

## **Supplementary Material**

### **Observation-based trajectory of future sea level for the coastal United States tracks near high-end model projections**

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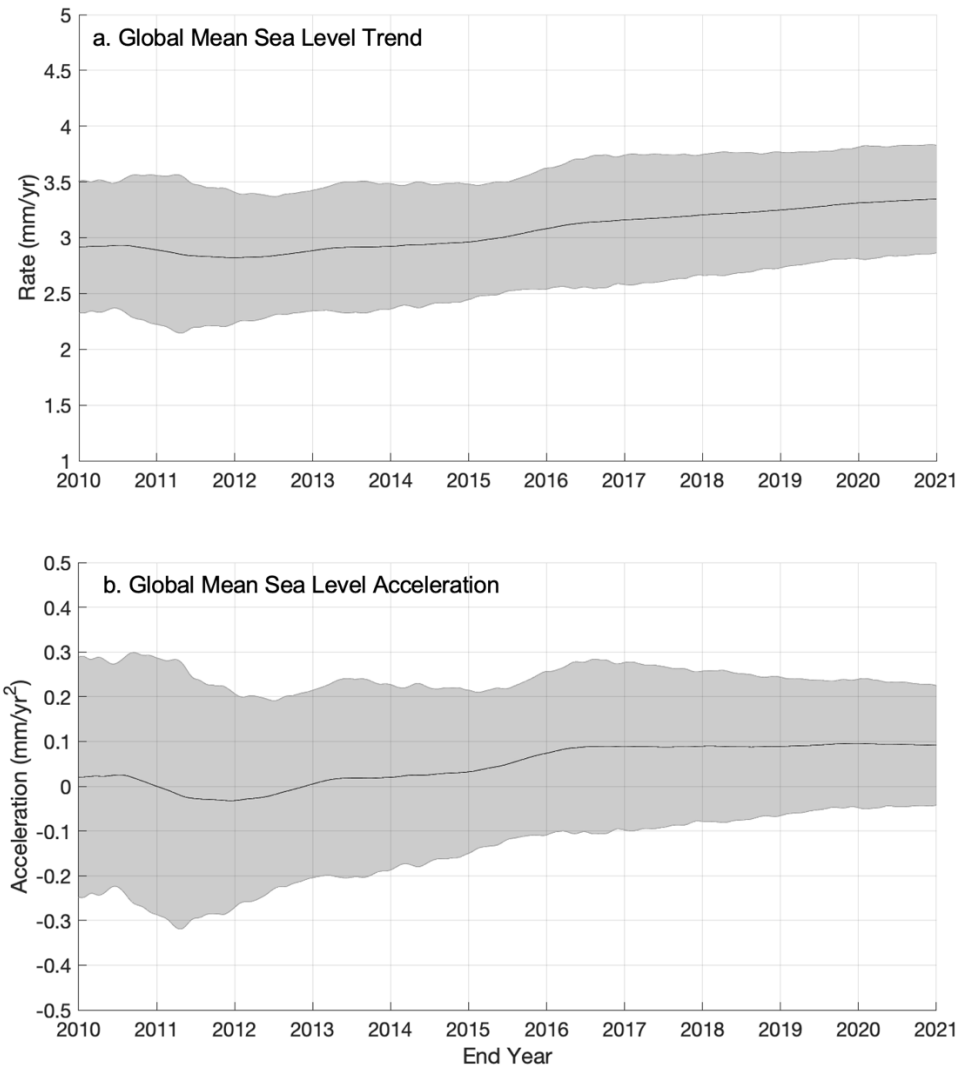
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**Figure S1. Evolution of Global Mean Sea Level.** For the time-period from 1993 to 2020, the evolution of (a) rate and (b) acceleration estimates for global mean sea level from the satellite altimeter record. The start year for each estimate is 1993, and the end year for the estimate is given on the x-axis. The shading provides the 90% confidence interval.

**Table S1. U.S. Tide Gauges.** Tide gauges used in this study are grouped by coastal region. Start year of the record (only extending back to 1920) is provided along with the percentage of completeness from 1920 to 2020.

Name	Longitude	Latitude	Start Year	%Completeness
<b>NORTHEAST COAST</b>				
'NEW YORK (THE BATTERY)'	286	40.7	1920	100
'ATLANTIC CITY'	285.6	39.4	1920	96
'LEWES'	284.9	38.8	1920	78
'BOSTON'	288.9	42.4	1921	99
'SEWELLS POINT'	283.7	36.9	1928	92
'ANNAPOLIS'	283.5	39	1929	88
'NEWPORT'	288.7	41.5	1931	88
'SANDY HOOK'	286	40.5	1933	87
'WOODS HOLE'	289.3	41.5	1933	84
'SOLOMON'S ISLAND'	283.5	38.3	1938	79
'NEW LONDON'	287.9	41.4	1939	80
'PROVIDENCE (STATE PIER)'	288.6	41.8	1938	71
<b>SOUTHEAST COAST</b>				
'FERNANDINA BEACH'	278.5	30.7	1920	84
'CHARLESTON I'	280.1	32.8	1922	98
'FORT PULASKI'	279.1	32	1935	83
'WILMINGTON'	282	34.2	1935	83
<b>GULF COAST</b>				
'PENSACOLA'	272.8	30.4	1923	95
'CEDAR KEY'	277.0	29.1	1920	86
'ST. PETERSBURG'	277.4	27.8	1947	73
<b>WEST COAST</b>				
'SAN FRANCISCO'	237.5	37.8	1920	99
'LOS ANGELES'	241.7	33.7	1924	96
'SANTA MONICA'	241.5	34	1933	77
'ALAMEDA'	237.7	37.8	1939	81
'PORT SAN LUIS'	239.2	35.2	1946	72

**Table S2. Future Sea Level Change Estimates.** Projected values (cm) from 2020 to 2050 for the four coastal regions of the United States. Observation-based projections using the enveloping approach, corrected envelope approach, and approach after removing the internal variability are provided. Model projections from the IPCC SSP1-2.6, SSP3-7.0 and SSP5-8.5 scenarios are also given. The low and high designations represent the lower and upper bounds of the 90% confidence interval, respectively.

<b><u>Northeast</u></b>	Enveloping	Corr. Env.	IV-Corrected	SSP1-2.6	SSP3-7.0	SSP5-8.5	Int. Low	Int. High	TG Extrap.
Low	11	-	25	16	18	19	21	27	21
Medium	37	36	39	26	27	30	25	35	27
High	62	-	52	40	40	45	32	46	33

<b><u>Southeast</u></b>	Enveloping	Corr. Env.	IV-Corrected	SSP1-2.6	SSP3-7.0	SSP5-8.5	Int. Low	Int. High	TG Extrap.
Low	24	-	20	13	14	15	16	23	23
Medium	58	37	40	21	22	25	20	31	30
High	92	-	62	33	35	39	25	43	36

<b><u>Gulf Coast</u></b>	Enveloping	Corr. Env.	IV-Corrected	SSP1-2.6	SSP3-7.0	SSP5-8.5	Int. Low	Int. High	TG Extrap.
Low	24	-	32	13	15	16	17	24	31
Medium	56	35	51	22	24	26	22	32	35
High	88	-	70	34	36	40	27	45	40

<b><u>West Coast</u></b>	Enveloping	Corr. Env.	IV-Corrected	SSP1-2.6	SSP3-7.0	SSP5-8.5	Int. Low	Int. High	TG Extrap.
Low	15	-	10	9	10	11	10	17	15
Medium	42	26	20	14	15	17	13	24	18
High	70	-	31	23	25	28	16	35	22