



Scripps CO₂ Program (/)



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[Ocean Time-series \(/data/seawater_carbon/ocean_time_series.html\)](/data/seawater_carbon/ocean_time_series.html)

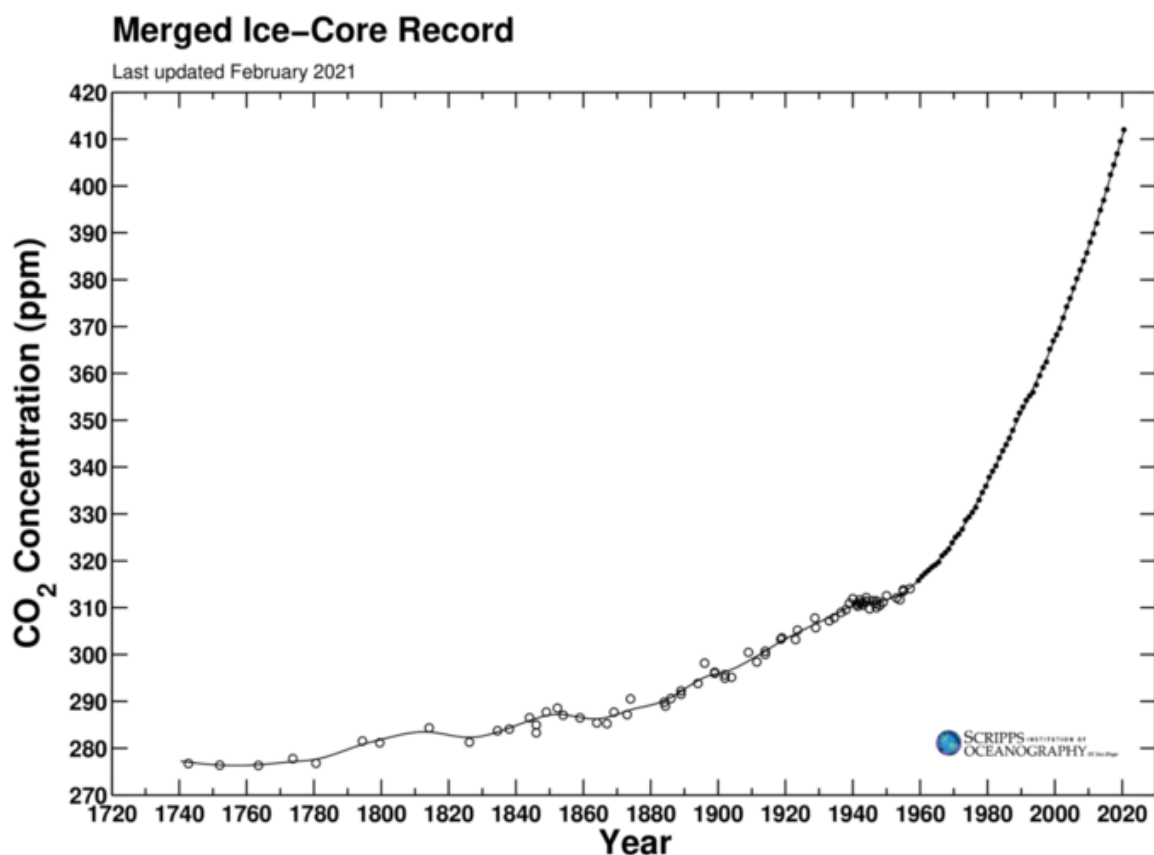
Atmospheric CO₂ Data

Ice-Core Merged Products

Atmospheric CO₂ record based on ice core data before 1958, (Ethridge et. al., 1996; MacFarling Meure et al., 2006) and yearly averages of direct observations from Mauna Loa and the South Pole after and including 1958 (from Scripps CO₂ Program).

Measurement	Frequency	Data File	Dates
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Measurement	Frequency	Data File	Dates
CO ₂	yearly	merged_ice_core_yearly.csv (/assets/data/atmospheric/merged_ice_core_mlo_spo/merged_ice_core_yearly.csv)	13.3 C.E. - present
CO ₂	yearly spline	spline_merged_ice_core_yearly.csv (/assets/data/atmospheric/merged_ice_core_mlo_spo/spline_merged_ice_core_yearly.csv)	13.3 C.E. - present



([/assets/graphics/png/merged_ice_core_record.png](#))

Citation for MLO/SPO Data

Please cite as:

C. D. Keeling, S. C. Piper, R. B. Bacastow, M. Wahlen, T. P. Whorf, M. Heimann, and H. A. Meijer, Exchanges of atmospheric CO₂ and ¹³CO₂ with the terrestrial biosphere and oceans from 1978 to 2000. I. Global aspects, SIO Reference Series, No. 01-06, Scripps Institution of Oceanography, San Diego, 88 pages, 2001.

If it is necessary to cite a peer-reviewed article, please cite as:

C. D. Keeling, S. C. Piper, R. B. Bacastow, M. Wahlen, T. P. Whorf, M. Heimann, and H. A. Meijer, Atmospheric CO₂ and ¹³CO₂ exchange with the terrestrial biosphere and oceans from 1978 to 2000: observations and carbon cycle implications, pages 83-113, in "A History of Atmospheric CO₂ and its effects on Plants, Animals, and Ecosystems", editors, Ehleringer, J.R., T. E. Cerling, M. D. Dearing, Springer Verlag, New York, 2005.

Citation for Ice-core Data

Please cite as:

Macfarling Meure, C. et al., 2006: Law Dome CO₂, CH₄ and N₂O ice core records extended to 2000 years BP. Geophysical Research Letters, 33.

Data sharing policy

The data and graphics on this website are made freely available, with the understanding that appropriate credit will be given. For applications supporting peer-reviewed scientific publications, coauthorship may sometimes be appropriate. An example would be if an important result or conclusion depends on this product, such as the first account of a previously unreported phenomenon. Ethical usage requires disclosing intentions at early stages of the work in order to avoid duplicating ongoing studies at Scripps. For applications where coauthorship is not needed, which includes all applications outside of the peer-reviewed scientific literature, it is sufficient to acknowledge the Scripps CO₂ program as the source. Please direct queries to Ralph Keeling (rkeeling@ucsd.edu) (<mailto:rkeeling@ucsd.edu>).

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