Electronic Supplementary Material:

“Tidal trends associated with anomalous sea level rise in the western Pacific Ocean”,

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Table S1: Amplitude and phase anomaly trends with 95% confidence limits for the K_1 constituent, for before and after 1993, and differences in the two rates (in italics)[a]

St. Name	K_1 A-TAT			K_1 P-TAT		
	Pre-1993 (mmm^{-1})	**Post-1993 (mmm^{-1})**	***Diffs.***	**Pre-1993 ($degm^{-1}$)**	**Post-1993 ($degm^{-1}$)**	***Diffs.***
Pohnpei	24.9 ± 5.9	20.8 ± 5.1	*-4.0 ± 7.8*	-13.3 ± 2.6	-16.5 ± 2.4	*-3.2 ± 3.5*
Majuro	20.7 ± 5.9	3.3 ± 14.6	*-17.4 ± 15.7*	-15.7 ± 3.7	5.7 ± 10.1	*21.4 ± 10.8*
Malakal	42.2 ± 5.2	52.8 ± 5.6	*10.6 ± 7.6*	8.9 ± 2.5	6.0 ± 1.7	*-2.9 ± 3.0*
Yap	4.9 ± 5.5	30.8 ± 6.1	*25.9 ± 8.2*	14.7 ± 2.6	9.5 ± 1.5	*-5.2 ± 3.0*
Honiara	-12.5 ± 3.9	-13.0 ± 17.4	*-0.5 ± 17.8*	-1.7 ± 0.8	-1.9 ± 4.3	*-0.3 ± 4.4*
Kanton	-20.1 ±3.0	-21.5 ± 8.4	*-1.4 ± 9.0*	33.7 ± 8.2	-77.0 ± 24.1	*-110.7 ± 25.5*
Noumea	10.7 ± 4.3	27.6 ± 12.0	*16.9 ± 12.7*	6.5 ± 2.5	3.0 ± 3.5	*-3.5 ± 4.3*
Saipan	-14.0 ± 11.8	-4.4 ± 11.4	*9.5 ± 16.4*	-2.3 ± 4.3	2.5 ± 3.2	*4.8 ± 5.4*
Midway	14.3 ± 4.6	4.4 ± 5.4	*-10.0 ± 7.1*	0.0 ± 3.0	4.6 ± 3.9	*4.6 ± 4.9*
Wake	-10.1 ± 3.0	-3.7 ± 5.4	*6.4 ± 6.2*	-0.3 ± 3.0	1.8 ± 6.1	*2.1 ± 6.8*
Johnston	-26.9 ± 3.7	-6.5 ± 8.8	*20.5 ± 9.5*	-5.6 ± 3.5	-1.7 ± 4.6	*4.0 ± 5.8*
Guam	-36.8 ± 6.3	-21.8 ± 8.0	*15.0 ± 10.2*	17.4 ± 2.5	17.7 ± 2.3	*0.2 ± 3.4*
Kwajalein	-4.6 ± 3.9	1.3 ± 4.9	*6.0 ± 6.3*	4.6 ± 2.7	5.9 ± 3.3	*1.3 ± 4.3*
Pagopago	20.8 ± 5.1	15.6 ± 3.4	*-5.2 ± 6.1*	4.8 ± 3.5	5.0 ± 4.8	*0.3 ± 5.9*
Ft Denison	11.5 ± 5.4	33.1 ± 10.8	*21.7 ± 12.1*	8.9 ± 2.2	12.5 ± 4.7	*3.6 ± 5.2*
Townsville	42.9 ± 8.5	9.1 ± 15.4	*-33.7 ± 17.6*	9.4 ± 2.3	8.0 ± 1.8	*-1.3 ± 2.9*
Cairns	-67.9 ± 32.5	45.9 ± 12.1	*113.8 ± 34.7*	-5.6 ± 2.3	4.6 ± 2.0	*10.1 ± 3.0*
Gladstone	66.0 ± 13.3	4.2 ± 14.1	*-61.8 ± 19.4*	10.6 ± 3.0	5.6 ± 2.1	*-5.0 ± 3.7*
Wlmstwn	-11.1 ± 7.2	30.0 ± 11.3	*41.1 ± 13.4*	-7.8 ± 6.4	3.5 ± 6.3	*11.3 ± 9.0*
Auckland	-2.0 ± 2.9	47.1 ± 9.7	*49.1 ± 10.1*	26.7 ± 4.7	5.8 ± 10.3	*-20.9 ± 11.3*

[a] -Tables are shaded with either a dark grey (for A-TATs), or light grey (for P-TATs) to show locations where there is a significant difference in the TATs between the two time periods, "significant" here is defined as more than ± 10 mmm^{-1} or $degm^{1}$ (beyond combined error bands), as well as a signal-to-noise ratio greater than 2 (SNR > 2)

Table S2: Amplitude and phase anomaly trends with 95% confidence limits for M_2 constituent, for before and after 1993, and differences in the two rates (in italics)[a]

St. Name	M_2 A-TAT			M_2 P-TAT		
	Pre-1993 (mmm^{-1})	**Post-1993 (mmm^{-1})**	***Diffs.***	**Pre-1993 (degm^{-1})**	**Post-1993 (degm^{-1})**	***Diffs.***
Pohnpei	-10.1 ± 21.6	5.5 ± 14.0	*15.6 ± 25.7*	22.6 ± 7.4	8.0 ± 2.4	*-14.6* ± 7.8
Majuro	-29.4 ± 35.3	5.0 ± 31.6	*34.4 ± 47.4*	4.8 ± 4.4	6.2 ± 2.8	*1.4* ± 5.2
Malakal	-27.9 ± 13.4	-27.4 ± 7.4	*0.5 ± 15.3*	0.7 ± 2.5	-3.8 ± 1.4	*-4.5* ± 2.9
Yap	-28.0 ± 16.1	-46.4 ± 7.9	*-18.4 ± 18.0*	21.5 ± 2.9	12.3 ± 2.0	*-9.2* ± 3.5
Honiara	62.8 ± 5.0	65.6 ± 5.1	*2.8 ± 7.1*	39.0 ± 4.3	26.8 ± 4.5	*-12.2* ± 6.2
Kanton	55.6 ± 18.5	58.1 ± 39.4	*2.5 ± 43.5*	6.0 ± 2.8	-33.3 ± 4.2	*-39.3* ± 5.0
Noumea	63.0 ± 22.8	-10.3 ± 46.4	*-73.2 ± 51.7*	-5.2 ± 3.3	8.7 ± 4.6	*13.9* ± 5.7
Saipan	5.9 ± 13.2	28.2 ± 13.7	*22.3 ± 19.0*	20.3 ± 4.6	-7.4 ± 6.9	*-27.7* ± .8.3
Midway	11.8 ± 8.6	8.2 ± 8.5	*-3.6 ± 12.1*	-7.1 ± 5.3	-6.7 ± 2.5	*0.3* ± 5.9
Wake	-66.5 ± 12.0	24.7 ± 22.7	*91.2 ± 25.7*	17.5 ± 2.5	14.1 ± 4.6	*-3.3* ± 5.2
Johnston	-32.4 ± 8.8	-33.3 ± 13.0	*-0.9 ± 15.7*	15.8 ± 4.5	0.2 ± 4.8	*-15.6* ± 6.6
Guam	-34.8 ± 8.7	-5.8 ± 10.5	*29.0 ± 13.6*	5.9 ± 2.0	-7.1 ± 2.4	*-13.0* ± 3.1
Kwajalein	1.3 ± 10.5	6.9 ± 11.7	*5.6 ± 15.7*	-2.7 ± 1.1	1.7 ± 1.2	*4.4* ± 1.6
Pagopago	105.6 ± 11.0	32.3 ± 13.1	*-73.4 ± 17.1*	20.7 ± 2.5	13.9 ± 1.9	*-6.9* ± 3.1
Ft. Denison	-64.9 ± 13.6	-13.9 ± 12.7	*51.0 ± 18.6*	12.0 ± 3.1	2.5 ± 3.3	*-9.5* ± 4.5
Townsville	-78.2 ± 30.3	22.4 ± 24.6	*100.5 ± 39.0*	1.0 ± 3.7	-3.4 ± 1.5	*-4.4* ± 4.0
Cairns	-169.1 ± 52.4	131.4 ± 20.8	*300.5 ± 56.4*	-10.3 ± 8.5	15.5 ± 3.4	*25.8* ± 9.2
Gladstone	-19.8 ± 18.2	-153.7 ± 55.4	*-133.9 ± 58.3*	8.6 ± 3.9	0.9 ± 1.9	*-7.7* ± 4.3
Wlmstwn	-2.9 ± 6.2	41.2 ± 13.3	*44.1 ± 14.7*	-16.1 ± 8.9	-2.9 ± 3.2	*13.2* ± 9.5
Auckland	-27.0 ± 19.4	-185.5 ± 39.5	*-158.5 ± 44.0*	39.6 ± 7.3	6.4 ± 2.7	*-33.2* ± 7.8

[a] -Tables are shaded with either a dark grey (for A-TATs), or light grey (for P-TATs) to show locations where there is a significant difference in the TATs between the two time periods; significant here is defined as more than ±10mm m^{-1} or deg m^{1} (beyond combined error bands), as well as having a SNR > 2

Table S3: Amplitude and phase anomaly trends with 95% confidence limits for O_1 constituent, for before and after 1993, and differences in the two rates (in italics)[a]

St. Name	O_1 A-TAT			O_1 P-TAT		
	Pre-1993 (mmm^{-1})	**Post-1993 (mmm^{-1})**	***Diffs.***	**Pre-1993 ($degm^{-1}$)**	**Post-1993 ($degm^{-1}$)**	***Diffs.***
Pohnpei	2.4 ± 3.3	-3.1 ± 3.3	*-5.5 ± 4.7*	8.0 ± 3.6	8.6 ± 1.7	*0.6* ± 4.0
Majuro	-22.2 ± 3.6	-3.6 ± 10.4	*18.6 ± 11.0*	11.6 ± 4.1	-5.9 ± 9.1	*-17.5* ± 10.0
Malakal	12.8 ± 4.8	-1.7 ± 5.4	*-14.5 ± 7.2*	-25.1 ± 1.6	-34.4 ± 2.3	*-9.3* ± 2.8
Yap	-4.1 ± 7.8	13.4 ± 9.4	*17.5 ± 12.2*	60.8 ± 4.4	51.4 ± 3.2	*-9.4* ± 5.4
Honiara	-24.2 ± 2.8	-25.4 ± 14.8	*-1.2 ± 15.1*	2.0 ± 14.6	-4.3 ± 4.6	*6.3* ± 15.3
Kanton	-10.6 ± 2.4	12.7 ± 15.4	*23.3 ± 15.6*	-12.9 ± 7.9	149.8 ± 26.8	*162.7* ± 27.9
Noumea	-2.7 ± 3.5	-6.3 ± 7.9	*-3.7 ± 8.6*	-10.3 ± 4.0	0.7 ± 19.8	*11.0* ± 20.2
Saipan	18.8 ± 4.0	2.9 ± 4.6	*-15.9 ± 6.1*	-6.3 ± 4.4	-17.5 ± 3.9	*-11.3* ± 5.9
Midway	-3.5 ± 3.5	-9.0 ± 4.3	*-5.5 ± 5.5*	-1.3 ± 2.9	1.9 ± 5.2	*3.2* ± 5.9
Wake	5.9 ± 3.2	4.4 ± 4.7	*-1.5 ± 5.7*	13.3 ± 3.9	3.2 ± 5.9	*-10.1* ± 7.1
Johnston	-0.3 ± 2.4	10.1 ± 5.0	*10.5 ± 5.5*	4.8 ± 3.9	6.6 ± 6.5	*1.8* ± 7.6
Guam	-39.6 ± 3.9	-14.6 ± 5.8	*24.9 ± 7.0*	-3.3 ± 2.4	-7.4 ± 3.1	*-4.1* ± 3.9
Kwajalein	13.0 ± 2.4	3.0 ± 5.3	*-10.0 ± 5.8*	-0.6 ± 2.5	-3.1 ± 3.3	*-2.5* ± 4.1
Pagopago	7.8 ± 2.5	-3.1 ± 1.9	*-11.0 ± 3.1*	24.1 ± 4.8	23.8 ± 6.2	*-0.3* ± 7.8
Ft. Denison	2.7 ± 4.5	37.7 ± 9.2	*35.0 ± 10.2*	0.6 ± 2.7	2.6 ± 6.5	*2.0* ± 7.0
Townsville	27.7 ± 9.8	-8.9 ± 9.3	*-36.6 ± 13.5*	8.2 ± 4.6	-9.6 ± 2.6	*-17.8* ± 5.3
Cairns	4.2 ± 14.3	29.8 ± 9.1	*25.6 ± 16.9*	-2.5 ± 4.4	-2.4 ± 3.0	*0.1* ± 5.3
Gladstone	7.3 ± 11.9	11.0 ± 12.8	*3.6 ± 17.5*	16.1 ± 4.4	-1.0 ± 5.6	*-17.1* ± 7.1
Wlmstwn	-10.4 ± 6.5	31.7 ± 13.1	*42.1 ± 14.6*	-15.1 ± 7.2	-3.5 ± 11.2	*11.6* ± 13.7
Auckland	-0.5 ± 2.6	6.3 ± 4.5	*6.8 ± 5.2*	0.3 + 12.0	8.0 ± 15.3	*7.7* ± 19.4

[a] -Tables are shaded with either a dark grey (for A-TATs), or light grey (for P-TATs) to show locations where there is a significant difference in the TATs between the two time periods; significant here is defined as more than ±10mm m^{-1} or deg m^1 (beyond combined error bands), as well as having a SNR > 2

Table S4 Amplitude and phase anomaly trends with 95% confidence limits for S_2 constituent, for before and after 1993, and differences in the two rates (in italics)[a].

St. Name	S_2 A-TAT			S_2 P-TAT		
	Pre-1993 (mmm^{-1})	**Post-1993 (mmm^{-1})**	***Diffs.***	**Pre-1993 (degm^{-1})**	**Post-1993 (degm^{-1})**	***Diffs.***
Pohnpei	-2.3 ± 4.0	-3.1 ± 4.1	*-0.8 ± 5.7*	-5.0 ± 5.9	-18.1 ± 2.9	*-13.1 ± 6.6*
Majuro	-3.6 ± 9.3	5.2 ± 4.7	*8.8 ± 10.2*	6.1 ± 3.9	1.3 ± 2.4	*-4.8 ± 4.6*
Malakal	-3.8 ± 3.0	0.0 ± 1.3	*3.7 ± 3.3*	-0.2 ± 2.3	-6.3 ± 1.6	*-6.1 ± 2.8*
Yap	-5.2 ± 2.6	-12.8 ± 1.7	*-7.7 ± 3.1*	29.5 ± 3.6	17.8 ± 1.8	*-11.7 ± 4.0*
Honiara	16.3 ± 1.2	16.4 ± 1.1	*0.1 ± 1.6*	-21.5 ± 1.9	-16.8 ± 2.1	*4.7 ± 2.8*
Kanton	-0.1 ± 2.9	12.8 ± 1.9	*12.9 ± 3.5*	7.6 ± 2.8	-1.8 ± 3.4	*-9.5 ± 4.4*
Noumea	8.9 ± 4.4	6.2 ± 6.7	*-2.7 ± 8.0*	0.8 ± 5.0	-3.5 ± 4.2	*-4.3 ± 6.5*
Saipan	-10.4 ± 3.6	-3.5 ± 3.6	*6.9 ± 5.1*	-24.3 ± 12.5	-13.3 ± 11.0	*10.9 ± 16.6*
Midway	1.9 ± 1.5	0.5 ± 1.9	*-1.4 ± 2.4*	-30.3 ± 10.4	-65.1 ± 12.2	*-34.8 ± 16.0*
Wake	-5.1 ± 2.2	-0.2 ± 4.6	*4.9 ± 5.1*	5.3 ± 2.5	2.1 ± 4.6	*-3.1 ± 5.2*
Johnston	-21.8 ± 2.6	-13.0 ± 5.1	*8.9 ± 5.7*	-3.9 ± 4.6	3.3 ± 6.6	*7.2 ± 8.0*
Guam	-1.4 ± 1.5	3.2 ± 1.4	*4.6 ± 2.1*	15.9 ± 4.4	22.1 ± 4.6	*6.2 ± 6.4*
Kwajalein	8.6 ± 3.3	2.8 ± 3.1	*-5.8 ± 4.5*	-0.4 ± 1.4	-3.1 ± 1.6	*-2.7 ± 2.1*
Pagopago	-6.3 ± 1.6	-10.8 ± 1.9	*-4.5 ± 2.5*	-5.4 ± 4.8	-1.6 ± 4.1	*3.8 ± 6.3*
Ft. Denison	-2.9 ± 2.1	1.4 ± 3.4	*4.3 ± 4.0*	17.2 ± 2.7	2.8 ± 3.5	*-14.5 ± 4.4*
Townsville	-20.6 ± 8.8	4.3 ± 4.3	*24.8 ± 9.8*	1.4 ± 2.9	3.4 ± 2.1	*1.9 ± 3.6*
Cairns	4.9 ± 8.4	-0.8 ± 5.1	*-5.7 ± 9.8*	-27.8 ± 5.8	7.8 ± 3.2	*35.6 ± 6.6*
Gladstone	-30.7 ± 7.7	-34.2 ± 11.1	*-3.5 ± 13.5*	8.8 ± 4.4	-5.2 ± 3.1	*-14.1 ± 5.4*
Wlmstwn	6.3 ± 2.1	13.4 ± 4.2	*7.1 ± 4.7*	-30.7 ± 9.1	-29.5 ± 7.2	*1.2 ± 11.6*
Auckland	-0.6 ± 2.9	1.5 ± 2.3	*2.0 ± 3.7*	43.2 ± 7.3	7.8 ± 2.7	*-35.4 ± 7.8*

[a] -Tables are shaded with either a dark grey (for A-TATs), or light grey (for P-TATs) to show locations where there is a significant difference in the TATs between the two time periods; significant here is defined as more than ±10mm m^{-1} or deg m^{1} (beyond combined error bands), as well as having a SNR > 2

Figures

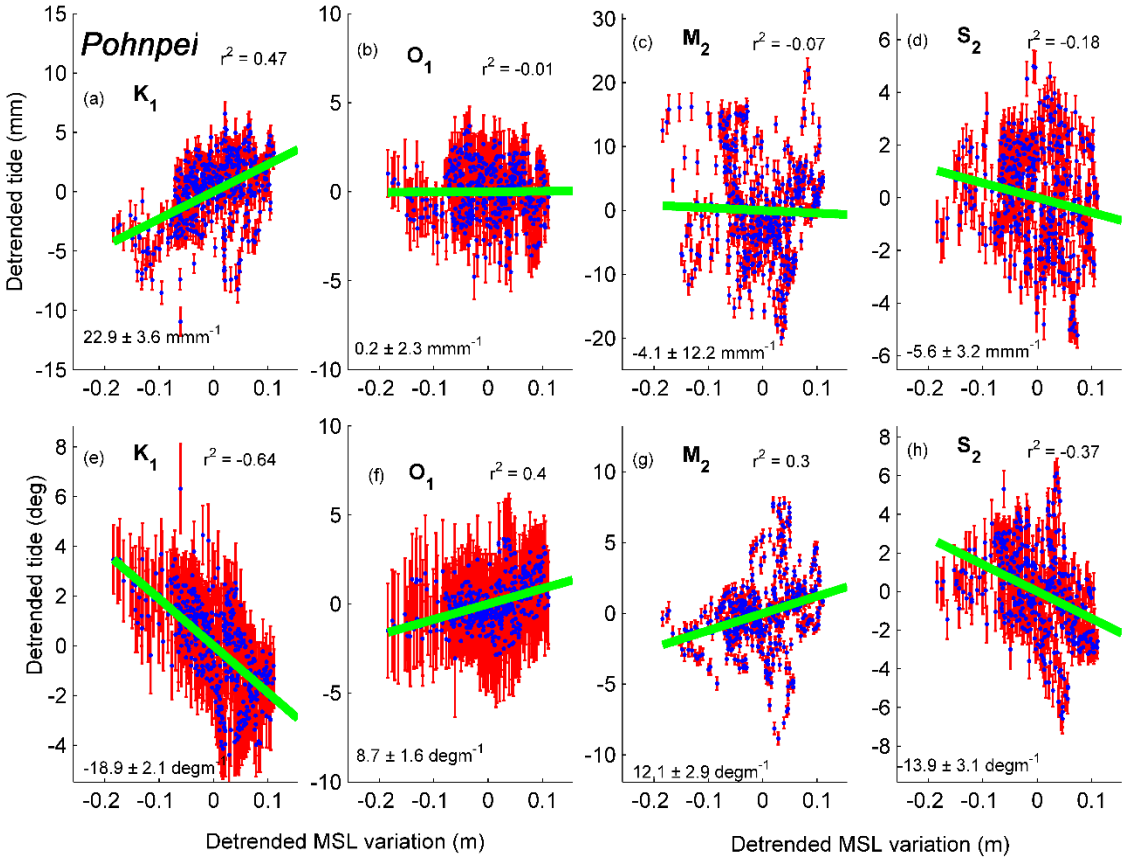

Figure S1-1 Pohnpei: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

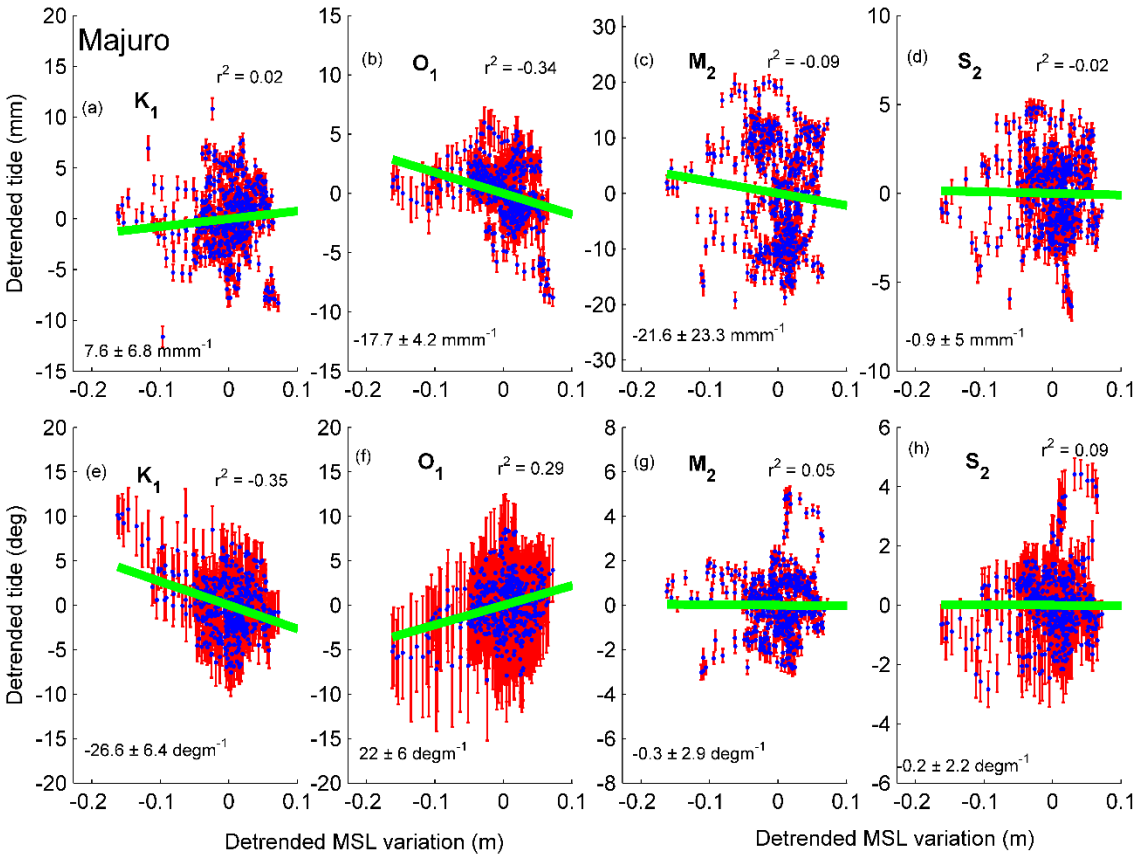

Figure S1-2 Majuro: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

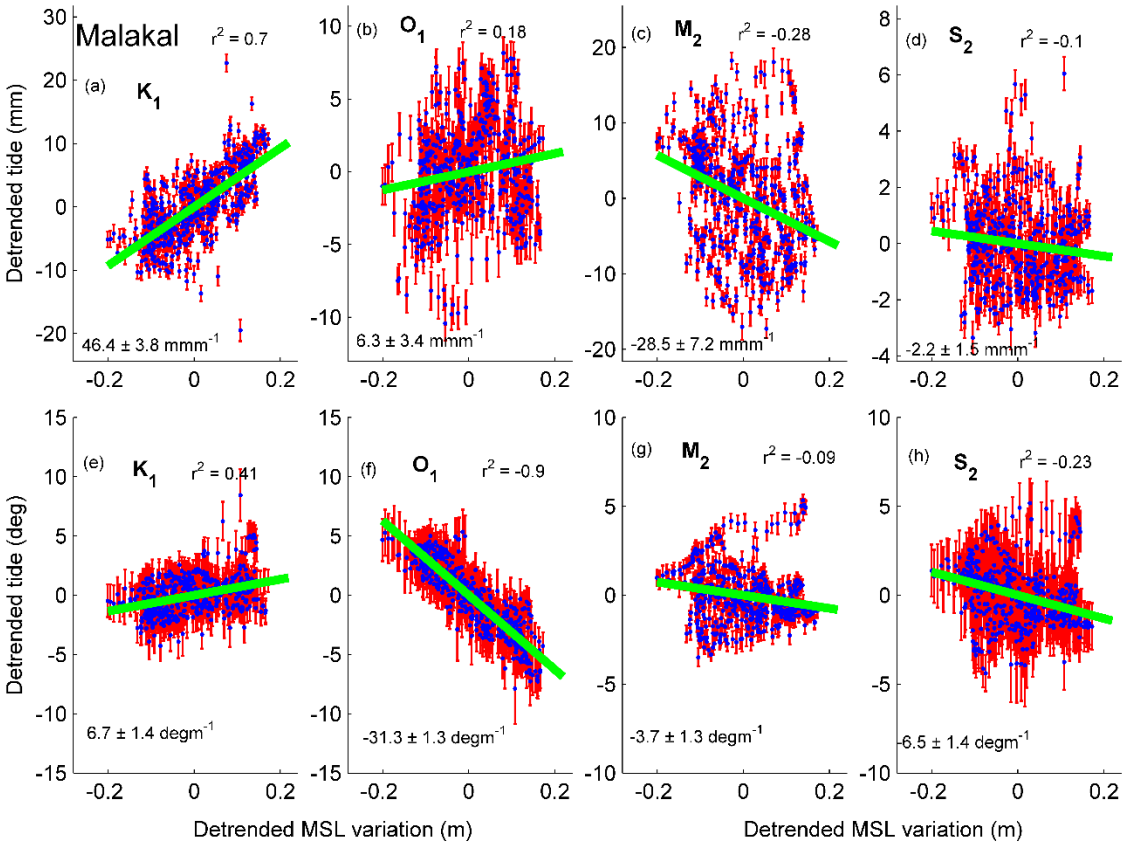

Figure S1-3 Malakal: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

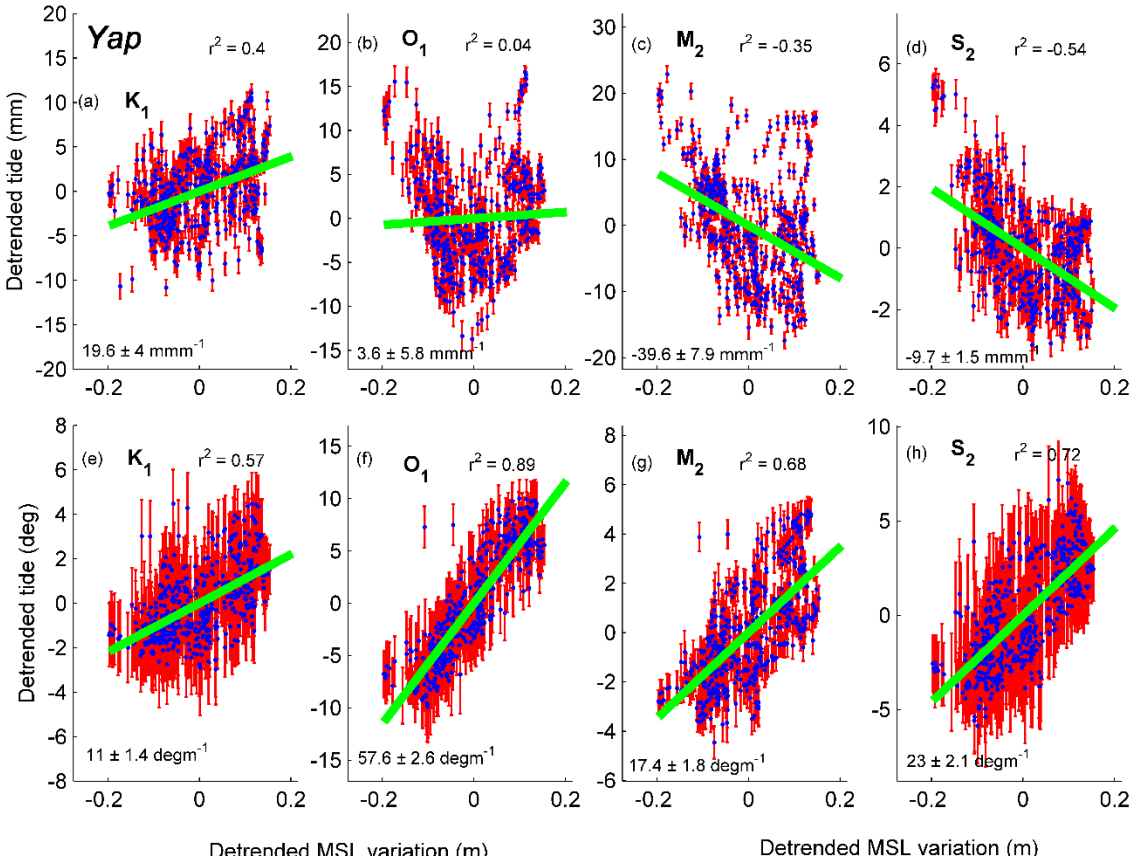

Figure S1-4 Yap: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

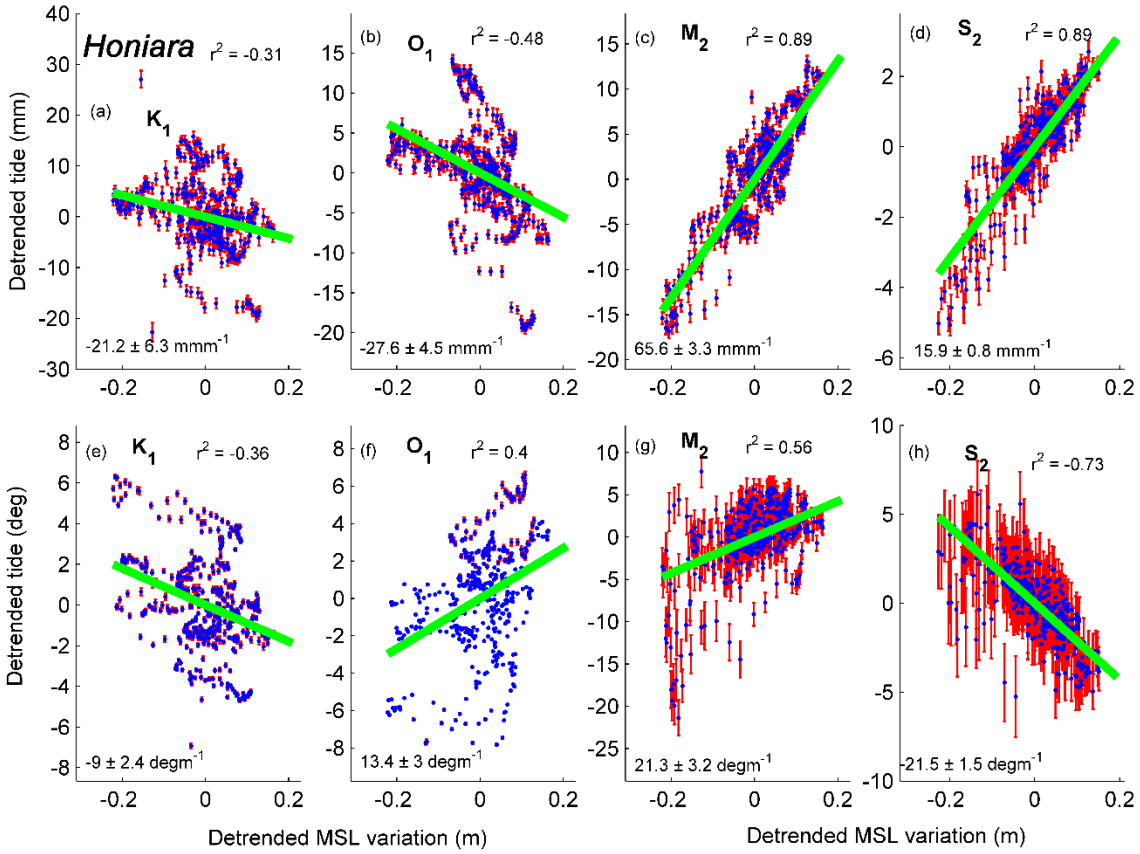

Figure S1-5 Honiara: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

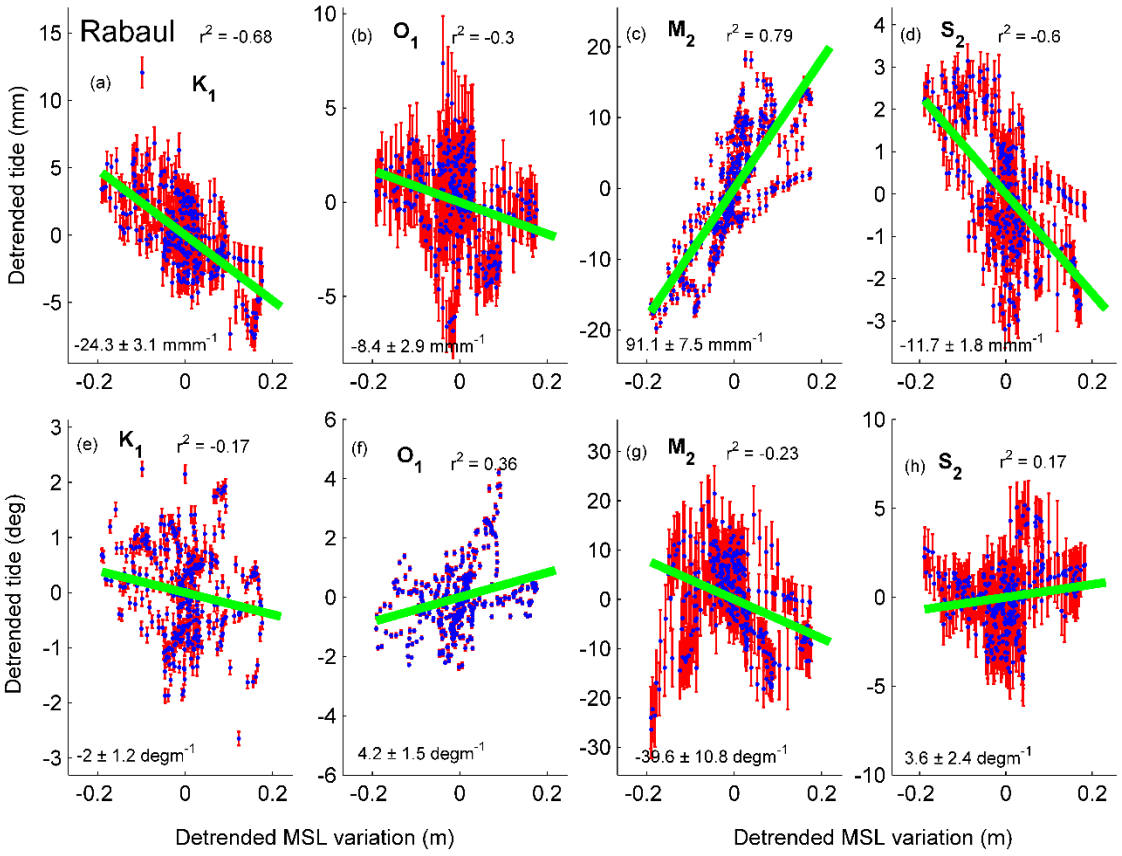

Figure S1-6 Rabaul: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

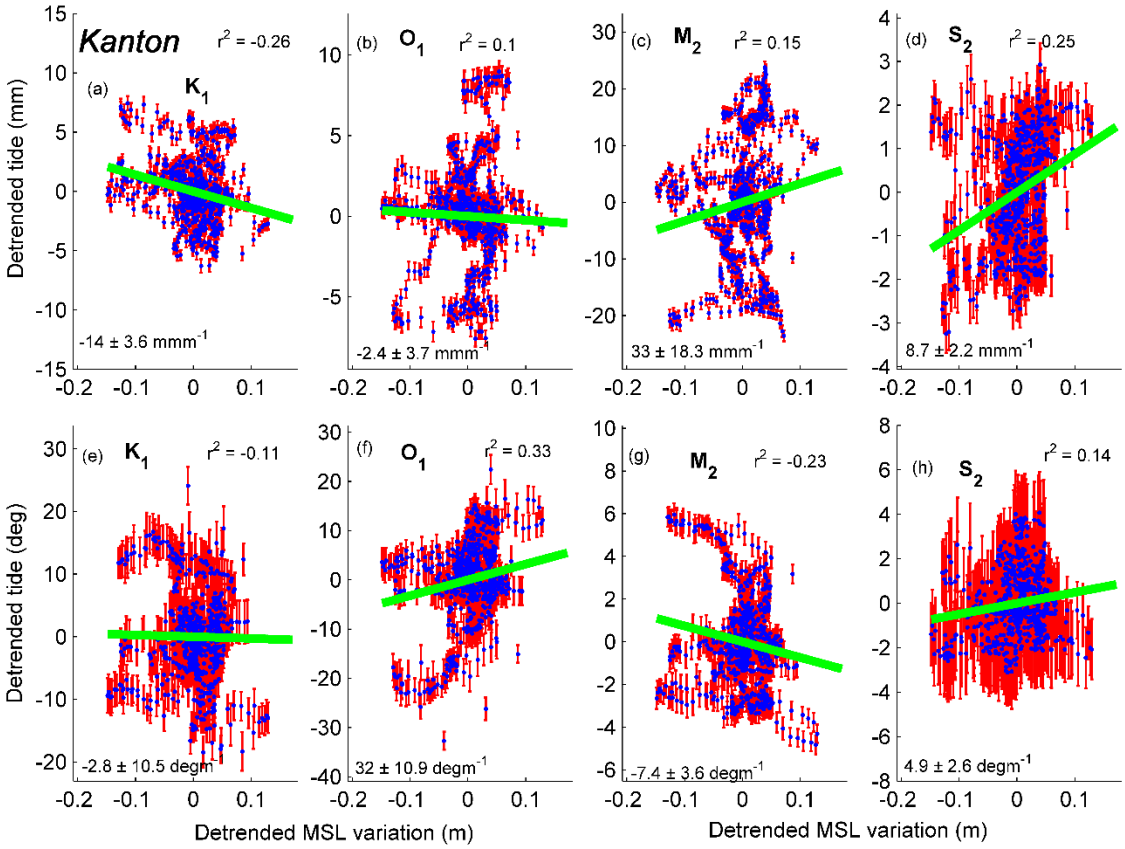

Figure S1-7 Kanton: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

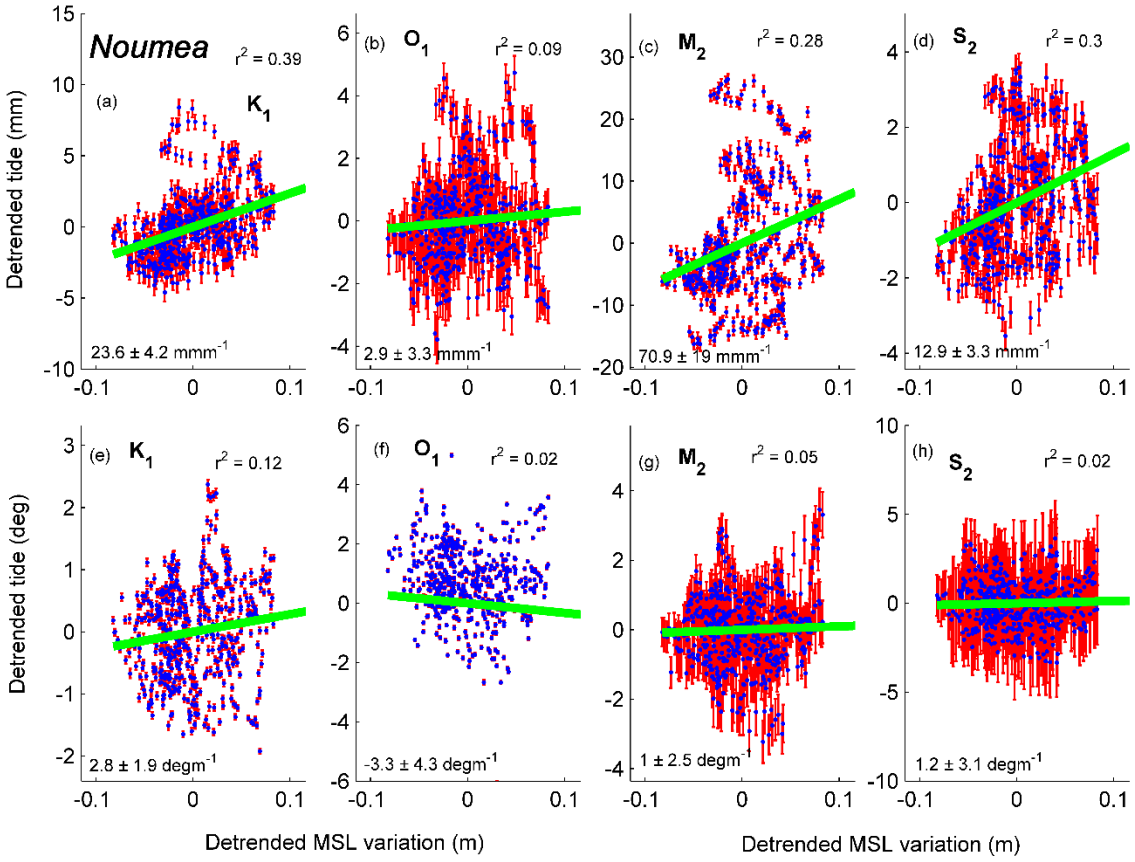

Figure S1-8 Noumea: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

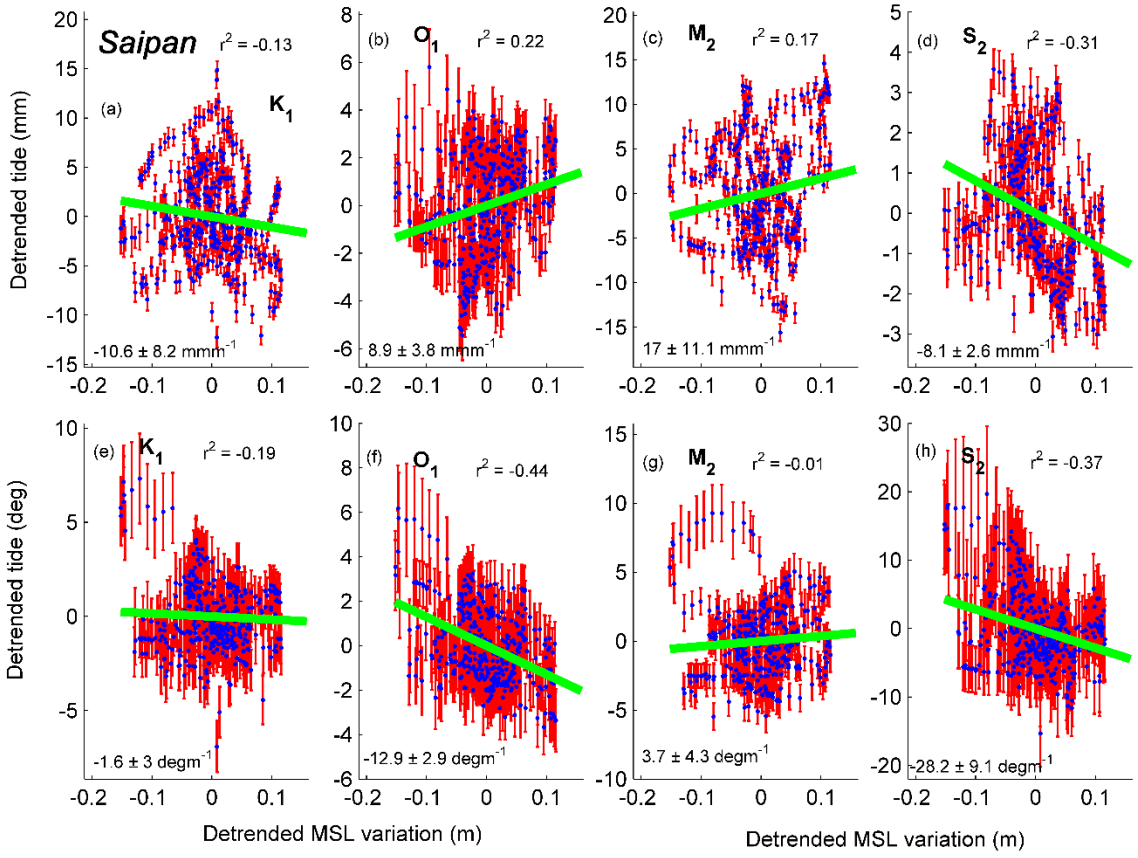

Figure S1-9 Saipan: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

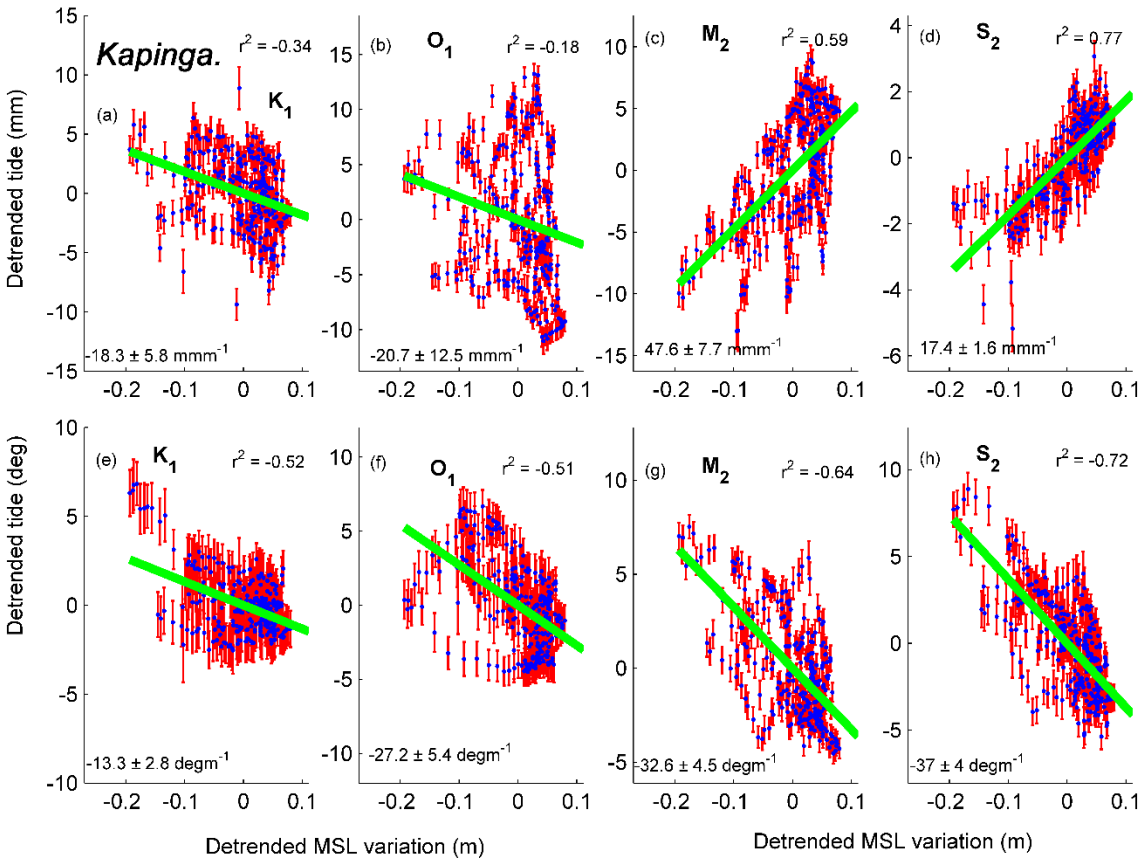

Figure S1-10 Kapingamarangi: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

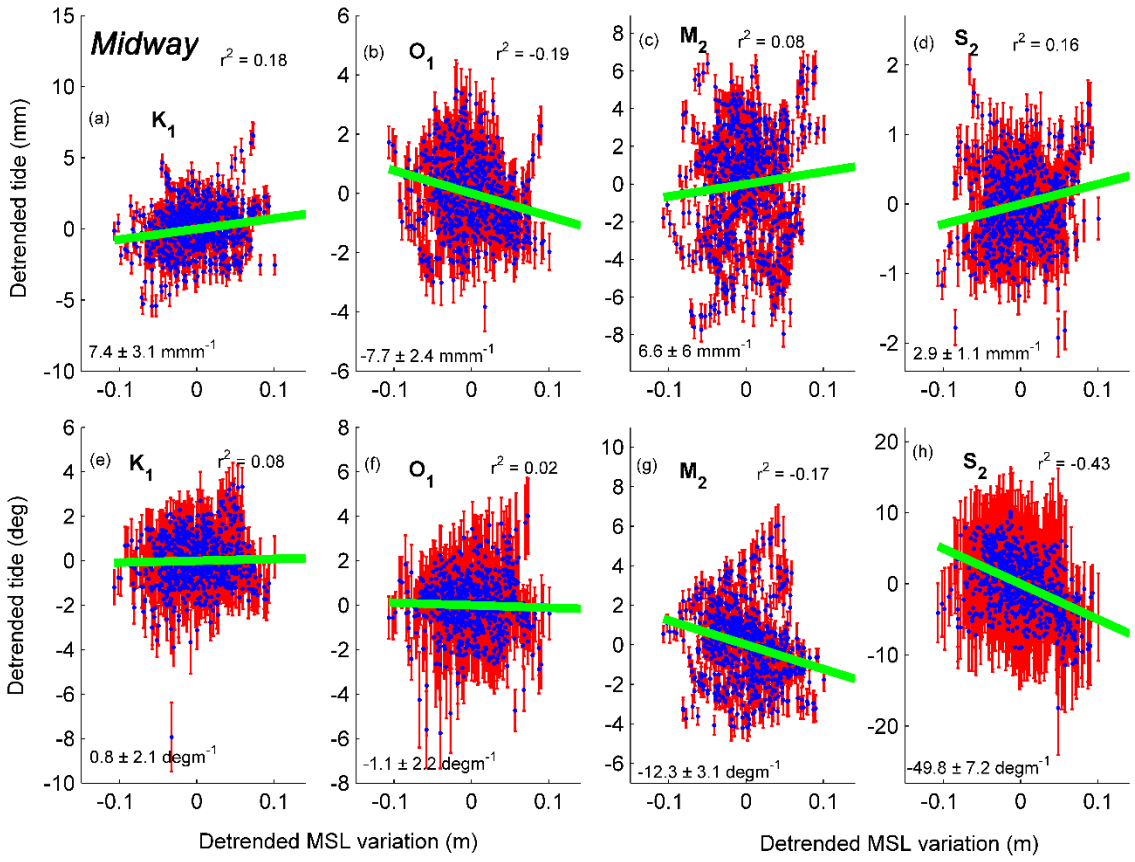

Figure S1-11 Midway: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

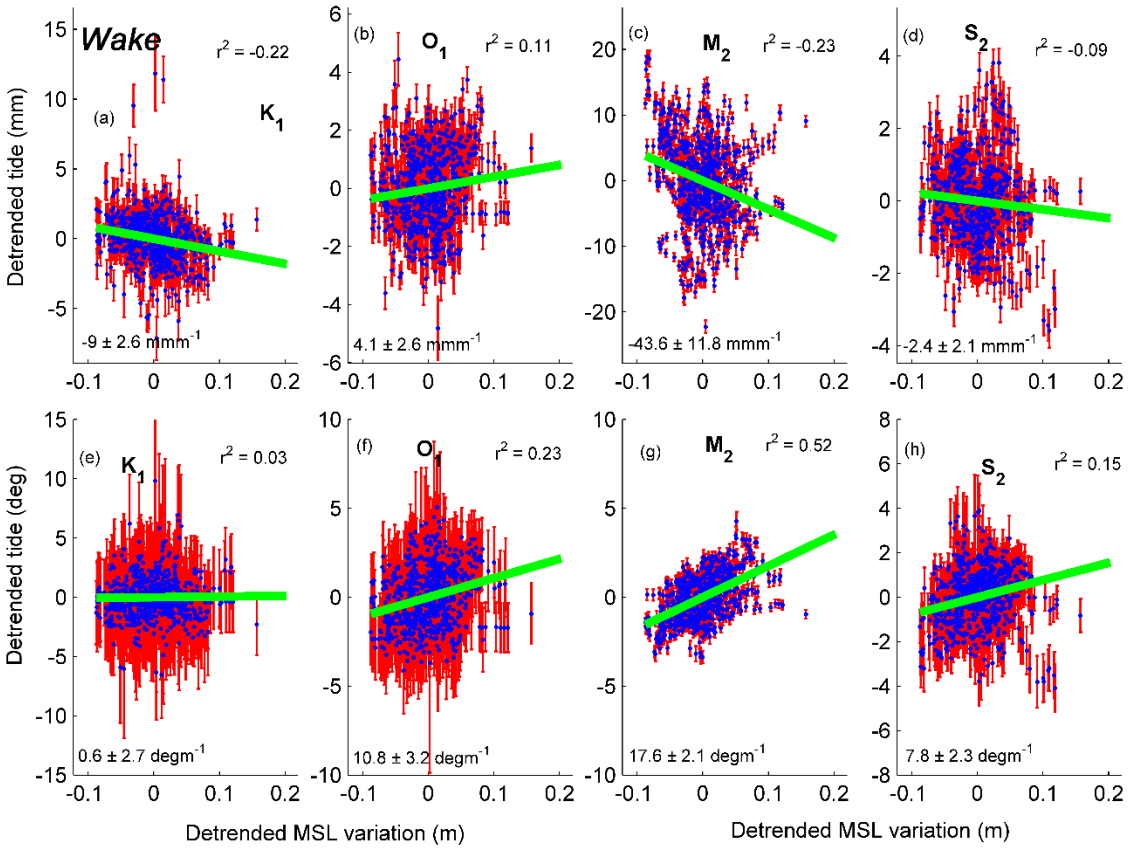

Figure S1-12 Wake: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

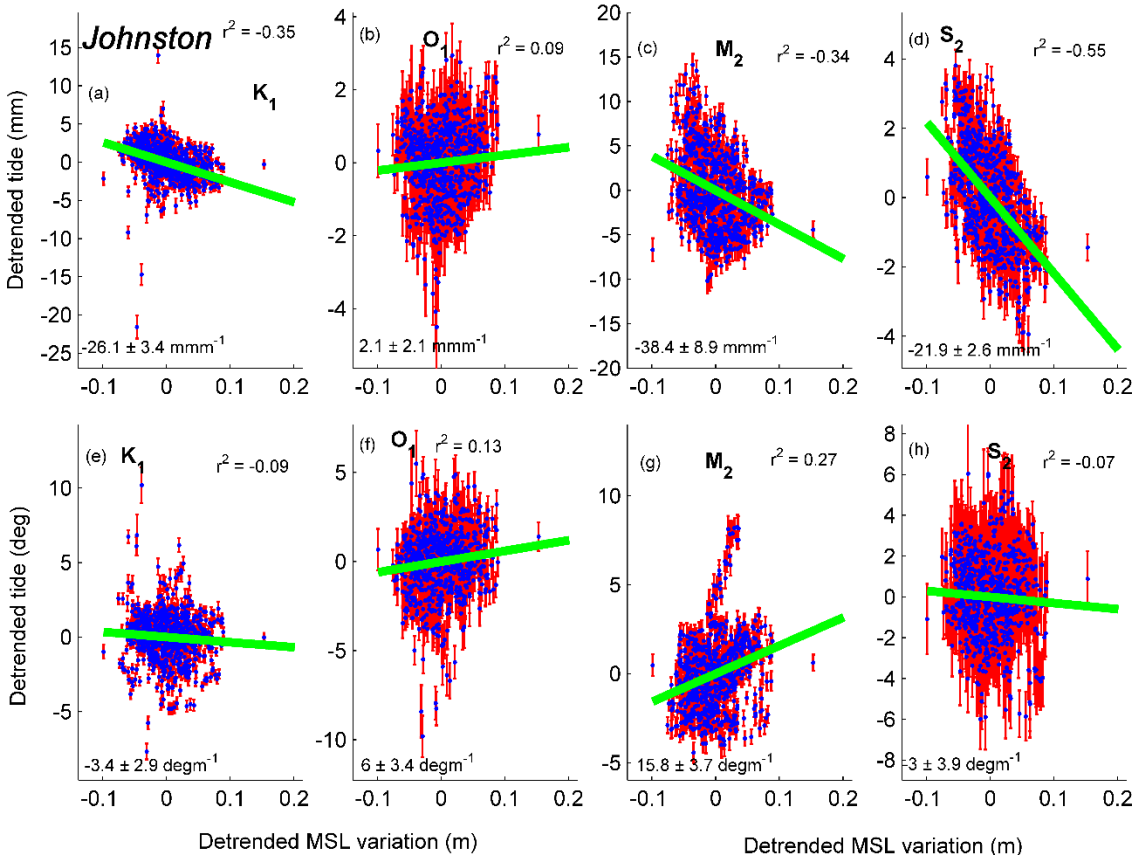

Figure S1-13 Johnston: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

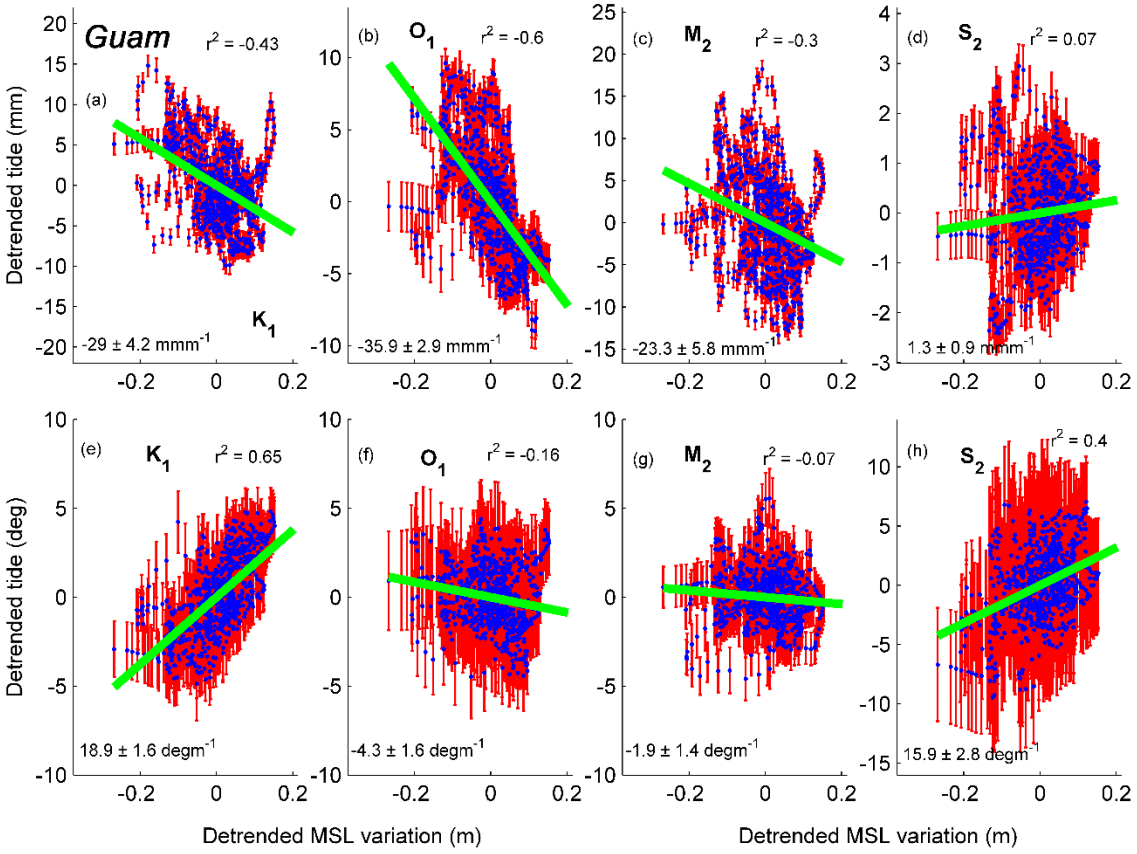

Figure S1-14 Guam: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or degm^{-1}, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

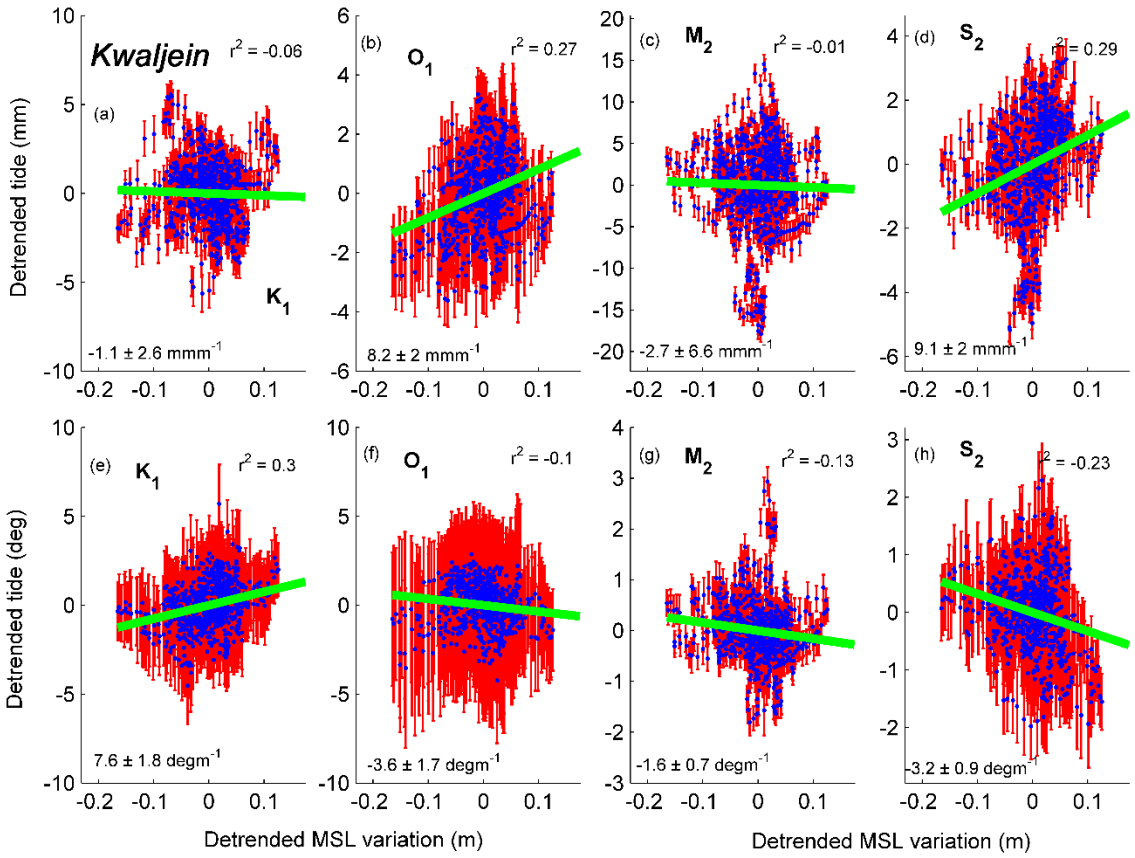

Figure S1-15 Kwaljein: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

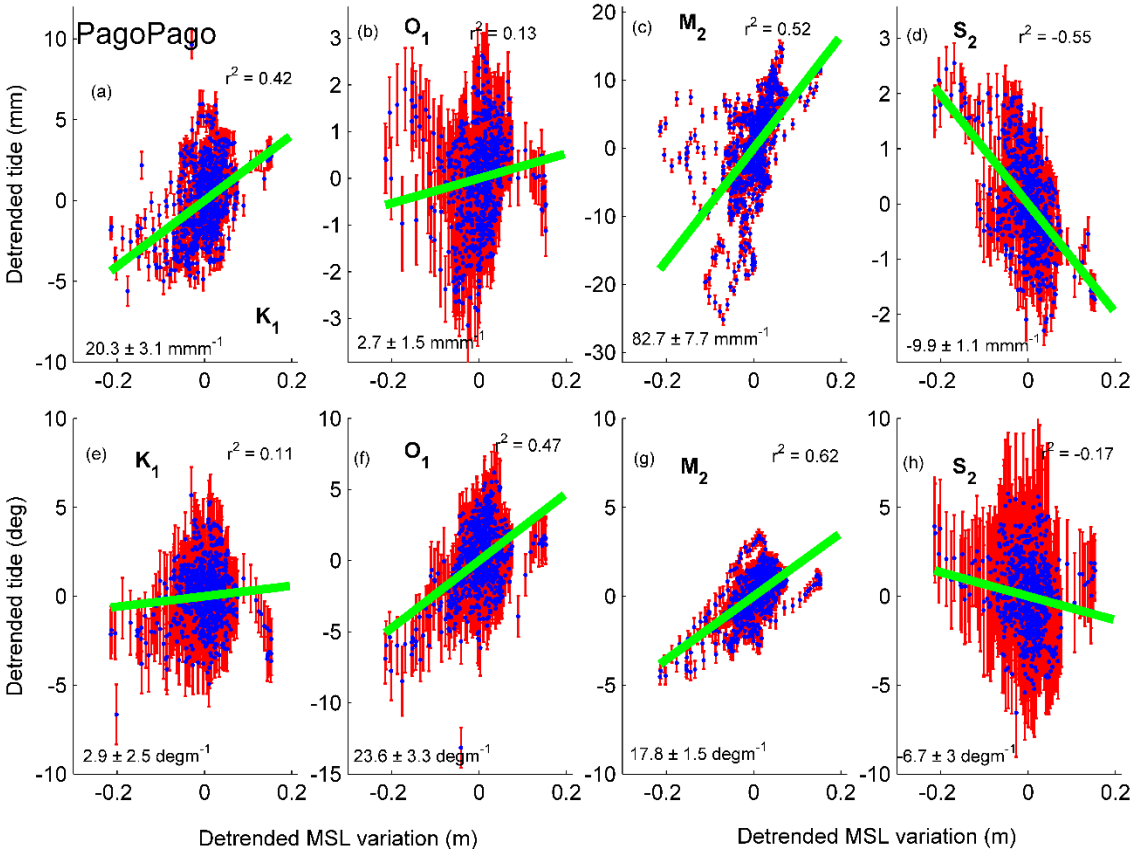

Figure S1-16 Pago Pago: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

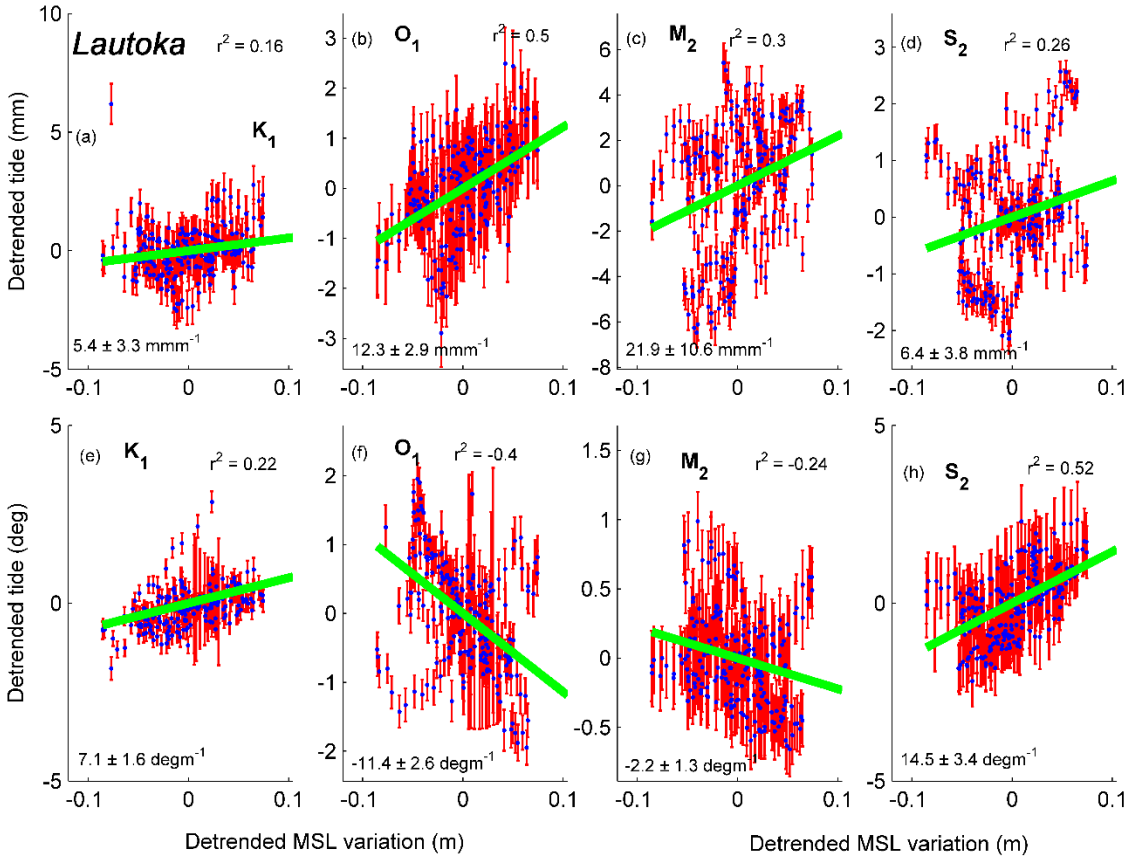

Figure S1-17 Lautoka: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

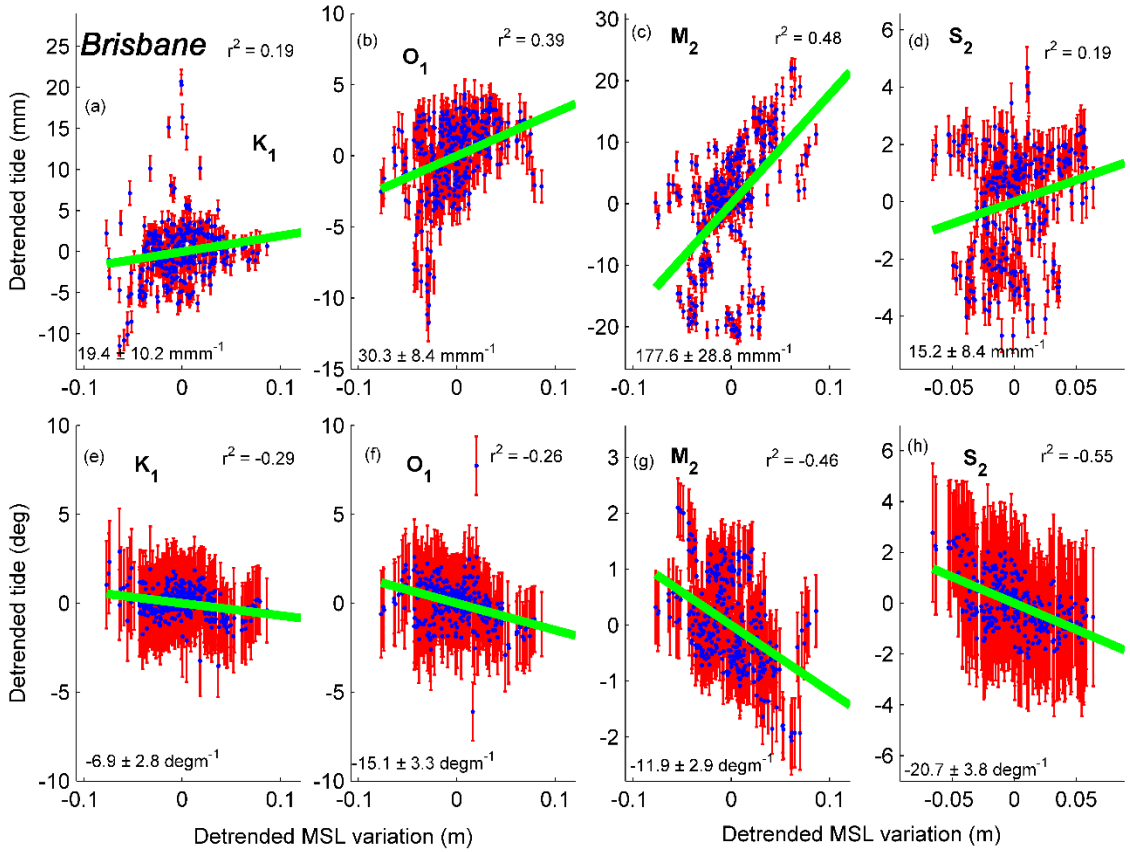

Figure S1-18 Brisbane anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

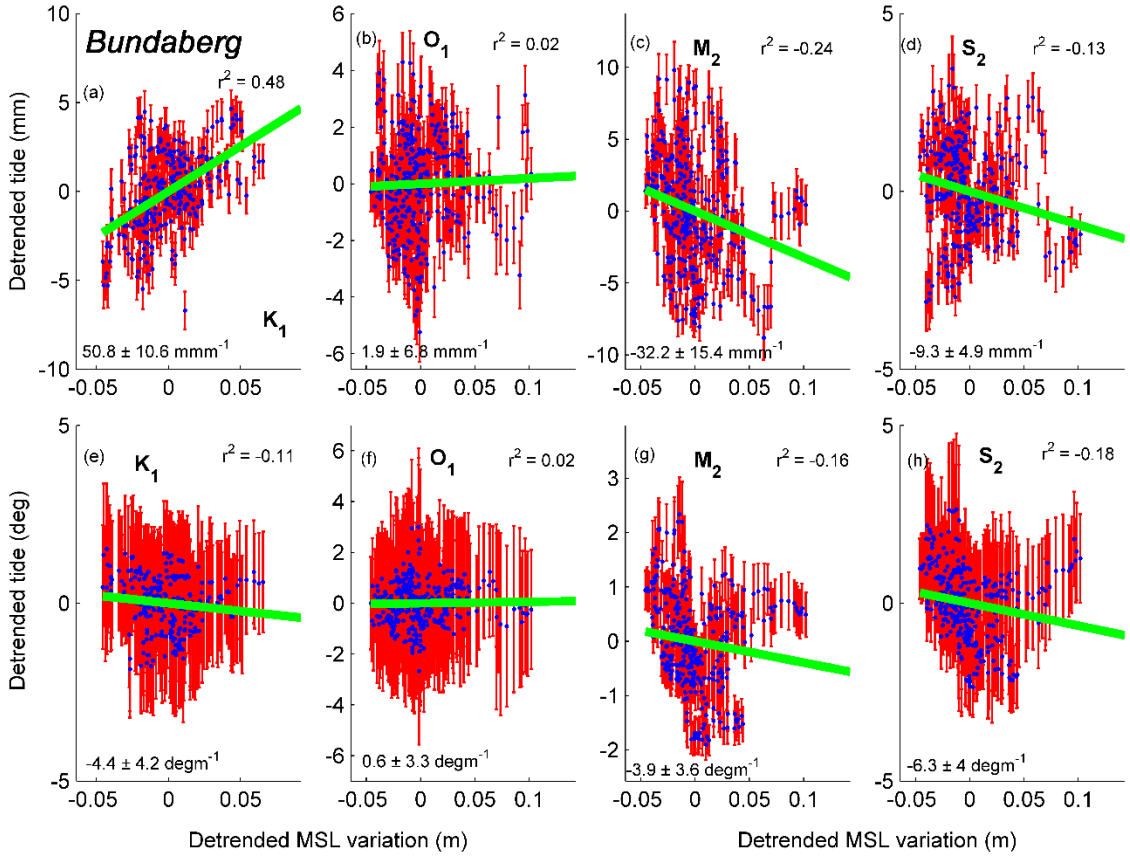

Figure S1-19 Bundaberg: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

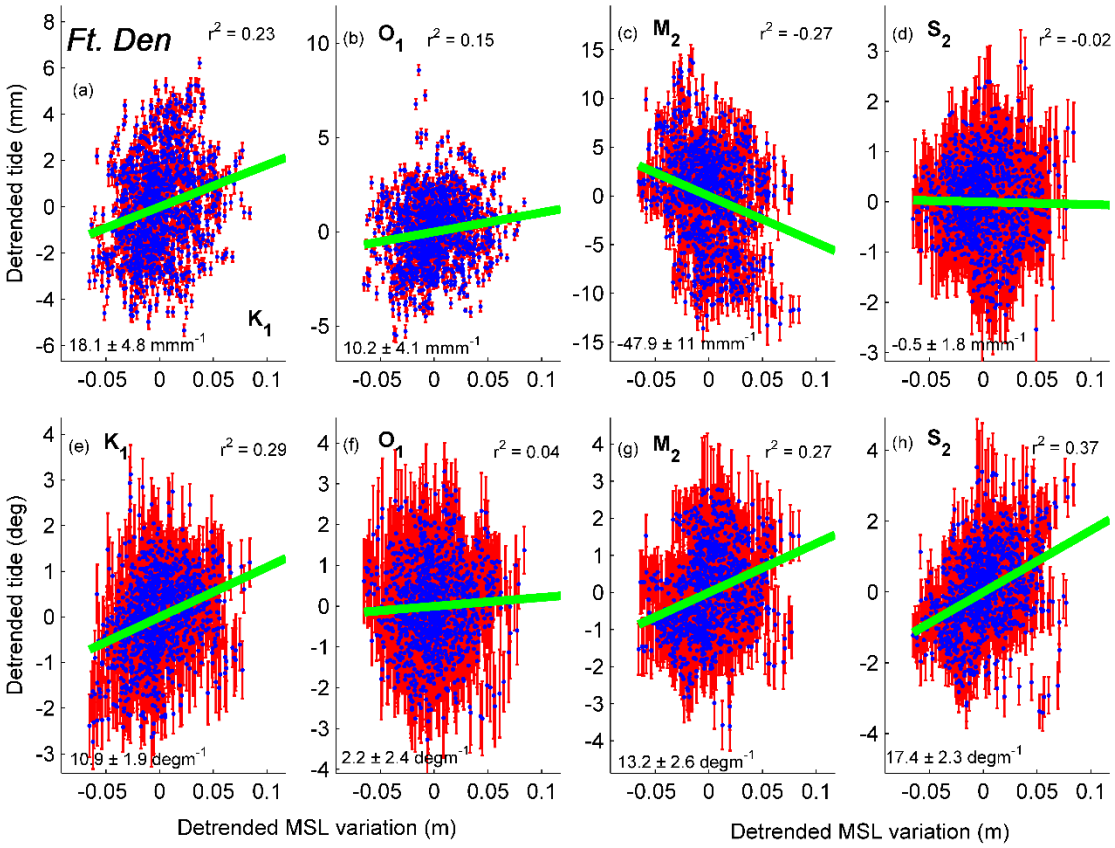

Figure S1-20 Fort Denison (Sydney Harbor): amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

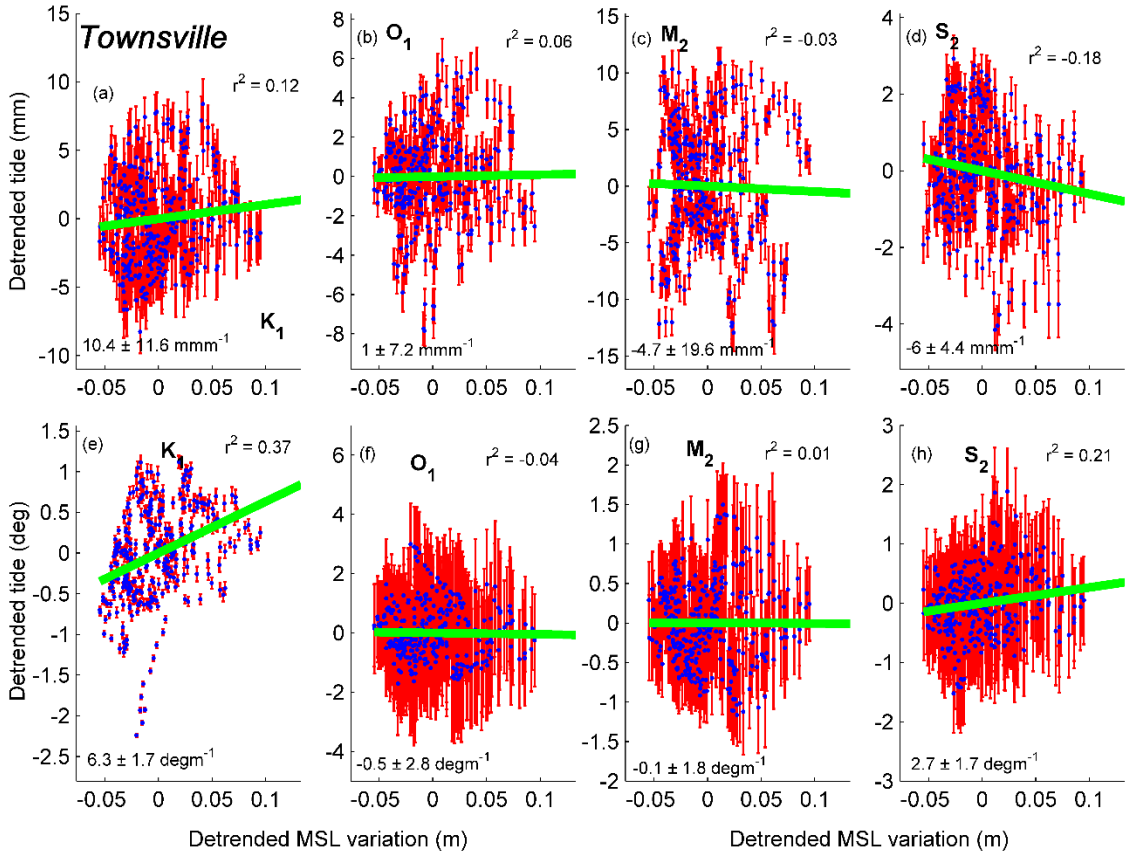

Figure S1-21 Townsville: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

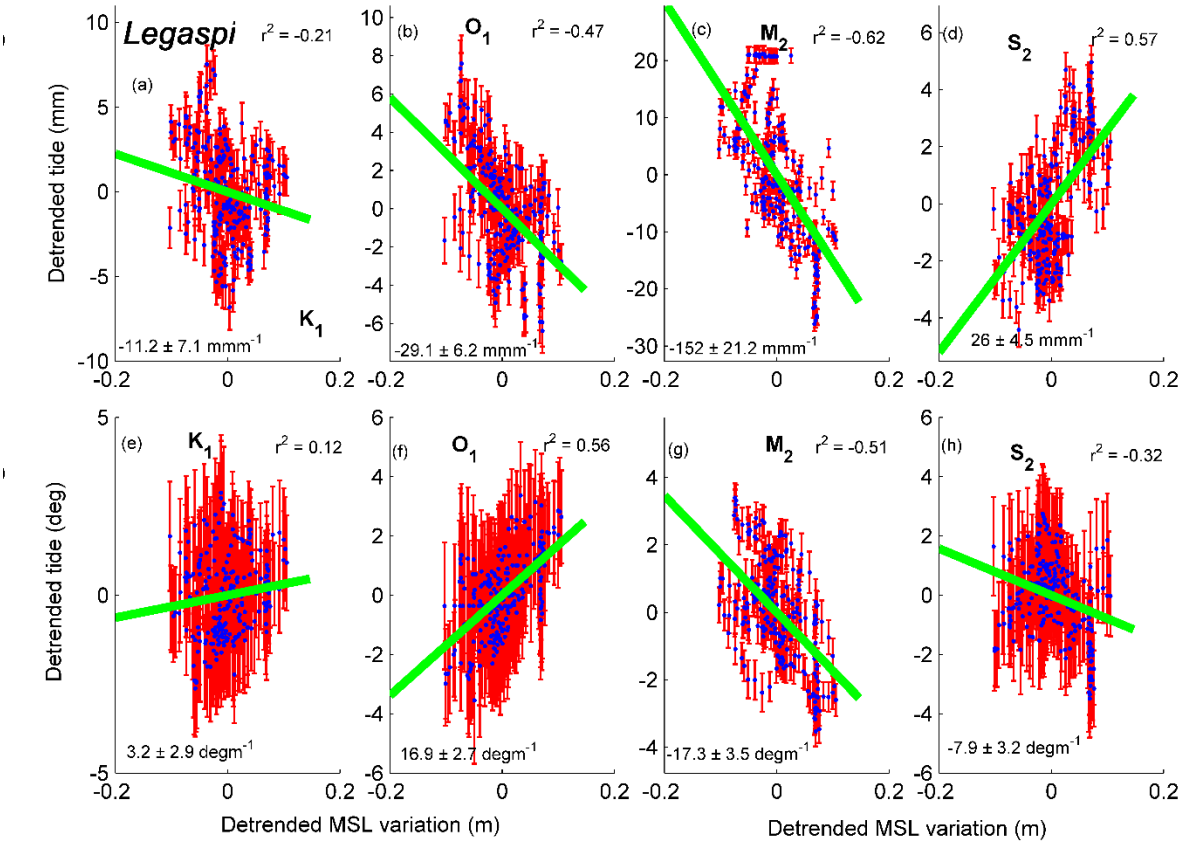

Figure S1-22 Legaspi: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or degm^{-1}, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

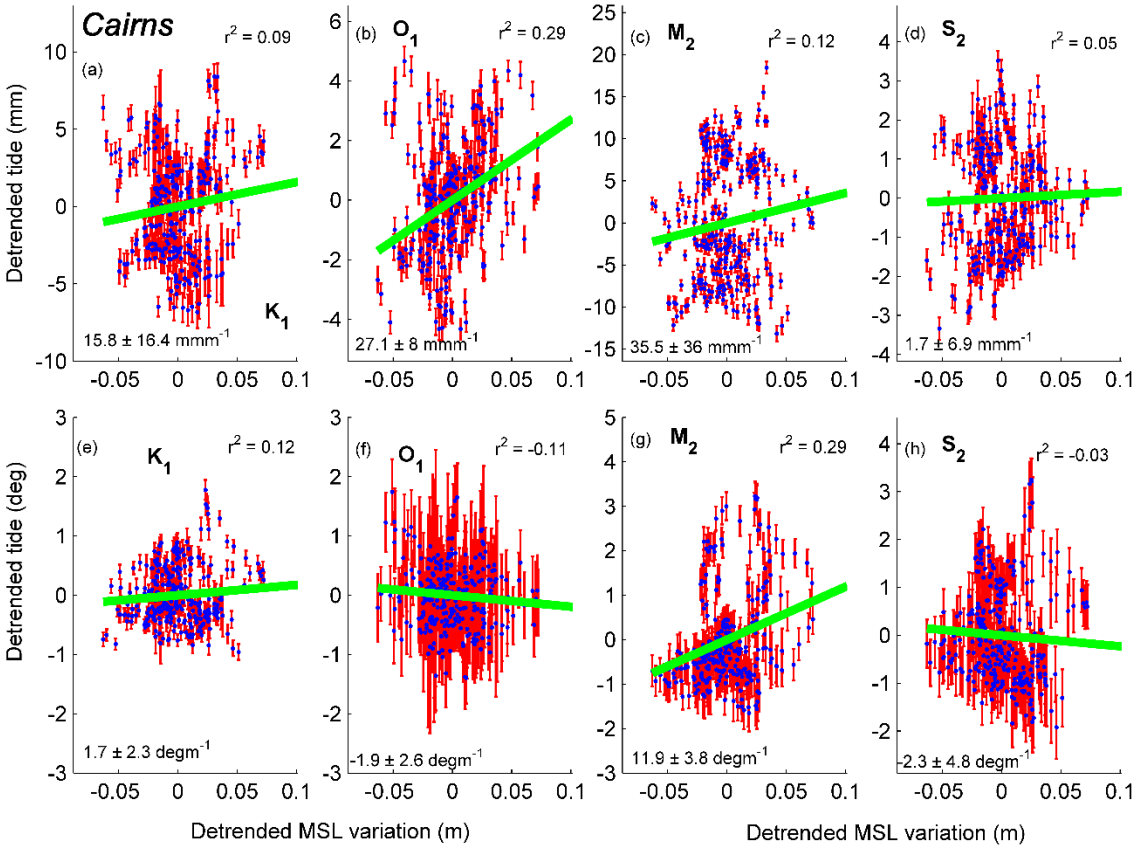

Figure S1-23 Cairns: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

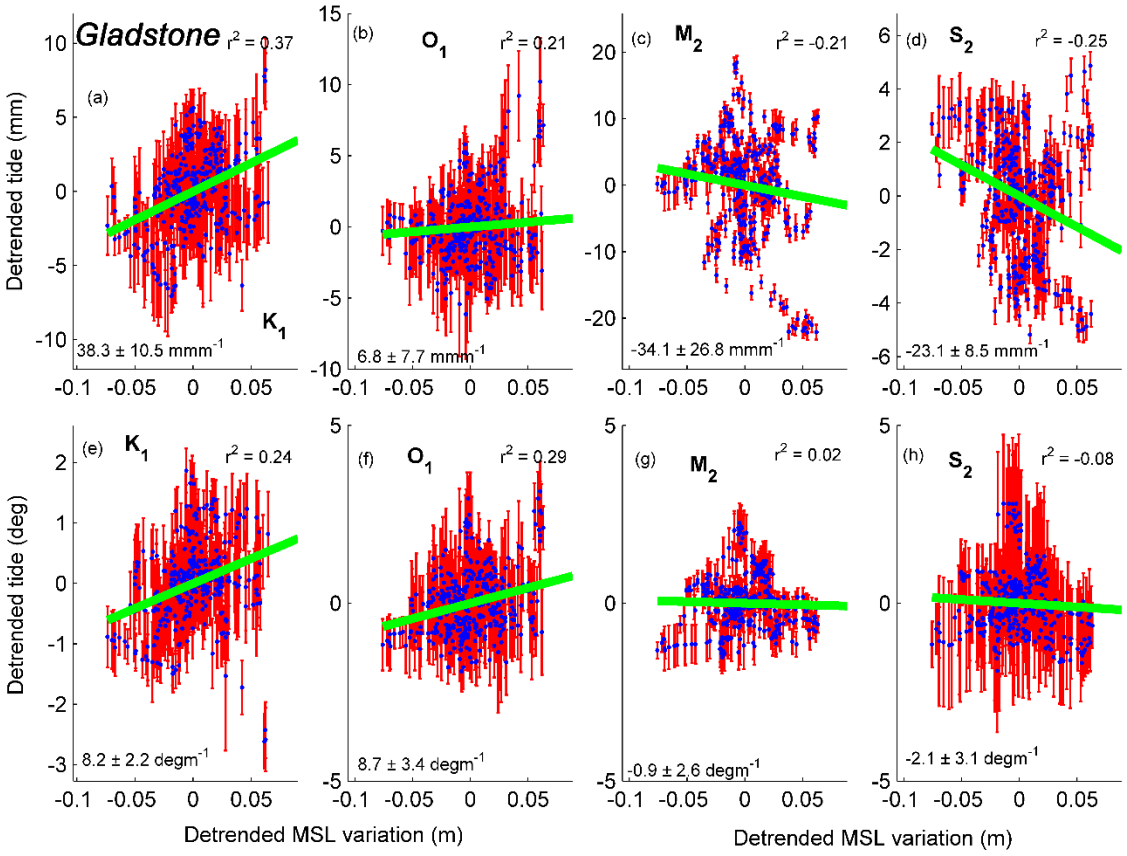

Figure S1-24 Gladstone: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

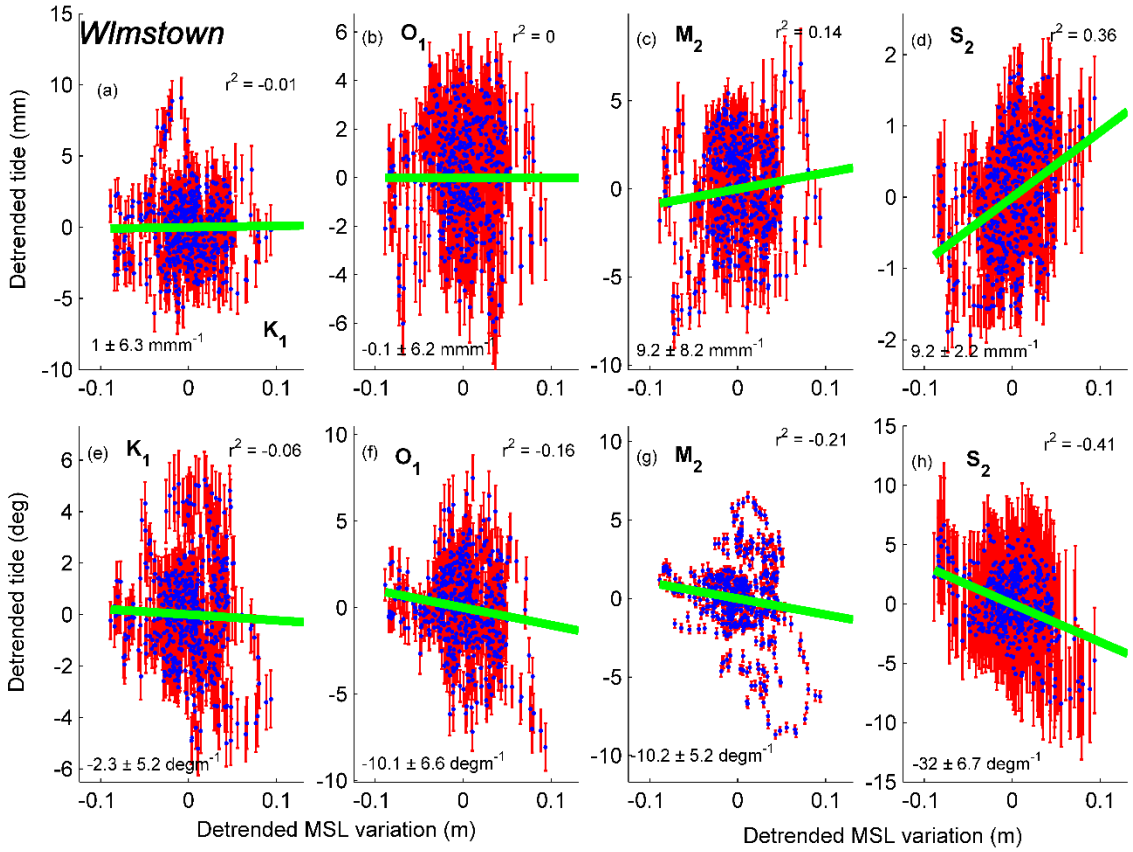

Figure S1-25 Williamstown: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

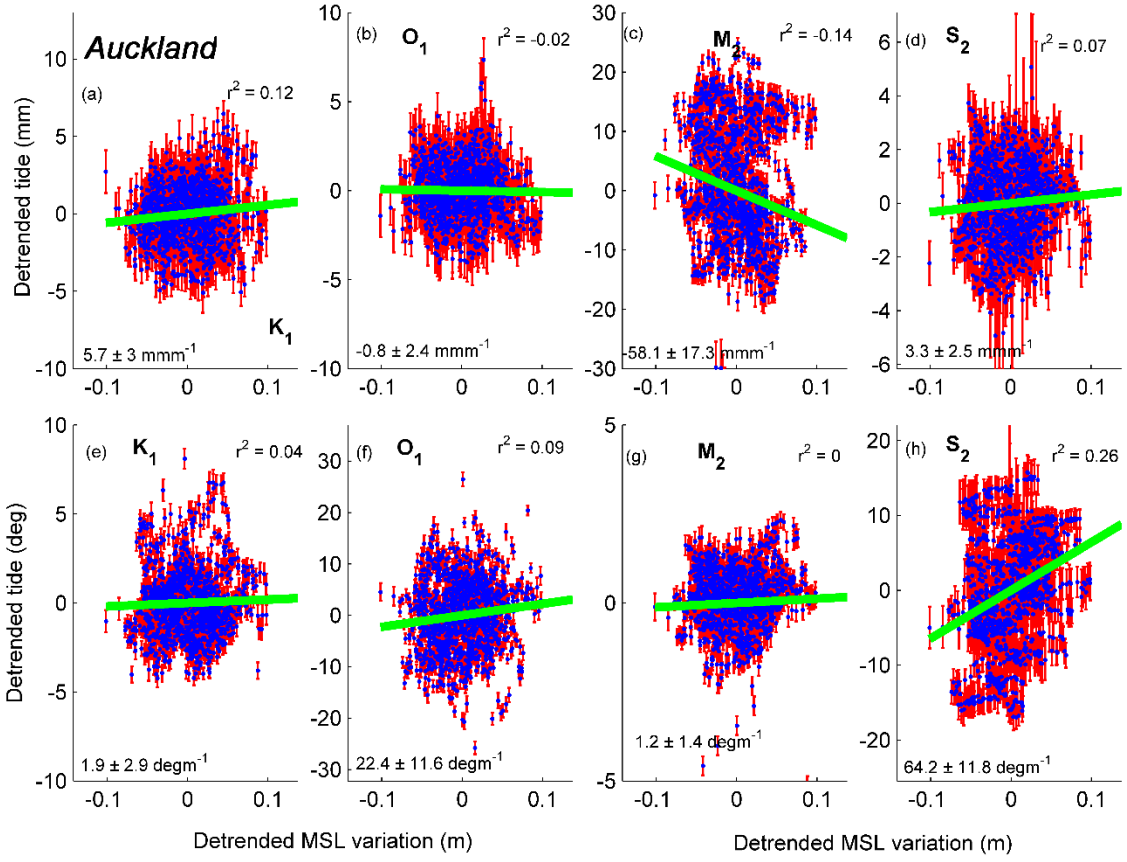

Figure S1-26 Auckland: amplitude anomaly trends (A-TATs) for (a) K_1; (b) O_1; (c) M; (d) S_2; and phase anomaly trend (P-TATs) for (e) K_1; (f) O_1; (g) M_2; and (h) S_2. The red bars show 95% confidence limits on each annual estimate. The green line is the robust linear regression trend, in mmm^{-1} or $degm^{-1}$, as shown as text, with 95% confidence limits on the anomaly trend. Significance is indicated by r^2 values within each subplot

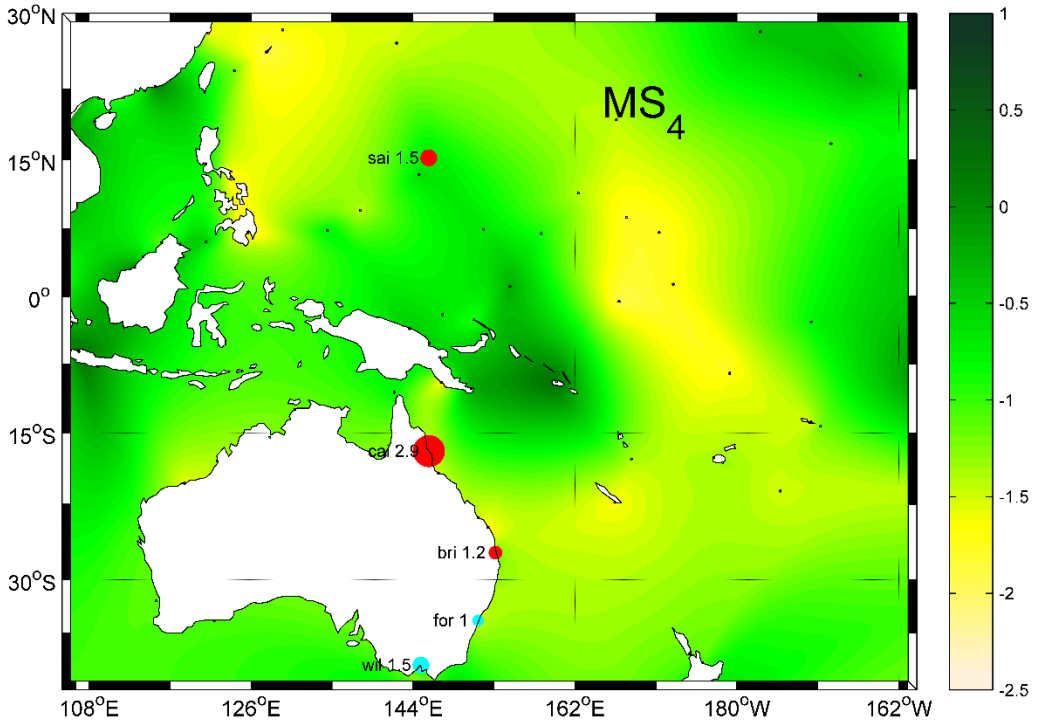

Figure S2 Overtide ratios (ORs) for: MS_4/ (M_2*S_2); the greenscale background represent the mean OR on a logarithmic scale. For stations that show a significant change over time in this ratio, numbers and colored (red for positive change, light blue for negative change) markers indicate change in the ORs, in units of 1/m, (or $1/m^2$ for M_6) expressed as percentage change per year

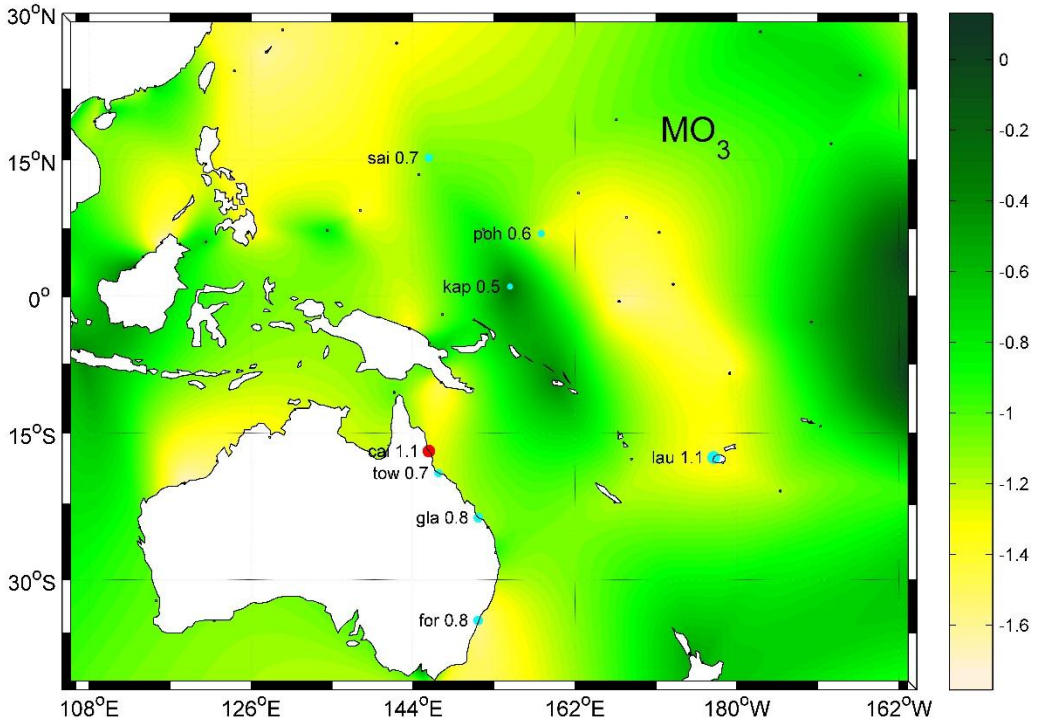

Figure S3 Overtide ratios (ORs) for: MO_3/ (M_2*O_1); the greenscale background represent the mean OR on a logarithmic scale. For stations that show a significant change over time in this ratio, numbers and colored (red for positive change, light blue for negative change) markers indicate change in the ORs, in units of 1/m, (or $1/m^2$ for M_6) expressed as percentage change per year

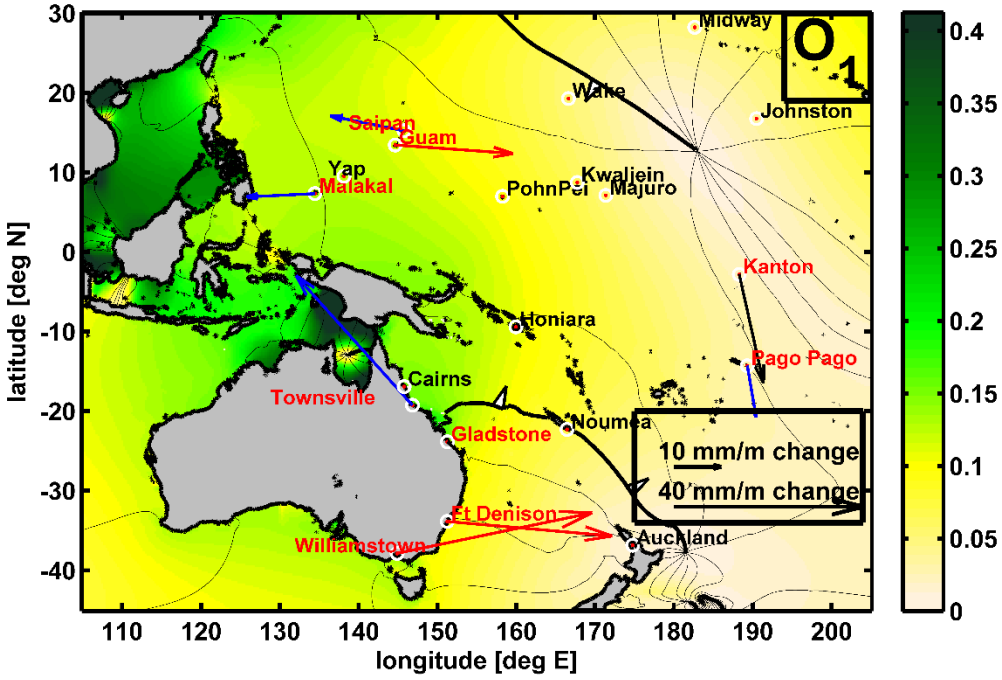

Figure S4 O_1 TAT map, showing differences in A-TATs and P-TATs between years before 1993 and after 1993 (for a 1m MSL rise); symbols are as in Figure 4-7; values are tabulated in Table 4

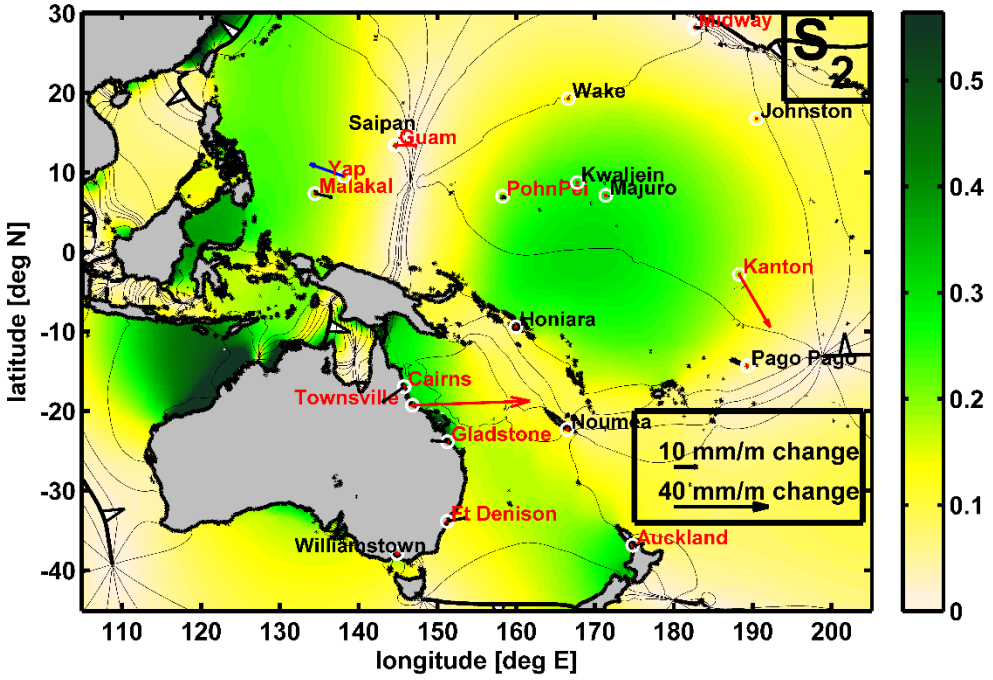

Figure S5: S_2 TAT map, showing differences in A-TATs and P-TATs between years before 1993 and after 1993 (for a 1-meter MSL rise); symbols are as in Figure 4-7; values are tabulated in Table 5