

Contents

- 399 Introduction, *R. Wang and K. Aki*
- 403 Mechanical Problems in Geodynamics and Work Done in China, *R. Wang*
- 425 A Review on the Lithospheric Structures in the Tibetan Plateau and Constraints for Dynamics, *R. Zeng, Z. Ding and Q. Wu*
- 445 Free Oscillations of a Laterally Heterogeneous and Anelastic Earth, *S. Tsuboi*
- 459 The Earth's Palaeorotation, Postglacial Rebound and Lower Mantle Viscosity from Analysis of Ancient Chinese Eclipse Records, *K. D. Pang, K. Yau and H.-h. Chou*
- 487 A Preliminary Study of the Effects of Some Flow Parameters in the Generation of Poloidal and Toroidal Energies Within a 3-D Spherical Thermal-convective System with Variable Viscosity, *A. T. Hsui, W.-S. Yang and J. R. Baumgardner*
- 505 On the Rifting Dynamics of Plate Divergence and Magma Accumulation at Oceanic Ridge Axes, *W. R. Jacoby and B. Higgs*
- 523 3-D Spherical Shell Modeling of Mantle Flow and Its Implication for Global Tectogenesis, *X. Sun and L. Han*
- 537 Coupling of Tectonic Loading and Earthquake Fault Slips at Subduction Zones, *K. Wang*
- 561 Oblique Subduction of a Newtonian Fluid Slab, *Z.-K. Shen*
- 579 On the Dynamics of Extensional Basin, *R.-s. Zeng, C.-y. Wang and D.-n. Zhang*
- 605 Rheological Information from Geological Structures, *P. J. Hudleston and L. Lan*

- 621 A Method of Estimating the Stress Exponent in the Flow Law for Rocks Using Fold Shape, *L. Lan and P. J. Hudleston*
- 637 The Effect of Fault-bend Folding on Seismic Velocity in the Marginal Ridge of Accretionary Prisms, *Y. Cai, C.-y. Wang, W.-t. Hwang and G. R. Cochrane*
- 647 Interrelation between Fault Zone Structures and Earthquake Processes, *K. Aki*
- 677 Analysis of Induced Seismicity for Stress Field Determination and Pore Pressure Mapping, *F. H. Cornet and Y. Jianmin*
- 701 A New Approach to Earthquake Prediction: The Load/Unload Response Ratio (LURR) Theory, *X.-C. Yin, X.-z. Chen, Z.-p. Song and C. Yin*
- 717 An Earthquake Instability Model Based on Faults Containing High Fluid-pressure Compartments, *D. A. Lockner and J. D. Byerlee*
- 747 Slip-weakening Constitutive Relation and the Structure in the Vicinity of a Shear Crack Tip, *C. He*
- 759 Development of Subcracks Between *en echelon* Fractures in Rock Plates, *Y. Zhao, H. Liang, J. Huang, J. Geng and R. Wang*
- 775 *In Situ* Stress State in Mainland China, *F. Li*