Solid Earth

Edited by Charles L. Drake and Lois E. Schmitt

LETTERS
Radiation Estimates: S. Jablon; W. E. Loewe and E. Mendelsohn; R. L. Dobson and T. Straume; D. C. Kaul; Support for DeVita: Chiefs of Laboratories and Clinics

EDITORIAL
Restless Earth

SOLID EARTH
Geodynamics—Where Are We and What Lies Ahead?: C. L. Drake and J. C. Maxwell
Ocean Crustal Dynamics: M. Talwani and M. Langseth
Crustal Processes of the Mid-Ocean Ridge: East Pacific Rise Study Group
Ancient Suture Zones Within Continents: E. M. Moores
Continental Accretion: From Oceanic Plateaus to Allochthonous Terranes: Z. Ben-Avraham et al.
Precambrian Perspectives: A. M. Goodwin
Tectonic Evolution of the Terrestrial Planets: J. W. Head and S. C. Solomon
A Decade of Progress in Earth's Internal Properties and Processes: O. L. Anderson
Hotspots, Basalts, and the Evolution of the Mantle: D. L. Anderson
Application of Space Technology to Geodynamics: E. A. Flinn
State of Stress and Intraplate Earthquakes in the United States:  
M. D. Zoback and M. L. Zoback .......................... 96

The Environmental Crisis: Quantifying Geosphere Interactions:  W. S. Fyfe 105

Micromorphology and Tectonics of the Gorda Ridge:  
A. Malahoff, S. Hammond, R. Embley ........................... 110

NEWS AND COMMENT
Fredrickson Resigns from NIH ............................................ 111
NIH Ponders Pitfalls of Industrial Support ....................... 113
Team Research: Responsibility at the Top ...................... 114
Fallout from the Raid on Iraq .............................................. 116
Cancer Researchers Defend NCI Against Congressional Attacks .............................. 117

Briefing: New Heads of NASA at Confirmation Hearing; Giacconi  
Named Director of Space Telescope Institute; Court Affirms  
Boy Clone Saga Is a Hoax; Administration Filling Room at the Top;  
Pepper Wants “A” Out of NIADDK ..................................... 118

RESEARCH NEWS
Inflation and the Mysteries of the Cosmos ...................... 121
Protohuman Activity Etched in Fossil Bones .................. 123
Bomb-Free Nuclear Fuels for Research ......................... 125

BOOK REVIEWS
Heartland of Cities, reviewed by G. A. Johnson; Phytoflagellates,  
G. F. Leedale; Nonlinear Dynamics, C. J. Thompson; The Fishes and  
the Forest, R. J. Horwitz; Epithelial Transport in the Lower  
Vertebrates, W. A. Dunson; Books Received ..................... 126

COVER
First high-resolution, real-time, machine-contoured bathymetric map produced in the United States using the SEABEAM, swath sonar system aboard the NOAA ship Surveyor. The map shows the geological details of the actively spreading rift valley (blue color) of the Gorda Ridge located 107 kilometers off the coast of Oregon. The Gorda Rift is terminated at its northwestern end by the Blanco Fracture Zone (red color) striking at 300 degrees along the edge of the page. A color change occurs at every 100 meters in a chromatic scale. Violet indicates a depth of 3700 meters and red a depth of 2200 meters. Scale of map is 1 centimeter to 816 meters. See page 15. [Data for the map were taken in 1980 aboard the Surveyor, Captain Bruce Williams, commanding officer; color overlay on the machine-contoured map was prepared by Cathy Connelly.] See also page 110.