This Week in Science .......................................................... 7

LETTERS
Periodicity of Extinctions: A. Hoffman; R. Lewin; Destroyers by the Pound?: T. L. Lincoln ..................... 8

EDITORIAL
The Status of Engineering .................................................. 13

ARTICLES
Origins: S. Weinberg ...................................................... 15
Cell Interactions in Myxobacterial Growth and Development: M. Dworkin and D. Kaiser ............................. 18
Pathways of Protein Secretion in Eukaryotes: R. B. Kelly ................................................................. 25
Structure of the GDP Domain of EF-Tu and Location of the Amino Acids Homologous to ras Oncogene Proteins: F. Jurnak .............. 32

NEWS AND COMMENT
Working Solar Monitor Shot Down by ASAT .............................................................. 44
NSA to Provide Secret Codes ............................................... 45
New Biotech Board Proposal ............................................. 46
Social Scientists Make Case to Congress ........................................... 47

Briefing: A Cleanup Plan for Chesapeake Bay; Science Text Books Too Bland for California; Pesticide Pact Struck by Opposing Groups; Soviets Target Campuses for Intelligence Operations; OTA Study Highlights Star Wars Difficulties; Magnets Chosen for Supercollider ............... 48

RESEARCH NEWS
New Plasma Physics Lab at Giacobini-Zinner ........................................ 51
Microscopy with Spin-Polarized Electrons ........................................ 53
Making mRNA from a Pair of Precursors ........................................ 55

AAAS NEWS
Scientists Aid Search for Argentina’s “Desaparecidos”: E. Stover; Instruments and Lab Equipment Needed; Transcripts of National Security Discussion Offered; Directory to Identify Research on Impacts of Technology ............... 56

BOOK REVIEWS
Ranching, Mining, and the Human Impact of Natural Resource Development, reviewed by C. R. Humphrey; Beyond IQ, R. Glaser; Science Reorganized, T. S. Feldman; Progress in Gauge Field Theory, E. Seiler; Books Received .................................................. 58

REPORTS
Infrared Speckle Observations of Io: An Eruption in the Loki Region:
R. R. Howell and M. T. McGinn .......................................................... 63
Characterization of Io’s Volcanic Activity by Infrared Polarimetry:
J. D. Goguen and W. M. Sinton ......................................................... 65
Induction of AIDS-Like Disease in the Macaque Monkeys with T-Cell Tropic Retrovirus STLV-III: N. L. Letvin et al ........................................ 71
Partial Inversion of the Initiation-Promotion Sequence of Multistage Tumorigenesis in the Skin of NMRI Mice: G. Fürstenberger, V. Kinzel, M. Schwartz, F. Marks .................................................. 76
A Model for the Tertiary Structure of p21, the Product of the ras Oncogene:
F. McCormick et al ................................................................. 78
Z-DNA Forms Without an Alternating Purine-Pyrimidine Sequence in Solution:
Isolation of a Spirochete from the Soft Tick, Ornithodoros coriacus: A Possible Agent of Epizootic Bovine Abortion: R. S. Lane, W. Burgdorfer, S. F. Hayes, A. G. Barbour .................................................. 85
A Neuroendocrine Marker in Tissues of the Immune System: R. H. Angeletti and W. F. Hickey .................................................. 89

COVER
Tidal flats in Minas Basin near Economy Point, Nova Scotia, showing large-scale bedforms carved by strong tidal flows over sand. This is one of the sites being considered for tidal power development. The combination of shallow water and large tides makes this an area of extensive tidal dissipation. See page 69. [Roger Belanger, Fisheries and Oceans Canada, Bedford Institute of Oceanography, Dartmouth, Nova Scotia B2Y 4A2]