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Global Greenhouse Gas Reference Network

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Trends in Atmospheric Carbon Dioxide



Mauna Loa, Hawaii

Global

CO₂ Movie

CO₂ Emissions

Last Month

Last 1 Year

Last 5 Years

Full Record

Growth Rate

Data

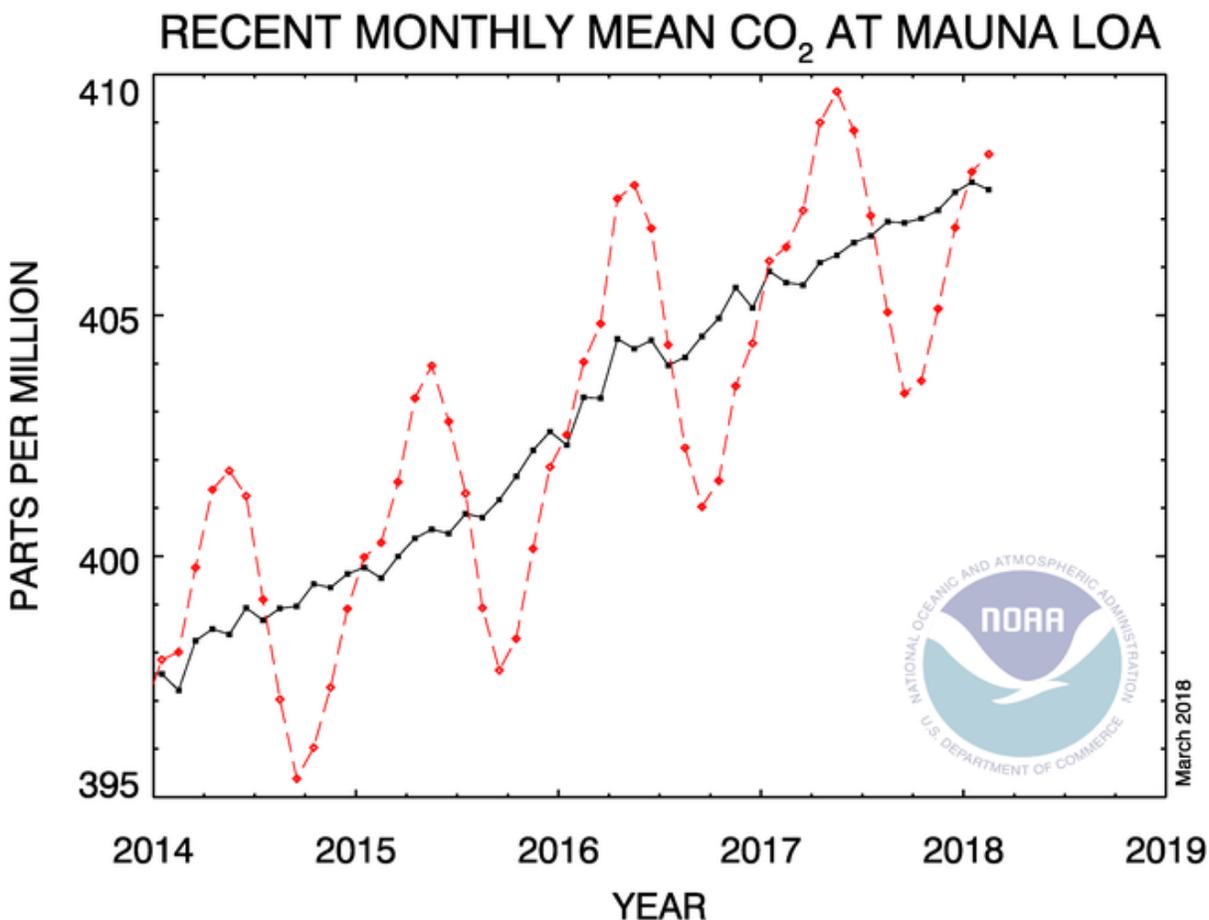
Interactive Plots

Recent Monthly Average Mauna Loa CO₂

February 2018: 408.35 ppm

February 2017: 406.42 ppm

Last updated: March 5, 2018



 [PNG Version](#)

 [PDF Version](#)

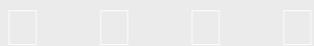
The graph shows recent monthly mean carbon dioxide measured at Mauna Loa Observatory, Hawaii.

The last four complete years of the Mauna Loa CO₂ record plus the current year are shown. Data are reported as a dry air mole fraction defined as the number of molecules of carbon dioxide divided by the number of all molecules in air, including CO₂ itself, after water vapor has been removed. The mole fraction is expressed as parts per million (ppm). Example: 0.000400 is expressed as 400 ppm.

In the above figure, the dashed **red line** with diamond symbols represents the monthly mean values, centered on the middle of each month. The **black line** with the square symbols represents the same, after correction for the average seasonal cycle. The latter is determined as a moving average of SEVEN adjacent seasonal cycles centered on the month to be corrected, except for the first and last THREE and one-half years of the record, where the seasonal cycle has been averaged over the first and last SEVEN years, respectively.

The last year of data are still **preliminary**, pending recalibrations of reference gases and other quality control checks. The Mauna Loa data are being obtained at an altitude of 3400 m in the northern subtropics, and may not be the same as the **globally averaged CO₂ concentration at the surface**.

Global Monitoring Division



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