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Trace gas fluxes from tidal salt marsh soils: implications for carbon–sulfur biogeochemistry

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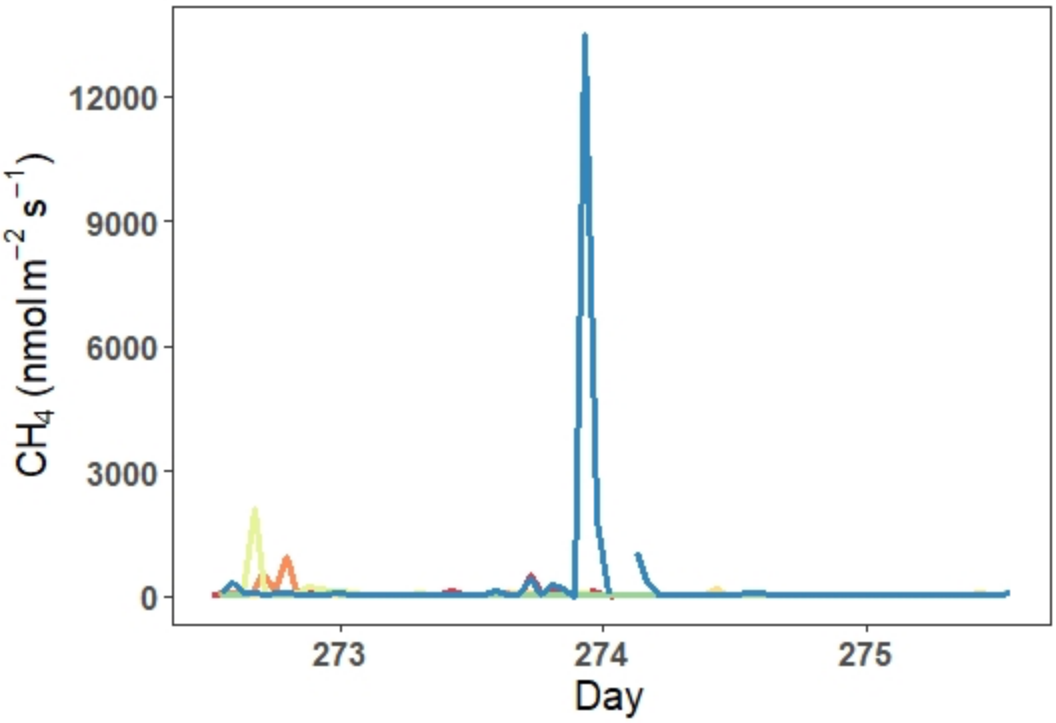
Supplementary Table 1 – Overview of CS_2 and DMS fluxes from various *Spartina alterniflora* marshes.

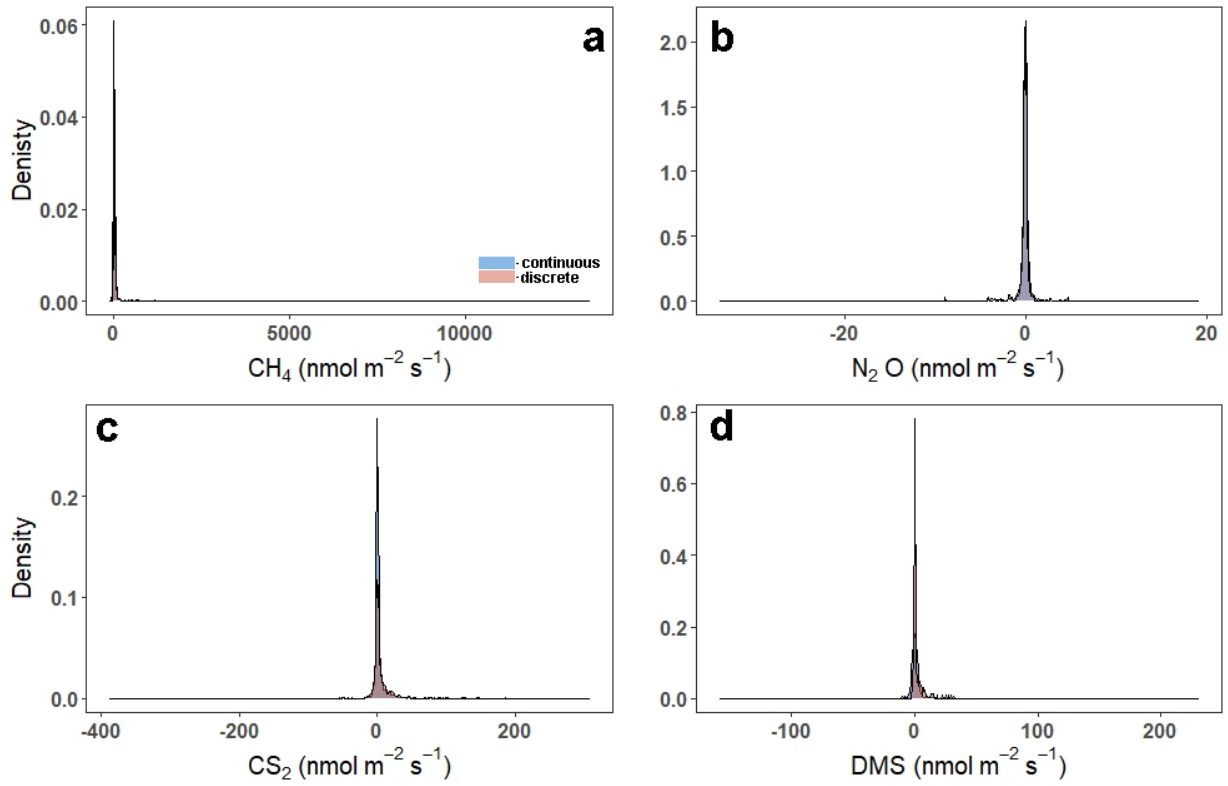
Location	Time Frame/ Location	CS_2 (nmol m^{-2} s^{-1})	DMS (nmol m^{-2} s^{-1})	References
Wallops Island	August/September Annual	0.006 0.68	NA 1.85	Carroll et al., 1986; Adams et al., 1981
North Carolina (Cedar Island Wildlife Refuge, Cox's Landing)	Summer *Spartina* Mud Flat Single Plant	 0.48 < 0.02 0.10	 1.75 < 0.04 NA	Aneja et al., 1981, 1979a, 1979b; Lamb et al., 1987; Goldan et al., 1987; Adams et al., 1981b
St. Marks National Wildlife Refuge, FL	January *Spartina* (W) Sand May *Spartina* (WD) October *Spartina* (WD) Sand Annual	 < 0.0009 < 0.0009–0.004 < 0.0009–0.003 < 0.0009–0.08 < 0.0009–0.04 0.52	 0.09–1.63 0.004–0.01 0.002–4.82 0.14–1.27 <0.001–0.15 1.22	De Mello et al., 1987; Cooper et al., 1987; Adams et al., 1981b
Chapman's Marsh, NH	August	NA	1.1–1.67 Max: 5.3	Morrison and Hines, 1990
Long Island, NY	Fall	NA	Max: 3.80	Hill et al., 1978
Louisiana	Annual	0.002–0.02	0.01–1.25	DeLaune et al., 2002
Canary Marsh, DE	August Intertidal Infrequently Flooded Unknown	 0.006 0.06 0.07	 0.04 0.90 0.48	Adams et al., 1981a, 1981b
Great Sippewissett Marsh, MA	Annual	0.08	2.84	Steudler and Peterson, 1985, 1984

Notes:

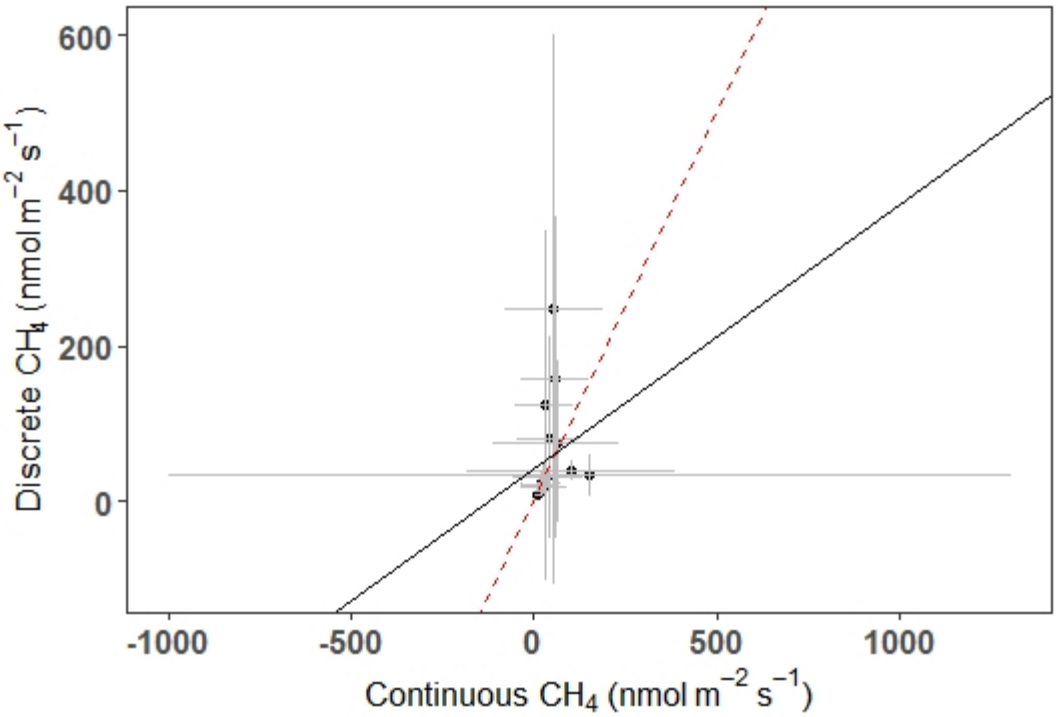
- For locations with multiple studies the highest mean or widest range is reported here
- For two locations, the maximum flux was reported in addition to other data (Chapman's Marsh and Long Island)



Supplementary Figure 1. Full range of CH_4 fluxes from each chamber during S2. Each color designates a different chamber.



Supplementary Figure 2. Density plots comparing the distribution of fluxes throughout all campaigns (continuous) to those measured during daytime low tide (discrete) for (a) CH_4, (b) N_2O, (c) CS_2, and (d) DMS. Note: The scales on the x- and y-axes are different. This figure shows the full distributions of the density plots shown in Figure 4.



Supplementary Figure 3. Plots comparing the daily average of continuous to discrete measurements for CH_4. Red dashed line is the 1:1 line, while the black solid line is the trend line. This figure shows the full error bars for Figure 5b.

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