

# NSF Sponsored NATIONAL CENTER FOR AIRBORNE LASER MAPPING

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## **Airborne Laser Swath Mapping Project**

### **Collier Cone Lava Flow on North Sister, OR**

#### **PI: Nicholas Deardorff, University of Oregon**

Date Flown: July 28, 2008 (DOY 209)

## **List of products – quick view**

1. 1m filtered (bare-earth) and unfiltered DEMs in ESRI GRID file format
2. 1m Shaded Relief Maps in ESRI GRID file format.
3. Raw laser point data (per flight line) in LAS file format.
4. Filtered and unfiltered laser point data (xyz), tiled with overlap, ASCII format.
5. Report on the data processing.

## **Comments**

- You may observe a periodic fine scale elevation variation throughout the dataset (about 5 to 20 cm, similar to a “corduroy” pattern), which is a property of the Optech LIDAR system, and it’s within the machine’s error limits. This variation can be removed by using a smoothing routine, but this process could smooth other features as well and we feel that the decision is best left with the PI.

## What's on the DVD(s)

### DVD1

**filtered\_arcinfo\_mosaics.zip, unfiltered\_arcinfo\_mosaics.zip** – zip archives containing the filtered and unfiltered ArcInfo DEMs and hillshades

Naming convention:

*[f|u]mXXX\_X<sub>1</sub>X<sub>1</sub>X<sub>1</sub>* - filtered (f) or unfiltered (u) mosaic DEM with the horizontal extent between XXX000 and X<sub>1</sub>X<sub>1</sub>X<sub>1</sub> UTM Easting coordinates.

*[f|u]mXXX\_X<sub>1</sub>X<sub>1</sub>X<sub>1</sub>shd* - shaded relief map

Cell Size: 1m. The shaded relief maps were generated from the 1m DEMs.

The projection for all grids is UTM zone 10N, with orthometric heights in NAVD88 computed using NGS GEOID03 model.

**filtered\_point\_tiles.zip, unfiltered\_point\_tiles.zip** – zip archive contains the filtered and unfiltered point cloud tiles ( 1km x 1km with 40m overlap)

The tile naming convention include the UTM coordinates of the tile's lower left corner, ignoring the overlap.

The format is 3-column space delimited X Y Z:

X = Easting last return

Y = Northing last return

Z = Elevation last return

The projection is UTM zone 10N with orthometric heights in NAVD88 computed using the NGS GEOID03 model.

**Readme.pdf** – this document

**ProcessingReport.pdf** – detailed report describing how the data was processed

### DVD2

**flightlines\_NAVD88.zip** - This ZIP archive contains the raw laser point output in LAS format, one file per flight line. The LAS format contains all four laser shot returns recorded by the scanner.

The laser point data has been projected to NAVD88 orthometric heights using the NGS GEOID03 model.

### **Software required for using the data**

The ESRI Grids and Coverages can be viewed with all ESRI software, such as ArcGIS, ArcMAP, and ArcView 3.xx. Please contact NCALM if alternative formats are needed.