Digital Elevation Models

	DMTI DEMs	GeoBase CDED (Canadian Digital Elevation Data)	AltaLIS Digital Elevation Model	ASTER (Advanced Spaceborne Thermal Emission and Reflection Radiometer)GDEM (Global Digital Elevation Model)
Availability	Free to University of Calgary faculty, students and staff	Free, but requires registration	Free to Alberta academic research libraries participating in the GEODE consortium	Free, but requires registration
Access	Download from GIS workstation at MADGIC	http://www.geobase.ca/geobase/en/data/cded/index.html;jsessionid=43F9FF115F38B3AD817EADF826C8892F	Download from GIS workstation at MADGIC	https://wist.echo.nasa.gov/wist-bin/api/ims.cgi?mode=MAINSRCH&JS=1
Coverage	Mostly southern Canada, south of 60 degrees	1:50,000 coverage is almost complete for Canada except for the high Arctic; 1:250,000 coverage is complete for Canada	All of Alberta	From 83 degrees north to 83 degrees south (approximately 99 percent of the earth's land mass)
Size	1:50,000 tiles	1:50,000 or 1:250,000 tiles	1:20,000 tiles	1 degree by 1 degree tiles
Source	Created from the interpolation of NTDB 1:50,000 contours, elevation points (spot heights), and water body polygons using the Hutchinson algorithm	BC and Alberta DEMs created from the mass points and breaklines files provided by provincial agencies	For provincial lands, the DEM was obtained from 1:60000 aerial photography using photogrammetry. For federal lands, the DEM was created from digital contours and hydrography from NTDB.	Created from a stereo-pair of images acquired with nadir and backward angles over the same area by a satellite borne sensor

Presentation: Comparison of Regional Digital Elevation Models in Canada

Digital Elevation Models (continued)

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Resolution	30m or 90m	Approximately 23x16m resolution for 1:50,000 tiles (0.75 arc seconds south-north and from 0.75 to 3 arc seconds west-east); approximately 90m resolution for 1:250,000 tiles	10m	30m
Projection/ Datum	UTM/ NAD83	Geographic Coordinate System/NAD83	10TM/NAD83 (10TM is UTM with Central Meridian = -115° Scale factor = 0.9992 False Easting = 500,000)	Geographic Coordinate System/ WGS84
Format	Ascii grid	USGS DEM	ESRI GRID or mass points and hard & soft breaklines (as shapefiles or simple ASCII)	HDF-EOS
Conversion	ascii to raster	DEM to raster	ESRI GRID can automatically be displayed in ArcGIS Create TIN from mass points and breaklines and then convert to raster	To view in ArcMap you can either convert this file first using the HEG (HDF-EOS To GeoTIFF) conversion tool at http://newsroom.gsfc.nasa.gov/sdptoolkit/HEG/HEGHome.html or add the layer and then export layer and save as Imagine Image or Tiff