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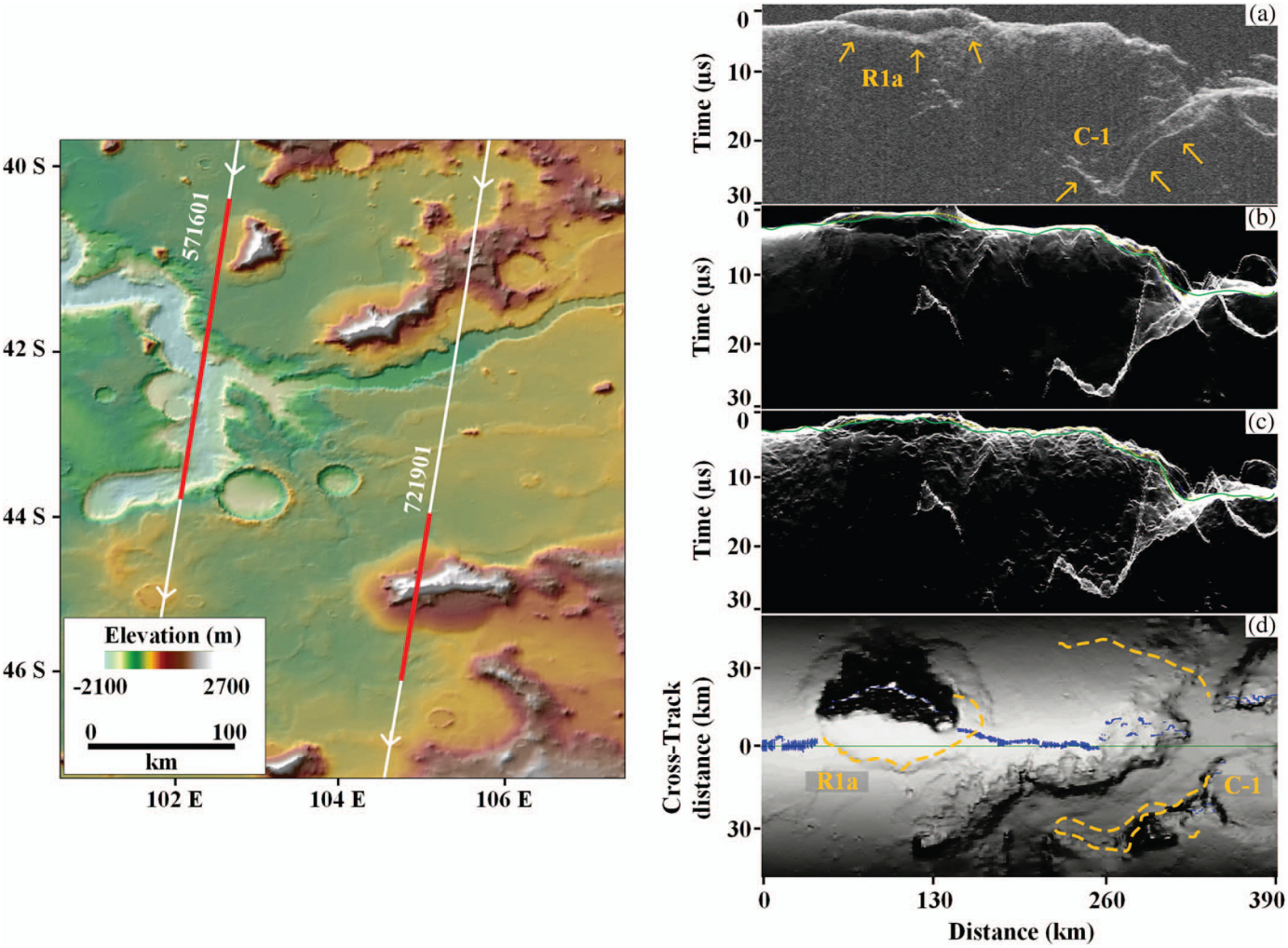

SHARAD orbital radar sounding data from Mars with predicted surface clutter and echo locations to aid in interpretation.

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PAPERS

(Contents Continued on Page 1210)

IEEE

(Contents Continued from Page 1209)

About the Cover: Shallow Radar (SHARAD) onboard the Mars Reconnaissance Orbiter (MRO) has been mapping the Martian subsurface since November 2006. Some of SHARAD's primary scientific objectives are to identify the presence of water ice deposits and to study the internal structure of polar ice deposits. Radar returns from cross-track surface features have longer time delay than returns from nadir, and can be confused as returns from below the surface. Simulating such returns ("surface clutter") is crucial for analyzing SHARAD data with confidence. Furthermore, even small cross-track slopes can significantly move the primary return from the nadir location, impacting the perceived source of subsurface echoes. This clutter simulator has been used to identify water-ice in the southern midlatitudes of Mars, identify proposed landing sites, and generate 3-D maps of subsurface interfaces. For more information please see "Surface Clutter and Echo Location Analysis for the Interpretation of SHARAD Data From Mars" by Choudhary *et al.*, which begins on page 1285.