LETTERS

Bad News: Is It True?: S. Singer; A. F. Matthews; J. P. Holdren et al;
R. Bodola; J. M. Street; G. A. Fuller; B. Currey; W. Sanderson and
B. F. Johnston; W. H. Davis; G. L. Cowgill; J. L. Simon ............... 1296

EDITORIAL

World Energy in Transition ................................................. 1311

ARTICLES

Total Eclipses of the Sun: J. B. Zirker ................................. 1313
Toward a Unified Theory: Threads in a Tapestry: S. L. Glashow .... 1319
The Geopolitics of Oil ...................................................... 1324

NEWS AND COMMENT

Science Finds a Place in the Transition .............................. 1328
Senator Schmitt, New Science Power ................................ 1329
Simon Ramo’s Prescriptions for Innovation ....................... 1331
Briefing: For NIH, Business as Usual; Primate Center Attempts
Bailout Through Congress; New Watchdog Group Ponders
Scientific Freedom ........................................................... 1332

RESEARCH NEWS

Gene Transfer Moves Ahead .............................................. 1334
Physics Journals Adopt New Policy .................................... 1337

ANNUAL MEETING

An Invitation; Washington Meeting in 1982 ......................... 1338

BOOK REVIEWS

The First Americans, reviewed by D. D. Anderson; Earthquake Engineering
and Hazards Reduction in China, F. T. Wu; Symposium on Glacier
Beds, W. S. B. Paterson; Liposomes in Biological Systems,
D. Papahadjopoulos; Books Received ................................ 1339
REPORTS

Rupture Zones of Great Earthquakes in the Alaska-Aleutian Arc, 1784 to 1980: L. R. Sykes et al. ........................................ 1343

A Temperature and Precipitation Record of the Past 16,000 Years in Southern Chile: C. J. Heusser and S. S. Streeter. .................. 1345

“Atmospheric” Epoxidation of Benzo[a]pyrene by Ozone: Formation of the Metabolite Benzo[a]pyrene-4,5-Oxide: J. N. Pitts, Jr., et al. 1347

Possible Fluid Dynamical Interpretation of Some Reported Features in the Jovian Atmosphere: T. Maxworthy and L. G. Redekopp. .... 1350

Lightning on Jupiter: Rate, Energetics, and Effects: J. S. Lewis .......................... 1351

Fluoride Distribution and Biological Availability in the Fallout from Mount St. Helens, 18 to 21 May 1980: D. R. Taves. .................. 1352

Deforestation and Increased Flooding of the Upper Amazon: A. H. Gentry and J. Lopez-Parodi ........................................... 1354

Chemical Species in Fly Ash from Coal-Burning Power Plants: L. D. Hulett, Jr., et al. ....................................................... 1356

Resonance Raman Effect of Carbonyl Group as a Probe of Its n-Electron State: Y. Nishimura and M. Tsuboi ................................ 1358

Comparison of the Nucleic Acid Sequence of Anglerfish and Mammalian Insulin mRNA’s from Cloned cDNA’s: P. M. Hobart et al. .... 1360

Modulation of Epidermal Growth Factor Receptors on 3T3 Cells by Platelet-Derived Growth Factor: M. Wran, C. F. Fox, R. Ross ......... 1363

Ratou Stunting Disease of Sugarcane: Isolation of the Causal Bacterium: M. J. Davis et al. ......................................................... 1365

Functional Development of Grafted Vasopressin Neurons: D. Gash, J. R. Sladek, Jr., C. D. Sladek ........................................... 1367

Mental Symptoms in Huntington’s Disease and a Possible Primary Aminergic Neuron Lesion: J. J. Mann et al. ............................ 1369

Pineal Melatonin Rhythm: Reduction in Aging Syrian Hamsters: R. J. Reiter et al. ...................................................................... 1372

Neural Organization Predicts Stimulus Specificity for a Retained Associative Behavioral Change: J. Farley and D. L. Alkon ............ 1373

Membrane Depolarization Accumulates During Acquisition of an Associative Behavioral Change: D. L. Alkon ............................. 1375

Technical Comments: Arginine Vasopressin in Extracts of Bovine Pituitary: J. H. Cort; H. J. Gitelman et al. ............................... 1377

COVER

Scanning electron photomicrographs of fly ash particles that have been etched in 1 percent hydrogen fluoride (×2200). Glass phases and the toxic elements contained within them have been removed, leaving crystalline residues of mullite (needles) and quartz. These are relatively pure and may be a recoverable resource that can be used in commercial ceramic manufacture. See page 1356. [Photomicrographs, Oak Ridge National Laboratory Analytical Chemistry Division, Oak Ridge, Tennessee 37830]