

TABLE OF CONTENTS

SESSION 1: INTRODUCTORY SESSION

Chairman: B. Barré

Opening Remarks <i>K. Uematsu, Director General of the NEA.....</i>	11
NEA/NSC Activities on Nuclear Transmutation <i>S. Matsuura.....</i>	13
IAEA Activity On Partitioning And Transmutation Of Actinides And Fission Products <i>A. Grigoriev</i>	16
Research Activities On Partitioning And Transmutation Supported By The European Commission <i>M. Hugon.....</i>	21
Importance Of The Double Strata Fuel Cycle For Minor Actinide Transmutation <i>T. Mukaiyama</i>	30
Impact Of High Burnup Irradiation And Multiple Recycle Of Plutonium And Minor Actinides On The Fuel Cycle Activities <i>L.H. Baetslé</i>	40

SESSION 2: MAJOR PROGRAMMES AND INTERNATIONAL CO-OPERATION

Chairman: G.H. Stevens

Long-Term Program For Research, Development And Utilization Of Nuclear Energy And Partitioning And Transmutation Technology In Japan <i>T. Kuramochi, K. Saeki</i>	57
An Overview Of The Spin Programme <i>M. Viala, M. Salvatores.....</i>	62

Current Status Of The Scientific Activity In Russia On Hlw Transmutation And Use Of Weapon-Grade And Power Plutonium In Subcritical Systems Driven By Proton Accelerator <i>G.V. Kiselev</i>	72
CEA And Pnc Views On Criteria And Research Guidelines On Partitioning And Transmutation <i>N. Sasao, H. Kaneko, K. Takahashi, M. Salvatores, M. Viala, A. Zaetta</i>	95
EFTTRA, A European Collaboration For the Development of Fuels and Targets For Transmutation <i>J.F. Babelot, H. Gruppelaar, G. Mühling, C. Prunier, M. Rome, M. Salvatores</i>	110

SESSION 3: SYSTEMS STUDIES

Chairman: J. Lefèvre

Potentialities And Costs Of Partition And Transmutation Of Long-Lived Radionuclides <i>H. Boussier, J.P. Grouiller</i>	119
Systems Study On Partitioning And Transmutation At JAERI <i>T. Takizuka, T. Mukaiyama, M. Kubota, T. Ogawa and H. Yoshida</i>	150
System Studies On The Advanced Fuel Recycle At PNC <i>I. Nakajima, M. Shiotsuki, O. Yamanmura, N. Sasao</i>	163
Partitioning And Transmutation System Of Transuranium Elements With Pyrometallurgical Separation And Metal Fuel <i>T. Inoue, M. Kurata, Y. Sakamura and A. Sasahara</i>	169
Waste Management Concept For Future Large Scale Nuclear Power <i>I. Ganev, G. Khacheresov, A. Lopatkin, V. Naumov, V. Orlov, V. Smirnov and L. Tochenyi</i>	179
The Consumption Of Actinides In Advanced Liquid Metal Reactors (ALMR) <i>M.L. Thompson, J.N. Gonzaga</i>	197

SESSION 4: REACTORS, FUELS AND TARGETS

Chairman: T. Mukaiyama

Motivation For Transmuting Long-Lived Radioactive Products <i>K. Abrahams</i>	207
Impact Of Plutonium And Americium Recycling In PWR On MOX Fuel Fabrication <i>Th. Maldague, S. Pilate and A.F. Renard</i>	215
Concept And Experimental Studies On Fuel And Target For Minor Actinides And Fission Products Transmutation <i>C. Prunier, Y. Guérin, A. Zaetta and M. Salvatores</i>	224
Potential Of Fast Reactors For Transmutation Of Actinides And Long-Lived Fission Products <i>U.K. Wehmann</i>	229
Studies On Nitride Fuel Cycle For TRU Burning <i>Y. Suzuki, T. Ogawa and M. Handa</i>	250
Study On Core Characteristics For MA Recycling In Fast Reactors <i>T. Wakabayashi</i>	257
Analysis Of Transmutation Rates Of Long-Lived Radionuclides In The Korean Multi-Purpose Research Reactor <i>M.C. Lee, H.S. Shin, D.J. Koh and B. Kochurov</i>	268
Transmutation Of Americium In Thermal Reactors <i>W.J.M. de Kruif and J.L. Kloosterman</i>	276
Transmutation Of Tc-99 In Fission Reactors <i>J.L. Kloosterman and J.M. Li</i>	285
A Physical Assessment Of The Effectiveness Of Different Actinide Transmutation Systems <i>P. Wydler and Y. Kadi</i>	298
Some Ideas About Hybrid System Concepts <i>P.A. Landeyro, A. Buccafurni and A. Santilli</i>	313
Experimental Measurements On A Hybrid System Or Energy Amplifier <i>S. Andriamanje, A. Angelopoulos, C. Geles, J.M. Loiseaux et al.</i>	317
Swedish Perspective On The Accelerator-Driven Nuclear Systems <i>W. Gudowski and H. Condé</i>	340
Transmutation Of Fission Products Through Accelerator <i>H. Nakamura, S. Tani, T. Takahashi and O. Yamamura</i>	350

Use Of Accelerator To Nuclear Energy <i>H. Takahashi</i>	362
Nuclear Data For The OMEGA Project <i>T. Nakagawa, S. Chiba, T. Fukahori, V. Konshin and Y. Kikuchi</i>	371

SESSION 5: CHEMISTRY

Chairman: L.H. Baetslé

Overview Of The Long-Lived Radionuclide Separation Processes Developed In Connection With The CEA's Spin Programme <i>C. Madic, J. Bourges and J.F. Dozol</i>	381
Development Of Partitioning Process At JAERI <i>M. Kubota, Y. Morita, R. Tatsugae, F. Fujiwara and Y. Kondo</i>	394
Pyrometallurgical Partitioning Of Minor Actinides And Lanthanides In LiCl-KCl Eutectic Molten Salt/Liquid Metal System <i>M. Kurata, Y. Sakamura and T. Inoue</i>	407
Investigating The Solvent Extraction Of Technetium (Vii) From Alkaline Sodium Nitrate Solution By Crown Ethers <i>B.A. Moyer, P.V. Bonnesen, J.H. Burns, L.H. Delmau, T.J. Haverlock, D.J. Presley R.A. Sachleben and F.V. Sloop</i>	425
Neptunium And Technetium Control In Reprocessing <i>S. Fujine, G. Uchiyama and M. Maeda</i>	438
The Progress Of TRUEX Process Improvement In PNC - The Applicability Of "Salt-Free" Reagents <i>H. Hirano, M. Ozawa, S. Nemoto, K. Nomura, Y. Koma and A. Togashi</i>	452
Partitioning And Transmutation Of Actinides And Fission Products - Consideration Of Medium And Low Level Waste Streams <i>R.K. Webster</i>	464
Some Implications Of Partitioning Processes For High Level Waste <i>R.P. Bush, A.L. Mills and M.L. Stearn</i>	476
Theoretically And Experimentally Derived Criteria For Partitioning And Transmutation Of Radionuclides In Existing Reactors <i>L. Koch, J.F. Babelot, J.P. Glatz and G. Nicolaou</i>	489
The Role Of Synroc In HLW Management Systems Based On P&T Strategies <i>A. Jostsons, D.J. Mercier and E.R. Vance</i>	496

SESSION 6: DISCUSSION SESSION

Chairman: M. Salvatores

Introduction by the Chairman.....	507
Major Programmes and International Co-operation	
<i>Chairman: G.H. Stevens</i>	507
Systems Studies	
<i>Chairman: J. Lefèvre</i>	508
Reactors, Fuels and Targets	
<i>Chairman: T. Mukaiyama</i>	511
Chemistry	
<i>Chairman: L.H. Baetslé</i>	513
List of Participants	
Partitioning and Transmutation Reports	527