



CLPX Airborne: Airborne Visible/Infrared Imaging Spectrometer (AVIRIS) Data, Version 1

USER GUIDE

How to Cite These Data

As a condition of using these data, you must include a citation:

Painter, T. 2006. *CLPX Airborne: Airborne Visible/Infrared Imaging Spectrometer (AVIRIS) Data, Version 1*. [Indicate subset used]. Boulder, Colorado USA. NASA National Snow and Ice Data Center Distributed Active Archive Center. <https://doi.org/10.5067/R92TRY26ZN2Q>. [Date Accessed].

FOR QUESTIONS ABOUT THESE DATA, CONTACT NSIDC@NSIDC.ORG

FOR CURRENT INFORMATION, VISIT <https://nsidc.org/data/NSIDC-0154>



National Snow and Ice Data Center

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1 DETAILED DATA DESCRIPTION

AVIRIS data have the following characteristics:

- Spectral range: 400-2500 nm
- Spectral resolution: 10 nm
- Spatial resolution: 1.5 m (variable)
- Swath width: 1.0 km (variable)
- Processing level: apparent surface reflectance, subpixel snow-covered area and grain size
- Sampling: scene based (~ 815 samples, 512 lines)
- Temporal coverage: April 4-8, 2002; February 19-20, 2003; March 25-April 1, 2003
- Spatial coverage: [39.70N, 1070W] to [410N, 105.50W], not complete coverage

1.1 Format

Apparent surface reflectance: binary, short integer

Subpixel snow-covered area: binary, floating point (data range N [0.0,1.0])

Subpixel snow grain radius: binary, floating point (data range N [0, 1100 micrometers])

1.2 File and Directory Structure

Data are available on the HTTPS site in the

https://daacdata.apps.nsidc.org/pub/DATASETS/CLP/data/airborne/nsidc0154_aviris/ directory. Within this directory, there are three folders and a readme file. One folder contains data for the Intensive Observation Period 4 (IOP-4), one folder contains data for reflectances, and one folder contains data for radiances. Within the IOP folder, data files are organized by study area location.

1.3 File Naming Convention

The following codes are used in filenames:

File names include location names.

Reflectance files include ".*rf1*" in the file name.

Radiance files include ".*img*" in the file name.

Grain size files include ".*grnsz*" in the file name.

Snow cover files include ".*snow*" in the file name.

Vegetation cover files include ".*veg*" in the file name.

Each file is named by its location and then a date of the form yymmdd.

1.4 Spatial Coverage

Southernmost Latitude: 39.70 N

Northernmost Latitude: 41.00 N

Westernmost Longitude: 107.00 W

Easternmost Longitude: 105.50 W

Coverage is not continuous.

1.4.1 Spatial Resolution

Spatial resolution is approximately 1.5 m.

1.5 Parameter or Variable

Apparent surface reflectance

Subpixel snow-covered area

Grain size

1.5.1 Parameter Description

AVIRIS measures calibrated radiance. The data include apparent surface reflectance, subpixel snow-covered area, and grain size.

For a complete description of parameters and measurements, please refer to the [Measurements section of the CLPX Plan](#).

2 DATA ACQUISITION AND PROCESSING

For complete information about data acquisition and processing regarding CLPX, please see the [Cold Land Processes Field Experiment \(CLPX\) Plan Web Site](#).

For complete information about data acquisition and processing, please see [JPL's AVIRIS Data Facility Web site](#).

3 REFERENCES AND RELATED PUBLICATIONS

Please see the [References section of the CLPX Plan](#).

3.1 Related Data Collections

[All CLPX Data Sets](#)

4 CONTACTS AND ACKNOWLEDGMENTS

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5 DOCUMENT INFORMATION

5.1 Publication Date

12 April 2006

5.2 Date Last Updated

5 April 2021