SnowEx23 Bonanza Creek Experimental Forest Terrestrial Lidar Scans Raw, Version 1 Technical Reference

1 INTRODUCTION

1.1 Data Set Overview

This data set contains unprocessed point cloud data created from terrestrial lidar scans (TLS) collected during the SnowEx 2023 campaign from the Bonanza Creek Experimental Forest near Fairbanks, Alaska. Data were collected in October 2022 (snow-off) and March 2023 (snow-on). Digital terrain models (DTMs) derived from the raw point cloud data are available as the SnowEx23 Bonanza Creek Experimental Forest Terrestrial Lidar Scans, Version 1 (SNEX23_BCEF_TLS) data set.

2 DATA DESCRIPTION

2.1 File Information

2.1.1 Format

The data are provided as compressed lidar aerial survey (LAZ) files.

2.1.2 File Contents

Each LAZ file provides the raw lidar point cloud data at each survey site. This data set contains 10 files from October 2022 and 21 files from March 2023, for a total of 31 files.

2.1.3 Naming Convention

The data files are named according to the following conventions and as described in Table 1:

```
SNEX23_BCEF_TLS_Raw_DD_YYYYMMDD_XXXXX_V01.0.laz
SNEX23_BCEF_TLS_Raw_DD_YYYYMMDD_SPR_V01.0.laz
SNEX23_BCEF_TLS_Raw_DD_YYYYMMDD_DEC_V01.0.laz
```

Table 1. File Naming Convention

Variable	Description
SNEX23_BCEF_TLS_Raw	SnowEx 2023 Bonanza Creek Experimental Forest Terrestrial Lidar Scans Raw data set
DD	Direction: N = north, NE = northeast, SW = southwest
YYYYMMDD	4-digit year, 2-digit month, and 2-digit day of data acquisition
XXXXX	Identifier for 21 individual survey sites (see SnowEx23 Reports). Some files do not have a site ID but are instead identified with a tree type (SPR = spruce, DEC = deciduous).
V01.0	Data set version 1.0

Examples:

```
SNEX23_BCEF_TLS_Raw_SW_20221024_CRS6_V01.0.laz
SNEX23_BCEF_TLS_Raw_NE_20221022_SPR_V01.0.laz
SNEX23_BCEF_TLS_Raw_N_20230316_DEC_V01.0.laz
```

3 RELATED DATA SETS

SnowEx23 Bonanza Creek Experimental Forest Terrestrial Lidar Scans (SNEX23_BCEF_TLS)

4 RELATED WEBSITES

SnowEx at NSIDC | Data Sets

SnowEx at NSIDC | Overview

SnowEx at NASA