

CONTENTS OF VOL. II

4. EXPERIMENTAL STUDIES ON HETEROGENEOUS FAST REACTOR CORES (Session V, Part 2 and Session VI, Part 1)

An experimental study of the heterogeneous LMFBR core using FCA assemblies with axial internal blanket (IAEA-SM-244/4)	3
<i>M. Nakano, S. Iijima, K. Shirakata, J. Hirota</i>	
Discussion	16
Some characteristics of two heterogeneous cores and their experimental confirmation (IAEA-SM-244/33)	17
<i>H. Giese, G. Henneges, S. Pilate, M. Schwarz, J.M. Stevenson</i>	
Discussion	35
Gamma-ray energy deposition measurements in a heterogeneous core and their analysis (IAEA-SM-244/35)	37
<i>A.D. Knipe, R. De Wouters</i>	
Discussion	55
Experimental studies of 350-MW(e) heterogeneous LMFBR cores at ZPPR (IAEA-SM-244/70)	57
<i>P.J. Collins, H.F. McFarlane, C.L. Beck, M.J. Lineberry, S.G. Carpenter, G.A. Ducat, J.M. Gasidlo, R.W. Goin</i>	
Discussion	68
Etude de l'effet de vidange sodium dans des milieux représentatifs des centrales à neutrons rapides de type classique ou hétérogène: Expériences faites au cours du programme Pré-Racine sur Masurca (IAEA-SM-244/23)	71
<i>F. Lyon, M. Martini, G. Rimpault</i>	
Discussion	89
Main characteristics of the Racine programme developed by DEBENE, CNEN and CEA on Masurca for the heterogeneous core concept studies (IAEA-SM-244/29)	91
<i>Y.H. Bouget, R. Conversano, P. Hammer, F. Helm, R. Martinelli, W. Scholtyssek</i>	
Discussion	100

5. IMPROVEMENTS AND OPTIMIZATION OF LARGE FAST POWER REACTORS

5.1. Design Characteristics and Optimization of Heterogeneous Fast Power Reactors and Comparison with Conventional Cores (Session VI, Part 2 and Session VII)

Design aspects and problems of heterogeneous cores for SNR 2 (IAEA-SM-244/49)	103
<i>U. Wehmann, H. Spenke, S. Pilate</i>	
Discussion	114
Концепция активных зон энергетических реакторов на быстрых нейтронах; оптимизация физических характеристик реактора БН-1600 (IAEA-SM-244/81)	117
<i>M.Ф. Троянов, В.И. Матвеев, А.И. Новожилов, С.Б. Бобров, А.П. Иванов, Г.М. Пшакин, А.А. Прошкин, Б.Ф. Шафрыгин</i>	
(<i>Core concepts for fast power reactors: Optimization of the physical characteristics of the BN-1600 reactor, M.F. Troyanov et al.</i>)	
Discussion	133
Core design and optimization of high-performance, low-sodium-void, 1000-MW(e) heterogeneous oxide LMFBR cores (IAEA-SM-244/66)	135
<i>W.P. Barthold, Y. Orechwa, S.F. Su, J.C. Beitel, R. Turski, P.S.K. Lam, E.L. Fuller</i>	
Discussion	164
Показатели воспроизводства в реакторах на быстрых нейтронах с совместным использованием окисного и металлического топлива (IAEA-SM-244/77)	167
<i>В.Г. Илюнин, В.М. Мурогов, В.Я. Руднева, В.В. Орлов, И.С. Слесарев, С.А. Субботин, Ю.А. Зверков, С.М. Зарицкий, П.Н. Алексеев, А.Н. Шмелев</i>	
(<i>Breeding characteristics of fast reactors with combined oxide and metallic fuels, V.G. Ilyunin et al.</i>)	
Physics aspects of a demonstration fast-breeder reactor (IAEA-SM-244/9) ...	179
<i>I. Otake, T. Inoue, K. Kawashima, K. Tomabechi</i>	
Discussion	190
Studies on heterogeneous core designs for 1000-MW(e) LMFBRs (IAEA-SM-244/84)	191
<i>B.R. Sehgal, E.L. Fuller, J.A. Naser, C.Lin</i>	
Discussion	205
Optimisation des coeurs rapides de puissance de type hétérogène radial: Etudes paramétriques (IAEA-SM-244/26)	207
<i>J.C. Cabrillat</i>	
Discussion	232

Etudes neutroniques de coeurs de 1500 MW(e): Incidence du contexte économique et énergétique (IAEA-SM-244/15)	233
<i>J. Jégu, G.B. Bruna, C. Girard, J. Moreau, N. Obin, J. Raballand, H. Sztark, J. Vergnes</i>	
Discussion	244
Study of large heterogeneous reactors (IAEA-SM-244/6)	247
<i>K. Tsutsumi, Y. Ueda, I. Otake</i>	
Discussion	263
Utilisation dans les réacteurs rapides de plutonium recyclé dans les réacteurs à eau ordinaire (IAEA-SM-244/14)	265
<i>G. Gambier, J.P. Perrutel, J.M. Gomit</i>	
Внутриреакторный топливный цикл быстрого реактора с гетерогенной активной зоной на оксидном топливе (IAEA-SM-244/10)	287
<i>Й.Куял, Б.Куял, В.И.Матвеев, А.И.Новожилов, С.Б.Бобров</i>	
<i>(In-pile fuel cycle of heterogeneous oxide fast reactors, J. Kuyal et al.)</i>	
Совместное использование урана и плутония в реакторах на быстрых нейтронах большой единичной мощности (IAEA-SM-244/78)	301
<i>B.V. Орлов, И.С. Слесарев, С.М. Зарицкий, Ю.А. Зверков, С.А. Субботин, Е.Н. Шаров</i>	
<i>(Combined use of uranium and plutonium in fast reactors of high unit power, V.V. Orlov et al.)</i>	
Discussion	313
Considérations ayant présidé au choix de configurations géométriques de coeurs rapides de grande puissance (IAEA-SM-244/16)	315
<i>H. Sztark, G.B. Bruna, C. Girard, A. Herault, J. Raballand, S. Peytier</i>	
Recent studies for CDFR (IAEA-SM-244/85)	327
<i>K.W. Brindley, R.F. Burstall, D.C. King, M.A. Perks</i>	
Discussion	344

5.2. Application of Improved Theoretical Methods (Session VIII, Part 1)

Design and nuclear analysis of large homogeneous and heterogeneous LMFBR cores using multi-dimensional diffusion codes (IAEA-SM-244/30)	349
<i>A. Mockel, R. De Wouters, S. Pilate, G. Buckel, E. Kieffhaber, A. Polch, D. Thiem, U. Wehmann</i>	
Discussion	370
Comparaison des méthodes de calculs spatiaux des réacteurs à neutrons rapides (IAEA-SM-244/17)	371
<i>S. Nisan, P. Hammer, J.J. Lautard, M. Mus</i>	
Discussion	382

Application of a new coarse-mesh computational method to the determination power distributions in a heterogeneous-core large fast reactor (IAEA-SM-244/59)	383
<i>J.J. Dorning, R.D. Lawrence, A.M. Ougouag</i>	
Discussion	399
Cell heterogeneity problems in the analysis of zero-power experiments (IAEA-SM-244/34)	401
<i>M.J. Grimstone, J.M. Stevenson, R. Böhme, E.A. Fischer</i>	
Discussion	419

5.3. Alternative Concepts (Session VIII, Part 2)

Breeding performance of metallic Pu-Th, ^{233}U -Th, ^{233}U - ^{238}U versus $(\text{Pu-U})\text{O}_2$ fuels in LMFBRs (IAEA-SM-244/60)	423
<i>R.A. Karam, C.C. Lee</i>	
Discussion	438
Physics and feasibility study of the fast mixed-spectrum reactor concept (IAEA-SM-244/71)	441
<i>G.J. Fischer, H.J.C. Kouts, R.J. Cerbone, S. Shenoy, C. Durston, H. Ludewig, D. Majumdar, J.W. Yang, M. Segev</i>	
Discussion	453
Critical experiments in a zero-power fast-reactor lattice with breeder zones of thorium and uranium (IAEA-SM-244/73)	455
<i>U. Schmocke, H. Chawla, K. Gmür, M. Jermann, C. McCombie, R. Richmond, S. Seth, D. Bartine, D. Ingersoll, J.R. White</i>	
Discussion	467
О принципиальной возможности снижения времени удвоения при гетерогенном размещении в реакторе на быстрых нейтронах различных типов топлива (IAEA-SM-244/76)	469
<i>B.V. Орлов, И.С. Слесарев, С.М. Зарицкий, С.А. Субботин, П.Н. Алексеев, Ю.А. Зверков</i>	
<i>(The theoretical possibility of reducing the doubling time in a fast-reactor by using heterogeneous configurations of various types of fuel, V.V. Orlov et al.)</i>	
Некоторые возможности улучшения показателей воспроизводства быстрых реакторов (IAEA-SM-244/82)	481
<i>В.Г. Илюнин, В.С. Каграманян, В.М. Мурогов, М.Ф. Троянов, А.Н. Шмелев</i>	
<i>(Possibilities for improving FBR breeding characteristics, V.G. Ilyunin et al.)</i>	

Chairmen of Sessions and Secretariat of the Symposium	491
List of Participants	493
Author Index	507
Transliteration Index	511
Index of Papers by Number	513