topographic maps of Earth, Venus, Mars, and the moon at present all have the same approximate spatial resolution (~10 km).

In summary, *Volcanoes of the Solar System* is a readable attempt to provide an integrated perspective of volcanism throughout the solar system, from Earth to Triton, Neptune's intriguing largest satellite. A paucity of illustrations to document the full spectrum of volcanic landforms on the bodies described, coupled with occasional inaccuracies in the text, weakens the treatment. Furthermore, the perspective presented is a limited one, given the references cited, and it fails to capture the full range of concepts that have recently been developed in the field.

In contrast with Frankel's introductory review, *Volcano Instability on the Earth and Other Planets* presents an in-depth treatment of a recent revolution in thinking concerning the evolution of volcanoes. Though at times esoteric, this compilation succeeds by virtue of its breadth and provides several levels of detail as to how large, polygenetic volcanoes evolve by means of flank collapse. That volcanic landforms are inherently unstable has been observed for at least a century, but the importance of their instability and the catastrophic effects associated with flank failure was recognized only after the 1980 eruption of Mount Saint Helens. The 26 chapters of *Volcano Instability* offer an up-to-date, comprehensive treatment of volcano instability and how it operates, how it can be monitored, and even how it has been most recently recognized on planetary bodies such as Mars and Venus. Indeed, in the opening chapter of the book, the lead editor presents a most readable review of the instabilities associated with terrestrial volcanoes and compellingly articulates their importance not only in terms of volcanology but also for people living near such unstable volcanoes as Mount Rainier. This overview readily allows a reader to identify where in the volume treatment of particular subjects might be found.

Topics of particular interest that are well described in the volume include volcano instability on the planets (especially Venus and Mars), the history of instability at the infamous Mount Etna, and new techniques for measuring and monitoring instabilities at terrestrial volcanoes. One of the most compelling themes in this regard is the building body of evidence for massive flank collapse episodes in association with oceanic volcanoes, such as those in the Hawaiian islands, on the island of Reunion, and in the Canaries archipelago. Chapters treating aspects of slope failure at these island volcanoes demonstrate the emerging recognition of submarine slope failure deposits and features at most polygenetic volcanoes, including those of basaltic composition. High-resolution side-scan sonar observations have revealed remarkable evidence for massive structural failure at many oceanic edifices, often with deposits that exceed 100 cubic kilometers in volume. Continental volcanoes at which voluminous debris avalanche deposits have been recognized include Colima and Popocatapetl in Mexico and Mount Shasta in the United States. The human hazards associated with catastrophic flank collapse and long runout debris avalanches are now known to be appreciable, and monitoring methods that may provide early warning of such events are under investigation and refinement.

Volcano Instability on the Earth and Other Planets offers any reader interested in volcanoes an extremely current view of one of the most significant elements of the evolution of volcanic landforms.

James B. Garvin
Goddard Space Flight Center, National Aeronautics and Space Administration, Greenbelt, MD 20771, USA

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Neurobiology

Nerve Growth and Guidance. C. D. McCAIG, Ed. Portland, London, 1996 (U.S. distributor, Ashgate, Brookfield, VT). xii, 174 pp., illus. $96 or £60. ISBN 1-85578-085-2. Frontiers in Neurobiology, 2.

These are heady times in the study of axon guidance. Recent editorials in this journal and elsewhere have expressed the excitement felt in this field. The rapid pace of recent progress, the discovery of guidance cues, and the plethora of innovative techniques brought to bear have given real hope that this complex problem may be solved. Thus, a comprehensive book on axon guidance is timely and will attract great interest among neurobiologists and scientists in general. *Nerve Growth and Guidance* results from a meeting organized by Colin McCaig in 1995. There are several thoughtful and informative chapters. Of particular note are those by Davenport, Bandtlow, and Bush *et al.*, which update advances in this field since the appearance of the best volume addressing axon guidance, *The Nerve Growth Cone* (Raven Press), which is now five years old. Still this new book, like most meeting-derived books, suffers from the long publishing time. A novel feature of the volume is advocacy of galvantropism, the hypothesis that physiological electric currents guide nerve growth, to project it from "the poor relation of axon guidance to one of its aristocrats" (editor's words). I do not believe the editor has served his cause well in this respect. His chapter is entirely too strident and concerned with redressing past wrongs. Inclusion of a chapter on electric currents in embryos that is only peripherally related to nerve growth seems inappropriate given the book's brevity and the current wealth of more relevant topics. It is always possible that such iconoclastic ideas may establish the new paradigm, but those wishing to overturn dogma must do so with rigorous and unrefutable experiments. Fields at their formative stages deserve an evenhanded presentation of the facts and controversies confronting them. This book seems less balanced and thus inappropriate for the naive reader.

Dan Jay
Biological Laboratories, Harvard University, Cambridge, MA 02138, USA

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Books Received

Careers in Science and Engineering. A Student Planning Guide to Grad School and Beyond. Committee on Science, Engineering, and Public Policy, National Academy of Sciences, National Academy of Engineering, Institute of Medicine. National Academy Press, Washington, DC, 1996. xxiv, 134 pp., illus. Paper, $11.95.

Clouds and Climate Change. Glenn E. Shaw. University Science, Sausalito, CA, 1996. xiv, 21 pp., illus. Paper, $17. Global Change Instruction Program.

The Collision of Comet Shoemaker-Levy 9 and Jupiter. Keith S. Noll. Harold A. Weaver, and Paul D. Feldman, Eds. Cambridge University Press, New York, 1996. xiv, 373 pp., illus. $69.95. Space Telescope Science Institute Symposium 9. From a workshop, Baltimore, MD, May 1995.

Cosmology and Astrophysics through Problems. T. Padmanabhan. Cambridge University Press, New York, 1996. 486 pp., illus. $90; paper, $34.95.

The Cougar Almanac. A Complete Natural History of the Mountain Lion. Robert H. Busch. Lyons and Burford, New York, 1996. 144 pp., illus., + plates. $25.

Human Gene Mapping 1995. A Compendium. A. Jamie Cuticchia *et al.*, compilers. Johns Hopkins University Press, Baltimore, 1996. vi, 1768 pp. Paper, $150.

Intracellular Signal Transduction. The JAK-STAT Pathway. Andrew F. Wilks and Ailsa G. Harpur. Landes, Austin, TX, and Chapman and Hall, New York, 1996. viii, 209 pp., illus. $69.95. Molecular Biology Intelligence Unit.

Introduction to Physical Oceanography. George L. Mellor. AIP Press, Woodbury, NY, 1996. xiv, 260 pp., illus. Paper, $55.

A Laboratory Guide to RNA. Isolation, Analysis, and Synthesis. Paul A. Krieg, Ed. Wiley-Liss, New York, 1996. x, 445 pp., illus. Spiralbound, $64.95.

Malaria Vaccine Development. A Multi-Immune Response Approach. Stephen L. Hoffman, Ed. ASM Press, Washington, DC, 1996. x, 310 pp., illus. $75.

The New Penguin Dictionary of Geology. Philip Kearey. Penguin, New York, 1996. x, 366 pp. Paper, $13.95 or £6.99 or A$16.95 or C$17.99.

Online Searching. A Scientist's Perspective. A Guide for the Chemical and Life Sciences. Damon D. Ridley. Wiley, New York, 1996. xx, 344 pp., illus. Paper, $39.95.

The Phospholipase C Pathway. Its Regulation and Desensitization. Andrew B. Tobin. Landes, Austin, TX, and Chapman and Hall, New York, 1996. xvi, 223 pp., illus. $69.95. Molecular Biology Intelligence Unit.

Phthalocyanines. Properties and Applications. C. C. Leznoff and A. B. P. Lever, Eds. VCH, New York, 1996. xii, 524 pp., illus. $150.

Superconductivity of Metals and Cuprates. J. R. Waldram. Institute of Physics, Philadelphia, 1996. xiv, 410 pp., illus. $180 or £90; paper, $60 or £30.

The Terrestrial Eocene-Oligocene Transition in North America. Donald R. Prothero and Robert J. Emry, Eds. Cambridge University Press, New York, 1996. xiv, 688 pp., illus. $95.