

Table 1. U37K' and Ancillary Data for EEP Surface Sediments

Core ID	Latitude	Longitude (degreeW)	U37K'	maSST (WOA09)	Prahl SST	Residual	Reference
RR9702A-62MC1	-18.1	79.0	0.698	19.96	19.38	-0.58	Prahl et al. [2006]
RR9702A-64MC1	-17.0	78.1	0.701	20.01	19.47	-0.54	Prahl et al. [2006]
RR9702A-70MC1	-16.7	76.0	0.661	19.68	18.29	-1.38	Prahl et al. [2006]
RR9702A-72MC1	-16.5	76.2	0.696	19.68	19.32	-0.36	Prahl et al. [2006]
RR9702A-74MC1	-16.2	76.2	0.675	19.68	18.71	-0.97	Prahl et al. [2006]
RR9702A-77MC1	-16.1	77.0	0.677	19.82	18.76	-1.06	Prahl et al. [2006]
RR9702A-66MC1	-16.1	77.1	0.677	19.82	18.76	-1.06	Prahl et al. [2006]
RR9702A-68MC1	-16.0	76.4	0.685	19.68	19.00	-0.68	Prahl et al. [2006]
RR9702A-82MC4	-13.7	76.7	0.736	19.13	20.50	1.37	Prahl et al. [2006]
RR9702A-80MC4	-13.5	76.9	0.699	19.13	19.41	0.28	Prahl et al. [2006]
RR9702A-83MC2	-13.2	77.3	0.748	19.13	20.85	1.72	Prahl et al. [2006]
VNTR01-10GC	-4.5	102.0	0.867	24.29	24.35	0.06	Prahl et al. [2006]
VNTR01-9PC	-3.0	110.5	0.876	24.52	24.62	0.10	Prahl et al. [2006]
VNTR01-12GC	-3.0	95.1	0.802	23.52	22.44	-1.08	Prahl et al. [2006]
VNTR01-8PC	0.0	110.5	0.868	24.30	24.38	0.08	Prahl et al. [2006]
VNTR01-19PC	7.9	90.5	0.911	27.32	25.65	-1.67	Prahl et al. [2006]
VNTR01-21GC	9.6	94.6	0.908	27.76	25.56	-2.20	Prahl et al. [2006]
MWSC2	-11.1	78.1	0.777	20.35	21.71	1.35	Conte et al. [2006]
Peru3MC1	-12.7	77.6	0.746	19.00	20.79	1.80	Conte et al. [2006]
Peru2MC4	-12.5	77.6	0.647	19.00	17.88	-1.11	Conte et al. [2006]
Peru4MC2	-12.5	77.5	0.762	19.00	21.26	2.27	Conte et al. [2006]
Peru1MC3	-12.4	77.5	0.747	19.00	20.82	1.83	Conte et al. [2006]
Peru Upwelling	-12.0	77.3	0.550	19.00	15.03	-3.97	Conte et al. [2006]
SC3	-15.1	75.7	0.710	19.24	19.74	0.49	Conte et al. [2006]
MWSC7	-14.9	75.6	0.656	18.32	18.15	-0.17	Conte et al. [2006]
PLDS66	1.0	124.5	0.826	25.90	23.13	-2.76	Conte et al. [2006]
PLDS_90, 5-10	1.1	119.9	0.938	25.08	26.44	1.36	Conte et al. [2006]
PLDS_74, 5-10	1.0	113.7	0.895	24.77	25.16	0.39	Conte et al. [2006]
PLDS_68, 5-10	1.1	107.2	0.885	24.77	24.88	0.11	Conte et al. [2006]
PLDS_72, 5-10	1.1	107.2	0.888	24.77	24.96	0.19	Conte et al. [2006]
PLDS_70, 5-10	1.0	105.5	0.886	24.76	24.90	0.14	Conte et al. [2006]
PLDS_70, 5-10	0.9	104.1	0.873	24.20	24.53	0.33	Conte et al. [2006]
PLDS_77, 5-10	1.0	104.1	0.914	24.20	25.72	1.52	Conte et al. [2006]
V19-27	-0.3	82.4	0.941	24.52	26.54	2.03	Koutavas and Sachs [2008]
V19-28	-2.2	84.4	0.856	22.85	24.04	1.18	Koutavas and Sachs [2008]
V19-30	-3.2	83.3	0.812	22.12	22.73	0.61	Koutavas and Sachs [2008]
V21-30	-1.1	89.4	0.881	23.41	24.76	1.36	Koutavas and Sachs [2008]
RC11-238	-1.3	85.5	0.870	23.49	24.43	0.94	Koutavas and Sachs [2008]
HY06	0.0	95.3	0.855	24.35	24.00	-0.34	Horikawa et al. [2006]
Y69-71P	0.1	86.5	0.857	25.00	24.06	-0.94	Prahl et al. [2006]

MD02-2529	8.1	84.1	0.954	28.49	26.91	-1.58	Leduc et al. [2007]	
ODP-846 -3.1	90.5	0.803	23.33	22.47	-0.86	Liu and Herbert [2004]		
TR163-19	2.2	90.6	0.893	26.33	25.12	-1.22	Dubois et al. [2009]	
TR163-22	0.3	92.2	0.858	24.15	24.10	-0.05	Dubois et al. [2009]	
TR163-31	-3.4	83.6	0.792	22.12	22.13	0.02	Dubois et al. [2009]	
TG7 (MC)	-17.2	78.6	0.730	20.01	20.32	0.31	Calvo et al. [2001]	
SO147-106KL	-12.0	77.4	0.763	19.00	21.30	2.30	Rein et al. [2005]	
B0406 -14.1	76.3	0.647	18.32	17.88	-0.44	Gutierrez et al. [2011]		
AMPH-25G	-9.1	105.9	0.911	24.82	25.64	0.81	this study	
CARR12 -8.9	103.5	0.894	24.76	25.14	0.38	this study		
DWBG-143	-3.6	114.3	0.895	24.80	25.17	0.37	this study	
DWBG-144	-1.2	115.8	0.920	24.27	25.91	1.63	this study	
GS7202-20	-8.8	98.0	0.924	24.37	26.03	1.67	this study	
GS7202-19	-7.0	98.0	0.930	24.35	26.20	1.85	this study	
GS7202-23	-8.4	101.5	0.922	24.62	25.97	1.35	this study	
GS7202-24	-10.0	101.6	0.911	24.48	25.65	1.17	this study	
GS7202-40	-18.0	102.6	0.901	23.03	25.34	2.31	this study	
GS7202-46	-12.3	78.5	0.893	19.97	25.12	5.15	this study	
GS7202-52	-12.8	79.5	0.905	20.58	25.46	4.88	this study	
ME005A-04MC6	15.7	95.3	0.981	27.73	27.71	-0.03	this study	
ME005A-07MC3	15.7	95.3	0.991	27.73	27.99	0.26	this study	
ME005A-08MC4	15.6	95.3	0.941	27.73	26.54	-1.20	this study	
ME005A-14MC7	5.8	86.4	0.976	27.63	27.56	-0.06	this study	
ME005A-15MC6	4.6	86.7	0.946	27.41	26.68	-0.72	this study	
ME005A-21MC4	0.0	86.5	0.915	25.00	25.76	0.77	this study	
ME005A-25MC2	-1.9	82.8	0.845	23.52	23.70	0.18	this study	
ME005A-29MC2	-0.5	82.0	0.921	24.91	25.95	1.04	this study	
ME005A-35MC3	4.1	85.0	0.952	27.44	26.86	-0.58	this study	
ME005A-38MC2	7.3	84.1	0.957	28.21	27.00	-1.21	this study	
ME005A-41MC2	7.9	83.6	0.962	28.35	27.15	-1.20	this study	
ME005A-20MC8	3.2	86.5	0.952	27.04	26.84	-0.20	this study	
P6702-G11	-5.0	103.0	0.897	24.56	25.23	0.67	this study	
P6702-G13	-6.1	81.6	0.815	20.46	22.84	2.38	this study	
P6702-G34	-9.3	109.9	0.917	25.11	25.81	0.71	this study	
P6702-G52	-1.7	90.6	0.894	23.06	25.14	2.08	this study	
P6702-G59	2.8	85.3	0.948	26.53	26.73	0.20	this study	
RC13-106	-5.4	88.8	0.877	23.48	24.64	1.16	this study	
RC13-108	-3.1	89.4	0.859	23.31	24.13	0.82	this study	
RC13-142	4.5	82.4	0.963	27.22	27.17	-0.05	this study	
RC18-46 -5.4	87.3	0.868	23.30	24.38	1.08	this study		
RC18-48 -3.6	82.4	0.928	21.67	26.16	4.49	this study		
RC23-20 1.0	83.6	0.920	25.90	25.92	0.03	this study		
SCAN-95G	-5.0	114.1	0.890	25.33	25.03	-0.30	this study	
KNR-176-2-MC11-D		5.3	77.4	0.972	26.68	27.44	0.76	this study
KNR-176-2-MC28-G		2.5	79.1	0.951	26.63	26.82	0.19	this study

KNR-176-2-MC4-A	7.2	78.1	0.949	28.33	26.78	-1.55	this study
KNR-176-2-MC24-F		3.5	78.1	0.956	26.77	26.96	0.19 this study
KNR-176-2-MC33-F		4.4	77.6	0.954	26.72	26.91	0.20 this study
KNR-176-2-MC7-G	6.5	77.6	0.953	26.63	26.89	0.26	this study
KNR-176-2-MC40-H		7.1	80.3	0.957	28.33	26.99	-1.34 this study
KNR-176-2-MC37-H		6.4	77.5	0.949	26.63	26.78	0.15 this study
KNR-176-2-MC14-G		4.5	77.4	0.959	26.72	27.05	0.34 this study
KNR-176-2-MC21-F		4.2	77.4	0.921	26.72	25.95	-0.77 this study
KNR-176-2-MC5-F	7.1	78.0	0.959	28.33	27.06	-1.26	this study
KNR182-9-MC2-E	-16.8	72.7	0.667	19.72	18.47	-1.26	this study
KNR182-9-MC3-A	-15.6	75.1	0.751	19.24	20.95	1.71	this study
KNR182-9-MC4-F	-13.3	77.2	0.782	19.13	21.85	2.72	this study
KNR182-9-MC6-E	-13.3	76.5	0.754	19.13	21.03	1.91	this study
KNR182-9-MC7-H	-12.8	77.0	0.800	19.00	22.39	3.40	this study
KNR182-9-MC8-C	-12.3	78.0	0.802	19.00	22.46	3.46	this study
KNR182-9-MC9-G	-11.7	78.4	0.800	20.35	22.37	2.02	this study
KNR182-9-MC10-F	-11.7	77.6	0.747	20.35	20.83	0.48	this study
KNR182-9-MC12-H	-11.0	78.2	0.822	20.35	23.02	2.67	this study
KNR182-9-MC13-E	-11.0	78.2	0.797	20.35	22.30	1.95	this study
KNR182-9-MC14-F	-8.2	80.3	0.774	20.35	21.62	1.27	this study
KNR182-9-MC15-F	-3.6	83.9	0.797	22.12	22.29	0.17	this study
KNR182-9-MC16-F	1.5	86.2	0.903	25.80	25.42	-0.39	this study
KNR182-9-MC17-H	8.5	90.0	0.937	27.30	26.41	-0.89	this study
KNR195-5-MC11-E	-1.3	86.5	0.840	23.53	23.56	0.02	this study
KNR195-5-MC33-E	-3.1	82.5	0.781	21.67	21.82	0.16	this study
KNR195-5-MC9-E	-0.5	87.5	0.849	24.17	23.82	-0.34	this study
KNR195-5-MC34-E	-3.4	83.6	0.788	22.12	22.03	-0.09	this study
KNR195-5-MC25-E	-3.3	81.0	0.777	21.29	21.71	0.42	this study
KNR195-5-MC42-D	-1.2	89.4	0.862	23.41	24.21	0.80	this study
KNR195-5-MC12-E	-3.4	81.1	0.819	21.29	22.94	1.66	this study
KNR195-5-MC38-E	-1.2	89.4	0.829	23.41	23.24	-0.17	this study
KNR195-5-MC16-E	-3.5	81.1	0.807	21.29	22.59	1.30	this study
KNR195-5-MC22-E	-3.5	81.2	0.823	21.29	23.06	1.77	this study
KNR195-5-MC18-E	-3.6	81.2	0.818	21.29	22.91	1.63	this study
ODP 1228	-11.1	78.1	0.791	20.35	22.11	1.76	this study
W7706-40K	-11.3	78.0	0.767	20.35	21.40	1.05	this study
GC-10	-14.9	75.6	0.721	18.32	20.05	1.73	this study
54-2-PG9	-8.1	104.3	1.000	25.08			this study
AMPH-19G	-8.3	107.8	1.000	25.40			this study
DWBG-140G	-5.9	112.5	1.000	25.51			this study

Table 2. Summary of Linear Regressions^a

	a	b	r2	RMSE		
Full Data Set						
maSST	0.027 +/- 0.003	0.207 +/- 0.062	0.78	0.044		
20 m	0.024 +/- 0.002	0.326 +/- 0.053	0.76	0.046		
50 m	0.024 +/- 0.005	0.396 +/- 0.088	0.47	0.068		
100 m	0.016 +/- 0.009	0.612 +/- 0.009	0.1	0.086		
SST Jan-Mar	0.044 +/- 0.006	-0.251 +/- 0.160	0.62	0.057		
SST Jul-Sep	0.020 +/- 0.002	0.403 +/- 0.05	0.74	0.047		
Reduced Data Set						
maSST	0.031 +/- 0.003	0.110 +/- 0.065	0.88	0.033		
Coastal Peru Samples Only						
maSST	0.046 +/- 0.021	-0.142 +/- 0.420	0.37	0.055		
20 m	0.042 +/- 0.015	0.011 +/- 0.260	0.51	0.048		
50 m	0.068 +/- 0.022	-0.310 +/- 0.349	0.55	0.047		
100 m	0.006 +/- 0.012	0.847 +/- 0.165	0.03	0.059		
SST Jan-Mar	0.034 +/- 0.033	-0.016 +/- 0.751	0.14	0.065		
SST Jul-Sep	0.032 +/- 0.022	0.210 +/- 0.388	0.23	0.062		

aThe variables a and b denote the slope and y-intercept, respectively, of the equation $U37K' = a \times \text{temperature} + b$.