

BOREAS TF-04 CO₂ AND CH₄ SOIL PROFILE DATA FROM THE SSA

Summary:

The BOREAS TF-04 team measured distributions of carbon dioxide (CO₂) and methane (CH₄) concentrations for the upper 5 meters of soil and unsaturated zone at the mature stand, upper 6 m at the 20-year old stand, and the upper 1m at the 8-year old stand and clear cut area at the Southern Study Area of the Boreal Ecosystem Atmosphere Study (BOREAS) during August 1993 to March 1995. Particle size and carbon content of the unsaturated deposits, precipitation, soil temperature and moisture, carbon and oxygen isotopes of soil CO₂ and soil water chemistry are also presented.

A guide document which includes more information about this data set can be found at http://daac.ornl.gov/boreas/TF/tf4ssasp/comp/TF04_Soil_profile.txt.

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

Data Citation

Cite this data set as follows (citation revised on July 17, 2003):

Streigl, R., and K. P. Wickland. 1999. BOREAS TF-04 CO₂ and CH₄ Soil Profile Data from the SSA. 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/363](https://doi.org/10.3334/ORNLDAAC/363).

References:

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

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

Sellers, P., F. Hall, and 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.

Striegl, R.G., and Wickland, K.P., 1998, effects of a clear-cut harvest on soil respiration in a jack-pine lichen woodland, Can. Jour. Forest Research 28:534-539.

Wickland, K.P., and Striegl, R.G., 1997, Measurements of soil carbon dioxide and methane concentrations and fluxes, and soil properties at four ages of jack pine forest in the Southern Study Area of the Boreal Ecosystem Atmosphere Study, Saskatchewan, Canada, 1993-1995. U.S. Geological Survey Open-File Report. 97-49.

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/boreas/TF/tf4ssasp/comp/tf4ssasp.def>

Document Information:

17-Mar-1999 (data set citation revised on 11-Sep-2002)

Document Review Date:

17-Mar-1999

Document Curator:

webmaster@daac.ornl.gov

Document URL:

<http://daac.ornl.gov>