

5th Ocean Climate Summit



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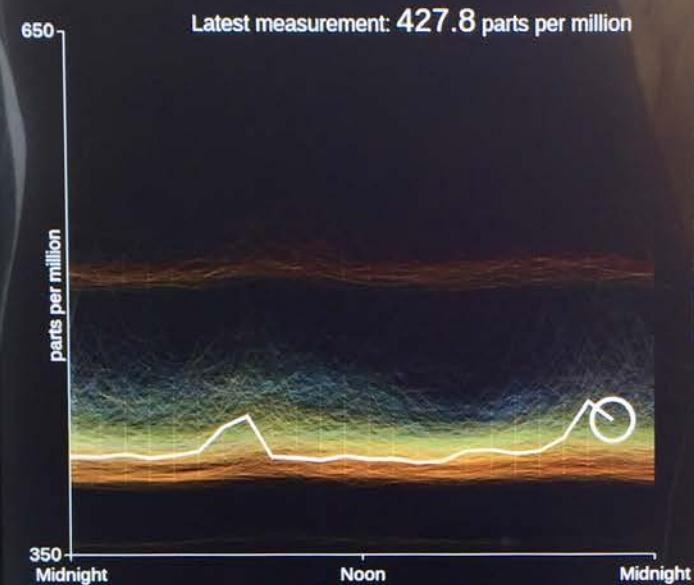
WIRED PIER

Environmental Sensors:
pCO₂ and amosCO₂
water quality
weather and climate
IFCB
HFR

Public Data Displays
Interactive Data Explorer



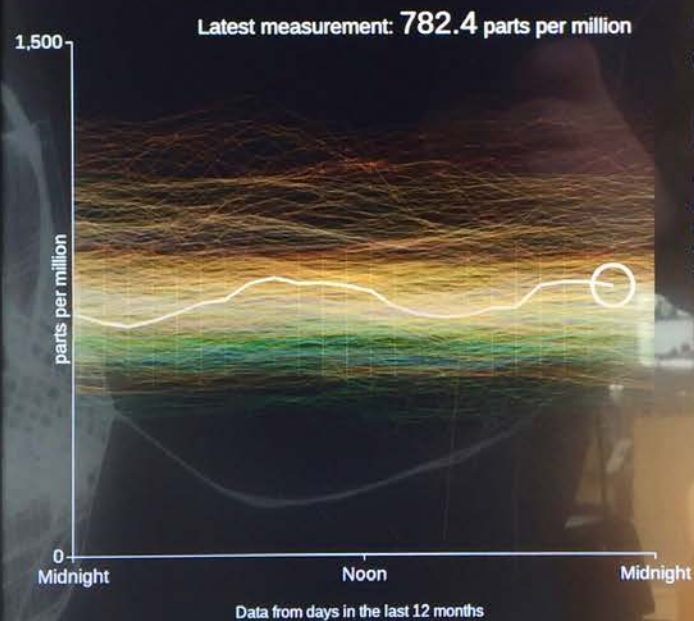
The red and white buoy floating between the piers is measuring carbon dioxide (CO₂) a gas that occurs naturally in Earth's atmosphere and oceans. Increasing CO₂ levels—from the burning of fossil fuels—are causing climate change and making the oceans more acidic.



CO₂ IN THE AIR

Our buoy's measurement is usually higher than the global CO₂ average (about 400 ppm) because cars, trucks, and industries nearby produce CO₂. Also, there are relatively few trees and other plants nearby to absorb CO₂.

CO₂ levels are lowest in the summer, when plants in the northern hemisphere get more sunlight and absorb more CO₂ through photosynthesis.



CO₂ IN THE WATER

Bay water contains more carbon dioxide than the atmosphere.

CO₂ levels in the Bay are highest in the late spring, when upwelling currents along the coast bring water that's high in CO₂ up to the mouth of the Bay.



A line's color indicates the season when it was recorded.

Our buoy is on loan from NOAA's Pacific Marine Environmental Lab. It's part of a global network that tracks carbon dioxide in the ocean and atmosphere.

Last update: 10:17PM 09/19/2017

Wired Pier Data Network

- Pier 15/17 data shared through ERDDAP, CeNCOOS and Exploratorium websites
- Research partnerships & observing networks: CeNCOOS, NOAA-PMEL, PORTS, UC Davis & SFSU-EOS (SF Bay Network), UCSC (IFCB) and USGS
- Scientists invited to share their OA and other research topics during “Lab and Lunch” and “After Dark” public programs









Ocean Acidification in a Cup

Change the atmosphere to change the water below.

Create a carbon dioxide-rich atmosphere in a cup and watch how it changes the water beneath it. This model of ocean-atmosphere interaction shows how carbon dioxide gas diffuses into water, causing the water to become more acidic. Ocean acidification is a change that can have big consequences.



Subjects:

[Chemistry](#)

[Earth Science](#)



Shell Shifts

See why ocean acidification may be giving some marine organisms shell shock.

Explore how the pH of a solution dictates whether carbon is present in the form needed to make seashells.



Subjects:

[Biology](#)

[Chemistry](#)

[Combining Matter](#)

[Earth Science](#)

[Oceans & Water](#)

[Environmental Science](#)