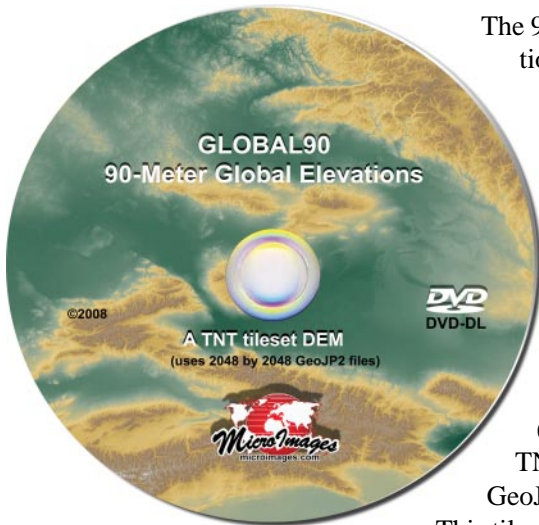


# Global 90-Meter Elevation Data (Global90)



The 90-Meter Global Elevations DVD-DL distributed by MicroImages provides elevation data for all continental areas between 60 degrees north latitude and 56 degrees south latitude plus arctic Canada and Alaska. This dataset was built around the latest version of NASA's Shuttle Radar Topography Mission (SRTM) elevation data posted by the US Geological Survey, which corrects a half-cell registration error in the earlier USGS version. MicroImages imported this revised SRTM data and filled local voids related to poor radar returns (chiefly water bodies and steep mountain slopes facing away from the sensor) using elevation values from corresponding cells in the earlier void-filled SRTM dataset produced under the auspices of the Consultative Group for International Agriculture (CGIAR) Consortium for Spatial Information (CSI). MicroImages also added coverage for northern Alaska (from U.S. National Elevation Dataset) and northern Canada (Canadian Digital Elevation Data). These data were mosaicked and converted to a TNT hierarchical tileset. The TNT tileset raster is linked to a set of uniformly-sized GeoJP2 files stored in conveniently-sized subdirectories of a separate tileset directory.

This tileset structure is optimized to allow very fast display of the entire dataset in the TNT products at any viewing scale. In addition, the small individual JP2 tile files (2048 by 2048 cells) can be used in any other software program that supports the JP2 format. The data are in geographic (latitude-longitude) coordinates with 3 arc-second cell size (about 90 meters at the equator) referenced to the WGS84 horizontal datum. Lossless JPEG2000 compression has been applied to preserve the fidelity of the original data while reducing file sizes.

The elevation dataset provided on this double layer DVD (DVD-DL) can be used in many ways in the TNT products:

- use as a terrain surface for stereo views of any georeferenced imagery or other geodata
- use extract as a terrain surface for 3D perspective views of imagery or other geodata
- use in the Topographic Properties process to derive slope, aspect, and curvature data and shaded relief images
- use in the Watershed process to delineate regional watershed boundaries, drainage networks, and their many associated attributes, along with other derived geomorphic/hydrologic characteristics
- use for Viewshed Analysis
- display with one of many standard color palettes (or design your own custom color palette) as backdrop for vector overlays
- overlay with a partially-transparent shading raster to create a color shaded relief display
- extract portions of the raster data as needed for local projects

## Technical Specifications

*Size:* 7.03 GB

*Compression:* Lossless JPEG 2000

*Format:* TNT Tileset using 2048 x 2048-cell GeoJP2 files

*Data Type:* 16-bit signed integer

*CRS:* Geographic / World Geodetic System 1984 (WGS84)

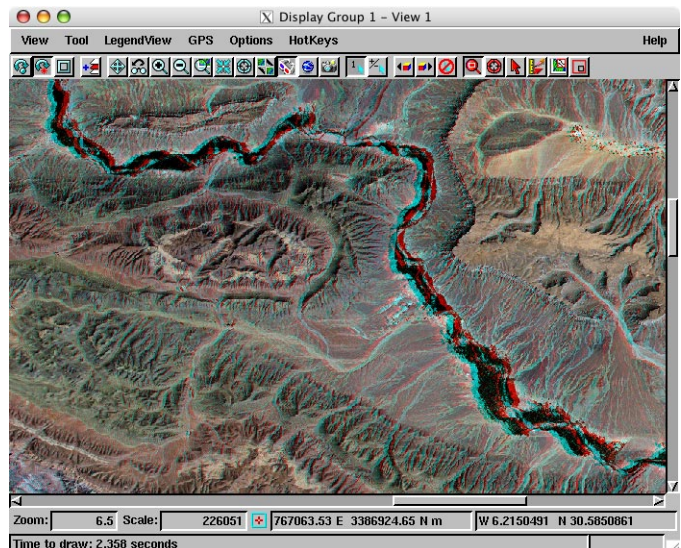
*Elevation Units:* Meters

*Extents:* N 83° 08' 13.5", W 180° 00' 01.5" (Upper Left),

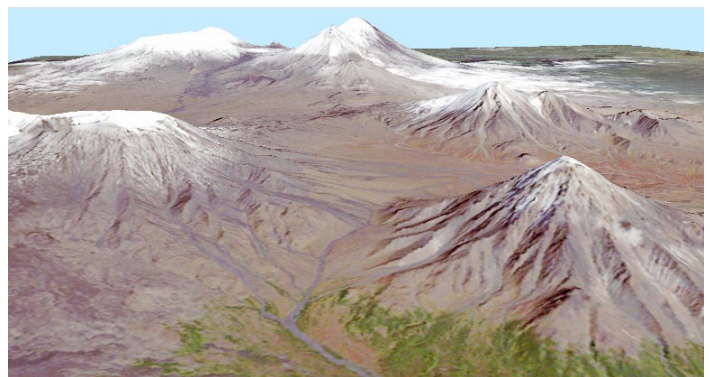
S 55° 58' 58.5", E 180° 00' 01.5" (Lower Right)

*Number of Cells:* 166,944 Lines x 432,001 Columns

*Cell Size:* 3 arc-seconds (nominally 90 meters)



Anaglyph stereo display of Landsat 7 scene (30-meter cell size) of Morocco using the Global 90-meter Elevation TNT tileset as the terrain layer.



3D Perspective view of volcanoes in Kamchatka (eastern Russia); Landsat 7 scene (30-meter cell size) draped on a terrain extract from the Global 90-meter Elevation data.