This issue of the Technical Digest features articles on planetary science at APL. On the front cover are images of Mars and on the back, Titan, two of the bodies in the solar system that are being investigated to study the origins of life. The APL CRISM (Compact Reconnaissance Imaging Spectrometers for Mars) instrument is searching for water on Mars by creating IR spectral maps of the entire surface (the false-color map next to Mars shows how much of Mars has already been covered). The small near-IR image of Titan (false-color) shows landforms, which are mapped in great detail by the Cassini/Huygens radar mapper and display evidence of hydrocarbon lakes. APL scientists are leading investigations of both Mars and Titan, as described in this issue.