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# BOREAS LANDSAT TM LEVEL-3B IMAGERY: AT-SENSOR RADIANCE IN BSQ FORMAT

## Get Data

### Summary:

For BOREAS, the level-3b Landsat TM data, along with the other remotely sensed images, were collected in order to provide spatially extensive information over the primary study areas. This information includes radiant energy, detailed land cover, and biophysical parameter maps such as FPAR and LAI. Although very similar in content to the level-3a Landsat TM products, the level-3b images were created to provide users with a directly usable at-sensor radiance image. Geographically, the level-3b images cover the BOREAS NSA and SSA. Temporally, the images cover the period of 22-Jun-1984 to 30-Jul-1996.

Companion files include (1) an image inventory listing to inform users of the images that are available and (2) example thumbnail images that may be viewed using a convenient viewer utility.

A document that includes more information about this data set can be found at [http://daac.ornl.gov/daacdata/boreas/STAFF/lrm\\_ii3b/comp/LANDSAT\\_TM\\_L3B.txt](http://daac.ornl.gov/daacdata/boreas/STAFF/lrm_ii3b/comp/LANDSAT_TM_L3B.txt).

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

### Data Citation

Cite this data set as follows (citation revised on October 29, 2002):

Newcomer, J. A., and J. Cihlar. 1999. BOREAS Landsat TM Level-3b Imagery: At-Sensor Radiance in BSQ Format. ORNL DAAC, Oak Ridge, Tennessee, USA. <http://dx.doi.org/10.3334/ORNLDAAC/425>

### References:

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. and F. Hall, 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., 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. *Journal of Geophysical Research* 102 (D24): 28, 731-28,770.

### Data Format:

For information about the image inventory dataset including Parameter/Variable Names, Variable Description/Definition, and Data File Format, see this companion file [http://daac.ornl.gov/daacdata/boreas/STAFF/lrm\\_ii3b/comp/LANDSAT\\_TM\\_L3B.txt](http://daac.ornl.gov/daacdata/boreas/STAFF/lrm_ii3b/comp/LANDSAT_TM_L3B.txt)

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