

Preface

Organizing Committee

GSI Experiments on the Synthesis of Superheavy Elements	p. 3
Fusion Reactions and Experimental Approaches to the Synthesis of Superheavy Nuclei	p. 16
The RNB Project in Japanese Hadron Facility and Possible Use of Neutron-Rich Beam for the Study of Superheavy Nuclei	p. 29
Fusion of Massive Nuclei and Synthesis of Superheavy Elements in the Framework of the DNS Concept	p. 41
Competition Between Complete Fusion and Quasifission in Reactions with Heavy Nuclei	p. 51
Diffusion Model for the Synthesis of Superheavy Elements	p. 61
Stability and Production of Superheavy Nuclei	p. 75
Superheavy Nuclei in Selfconsistent Nuclear Models	p. 85
Decay Properties of Superheavy Nuclei	p. 97
Simulation for Fusion and Fusion-Fission Dynamics in Heavy Nuclei	p. 107
Fission of Exotic Nuclei	p. 113
Production Cross-Section of Very Neutron-Rich Nuclei in Relativistic Projectile Fission of [²³⁸ U]	p. 126
Evolution of Fission Lifetime with Temperature: A Straightforward Measurement by the Blocking Technique	p. 134
Angular Momentum Dependence of Pre-Scission Particle Multiplicity in Medium Mass Systems	p. 142
Investigation of the Extra-Extra-Push by Pre-Scission Neutron Measurements with DEMON	p. 155
Fusion Dynamics of Massive Nuclei	p. 164
Multi-Dimensional Langevin Approach to the Fusion of Massive Nuclei	p. 171
Time Scale of Fission Process of Cold Heavy Nuclei	p. 179
Observation of Fission Modes in Heavy Ion Induced Reactions	p. 189
New Fission Mode of the [²⁵² Cf] Spontaneous Fission Obtained with Modern HPGE Detectors	p. 202
Fission Mode Study for Low-Energy Fission of Light Actinide Elements	p. 212
Vlasov Treatment of Spontaneous Fission and Sub-Barrier Fusion	p. 222
Fusion Barrier Distributions - What Have We Learned?	p. 233
Fusion Reactions of Deformed Nuclei Near Coulomb Barriers	p. 249
Anharmonic Phonon Excitations in Subbarrier Fusion Reactions	p. 259
Mass and Nuclear Moment Measurement with High and Low Energy RIB's	p. 271
Gamma Spectroscopy with Low and High Energy Radioactive Beams	p. 279
Study of Deformation in Light Neutron-Rich Nuclei	p. 290
The September 1997 Status of SPIRAL Project and Future Developments	p. 300
Inelastic Proton Scattering of Unstable Nuclei	p. 305
Double Giant Resonance States	p. 315
New Experimental Approaches to Quests in Static Burning	

Reactions with Radioactive Beams: Direct Measurements	p. 327
A Plan for [⁴ He][¹² C, ¹⁶ O] [γ] Experiment	p. 337
Time Scale for Non-Resonant Breakup of [⁷ Li] Over the Gamow Energy Region	p. 343
New Experiments for the Breakout Off the Hot-CNO Cycle	p. 355
Nuclear Astrophysics with Intermediate-Energy RI Beams	p. 362
Information About the [¹² C(α , γ)] [¹⁶ O] Reaction From the [β]-Delayed Proton Decay of [¹⁷ Ne]	p. 372
Coulomb Dissociation of [⁸ B] at 254 MeV/u	p. 382
Astronuclear Physics with Coulomb Dissociation	p. 389
Pulsed keV Neutrons for Nuclear Astrophysics and Recent Results of (n, [γ]) Reactions of Light Nuclei	p. 399
Constraints for s-Process Scenarios: Neutron Capture Studies in the Lanthanide Region	p. 408
Recent Progress in Theoretical Nuclear Astrophysics	p. 418
The Cross Section of the Neutron Capture Reaction [¹³ C(n, γ)] [¹⁴ C]	p. 428
Radiative Neutron Captures by Exotic Nuclei	p. 436
Spallation Reactions in Extraterrestrial Matter	p. 447
Nuclear Data for Gamma Ray Astronomy and the Cosmochemistry of Isotopic Anomalies	p. 457
The Gamma-Ray Line Emission of Orion	p. 465
The ETFSI Mass Formula - Recent Developments	p. 475
Beta-Decay Rates: Towards A Self-Consistent Approach	p. 485
[β]-Decay Rates - The Semi-Gross Theory	p. 495
Nucleosynthesis in Low- and Intermediate-Mass Stars: An Overview	p. 507
Supernova Nucleosynthesis	p. 517
The Pre-Supernova Evolution of Massive Stars and Concomitant Nucleosynthesis	p. 526
Nuclear Uncertainties and Their Role in Nova Nucleosynthesis	p. 539
X-Ray Bursts	p. 551
Nucleosynthesis at the Proton Drip Line - A Challenge for Nuclear Physics	p. 559
Origin and Evolution of the Light Elements Li, Be, and B	p. 571
The "Stellar Yields - Galactic Chemical Evolution" Connection: A Re-Analysis	p. 581
Heavy Elements Abundances in Metal-Poor Stars	p. 592
The s-Process Efficiency in Massive Stars	p. 605
The [¹⁸⁷ Re - ¹⁸⁷ O]s Cosmochronometry - The Latest Developments	p. 616
The p-Process in Exploding Massive Stars	p. 626
Theoretical Astronuclear Physics in Tours: A Brief Summary	p. 637
Schedule	p. 641
Scientific Program	p. 642

List of Participants

p. 647

Author Index

p. 657

Table of Contents provided by Blackwell's Book Services and R.R. Bowker. Used with permission.