This Week in Science

Editorial
661 Engineering Research Centers

Letters

ScienceScope
671 AXAF's indirect costs soar higher; budget woes ground NIH scientists; etc.

News & Comment
672 Science Budget: Selective Growth ■ Science and the Domestic Spending Squeeze ■ Civilian R&D: The Big Four Federal Spenders
676 Where Have All Japan's Scientists Gone?
677 Sequencing Venture Sparks Alarm
678 Third World: S(ave) O(ut) S(leep)?
679 Stepping Up the Pressure On Indirect Costs
680 Briefings: Zagury in the Clear ■ Debut for 425-Million-Year-Old Fossil ■ Sarin Indicted ■ Neuro Nerves Calmed ■ More Turmoil Over Orphan Drugs ■ Picture-Perfect Plankton

Research News
682 Pollutant Haze Cools the Greenhouse ■ Hot Nights in the Greenhouse
684 Molecular Design Gets Into a Hole
685 Yellowstone Ecosystem: “Win-Win” Solution
686 “African Eve” Backers Beat a Retreat ■ Choosing a Human Family Tree
688 Boring in on β-Amyloid’s Role in Alzheimer’s

Articles
690 When Do Anomalies Begin?: A. Lightman and O. Gingerich

Reports
Cover: Granophyre from the roof zone of the Muskox intrusion, Northwest Territories, Canada, with a skeletal quartz crystal (violet, ~0.17 millimeter long) surrounded by optically continuous vermicular quartz intergrown with alkali feldspar (blue). The intergrowths reflect the final crystallization of a magma rich in silica and alkalis that coexisted with an underlying silica-poor magma. See page 708.

[Photograph by Brian W. Stewart, California Institute of Technology, with cross-polarized light and a 575-nanometer retardation plate]

705 Modeling 100,000-Year Climate Fluctuations in Pre-Pleistocene Time Series: T. J. Crowely, K.-Y. Kim, J. G. Mengel, D. A. Short

708 Diffusive Isotopic Contamination of Mafic Magma by Coexisting Silicic Liquid in the Muskox Intrusion: B. W. Stewart and D. J. DePaolo

711 Reaction Planning: Computer-Aided Discovery of a Novel Elimination Reaction: R. Herges and C. Hock


717 On the Probability of Matching DNA Fingerprints: N. J. Risch and B. Devlin


723 Reversal of Integration and DNA Splicing Mediated by Integrase of Human Immunodeficiency Virus: S. A. Chow, K. A. Vincent, V. Ellison, P. O. Brown


728 Processing of the Amyloid Protein Precursor to Potentially Amyloidogenic Derivatives: T. E. Golde, S. Estus, L. H. Younkin, D. J. Selkoe, S. G. Younkin

730 The Influence of Prior Synaptic Activity on the Induction of Long-Term Potentiation: Y.-Y. Huang, A. Colino, D. K. Selig, R. C. Malenka

733 Chondroitin Sulfate as a Regulator of Neuronal Patterning in the Retina: P. A. Britts, D. R. Canning, J. Silver

Technical Comment


Book Reviews

740 The Detection of Gravitational Waves, reviewed by P. R. Saulson • Neuronal Networks of the Hippocampus, C. Koch • Electrogenic Ion Pumps, B. Hille Vignettes: The Market for Books • Books Received

Products & Materials

744 Cell Lysis Reagent Simplifies DNA Release • Particle Size Analyzer • DNA Insertion Marker • Light Box • Nanoliter Injector • Centrifugal Ultrafiltration Devices • Photon-Counting Spectrofluorometer • Premixed Electrophoresis Buffers • Literature