	27.46	3.43	
DSDP 511	124.35	495000	123000	133000	22300	969000	98400	0.268919	0.066822	0.072255	0.012115	0.0526430	0.0534558	0.67	0.23	25.39	3.46	
DSDP 511	124.48	1630000	4970000	5960000	981000	4230000	5260000	0.215122	0.065592	0.078658	0.012947	0.0558261	0.0694240	0.71	0.13	27.99	3.52	
DSDP 511	124.73	1420000	357000	362000	74900	3050000	308000	0.254850	0.064072	0.064969	0.013442	0.0547390	0.055277	0.68	0.35	25.86	3.58	
DSDP 511	125.19	950000	258000	283000	55400	2030000	221000	0.250171	0.067451	0.074525	0.014589	0.0534576	0.056198	0.68	0.19	27.19	3.54	
DSDP 511	126.00	618000	171000	203000	48500	160000	173000	0.219655	0.060778	0.071251	0.017238	0.0568687	0.061489	0.71	0.36	28.39	3.84	
DSDP 511	126.27	66300																

Cretaceous dataset for OPTiMAL

SITE	AGE (GTS 2012)	1302 GDGT0	1300 GDGT1	1298 GDGT2	1296 GDGT3	1292 CREN'	1292' CREN'	Fr.1302	Fr.1300	Fr.1298	Fr.1296	Fr.1292	Fr.1292'	TEX86 (calculated)	OPTIMAL SST	OPTIMAL StDev	
ODP 1207	125.46	38600	12200	34400	18500	552000	91100	0.051687	0.016336	0.046063	0.024772	0.739154	0.121987	0.92	1.58	19.44	8.30
ODP 1207	125.46	84500	28200	81200	44800	135000	245000	0.040682	0.015379	0.044282	0.024431	0.736216	0.133610	0.93	1.64	18.93	8.44
ODP 1207	125.47	80000	22500	65700	35700	118000	203000	0.050413	0.014179	0.041401	0.022497	0.743588	0.127922	0.93	1.61	19.06	8.43
ODP 1207	125.47	234000	51300	62800	32300	1400000	223000	0.116801	0.025606	0.031347	0.016123	0.698812	0.111311	0.86	1.39	19.94	8.01
ODP 1207	125.48	366000	108000	89700	48400	217000	260000	0.120312	0.035502	0.029486	0.015910	0.713233	0.085467	0.79	1.04	20.92	7.08
ODP 1207	125.48	296000	88000	89100	43300	190000	280000	0.109776	0.032636	0.033044	0.016058	0.704643	0.103842	0.82	1.21	21.00	7.54
ODP 1207	125.49	86100	31300	53100	26200	928000	150000	0.067545	0.024555	0.041657	0.020554	0.728014	0.117675	0.88	1.36	21.04	7.91
ODP 1207	125.49	190000	49300	94200	42800	1440000	247000	0.092085	0.023894	0.045655	0.020743	0.697911	0.119711	0.89	1.29	21.48	7.74
ODP 1207	125.50	138000	31900	57100	28800	933000	152000	0.102924	0.023792	0.042587	0.020248	0.695853	0.113365	0.88	1.33	21.01	7.83
ODP 1207	125.50	42100	16700	31200	13600	42800	74300	0.069483	0.027562	0.051494	0.022446	0.706387	0.122627	0.88	1.21	21.91	7.46
ODP 1207	125.50	29600	13300	23500	11100	333000	61600	0.062699	0.028172	0.049778	0.027539	0.705359	0.130481	0.88	1.30	21.14	7.74
ODP 1207	125.51	30700	44200	82100	38900	117000	217000	0.165125	0.023774	0.044150	0.020923	0.629303	0.116717	0.88	1.40	20.08	8.13
ODP 1207	125.53	97600	44700	78900	34700	104000	203000	0.065114	0.029822	0.052630	0.023150	0.693842	0.135433	0.88	1.24	21.53	7.62
ODP 1207	125.55	180000	77900	198000	104000	310000	606000	0.042195	0.018261	0.046415	0.024379	0.726693	0.142057	0.92	1.59	19.11	8.39
ODP 1258	95.10	583000	330000	853000	412000	1100000	1440000	0.039882	0.022575	0.058353	0.028184	0.752497	0.098509	0.89	1.31	20.10	8.11
ODP 1258	95.25	372000	173000	518000	271000	692000	1140000	0.039600	0.018416	0.05142	0.028848	0.736640	0.121354	0.92	1.50	19.10	8.42
ODP 1258	95.42	1000000	524000	1320000	668000	1620000	2170000	0.045700	0.023947	0.060324	0.030527	0.740335	0.099168	0.89	1.46	19.35	8.37
ODP 1258	95.67	2490000	1190000	3360000	1740000	5010000	831000	0.037059	0.017711	0.050007	0.025897	0.745647	0.123679	0.92	1.51	19.39	8.31
ODP 1258	95.84	175000	100000	200000	103000	212000	263000	0.059102	0.033772	0.067545	0.034786	0.715974	0.088821	0.85	1.98	18.22	8.76
ODP 1258	96.03	841000	495000	967000	478000	8670000	1200000	0.066477	0.039127	0.076437	0.037784	0.685321	0.094854	0.84	1.90	18.22	8.77
ODP 1258	96.23	638000	367000	819000	408000	951000	1120000	0.049603	0.028534	0.063676	0.031721	0.739387	0.087078	0.86	1.54	19.16	8.47
ODP 1258	96.39	232000	130000	263000	130000	2700000	338000	0.061165	0.034274	0.069336	0.034274	0.711838	0.089112	0.85	1.86	18.56	8.70
ODP 1258	96.51	905000	503000	112000	56900	1150000	1510000	0.056187	0.031229	0.069553	0.035326	0.713975	0.093748	0.86	2.08	17.81	8.80
ODP 1258	96.87	760000	436000	933000	417000	973000	1150000	0.056607	0.032474	0.069492	0.031059	0.724713	0.085655	0.85	1.32	20.49	8.11
ODP 1258	97.01	235000	1320000	283000	138000	2790000	347000	0.059873	0.033631	0.071303	0.031702	0.701828	0.088408	0.85	2.02	18.21	8.77
ODP 1258	97.17	1140000	639000	1440000	683000	1420000	158000	0.057921	0.032466	0.073162	0.034702	0.721471	0.080276	0.85	1.96	18.34	8.75
ODP 1258	97.33	82200	41300	73300	38100	724000	889000	0.078450	0.039416	0.066956	0.036232	0.690972	0.084844	0.83	1.75	18.87	8.70
ODP 1258	97.54	1090000	616000	111000	543000	1150000	1510000	0.068087	0.038478	0.069336	0.033918	0.718346	0.071835	0.82	1.83	19.21	8.62
ODP 1258	97.61	256000	124000	231000	118000	2380000	2660000	0.075852	0.036741	0.068444	0.034963	0.705185	0.078815	0.83	1.85	18.92	8.69
ODP 1258	97.96	1030000	55000	108000	55500	1160000	1290000	0.063955	0.034151	0.067060	0.034461	0.720273	0.080099	0.84	1.94	18.53	8.72
ODP 1258	99.33	522000	199000	371000	186000	388000	438000	0.093281	0.035561	0.066297	0.033238	0.693352	0.078270	0.83	1.70	19.93	8.50
ODP 1258	99.75	827000	368000	651000	316000	624000	728000	0.090581	0.040307	0.071303	0.034911	0.683461	0.079737	0.82	1.71	19.79	8.56
ODP 1258	100.08	122000	526000	113000	56900	1400000	177000	0.063492	0.027374	0.058804	0.029612	0.728597	0.092116	0.87	1.28	20.55	8.04
ODP 1258	100.79	132000	668000	175000	625000	1480000	224000	0.061674	0.031211	0.081764	0.029102	0.691492	0.104658	0.87	0.86	23.47	6.92
ODP 1258	101.92	103000	542000	148000	53700	1340000	188000	0.054587	0.028724	0.078436	0.028459	0.710160	0.099634	0.88	0.88	23.18	6.98
ODP 1258	102.46	246000	128000	402000	125000	3270000	564000	0.051954	0.027033	0.084900	0.026399	0.690602	0.119113	0.89	0.77	24.68	6.23
ODP 1258	104.25	536000	294000	908000	30900	825000	130000	0.046219	0.025351	0.078296	0.026645	0.711391	0.112098	0.90	0.89	23.51	6.78
ODP 1258	104.92	177000	931000	269000	823000	2120000	3740000	0.056815	0.028848	0.086345	0.026417	0.680490	0.120049	0.89	0.67	25.35	5.88
ODP 1259	86.28	394000	163000	364000	135000	3680000	680000	0.072747	0.030996	0.067208	0.024926	0.679468	0.125564	0.88	0.96	23.84	6.66
ODP 1259	87.01	354000	147000	352000	185000	4040000	6450000	0.061856	0.025866	0.061506	0.032326	0.705923	0.121703	0.89	1.64	18.72	8.58
ODP 1259	87.29	132000	632000	152000	61700	1740000	290000	0.054123	0.025913	0.062323	0.025298	0.713436	0.118906	0.89	1.11	22.36	7.26
ODP 1259	87.39	222000	829000	217000	111000	2950000	4630000	0.054870	0.020490	0.053633	0.027435	0.729133	0.114347	0.91	1.33	20.20	8.12
ODP 1259	87.49	450000	173000	495000	252000	6550000	1210000	0.041948	0.028944	0.054217	0.027601	0.717415	0.132530	0.92	1.43	19.62	8.30
ODP 1259	88.15	171000	80500	219000	118000	303000	496000	0.041560	0.019565	0.053226	0.028679	0.736420	0.120549	0.91	1.48	19.19	8.40
ODP 1259	89.48	285000	143000	366000	193000	5480000	9390000	0.038482	0.019309	0.049419	0.026060	0.739941	0.126789	0.91	1.50	19.45	8.30
ODP 1259	89.83	124000	557000	146000	77100	2140000	3610000	0.042703	0.019182	0.050279	0.028551	0.736965	0.124320	0.91	1.46	19.55	8.28
ODP 1259	89.95	296000	143000	390000	206000	4940000	8670000	0.043262	0.020900	0.050701	0.030108	0.722011	0.126717	0.91	1.55	18.87	8.49
ODP 1259	90.02	111000	45700	127000	66900	1780000	284000	0.045970	0.018927	0.052597	0.027706	0.737182	0.117618	0.91	1.42	19.58	8.29
ODP 1259	90.08	319000	144000	438000	227000	5000000	827000	0.045866	0.020705	0.062976	0.032638	0.718907	0.118907	0.91	1.79	17.87	8.71
ODP 1259	90.14	114000	45000	144000	77600	2570000	4580000	0.033445	0.012020	0.042246	0.022766						

Cretaceous dataset for OPTiMAL

SITE	AGE (GTS 2012)	1302 GDGT0	1300 GDGT1	1298 GDGT2	1296 GDGT3	1292 CREN	1292' CREN'	Fr.1302	Fr.1300	Fr.1298	Fr.1296	Fr.1292	Fr.1292'	TEX86 (calculated)	OPTIMAL SST	OPTIMAL StDev	
ODP 1259	93.04	937000	364000	1020000	555000	18800000	3120000	0.037788	0.014680	0.041136	0.022383	0.758187	0.125827	0.93	1.62	18.94	8.45
ODP 1259	93.04	1040000	370000	1070000	595000	20400000	3400000	0.038698	0.013767	0.039814	0.022140	0.759070	0.126512	0.93	1.65	18.79	8.49
ODP 1259	93.04	978000	345000	1030000	571000	21000000	3570000	0.035571	0.012548	0.037463	0.020768	0.763803	0.129847	0.94	1.71	18.58	8.57
ODP 1259	93.05	830000	290000	878000	481000	19000000	3270000	0.033537	0.011718	0.035476	0.019435	0.767708	0.132127	0.94	1.75	18.40	8.64
ODP 1259	93.05	1090000	386000	1130000	633000	23900000	4170000	0.034814	0.012329	0.036092	0.020218	0.763359	0.133189	0.94	1.74	18.43	8.62
ODP 1259	93.05	1440000	521000	1560000	844000	32200000	5670000	0.034095	0.012336	0.036930	0.019983	0.762401	0.134249	0.94	1.73	18.49	8.61
ODP 1259	93.05	709000	254000	762000	414000	15800000	2700000	0.034352	0.012307	0.036920	0.020059	0.765541	0.130820	0.94	1.72	18.56	8.60
ODP 1259	93.05	1140000	430000	1250000	681000	22900000	3870000	0.037660	0.014205	0.041294	0.022497	0.756500	0.127845	0.93	1.64	18.85	8.47
ODP 1259	93.06	867000	336000	950000	524000	15300000	2510000	0.042320	0.016401	0.046371	0.025577	0.746815	0.122517	0.92	1.58	19.13	8.38
ODP 1259	93.06	1000000	366000	1080000	570000	21600000	3660000	0.035366	0.012944	0.038195	0.020158	0.763899	0.129438	0.94	1.68	18.77	8.56
ODP 1259	93.07	842000	290000	873000	476000	19200000	3220000	0.033814	0.011646	0.035050	0.019116	0.770153	0.129312	0.94	1.75	18.45	8.64
ODP 1259	93.08	1440000	560000	1650000	888000	33800000	6140000	0.032376	0.012590	0.037097	0.019965	0.759926	0.138046	0.94	1.74	18.39	8.63
ODP 1259	93.09	1280000	490000	1480000	812000	33000000	5630000	0.029982	0.011748	0.034667	0.019020	0.727979	0.131875	0.94	1.78	18.28	8.67
ODP 1259	93.10	795000	321000	932000	517000	18600000	3160000	0.032682	0.013196	0.038314	0.021254	0.764645	0.129098	0.93	1.69	18.59	8.56
ODP 1259	93.10	1110000	465000	1310000	718000	21200000	3640000	0.039025	0.016348	0.046057	0.025243	0.745350	0.127975	0.92	1.62	19.01	8.41
ODP 1259	93.11	1260000	413000	1270000	701000	2540000	434000	0.037743	0.012371	0.038042	0.020998	0.760844	0.130002	0.94	1.70	18.61	8.56
ODP 1259	93.11	1100000	397000	1110000	604000	17800000	2910000	0.045985	0.016596	0.046403	0.025250	0.744116	0.121650	0.92	1.57	19.30	8.34
DSDP 545	111.03	61675980	21854366	28357604	10627790	182420326	26029842	0.086351	0.060302	0.085681	0.032111	0.551176	0.078644	0.75	1.38	22.01	7.88
DSDP 545	111.04	76928227	28286833	37020523	14556611	23856464	32598773	0.179694	0.066074	0.086895	0.034002	0.557188	0.071646	0.75	1.04	22.18	7.52
DSDP 545	111.05	57162760	21069262	26878666	10718280	174961832	25859510	0.180559	0.066354	0.084901	0.033856	0.552648	0.081682	0.75	1.11	21.91	7.69
DSDP 545	111.05	58006773	20240948	26146872	9879732	17781314	26454920	0.182225	0.062905	0.082133	0.031035	0.558590	0.083107	0.76	1.29	22.55	7.71
DSDP 545	111.07	154999475	63661212	95264181	38155928	664758266	95245767	0.139377	0.057245	0.085663	0.034310	0.597759	0.085646	0.78	1.25	21.88	7.96
DSDP 545	111.07	124100295	50485147	73088728	29836435	524663397	68720050	0.142498	0.057968	0.083924	0.034258	0.602444	0.078908	0.77	1.17	22.20	7.78
DSDP 545	111.08	88027679	36088937	53753934	21176823	30818844	51913722	0.139337	0.057093	0.085086	0.033520	0.602700	0.082173	0.78	1.32	22.21	7.92
DSDP 545	111.10	98671167	40926445	64586190	26428039	449018257	62926687	0.130773	0.055250	0.087189	0.035617	0.606162	0.084949	0.79	1.18	21.57	7.97
DSDP 545	111.11	101556987	43477761	65736657	29096360	498203365	67734650	0.125891	0.055011	0.081488	0.036068	0.617578	0.083965	0.79	1.16	21.53	7.95
DSDP 545	111.11	70329397	31040661	43727543	19210176	336118473	46814472	0.128525	0.056606	0.079911	0.035106	0.614246	0.085552	0.78	1.21	21.54	8.00
DSDP 545	111.12	72705440	29932141	46015666	19339294	3434248412	49167607	0.129736	0.053411	0.082111	0.034509	0.612497	0.087735	0.79	1.33	21.54	8.11
DSDP 545	111.13	67724634	28954680	43793501	18673669	324921659	63687087	0.126777	0.054568	0.082561	0.035204	0.612550	0.087416	0.79	1.26	21.41	8.08
DSDP 545	111.13	43905925	17327691	52598868	10696010	186898669	27647109	0.140826	0.055578	0.081148	0.034307	0.599466	0.088676	0.79	1.28	21.74	8.02
DSDP 545	111.13	41552289	14701058	16574112	6394358	19115258	15513651	0.191794	0.078656	0.076502	0.029515	0.562727	0.071607	0.72	1.13	22.36	7.46
DSDP 545	111.14	32551234	12113239	14074104	5314791	101793415	12535341	0.193903	0.066230	0.077416	0.029235	0.559925	0.072901	0.73	1.08	22.61	7.34
DSDP 545	111.15	36853279	13010370	15579508	6127170	10804091	14221812	0.189383	0.066858	0.080061	0.031487	0.559127	0.073084	0.73	1.43	22.00	7.84
DSDP 545	111.15	51461349	18290061	2229327	8653004	15064992	19678814	0.187509	0.066483	0.081252	0.031529	0.561364	0.071703	0.73	1.42	22.10	7.80
DSDP 545	111.28	31767327	10759280	12805021	4710970	89265949	1131205	0.197963	0.067272	0.079769	0.029357	0.562674	0.069366	0.73	1.13	22.45	7.44
DSDP 545	111.29	25726470	8614893	9707315	3868674	71067679	902129	0.200415	0.067111	0.075622	0.028736	0.557839	0.070277	0.72	1.07	22.53	7.30
ADERET 1 BOREHOLE	69.05	788000	326000	363000	122000	1930000	279000	0.206933	0.085609	0.095326	0.032038	0.506828	0.073267	0.70	1.56	19.50	8.46
ADERET 1 BOREHOLE	69.10	816000	294000	320000	118000	183000	327000	0.220423	0.079352	0.086370	0.031849	0.493927	0.088259	0.72	1.62	19.65	8.47
ADERET 1 BOREHOLE	69.16	286000	110000	118000	45400	793000	101000	0.196780	0.075685	0.081189	0.031237	0.545617	0.069492	0.71	1.51	21.03	8.08
ADERET 1 BOREHOLE	69.21	205000	79500	89200	28600	643000	81600	0.181915	0.070548	0.079155	0.025379	0.570592	0.072411	0.71	0.64	24.64	5.59
ADERET 1 BOREHOLE	69.26	696000	267000	314000	97700	154000	223000	0.221819	0.085904	0.100073	0.031137	0.490805	0.071071	0.70	1.75	19.24	8.55
ADERET 1 BOREHOLE	69.31	505000	194000	251000	85300	1310000	243000	0.195109	0.074953	0.096975	0.032956	0.506124	0.093884	0.75	1.47	20.28	8.33
ADERET 1 BOREHOLE	69.37	228000	90000	96100	35800	714000	83400	0.182795	0.072156	0.077046	0.028702	0.572436	0.066864	0.71	1.02	22.41	7.17
ADERET 1 BOREHOLE	69.43	852000	289000	300000	105000	149000	195000	0.263695	0.089446	0.092851	0.032498	0.461158	0.060353	0.67	1.69	18.09	8.68
ADERET 1 BOREHOLE	5.00	1240000	474000	472000	157000	2320000	306000	0.249547	0.059391	0.094988	0.031596	0.466895	0.061582	0.66	1.87	17.78	8.76
ADERET 1 BOREHOLE	69.64	986000	340000	343000	125000	1650000	218000	0.269252	0.092845	0.093665	0.034134	0.450573	0.059530	0.67	1.59	17.99	8.62
ADERET 1 BOREHOLE	69.80	751000	251000	251000	90500	134000	205000	0.259977	0.086896	0.086896	0.031331	0.463909	0.070971	0.69	1.83	18.23	8.71
ADERET 1 BOREHOLE	69.92	850000	279000	253000	85700	114000	149000	0.308340	0.10208	0.091776	0.031088	0.413558	0.054050	0.64	2.33	16.52	8.88
ADERET 1 BOREHOLE	70.06	477000	171000	174000	62200	865000	135000	0.253158	0.090755	0.092347	0.033011	0.459081	0.071648	0.68	1.64	18.17	8.65
ADERET 1 BOREHOLE	70.17	981000	381														

Cretaceous dataset for OPTiMAL

SITE	AGE (GTS 2012)	1302 GDGT0	1300 GDGT1	1298 GDGT2	1296 GDGT3	1292 CREN	1292' CREN'	Fr.1302	Fr.1300	Fr.1298	Fr.1296	Fr.1292	Fr.1292'	TEX86 (calculated)	OPTIMAL SST	OPTIMAL StDev	
ADERET 1 BOREHOLE	75.83	280000	104000	106000	40100	764000	107000	0.199843	0.074227	0.075655	0.028620	0.545286	0.076369	0.71	1.17	21.80	7.60
ADERET 1 BOREHOLE	75.89	223000	72800	79000	35200	685000	72800	0.190957	0.062339	0.067649	0.030142	0.586573	0.062339	0.72	1.23	22.01	7.64
ADERET 1 BOREHOLE	75.95	190000	66600	80600	32200	652000	65300	0.174520	0.063011	0.074033	0.029574	0.598879	0.059980	0.72	1.02	22.83	7.12
ADERET 1 BOREHOLE	76.18	39100	16700	18000	8940	142000	13900	0.163845	0.069980	0.075427	0.037462	0.595039	0.058247	0.71	0.48	24.20	5.71
ADERET 1 BOREHOLE	76.48	76600	28300	22500	10700	15700	14100	0.247736	0.091527	0.072768	0.034605	0.507762	0.045602	0.63	1.30	19.13	8.25
ADERET 1 BOREHOLE	76.76	77700	27700	20000	8130	131000	12100	0.280881	0.100134	0.072299	0.029389	0.473557	0.043741	0.59	2.20	17.02	8.82
ADERET 1 BOREHOLE	77.15	27700	10800	9350	7530	119000	13700	0.147278	0.057422	0.049713	0.040036	0.632709	0.072841	0.74	1.13	22.82	7.47
ADERET 1 BOREHOLE	77.45	650000	234000	274000	89400	1450000	217000	0.223030	0.080291	0.094016	0.030675	0.497530	0.074458	0.71	1.67	19.89	8.43
ADERET 1 BOREHOLE	77.74	78300	29900	29600	14400	258000	24400	0.180166	0.068799	0.068109	0.033134	0.593649	0.056144	0.70	1.04	22.00	7.44
ADERET 1 BOREHOLE	78.03	473000	187000	209000	74500	1140000	184000	0.208600	0.082470	0.092172	0.032856	0.502756	0.081474	0.71	1.43	19.77	8.35
ADERET 1 BOREHOLE	78.91	540000	145000	175000	61800	1100000	168000	0.246598	0.066216	0.079916	0.028222	0.502329	0.076719	0.74	1.41	21.13	8.03
ADERET 1 BOREHOLE	79.50	287000	100000	121000	46600	774000	124000	0.197577	0.068842	0.083299	0.032080	0.532838	0.085364	0.74	1.44	21.32	8.09
ADERET 1 BOREHOLE	80.21	109000	37000	41400	15700	318000	37700	0.195061	0.066213	0.074087	0.028096	0.569077	0.067466	0.72	0.95	23.00	6.89
ADERET 1 BOREHOLE	80.71	213000	75700	88200	36200	626000	82400	0.189924	0.067499	0.078645	0.032278	0.558181	0.073473	0.73	1.30	21.83	7.84
ADERET 1 BOREHOLE	81.93	105000	32800	48900	18500	339000	56000	0.174942	0.054648	0.081473	0.030823	0.564812	0.093302	0.79	1.22	23.18	7.55
ADERET 1 BOREHOLE	83.11	106000	36100	51200	25000	346000	73600	0.166170	0.056959	0.080263	0.039191	0.542405	0.115379	0.81	1.39	20.05	8.37
ADERET 1 BOREHOLE	83.62	125000	30900	46500	16700	302000	47300	0.219916	0.054363	0.081809	0.029381	0.531316	0.083216	0.78	1.24	22.32	7.72
ADERET 1 BOREHOLE	84.03	79000	28900	46700	15600	360000	51500	0.135809	0.049682	0.080282	0.026818	0.618876	0.088554	0.80	0.38	26.39	4.63
ADERET 1 BOREHOLE	84.55	65100	26400	39200	13400	340000	63700	0.118839	0.048193	0.071559	0.024461	0.620664	0.116283	0.81	0.69	25.01	5.69
ADERET 1 BOREHOLE	84.95	51300	23100	37300	14100	322000	65100	0.100019	0.045038	0.072724	0.027491	0.627803	0.126925	0.83	0.76	24.83	6.41
PAMA QUARRY	70.36	103000	365000	446000	135000	165000	289000	0.263091	0.093231	0.113921	0.034483	0.421456	0.073819	0.70	1.75	17.48	8.74
PAMA QUARRY	70.41	166000	45800	40800	14700	209000	27200	0.236962	0.090693	0.081033	0.029196	0.415094	0.054022	0.64	2.19	16.99	8.82
PAMA QUARRY	70.46	166000	593000	757000	222000	304000	517000	0.245413	0.087347	0.111504	0.032700	0.447783	0.076153	0.72	1.74	18.12	8.70
PAMA QUARRY	70.49	33700	11200	10800	3450	54100	8650	0.276456	0.091879	0.088597	0.028302	0.443806	0.070960	0.67	1.88	18.25	8.71
PAMA QUARRY	70.50	1490000	510000	600000	182000	257000	425000	0.257919	0.088281	0.103860	0.031504	0.444868	0.073568	0.70	1.90	17.96	8.76
PAMA QUARRY	70.52	408000	121000	133000	34300	469000	63000	0.332166	0.098510	0.108280	0.027925	0.381829	0.051290	0.66	2.32	17.01	8.83
PAMA QUARRY	70.68	637000	20000	264000	75100	131000	21000	0.236267	0.074181	0.097919	0.027855	0.485887	0.077890	0.73	1.31	21.36	7.96
PAMA QUARRY	70.71	739000	212000	254000	71900	103000	98300	0.307251	0.088142	0.105603	0.029894	0.428239	0.040870	0.67	2.24	17.15	8.84
PAMA QUARRY	70.79	31300	78500	74500	26700	43700	51100	0.044772	0.112287	0.106566	0.038192	0.625089	0.073094	0.66	2.40	16.07	8.90
PAMA QUARRY	70.83	226000	60100	62500	22900	389000	49300	0.279081	0.074216	0.077180	0.028279	0.480366	0.060879	0.69	1.68	19.24	8.45
PAMA QUARRY	70.89	80400	22800	19200	10100	175000	15100	0.249225	0.070676	0.059516	0.031308	0.542467	0.046807	0.66	1.57	19.19	8.45
PAMA QUARRY	70.90	398000	122000	114000	40700	703000	84700	0.271255	0.083425	0.077954	0.027831	0.480717	0.057918	0.66	1.66	19.19	8.44
PAMA QUARRY	70.98	787000	256000	250000	83600	125000	224000	0.276082	0.089806	0.087701	0.029327	0.435804	0.078580	0.69	1.99	17.91	8.77
PAMA QUARRY	71.11	275000	86600	91500	30900	539000	75500	0.250341	0.078835	0.083295	0.028129	0.490669	0.068730	0.70	1.47	20.25	8.26
PAMA QUARRY	71.19	454000	140000	148000	51700	824000	104000	0.263693	0.081315	0.085962	0.030028	0.478597	0.060405	0.68	1.85	18.78	8.63
PAMA QUARRY	71.20	613000	173000	175000	57400	924000	129000	0.295935	0.083518	0.084484	0.027711	0.446075	0.062277	0.68	1.83	18.67	8.59
PAMA QUARRY	71.23	121000	35600	36700	12200	196000	27900	0.281789	0.082906	0.085468	0.028412	0.456451	0.064974	0.68	1.79	18.72	8.61
PAMA QUARRY	71.24	562000	151000	150000	47200	721000	97800	0.325043	0.087334	0.086755	0.027299	0.417004	0.056564	0.66	1.93	18.09	8.65
PAMA QUARRY	71.40	38700	9450	8620	3590	60400	8340	0.299768	0.073199	0.066770	0.027808	0.467854	0.064601	0.69	1.70	18.57	8.50
PAMA QUARRY	71.43	543000	170000	232000	75900	117000	199000	0.227206	0.071133	0.097075	0.031759	0.489560	0.083267	0.75	1.60	20.24	8.39
PAMA QUARRY	71.69	440000	135000	139000	47600	755000	103000	0.271672	0.083534	0.085824	0.029390	0.466164	0.063596	0.68	1.84	18.57	8.66
PAMA QUARRY	71.69	422000	108000	108000	32800	638000	76800	0.304561	0.077945	0.077945	0.023672	0.460450	0.055427	0.67	1.21	22.02	7.08
PAMA QUARRY	71.71	378000	113000	113000	33000	520000	94700	0.301989	0.090277	0.090277	0.026364	0.415453	0.075657	0.68	1.83	18.91	8.57
PAMA QUARRY	73.27	394000	116000	116000	39900	583000	45400	0.304412	0.089624	0.089624	0.030827	0.450437	0.035077	0.63	2.12	17.08	8.83
PAMA QUARRY	73.70	57500	15800	14100	7530	127000	11500	0.246327	0.067686	0.060404	0.023258	0.544060	0.049265	0.68	1.39	19.71	8.28
PAMA QUARRY	74.14	38000	12900	14500	3560	73800	8420	0.251536	0.085329	0.095912	0.023548	0.488160	0.055695	0.67	1.08	24.10	6.79
PAMA QUARRY	75.52	585000	182000	174000	73100	115000	125000	0.255559	0.079507	0.076012	0.031934	0.502381	0.054607	0.67	1.54	19.09	8.49
CISMON	124.27	1710000	471000	456000	143000	388000	256000	0.247253	0.068103	0.065934	0.020677	0.561018	0.037016	0.64	0.37	25.21	4.13
CISMON	124.34	868000	144000	122000	31900	102000	45800	0.388941	0.064525	0.054667	0.014294	0.457051	0.020522	0.58	0.36	19.72	4.05
CISMON	124.65	425000	98200	96000	26300	959000	63900	0.254643	0.058838	0.057879	0.015758	0.574596	0.038286	0.66	0.39	24.48	3.66
CISMON	124.74	626000	175000	175000	65300	151000	89800	0.237022	0.066260	0.066260	0.024725	0.571731	0.034001	0.65	1.05	22.28	6.

Cretaceous dataset for OPTiMAL

SITE	AGE (GTS 2012)	1302 GDGT0	1300 GDGT1	1298 GDGT2	1296 GDGT3	1292 CREN	1292' CREN'	Fr.1302	Fr.1300	Fr.1298	Fr.1296	Fr.1292	Fr.1292'	TEX86 (calculated)	OPTIMAL SST	OPTIMAL StDev	
BASS RIVER	94.01	7260000	1070000	2590000	1460000	45200000	8050000	0.110620	0.016304	0.039464	0.022246	0.688709	0.122657	0.92	1.61	19.47	8.35
BASS RIVER	94.02	3680000	607000	1380000	772000	1980000	3490000	0.123785	0.020418	0.046419	0.025968	0.666016	0.117394	0.90	1.44	20.38	8.16
BASS RIVER	94.03	6300000	2820000	1660000	5810000	10200000	0.078466	0.015070	0.035123	0.020675	0.723627	0.127039	0.92	1.65	19.13	8.46	
BASS RIVER	94.04	2290000	730000	1720000	1010000	34400000	5290000	0.050396	0.016065	0.037852	0.022227	0.757042	0.116417	0.92	1.59	19.14	8.40
BASS RIVER	94.05	3140000	996000	2500000	1490000	50200000	8410000	0.047051	0.014924	0.037461	0.022327	0.752218	0.126019	0.93	1.66	18.79	8.49
BASS RIVER	94.06	3900000	1420000	3070000	1740000	55500000	8210000	0.052817	0.019231	0.041576	0.023564	0.751625	0.111186	0.90	1.54	19.59	8.23
BASS RIVER	94.07	1390000	472000	1130000	656000	1870000	3030000	0.054772	0.018599	0.044527	0.025849	0.736859	0.119395	0.91	1.51	19.40	8.32
BASS RIVER	94.07	3030000	975000	2280000	1320000	3710000	6220000	0.059499	0.019146	0.044772	0.025920	0.728522	0.122140	0.91	1.49	19.53	8.30
BASS RIVER	94.08	2060000	798000	1810000	1020000	31900000	5020000	0.048348	0.018729	0.042480	0.023939	0.748666	0.117818	0.91	1.57	19.43	8.29
BASS RIVER	94.09	4150000	1520000	3330000	1980000	63400000	9570000	0.049434	0.018106	0.039666	0.023585	0.755211	0.113996	0.91	1.60	19.21	8.34
BASS RIVER	94.10	2350000	1020000	2590000	1560000	46600000	7620000	0.039337	0.017074	0.043355	0.024163	0.746568	0.127553	0.92	1.63	18.69	8.50
BASS RIVER	94.11	1940000	600000	1380000	784000	2270000	3730000	0.062311	0.019727	0.044326	0.025181	0.729106	0.119805	0.91	1.50	19.70	8.24
BASS RIVER	94.12	2710000	1100000	2750000	1630000	50400000	8570000	0.040351	0.016379	0.040947	0.024270	0.750447	0.127606	0.92	1.68	18.75	8.47
BASS RIVER	94.12	5480000	970000	2360000	1320000	3970000	5770000	0.098561	0.017446	0.042446	0.023741	0.714029	0.103777	0.91	1.47	19.95	8.17
BASS RIVER	94.13	1050000	2030000	4810000	2730000	85500000	13300000	0.088332	0.017077	0.040464	0.022866	0.719273	0.111887	0.91	1.53	19.76	8.23
BASS RIVER	94.14	375000	853000	215000	132000	6130000	1030000	0.047067	0.017067	0.026985	0.016568	0.769395	0.129278	0.94	1.97	17.74	8.76
BASS RIVER	94.15	1610000	456000	1210000	699000	3320000	5830000	0.037438	0.010603	0.028136	0.016254	0.772003	0.135566	0.94	2.01	17.54	8.79
BASS RIVER	94.16	2450000	727000	1830000	1070000	49000000	6730000	0.042456	0.012598	0.031712	0.028764	0.770869	0.116624	0.93	1.75	18.68	8.62
BASS RIVER	94.17	487000	1680000	4230000	2570000	10700000	17400000	0.035354	0.012196	0.030708	0.018657	0.776770	0.126316	0.94	1.81	18.26	8.68
BASS RIVER	94.18	4630000	649000	1690000	908000	3680000	6160000	0.091075	0.017266	0.033244	0.017861	0.723882	0.121172	0.93	1.68	19.02	8.53
BASS RIVER	94.20	1800000	736000	1950000	1150000	4040000	6620000	0.034184	0.013978	0.030703	0.021840	0.767244	0.125722	0.93	1.69	18.56	8.55
BASS RIVER	94.22	3190000	1130000	2780000	1690000	65100000	9950000	0.030849	0.013478	0.033150	0.020157	0.776479	0.118678	0.93	1.72	18.65	8.58
BASS RIVER	94.23	3530000	1200000	2570000	1840000	6430000	10300000	0.042154	0.014330	0.030690	0.021973	0.767853	0.123000	0.92	1.77	18.20	8.62
BASS RIVER	94.24	1980000	722000	1720000	1190000	48600000	9670000	0.030995	0.011302	0.026925	0.018628	0.760778	0.151373	0.95	2.00	17.30	8.80
BASS RIVER	94.24	711000	3320000	5420000	2460000	7170000	1010000	0.071022	0.033164	0.054140	0.024573	0.761212	0.100889	0.84	1.06	22.35	7.00
BASS RIVER	94.25	678000	2800000	6410000	3840000	12400000	18600000	0.041741	0.017238	0.039463	0.023641	0.763406	0.114511	0.91	1.64	18.96	8.41
BASS RIVER	94.26	235000	949000	1670000	807000	2040000	3020000	0.080490	0.032504	0.057200	0.027641	0.698726	0.103439	0.85	1.02	22.41	7.29
BASS RIVER	94.27	1920000	873000	2080000	1180000	3340000	4820000	0.043367	0.019719	0.046981	0.026653	0.754410	0.108870	0.90	1.47	19.37	8.31
BASS RIVER	94.28	482000	2360000	474000	267000	5710000	7980000	0.060500	0.026922	0.059498	0.033513	0.716706	0.100163	0.87	1.83	18.22	8.71
BASS RIVER	94.29	2120000	1030000	1870000	1060000	1920000	2500000	0.076314	0.030777	0.067315	0.038157	0.691145	0.089993	0.84	1.84	18.48	8.72
BASS RIVER	94.30	3140000	1410000	2860000	1590000	3810000	5440000	0.059764	0.026837	0.054435	0.030263	0.725162	0.103540	0.88	1.42	19.68	8.31
BASS RIVER	94.30	5100000	2230000	4620000	2700000	6850000	10200000	0.054633	0.023889	0.049491	0.028923	0.733798	0.109266	0.89	1.42	19.55	8.31
BASS RIVER	94.31	5550000	2380000	6010000	3310000	8900000	12600000	0.046698	0.020025	0.050568	0.027850	0.748843	0.106016	0.90	1.42	19.50	8.30
BASS RIVER	94.32	3510000	1440000	2870000	1470000	4550000	6560000	0.057213	0.023472	0.046781	0.023961	0.741646	0.106927	0.88	1.38	20.57	7.88
BASS RIVER	94.33	3840000	1540000	3560000	2020000	6320000	9390000	0.045961	0.018143	0.042609	0.024177	0.756433	0.112388	0.91	1.59	19.36	8.29
BASS RIVER	94.34	5480000	2020000	474000	267000	5710000	9780000	0.060500	0.026922	0.059498	0.033513	0.717607	0.100163	0.87	1.83	18.22	8.71
BASS RIVER	94.35	4850000	1520000	3920000	2270000	8450000	1250000	0.042468	0.013874	0.035779	0.020719	0.771267	0.114093	0.92	1.64	19.00	8.49
BASS RIVER	94.35	6110000	1870000	492000	289000	1580000	1040000	0.044047	0.013591	0.035759	0.021004	0.770405	0.114834	0.93	1.65	18.91	8.50
BASS RIVER	94.36	2280000	722000	1900000	111000	4630000	7920000	0.037854	0.011987	0.031545	0.018429	0.768894	0.131492	0.94	1.81	18.22	8.69
BASS RIVER	94.37	2050000	699000	1650000	1000000	3680000	5920000	0.042603	0.014526	0.034290	0.020782	0.764771	0.123028	0.92	1.68	18.74	8.54
BASS RIVER	94.38	2170000	883000	216000	129000	4330000	7000000	0.038202	0.015548	0.038026	0.023082	0.762284	0.123233	0.92	1.66	18.72	8.49
BASS RIVER	94.39	1210000	455000	1140000	688000	2430000	4080000	0.037963	0.014275	0.035767	0.021586	0.762401	0.128000	0.93	1.70	18.54	8.56
BASS RIVER	94.40	1620000	673000	1680000	104000	3510000	590000	0.035207	0.016262	0.036356	0.022602	0.762828	0.128225	0.93	1.72	18.41	8.57
BASS RIVER	94.42	632000	229000	506000	301000	1020000	179000	0.046273	0.016767	0.037044	0.022038	0.746815	0.131059	0.92	1.65	18.85	8.48
BASS RIVER	94.43	1430000	562000	1350000	825000	2500000	4380000	0.043272	0.017008	0.040851	0.024964	0.741368	0.132539	0.92	1.70	18.66	8.50
BASS RIVER	94.44	1430000	638000	1350000	762000	1880000	2840000	0.055833	0.024710	0.052825	0.029512	0.728118	0.109992	0.89	1.41	19.62	8.31
BASS RIVER	94.45	787000	415000	1090000	710000	2020000	3360000	0.029629	0.015624	0.041036	0.026730	0.760485	0.126496	0.93	1.73	18.09	8.62
BASS RIVER	94.46	2050000	556000	1210000	711000	2900000	3620000	0.070575	0.017941	0.041657	0.024478	0.719524	0.124626	0.91	1.58	19.55	8.29
BASS RIVER	94.47	1120000	450000	107000	658000	183000	322000	0.045129	0.018132	0.043114	0.026513	0.737368	0.129745	0.92	1.60	18.77	8.49
BASS RIVER	94.48	810000	354000	100100	503000	213000	212000	0.044291	0.0193								

Cretaceous dataset for OPTiMAL

SITE	AGE (GTS 2012)	1302 GDGT0	1300 GDGT1	1298 GDGT2	1296 GDGT3	1292 CREN	1292' CREN'	Fr.1302	Fr.1300	Fr.1298	Fr.1296	Fr.1292	Fr.1292'	TEX86 (calculated)	OPTIMAL SST	OPTIMAL StDev	
BRAZOS RIVER	Maastrichtian	1890000	1770000	2290000	1300000	15400000	735000	0.080821	0.075690	0.097926	0.055591	0.658542	0.031430	0.71	1.05	21.69	7.68
BRAZOS RIVER	Maastrichtian	1970000	150000	247000	98800	170000	92500	0.079266	0.060355	0.099384	0.039754	0.684022	0.037219	0.75	1.36	21.38	8.10
BRAZOS RIVER	Maastrichtian	1110000	1030000	170000	747000	1000000	465000	0.073744	0.068429	0.112842	0.049628	0.664364	0.030893	0.74	0.79	23.32	6.85
BRAZOS RIVER	Maastrichtian	1040000	60100	92600	36200	684000	39700	0.102302	0.059119	0.091088	0.035609	0.672831	0.039052	0.74	1.09	21.58	7.78
BRAZOS RIVER	Maastrichtian	84900	36200	57400	26300	623000	54100	0.096269	0.041048	0.065087	0.029822	0.706429	0.061345	0.79	1.22	21.84	7.57
BRAZOS RIVER	Maastrichtian	170000	100000	158000	62400	131000	97500	0.089573	0.052690	0.083250	0.032878	0.690237	0.051373	0.76	1.57	21.00	8.21
BRAZOS RIVER	Maastrichtian	492000	318000	453000	294000	459000	329000	0.075973	0.049104	0.066951	0.045398	0.708771	0.050803	0.77	0.96	23.58	7.25
BRAZOS RIVER	Maastrichtian	86600	60900	93000	44700	70000	45100	0.084053	0.059109	0.090265	0.043385	0.679414	0.043774	0.75	0.96	23.41	7.32
BRAZOS RIVER	Maastrichtian	408000	241000	389000	196000	323000	184000	0.087870	0.051850	0.083692	0.042169	0.694923	0.039587	0.76	0.89	23.41	7.18
BRAZOS RIVER	Maastrichtian	126000	109000	159000	87600	144000	108000	0.062081	0.053705	0.078341	0.043161	0.709499	0.053212	0.76	1.11	21.88	7.85
BRAZOS RIVER	Maastrichtian	75000	56900	93200	42600	677000	46200	0.075689	0.057423	0.094056	0.026991	0.683217	0.046624	0.76	1.07	22.48	7.71
BRAZOS RIVER	Maastrichtian	182000	107000	173000	89800	177000	142000	0.073870	0.043429	0.070217	0.036448	0.718402	0.057635	0.79	1.55	19.56	8.55
BRAZOS RIVER	Maastrichtian	410000	306000	480000	34100	431000	319000	0.066494	0.049627	0.077846	0.055303	0.698994	0.051735	0.79	0.67	23.30	6.42
BRAZOS RIVER	Maastrichtian	243000	218000	346000	216000	290000	205000	0.058866	0.052810	0.083818	0.052326	0.702519	0.049661	0.78	0.61	25.04	6.13
BRAZOS RIVER	Maastrichtian	176000	170000	281000	149000	206000	126000	0.059419	0.057394	0.094868	0.053034	0.695476	0.042539	0.77	0.86	24.94	6.55
BRAZOS RIVER	Maastrichtian	102000	895000	1380000	969000	1200000	756000	0.059929	0.052585	0.081081	0.056933	0.705053	0.044418	0.78	0.89	21.76	7.17
BRAZOS RIVER	Maastrichtian	336000	314000	489000	333000	425000	263000	0.056140	0.052644	0.081704	0.055659	0.710109	0.043943	0.78	0.70	23.07	6.51
BRAZOS RIVER	Maastrichtian	220000	107000	155000	108000	154000	83600	0.099386	0.048338	0.070022	0.048789	0.695699	0.037767	0.76	0.81	26.42	6.26
BRAZOS RIVER	Maastrichtian	184000	154000	210000	175000	207000	148000	0.062564	0.052363	0.071404	0.059504	0.703842	0.050323	0.78	1.40	18.82	8.37
BRAZOS RIVER	Maastrichtian	876000	639000	1240000	722000	954000	663000	0.064035	0.046711	0.090643	0.052778	0.697368	0.048465	0.80	0.64	24.53	6.32
BRAZOS RIVER	Maastrichtian	156000	109000	159000	87500	144000	110000	0.075673	0.052874	0.077128	0.042445	0.698520	0.053359	0.77	1.01	22.46	7.61
BRAZOS RIVER	Maastrichtian	200033	131000	187000	102000	173000	153000	0.079916	0.052337	0.074709	0.040751	0.691161	0.061126	0.77	1.20	21.74	7.92
BRAZOS RIVER	Maastrichtian	204000	133000	189000	102000	175000	153000	0.080601	0.052744	0.074674	0.040300	0.691426	0.060450	0.77	1.25	21.65	7.97
BRAZOS RIVER	Maastrichtian	752000	292000	447000	276000	473000	348000	0.108961	0.042659	0.065303	0.040321	0.691015	0.050840	0.79	1.04	22.64	7.44
BRAZOS RIVER	Maastrichtian	228000	169000	236000	194000	261000	208000	0.062551	0.046365	0.064746	0.03224	0.716049	0.057064	0.79	0.70	23.76	6.59
BRAZOS RIVER	Maastrichtian	333000	219000	360000	150000	278000	218000	0.082020	0.055941	0.088670	0.036946	0.684729	0.053695	0.77	1.29	20.74	8.22
BRAZOS RIVER	Maastrichtian	340000	202000	338000	143000	284000	255000	0.082564	0.049053	0.082079	0.034726	0.689655	0.061923	0.78	1.50	20.35	8.41
BRAZOS RIVER	Maastrichtian	341000	197000	338000	141000	301000	285000	0.079082	0.045668	0.078380	0.032699	0.698052	0.060695	0.80	1.56	20.77	8.27
BRAZOS RIVER	Maastrichtian	94100	41700	75200	33500	74000	55600	0.090472	0.040924	0.072301	0.032208	0.711470	0.053456	0.80	1.59	20.57	8.30
BRAZOS RIVER	Maastrichtian	529000	139000	226000	115000	259000	191000	0.139578	0.036675	0.059631	0.030343	0.683377	0.050396	0.79	1.39	20.92	8.07
BRAZOS RIVER	Maastrichtian	141000	59900	88100	44400	92000	86900	0.105200	0.044691	0.065732	0.033127	0.686413	0.064836	0.79	1.61	20.80	8.30
BRAZOS RIVER	Maastrichtian	106000	45700	53800	30400	514000	35100	0.135052	0.058217	0.068553	0.038728	0.654777	0.044713	0.72	0.72	24.69	6.29
BRAZOS RIVER	Maastrichtian	220000	99700	135000	71400	151000	124000	0.101847	0.046155	0.062497	0.033054	0.699042	0.054075	0.77	1.59	20.53	8.33
BRAZOS RIVER	Maastrichtian	657000	161000	210000	84500	146000	91700	0.246603	0.060341	0.078823	0.031717	0.548007	0.034319	0.71	1.44	20.01	8.28
BRAZOS RIVER	Maastrichtian	227000	126000	176000	81600	147000	100000	0.104100	0.057782	0.080712	0.037421	0.674126	0.045859	0.74	0.97	22.56	7.44
BRAZOS RIVER	Maastrichtian	271000	98100	126000	60900	108000	72300	0.158637	0.057426	0.073750	0.035649	0.632207	0.042323	0.73	0.63	23.74	6.26
BRAZOS RIVER	Maastrichtian	289000	115000	142000	75600	152000	112000	0.128239	0.051029	0.063010	0.033546	0.674476	0.049698	0.74	1.26	21.44	7.98
BRAZOS RIVER	Maastrichtian	244000	100000	117000	64500	131000	92900	0.126530	0.051856	0.060672	0.033447	0.679320	0.048175	0.73	1.28	21.27	8.02
BRAZOS RIVER	Maastrichtian	750000	251000	246000	102000	235000	119000	0.196438	0.065741	0.064432	0.028716	0.615056	0.031168	0.65	1.01	21.68	6.86
BRAZOS RIVER	Maastrichtian	45500	16700	20800	10500	206000	15300	0.144536	0.050350	0.066074	0.033355	0.654364	0.048602	0.74	1.17	21.98	7.74
BRAZOS RIVER	Maastrichtian	75500	22100	24900	13300	247000	17500	0.188609	0.055209	0.062603	0.033225	0.617037	0.043717	0.72	1.08	21.81	7.60
BRAZOS RIVER	Maastrichtian	367000	84300	88400	47900	105000	65400	0.215502	0.049501	0.051908	0.028127	0.616559	0.038403	0.71	1.40	19.76	8.00
BRAZOS RIVER	Maastrichtian	154000	49900	59100	27100	406000	31800	0.211568	0.068553	0.081192	0.037230	0.557769	0.043687	0.70	0.36	24.17	5.27
BRAZOS RIVER	Maastrichtian	81400	33500	39200	21100	404000	32000	0.133181	0.054810	0.064136	0.034522	0.660995	0.052356	0.73	1.05	22.05	7.61
BRAZOS RIVER	Maastrichtian	188000	59100	70000	37400	746000	51100	0.163251	0.051320	0.060785	0.032477	0.647794	0.044373	0.73	1.30	21.50	7.92
BRAZOS RIVER	Maastrichtian	62100	24500	29600	15000	278000	22200	0.143950	0.056792	0.068614	0.034771	0.644414	0.051460	0.73	0.90	22.70	7.18
BRAZOS RIVER	Maastrichtian	1570000	335000	433000	222000	4910000	295000	0.202189	0.043142	0.055763	0.028590	0.632325	0.037991	0.74	1.38	20.04	8.08
BRAZOS RIVER	Maastrichtian	448000	127000	152000	76000	161000	113000	0.177356	0.050277	0.060174	0.030867	0.637371	0.044735	0.73	1.29	21.33	7.83
BRAZOS RIVER	Maastrichtian	433000	206000	284000	119000	193000	158000	0.130030	0.061862	0.068258	0.035736	0.639640	0.047447	0.73	0.80	23.01	6.90
BRAZOS RIVER	Maastrichtian	107000	44700	51900	28200	33400	31800	0.148158	0.061894	0.071864	0.039047	0.632789	0.046248	0.72	0.59	25.35	5.74
BRAZOS RIVER	Maastrichtian	144000	49600	59100	27400	486000	31900	0.180451	0.062155	0.074060	0.034336	0.609023	0.039975				

Cretaceous dataset for OPTiMAL

SITE	AGE (GTS 2012)	1302 GDGT0	1300 GDGT1	1298 GDGT2	1296 GDGT3	1292 CREN	1292' CREN'	Fr.1302	Fr.1300	Fr.1298	Fr.1296	Fr.1292	Fr.1292'	TEX86 (calculated)	OPTIMAL SST	OPTIMAL StDev	
DSDP 398	124.75 +/-1.75	17976	3289	8798	1908	78592	14186	0.144098	0.026364	0.070529	0.015293	0.630001	0.113715	.88	1.11	23.70	7.16
DSDP 398	124.75 +/-1.75	202075	84705	204301	61856	517086	0.066316	0.027798	0.067047	0.020300	0.648844	0.169695	.90	1.29	20.91	7.88	
DSDP 398	124.75 +/-1.75	153226	1576326	4358170	1862206	42220977	8160871	0.052957	0.025660	0.070943	0.030313	0.687282	0.132844	.90	1.33	20.27	8.15
DSDP 398	124.75 +/-1.75	1019249	371848	1058052	404735	12983948	2919817	0.054338	0.019824	0.056408	0.021577	0.692195	0.155660	.92	1.43	20.19	8.12
DSDP 398	124.75 +/-1.75	16862375	4915925	13608728	8119820	157200142	41755648	0.069546	0.020275	0.056127	0.033489	0.648348	0.172215	.93	2.21	16.59	8.87
DSDP 398	124.75 +/-1.75	3846038	1147625	3419882	1818453	45253086	9230831	0.059430	0.017733	0.052845	0.028099	0.699257	0.142636	.93	1.52	19.15	8.45
DSDP 398	124.75 +/-1.75	2838310	893926	2792227	1814364	47838455	11344417	0.042036	0.013239	0.041353	0.026871	0.708490	0.168011	.95	1.96	17.31	8.77
DSDP 398	124.75 +/-1.75	2181334	754170	2378756	1292720	37465448	8545644	0.041456	0.014333	0.045208	0.024568	0.712026	0.162409	.94	1.79	18.02	8.64
DSDP 398	124.75 +/-1.75	273742	75162	146117	59074	250103	0.047762	0.040792	0.038188	0.055904	0.135003	0.86	.86	1.49	20.97	8.29	
DSDP 398	124.75 +/-1.75	1218731	398839	1400297	837415	20470215	4898254	0.041703	0.013648	0.047916	0.028655	0.700465	0.167612	.95	1.92	17.34	8.78
DSDP 398	124.75 +/-1.75	557985	24281	693639	372325	7694016	1625767	0.049891	0.021484	0.062021	0.032391	0.687948	0.145365	.92	1.98	17.21	8.80
DSDP 398	124.75 +/-1.75	6882440	4422226	1540409	6178513	12725957	33715124	0.035452	0.022779	0.079360	0.031826	0.656914	0.173669	.93	1.86	17.54	8.75
DSDP 398	124.75 +/-1.75	15588470	7656064	25318965	11108955	182102571	48993157	0.056611	0.026330	0.087076	0.032806	0.626281	0.168496	.92	2.79	15.96	8.90
DSDP 398	124.75 +/-1.75	3618154	1628953	5214677	1812696	4073916	10569938	0.056604	0.025619	0.080212	0.028509	0.640721	0.166236	.92	1.31	20.69	8.08
DSDP 398	124.75 +/-1.75	4672353	2694733	7628152	2877027	63328660	17566720	0.047307	0.027284	0.077234	0.029129	0.641191	0.177855	.91	1.53	19.20	8.46
DSDP 398	124.75 +/-1.75	21219271	11920194	32830853	10248888	19021622	46770537	0.067732	0.038049	0.047947	0.032715	0.607414	0.149292	.88	1.53	19.43	8.46
DSDP 398	124.75 +/-1.75	199819	106085	321457	126834	2601484	651038	0.049871	0.026477	0.080223	0.031655	0.649281	0.162487	.91	1.65	18.52	8.60
DSDP 398	124.75 +/-1.75	2460400	994452	2466582	9195050	19939090	4181050	0.079457	0.032120	0.079668	0.029699	0.644013	0.135044	.88	1.02	22.74	7.42
DSDP 398	124.75 +/-1.75	2040070	1221022	1113267	1229232	27828607	7403318	0.058260	0.029640	0.027024	0.029839	0.675525	0.179712	.89	2.15	16.65	8.86
DSDP 398	124.75 +/-1.75	5293050	3327618	7601795	2243383	5062894	11064688	0.064871	0.040783	0.093169	0.027495	0.638076	0.135607	.88	0.63	25.47	6.06
DSDP 398	124.75 +/-1.75	94891	47424	123966	51928	1012942	231974	0.060713	0.030227	0.079316	0.033225	0.648099	0.148421	.90	1.74	18.24	8.67
SHUQUALAK	astrichtian / Campan	791589	428226	644039	310554	5471860	561829	0.096440	0.052171	0.078464	0.037835	0.666642	0.068448	.78	1.24	21.33	8.06
SHUQUALAK	astrichtian / Campan	1210000	566000	626000	324000	4890000	410000	0.150760	0.070521	0.077997	0.040369	0.609270	0.051084	.71	0.77	25.00	6.33
SHUQUALAK	astrichtian / Campan	624960	280179	385233	191969	3163790	265358	0.126728	0.056814	0.078117	0.038927	0.645604	0.053809	.75	0.85	24.16	6.76
SHUQUALAK	astrichtian / Campan	2693820	1442110	1914800	999334	15697200	1396840	0.111573	0.059729	0.079307	0.032993	0.651049	0.057854	.75	0.95	24.06	7.05
SHUQUALAK	astrichtian / Campan	2190000	1060000	1460000	738000	11600000	1060000	0.120941	0.058538	0.080627	0.040755	0.646061	0.058538	.75	0.99	24.28	6.91
SHUQUALAK	astrichtian / Campan	681000	304000	371000	213000	326000	130600	0.138555	0.061851	0.075483	0.043337	0.632757	0.048016	.73	0.58	25.95	5.85
SHUQUALAK	astrichtian / Campan	616616	304102	375499	214928	2870650	202474	0.134507	0.066336	0.081916	0.046684	0.626196	0.044168	.72	0.61	26.05	5.39
SHUQUALAK	astrichtian / Campan	2690610	1246510	1626230	974425	14850700	1267390	0.115819	0.055322	0.072175	0.043247	0.657189	0.056249	.76	0.66	24.87	6.35
SHUQUALAK	astrichtian / Campan	3884220	1049600	1651560	1574800	23326100	2332610	0.108440	0.057224	0.074027	0.043966	0.651222	0.065122	.76	0.81	24.16	6.86
SHUQUALAK	astrichtian / Campan	9654860	4777370	7076540	3698750	54627600	6318180	0.112066	0.055456	0.082139	0.042923	0.634072	0.073336	.78	0.92	23.32	7.29
SHUQUALAK	astrichtian / Campan	2488780	1640010	2450030	1202350	2094940	2594640	0.129472	0.049509	0.073963	0.036297	0.632431	0.078288	.79	1.15	21.61	7.94
SHUQUALAK	astrichtian / Campan	2929560	1259200	2196650	974981	18347400	2393740	0.104116	0.046031	0.078068	0.034651	0.652061	0.080573	.81	1.55	20.60	8.40
SHUQUALAK	astrichtian / Campan	350000	134000	204000	86400	1660000	218000	0.131956	0.050520	0.076911	0.032574	0.625584	0.082190	.79	1.50	22.37	7.92
SHUQUALAK	astrichtian / Campan	214000	86900	136000	58500	108000	137000	0.124971	0.050747	0.079421	0.034163	0.630694	0.080005	.79	1.35	21.68	8.10
SHUQUALAK	astrichtian / Campan	893900	348000	536000	245000	4730000	594000	0.121563	0.047373	0.072965	0.033351	0.643888	0.080860	.80	1.53	21.55	8.17
SHUQUALAK	astrichtian / Campan	573000	233000	342000	160000	297000	407000	0.122305	0.049733	0.072998	0.034152	0.633938	0.086873	.80	1.45	21.20	8.24
SHUQUALAK	astrichtian / Campan	872830	414969	598874	270414	5648170	719958	0.102951	0.046845	0.072020	0.031699	0.662108	0.084397	.79	1.38	22.01	7.85
SHUQUALAK	astrichtian / Campan	2579350	1162950	1661080	737171	14773100	1672460	0.114201	0.051490	0.073544	0.032638	0.654079	0.074408	.78	1.53	21.90	8.00
SHUQUALAK	astrichtian / Campan	924037	431968	636503	287482	5589170	657034	0.106285	0.051465	0.074590	0.033689	0.654976	0.076996	.78	1.47	21.33	8.19
SHUQUALAK	astrichtian / Campan	1322920	600122	780649	370905	7162190	749949	0.120425	0.054555	0.076955	0.0303713	0.650997	0.069534	.76	1.31	21.68	8.00
SHUQUALAK	astrichtian / Campan	1370900	633637	911293	432094	7877330	889000	0.112995	0.052483	0.075157	0.035636	0.649667	0.074062	.78	1.21	21.38	8.04
SHUQUALAK	astrichtian / Campan	224070	994116	1395670	624464	12769300	1420810	0.115024	0.051126	0.071777	0.032115	0.656707	0.073070	.78	1.43	22.08	7.89
SHUQUALAK	astrichtian / Campan	1555440	718737	1087620	481436	10009100	1219640	0.103201	0.047687	0.072162	0.031942	0.664087	0.080921	.80	1.41	21.96	7.91
SHUQUALAK	astrichtian / Campan	2120000	952000	1390000	602000	13400000	1510000	0.106138	0.047662	0.069590	0.030139	0.670872	0.075598	.79	1.11	23.03	7.17
SHUQUALAK	astrichtian / Campan	1480000	691000	1020000	447000	988000	1180000	0.100694	0.047013	0.069397	0.030412	0.672200	0.080283	.79	1.18	22.81	7.33
SHUQUALAK	astrichtian / Campan	1310000	602000	929000	400000	875000	1050000	0.100452	0.046162	0.071237	0.030672	0.670961	0.080515	.80	1.19	22.78	7.41
SHUQUALAK	astrichtian / Campan	4300000	3100000	1280000	2800000	3310000	110399	0.050628	0.027799	0.069797	0.033024	0.639835	0.085397	.80	1.57	21.79	8.09
SHUQUALAK	astrichtian / Campan	1520600	752520	9955790	521268	1121030	0.100871	0.049920	0.073862	0.034579	0.660433	0.083396	.79	1.48	20.71	8.34	
SHUQUALAK	astrichtian / Campan	415399	198474														