BOREAS HYD-03 SUBCANOPY METEOROLOGICAL DATA

Summary:

The BOREAS HYD-03 team collected several data sets related to the hydrology of forested areas. This data set includes measurements of wind speed and direction; air temperature; relative humidity; and canopy, trunk, and snow surface temperatures within three forest types. The data were collected in the SSA-OJP (1994) and SSA-OBS and SSA-OA (1996). Measurements were taken for 3 days in 1994 and 4 days at each site in 1996. These measurements were intended to be short term to allow the relationship between subcanopy measurements and those collected above the forest canopy to be determined. The subcanopy estimates of wind speed were used in a snow melt model to help predict the timing of snow ablation.

A guide document which includes more information about this data set can be found at http://daac.ornl.gov/boreas/HYD/h3scmet/comp/HYD03_Subcan_Met.txt.

ORNL DAAC maintains information on the entire BOREAS Project.

Data Citation:

Cite this dataset as follows:

Hardy, J. P., and R. E. Davis. 1998. BOREAS HYD-03 Subcanopy Meteorological 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/265.

References:

Davis, R.E., C. Woodcock, and J.P. Hardy. 1996. Toward spatially distributed modeling of snow in the boreal forest. Eos Transactions, AGU 1995 Fall Meeting, Abstract, p. 218.

Davis, R.E., J.P. Hardy, W. Ni, C. Woodcock, C.J. McKenzie, R. Jordan, and X. Li. 1997. Variation of snow ablation in the boreal forest: A sensitivity study on the effects of conifer canopy. Journal of Geophysical Research. 102(D24):29389-29396.

Hardy, J.P., R.E. Davis, and J.C. McKenzie. 1995. Snow Distribution Around Trees: Incorporation of snow interception patterns into spatially distributed snow models. Eos Transactions, AGU 1995 Fall Meeting, Abstract, p. 202.

Hardy, J.P., R.E. Davis, R. Jordan, X. Li, C. Woodcock, W. Ni, and J.C. McKenzie. 1997. Snow ablation modeling at the stand scale in a boreal jack pine forest. Journal of Geophysical Research. 102(D24): 29397-29406.

Ni, W., X. Li, C.E. Woodstock, J.L. Roujean, and R.E. Davis. 1997. Transmission of solar radiation in boreal conifer forests: Measurements and models. Journal of Geophysical Research. 102(D24):29555-29566.

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 (OPS DOC 94).

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, F.E. Guertin. 1997. BOREAS in 1997: Experiment overview, scientific results, and future directions. Journal of Geophysical Research. 102(D24):28731-28770.

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.

Data Format:

For information on Parameter/Variable Names, Variable Description/Definition, Units of Measurement, and Data File Format see the companion file http://daac.ornl.gov/boreas/HYD/h3scmet/comp/h3scmet.def.

Document Information:

10-Jun-1998 (data set citation revised on 13-Sep-2002)

Document Review Date:

10-Jun-1998

Document Curator:

webmaster@daac.ornl.gov

Document URL:

http://daac.ornl.gov