NSF Sponsored
NATIONAL CENTER FOR AIRBORNE LASER MAPPING

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Airborne Laser Swath Mapping Project

Hillslope-channel coupling in a bedrock landscape, Henry Mountains, UT

PI: Skye Corbett, San Francisco State University
Date Flown: February 07, 2008 (DOY 038)

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. Shaded Relief Maps high resolution JPEG images for quick visualization.
6. 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

GlenCanyon_arcinfo.zip – this zip archive contains the ArcInfo datasets and the associated "info" directory

- Digital Elevation Models, in ESRI GRID file format

  "**fm535_544**" – 1m bare-earth DEM
  "**um535_544**" – 1m unfiltered DEM

- Shaded Relief Maps, in ESRI GRID file format

  "**fm535_544**" – bare-earth shaded relief map
  "u**m535_544**" – unfiltered shaded relief map

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

  The projection for all grids is UTM zone 12N, with orthometric heights in NAVD88 computed using NGS GEOID03 model.

  The naming convention indicate that the horizontal extent is from 535000 to 544000 UTM Easting.

Images – This folder contains high resolution images for quick visualization.

GlenCanyon_filtered_point_tiles.zip – This ZIP archive contains the filtered point cloud tiles (1km x 1km with 40m overlap)

File naming convention:
fXXX000_YYYY000.xyz

, where (XXX000, YYYY000) are the 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 12N with orhtometric heights in NAVD88 computed using the NGS GEOID03 model.

GlenCanyon_unfiltered_point_tiles.zip – This ZIP archive contains the unfiltered point cloud tiles (1km x 1km with 40m overlap)

File naming convention:

uXXX000_YYYY000.xyz

, where (XXX000, YYYY000) are the 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 12N with orhtometric heights in NAVD88 computed using the NGS GEOID03 model.

Readme.pdf – this document

GlenCanyon_08_038_ProcessingReport.pdf – detailed report describing how the data was processed

DVD2

GlenCanyon_LAS_flightlines.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.