

Data

2019

High-frequency CO₂-system observations from a moored sensor in the York River

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Dataset Information

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Academic Department and/or Research Group:

Physical Sciences

Title of Dataset:

High-Frequency CO₂-system observations from a moored sensor in the York River

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Description: *Include information of data format and file types, software required to run/analyze files, and information about data collection methods, site location, etc.*

These are CO₂-system data from a moored sensor in the York River, a tributary of the Chesapeake Bay. Temperature, salinity and pH were acquired hourly over two deployments lasting several months. Sensor data were then averaged to 24-hour resolution. Data were calibrated with discrete dissolved inorganic carbon (TCO₂) and alkalinity samples analyzed at the Virginia Institute of Marine Science, following standard procedures. The pH sensor data were then combined with salinity data, and a relationship between alkalinity and salinity, to compute the remaining CO₂-system parameters (TCO₂, CO₂ partial pressure (pCO₂), and saturation state of aragonite, Ω_{ar}). There is one file for each deployment (D1, and D2); the data are in a comma-separated (csv) format. Hourly measured temperature, salinity, and pH are given, as well as derived alkalinity, TCO₂, pCO₂, and Ω_{ar} are included. Units are in the first row of each file.

Files:

Deployment 1 data : YR_buoy_D1.csv

Deployment 2 data : YR_buoy_D2.csv

Funding: *Acknowledge your funding source, including grant # if applicable*

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Keywords:

CO₂-system; pH; estuarine acidification; SeapHOx

Associated Publications:

Shadwick, E.H., Friedrichs, M.A.M., Najjar, R.G., De Meo, O.A., Friedman, J.R., Da, F. and Reay, W.G (2019) High-frequency CO₂-system variability over the winter-to-spring transition in a large coastal plain estuary, J. Geophys. Res. – Oceans – in revision August 2019.

Additional information: