

## CONTENTS OF VOLUME 2

### MAGNETIC CONFINEMENT THEORY AND MODELLING (Session D)

|  |     |
|--|-----|
| Dynamics of auxiliary heating and profile effects in a tokamak<br>(IAEA-CN-50/D-I-1) .....   | 3   |
| <i>V.V. Parail, P.N. Yushmanov</i>   |     |
| Model for the L-H transition in tokamaks (IAEA-CN-50/D-I-2) .....  | 13  |
| <i>K.C. Shaing, G.S. Lee, B.A. Carreras, W.A. Houlberg, E.C. Crume, Jr.</i>  |     |
| A model of the H-mode and scaling of SOL and divertor plasma<br>(IAEA-CN-50/D-I-3) .....   | 23  |
| <i>S.I. Itoh, K. Itoh, T. Ohkawa, N. Ueda</i>  |     |
| Tearing and micro-tearing instabilities in tokamaks (IAEA-CN-50/D-I-4) .....   | 33  |
| <i>J.W. Connor, S.C. Cowley, R.J. Hastie, T.J. Martin</i>  |     |
| Resistive ballooning modes at high beta (IAEA-CN-50/D-I-5-1) .....   | 41  |
| <i>K. Grassie, H.P. Zehrfeld, T.C. Hender</i>  |     |
| Internal kink modes in tokamaks (IAEA-CN-50/D-I-5-2) .....   | 47  |
| <i>B.N. Kuvshinov, A.B. Mikhajlovskij</i>  |     |
| Neoclassical MHD descriptions of tokamak plasmas<br>(IAEA-CN-50/D-II-1) .....  | 53  |
| <i>J.D. Callen, Y.B. Kim, A.K. Sundaram, B.A. Carreras, L. Garcia,<br/>    K.C. Shaing, D.A. Spong, H. Biglari, P.H. Diamond, O.J. Kwon</i>  |     |
| Effect of shaping on the equilibrium and stability of high current,<br>high beta tokamaks (IAEA-CN-50/D-II-2) .....  | 65  |
| <i>M.W. Phillips, M.H. Hughes, A.M.M. Todd, J.T. Hogan, R.A. Dory,<br/>    F.J. Helton, J.M. Greene, J.W. Helton, S. Jardin, J.L. Johnson,<br/>    J. Manickam, R.R. Parker, N. Pomphrey</i>                     |     |
| Theory of energetic/alpha particle effects on magnetohydrodynamic modes<br>in tokamaks (IAEA-CN-50/D-II-3-1) .....   | 77  |
| <i>L. Chen, R.B. White, G. Rewoldt, P.L. Colesstock, P.H. Rutherford,<br/>    M.N. Bussac, Y.P. Chen, F.J. Ke, S.T. Tsai</i>   |     |
| Effect of alpha particle heating on plasma energy confinement time<br>and other characteristics of a tokamak reactor (IAEA-CN-50/D-II-3-2) ....  | 89  |
| <i>Ya.I. Kolesnichenko, V.V. Lutsenko, S.N. Reznik</i>   |     |
| Alpha power effects on energy confinement time and ignition,<br>and enhancement of ion neoclassical heat conduction due to electron<br>and superthermal ion energy scattering collisions (IAEA-CN-50/D-II-3-3) . | 97  |
| <i>D.J. Sigmar, C.T. Hsu, A.A. Ware</i>  |     |
| Alpha particle loss in tokamaks (IAEA-CN-50/D-II-4) .....  | 111 |
| <i>R.B. White, M.S. Chance, J.L. Johnson, H.E. Mynick, F.W. Perkins,<br/>    A.H. Reiman</i>   |     |

|  |     |  |     |
|--|-----|--|-----|
| Burn control of tokamak plasma by toroidal field ripple<br>(IAEA-CN-50/D-II-5) .....   | 121 | Theory of sawtooth stabilization in the presence of energetic ions<br>(IAEA-CN-50/D-IV-6) .....  | 243 |
| <i>K. Tani, T. Takizuka, M. Azumi, M. Yamagiwa, Y. Kishimoto,<br/>K. Hamamatsu, J.J. Foit</i>  |     | <i>F. Pegoraro, F. Porcelli, B. Coppi, P. Detragiache, S. Migliuolo</i>  |     |
| Non-linear MHD studies in toroidal geometry — disruptive phenomena<br>in tokamak plasmas (IAEA-CN-50/D-III-1) .....  | 131 | Temperature gradient modes, streamers and anomalous transport<br>(IAEA-CN-50/D-IV-7) .....   | 251 |
| <i>A.Y. Aydemir, R.D. Hazeltine, M. Kotschenreuther, J.D. Meiss,<br/>P.J. Morrison, D.W. Ross, F.L. Waelbroeck, J.C. Wiley, R.E. Denton,<br/>J.F. Drake, R.G. Kleva</i>                            |     | <i>T. Antonsen, A.M. Dimits, J.Q. Dong, J.F. Drake, P.N. Guzdar,<br/>A.B. Hassam, C.S. Liu</i>   |     |
| Supersaturation mechanism of tokamak sawtooth relaxation<br>(IAEA-CN-50/D-III-2) .....   | 145 | Advances in the theory of ion-temperature-gradient-driven turbulence<br>(IAEA-CN-50/D-IV-8) .....  | 261 |
| <i>T. Sato, Y. Nakayama, T. Hayashi, K. Watanabe, R. Horiuchi</i>  |     | <i>H. Biglari, P.H. Diamond, M.N. Rosenbluth, R.E. Waltz,<br/>R.R. Dominguez, P.W. Terry, N. Mattox, P. Lyster, J.N. Leboeuf,<br/>B.A. Carreras, G.S. Lee, L. Garcia, N. Dominguez, J.H. Han</i> |     |
| Theoretical studies of enhanced confinement properties in tokamaks<br>(IAEA-CN-50/D-III-3) .....   | 153 | Effects of sawtooth oscillations on profile consistency and beta limit<br>disruptions (IAEA-CN-50/D-IV-9) .....  | 273 |
| <i>W.M. Tang, N.L. Bretz, T.S. Hahm, W.W. Lee, F.W. Perkins,<br/>M.H. Redi, G. Rewoldt, M.C. Zarnstorff, S.J. Zweben, R.D. Sydora,<br/>J.M. Dawson, V.K. Decyk, H. Naitou, T. Kamimura, Y. Abe</i> |     | <i>H.R. Strauss, M. Hossain</i>  |     |
| Linear and quasi-linear behaviour of ion modes (IAEA-CN-50/D-III-4) .....  | 163 | Resistive fluid turbulence and tokamak edge plasma dynamics<br>(IAEA-CN-50/D-IV-10) .....  | 277 |
| <i>X. Garbet, L. Laurent, F. Mourguès, J.P. Rouxin, A. Samain</i>  |     | <i>D.R. Thayer, P.H. Diamond, H. Biglari, C.P. Ritz, A.J. Wootton,<br/>B.A. Carreras, G.G. Craddock, T.S. Hahm, S.J. Zweben, O.J. Kwon,<br/>P.W. Terry, J.K. Lee, N. Ohyabu, F. Wagner</i>       |     |
| Microinstability based models of anomalous energy transport in tokamaks<br>(IAEA-CN-50/D-III-5) .....  | 171 | MHD Alfvén stability in ignited toroidal plasmas (IAEA-CN-50/D-IV-11) ...  | 291 |
| <i>E. Barbato, S. Briguglio, A. Cardinali, G. Cenacchi, M. Ottaviani,<br/>F. Romanelli, G. Vlad, F. Zonca</i>  |     | <i>G.Y. Fu, J.W. Van Dam, M.N. Rosenbluth, D.W. Ross, Y.Z. Zhang,<br/>H.L. Berk, S.M. Mahajan, C.Z. Cheng, R.L. Miller, X.H. Wang,<br/>A. Bhattacharjee, M.E. Mauel, B. Breizman</i>             |     |
| Boundary conditions appropriate for fluid theory calculations in the<br>presence of an absorbing wall (IAEA-CN-50/D-III-6) .....   | 179 | Ballooning magnetic islands in tokamaks (IAEA-CN-50/D-IV-12) .....   | 303 |
| <i>K. Günther</i>  |     | <i>B.N. Kuvshinov, V.P. Lakhin, A.B. Mikhajlovskij, S.V. Novakovskij,<br/>A.I. Smolyakov</i>   |     |
| The critical temperature gradient model of plasma transport:<br>Applications to JET and future tokamaks (IAEA-CN-50/D-IV-1) .....  | 191 | A multiple scale approach to plasma relaxation, stability and transport<br>(IAEA-CN-50/D-IV-13) .....  | 311 |
| <i>P.H. Rebut, P.P. Lallia, M.L. Watkins</i>   |     | <i>J.W. Edenstrasser</i>   |     |
| High energy particle populations, transport processes and fusion burn<br>conditions (IAEA-CN-50/D-IV-2) .....  | 201 | Second stability regime: parameterization and access<br>(IAEA-CN-50/D-IV-14) .....   | 319 |
| <i>B. Coppi, P. Detragiache, R. Englade, S. Migliuolo, F. Pegoraro,<br/>F. Porcelli, Y.K. Pu, L. Sugiyama</i>  |     | <i>S.A. Sabbagh, M.E. Mauel, G.A. Navratil, M.H. Hughes, M.W. Phillips,<br/>A.M.M. Todd, G.Y. Fu, J.W. Van Dam, M.N. Rosenbluth</i>  |     |
| Electromagnetic drift mode transport formulas and empirical scaling<br>for tokamaks (IAEA-CN-50/D-IV-3) .....  | 211 | Energy and particle transport across a separatrix in diverted tokamaks<br>(IAEA-CN-50/D-IV-15) .....   | 327 |
| <i>W. Horton, N. Bekki, H.L. Berk, B.G. Hong, M.J. LeBrun, S. Mahajan,<br/>T. Tajima, Y.Z. Zhang</i>   |     | <i>F.L. Hinton, G.M. Staebler</i>  |     |
| Damping of toroidal rotation by anomalous ion viscosity<br>(IAEA-CN-50/D-IV-4) .....   | 221 |  |     |
| <i>M.V. Osipenko, O.P. Pogutse, R.V. Shurygin</i>  |     |  |     |
| The density limit as a consequence of the theory of sawtoothing<br>and the drift wave transport code (IAEA-CN-50/D-IV-5) .....   | 233 |  |     |
| <i>A. Rogister, G. Hasselberg, R. Singh</i>  |     |  |     |

**NON-TOKAMAK CONFINEMENT SYSTEMS**  
**(Session C)**

|   |     |   |     |
|---|-----|---|-----|
| Recent experiments on Heliotron E (IAEA-CN-50/C-I-1) .....  | 337 | Low aspect ratio torsatrons (IAEA-CN-50/C-I-5-2) .....  | 397 |
| <i>T. Obiki, T. Mizuuchi, H. Zushi, K. Kondo, F. Sano, S. Sudo, N. Noda, M. Sato, T. Mutoh, S. Morimoto, K. Akaishi, H. Kaneko, M. Nakasuga, K. Hanatani, H. Okada, Y. Takeiri, K. Hanatani, Y. Nakamura, I. Ohtake, Y. Ijiri, M. Iima, T. Kawabata, T. Senju, K. Yaguchi, T. Baba, S. Kobayashi, H. Matsuura, M. Nishimura, M. Harada, O. Motojima, M. Wakatani, A. Iiyoshi, T. Yamashina, T. Hino, H. Minagawa, Y. Sakamoto, H. Amemiya, H. Oyama, S. Kato, H. Sugai, H. Toyoda, T. Oda, K. Muraoka, T. Kajiwara, K. Matsuo, M. Akazaki, A. Komori, M. Maeda</i>  |     | <i>B.A. Carreras, N. Dominguez, L. Garcia, J.F. Lyon, S.L. Painter, J. Sheffield, V.E. Lynch, J.R. Cary, J.D. Hanson</i>  |     |
| Initial experimental results from the ATF torsatron (IAEA-CN-50/C-I-2) .....  | 349 | Optimization studies of compact torsatrons (IAEA-CN-50/C-I-5-3) .....   | 403 |
| <i>M.J. Saltmarsh, F.S.B. Anderson, G.L. Bell, J.D. Bell, T.S. Bigelow, M.D. Carter, R.J. Colchin, E.C. Crume, Jr., J.L. Dunlap, G.R. Dyer, A.C. England, R.F. Gandy, J.C. Glowienka, R.C. Goldfinger, R.H. Goulding, J.W. Halliwell, J.H. Harris, D.L. Hillis, S. Hiroe, L.D. Horton, H.C. Howe, R.C. Isler, T.C. Jernigan, H. Kaneko, R.R. Kindsvater, R.A. Langley, D.K. Lee, J.F. Lyon, M. Kwon, M.M. Menon, P.K. Mioduszewski, T. Mizuuchi, O. Motojima, M. Murakami, G.H. Neilson, V.K. Paré, N.F. Perepelkin, D.A. Rasmussen, F. Sano, J. Sheffield, J.E. Simpkins, C.E. Thomas, T. Uckan, G.S. Voronov, M.R. Wade, T.L. White, J.B. Wilgen, W.R. Wing</i> |     | <i>V.E. Bykov, E.D. Volkov, A.V. Georgievskij, Yu.K. Kuznetsov, S.A. Martynov, V.G. Peletminskaya, K.S. Rubtsov, V.A. Rudakov, Yu.F. Sergeev, A.V. Khodyachikh, A.A. Shishkin</i>   |     |
| Electron cyclotron heating of currentless plasma by an ordinary wave in the L-2 stellarator (IAEA-CN-50/C-I-3) .....  | 359 | Confinement study in compact helical system (CHS) (IAEA-CN-50/C-I-6) ...  | 411 |
| <i>D.K. Akulina, E.D. Andryukhina, G.M. Batanov, M.S. Berezhetskij, N.P. Donskaya, K.S. Dyabilin, O.I. Fedyarin, V.N. Grafov, S.E. Grebenchikov, Yu.V. Kholnov, L.V. Kolik, L.M. Kovrizhnykh, N.F. Larionova, K.M. Likin, A.I. Meshcheryakov, A.E. Petrov, S.N. Popov, V.I. Roshchin, A.V. Sapozhnikov, K.A. Sarkyan, I.S. Sbitnikova, M.G. Shats, I.S. Shpigel', N.N. Skvortsova, A.D. Smirnova, V.N. Sukhodol'skij, V.A. Tsigankov, G.S. Voronov</i>  |     | <i>K. Matsuoka, S. Kubo, M. Hosokawa, Y. Takita, S. Okamura, N. Noda, H. Yamada, H. Iguchi, K. Masai, S. Morita, K. Ida, H. Idei, C. Takahashi, K. Nishimura, T. Shoji, H. Sanuki, M. Fujiwara, Y. Abe, T. Amano, A. Ando, T. Aoki, D.-G. Bi, J. Fujita, S. Hidekuma, T. Kamimura, O. Kaneko, T. Kawamoto, A. Mohri, A. Nishizawa, S. Tanahashi, J. Todoroki, K. Tsuzuki, K. Yamazaki</i>   |     |
| Physics studies for helical-axis advanced stellarators (IAEA-CN-50/C-I-4) ...   | 369 | Confinement dynamics and boundary condition studies in the reversed field pinch (IAEA-CN-50/C-II-1) .....   | 419 |
| <i>G. Grieger, C. Beidler, E. Harmeyer, J. Junker, J. Kisslinger, W. Lotz, P. Merkel, A. Montvai, J. Nührenberg, F. Rau, A. Schlüter, H. Wobig, R. Zille</i>  |     | <i>K.F. Schoenberg, J.C. Ingraham, R.W. Moses, Jr., P.G. Weber, L.C. Burkhardt, T.E. Cayton, J.N. DiMarco, J.N. Downing, R.F. Ellis, R. Gerwin, G. Miller, C.P. Munson, R.A. Nebel, M.M. Pickrell, A.E. Schofield, R. Veerasingam, K.A. Werley, G.A. Wurden, A.F. Almagri, S. Assadi, J.A. Beckstead, G. Chartas, D.J. Den Hartog, R.N. Dexter, Y.L. Ho, D.W. Kerst, T.W. Lovell, D. Kortbawi, E.J. Nilles, S.C. Prager, T.D. Rempel, J.S. Sarff, W. Shen, C.W. Spragins, J.C. Sprott</i> |     |
| Equilibrium and stability studies for low aspect ratio stellarator configurations (IAEA-CN-50/C-I-5-1) .....  | 389 | Reversed field pinch confinement and stability with thick and thin shells (IAEA-CN-50/C-II-2) .....   | 431 |
| <i>L. Garcia, C. Alejaldre, A.L. Fraguas, J. Guasp, A. Varias, B.A. Carreras, N. Dominguez, V.E. Lynch</i>  |     | <i>B. Alper, M.K. Bevir, H.A.B. Bodin, C.A. Bunting, P.G. Carolan, J.A. Cunnane, R.F. Ellis, D.E. Evans, A.R. Field, C.G. Gimblett, R.J. Hayden, N. Inoue, T.C. Hender, C. Ingraham, R.J. La Haye, A. Lazaros, J.W. Long, P. Martin, R.W. Moses, Jr., A.A. Newton, P.G. Noonan, R. Paccagnella, A. Patel, S. Robertson, M.G. Rusbridge, H.Y.W. Tsui, P.D. Wilcock, Z. Yoshida</i>   |     |
| Toroidal pinch experiments in OHTE with a resistive shell (IAEA-CN-50/C-II-3) .....   | 441 | Toroidal pinch experiments in OHTE with a resistive shell (IAEA-CN-50/C-II-3) .....   | 441 |
| <i>T. Tamano, W.D. Bard, C.M. Greenfield, R.J. La Haye, M.J. Schaffer, P.L. Taylor</i>  |     | <i>T. Tamano, W.D. Bard, C.M. Greenfield, R.J. La Haye, M.J. Schaffer, P.L. Taylor</i>  |     |
| Self-organization and confinement of high current density RFP plasma (IAEA-CN-50/C-II-4-1) .....  | 447 | Self-organization and confinement of high current density RFP plasma (IAEA-CN-50/C-II-4-1) .....  | 447 |
| <i>K.I. Sato, K. Yokoyama, A. Nagata, S. Masamune, H. Arimoto, S. Yamada, A. Matsuoka, T. Tamari, H. Oshiyama, Z.X. Chen, T. Amano</i>  |     | <i>K.I. Sato, K. Yokoyama, A. Nagata, S. Masamune, H. Arimoto, S. Yamada, A. Matsuoka, T. Tamari, H. Oshiyama, Z.X. Chen, T. Amano</i>  |     |

|  |     |   |     |
|--|-----|---|-----|
| Experimental and theoretical studies of reversed field pinch plasma in TPE-1RM15 (IAEA-CN-50/C-II-4-2) .....   | 457 | B.B. Bogdanov, A.A. Goruppa, R. Kh. Kurtmullaev, Ya.N. Laukhin,<br>A.I. Malyutin, S.A. Galkin, V.V. Drozdov, V.N. Semenov   |     |
| <i>T. Shimada, Y. Yagi, Y. Hirano, K. Hattori, I. Hirota, Y. Kondoh,<br/>Y. Maejima, K. Saito, S. Shiina, K. Ogawa</i>   |     |   |     |
| Advances in reversed field pinch theory and computations (IAEA-CN-50/C-II-5) .....   | 467 | Investigation of confinement properties of spheromaks (IAEA-CN-50/C-IV-3) .....   | 539 |
| <i>D.D. Schnack, D.S. Harned, J. McBride, H. Biglari, P.H. Diamond,<br/>F.Y. Gang, E.J. Caramana, R.A. Nebel, B.A. Carreras, E. Hameiri,<br/>H.R. Strauss, Y.L. Ho, S.C. Prager</i>  |     | <i>M. Yamada, R.A. Ellis, Jr., A.C. Janos, F.M. Levinton, R.M. Mayo,<br/>R.W. Motley, M. Nagata, Y. Ono, N. Satomi, Y. Ueda, T.R. Jarboe,<br/>C.W. Barnes, J.C. Fernandez, I. Henins, G.J. Marklin, F.J. Wysocki</i>  |     |
| Radial transport in the Phaedrus-B tandem mirror (IAEA-CN-50/C-III-1) ....   | 475 | The physics of the high-density Z-pinch (IAEA-CN-50/C-IV-4-1) .....   | 557 |
| <i>R.A. Breun, N. Hershkowitz, P. Brooker, J. Browning, D. Brouchous,<br/>J.R. Conrad, B.J. Cui, D. Edgell, J. Ferron, R.H. Goulding,<br/>T. Intrator, D. Keil, R. Majeski, S. Meassick, L.L. Peng, H. Persing,<br/>P. Probert, D. Roberts, Yunjian WEN</i>  |     | <i>A.H. Glasser, J.E. Hammel, H.R. Lewis, I.R. Lindemuth, G.H. McCall,<br/>R.A. Nebel, D.W. Scudder, J.S. Shlachter, R.H. Lovberg, P. Rosenau,<br/>P.T. Sheehey</i>   |     |
| Experiments on neutral beam injection in a gasdynamic trap (IAEA-CN-50/C-III-2) .....  | 483 | Z-pinch equilibria and stability: experiment and theory (IAEA-CN-50/C-IV-4-2) .....   | 565 |
| <i>P.A. Bagryanskij, A.A. Ivanov, V.V. Klesov, Yu.L. Koz'minykh,<br/>Yu.I. Krasnikov, E.R. Krzhizhanovskij, A.I. Rogozin, G.V. Roslyakov,<br/>Yu.A. Tsidulko</i>   |     | <i>M.G. Haines, P. Baldock, J.M. Bayley, A.R. Bell, J.P. Chittenden,<br/>P. Choi, M. Coppins, I.D. Culverwell, A.E. Dangor, E.S. Figura,<br/>G. McCall, G.J. Rickard</i>  |     |
| Stability issues in the Tara tandem mirror experiment (IAEA-CN-50/C-III-3) .....   | 493 | Experimental studies on the plasma focus (IAEA-CN-50/C-IV-5-1) .....  | 579 |
| <i>R.S. Post, K. Brau, J. Casey, J. Coleman, M. Gerver, S.N. Golovato,<br/>W.C. Guss, G. Hallock, S. Horne, J.H. Irby, J. Kesner, B. Lane,<br/>J. Machuzak, R. Myer, E. Sevillano, D.K. Smith, J.D. Sullivan, R. Torti,<br/>X.Z. Yao, J. Zielinski</i>   |     | <i>E.Yu. Khautiev, V.I. Krauz, N.G. Reshetnyak, R.G. Salukvadze,<br/>A.A. Batenyuk, A.Ch. Chkhaidze, K.N. Koshelev, Yu.V. Sidelnikov,<br/>V.A. Gribkov, O.N. Krokin</i>   |     |
| Scaling studies on thermal barrier potential and plasma confinement in the tandem mirror GAMMA 10 (IAEA-CN-50/C-III-4) .....   | 501 | Progress in plasma focus operation up to 500 kJ bank energy (IAEA-CN-50/C-IV-5-2) .....   | 587 |
| <i>T. Cho, H. Hojo, M. Ichimura, M. Inutake, K. Ishii, A. Itakura,<br/>I. Katanuma, Y. Kiwamoto, A. Mase, S. Miyoshi, Y. Nakashima,<br/>T. Saito, K. Sawada, D. Tsubouchi, N. Yamaguchi, K. Yatsu</i>  |     | <i>H. Herold, H.J. Kaeppler, H. Schmidt, M. Shakhatre, C.S. Wong,<br/>C. Deeney, P. Choi</i>  |     |
| Studies of instabilities and waves in a mirror confined hot electron plasma (IAEA-CN-50/C-III-5) .....   | 509 | Behaviour of impurities during RF heating in the Uragan-3 torsatron (IAEA-CN-50/C-V-1) .....  | 599 |
| <i>Chaosong Huang, Lijian Qiu, Zhaoxing Ren, and the HER Group</i>   |     | <i>V.L. Berezhnyj, S.P. Bondarenko, M.P. Vasil'ev, V.S. Vojtsenya,<br/>E.D. Volkov, Ya.F. Volkov, L.I. Grigor'eva, S.P. Gubarev,<br/>Yu.V. Gutarev, A.G. Dikij, V.M. Zalkind, G.V. Zelenin, A.V. Zolotukhin,<br/>S.V. Kovalev, V.G. Konovalov, V.I. Kononenko, V.D. Kotsubanov,<br/>B.V. Kravchin, G.G. Lesnyakov, A.P. Litvinov, Yu.K. Mironov,<br/>N.I. Nazarov, I.K. Nikolskij, G.P. Opaleva, O.S. Pavlichenko,<br/>G.P. Pavlova, I.I. Patlay, V.K. Pashnev, N.F. Perepelkin, I.B. Pinos,<br/>V.V. Plyusnin, G.N. Polyakova, N.P. Ponomarenko, A.I. Skibenko,<br/>A.S. Slavnyj, V.S. Taran, T.O. Tkhorayak, A.A. Utkin, I.P. Fomin,<br/>V.V. Chechkin, A.N. Shapoval, O.M. Shvets, A.A. Shishkin</i> |     |
| Field reversed configuration experiments (IAEA-CN-50/C-IV-1) .....   | 517 | Plasma equilibrium and stability in stellarators (IAEA-CN-50/C-V-2) .....   | 611 |
| <i>R.E. Siemon, R.E. Chrien, W.N. Hugrass, S. Okada, D.J. Rej,<br/>D.P. Taggart, M. Tuszewski, R.B. Webster, B.L. Wright, J.T. Slough,<br/>E.A. Crawford, A.L. Hoffman, R.D. Milroy, G.C. Vlases, R.D. Brooks,<br/>B. Kronast, Z.A. Pietrzyk, R. Raman, R. Smith</i>                                       |     | <i>V.V. Drozdov, M.Yu. Isaev, M.I. Mikhajlov, V.D. Pustovitov,<br/>V.D. Shafranov</i>   |     |
| Application of magnetic insulation in a compact torus to the suppression of losses and impurities and to the enhancement of the relative separatrix radius — Influence of various losses upon the dynamics of field reversed configuration plasma equilibrium with free boundary (IAEA-CN-50/C-IV-2) ..... | 527 | Monte Carlo neoclassical transport simulation in a stellarator (IAEA-CN-50/C-V-3-1) .....   | 623 |
|  |     | <i>Yu.A. Volkov, L.M. Kovrizhnykh, S.G. Shasharina</i>  |     |

|   |     |  |     |
|---|-----|--|-----|
| Equilibrium of a plasma with a steady flow in the stellarator<br>(IAEA-CN-50/C-V-3-2) .....   | 631 | <i>Yu.A. Kucheryaev, V.Kh. Likhtenshtein, V.A. Obysov, D.A. Panov,<br/>A.A. Skovoroda, Yu.A. Tarabrin, A.G. Shcherbakov</i>  |     |
| <i>L.M. Kovrizhnykh, S.V. Shchepetov</i>  |     |  |     |
| MHD and transport study of the $\ell = 2$ heliotron/torsatron<br>(IAEA-CN-50/C-V-4) .....   | 637 | Early formation phase of a field reversed configuration in a fast theta pinch<br>(IAEA-CN-50/C-V-12) .....   | 697 |
| <i>J. Todoroki, T. Kamimura, H. Sanuki, T. Amano, T. Hayashi, K. Suzuki,<br/>T. Sato, K. Hanatani, Y. Nakamura, M. Wakatani, A. Iiyoshi</i>   |     | <i>J.L. Sobeckart, R.J. Maqueda, A.B. Rodrigo</i>  |     |
| Confinement studies of laser produced plasmas in a module-type $\ell = 2$ ,<br>$m = 12$ torsatron/heliotron device, SHATLET-M<br>(IAEA-CN-50/C-V-5) .....   | 645 | Stabilization and confinement of field reversed configuration (FRC) plasmas<br>(IAEA-CN-50/C-V-13) .....   | 705 |
| <i>H. Seki, H. Ohsaki, H. Okuyama, S. Kogoshi, Y. Iida, M. Katsurai,<br/>T. Tanaka, T. Sekiguchi</i>  |     | <i>T. Ishimura, Y. Ueda, S. Sugimoto, S. Okada, Y. Ito, S. Ohi, S. Goto,<br/>T. Takahashi, S. Shimamura, Y. Nogi, S. Hamada</i>  |     |
| Plasma stabilization and diffusion in traps with spatial axes and<br>with circular magnetic surfaces (IAEA-CN-50/C-V-6) .....   | 651 | Grad-Hogan diffusion in field reversed configurations<br>(IAEA-CN-50/C-V-14) .....   | 713 |
| <i>V.M. Glagolev, A.E. Leneva, B.A. Trubnikov, S.L. Lazarev</i>   |     | <i>R.A. Clemente, P.H. Sakanaka, A.J. Mania</i>  |     |
| Experimental and theoretical studies on RFP plasma confinement<br>(IAEA-CN-50/C-V-7) .....  | 661 | The tilt mode, turbulence and transport in field-reversed configurations<br>(IAEA-CN-50/C-V-15) .....  | 721 |
| <i>V. Antoni, M. Bagatin, E. Baseggio, M. Bassan, A. Buffa, S. Cappello,<br/>L. Carraro, S. Costa, L. Giudicotti, P. Innocente, P. Martin, S. Martini,<br/>D. Merlin, S. Ortolani, R. Paccagnella, R. Pasqualotto, M.E. Puiatti,<br/>M. Scapin, P. Scarin, M. Valisa, P. Villoresi, S. Zago, E. Zilli</i>   |     | <i>H.R. Lewis, D.C. Barnes, R.C. Bishop, N.A. Krall, Z. Mikic,<br/>D.R. Milroy, A.A. Mirin, A.G. Sgro, D.E. Shumaker, J.L. Staudenmeier,<br/>R.B. Webster</i>          |     |
| Results of ultra-low q and reversed field pinch experiments on<br>REPUTE-1 and TORIUT-6 (IAEA-CN-50/C-V-8) .....  | 671 | Spheromak confinement in perfectly closed magnetic surfaces near the<br>entrance hole of the flux conserver (IAEA-CN-50/C-V-16) .....                                  | 727 |
| <i>N. Inoue, Z. Yoshida, Y. Kamada, N. Asakura, M. Chaki, A. Ejiri,<br/>A. Fujisawa, T. Fujita, Y. Fuke, Y. Fukuda, K. Hattori, T. Iguchi,<br/>K. Itami, H. Ji, K. Miyamoto, J. Morikawa, H. Morimoto,<br/>Y. Murakami, Y. Nagayama, M. Nakazawa, H. Nihei, K. Saito,<br/>K. Shimoji, S. Shinohara, A. Shirai, H. Toyama, M. Utsumi,<br/>K. Yamagishi</i> |     | <i>Y. Kato, M. Nishikawa, Y. Honda, N. Satomi, K. Watanabe, S. Kaneko,<br/>A. Kamitani, Y.P. Wang</i>  |     |
| Potential formation in an RF-plugged axisymmetric mirror cusp device<br>(IAEA-CN-50/C-V-9) .....  | 677 | Plasma focus research at the Institute for Nuclear Studies, Świerk<br>(IAEA-CN-50/C-V-17) .....  | 737 |
| <i>K. Adati, R. Kumazawa, H. Fujita, T. Oda, K. Kadota, K. Takiyama,<br/>M. Hamamoto, T. Ohgo, T. Watanabe, T. Aoki, J. Fujita, S. Hidekuma,<br/>T. Kawamoto, H. Masumoto, K. Nishimura, S. Okamura, T. Sato,<br/>H.R. Garner, A.M. Howald</i>  |     | <i>A. Jerzykiewicz, S. Brandt, K. Kocięcka, W. Nawrot, L. Jakubowski,<br/>J. Baranowski, M. Sadowski, E. Składnik-Sadowska, A. Szydłowski,<br/>J. Zebrowski</i>        |     |
| Injection of plasma streams with energies of up to 50 kJ, stagnation<br>temperatures of more than 1 keV and $\beta \approx 1$ into open magnetic traps<br>(IAEA-CN-50/C-V-10) .....   | 683 | Fusion of heavy ions in advanced focused discharges<br>(IAEA-CN-50/C-V-18) .....   | 743 |
| <i>N.I. Arkhipov, A.M. Zhitlukhin, V.M. Safronov, V.V. Sidnev,<br/>Yu. V. Skvortsov</i>   |     | <i>V. Nardi, L. Bilbao, A. Bortolotti, J.S. Brzosko, C. Powell, D. Zeng</i>  |     |
| Hot electron plasma confinement in the cusp device OGRA-4K<br>(IAEA-CN-50/C-V-11) .....   | 691 | Experimental studies of a high-beta, non-circular cross-section<br>toroidal pinch (IAEA-CN-50/C-V-19) .....  | 751 |
| <i>M.I. Belavin, I.N. Golovin, V.A. Zhil'tsov, P.M. Kosarev,</i>  |     | <i>J.R. Drake, P. Brunsell, J. Brzozowski, J.E. Eninger, E.R. Hedin,<br/>P. Karlsson, B. Lehnert, Jin Li, J. Scheffel, H.E. Sätherblom,<br/>E. Tennfors, B. Wilner</i> |     |
| Initial operation of the Madison Symmetric Torus reversed field pinch<br>(IAEA-CN-50/C-V-20) .....  | 757 | Initial operation of the Madison Symmetric Torus reversed field pinch<br>(IAEA-CN-50/C-V-20) .....   | 757 |
| <i>A.F. Almagri, S. Assadi, J.A. Beckstead, G. Chartas, D.J. Den Hartog,<br/>X. Deng, R.N. Dexter, S.A. Hokin, E. Hotta, D.W. Kerst,<br/>D. Kortbawi, J. Laufenberg, T.W. Lovell, E.J. Nilles, S.C. Prager,<br/>T.D. Rempel, J.S. Sarff, W. Shen, C.W. Spragins, J.C. Sprott</i>  |     | Chairmen of Sessions and Secretariat of the Conference .....   | 763 |