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Interior Layered Deposits in Coprates Chasma north wall and Juventae Chasma: results from Mars Express High Resolution Stereo Camera (HRSC) derived topography

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The interior layered deposit (ILD) in the north wall of Coprates Chasma differs from those we have examined in Hebes, Ophir, Candor, Melas, and Juventae Chasmata (Hauber et al., EOS Trans. AGU, 85(47), Fall Meet. Suppl., Abstract V33C-1471, 2004) in that its base apparently occurs some 2300 m above the main chasma floor. Situated in a re-entrant of the chasma wall, it has two main sections, the maximum lateral extent of the larger deposit (A) being about 15 km. Nevertheless, it displays several small-scale features in common with an apparently exhumed ILD in Juventae Chasma (HRSC orbit 1070) of much greater extent (50-150 km, also in two sections): bright material; regular layering with 3-6 m layer thickness; steeper slopes with chutes headed by scalloped alcoves, and ending with dark talus fans; morphologically similar yardangs. Using a digital terrain model derived from HRSC stereo together with projected nadir and colour channels and manually coregistered MOC images, we investigate the structure of the layering, and the present erosional features. As elsewhere, we are interested to make measurements of the strike and dip of the layering, since this information could potentially discriminate between theories of the origin of the layers: whether water emplaced sediments, volcanic ash deposits, or some other airfall deposit. G. Michael acknowledges the financial support provided through the Euro-

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