

# Symposium on Mechanics for Space Flight 1981-1990

by

Koichi OSHIMA

Symposium on Mechanics for Space Flight was held firstly in 1968 at Institute of Space and Aeronautical Science, University of Tokyo. Since then, this Symposia have been annually held in this Institute. During the period until 1980, 11 Symposia were held and a summarizing report of these Symposia was presented at the Proceedings of 1982 Symposium.

In 1981, the Institute of Space and Astronautical Science was inaugurated, and this Symposia have been sponsored since then. The Proceedings of them were also published as ISAS Report SP.

List of contents of these Proceedings and the author's index are presented as follows :

K. Oshima M. Hinada K. Matsuo M. Murakami (1981) p. 1

Preface

K. Nanbu (1981) p. 3

The exact direct-simulation-scheme for the Boltzmann equation —Correlation of velocity between the molecules in a closed system—

S. Ogawa T. Kato (1981) p. 14

On the statistical approaches for inelastic granular particles

K. Koura (1981) p. 25

Hole burning into velocity distribution of thermal electrons due to resonance attachment to O<sub>2</sub>

K. Yamamoto (1981) p. 29

Flow of rarefied gas past a circular cylinder at moderate Knudsen numbers

M. Nishida A. Kimura (1981) p. 37

Spectroscopic measurements of a plasma flow on a stagnation streamline

T. Kanki S. Inchi Y. Matsui (1981) p. 45

Non-uniform pressure diffusion of a ternary gas mixture in a circular tube at low pressures

N. Takahashi T. Moriya K. Teshima (1981) p. 64

Rotational-translational relaxation of molecules and translational relaxation of binary mixtures in free-jet expansions

Y. Tanaka H. Oguro K. Oshima (1981) p. 73

Experimental study of jet plumes expanding into vacuum

K. Teshima K. Tanaka T. Kato I. Koyano (1981) p. 85

Crossed-beam apparatus for ion-cluster reaction

- A. Onji S. Tsuda (1981) p. 97  
Scattering of Argon beams from metallic surfaces with adsorbed layers
- H. Mikami (1981) p. 107  
Rotating supersonic flow about scoop inlet using an unsteady implicit technique
- H. Honma I. I. Glass Y. Tsumita (1981) p. 121  
An application of the random-choice method to weak blast waves
- K. Karashima S. Kitama (1981) p. 137  
The effect of a small blowing on vortex-breakdown in a swirling flow
- Y. Oshima (1981) p. 145  
Studies of autorotation of an elliptic cylinder
- K. Horiuchi (1981) p. 159  
Study of incompressible turbulent channel flow by large-eddy simulation
- M. Hayashi A. Sakurai S. Aso (1981) p. 171  
On a multi-layered thin film heat transfer gauge
- M. Murakami H. Nagano (1981) p. 179  
Space cryogenics
- K. Etori (1981) p. 197  
Analytical estimation of the thermal properties of liquid Helium II
- K. Negishi (1981) p. 213  
Performance of closed two-phase thermosyphon-II-
- K. Kaneko K. Negishi (1981) p. 225  
Counter-current two-phase flow in heat pipes —III-
- Y. Kobayashi (1981) p. 229  
A concept of heat pipe engine
- T. Yamamoto Y. Tanaka S. Matsumoto M. Sasaki (1981) p. 241  
On useful temperature range of sodium heat pipe
- I. Totsuka S. Tazoe K. Yoshizumi N. Okada (1981) p. 255  
A new internal-surface finish method of heat pipes
- J. Niekawa K. Matsumoto T. Koizumi K. Hasegawa H. Kaneko Y. Mizoguchi  
(1981) p. 261  
Performance of revolving heat pipes and application to a rotary heat exchanger
- K. Oshima (1982) p. 1  
Preface
- H. Murakami M. Tanna K. Niu (1982) p. 3  
Self-similar solutions of hydrodynamic equations for expanding layer with  
boundary condition specified by different equation
- S. Kawata K. Niu (1982) p. 9  
Numerical simulations for intense light-ion beam propagation in channel under  
influence of plasma inertia
- T. Okada H. Murakami K. Niu (1982) p. 21  
Propagation of light ion beam II—"Micro-and macro-stabilities of rotating ion  
layer"
- K. Hayashi T. Fujiwara (1982) p. 27  
Oxyhydrogen ignition and flame propagation under cryogenic temperatures

- K. Ono (1982) p. 41  
Frequency effect of transonic flow over an oscillating airfoil
- K. Nakahashi (1982) p. 51  
Computation of two-dimensional transonic chemically reacting nonequilibrium flow in a rocker nozzle
- K. Oshima Y. Oshima (1982) p. 65  
Lift generation due to vortex shedding
- H. Yokota T. Tanabe (1982) p. 73  
Interplanetary mission design by multiple Earth-venus-jupiter Swingbys
- H. Matsu Y. Matogawa T. Nozoe T. Shimoda (1982) p. 87  
Optimization of low thrust trajectories for colinear Lagrange point mission
- I. Nakatani (1982) p. 103  
Attitude control experiment of sounding rocket S-520-5
- K. Nanbu (1982) p. 109  
Exact direct-simulation-scheme for the Boltzmann equation/correlation of molecular velocities subject to renewal process
- K. Nanbu (1982) p. 123  
Couette flow in continuum to free molecular region
- K. Koura (1982) p. 141  
Relaxation of velocity distribution of electrons cooled/heated/by rotational excitation/de-excitation/of N<sub>2</sub>
- T. Soga (1982) p. 151  
On the interpolation formula based upon the asymptotic solution to the kinetic model equation
- T. Soga M. Takanashi M. Yasuhara (1982) p. 159  
Rotational temperature measurements in free jet expansions of N<sub>2</sub> using electron beam fluorescence technique
- M. Nishida A. Nakajima (1982) p. 169  
Density measurements of a free jet by Laser differential interferometer
- K. Teshima T. Moriya N. Takahashi (1982) p. 179  
Translational nonequilibrium in a rapid expansion flow from a high temperature source
- T. Fujimoto S. Yamamoto S. Kato (1982) p. 187  
Recent developments in the investigations on the gas-surface interactions
- K. Koura (1982) p. 191  
Monte Carlo simulation in molecular gas dynamics
- H. Mikami (1982) p. 199  
Rarefaction phenomena in gas and isotope separation
- K. Etori (1982) p. 211  
Remarks on thermal properties of rotating superfluid Helium in a gravitational field
- K. Etori S. Haraguchi H. Okushima (1982) p. 229  
Simulation of Brownian motion affected by Gaussian force in gravitational field
- Y. Kobayashi M. Kaneko T. Matsumoto (1982) p. 241

- Visualization of density variation due to vapor condensation  
M. Takuma S. Maezawa A. Tsuchida (1982) p. 247  
Studies on condensation heat transfer in two-phase closed thermosyphons
- K. Negishi (1982) p. 257  
Unstable phenomena in a two-phase closed thermosyphon
- T. Yasunaga H. Koizumi (1982) p. 265  
The cooling unit for the closed box
- Y. Tanaka T. Yamamoto H. Hattori (1982) p. 273  
Heat transfer rate of looped type heat pipes using water and NaK as working fluid under liquid phase flow
- K. Oshima (1982) p. 283  
Symposium on mechanics for space flight 1970-1980
- K. Oshima (1983) p. 1  
Preface
- H. Honma M. Wada K. Inomata (1983) p. 3  
Random-choice solutions for two-dimensional and axisymmetric supersonic flows
- S. Kuwabara (1983) p. 15  
Numerical analysis of the burst in the turbulent boundary layer based on the three-dimensional vortex model
- K. Fujii (1983) p. 23  
Elliptic grid generation for three-dimensional geometries
- N. Izutsu Y. Oshima (1983) p. 29  
Numerical simulation of autorotation
- M. Nishida H. Kobayashi (1983) p. 43  
Freejets of rotationally relaxing diatomic gases
- K. Teshima (1983) p. 51  
Visualization for a free jet by a laser induced fluorescence method and its structure
- K. Etori (1983) p. 61  
Remarks on thermal analysis of thin  $^4\text{He}$  films in superfluid heat pipe
- K. Negishi (1983) p. 69  
A blowup phenomenon of the working fluid in a two-phase closed thermosyphon
- A. Shimizu S. Yamazaki (1983) p. 75  
An experimental study of helical guide-type rotating heat pipe
- M. Oshiro S. Takasu M. Kurihara K. Taneda T. Nakamoto H. Nakayama (1983) p. 83  
The heat pipe heat exchanger with controllable heat exchanging area
- I. Honda A. Suzuki Y. Abe S. Sugihara (1983) p. 93  
Experimental study of the naphthalene heat pipe
- M. Takaoka M. Mohtai M. Mochizuki K. Mashiko (1983) p. 101  
Research and development of long heat pipes and their applications
- H. Takagi M. Mohtai K. Kojima (1983) p. 107

- Study of latent heat storage system used heat pipes for cooling underground cables
- K. Oshima (1984) p. 1  
Preface
- Y. Oshima (1984) p. 3  
Interactions of vortices
- K. Tsuboi K. Oshima (1984) p. 17  
Numerical study of two-dimensional vortex street
- S. Kuwabara (1984) p. 31  
Vorton model analysis
- N. Izutsu H. Kanda (1984) p. 43  
Numerical simulation of vortices shed behind a rotating wing
- T. Matsuda (1984) p. 51  
Numerical simulations in cosmic gas dynamics-gas flow in binary stars-
- H. Yamada T. Fujiwara (1984) p. 67  
Two-dimensional analysis of a flow in MPD thruster
- T. Soga (1984) p. 77  
A kinetic theory analysis of transient evaporation problem
- N. Ichikawa M. Murakami H. Nakai (1984) p. 91  
Application of porous solid nitrogen to space borne cooling missions
- T. Matsumoto Y. Kobayashi (1984) p. 105  
Effect of non-condensable gas on the vapor flow in thermosyphons
- K. Kaneko K. Negishi (1984) p. 113  
Heat transfer performances of a thermosyphon contained non-condensable gas  
-I-
- Y. Ikeda (1984) p. 119  
Permeability of a screen wick
- Y. Ikeda M. Kamata A. Shimizu (1984) p. 127  
Effective thermal conductivity of a screen wick
- H. Nakai M. Murakami N. Ichikawa (1984) p. 135  
Flow of HeII through porous-plug phase separators
- M. Ishizuka T. Sasaki Y. Miyazaki (1984) p. 157  
Development of titanium heat pipes for use in space
- K. Oshima (1985) p. 1  
Preface
- R. Takaki A. K. M. Hussain (1985) p. 3  
Theoretical study of strong interaction of vortex filaments
- S. Kuwabara (1985) p. 1  
Studies on vortex motion based on the dividing vorton model
- H. Nakajima Y. Yoshizawa (1985) p. 23  
A description of a turbulent flow past a circular cylinder by a discrete vortex method
- T. Kambe T. Minota Y. Ikushima (1985) p. 33  
Acoustic waves by vortex-body interaction

- Y. Ishii Y. Oshima (1985) p. 43  
Study of three-dimensional separation on a spheroid at incidence
- N. Nishikawa A. Suzuki S. Akiyama (1985) p. 53  
Images of three dimensional flows in computer graphics
- M. Katagiri (1985) p. 65  
On accurate numerical solution of Falkner-Skan equation
- H. Kanda K. Oshima (1985) p. 71  
Numerical study of entrance flow of a circular pipes
- K. Teshima H. Nakatsuji (1985) p. 89  
Numerical simulation of two-dimensional freejet flow-fields
- Y. Sakurai H. Kimura (1985) p. 97  
Technical overview of plume radiation from a solid rocket motor
- H. Kuninaka K. Kuriki (1985) p. 111  
Two-dimensional analysis of high voltage solar array interfering with ionospheric plasma
- K. Etori (1985) p. 121  
Analysis on gravitational effect to nonlinear diffusion system of vapor molecules in a heat pipe
- M. Kamata Y. Ikeda (1985) p. 133  
Effect of surplus standing liquid on heat transfer resistance in the heat pipe-with mesh wick in a horizontal mode-
- K. Negishi K. Kaneko F. Kusumoto (1985) p. 143  
Dynamic heat transfer mechanism of two-phase closed thermosyphon
- Y. Tanaka T. Yamamoto (1985) p. 153  
A trial on performance test method for Cu-water heat pipe
- Y. Miyazaki Y. Ido (1985) p. 161  
High capacity heat pipe with axial grooves
- K. Oka H. Tsuchihashi Y. Nishimura T. Mohtai M. Mochizuki K. Mashiko H. Yamanouchi (1985) p. 167  
Operating characteristics of cooling underground power cables using up sloped long heat pipes in conduit
- K. Oshima (1985) p. 177  
Report on International Symposium on Computational Fluid Dynamics-Tokyo
- P. I. Chushkin G. P. Voskresensky (1985) p. 185  
Computational aerodynamics of supersonic lifting vehicles
- V. M. Kovenya G. A. Tarnavsky S. G. Cherny (1985) p. 199  
Numerical modeling of spatial flows on the basis of splitting up method
- A. I. Tolstykh (1985) p. 209  
The third order compact schemes for fluid dynamics problems
- G. P. Voskresensky (1985) p. 217  
Supersonic flow around tip sides of wings
- B. Dobrowolski Z. Kabza (1985) p. 225  
An improved  $\psi$ -cell method for turbulent multi-phase flows
- Z. D. Zapryanov E. V. Toshev (1985) p. 231

- Hydrodynamic and thermal interaction between two spheres in a steady viscous flow
- K. V. Brushlinsky (1985) p. 239  
Mathematical and computational models of plasma flows
- V. V. Zhurin A. V. Shipilin (1985) p. 249  
The numerical method of calculation two-dimensional stationary electro-gas-dynamic internal flows
- A. A. Samarskii B. P. Gerasimov T. G. Elizarova I. S. Elizarova I. S. Kalachinskaya  
A. B. Karagichev A. V. Lesunovsky S. A. Semushin B. I. Chetversushkin A. G.  
Churban (1985) p. 257  
Computer simulation in engineering hydrodynamics
- K. Oshima (1986) p. 1  
Preface
- N. Izutsu K. Oshima Y. Oshima (1986) p. 3  
Experimental study of interacting vortex rings
- H. L. Chen (1986) p. 5  
Numerical simulation of the interaction of vortex rings in viscous fluid
- S. Kuwabara (1986) p. 23  
Theory of dividing vortns
- Y. Takakura T. Ishiguro S. Ogawa (1986) p. 31  
On the scheme dependency of the three-dimensional Euler solutions
- H. Kanda K. Oshima (1986) p. 47  
Numerical study of the entrance flow and its transition in a circular pipe-2-
- M. Cho K. Abe (1986) p. 77  
Thrust and specific impulse of repetitively-pulsed-laser propulsion rocket
- K. Etori (1986) p. 97  
Estimations of gravitational effects on thermal denaturation process in a  
biopolymer
- H. Uchida K. Kuwahara S. Enya (1986) p. 107  
Numerical analysis of Marangoni convection in Bridgman method
- A. Takaichi J. Nishimura M. Hinada (1986) p. 117  
Effect of void gas lying between fluid slugs in nutation dampers
- T. Ogushi G. Yamanaka (1986) p. 127  
Heat transfer performance of axially grooved heat pipes
- Y. Miyazaki S. Oshima Y. Inoue (1986) p. 141  
Heat transfer characteristics of arterial heat pipe with axial grooves
- Y. Miyazaki S. Oshima (1986) p. 149  
Pump assisted heat pipe
- H. Shirai (1986) p. 155  
Nonequilibrium characteristics of nitrogen plasmas appropriate to an AOTV  
flight
- K. Teshima K. Abe T. Nishino (1986) p. 165  
Rayleigh scattering measurements of f freejet with homogeneous condensation
- K. Teshima H. Nakatsuji (1986) p. 175

- Numerical simulation and visualization of a flowfield by interaction of two parallel two-dimensional freejets  
 N. Goto S. Hokamoto (1986) p. 187  
 On the root locus method applied to flexural vibration control systems  
 K. Oshima (1987) p. 1  
 Preface  
 H. L. Chen K. Oshima (1987) p. 3  
 Numerical analysis of reconnection of vortex rings  
 A. Yamashita Y. Oshima (1987) p. 13  
 Vortex filament simulation for the crosslinking vortex rings  
 Y. Oshima N. Izutsu (1987) p. 19  
 Crosslinking of two vortex rings side by side  
 Y. Ishii H. Kanda (1987) p. 29  
 Turbulence transition in a circular pipe  
 H. Shirai (1987) p. 37  
 Absorption characteristics of Si<sub>3</sub>N<sub>4</sub> ablation layer plasma  
 K. Etori (1987) p. 47  
 Thermostatistical estimation of vapor-state molecules affected by gravity in a heat pipe  
 F. Kaminaga N. Tsuyuzaki T. Saito M. Konno Y. Okamoto (1987) p. 55  
 An experimental investigation of transient characteristics in a gravity-assisted heat pipe  
 Y. Ikeda S. Onuma (1987) p. 61  
 Heat transfer of mesh-wick mesh-pipes-bottom heat mode-  
 T. Matsuoka K. Negishi K. Kaneko M. Hirashima Y. Nishikawa M. Taguchi (1987) p. 77  
 An arranging method on l/d of two-phase closed thermosyphons  
 M. Murakami K. Arai Y. Kojima (1987) p. 87  
 A statistical treatment of accelerated life test data for copper-water heat pipes  
 Y. Miyazaki Y. Kuriyama M. Furukawa (1987) p. 99  
 Forced-convective boiling in small diameter tube  
 M. Hirashima Y. Nishikawa M. Taguchi K. Negishi K. Kaneko T. Matsuoka (1987) p. 107  
 Characteristics of long size thermosyphons made of corrugated tube  
 Z. G. Ling (1987) p. 115  
 An analysis of gas-steam total power recovery energy system  
 M. Inoue K. Tsuchiya A. Nakajima C. Murakami (1987) p. 127  
 Nutational stability of a satellite equipped with an active magnetic momentum wheel  
 M. Hinada I. Nakatani K. Ninomiya N. Muranaka T. Namera M. Uo N. Ogura (1987) p. 137  
 Dynamics of satellite with radial wire antennas  
 K. Oshima (1988) p. 1  
 Preface



- K. Oshima (1988) p. 3  
Numerical solutions of viscous incompressible Navier-Stokes equations
- S. Aso M. Hayashi N. Futatsudera (1988) p. 11  
Numerical simulations of separated flow around two-dimensional wing section by a discrete vortex method
- K. Noto (1988) p. 21  
Computational prediction on disappearance of the Karman vortex street due to heating of cylinder submerged in horizontal main stream
- M. Katagiri (1988) p. 31  
On accurate numerical solutions of the unsteady boundary layer flow around a circular cylinder
- H. L. Chen K. Oshima M. Hinada (1988) p. 39  
Numerical analysis of thermocapillary and evaporating flows at low Bond number
- K. Etori (1988) p. 55  
New estimation on specific heat of superfluid Helium by Roton-growth model and its gravitational effect in rotating system
- M. Hirashima Y. Nishikawa M. Taguchi K. Negishi K. Kaneko H. Takemura (1988) p. 65  
Characteristics of top heat mode thermosyphons Part II an improved model
- K. Oshima (1988) p. 77  
Research and development on heat pipe and related thermal engineering technologies in Japan
- V. Hlavack F. Polasek K. Oshima (1988) p. 87  
Design calculation of heat pipes and heat pipe systems
- K. Oshima (1989) p. 1  
Preface
- S. Aso M. Hayashi M. Takano (1989) p. 3  
Numerical simulation of unsteady shock reflection process by a ramp
- S. Aso A. Fujimoto N. Futatsudera M. Hayashi (1989) p. 5  
Numerical simulation of separated flows around a wing section at steady and unsteady motion by a discrete vortex method
- H. Honma N. Nishikawa (1989) p. 25  
Some topics of Navier-Stokes solvers
- O. Inoue (1989) p. 41  
Simulation of excited shear flows
- Y. Ishii (1989) p. 45  
Numerical simulation of pulsatile flows passing through a pipe with sudden expansion
- A. Sakurai H. Uchihori (1989) p. 53  
Unsteady vortex lattice calculation of the flow around a slender delta wing
- V. S. Berman (1989) p. 61  
Application of computer algebra to perturbation solution problem of the viscous flow past a sphere

- H. L. Chen K. Oshima (1989) p. 73  
Numerical simulation of complicate transition-breakdown of vortical flows inside a circular pipe
- L. Wang H. M. Wu (1989) p. 105  
Analysis of atmospheric diffusion of pollutant based on the limited observation of horizontal wind
- H. M. Wu S. Yang (1989) p. 115  
Mm B-A new class of accurate high resolution schemes for conservation laws in two dimensions
- F. Kaminaga Y. Okamoto T. Yotsukura H. Ito T. Saito H. Amezawa (1989) p. 147  
Heat transfer characteristics of radial heat pipe
- Y. Miyazaki M. Furukawa Y. Ishii M. Shigehara M. Komori K. Mimura S. Oshima (1989) p. 155  
Development of a two-phase cold plate
- P. Terdtoon M. Shiraishi M. Murakami (1989) p. 167  
Effect of inclination angle on heat transfer characteristics of closed two-phase thermosyphon
- H. Yamaguchi M. Ishii K. Uematsu H. Uchida S. Enya H. Azuma (1989) p. 175  
Numerical simulation of buffer flow in a free flow electrophoresis chamber
- M. Tashiro Y. Tanaka T. Yamamoto Y. Ikeda (1989) p. 183  
Experimental study on mercury heat pipes-on effect of screen mesh wick under bottom heat mode-
- K. Oshima (1990) p. 1  
Preface
- H. Kanda (1990) p. 3  
Normal wall effect and the minimum critical Reynolds number for flow in a circular pipe
- T. Ohtsuka H. Fujii (1990) p. 37  
Minimax optimization in the time domain
- I. Nakatani J. Kawaguchi R. Hasegawa M. Abe K. Ashina (1990) p. 47  
Attitude control system of I-520 recovery type rocket
- S. V. Konev (1990) p. 53  
Intensification of phase change heat transfer
- Z. G. Ling K. Oshima (1990) p. 69  
Brayton-Rankin total energy space dynamic power system analysis
- K. Oshima (1990) p. 81  
Symposium on mechanics for space flight 1981-1990

## AUTHOR INDEX

- Abe, K. (1986) p. 77 (1986) p. 165  
Abe, M. (1990) p. 47  
Abe, Y. (1983) p. 93  
Amezawa, H. (1989) p. 147  
Arai, K. (1981) p. 171 (1988) p. 11 (1989) p. 3 (1989) p. 15  
Ashina, K. (1990) p. 47  
Azuma, H. (1989) p. 175  
Berman, V. S. (1989) p. 61  
Brushlinsky, U. V. (1985) p. 239  
Chen, H. L. (1986) p. 15 (1987) p. 3 (1988) p. 39 (1989) p. 73  
Cherny, S. G. (1985) p. 199  
Chetversushkin, B. I. (1985) p. 257  
Cho, M. (1986) p. 77  
Churban, A. G. (1985) p. 257  
Chushkin, P. I. (1985) p. 185  
Dobrowolski, B. (1985) p. 225  
Elizarova, T. G. (1985) p. 257  
Enya, S. (1986) p. 107 (1989) p. 175  
Etori, K. (1981) p. 197 (1982) p. 211 (1982) p. 229 (1983) p. 61 (1985) p. 121 (1986) p. 97 (1987) p. 47 (1988) p. 55  
Fujii, H. (1990) p. 37  
Fujii, K. (1983) p. 23  
Fujimoto, A. (1989) p. 15  
Fujimoto, T. (1982) p. 187  
Fujiwara, T. (1982) p. 27 (1984) p. 67  
Furukawa, M. (1987) p. 99 (1989) p. 155 (1988) p. 11  
Futatsudera, N. (1989) p. 15  
Gerasimov, B. P. (1985) p. 257  
Glass, I. I. (1981) p. 121  
Goto, N. (1986) p. 187  
Haraguchi, S. (1982) p. 229  
Hasegawa, K. (1981) p. 261  
Hasegawa, R. (1990) p. 47  
Hattori, H. (1982) p. 273  
Hayashi, K. (1982) p. 27  
Hayashi, M. (1981) p. 171 (1988) p. 11 (1989) p. 3 (1989) p. 15  
Hinada, M. (1981) p. 1 (1986) p. 117 (1987) p. 137 (1988) p. 39  
Hirashima, M. (1987) p. 77 (1987) p. 107 (1988) p. 65  
Hlavacks, V. (1988) p. 87  
Hokamoto, S. (1986) p. 187  
Honda, I. (1983) p. 93  
Honma, H. (1981) p. 121 (1983) p. 3 (1989) p. 25

- Horiuchi, K. (1981) p. 159  
Hussain, A. K. M. (1985) p. 3  
Ichikawa, N. (1984) p. 91 (1984) p. 135  
Ido, Y. (1985) p. 161  
Ikeda, Y. (1984) p. 119 (1984) p. 127 (1985) p. 127 (1985) p. 133 (1987) p. 61 (1989)  
p. 183  
Ikushima, Y. (1985) p. 33  
Inomata, K. (1983) p. 3  
Inoue, M. (1987) p. 127  
Inoue, O. (1989) p. 41  
Inoue, Y. (1986) p. 141  
Ishiguro, T. (1986) p. 31  
Ishii, M. (1989) p. 175  
Ishii, Y. (1985) p. 43 (1987) p. 29 (1989) p. 45 (1989) p. 155  
Ishizuka, M. (1984) p. 157  
Ito, H. (1989) p. 147  
Iuchi, S. (1981) p. 45  
Izutsu, N. (1983) p. 29 (1984) p. 43 (1986) p. 3 (1987) p. 19  
Kabza, Z. (1985) p. 225  
Kalachinskaya, I. S. (1985) p. 257  
Kamata, M. (1984) p. 127 (1985) p. 133  
Kambe, T. (1985) p. 33  
Kaminaga, F. (1987) p. 55 (1989) p. 147  
Kanda, H. (1984) p. 43 (1985) p. 71 (1986) p. 47 (1987) p. 29 (1990) p. 3  
Kaneko, H. (1981) p. 261  
Kaneko, K. (1981) p. 225 (1984) p. 113 (1985) p. 143 (1987) p. 77 (1987) p. 107 (1988)  
p. 65  
Kaneko, M. (1982) p. 241  
Kanki, T. (1981) p. 45  
Karagichev, A. B. (1985) p. 257  
Karashima, K. (1981) p. 137  
Katagiri, M. (1985) p. 65 (1988) p. 31  
Kato, S. (1982) p. 187  
Kato, T. (1981) p. 14 (1981) p. 85  
Kawaguchi, J (1990) p. 47  
Kawata, S. (1982) p. 9  
Kimura, A. (1981) p. 37  
Kimura, H. (1985) p. 97  
Kitami, S. (1981) p. 137  
Kobayashi, H. (1983) p. 43  
Kobayashi, Y. (1981) p. 229 (1982) p. 241 (1984) p. 105  
Koizumi, H. (1982) p. 265  
Koizumi, T. (1981) p. 261  
Kojima, K. (1983) p. 107

- Kojima, Y. (1987) p. 87  
Konev, S. V. (1990) p. 53  
Konno, M. (1987) p. 55  
Konori, M. (1989) p. 155  
Koura, K. (1981) p. 25 (1982) p. 141 (1982) p. 191  
Kovenya, V. M. (1985) p. 199  
Koyano, I. (1981) p. 85  
Kuninaka, H. (1985) p. 111  
Kurihara, M. (1983) p. 83  
Kuriki, K. (1985) p. 111  
Kuriyama, Y. (1987) p. 99  
Kusumoto, F. (1985) p. 143  
Kuwabara, S. (1983) p. 15 (1984) p. 31 (1985) p. 11 (1986) p. 23 (1986) p. 107  
Lesunovsky, A. V. (1985) p. 257  
Ling, Z. G. (1987) p. 115 (1990) p. 69  
Maezawa, S. (1982) p. 247  
Mashiko, K. (1983) p. 101 (1985) p. 167  
Matogawa, Y. (1982) p. 87  
Matsuda, T. (1984) p. 51  
Matsui, Y. (1981) p. 45  
Matsumoto, K. (1981) p. 261  
Matsumoto, S. (1981) p. 241  
Matsumoto, T. (1982) p. 241 (1984) p. 105  
Matsuo, H. (1982) p. 87  
Matsuo, K. (1981) p. 1  
Matsuoka, T. (1987) p. 77 (1987) p. 107  
Mikami, H. (1988) p. 107 (1982) p. 199  
Mimura, K. (1989) p. 155  
Minota, T. (1985) p. 33  
Miyazaki, Y. (1984) p. 157 (1985) p. 161 (1986) p. 141 (1986) p. 149 (1987) p. 99  
(1989) p. 155  
Mizoguchi, Y. (1981) p. 261  
Mochizuki, M. (1983) p. 101 (1985) p. 167  
Mohtai, M. (1988) p. 101 (1983) p. 107  
Mohtai, T. (1985) p. 167  
Moriya, T. (1981) p. 64 (1982) p. 179  
Murakami, C. (1987) p. 127  
Murakami, H. (1982) p. 3 (1982) p. 21 (1981) p. 1 (1981) p. 179 (1984) p. 91 (1984) p.  
135 (1987) p. 87 (1989) p. 167  
Muranaka, N. (1987) p. 137  
Nagano, H. (1981) p. 179  
Nakahashi, K. (1982) p. 51  
Nakai, H. (1984) p. 91 (1984) p. 135  
Nakajima, A. (1982) p. 169 (1987) p. 127

- Nakajima, H. (1985) p. 23  
Nakamoto, T. (1983) p. 83  
Nakatani, I. (1982) p. 103 (1987) p. 137 (1990) p. 47  
Nakatsuji, H. (1985) p. 89 (1986) p. 175  
Nakayama, H. (1983) p. 83  
Namera, T. (1987) p. 137  
Nanbu, K. (1981) p. 3 (1982) p. 109 (1982) p. 123  
Negishi, K. (1981) p. 213 (1981) p. 225 (1982) p. 257 (1983) p. 69 (1984) p. 113 (1985)  
p. 143 (1987) p. 77 (1987) p. 107 (1988) p. 65  
Niekawa, J. (1981) p. 261  
Ninomiya, K. (1987) p. 137  
Nishida, M. (1981) p. 37 (1982) p. 169 (1983) p. 43  
Nishikawa, N. (1985) p. 53 (1989) p. 25  
Nishikawa, Y. (1987) p. 77 (1987) p. 107 (1988) p. 65  
Nishimura, J. (1986) p. 117  
Nishimura, Y. (1985) p. 167  
Nishino, T. (1986) p. 165  
Niu, K. (1982) p. 3 (1982) p. 9 (1982) p. 21  
Noto, K. (1988) p. 21  
Nozoe, T. (1982) p. 87  
Ogawa, S. (1981) p. 14 (1986) p. 31  
Ogura, N. (1987) p. 137  
Oguro, H. (1981) p. 73  
Ogushi, T. (1986) p. 127  
Ohtsuka, T. (1990) p. 37  
Oka, K. (1985) p. 167  
Okada, N. (1981) p. 255  
Okada, T. (1982) p. 21  
Okamoto, Y. (1987) p. 55 (1989) p. 147  
Okushima, H. (1982) p. 229  
Onji, A. (1981) p. 97  
Ono, K. (1982) p. 41  
Onuma, S. (1987) p. 61  
Oshima, K. (1981) p. 1 (1981) p. 73 (1982) p. 1 (1982) p. 65 (1982) p. 283 (1983) p. 1  
(1984) p. 17 (1985) p. 1 (1985) p. 71 (1985) p. 177 (1986) p. 1 (1986) p. 3 (1986)  
p. 47 (1987) p. 1 (1987) p. 3 (1988) p. 1 (1988) p. 3 (1988) p. 39 (1988) p. 77 (1988)  
p. 87 (1989) p. 1 (1989) p. 73 (1990) p. 1 (1990) p. 69 (1990) p. 81  
Oshima, S. (1986) p. 141 (1986) p. 149 (1989) p. 155  
Oshima, Y. (1981) p. 145 (1982) p. 65 (1983) p. 29 (1984) p. 3 (1985) p. 43 (1986) p.  
3 (1987) p. 13 (1987) p. 19  
Oshiro, M. (1983) p. 83  
Polasek, F. (1988) p. 87  
Saito, T. (1987) p. 55 (1989) p. 147  
Sakurai, A. (1981) p. 171 (1989) p. 53

- Sakurai, Y. (1985) p. 87  
Samaraskii, A. A. (1985) p. 257  
Sasaki, M. (1981) p. 241  
Sasaki, T. (1984) p. 157  
Semushin, S. A. (1985) p. 257  
Shigehara, M. (1989) p. 155  
Shimizu, A. (1983) p. 75 (1984) p. 127  
Shimoda, T. (1982) p. 87  
Shipilin, A. V. (1985) p. 249  
Shirai, H. (1986) p. 155 (1987) p. 37  
Shiraishi, M. (1989) p. 167  
Soga, T. (1982) p. 151 (1982) p. 159 (1984) p. 77  
Sugihara, S. (1983) p. 93  
Suzuki, A. (1983) p. 93 (1985) p. 53  
Taguchi, M. (1987) p. 77 (1987) p. 107 (1988) p. 65  
Takagi, H. (1983) p. 107  
Takahashi, N. (1981) p. 64 (1982) p. 179  
Takaichi, A. (1986) p. 117  
Takaki, R. (1985) p. 3  
Takakura, Y. (1986) p. 31  
Takanashi, M. (1982) p. 159  
Takano, M. (1989) p. 3  
Takaoka, M. (1983) p. 101  
Takasu, S. (1983) p. 83  
Takemura, H. (1988) p. 65  
Takuma, M. (1982) p. 247  
Tanabe, T. (1982) p. 73  
Tanaka, K. (1981) p. 85  
Tanaka, Y. (1981) p. 73 (1981) p. 241 (1982) p. 273 (1985) p. 153 (1989) p. 183 (1983) p. 83  
Tanna, M. (1982) p. 3  
Tarnavsky, G. A. (1985) p. 199  
Tashiro, M. (1989) p. 183  
Tazoe, S. (1981) p. 255  
Terdtoon, P. (1989) p. 167  
Teshima, K. (1981) p. 64 (1981) p. 85 (1982) p. 179 (1983) p. 51 (1985) p. 89 (1986) p. 165 (1986) p. 175  
Tolstykh, A. I. (1985) p. 209  
Toshev, E. V. (1985) p. 231  
Totsuka, I. (1981) p. 255  
Tsuboi, K. (1984) p. 17  
Tsuchida, A. (1982) p. 247  
Tsuchihashi, H. (1985) p. 167  
Tsuchiya, K. (1987) p. 127

- Tsuda, S. (1981) p. 97  
Tsumita, Y. (1981) p. 121  
Tsuyuzaki, N. (1987) p. 55  
Uchida, H. (1986) p. 107 (1989) p. 175  
Uchihori, H. (1989) p. 53  
Uematsu, K. (1989) p. 175  
Uo, M. (1987) p. 137  
Voskresensky, G. P. (1985) p. 185 (1985) p. 217  
Wada, M. (1983) p. 3  
Wang, L. (1989) p. 105  
Wu, H. M. (1989) p. 105 (1989) p. 115  
Yamada, H. (1984) p. 67  
Yamaguchi, H. (1989) p. 175  
Yamamoto, K. (1981) p. 29  
Yamamoto, S. (1982) p. 187  
Yamamoto, T. (1981) p. 241 (1982) p. 273 (1985) p. 153 (1989) p. 183  
Yamanaka, G. (1986) p. 127  
Yamanouchi, H. (1985) p. 167  
Yamashita, A. (1987) p. 13  
Yamazaki, S. (1983) p. 75  
Yang, S. (1989) p. 115  
Yasuhara, M. (1982) p. 159  
Yasunaga, T. (1982) p. 265  
Yokota, H. (1982) p. 73  
Yoshizawa, Y. (1985) p. 23  
Yoshizumi, K. (1981) p. 255  
Yotsukura, T. (1989) p. 147  
Zapryanov, Z. D. (1985) p. 231  
Zhurin, V. V. (1985) p. 249