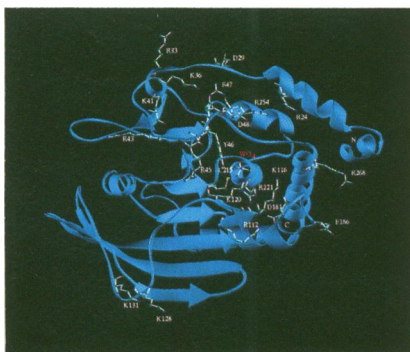




**1371**

**Witness to extinction**



**1373 & 1397**

**Catalytic site cleft  
of protein tyrosine  
phosphatase 1B**

## NEWS & COMMENT

**New AIDS Chief Takes Charge** 1364  
Using Discretion, OAR Style

**LIGO Director Out in Shakeup** 1366

**Agriculture Research: A Bold New  
Program at Berkeley Runs Into Trouble** 1367

**Biosphere 2 Makes a New Bid for  
Scientific Credibility** 1368  
No Eden in Biosphere

## RESEARCH NEWS

**Testing an Ancient Impact's Punch** 1371  
Searching for the Tracks of Impact in Mexican  
Sand

**Taking a First Look at a Tyrosine  
Phosphatase** 1373

**Slow DNA Repair Implicated in  
Mutations Found in Tumors** 1374

**AAAS Meeting: War of Words  
Continues in Violence Research** 1375

**Quantum Physics: Heisenberg's Heirs** 1376  
Exploit Loopholes in His Law

## POLICY FORUMS

**Status and Prospects of Women in  
Science in Europe** 1389  
M. Osborn

**Interventions to Increase the  
Participation of Women in Physics** 1392  
M. S. Dresselhaus, J. R. Franz, B. C. Clark

## PERSPECTIVES

**The Quantum Optical Repeater** 1394  
Y. Yamamoto

**Will Transgenic Crops Generate  
New Viruses and New Diseases?** 1395  
B. W. Falk and G. Bruening

## RESEARCH ARTICLES

**Crystal Structure of Human Protein  
Tyrosine Phosphatase 1B** 1397  
D. Barford, A. J. Flint, N. K. Tonks

**The 2.9 Å Crystal Structure of  
*T. thermophilus* Seryl-tRNA Synthetase  
Complexed with tRNA<sup>Ser</sup>** 1404  
V. Biou, A. Yaremchuk, M. Tukalo, S. Cusack

## DEPARTMENTS

**THIS WEEK IN SCIENCE** 1353

**EDITORIAL** 1355  
Women in Science

**LETTERS** 1357  
Women in Biomedicine: Encouragement: S. R.  
Long and V. Zakian • Shamans and Patent Law-  
yers: P. L. Bereano

**SCIENCESCOPE** 1363

**RANDOM SAMPLES** 1370

Miraculous Astronomy • Neuroscientists Band to  
Study Dyslexia • Hopping to Extinction • Keeping  
Russian Science Afloat

**BOOK REVIEWS** 1455

*Wrinkles in Time* and *Ripples in the Cosmos*, reviewed  
by W. H. Press • *Biological Basis of Substance Abuse*,  
E. M. Unterwald • Women in Science: Some  
Books of the Year • Vignettes • Books Received

**PRODUCTS & MATERIALS** 1465

## Board of Reviewing Editors

John Abelson  
Frederick W. Alt  
Don L. Anderson  
Michael Ashburner  
Stephen J. Benkovic  
David E. Bloom  
Floyd E. Bloom  
Piet Borst  
Michael S. Brown  
Henry R. Bourne  
James J. Bull

Kathryn Calame  
C. Thomas Caskey  
Dennis W. Choi  
John M. Coffin  
Paul J. Crutzen  
Robert Desimone  
Nicole Le Douarin  
Bruce F. Eldridge  
Paul T. Englund  
Richard G. Fairbanks  
Douglas T. Fearon

Harry A. Fozzard  
Klaus Friedrich  
Theodore H. Geballe  
Margaret J. Geller  
John C. Gerhart  
Roger I. M. Glass  
Stephen P. Goff  
Peter N. Goodfellow  
Corey S. Goodman  
Stephen J. Gould  
Ira Herskowitz

Eric F. Johnson  
Stephen M. Kosslyn  
Michael LaBarbera  
Charles S. Levings III  
Alexander Levitzki  
Harvey F. Lodish  
Richard Losick  
Diane Mathis  
Anthony R. Means  
Shigetada Nakanishi  
Roger A. Nicoll

William H. Orme-  
Johnson III  
Stuart L. Pimm  
Yeshayau Pocker  
Dennis A. Powers  
Ralph S. Quatran  
V. Ramanathan  
Douglas C. Rees  
T. M. Rice  
Erkki Ruoslahti  
David C. Rubie

Gottfried Schatz  
Jozef Schell  
Ronald H. Schwartz  
Terrence J. Sejnowski  
Ellen Solomon  
Thomas A. Steitz  
Michael P. Stryker  
Richard F. Thompson  
Robert T. N. Tjian  
Emil R. Unanue  
Geerat J. Vermeij

Bert Vogelstein  
Harold Weintraub  
Zena Werb  
George M. Whitesides  
Owen N. Witte  
William A. Wulf  
Keith Yamamoto