

Obtaining and Importing SRTM Elevation Data

In February of 2000 the Space Shuttle mapped most of the land surfaces of the Earth to create a high resolution elevation dataset. Global data were released at a 3 arc-second (90 m) resolution. Data covering the United States were also released at a 1 arc-second (30 m) resolution.

NASA has completed their second release, Version 2, of the SRTM data. These "finished" data have most voids filled in, lake surfaces have been corrected, and coastlines have been properly defined and aligned. These data are available at the USGS [Earth Explorer](#) site. Data are available at 3 Arc-Second (90 m) resolution globally, and also at 1 Arc-Second (30 m) in the U.S. Care should be taken when using SRTM data in areas with extreme relief, as there are still data voids in some of these areas.

You will first select the type of data (SRTM in this case) then a location. This can be accomplished by entering corner coordinates or dragging a box on the map. After submitting the request the results will be packaged in tiles and available for immediate download. You can click on the **KML** button to display the SRTM tiles in Google Earth. You have a choice of two formats for download; BIL and DTED. When using these data with ENVI you should select the **DTED** Data Format. To open these data in ENVI select **Open External File → Digital Elevation → DTED**. The file can now be saved in ENVI Standard format for further processing. The BIL format data can be imported in most remote sensing and GIS software. This is a binary dataset with the Band Interleaved by Line structure.

The [Global Land Cover Facility](#) at the University of Maryland also distributes SRTM data, conveniently subset into tiles large enough to contain individual Landsat images. These are distributed in GeoTIFF format and can be used with any program designed to use spatial data. As of this writing, 3 Arc-second (90 m) data, distributed through the Earth Science Data Interface (ESDI) in Landsat Path/Row tiles, are available in both the Version 1 Unfinished processing level and the Version 2 Finished and the Version 2 Filled Finished processing level. The Filled data are produced from the Version 2 finished data and have an interpolation algorithm applied to fill in data voids. You should always select the *Filled Finished* version when available. Within the U.S. you can also download 1 Arc-second (30 m) data, but these data may only be available in the Unfinished format. For continental U.S. 1 Arc-second data you should use the [Earth Explorer](#) site described above.

SRTM one degree tiles at both Version 1 and 2 processing levels can still be obtained at the NASA SRTM FTP site. These data are organized by version, then continent. Individual tiles are labeled by the latitude and longitude of the lower left corner of the tile. Version 1 tiles should be processed to fill in data voids.