

BOREAS TGB-12 CARBON DIOXIDE ISOTOPIC CONTENT DATA OVER THE NSA

Get Data

Summary:

The BOREAS TGB-12 team made measurements of soil carbon inventories, carbon concentration in soil gases, and rates of soil respiration at several sites to estimate the rates of carbon accumulation and turnover in each of the major vegetation types. This data set contains information on the carbon isotopic content of carbon dioxide sampled from soils.

A guide document which includes more information about this data set can be found at http://daac.ornl.gov/daacdata/boreas/TGB/tgb12ci/comp/TGB12_Iso_CO2.txt.

ORNL DAAC maintains information on the entire [BOREAS Project](#).

Data Citation

Cite this data set as follows:

Trumbore, S. E., E. T. Sundquist, and G. C. Winston. 1998. BOREAS TGB-12 Carbon Dioxide Isotopic Content Data over the NSA. Data set. Available on-line [<http://www.daac.ornl.gov>] from Oak Ridge National Laboratory Distributed Active Archive Center, Oak Ridge, Tennessee, U.S.A. doi:[10.3334/ORNLDAAC/399](https://doi.org/10.3334/ORNLDAAC/399).

References:

Davidson, E.A. and S.E. Trumbore. 1995. Gas diffusivity and production of CO₂ in deep soils of the eastern Amazon. *Tellus*. 47B: 550-565.

Donahue, D. J., T. W. Linick and A. J. T. Jull, Isotope-ratio and background corrections for accelerator mass spectrometry radiocarbon measurements, *Radiocarbon* 32: 135-142 (1990).

Goulden, M. L., S. C. Wofsy, J. W. Harden, S. E. Trumbore, P. M. Crill, S. T. Gower, T. Fries, B. C. Daube, S-M. Fan, D. J. Sutoon, A. Bazzaz, J. W. Munger. Sensitivity of boreal forest carbon balance to soil thaw, *Science* 279:214-217 (1998).

Harden, J., K. P. O'Neill, S. E. Trumbore, H. Veldhuis, and B. J. Stocks, Moss and soil contributions to the annual net carbon flux in a maturing boreal forest. *JGR Atmospheres* 102:28,817-28,830 (1997).

Sellers, P., F. Hall. 1994. Boreal Ecosystem-Atmosphere Study: Experiment Plan. Version 1994-3.0, NASA BOREAS Report (EXPLAN 94).

Sellers, P., F. Hall, H. Margolis, B. Kelly, D. Baldocchi, G. den Hartog, J. Cihlar, M.G. Ryan, B. Goodison, P. Crill, K.J., Ranson, D. Lettenmaier, and D.E. Wickland. 1995. The boreal ecosystem-atmosphere study (BOREAS): an overview and early results from the 1994 field year. *Bulletin of the American Meteorological Society*. 76(9):1549-1577.

Sellers, P., F. Hall, K.F. Huemmrich. 1996. Boreal Ecosystem-Atmosphere Study: 1994 Operations. NASA BOREAS Report (OPS DOC 94).

Sellers, P., F. Hall. 1996. Boreal Ecosystem-Atmosphere Study: Experiment Plan. Version 1996-2.0, NASA BOREAS Report (EXPLAN 96).

Sellers, P., F. Hall, K.F. Huemmrich. 1997. Boreal Ecosystem-Atmosphere Study: 1996 Operations. NASA BOREAS Report (OPS DOC 96).

Sellers, P. J., F. G. Hall, R. D. Kelly, A. Black, D. Baldocchi, J. Berry, M. Ryan, K. J. Ranson, P. M. Crill, D. P. Lettenmaier, H. Margolis, J. Cihlar, J. Newcomer, D. Fitzjarrald, P. G. Jarvis, S. T. Gower, D. Halliwell, D. Williams, B. Goodison, D. E. Wickland, and F. E. Guertin. 1997. BOREAS in 1997: Experiment Overview, Scientific Results and Future Directions. *Journal of Geophysical Research* 102 (D24): 28,731-28,770.

Southon, J., R., J. S. Vogel, S. E. Trumbore and others, Progress in AMS measurements at the LLNL spectrometer, *Radiocarbon* 34: 473 - 477 (1992).

Stuiver, M. and H. Polach., Reporting of 14C data. Radiocarbon 19: 355-363 (1977).

Trumbore, S.E., Radiocarbon geochronology, in, J. M. Sowers, J. S. Noller and W. R. Lettis, eds., Dating and Earthquakes: Review of Quaternary Geochronology and its Application to Paleoseismology: NUREG-5562, US Nuclear Regulatory Commission, Washington DC, pp.2-69 ◆ 2-101 (1998).

Trumbore, S. E., Comparison of carbon dynamics in two soils using measurements of radiocarbon in pre-and post-bomb soils. Global Biogeochemical Cycles 7:275-290 (1993).

Trumbore, S. E. and J. W. Harden, Input, accumulation and turnover of carbon in soils of the BOREAS northern study area, JGR Atmospheres 102:28,805-28,816 (1997).

Winston, G., E. T. Sundquist, B. B. Stephen and S. E. Trumbore, Winter CO2 fluxes in a boreal forest, JGR Atmospheres 102:28,795-28,804 (1997).

Data Format:

For information on Parameter/Variable Names, Variable Description/Definition, Units of Measurement, and Data File Format see this companion file <http://daac.ornl.gov/daacdata/boreas/TGB/tgb12ci/comp/tgb12ci.def>

Document Information:

28-Oct-1998 (data set citation revised on 10-Sep-2002)

Document Review Date:

28-Oct-1998

Document Curator:

uso@daac.ornl.gov

Document URL:

<http://daac.ornl.gov>



[Privacy Policy](#) | [Feedback](#) | [Help](#)



[Home](#)

About Us

Who We Are
Partners
User Working Group
Data Citation Policy
Workshops
News

Get Data

Complete Dataset List
Search for Data
Field Campaigns
Land Validation
Regional/Global
Model Archive

Submit Data

Submit Data Form
Data Scope and Acceptance
Data Authorship Policy
Data Publication Timeline
Detailed Submission Guidelines

Data Management

Best Practices
Data Management Plan
How-to's

Tools

MODIS
THREDDS
SDAT
Daymet
CARVE Data Viewer
Soil Moisture Visualizer
Land - Water Checker

Help

FAQs

[Contact Us](#)