

(G) Detail of the high-albedo kieserite-rich unit (3.6°S/333.8°E) identified in Fig. 36A (red box), which coincides with unit 1. An angular surface pattern is apparent indicating rock break-up (HiRISE image orbit PSP_004026_1765). On the surface dark ripples and other accumulated sandy material is shown.

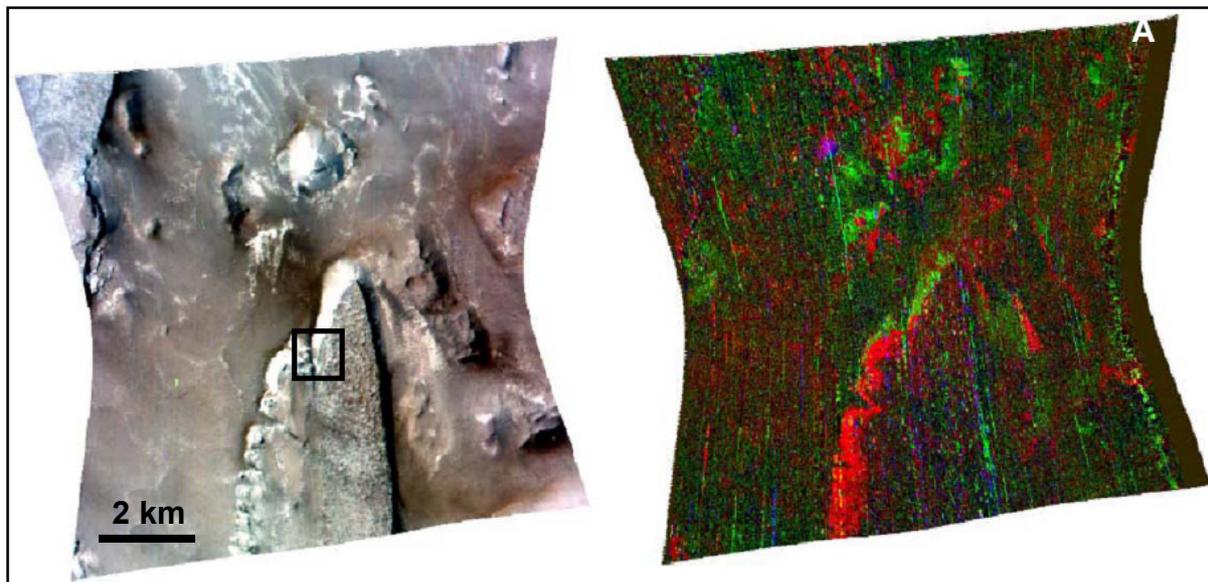
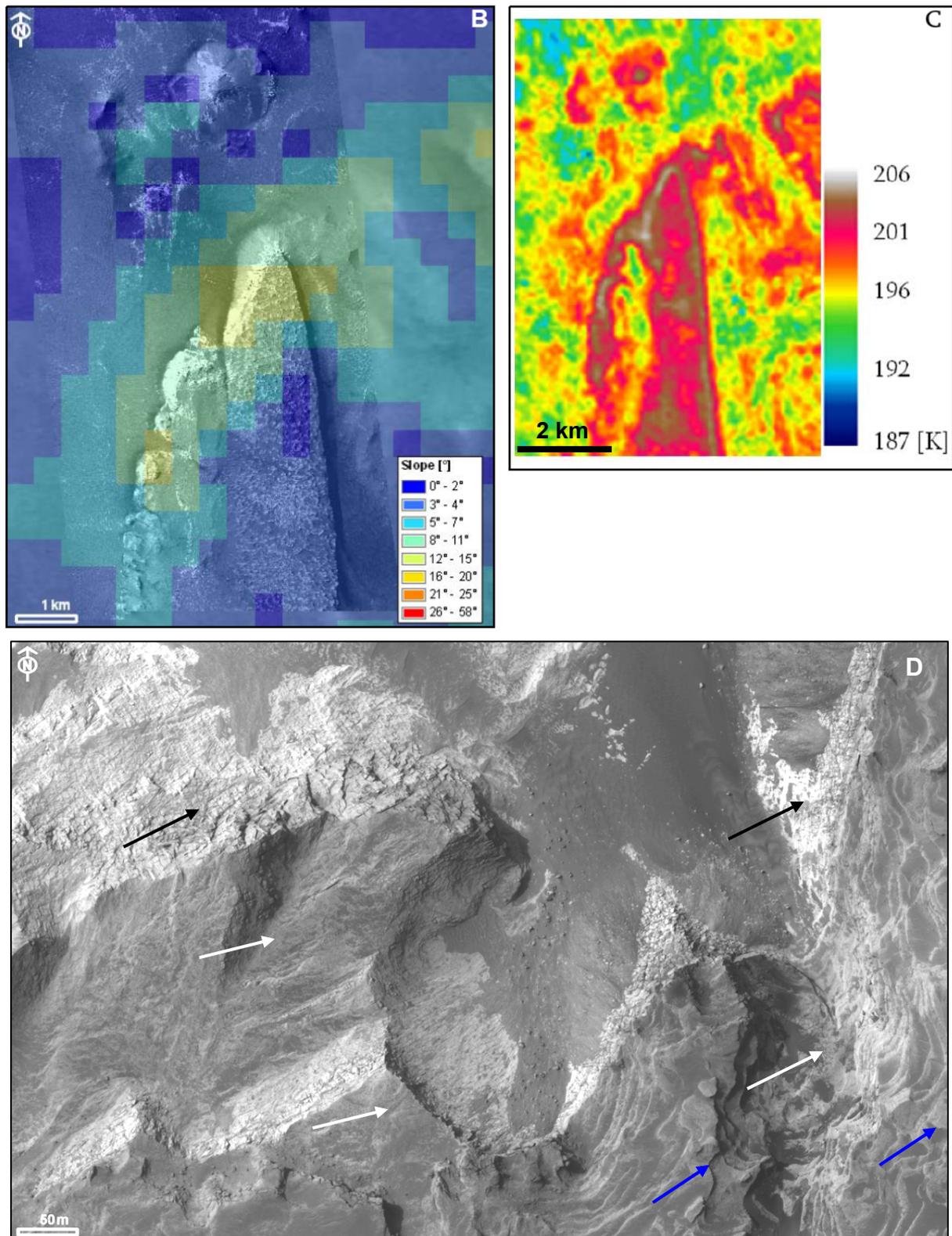


Figure 37: Further characteristics of Aureum 2. (A) CRISM observation (orbit FRT00009DAD; *Roach and Mustard*, 2008; 4.3°S/333.3°E). For context, see Fig. 32 (westernmost box). (left) Context image to Fig. 37B. Black box indicates Fig. 37D. (right) Green represents kieserite, purple phyllosilicate (likely nontronite), and red PHS. PHS appears above kieserite in low albedo regions within unit 1 (Fig. 37D). Kieserite is evident in several high albedo features as monadnocks whereas PHS apparently is distinctly layered (Fig. 37D). Note that no minerals were detected at the top of the cap rock unit (unit 2). For morphological contact between sulphates cf. Fig. 37D.



(B) MOLA slope map superimposed on HiRISE (orbit PSP_007217_1755). Same detail as in Fig. 37A, 37C. Note that steepness correlates with mineral detections that coincide with fresh, mostly uncovered outcrops (Fig. 37A, 37D). (C) BT map showing the same detail as Fig. 37A, 37B. Fresh, mostly steep (10-20°) high-albedo regions (Fig. 37B, 37D) are the regions of highest surface temperature (~206°K). (D) Discrepancies between unit 1 and unit 2 (4.3°S/333.3°E). See Fig. 37A for context. As Fig. 37A shows, unit 1 coincides with kieserite-rich material (black arrow) and PHS (white arrow). Unit 1 features thickly bedded strata, whereas unit 2 displays distinct convolute-like layering and a stair-stepped morphology (blue arrow). Note angular joints within unit 1 and rock rock-break-up.

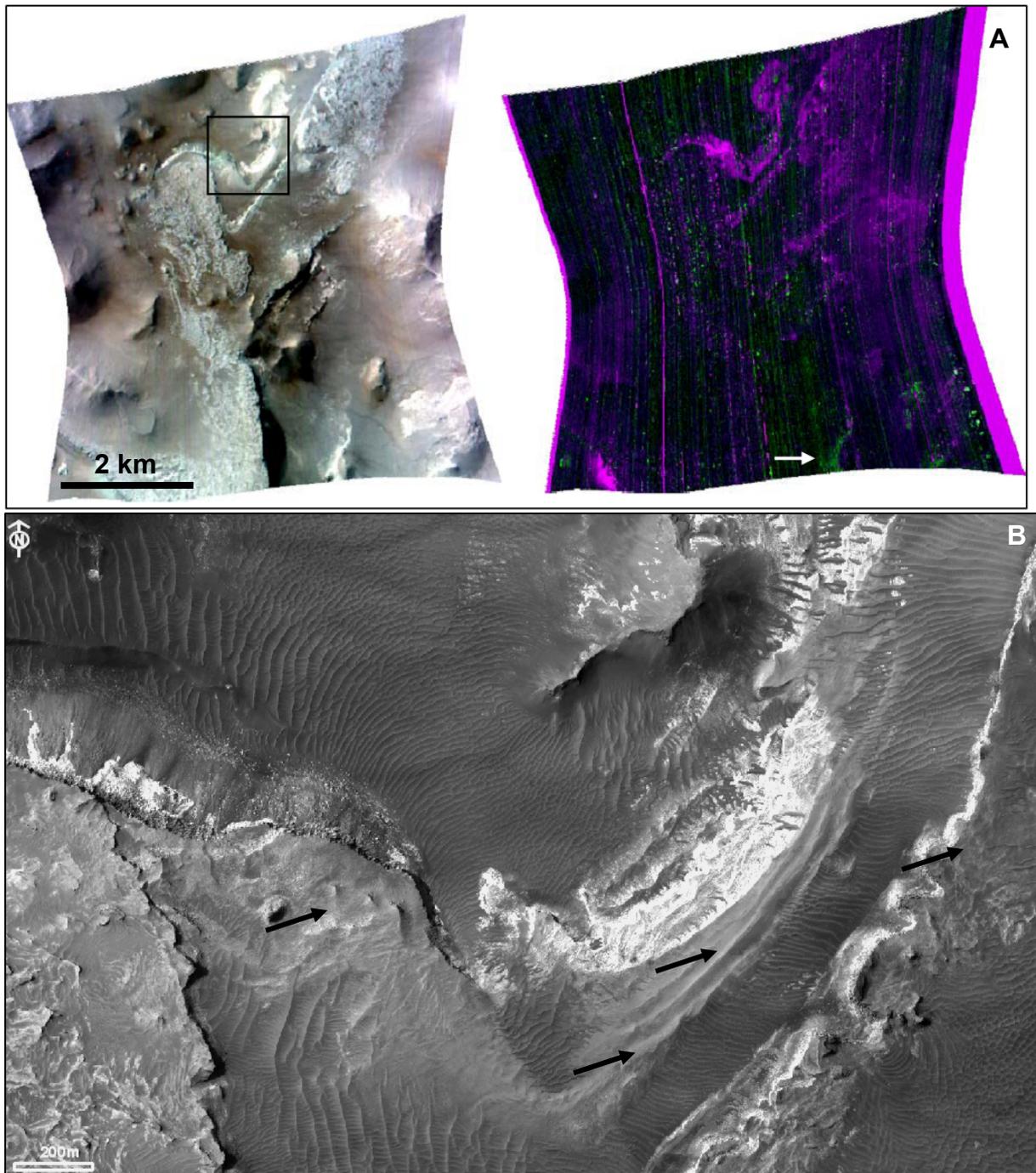
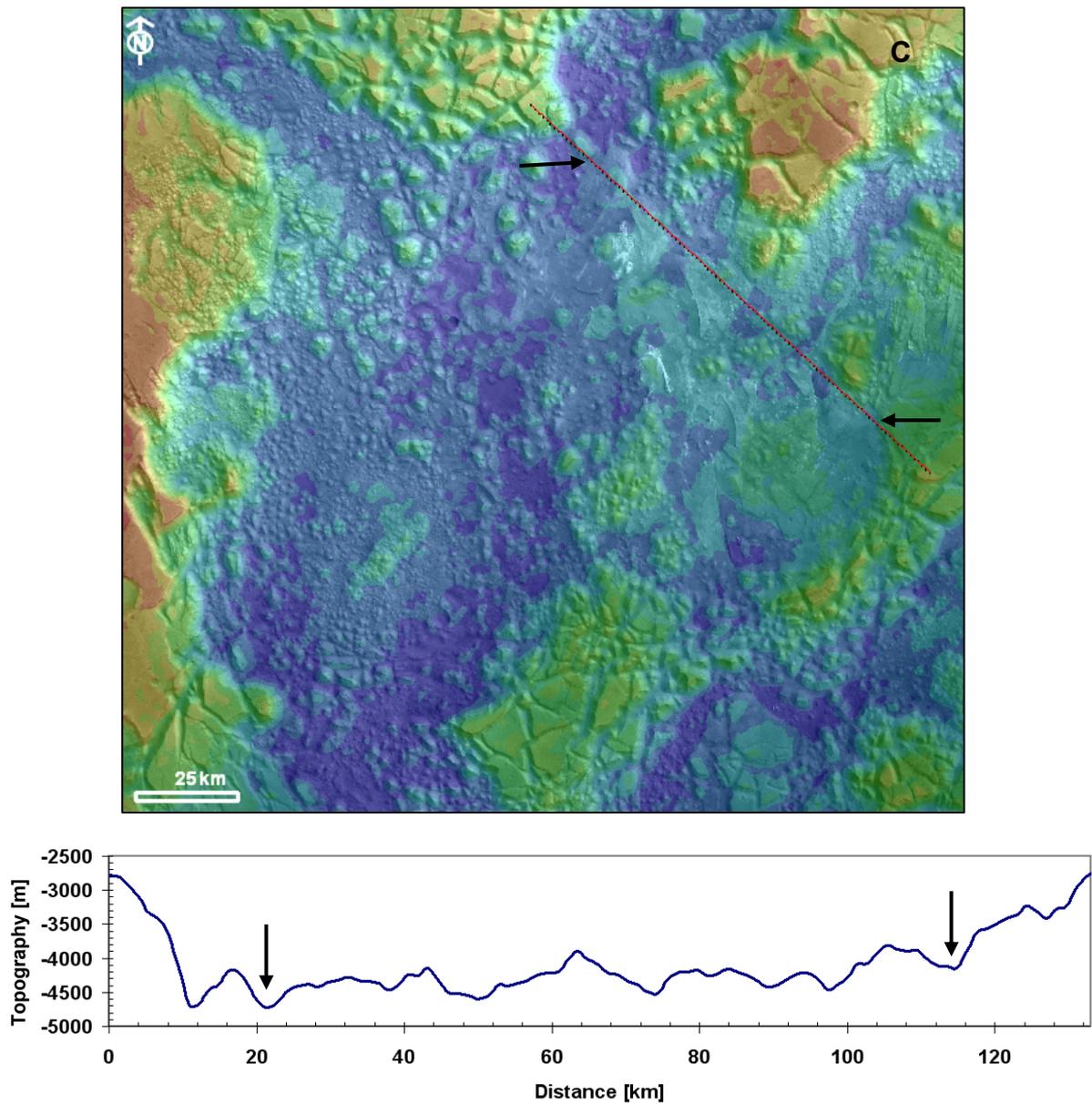


Figure 38: PHS found at in Aureum 2. (A) (*left*) CRISM false colour context image (orbit FRT0000A38B; 4°S/333.4°E) supplementing Fig. 38A on the right. For context, see box at the centre of Fig. 32. (*right*) CRISM spectral map [Roach and Mustard, 2008] showing PHS (purple) and kieserite (green) detections in the ILD. No direct contact between PHS and kieserite. However, unlike other locations nearby (Fig. 37A, 37D) kieserite is superimposed by PHS. Black box shows detail of Fig. 38B. (B) HiRISE (orbit PSP_007507_1760) showing a region in which PHS were detected within the distinctly layered parts of unit 1 (black arrows; cf. Fig. 37D). For context see Fig. 38A.



(C) (*top*) HRSC nadir image overlain by DTM showing the NW-SE-trending profile. The northern part features several ILDs that are eroded into mesas. The arrows mark the ILD extent as shown in the profile (orbit h0456_0000; 4°S/333.1°E). (*bottom*) Profile covers the disrupted plateau rim and extends to another plateau remnant. ILDs are exposed next to mounds and unconformable on them but located below the surrounding plateau rims. Accuracy (Sect. 3.2.3): Distance ± 0.1 km, topography ± 25 m (HRSC orbit h0456_0000).