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GEOLOGIC MAP OF THE NORD RUPES (NORTH POLAR CAP, MARS)

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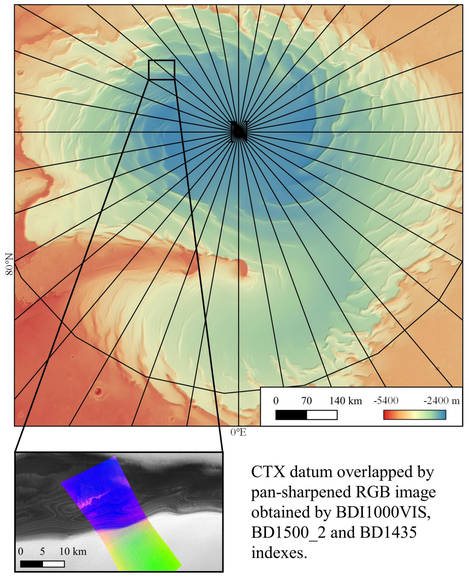
1:100000

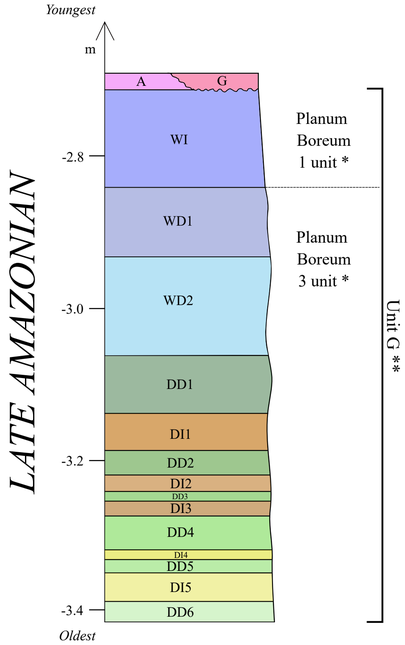
LOCATION MAP

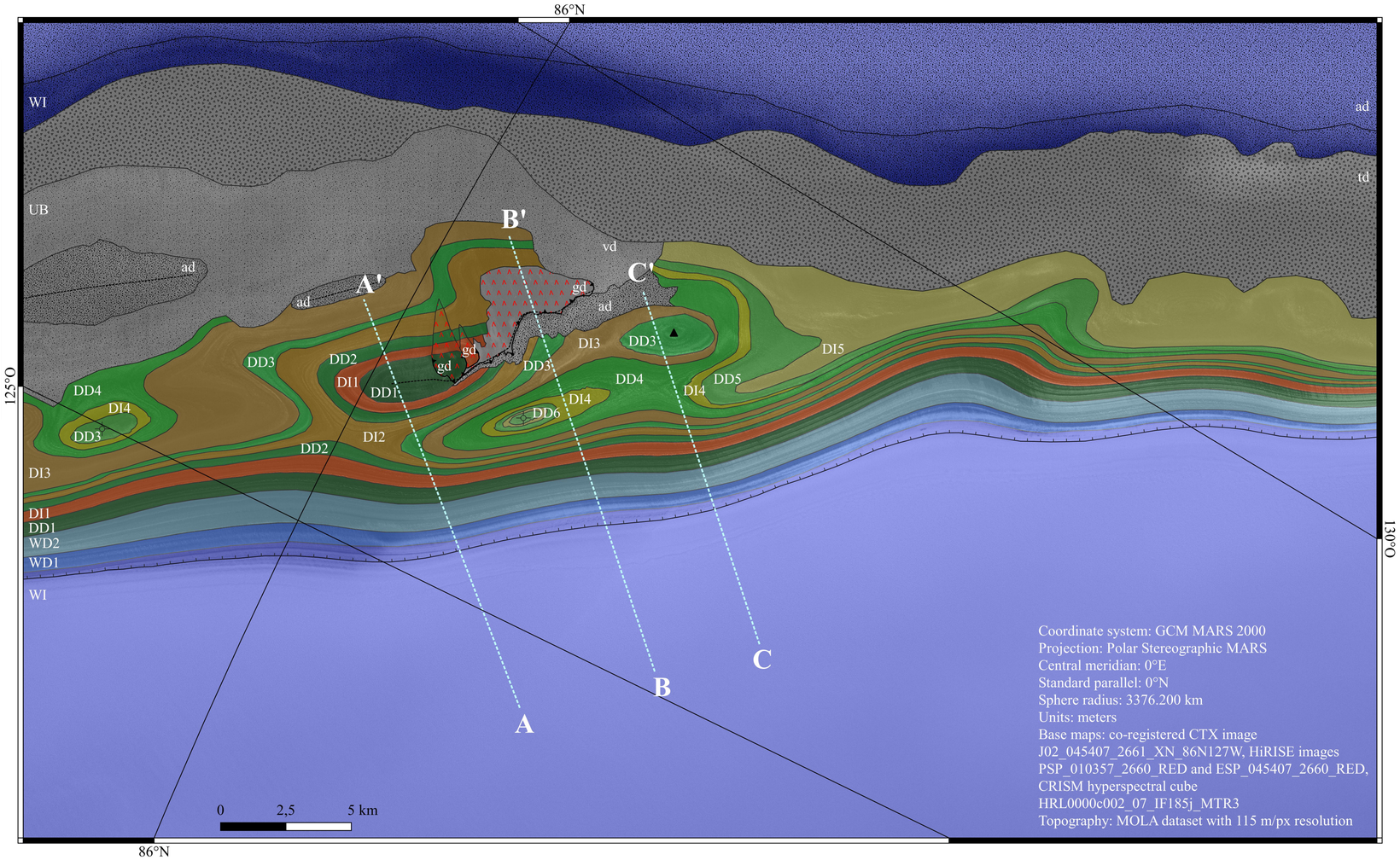


CTX datum overlapped by pan-sharpened RGB image obtained by BDI1000VIS, BD1500_2 and BD1435 indexes.

SUGGESTED RELATIVE STRATIGRAPHY

* Tanaka K. et al. (2008) Icarus 196(2): 318–58, doi: 10.1016/j.icarus.2008.01.021
** Putzig N. et al. (2009) Icarus 204(2): 443–57, doi: 10.1016/j.icarus.2009.07.034





LEGEND

Surficial units

- aeolian mantling deposits (ad): icy sediments (heavily) accumulated along ridges
- floor-valley deposits (vd): dusty ice covering the valley floor
- scarp talus deposits (td): aeolian dusty dry ice material reworked by gravitational movements along steep slopes
- gravitational mass movements and deposits (gd): gravitational events favored by summer sublimation of interstitial ice

Stratigraphic units

- **Water ice (WI):** uppermost and smooth unit with high albedo, mainly composed of relatively pure water ice

Dusty water ice (WD): unit of water ice and limited increase of dry ice content and femic oxides. WD1: bright layers of pure water ice and rare low-albedo strata enriched in dust; WD2: high and low-albedo with aprogressive top-down increase of darkish femic material

- top dusty water ice (WD1)
- bottom dusty water ice (WD2)

Pure and dusty dry ice group (DI-DD): <10 m-thick low-albedo layers composed of relative pure dry ice with a low water ice content alternanting with <10 m-thick high-albedo strata composed by dry ice mixed with Fe-bearing dust. DD1-DD2 are constituted by fewer bright strata than other DD subunits

- dry ice 1 (DI1)
- dry ice 2 (DI2)
- dry ice 3 (DI3)
- dry ice 4 (DI4)
- dry ice 5 (DI5)
- dark dusty dry ice 1 (DD1)
- dark dusty dry ice 2 (DD2)
- dusty dry ice 3 (DD3)
- dusty dry ice 4 (DD4)
- dusty dry ice 5 (DD5)
- dusty dry ice 6 (DD6)

Undifferentiated ice-dominated bedrock (UB)

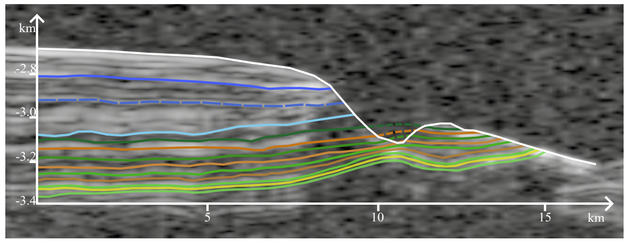
Geomorphological features

- ridge
- landslide crown
- scarp
- depression
- peak
- geological contact
- radargram cross-section

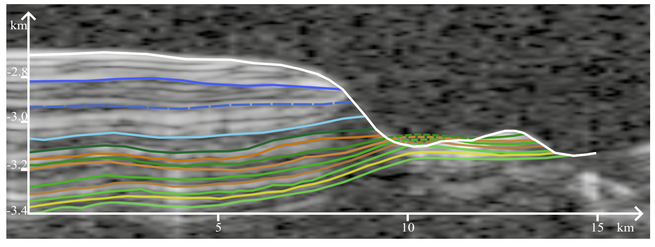
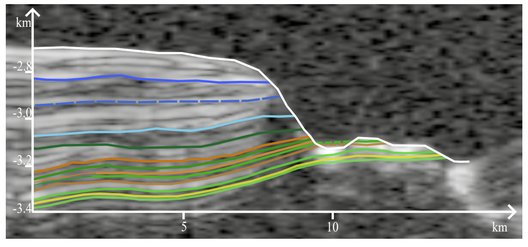
RADARGRAM CROSS-SECTIONS

Vertical exaggeration: 8x

A r_0414302_001_ss05_700_a_lbl_c01 **A'**



B r_4896301_001_ss19_700_a_lbl_c01 **B'**



C r_144102_001_ss19_700_a_lbl_c01 **C'**