

SnowEx23 Oct23 Ground Surface Roughness Reconstruction, Version 1 Technical Reference

1 DATA DESCRIPTION

This data set presents photographs of snow pit ground surface collected using a digital camera during the NASA SnowEx 2023 field campaign between 17 and 28 October 2023. The images were collected from 22 snow pits located across three study sites: Upper Kugaruk and Toolik (UKT), an arctic tundra environment in Northern Alaska, and Caribou Poker Creek watershed (CPCW) and Farmers Loop Creamers Field (FLCF), two boreal forest sites near Fairbanks, Alaska. These photographs were used to derive point cloud data representative of ground surface roughness, which are available as [SnowEx23 Oct23 Ground Surface Roughness Reconstruction, Version 1](#).

1.1 File Information

1.1.1 Format

The data are available as .jpg files.

1.1.2 Naming Convention

Data files utilize the following naming convention which is described in Table 1.

SNEX23_OCT23_GSR_Raw_[site]_[pit_ID]_[YYYYMMDD]_[camera]_[XX]_V01.0.jpg

Table 1. File naming convention

Variable	Description
SNEX23	SnowEx 2023 field campaign
OCT23	Month and year of data collection
GSR_Raw	Ground Surface Roughness Raw data (i.e., input imagery)
[site]	Study site: Upper Kugaruk and Toolik (UKT), Caribou Poker Creek watershed (CPCW), or Farmers Loop Creamers Field (FLCF)
[pit_ID]	Snow pit ID
[YYYYMMDD]	Date images was taken, formatted as 4-digit year, two-digit month, and two-digit day
[camera]	Camera type used (SONY or LUMIX)
XX	Photograph identification number, indicating image sequence per snow pit
v<nn.n>	Indicates version number of the data set
.jpg	File extension

2 RELATED DATA SETS

[SnowEx23 Oct23 Ground Surface Roughness Imagery, Version 1](#)

[SnowEx at NSIDC | Data sets](#)

3 RELATED WEBSITES

[SnowEx at NSIDC | Overview](#)

[SnowEx at NASA](#)