

About Us
 Get Data
 Submit Data
 Data Management
 Tools
 Sign in

[DAAC Home](#) > [Get Data](#) > [Field Campaigns](#) > [Boreal Ecosystem-Atmosphere Study \(BOREAS\)](#) > [User guide](#)

BOREAS TE-12 LEAF GAS EXCHANGE DATA

[Get Data](#)

Summary:

The BOREAS TE-12 team collected several data sets in support of its efforts to characterize and interpret information on the reflectance, transmittance, and gas exchange of boreal vegetation. This data set contains measurements of leaf gas exchange conducted in the SSA during the growing seasons of 1994 and 1995 using a portable gas exchange system.

A guide document which includes more information about this data set can be found at http://daac.ornl.gov/daacdata/boreas/TE/te12lgex/comp/TE12_Leaf_Gas_Exch.txt.

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

Data Citation

Cite this data set as follows:

Arkebauer, T. J. 1998. BOREAS TE-12 Leaf Gas Exchange Data. 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/351](https://doi.org/10.3334/ORNLDAAC/351).

References:

- Ball, J.T. 1987 Calculations related to gas exchange. In: Stomatal Function. E. Zeiger, G.D. Farquhar and I.R. Cowan (eds), Stanford University Press, Stanford, CA, pp. 446-475.
- McDermitt, D.K., J.M. Norman, J.T. Davis, T.M. Ball, T.J. Arkebauer, J.M. Welles, and S.R. Roemer. 1989 CO₂ response curves can be measured with a field-portable closed-loop photosynthesis system. *Ann. Sci. For.* 46:416s-420s.
- Sellers, P. and F. Hall. 1994. Boreal Ecosystem-Atmosphere Study: Experiment Plan. Version 1994-3.0, NASA BOREAS Report (EXPLAN 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. 1996. Boreal Ecosystem-Atmosphere Study: 1994 Operations. NASA BOREAS Report (OPSDOC 94).
- Sellers, P., F. Hall, and K.F. Huemmrich. 1997. Boreal Ecosystem-Atmosphere Study: 1996 Operations. NASA BOREAS Report (OPSDOC 96).
- 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.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. *JGR, BOREAS Special Issue*, 102 (D24), 28731-28769.

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/TE/te12lgex/comp/te12lgex.def>

Document Information:

28-Oct-1998 (data citation revised on 25-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](#)