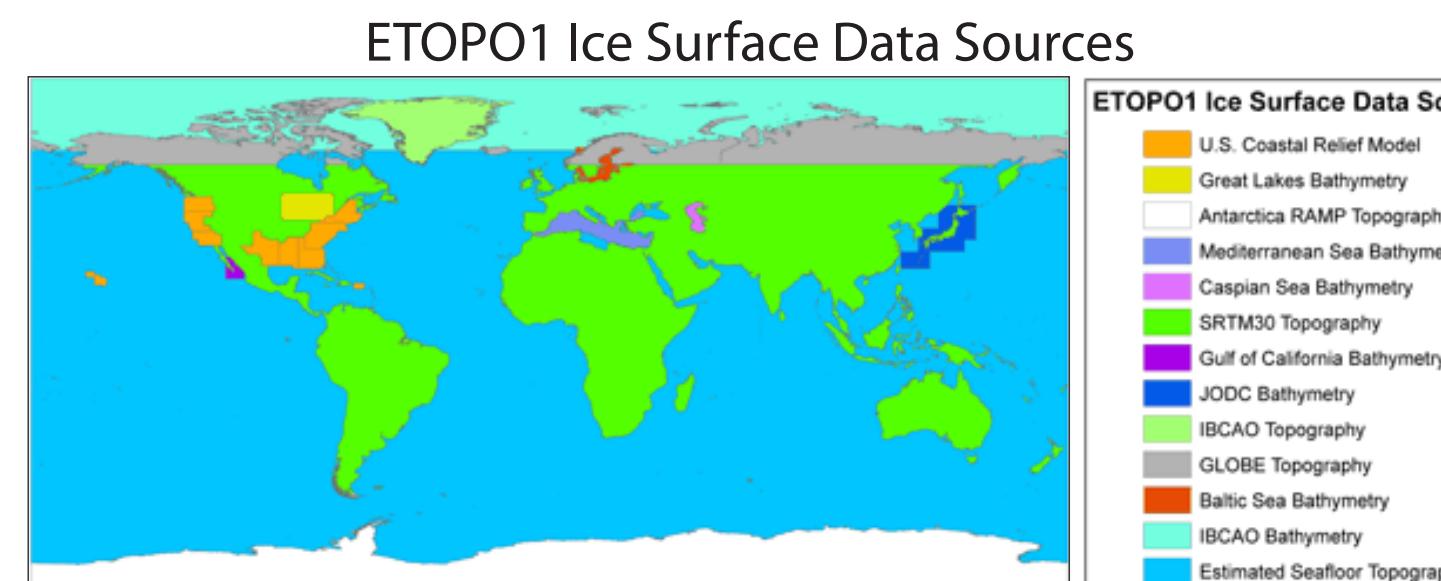
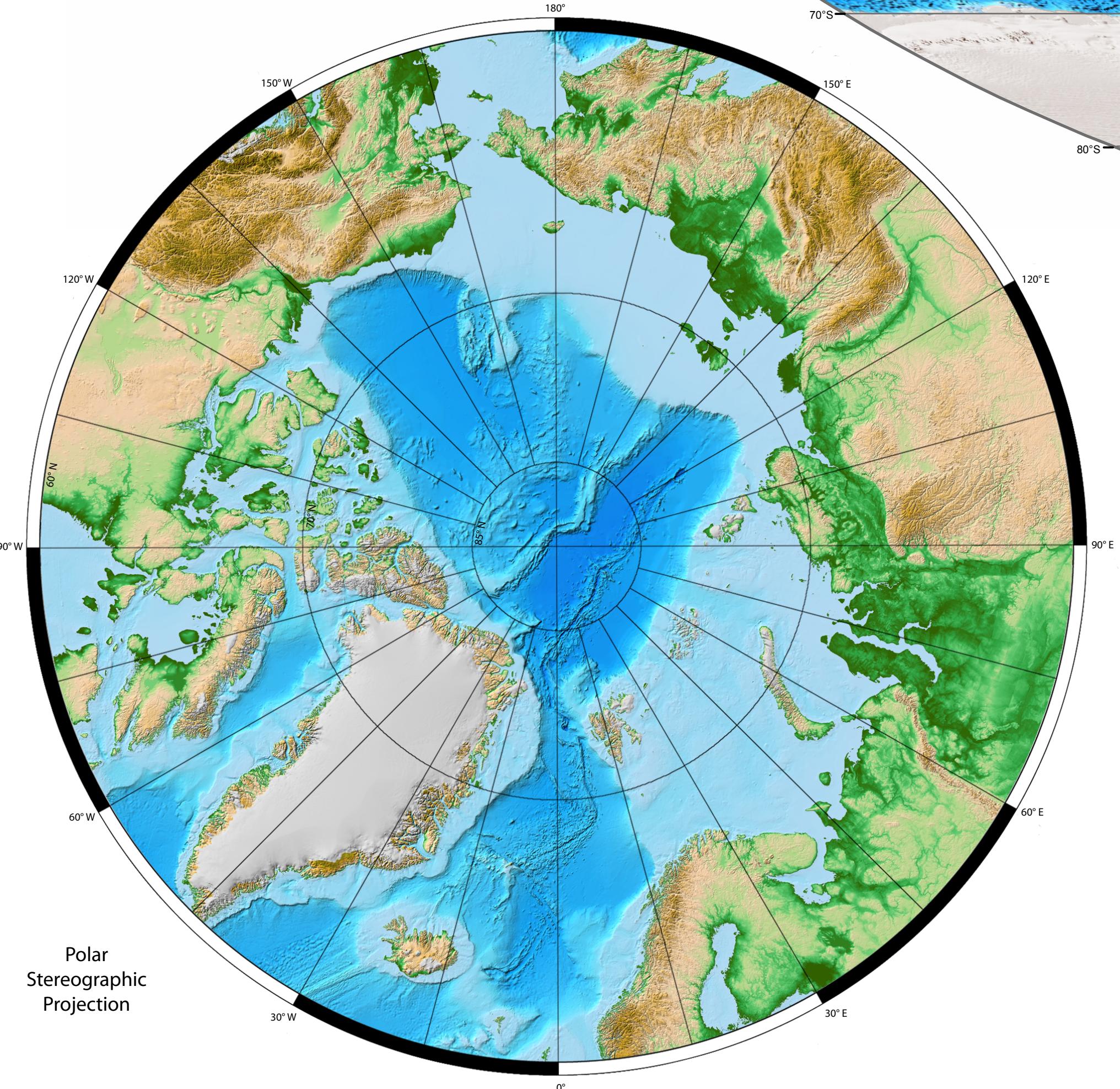


## ETOPO1 ICE SURFACE GLOBAL RELIEF MODEL

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**Data Source References:**  
U.S. Coastal Relief Model  
Great Lakes Bathymetry  
Antarctica RAMP Topography  
Mediterranean Sea Bathymetry  
Caspian Sea Bathymetry  
SRTM30 Topography  
Gulf of California Bathymetry  
JODC Bathymetry  
Globe Topography  
Baltic Sea Bathymetry  
IBCAO Bathymetry  
GEBCO/Est. Seafloor Bathymetry

<http://www.ngdc.noaa.gov/mgg/coastal/coastal.html>  
<http://www.ngdc.noaa.gov/mgg/greatlakes/greatlakes.html>  
<http://nsidc.org/data/nsidc-0082.html>  
[http://www.ifremer.fr/drgm\\_uk/Realisation/carto/Mediterrane/index.html](http://www.ifremer.fr/drgm_uk/Realisation/carto/Mediterrane/index.html)  
<http://www.caspianenvironment.org/dlm/menu5.htm>  
<http://www2.jpl.nasa.gov/srtm/>  
<http://www.ngdc.noaa.gov/mgg/bathymetry/multibeam.html>  
[http://www.jodc.go.jp/data\\_set/jodc/jegg\\_intro.html](http://www.jodc.go.jp/data_set/jodc/jegg_intro.html)  
<http://www.ngdc.noaa.gov/mgg/topo/globe.html>  
[http://www.iowamemuende.de/research/en\\_iowtopo.html](http://www.iowamemuende.de/research/en_iowtopo.html)  
[http://topex.ucsd.edu/marine\\_topo/](http://topex.ucsd.edu/marine_topo/)

ETOPO1 is a 1 arc-minute global relief model of Earth's surface that integrates land topography and ocean bathymetry. It was built from numerous global and regional data sets, and is available in "Ice Surface" (top of Antarctic and Greenland ice sheets) and "Bedrock" (base of the ice sheets) versions. All data sets were converted to WGS 84 geographic coordinates before building ETOPO1. ETOPO1 was designed to support tsunami forecasting, modeling and warning, as well as ocean circulation modeling and Earth visualization.

A color, shaded-relief image of Earth from ETOPO1 Ice Surface, is displayed above. The image was created with Generic Mapping Tools (GMT; <http://gmt.soest.hawaii.edu/>) using three color palettes: blues for ocean depths and above sea-level lakes; greens and browns for dry land areas, and shades of white for the Antarctic and Greenland ice sheets, and other glaciers greater than 100 km<sup>2</sup> using the GLIMS Glacier Database at the National Snow and Ice Data Center (NSIDC) (<http://nsidc.org/data/nsidc-0272.html>).

**Web Access:**  
ETOPO1 - <http://www.ngdc.noaa.gov/mgg/global/global.html>  
Poster - [ftp://ftp.ngdc.noaa.gov/mgg/global/relief/ETOPO1/posters/etopo1\\_wallmap\\_at.pdf](ftp://ftp.ngdc.noaa.gov/mgg/global/relief/ETOPO1/posters/etopo1_wallmap_at.pdf)  
[ftp://ftp.ngdc.noaa.gov/mgg/global/relief/ETOPO1/posters/etopo1\\_wallmap\\_pac.pdf](ftp://ftp.ngdc.noaa.gov/mgg/global/relief/ETOPO1/posters/etopo1_wallmap_pac.pdf)

**Citation:**  
ETOPO1 Global Relief Model  
Amante, C. and B. W. Eakins, ETOPO1 1 Arc-Minute Global Relief Model: Procedures, Data Sources and Analysis, National Geophysical Data Center, NESDIS, NOAA, U.S. Department of Commerce, Boulder, CO, August 2008

**ETOPO1 Image**  
Varner J. and E. Lim, CIRES, University of Colorado at Boulder, 2008

**ETOPO1 Poster**  
Medley, P. R., CIRES, University of Colorado at Boulder, 2009

