All-Russian Conference with International Participation on Modern Problems of Continuum Mechanics and Explosion Physics 2017

Dedicated to the 60th Anniversary of Lavrentyev Institute of Hydrodynamics SB RAS

Journal of Physics: Conference Series Volume 894

Novosibirsk, Russia
4 – 8 September 2017

ISBN: 978-1-5108-5034-7
ISSN: 1742-6588

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571

Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2017) by the Institute of Physics
All rights reserved. The material featured in this book is subject to
IOP copyright protection, unless otherwise indicated.

Printed by Curran Associates, Inc. (2017)

For permission requests, please contact the Institute of Physics
at the address below.

Institute of Physics
Dirac House, Temple Back
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481
Fax: 44 1 17 920 0979

techtracking@iop.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

Table of contents

Volume 894

All-Russian Conference with international participation "Modern problems of continuum mechanics and explosion physics" dedicated to the 60th anniversary of Lavrentyev Institute of Hydrodynamics SB RAS

4–8 September 2017, Novosibirsk, Russian Federation

Accepted papers received: 15 September 2017
Published online: 22 October 2017

Preface

011001
OPEN ACCESS
All-Russian Conference with international participation "Modern problems of continuum mechanics and explosion physics" dedicated to the 60th anniversary of Lavrentyev Institute of Hydrodynamics SB RAS

011002
OPEN ACCESS
Peer review statement

Papers

012001
OPEN ACCESS
The energy method. Application to PDEs of hydrodynamics with nonstandard growth

S N Antontsev and S I Shmarev.....1

012002
OPEN ACCESS
Influence of a surface plates inhomogeneity on a translation oscillations of a drop

A A Alabuznev.....8

012003
OPEN ACCESS
The dynamics of hemispherical drop under the influence of a alternating electric field

A A Alabuzhev and M A Kashina.....14

012004
OPEN ACCESS
Invisibility problem in acoustics, electromagnetism and heat transfer. Inverse design method

G Alekseev, A Tokhtina and O Soboleva.....20

012005
OPEN ACCESS
Analysis of the in situ stress contrast impact on a planar hydraulic fracture propagation using the fully coupled poroelastic model

A N Baykin and S V Golovin.....27

012006
OPEN ACCESS
Evaluation of the stress-strain state of a twisted rod made from an anisotropic material in the shear direction at creep

I A Banshchikova.....32

012007
OPEN ACCESS
Time of creep fracture of axisymmetrically loaded structures

I A Banshchikova and I V Lubashevskaya.....38

012008
OPEN ACCESS
Mathematical modeling of the detonation wave and inert particles interaction at the macro and micro levels

I. A. Bedarev and A. V. Fedorov.....44

012009
OPEN ACCESS
Real gas flow about a round cone

E A Biberdorf and A M Blokhin.....51

012010
OPEN ACCESS
On General boundary value problem for an elliptic higher order equation in the plane with constant real coefficients

Yu A Bogan.....58

012011
OPEN ACCESS
On non-symmetric axial corner-layer flow

A V Boiko, S V Kirilovskiy, Y M Nechepurenko and T V Poplavskaya.....64

012012
OPEN ACCESS
The analysis of solutions behaviour of Van der Pol Duffing equation describing local brain hemodynamics

A A Cherevko, E E Bord, A K Khe, V A Panarin and K J Orlov....70

012013
OPEN ACCESS
Numerical simulation of nonlinear dynamics of 1D pulsating detonations

S P Borisov and A N Kudryavtsev.....76

012014
OPEN ACCESS
Flow of viscoplastic suspensions in a hydraulic fracture: implications to overflush

S A Boronin, A A Osiptsov and J Desroches.....83

012015
OPEN ACCESS
Study of control problems for the stationary MHD equations

R V Brizitskii.....90

012016
OPEN ACCESS
The influence of the structure of ultrafine-grained aluminium alloys on their mechanical properties under dynamic compression and shock-wave loading

I G Brodova, A N Petrova, O B Naimark, O A Plekhov, S V Razorenov and E V Shorokhov.....97

012017
OPEN ACCESS
Vortices appearance and diffusion

A M Gaifullin, D A Gadzhiev and A V Zubtsov.....106

012018
OPEN ACCESS
Impact interaction of shells and structural elements of spacecrafts with the particles of space debris and micrometeoroids

A V Gerasimov, S V Pashkov and Yu.F. Khristenko.....112

012019
OPEN ACCESS
Modeling of thermomechanical processes in woven composite material at blow by the striking element

V O Kaledin, A Ye Gilyova, O N Budadin and S O Kozelskaya.....118

012020
OPEN ACCESS
Molecular-dynamics investigation of the nano-bar stability

E I Golovneva, I F Golovnev and L A Merzhievsky.....124

012021
OPEN ACCESS
Mathematical modeling and numerical calculation of composite structures

S K Golushko.....130

012022
OPEN ACCESS
Calculation and design of lattice cylindrical shells manufactured of unidirectional CFRPs

S Golushko and B Semisalov.....137

012023
OPEN ACCESS
Three-dimensional thermocapillary flow regimes with evaporation

V B Bekezhanova and O N Goncharova.....145

012024
OPEN ACCESS
An analytical solution of the ill–posed Cauchy problem for Lame equation in a rectangle

Yu Grigor'ev.....154

012025
OPEN ACCESS
Supercritical stratified flow over an uneven bottom

D S Denisenko and N I Makarenko.....160

012026
OPEN ACCESS
The choice of the energy embedding law in the design of heavy ionic fusion cylindrical targets

GV Dolgoleva and A I Zykova.....167

012027
OPEN ACCESS
Pressure driven laminar flow of a power-law fluid in a T-channel

O A Dyakova and O Yu Frolov.....174

012028
OPEN ACCESS
Vragov's boundary value problem for an implicit equation of mixed type

I E Egorov.....181

012029
OPEN ACCESS
Non-symmetrical separated flow along the parabolic wing

A M Gaifullin and V V Zhvick.....186

012030
OPEN ACCESS
Self-Exciting Oscillations of Elastic Tube Conveying Fluid at Laminar and Turbulent Flow Regimes

J S Zayko and V V Vedeneev.....193

012031
OPEN ACCESS
Experimental studies of laminar-turbulent transition on a body of revolution

A V Dovgal, B Yu Zanin and A M Sorokin.....198

012032
OPEN ACCESS
The influence of coating technologies on stress-strain characteristics of the sample at periodic loading

K V Zakharchenko, V P Zubkov, V I Kapustin, E A Maksimovski and A V Talanin.....203

012033
OPEN ACCESS
Numerical simulation for the propagation and action of shock waves during explosive synthesis

S A Zelepugin, O V Ivanova, A S Yunoshev and A S Zelepugin.....208

012034
OPEN ACCESS
Impact compaction of ultra high molecular weight polyethylene

B S Zlobin, A A Shtertser, V V Kiselev and S D Shemelin.....215

012035
OPEN ACCESS
Numerical simulation of the drop spreading on a horizontal plane

N A Zyuzina and V V Ostapenko.....220

012036
OPEN ACCESS
The influence of compliant coatings on skin friction in the turbulent boundary layer

O O Ivanov, V V Vedeneev, V M Kulik and A V Boiko.....225

012037
OPEN ACCESS
On a criterion of incipient motion and entrainment into suspension of a particle from cuttings bed in shear flow of non-Newtonian fluid

Yaroslav Ignatenko, Oleg Bocharov and Roland May.....232

012038
OPEN ACCESS
On exact solutions of a heat-wave type with logarithmic front for the porous medium equation

A L Kazakov, A A Lempert, S S Orlov and S S Orlov.....240

012039
OPEN ACCESS
Peculiarity of she shaped-charge liner collapse concerning the unevenness in its cross-section

K A Karnaukhov, V D Baskakov, V V Korenkov and O V Zarubina.....246

012040
OPEN ACCESS
Hypersonic boundary layer stabilization by using a wavy surface

S V Kirilovskiy and T V Poplavskaya.....251

012041
OPEN ACCESS
Solution of internal ballistic problem for SRM with grain of complex shape during main firing phase

A E Kiryushkin and L L Minkov.....258

012042
OPEN ACCESS
Modeling of gas flows in radial micro-nozzles

S P Kiselev, V P Kiselev, V Yu Liapidevskii and V N Zaikovskii.....265

012043
OPEN ACCESS
Influence of the solute immobilization on linear stability within the solute analogy of Horton–Rogers–Lapwood problem

L S Klimenko and B S Maryshev.....271

012044
OPEN ACCESS
Stability of a horizontal shear flow

P V Kovtunenko.....278

012045
OPEN ACCESS
On catastrophic fracture of steel structures at temperatures lower than cold brittleness threshold

V M Kornev.....286

012046
OPEN ACCESS
Quasi-solutions of genuinely nonlinear forward-backward ultra-parabolic equations

I V Kuznetsov and S A Sazhenkov.....293

012047
OPEN ACCESS
Plastic deformation and wave formation on the interface of metals welded by ultrasound-assisted explosive welding

E V Kuz'min, S V Kuz'min, V I Lysak and A N Lata.....300

012048
OPEN ACCESS
On the existence of global solutions to equations for mixtures of compressible viscous fluids

N A Kucher and A A Zhalnina.....306

012049
OPEN ACCESS
Modeling of detonation propagation in expansion channel in bidisperse mixture

A V Fedorov, T A Khmel and S A Lavruk.....313

012050
OPEN ACCESS
Influence of the creep ageing process on the fatigue properties of components from V95pchT2 (analog 7175T76) and V95ochT2 (analog 7475) aluminium alloys

A Larichkin, K Zakharchenko, B Gorev, V Kapustin and E Maksimovskiy.....320

012051
OPEN ACCESS
Formation of annular cracks in glass during contact interaction

M A Legan, A N Novoselov and N V Fedorova.....327

012052
OPEN ACCESS
Application of the boundary elements method for modeling of the fracture of cylindrical bodies by hydraulic fracturing

M A Legan, V A Blinov, A Yu Larichkin and A N Novoselov.....334

012053
OPEN ACCESS
On numerical model of one-dimensional time-dependent gas flows through bed of encapsulated phase change material

N A Lutsenko and S S Fetsov.....340

012054
OPEN ACCESS
Smoldering of porous media: numerical model and comparison of calculations with experiment

N A Lutsenko and V A Levin.....346

012055
OPEN ACCESS
Modeling of the kinetics of diffusion processes in the formation of a junction glass-steel

O N Lyubimova, A V Morkovin and V V Andreev.....353

012056
OPEN ACCESS
Asymptotic behavior of solutions to perturbed superstable wave equations

I Y Kmit and N A Lyulko.....360

012057
OPEN ACCESS
Numerical investigations of oxides and silicates under shock-wave loading

K K Maevskii.....366

012058
OPEN ACCESS
Modeling viscous compressible barotropic multi-fluid flows

Alexander Mamontov and Dmitriy Prokudin.....372

012059
OPEN ACCESS
Global solvability of 1D equations of viscous compressible multi-fluids

A Mamontov and D Prokudin.....380

012060
OPEN ACCESS
Group classification applications for analysis of discrete models of flow in porous media

Pavel Markov.....387

012061
OPEN ACCESS
The stability of homogeneous pulsating vertical seepage of mixture through porous media with solute immobilization

B S Maryshev.....394

012062
OPEN ACCESS
Hydrodynamic dispersion in porous media with macroscopic disorder of parameters

D S Goldobin and B S Maryshev.....401

012063
OPEN ACCESS
Invariant solutions in explicit form of the Boltzmann equation with a source term

S V Meleshko, Yu N Grigoriev, A Karnbanjong and A Suriyawichitseranee.....408

012064
OPEN ACCESS
Effect of porous material heating on the drag force of a cylinder with gas-permeable porous inserts in a supersonic flow

S G Mironov, T V Poplavskaya and S V Kirilovskiy.....413

012065
OPEN ACCESS
Burning stability of the coal-dust methane-air mixture in a recuperative burner

K M Moiseeva, D A Krainov and A A Dement'ev.....418

012066
OPEN ACCESS
Computational and experimental research of explosive meteorial devices with combined cumulative liners of the semi-sphere-cylinder shape

S V Fedorov, S V Ladov and Ya M Nikolskaya.....424

012067
OPEN ACCESS
Numerical simulation of shock-free strong compression of 1D gas layer's problem subject to conditions on characteristic

S P Bautin and N S Novakovskiy.....430

012068
OPEN ACCESS
Multiphase flow models for hydraulic fracturing technology

Andrei A. Osiptsov.....438

012069
OPEN ACCESS
Pulse X-ray device for stereo imaging and few-projection tomography of explosive and fast processes

E I Palchikov, A V Dolgikh, V V Klypin, I Y Krasnikov and A M Ryabchun.....452

012070
OPEN ACCESS
Correctness of the initial-boundary problem of the compressible fluid filtration in a viscous porous medium

A A Papin and M A Tokareva.....457

012071
OPEN ACCESS
On the mechanics of cerebral aneurysms: experimental research and numerical simulation

D V Parshin, I O Kuianova, A S Yunoshev, K S Ovsyannikov and A V Dubovoy.....463

012072
OPEN ACCESS
Effect of wave action on near-well zone cleaning

V I Pen'kovskii and N K Korsakova.....470

012073
OPEN ACCESS
Suppression of a laminar separation by a spark discharge at a supersonic Mach number

P A Polivanov, A A Sidorenko and A A Maslov.....476

012074
OPEN ACCESS
Simulation of a supersonic flow around a body with a frontal gas-permeable insert by using a skeleton model of a highly porous cellular material

T V Poplavskaya, S V Kirilovskiy and S G Mironov.....483

012075
OPEN ACCESS
Boundary value problems for parabolic equations of high order with a changing time direction

S V Popov and V G Markov.....490

012076
OPEN ACCESS
Global solvability of the initial boundary value problem for a model system of one-dimensional equations of polytropic flows of viscous compressible fluid mixtures

Dmitriy Prokudin.....495

012077
OPEN ACCESS
Detonation velocity in poorly mixed gas mixtures

E S Prokhorov.....501

012078
OPEN ACCESS
Determination of optimum parameters of the technological process for plates forming from V95 and V-1461 alloys in creep applied in aircrafts constructed by "Sukhoi design bureau"

G A Raevskaya, K Zakharchenko and A Larichkin.....506

012079
OPEN ACCESS
Accounting for anisotropy of properties of substructural elements in study of strength of macroinhomogeneous media in the case of plane stressed state

B S Reznikov and K A Kuzmin.....512

012080
OPEN ACCESS
Technology for formation of axisymmetric free jets with long laminar region

A Reshmin, A Sudarikova, S Teplovodskii and J Zayko.....519

012081
OPEN ACCESS
Computer modelling of the mechanical behaviour of the cervical spine segment and intervertebral disk prosthesis

T V Kolmakova and Y A Rikun.....524

012082
OPEN ACCESS
Leading coefficient's recovering problem for nonlinear convection–diffusion–reaction equation

Zh Yu Saritskaya and R V Brizitskii.....529

012083
OPEN ACCESS
Spontaneous emission in the linear problem of shock wave disturbance in a non-classical case

E V Semenko and T I Semenko.....536

012084
OPEN ACCESS
Shape derivative of the energy functional for the bending of elastic plates with thin defects

V V Shcherbakov.....543

012085
OPEN ACCESS
Numerical study of a mathematical model of internal erosion of soil

A Sibin.....550

012086
OPEN ACCESS
Generation of elastoplastic waves in shaped-charged (cumulative) jets and perforated barriers

V G Smelikov.....556

012087
OPEN ACCESS
Multiscale Simulation of Porous Ceramics Based on Movable Cellular Automaton Method

A Smolin, I Smolin, G Eremina and I Smolina.....561

012088
OPEN ACCESS
Modeling the dynamics of polymer chains in water solution. Application to sensor design

V N Starovoitov and B N Starovoitova.....567

012089
OPEN ACCESS
Acoustic properties of a layered porous elastic structure saturated with a Maxwell fluid

B N Starovoitova and V N Starovoitov.....574

012090
OPEN ACCESS
On some group properties of heat and mass transfer equations

I V Stepanova.....581

012091
OPEN ACCESS
Metal explosion chambers: designing, manufacturing, application

O I Stoyanovskii, B S Zlobin, A A Shtertser and Y P Meshcheryakov.....589

012092
OPEN ACCESS
Wave motion in a fluid under an inhomogeneous ice cover

I V Sturova and L A Tkacheva.....594

012093
OPEN ACCESS
Wave propagation in channels and cracks with elastic walls

S V Sukhinin, V S Yurkovskiy, A P Konstantinov and A V Trilis.....602

012094
OPEN ACCESS
Wave transmission and reflection at the boundary of phononic crystals

A P Konstantinov, S V Sukhinin and V S Yurkovskiy.....607

012095
OPEN ACCESS
Numerical solution of inverse problems in hydrodynamics

D A Tereshko.....613

012096
OPEN ACCESS
Analogue of the Poiseuille flow for incompressible polymeric fluid with volume charge. Asymptotics of the linearized problem spectrum

A M Blokhin and D L Tkachev.....619

012097
OPEN ACCESS
Numerical simulation of classical and rotating detonation waves in methane mixtures

A V Trotsyuk.....625

012098
OPEN ACCESS
The time-space relationship between strain, microstrain temperature fields and microseismic emission parameters in geomodels with hole under external loading

O M Usol'tseva, V I Vostrikov, P A Tsoi, V N Semenov and O A Persidskaya.....633

012099
OPEN ACCESS
Mathematical description of ignition, combustion and propagation of detonation in reacting gas mixtures in the presence of micro- and nanoparticles

A V Fedorov and D A Tropin.....640

012100
OPEN ACCESS
Reduced detonation kinetics and detonation structure in one- and multi-fuel gaseous mixtures

P A Fomin, A V Trotsyuk and A A Vasil'ev.....646

012101
OPEN ACCESS
Parameter identification problems for thin inclusions in elastic bodies

A M Khludnev and T S Popova.....652

012102
OPEN ACCESS
Cellular detonations in nano-sized aluminum particle gas suspensions

TA Khmel.....658

012103
OPEN ACCESS
Interaction of long-wave perturbations with a shock wave on a wedge and method of mode decomposition of supersonic flow pulsations

I S Tsyryulnikov, S V Kirilovskiy and T V Poplavskaya.....665

012104
OPEN ACCESS
Study of deformation-strength properties of sandstone under multistage triaxial compression

P A Tsoi and I P Homenok.....672

012105
OPEN ACCESS
Quantitative analysis of transverse non-uniformity of liquid film at the initial stage of annular-dispersed flow

S Isaenkov, A Cherdantsev, M Cherdantsev and D Markovich.....679

012106
OPEN ACCESS
The unidirectional motion of two heat-conducting liquids in a flat channel

V K Andreev and E N Cheremnykh.....685

012107
OPEN ACCESS
Kinematic-wave model of viscous fingers with mixing layer

A A Chesnokov, V Yu Liapidevskii and I V Stepanova.....692

012108
OPEN ACCESS
Motion of gas in highly rarefied space

Yu A Chirkunov.....699

012109
OPEN ACCESS
Deflection of ice cover caused by an underwater body moving in channel

K A Shishmarev, T I Khabakhpasheva and A A Korobkin.....705

012110
OPEN ACCESS
Finite strain transient creep of D16T alloy: identification and validation employing heterogeneous tests

A V Shutov and A Yu Larichkin.....711

012111
OPEN ACCESS
Influence of bed material entrainment and non-Newtonian rheology on turbulent geophysical flows dynamics. Numerical study

M E Eglit, A E Yakubenko and T A Yakubenko.....718

012112
OPEN ACCESS
Lee wave breaking region: the map of instability development scenarios

S N Yakovenko.....725

012113
OPEN ACCESS
Numerical modeling of compressible fluid flow through elastic porous medium

A A Yanchenko, E Romenski and A K Khe.....732

012114
OPEN ACCESS
Special vortex in relativistic hydrodynamics

A P Chupakhin and A A Yanchenko.....741

012115
OPEN ACCESS
On the dispersion of liquid in coaxial supersonic gas jet

S V Poplavski, V M Boiko, V V Lotov and A U Nesterov.....748

012116
OPEN ACCESS
Effect of additives on CuO/Al nanothermite properties

V V Gordeev, M V Kazutin and N V Kozyrev.....755

012117
OPEN ACCESS
Transonic streamline of symmetric wing under the influence unilateral oscillations characterized by the spectrum of two frequencies

V P Zamuraev and A P Kalinina.....760

012118
OPEN ACCESS
Study of the geometry effect of the channel with variable cross section under forming transonic region in the supersonic flow with energy supply

V P Zamuraev and A P Kalinina.....766

012119
OPEN ACCESS
About control of convection intensity in chemical reacting equilibrium gas

I B Palymskiy, V I Palymskiy, P A Fomin and A V Trifanov.....773

012120
OPEN ACCESS
Calculation of heat sink around cracks formed under pulsed heat load

G G Lazareva, A S Arakcheev, I V Kandaurov, A A Kasatov, V V Kurkuchekov, A G Maksimova, V A Popov, A A Shoshin, A V Snytnikov, Yu A Trunev, A A Vasilyev and L N Vyacheslavov.....779

012121
OPEN ACCESS
Static and dynamic overdetermined problems in elasticity, plasticity and post-limit deformation

A I Chanyshev, O E Belousova and I M Abdulin.....786

012122
OPEN ACCESS
The study of stationary flow in the core of thin vortex ring

V F Kopiev, S A Chernishev, R V Akinshin and M A Yudin.....793

012123
OPEN ACCESS
High temperature creep of steel 09G2S under non-stationary loading

S V Iyavoynen, I A Banshchikova, I V Lubashevskaya and M A Legan.....800

012124
OPEN ACCESS
Deformation and fracture in one-dimensional creep problems

A M Kovrizhnykh and S A Kovrizhnykh.....806

012125
OPEN ACCESS
Numerical simulation of stress-strain state of electrophoretic shell molds

A V Sviridov, V I Odinokov, E A Dmitriev, A I Evstigneev and O V Bashkov.....812

012126
OPEN ACCESS
Cylinder instability in bounded flow with constant vorticity

A G Petrov and M A Yudin.....820

012127
OPEN ACCESS
Optimization of oil-mixture "hot" pumping in main oil pipelines

T T Bekibayev, U K Zhapbasbayev and G I Ramazanova.....827

012128
OPEN ACCESS
On the experimental analysis of dissipative processes under cyclic loading of metals

V I Kapustin and K V Zakharchenko.....835

012129
OPEN ACCESS
Modelling the motion of a non-free system of rigid bodies using the Lagrange equations of the first kind

A R Zagidulin, E G Podruzhin and G I Rastorguev.....842

012130
OPEN ACCESS
Study of gas dynamics of the intersecting jets in a semi-open channel

V M Abashev, I V Eremkin, N P Zhivotov, V P Zamuraev, A P Kalinina, P K Tretyakov and A V Tupikin.....849

012131
OPEN ACCESS
Rationing and shock testing on-board equipment of spacecrafts

S A Orlov, K A Matveev and G I Rastorguev.....854

012132
OPEN ACCESS
The numerical modelling of MHD astrophysical flows with chemistry

I Kulikov, I Chernykh and V Protasov.....859

012133
OPEN ACCESS
Optimal error functional for parameter identification in anisotropic finite strain elasto-plasticity

A V Shutov, A A Kaygorodtseva and N S Dranishnikov.....865

012134
OPEN ACCESS
Thermodynamics of micropolar fluids with variable concentration of polar particles

V V Neverov and V V Shelukhin.....872

012135
OPEN ACCESS
Numerical models for calculating hydrologic processes in river and lake-river systems

V S Nikiforovskaya and A F Voevodin.....884

012136
OPEN ACCESS
Duration of the zone of high electrical conductivity at the detonation of RDX of different densities

N P Satonkina.....892

012137
OPEN ACCESS
Effect of sound-absorbing coatings on the disturbance evolution in a flow of a mixture of vibrationally excited gases

A I Reshetova, T V Poplavskaya, S V Kirilovskiy and I S Tsyrulnikov.....897

012138
OPEN ACCESS
Asymptotic representation for spectrum of linear problem describing flows of viscoelastic polymeric fluid

A Yegitov.....904

012139
OPEN ACCESS
Cumulative jet generation in a plane parallel potential flow of the perfect incompressible fluid

N D Baykov and A G Petrov.....910

012140
OPEN ACCESS
Numerical analysis of corrugated shells rotation

S S Rassokha, S V Ladov and A V Babkin.....917

012141
OPEN ACCESS
State dynamics of bubbly cavitation in a vicinity of quasi-empty rupture at its collapse

E S Bol'shakova and V K Kedrinskiy.....922