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Supplement of

Non-methane hydrocarbon (C_2–C_8) sources and sinks around the Arabian Peninsula

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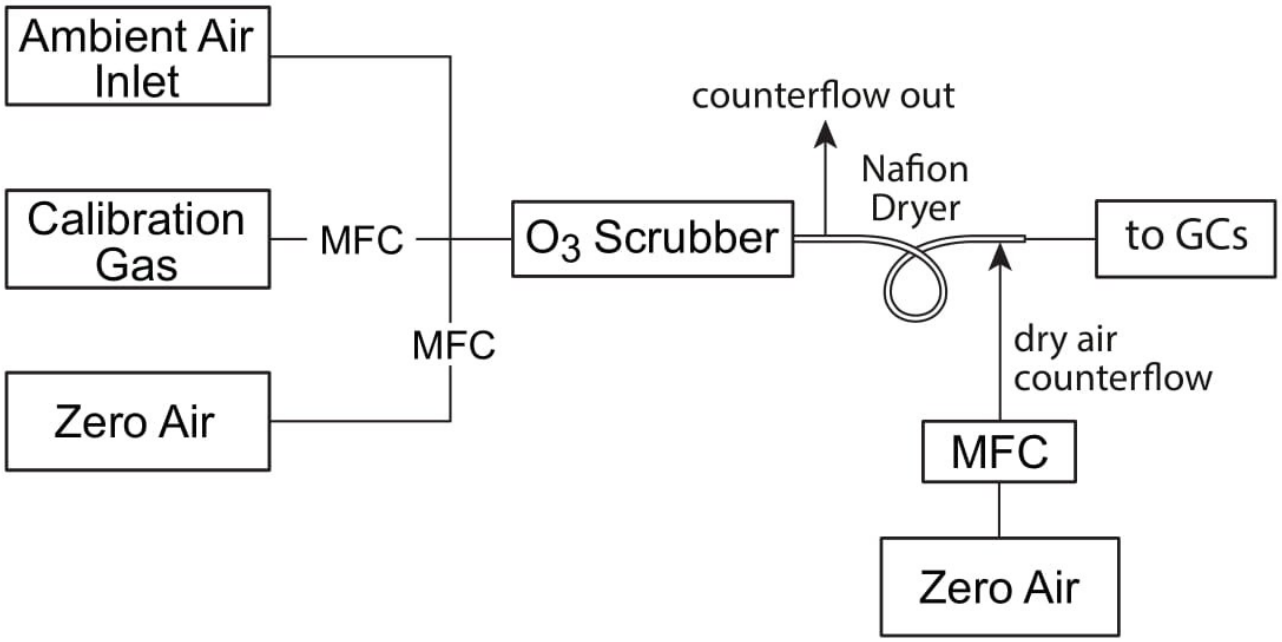


Figure S1. Sampling configuration of ambient air and calibration mixture.

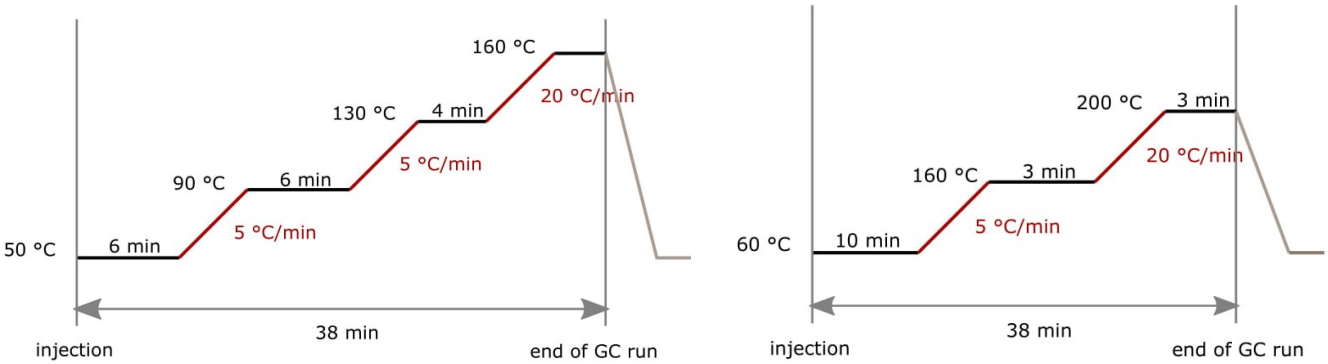


Figure S2. Temperature program for GC5000VOC (left) and GC5000BTX.

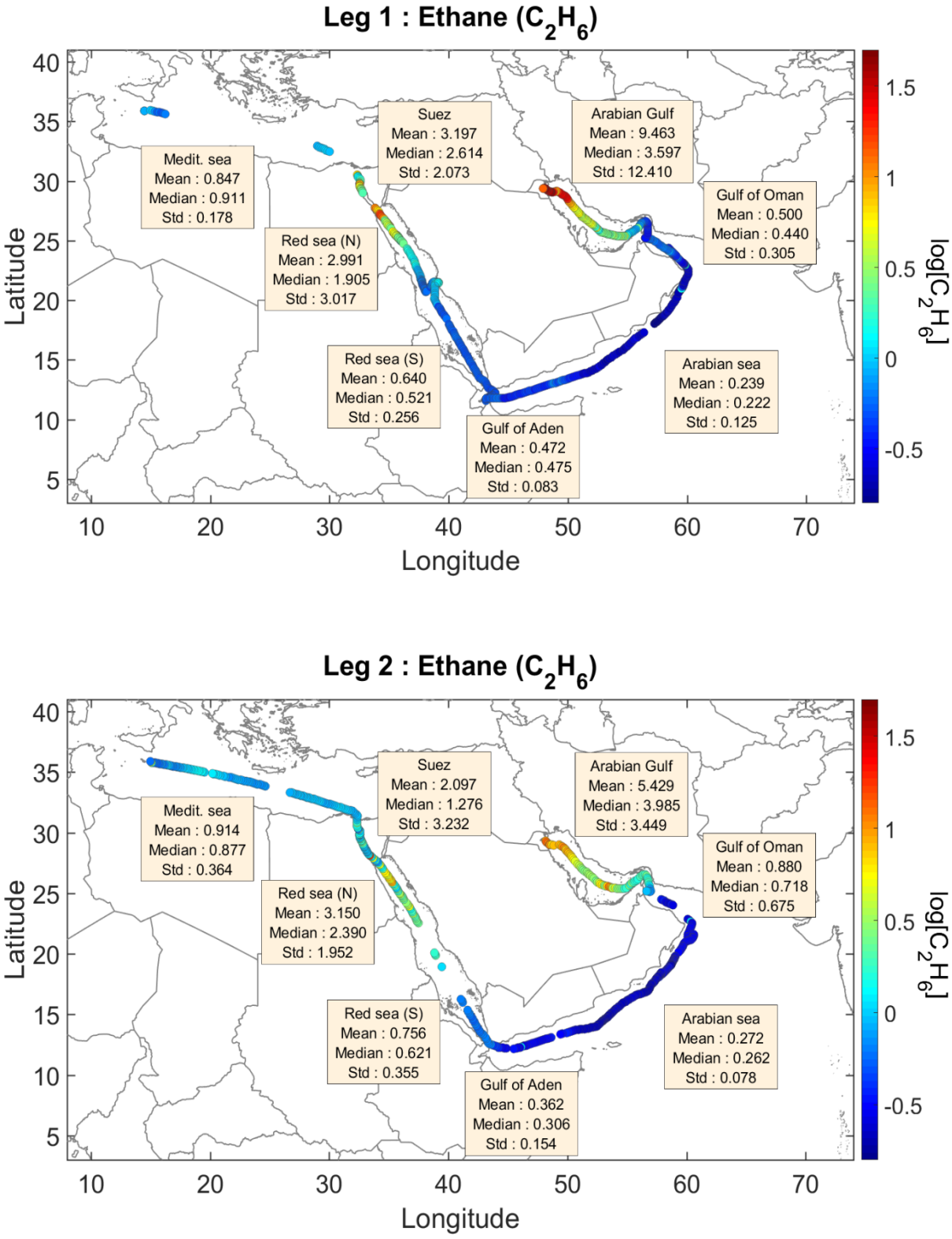


Figure S3. Ethane volume mixing ratios (in ppb) for leg 1 (up) and leg 2 (down). Data from periods that have been influenced by KI ship exhaust have not been removed.

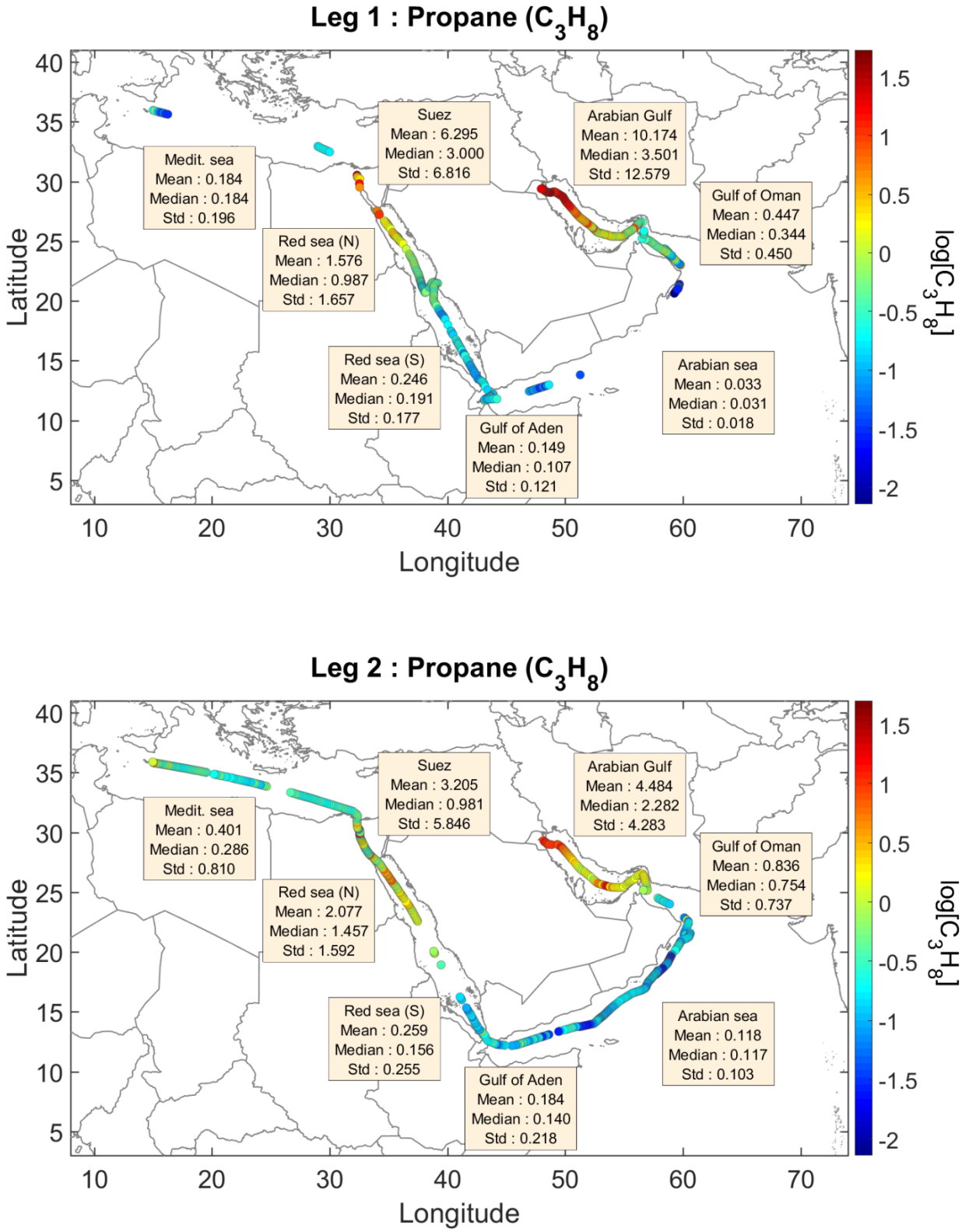


Figure S4. Propane volume mixing ratios (in ppb) for leg 1 (up) and leg 2 (down). Data from periods that have been influenced by KI ship exhaust have been removed.

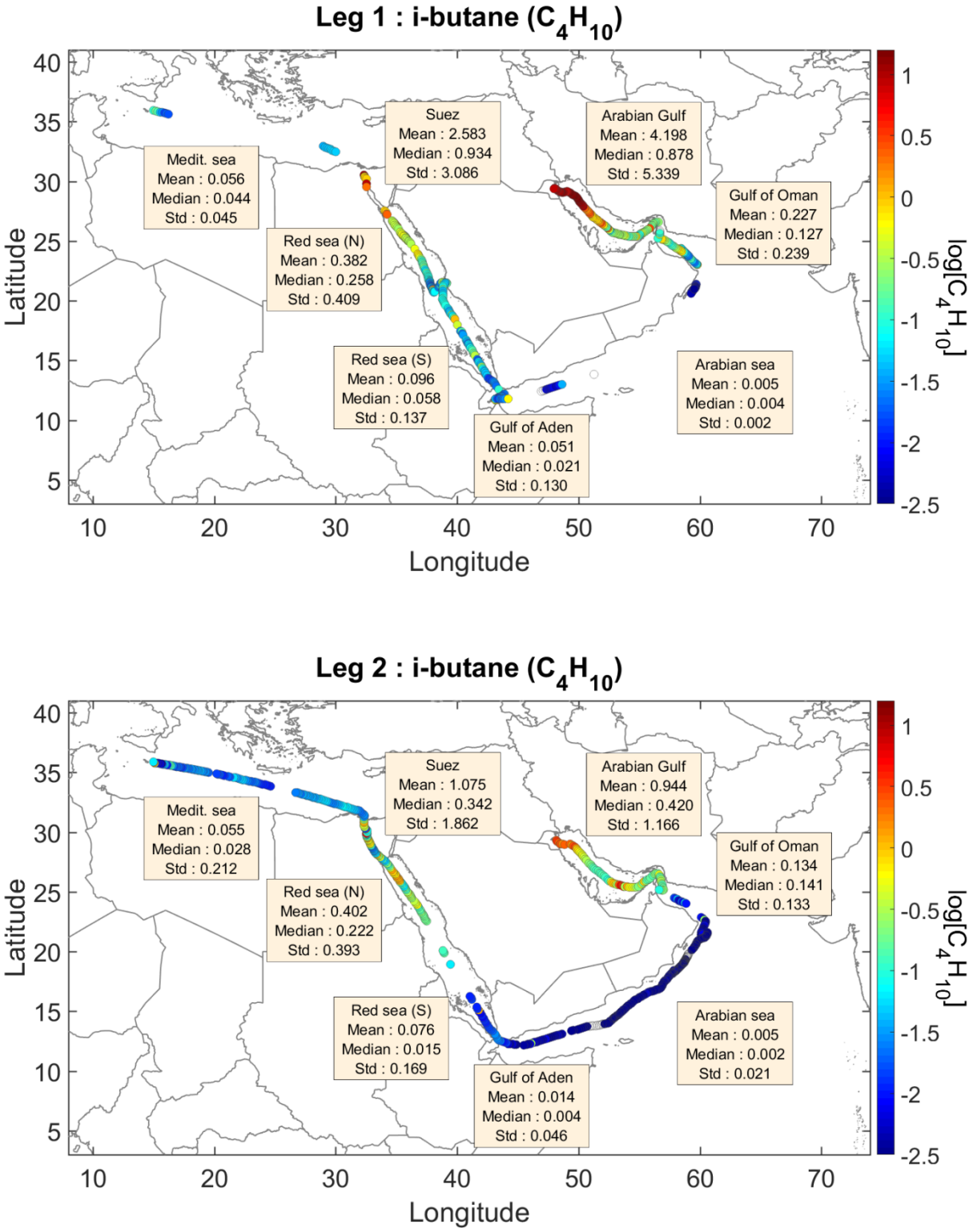
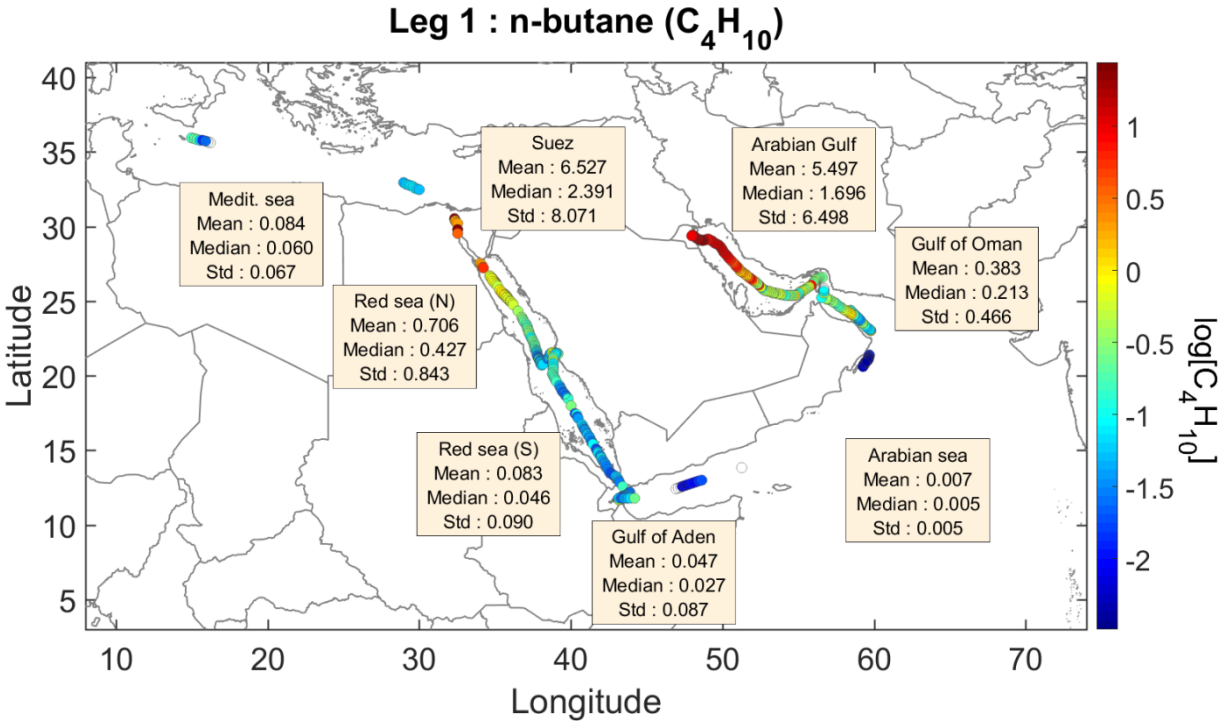


Figure S5. I-butane volume mixing ratios (in ppb) for leg 1 (up) and leg 2 (down). Data from periods that have been influenced by KI ship exhaust have been removed.



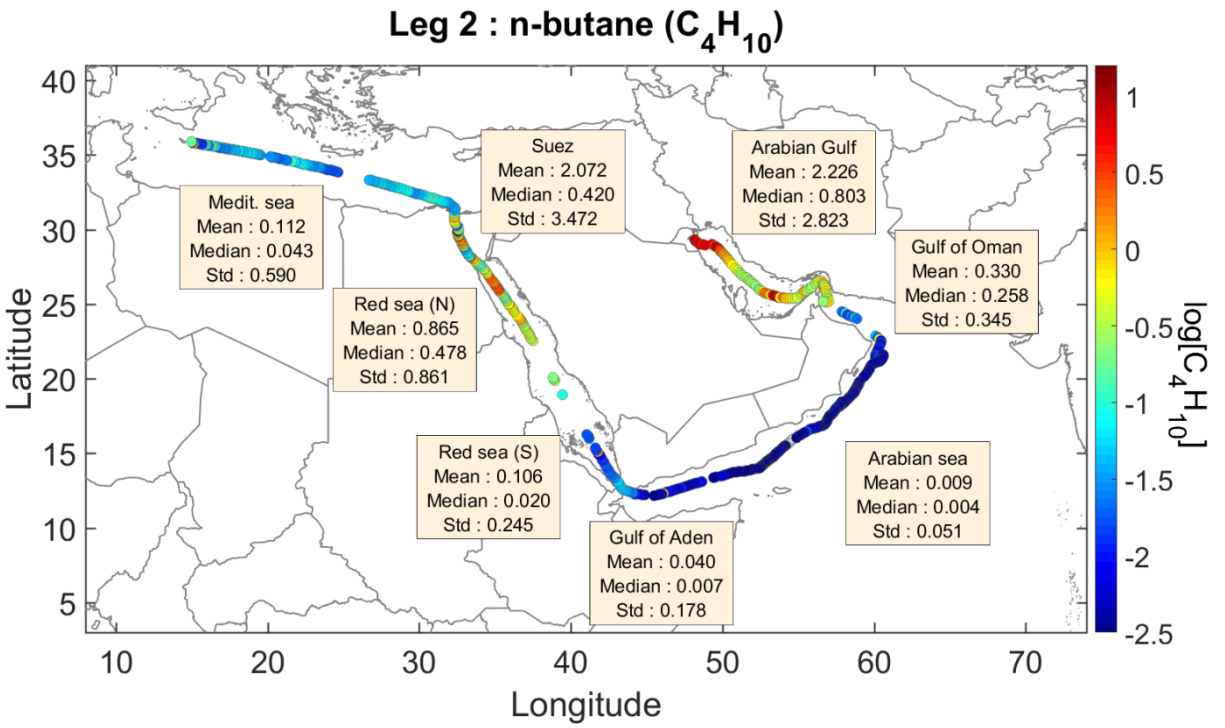


Figure S6. N-butane volume mixing ratios (in ppb) for leg 1 (up) and leg 2 (down). Data from periods that have been influenced by KI ship exhaust have been removed.

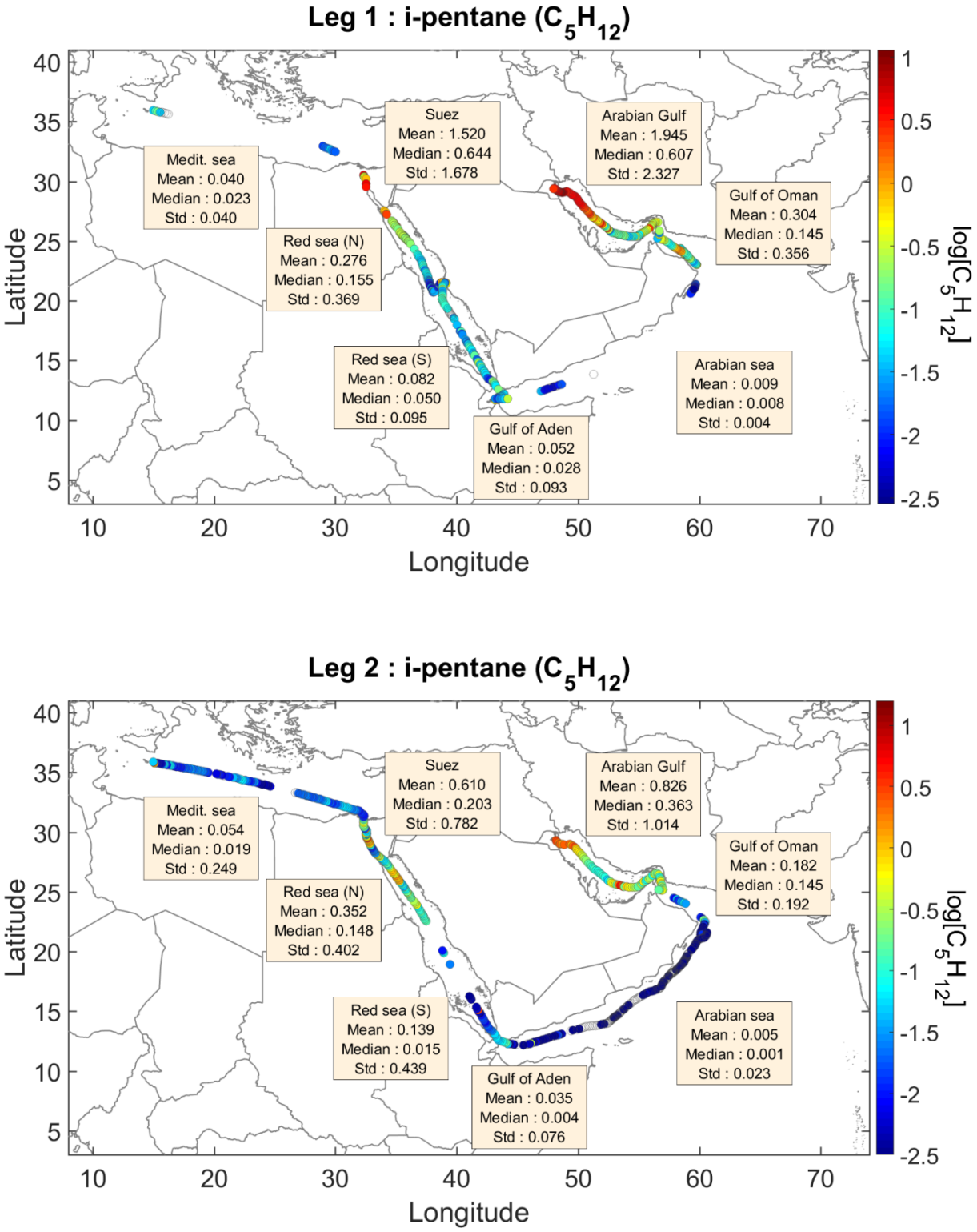


Figure S7. I-pentane volume mixing ratios (in ppb) for leg 1 (up) and leg 2 (down). Data from periods that have been influenced by KI ship exhaust have been removed.

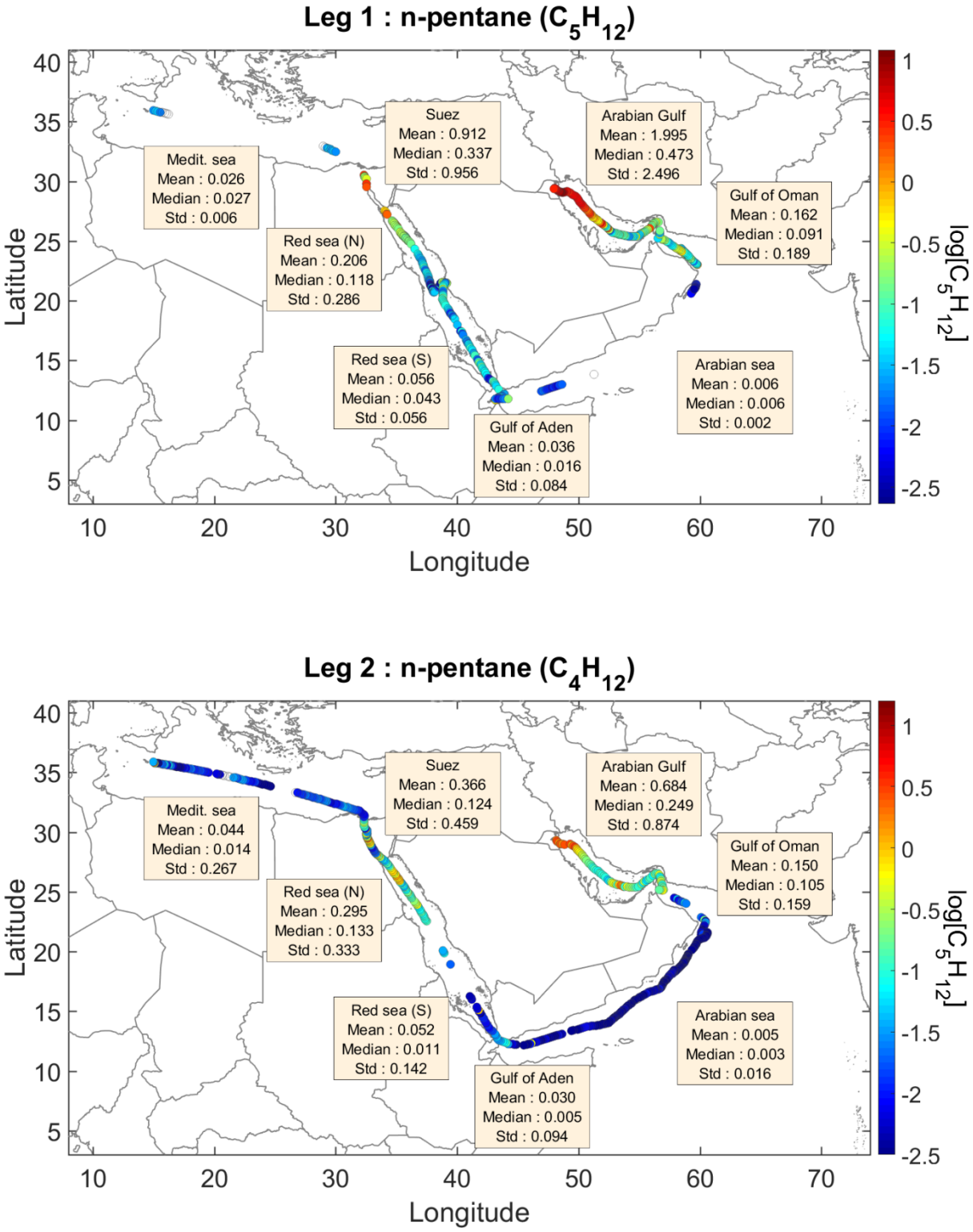


Figure S8. N-pentane volume mixing ratios (in ppb) for leg 1 (up) and leg 2 (down). Data from periods that have been influenced by KI ship exhaust have been removed.

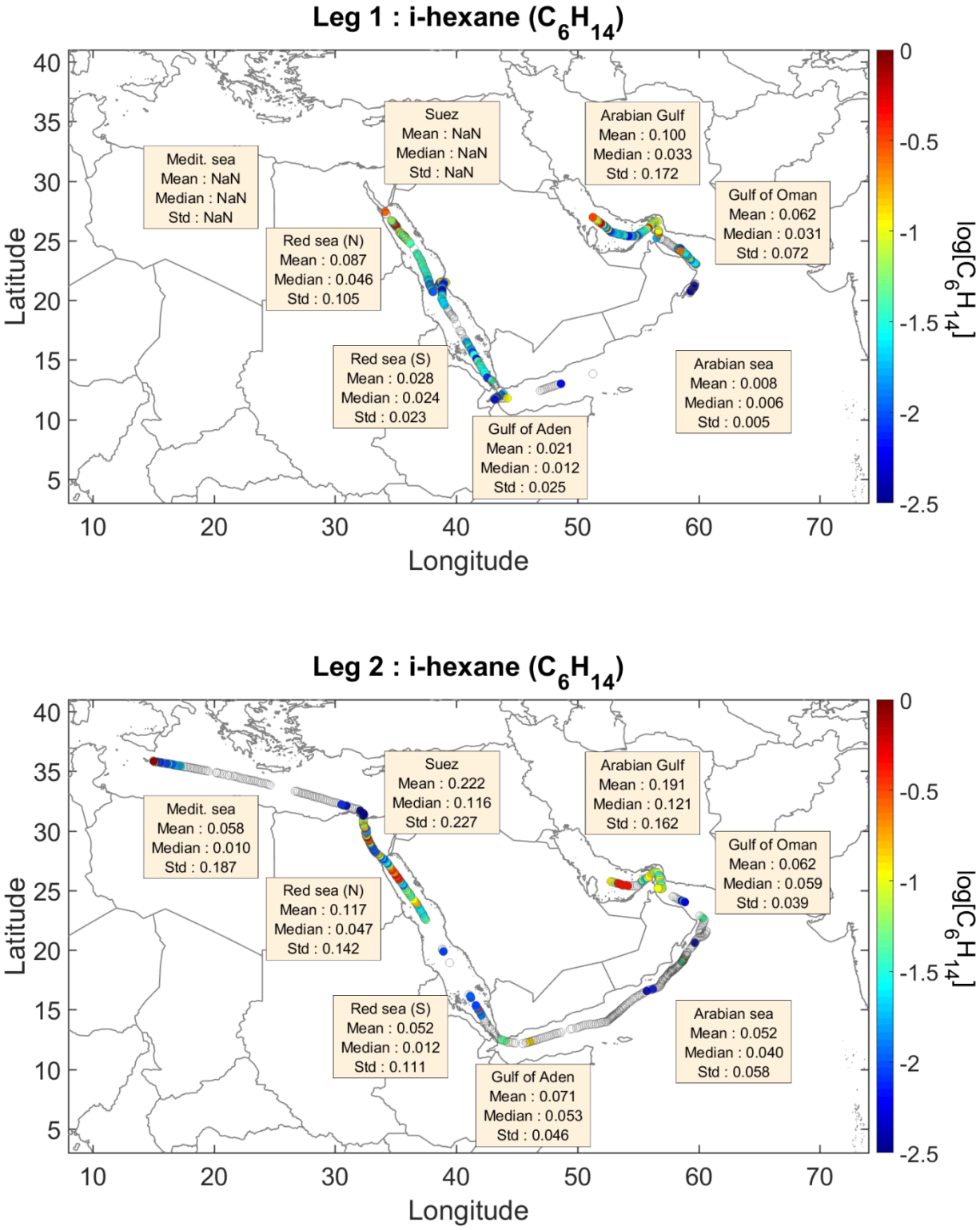


Figure S9. I-hexane (2-methylpentane) volume mixing ratios (in ppb) for leg 1 (up) and leg 2 (down). Data from periods that have been influenced by KI ship exhaust have been removed. No data were obtained at the north part of Persian Gulf for both legs.

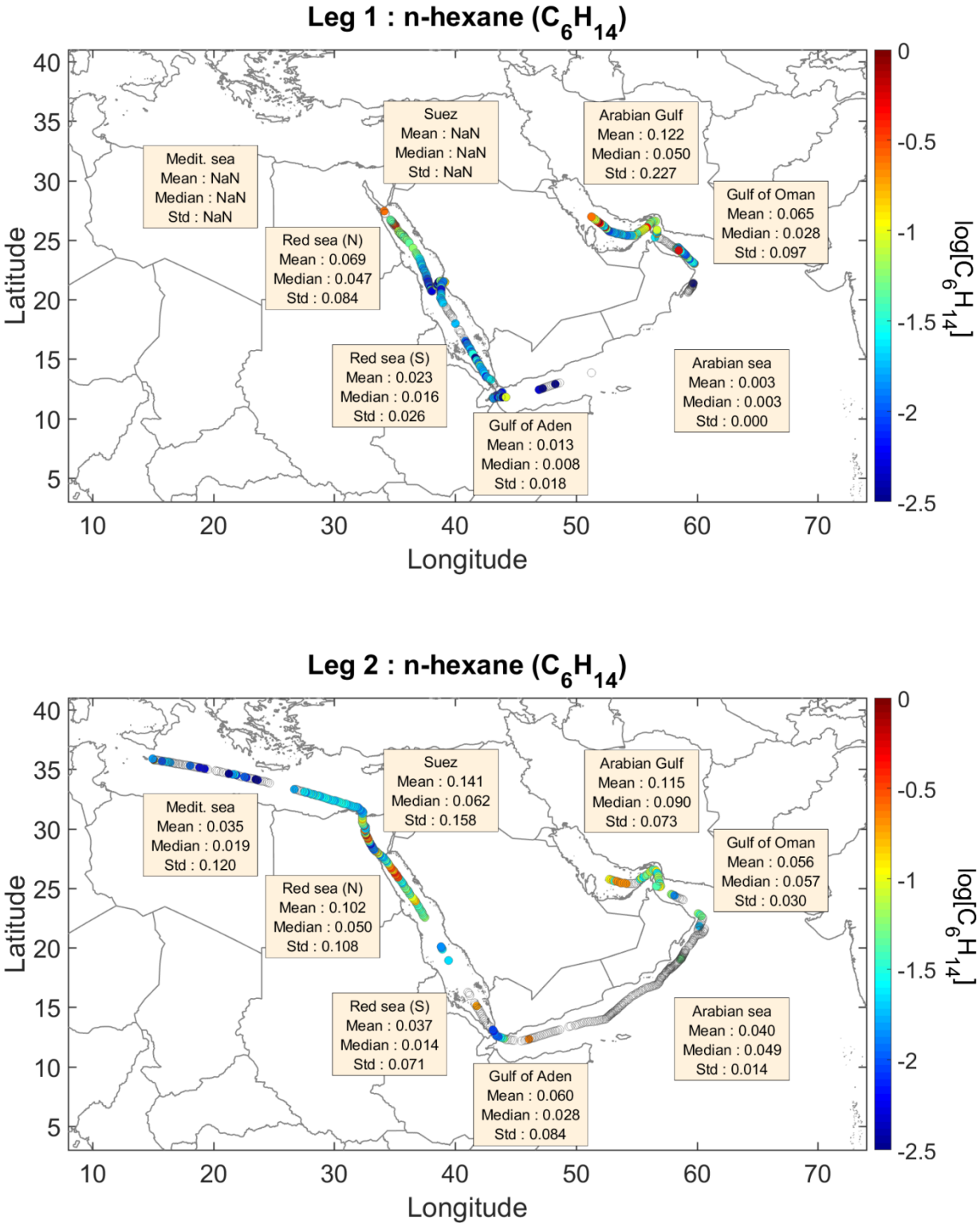


Figure S10. N-hexane volume mixing ratios (in ppb) for leg 1 (up) and leg 2 (down). Data from periods that have been influenced by KI ship exhaust have been removed. No data were obtained at the north part of Persian Gulf for both legs.

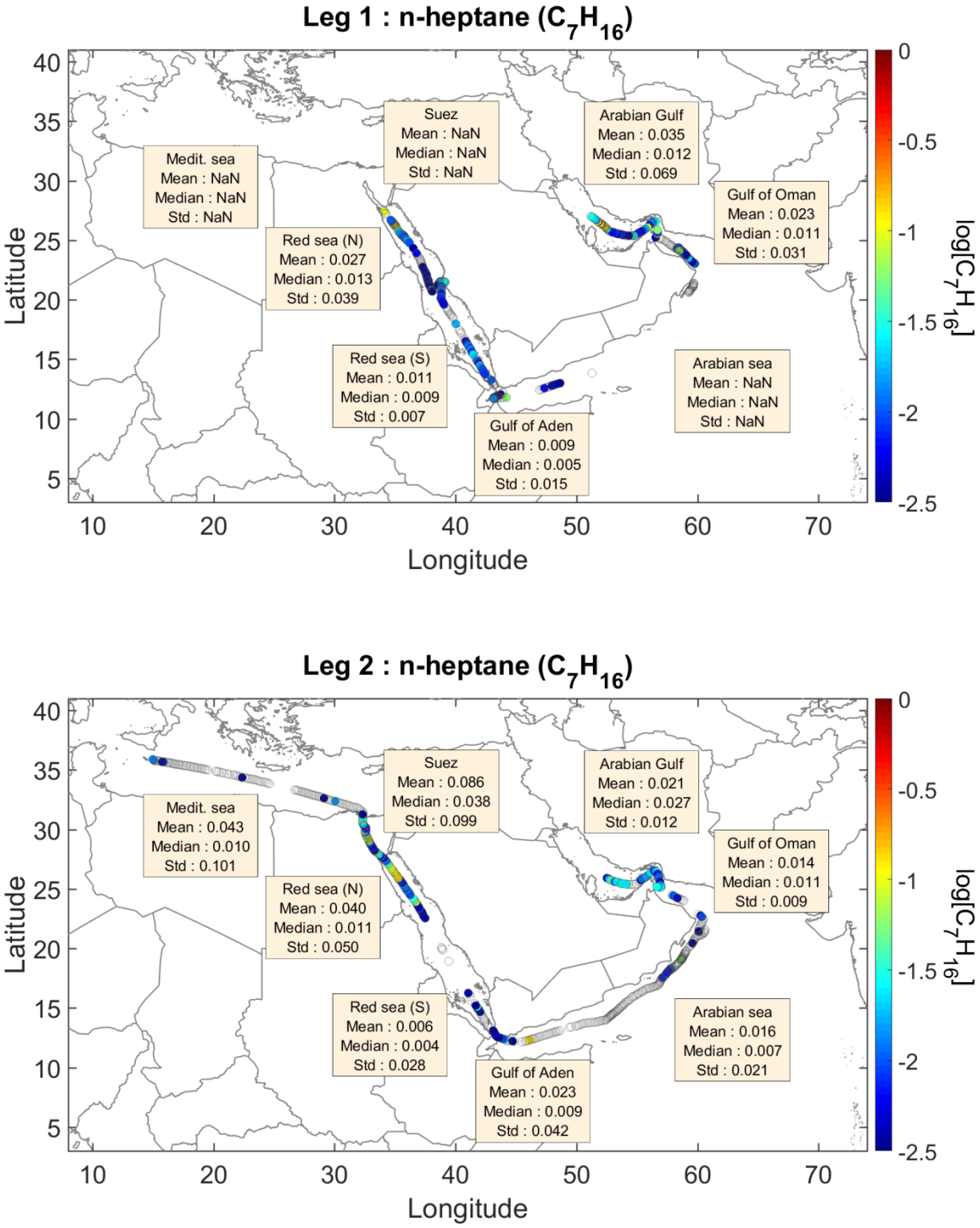
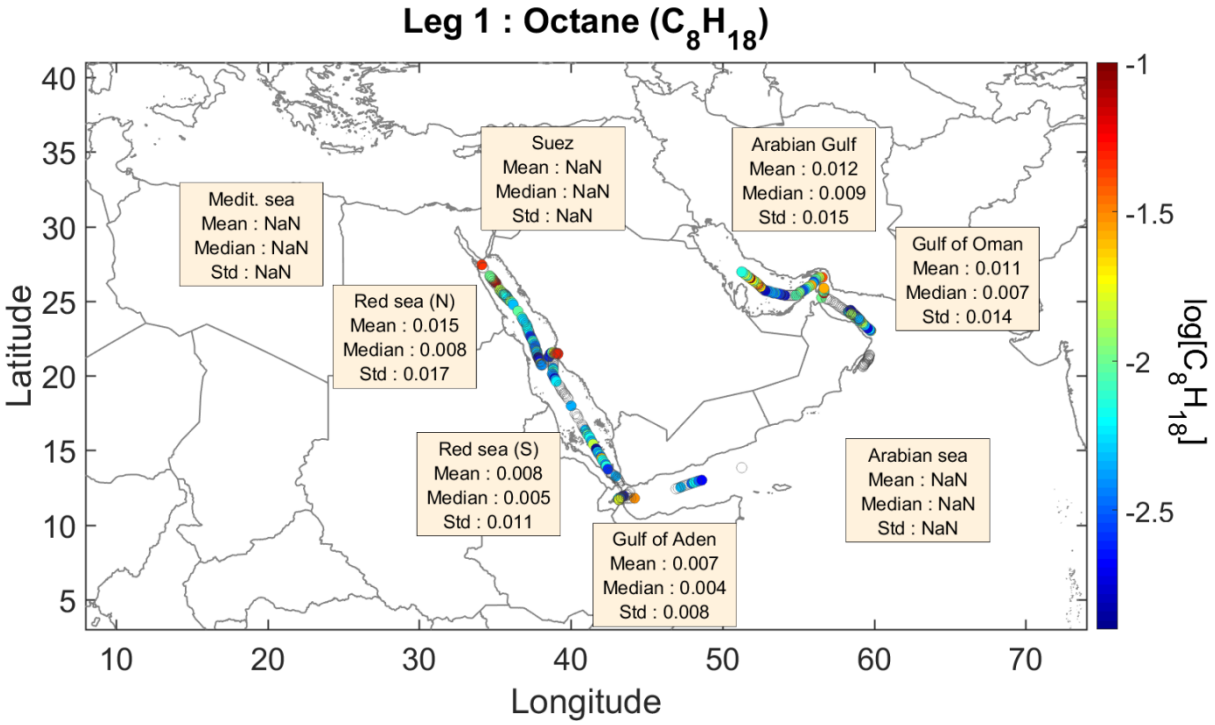


Figure S11. N-hexane volume mixing ratios (in ppb) for leg 1 (up) and leg 2 (down). Data from periods that have been influenced by KI ship exhaust have been removed. No data were obtained at the north part of Persian Gulf for both legs.



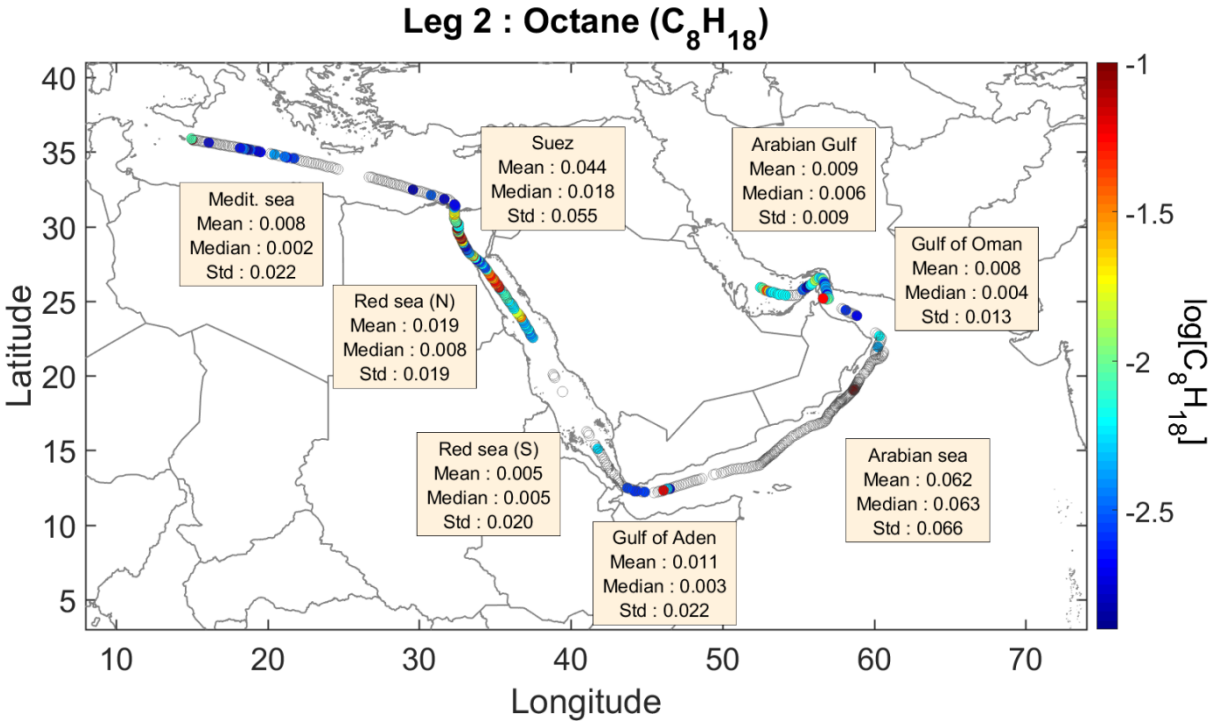


Figure S12. Octane volume mixing ratios (in ppb) for leg 1 (up) and leg 2 (down). Data from periods that have been influenced by KI ship exhaust have been removed. No data were obtained at the north part of Persian Gulf for both legs.

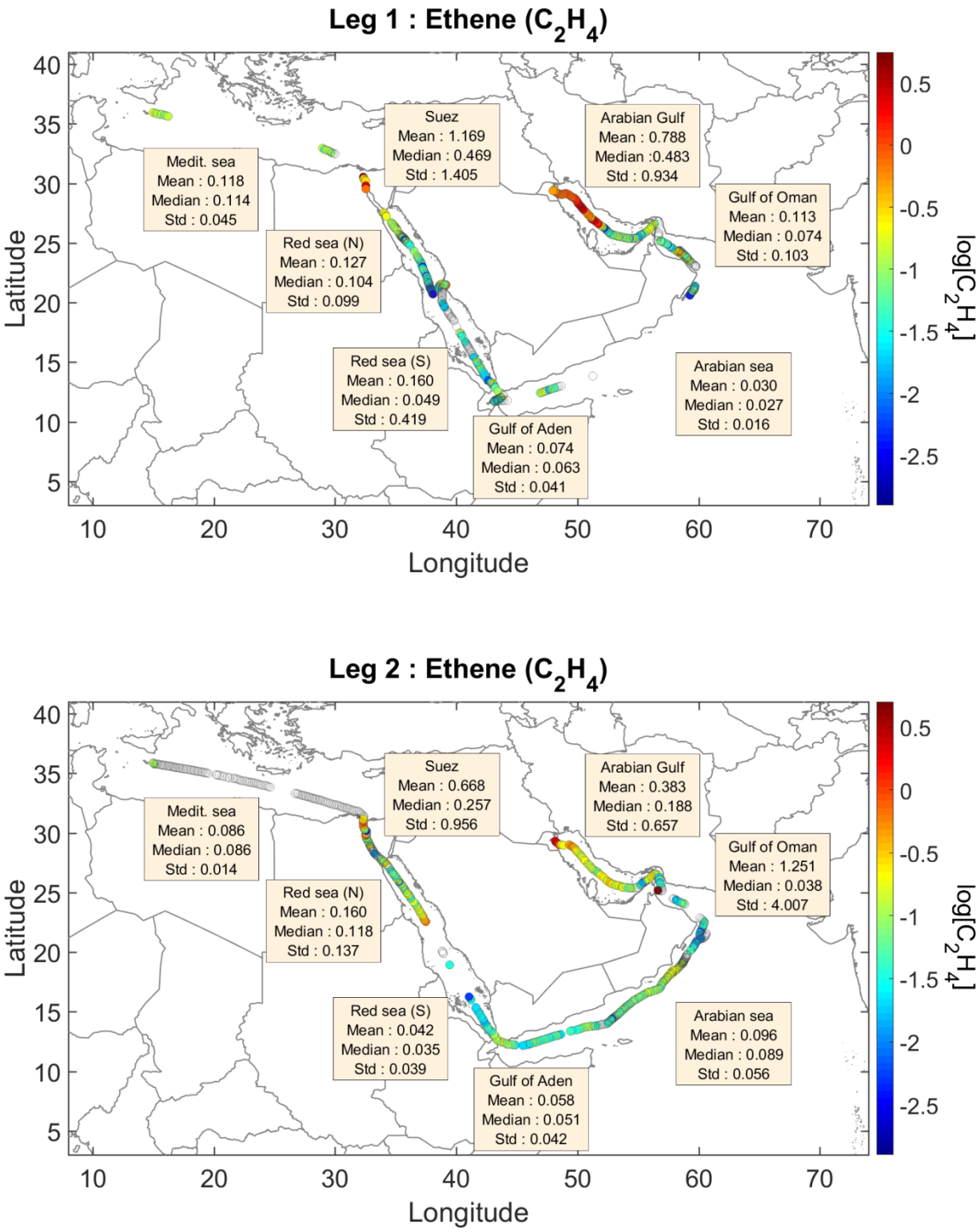


Figure S13. Ethene volume mixing ratios (in ppb) for leg 1 (up) and leg 2 (down). Data from periods that have been influenced by KI ship exhaust have been removed.

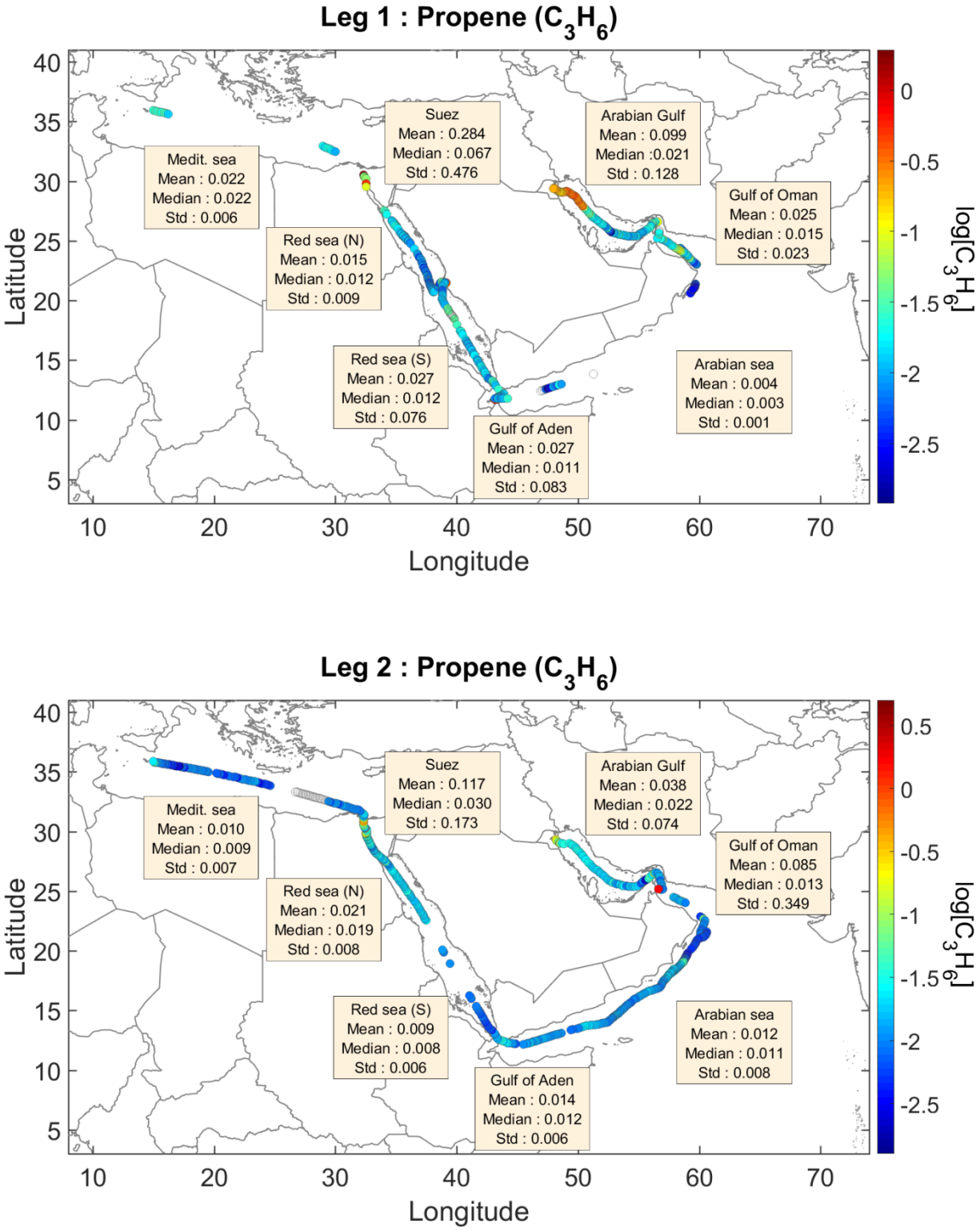


Figure S14. Propene volume mixing ratios (in ppb) for leg 1 (up) and leg 2 (down). Data from periods that have been influenced by KI ship exhaust have been removed.

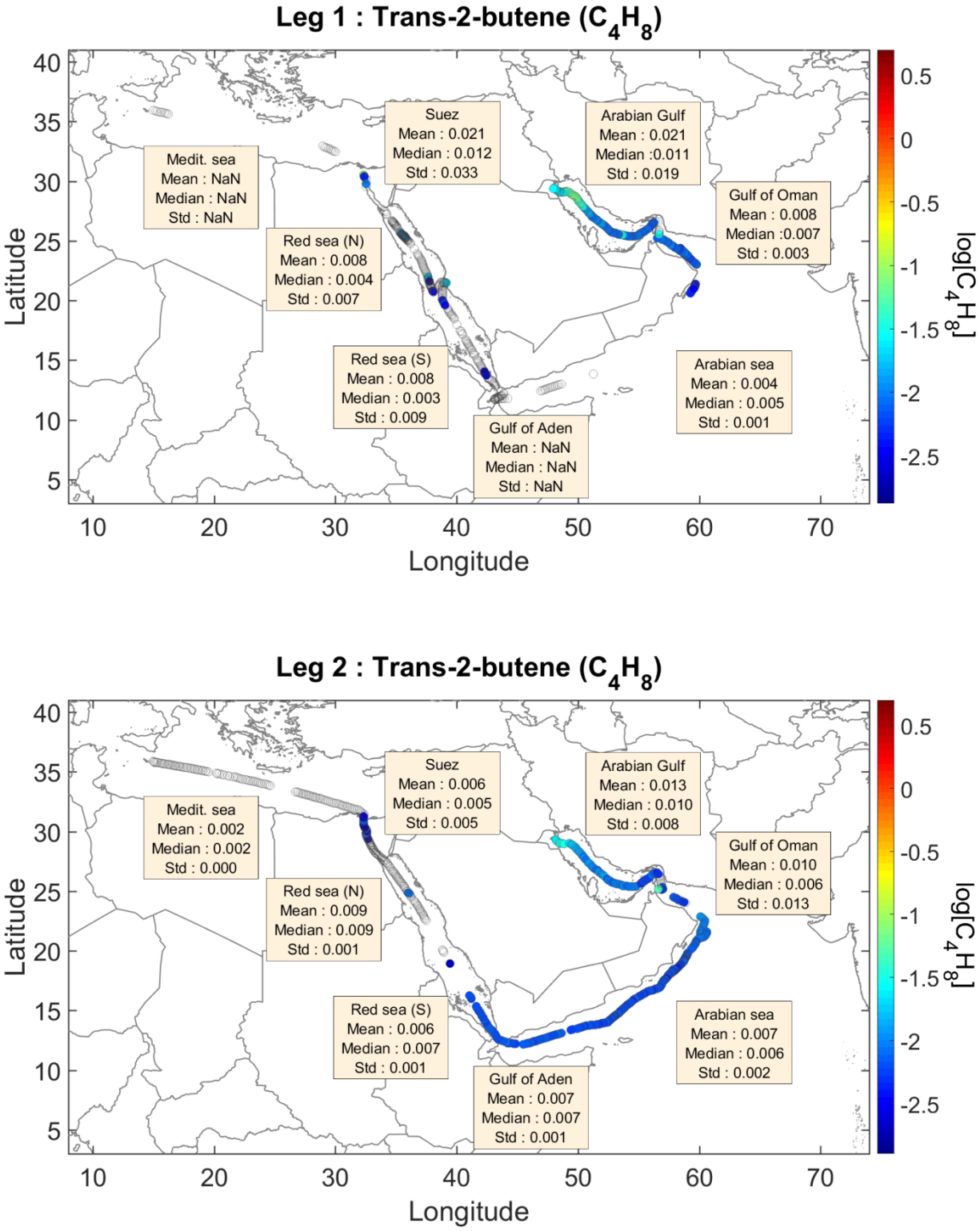


Figure S15. Trans-2-butene volume mixing ratios (in ppb) for leg 1 (up) and leg 2 (down). Data from periods that have been influenced by KI ship exhaust have been removed.

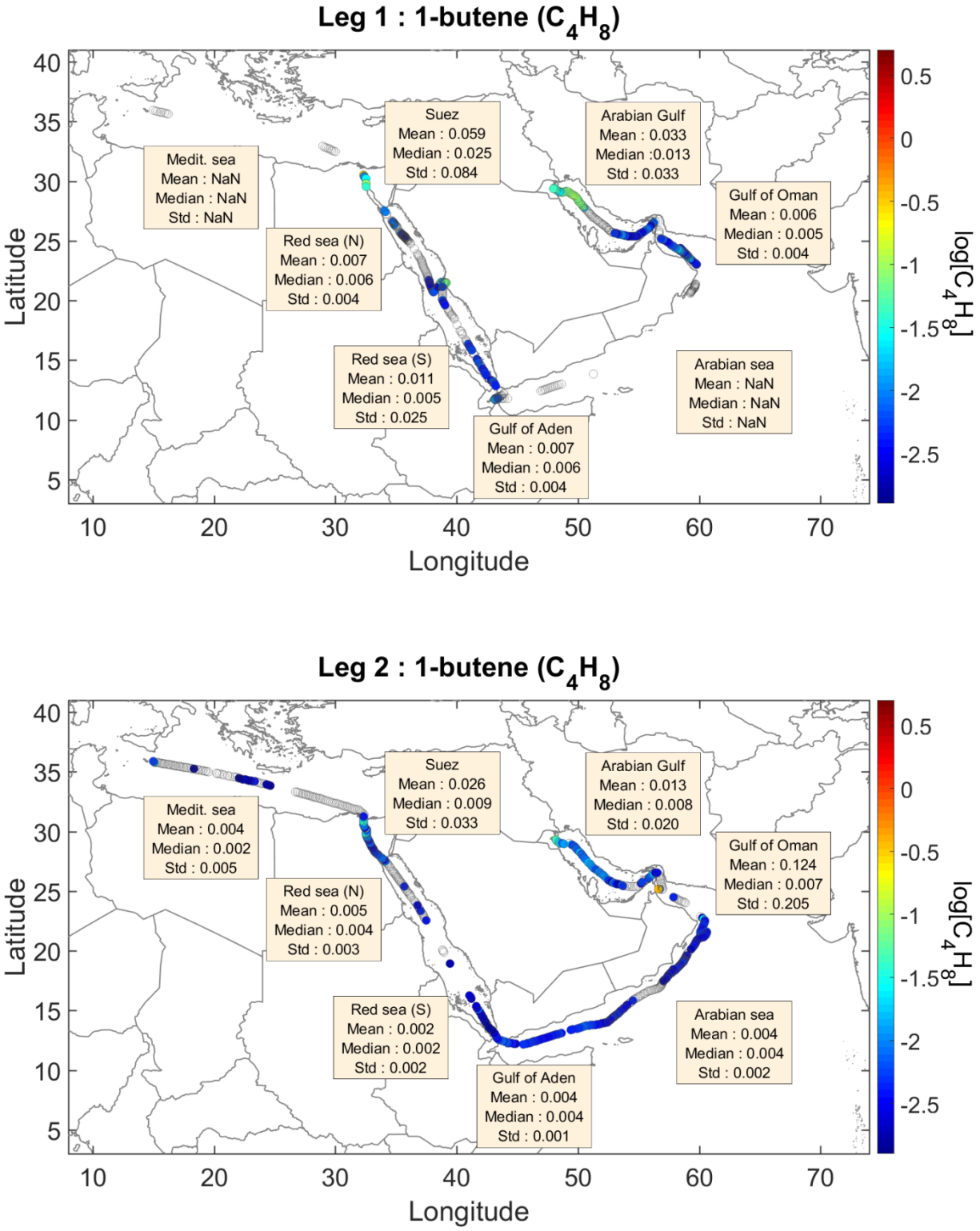


Figure S16. 1-butene volume mixing ratios (in ppb) for leg 1 (up) and leg 2 (down). Data from periods that have been influenced by KI ship exhaust have been removed.

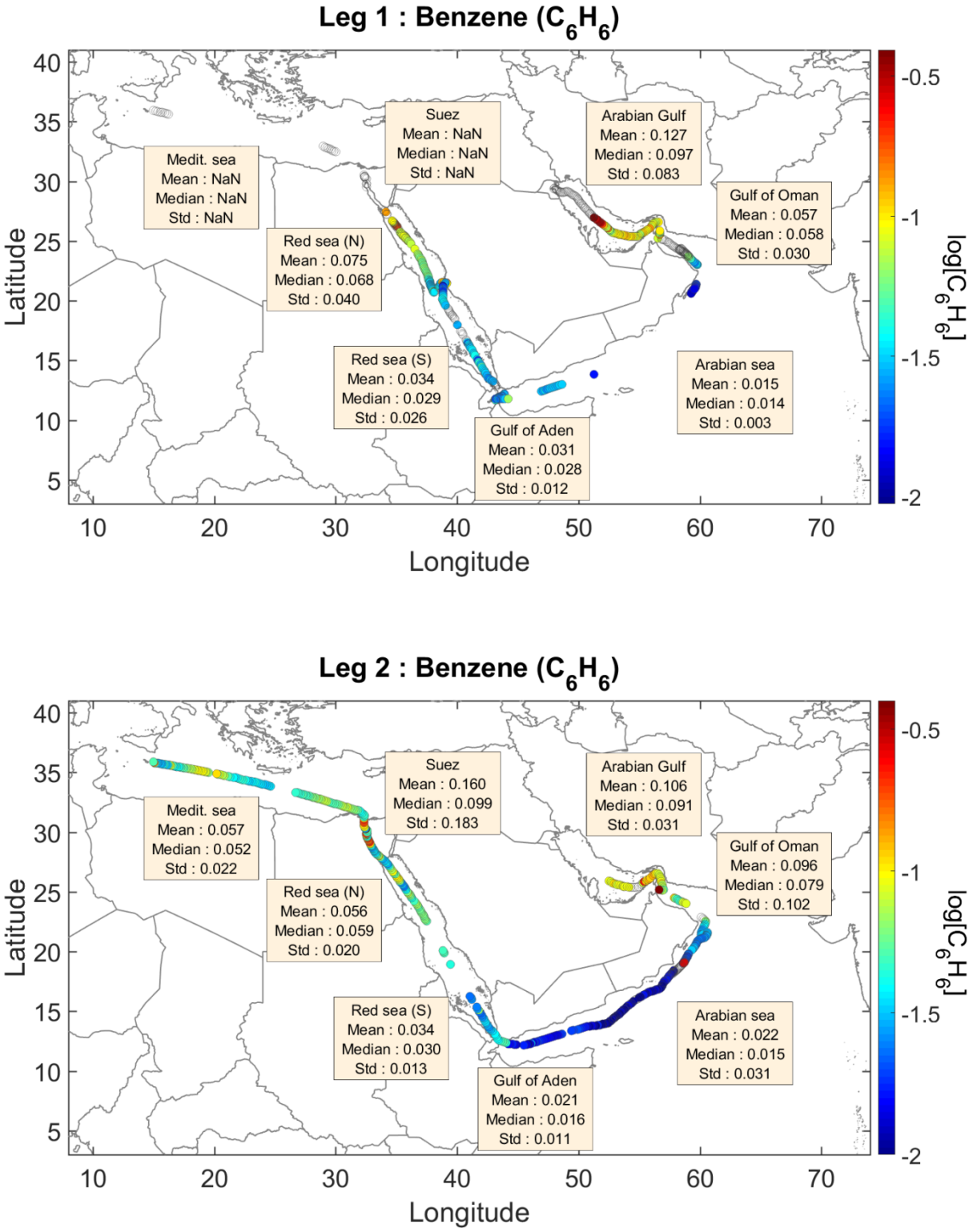


Figure S17. Benzene volume mixing ratios (in ppb) for leg 1 (up) and leg 2 (down). Data from periods that have been influenced by KI ship exhaust have been removed. No data were obtained at the north part of Persian Gulf for both legs.

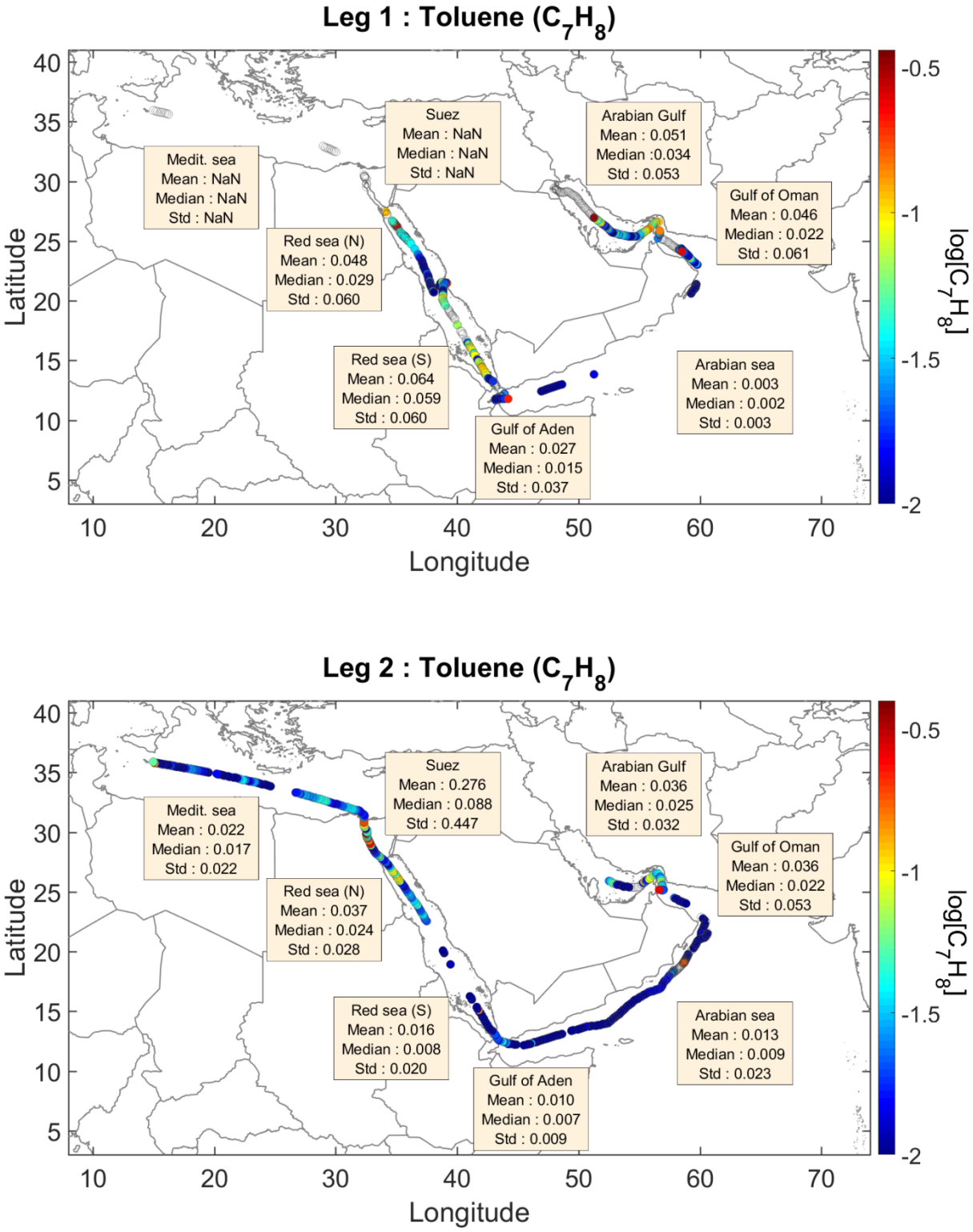


Figure S18. Toluene volume mixing ratios (in ppb) for leg 1 (up) and leg 2 (down). Data from periods that have been influenced by KI ship exhaust have been removed. No data were obtained at the north part of Persian Gulf for both legs.

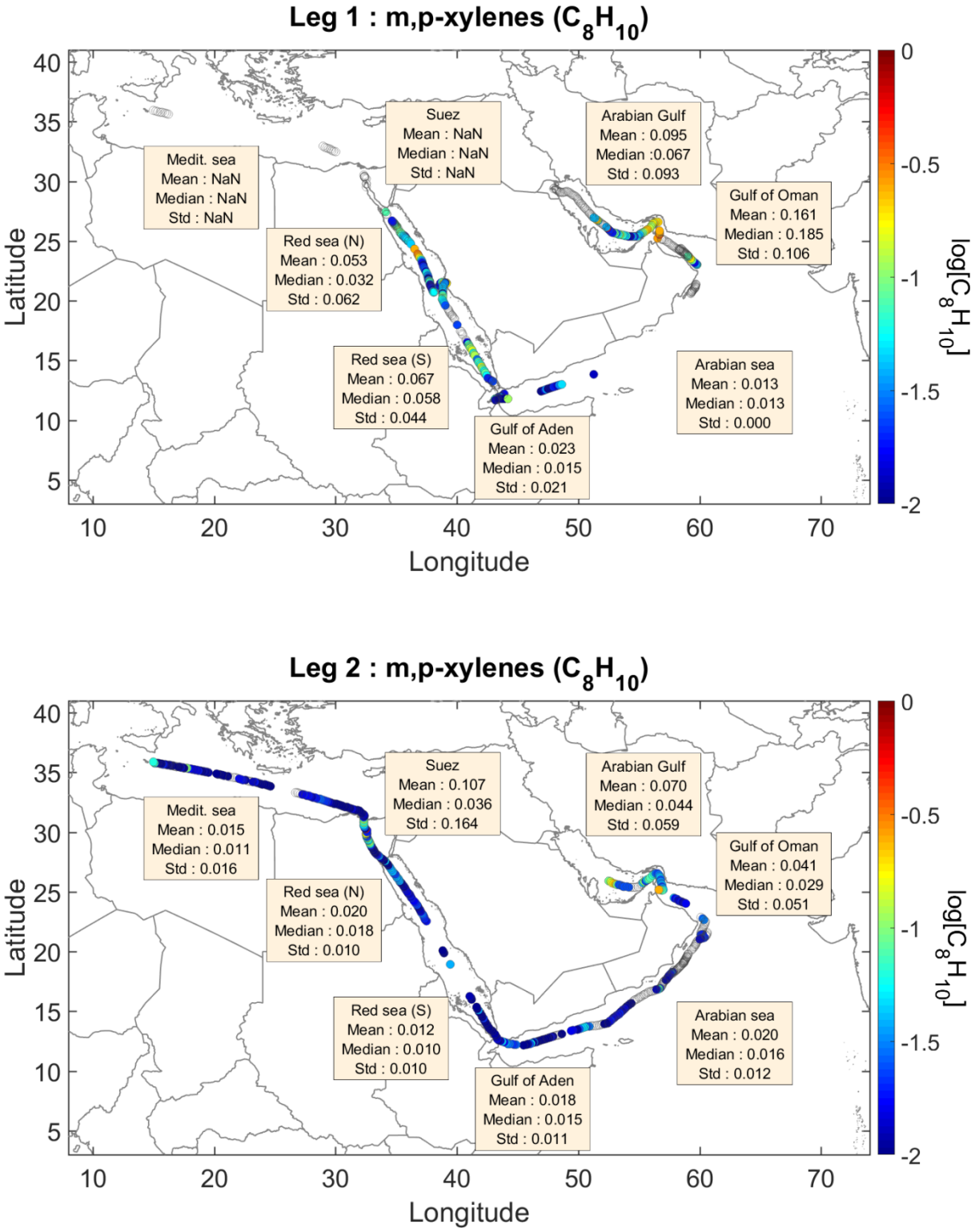


Figure S19. Xylene (m- + p-) volume mixing ratios (in ppb) for leg 1 (up) and leg 2 (down). Data from periods that have been influenced by KI ship exhaust have been removed. No data were obtained at the north part of Persian Gulf for both legs.

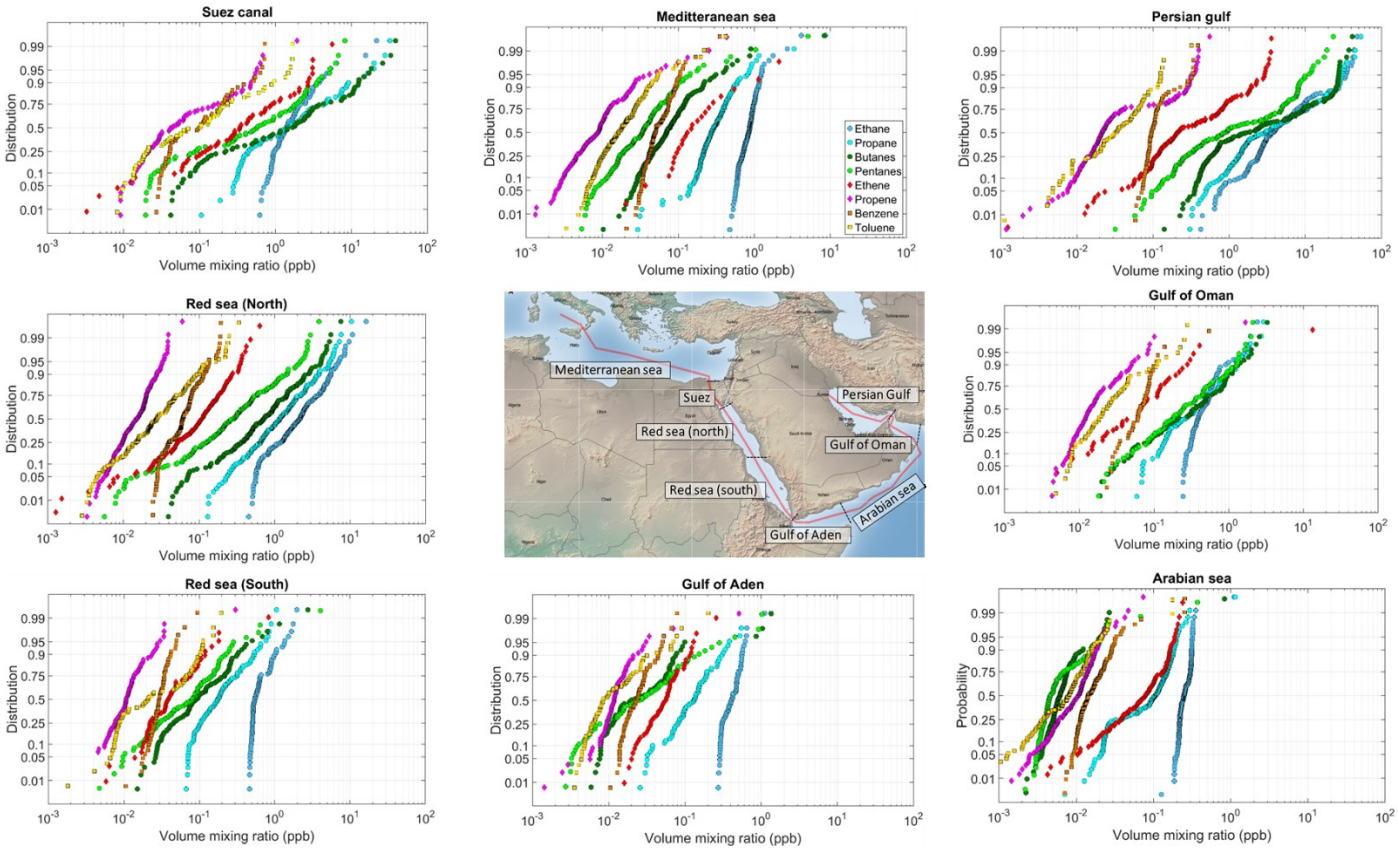


Figure S20. Distribution of the main NMHCs along each area.

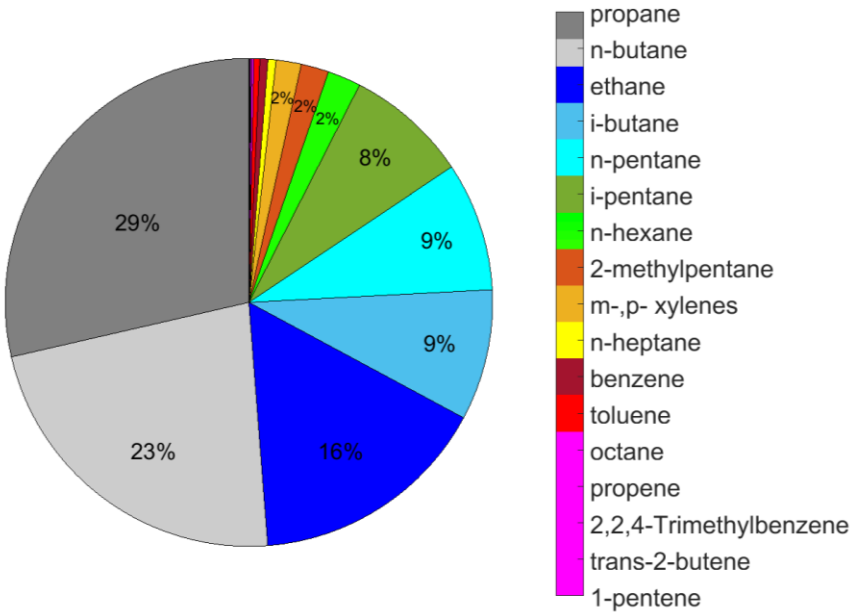


Figure S21. Composition of the sample that was taken above the oil silk.