

E. HEATING BY NEUTRAL BEAM INJECTION

A one dimensional volume ion source model.

First author: D.J. Mynors

Mo 72 E 1

III-974

Surface effects in D⁻ ion sources for neutral beam injection.

First author: R.M.A. Heeren et al.

Mo 73 E 2

III-978

Present status of the design of a DC low-pressure, high-yield D⁻ source.

First author: W.B. Kunkel et al.

Mo 74 E 3

III-979

Cascade arc hydrogen source for plasma neutralizers.

First author: D.C. Schram et al.

Mo 75 E 4

III-983

F. RF HEATING

Trapped and passing ion transport in ICRH tokamak plasmas.

First author: M.V. Osipenko et al.

Mo 44 F 1

III-987

Automic FMS mode tracking during ICRH in TO-2 tokamak.

First author: I.A. Kovan et al.

Mo 45 F 2

III-991

Studies of mode conversion physics for waves in the ion cyclotron range of frequencies.

First author: G.J. Morales et al.

Mo 46 F 3

III-995

Ballistic-wave analysis of gyroresonant heating.

First author: A.N. Kaufman et al.

Mo 47 F 4

III-999

Edge absorption of fast wave due to Alfvén resonance and wave nonlinearity in ICRH.

First author: J.A. Heikkinen et al.

Mo 48 F 5

III-1003

D-He³ fusion yield in higher harmonic ICRF heated plasma.

First author: M. Yamagiwa et al.

Mo 49 F 6

III-1007

Theoretical analysis of higher harmonic ICRF heating in JT-60.

First author: K. Hamamatsu et al.

Mo 50 F 7

III-1011

³He-D fusion studies and α -particle simulations using MeV ions created by ICRH in the JET tokamak.

First author: D.F.H. Start et al.

Mo 51 F 8*

III-1015

Fast ion orbit effects in high power ICRH modulation experiments in the JET tokamak.

First author: D.F.H. Start et al.

Mo 52 F 9

III-1019

Analysis of ICRF coupling and heating in CIT and JET.

First author: J.E. Scharer et al.

Mo 53 F 10

III-1023

Studies on the distribution function of minority ions under ICRF wave heating.

First author: Duk-in Choi et al.

Mo 54 F 11

III-1027

* This paper will also be presented orally on Monday 25 June at 13.45 hrs.

Parasitic coupling of the fringing fields of an ion-Bernstein wave antenna. First author: S.C. Chiu et al.	Tu 42	F 12	III-1031
Mode coupling between I.C.R.F. waves propagating outside the B_{-VB} plane. First author: B.M. Harvey et al.	Tu 43	F 13	III-1035
An analysis of ridged waveguide for plasma heating by using integral equation method. First author: T. Honma et al.	Tu 44	F 14	III-1039
Study of the neutron yield behaviour in ICRH and NBI heated discharges on TEXTOR. First author: G.Van Wassenhove et al.	Tu 45	F 15	III-1040
Eigenfunctions of the anisotropic quasilinear Fokker-Planck equation. First author: D. Lebeau et al.	Tu 46	F 16	III-1044
ICRF heating up to the 4.5 MW level on TFTR. First author: J.E. Stevens et al.	Tu 47	F 17*	III-1048
ICRF hydrogen minority heating in the boronized ASDEX tokamak. First author: F. Ryter et al.	Tu 48	F 18	III-1052
Induction of parallel electric fields at the plasma edge during ICRF heating. First author: M. Brambilla et al.	Tu 49	F 19	III-1056
Ion-cyclotron absorption of fast magnetosonic waves by cold minority ions in an open trap. First author: V.E. Moysenko et al.	Tu 50	F 20	III-1060
RF plasma heating in the gas-dynamics mirror trap. First author: I.F. Potapenko et al.	Tu 51	F 21	III-1064
Experimental study of strong nonlinear wave phenomena during ICRH on TEXTOR. First author: R. Van Nieuwenhove et al.	Tu 52	F 22	III-1068
Some features of ECRH in inhomogeneous magnetic fields. First author: V.A. Zhil'tsov et al.	Mo 55	F 23	III-1072

Observation of "H"-like phenomena at the beginning phase of ECR-heating on T-10. First author: A.V. Sushkov et al.	Mo 56	F 24	III-1076
Reasons for averaged electron-density limitation - Experimental study in T-10 and simulation. First author: V.V. Alikeev et al.	Mo 57	F 25	III-1080
Optimization of break-down and of initial stage of discharge with ECH in T-10. First author: V.V. Alikeev et al.	Mo 58	F 26	III-1084
Nonlinear heating by a spatially localized electron cyclotron wave. First author: D. Farina et al.	Mo 59	F 27	III-1088
Power absorption and energy confinement during LH injection in ASDEX. First author: R. Bartiromo et al.	Mo 60	F 28	III-1092
Scattering and localizability of ECH power in CIT. First author: G.R. Smith	Mo 61	F 29	III-1096
Combined electron cyclotron ray tracing and transport code studies in the Compact Ignition Tokamak. First author: M. Porkolab et al.	Mo 62	F 30	III-1100
Stochastic electron energy diffusion in electron cyclotron heating. First author: R. Pozzoli et al.	Mo 63	F 31	III-1104
Calculated power deposition profiles during ECRH on the FTU tokamak. First author: S. Cirant et al.	Th 47	F 32	III-1108
Microwave breakdown of the neutral gas around the EC resonance in high power transmission lines for ECRH. First author: L. Argenti et al.	Th 48	F 33	III-1112
Ray tracing study of the second electron cyclotron harmonic wave absorption and current drive. First author: S. Pešić et al.	Th 49	F 34	III-1116

* This paper will also be presented orally on Monday 25 June at 14.05 hrs.

High power mode-purity measurements on the 60 GHz transmission line for ECRH on RTP.

First author: A.G.A. Verhoeven et al.
Th 50 F 35 III-1117

ECRH sustained breakdown plasmas in RTP.

First author: R.W. Polman et al.
Th 51 F 36 III-1121

The electron temperature behaviour study in FT-I tokamak plasma heated by the ordinary and extraordinary ECRH waves.

First author: M.Yu. Kantor et al.
Th 52 F 37 III-1125

Electron-cyclotron heating in NET using the ordinary mode at down-shifted frequency.

First author: G. Giruzzi et al.
Th 53 F 38 III-1129

Recent electron cyclotron heating results on TEXT.

First author: B. Richards et al.
Th 54 F 39 III-1133

RF Alfvén wave heating of a high-beta plasma column.

First author: F.L. Ribe et al.
Mo 64 F 40 III-1137

Generation of fast magnetosonic waves in a mirror trap.

First author: A.G. Elfimov et al.
Mo 65 F 41 III-1141

Nonlinear transformation of Alfvén waves in a hot plasma.

First author: V.P. Minenko et al.
Mo 66 F 42 III-1145

Experimental studies of kinetic Alfvén waves on CT-6B tokamak.

First author: Daming ZHANG et al.
Mo 67 F 43 III-1149

Electron absorption of fast magnetosonic waves by TTMP in JET.

First author: F. Rimini et al.
Mo 68 F 44 III-1150

Ion Bernstein wave experiments and preliminary observations of Alfvén wave resonance in tokamak KT-5B.

First author: W. LIU et al.
Mo 69 F 45 III-1154

Edge-plasma heating via parasitic-torsional-mode excitation by Faraday-shielded ion-Bernstein-wave antennas.

First author: S. Puri
Mo 70 F 46 III-1158

Propagation absorption and particle dynamics of ion-Bernstein wave in tokamaks.

First author: A. Cardinali et al.
Mo 71 F 47 III-1159

Modelling of the interaction of energetic ions with lower hybrid waves on JET.

First author: E. Barbato
Fr 41 F 48 III-1163

Probe measurements of lower-hybrid wavenumber spectra in the ASDEX edge plasma.

First author: M. Krämer et al.
Fr 42 F 49 III-1167

Transition from electron- to ion-interaction of LH-waves in ASDEX.

First author: H.-U. Fahrbach et al.
Fr 43 F 50 III-1171

Alfvén wave heating in ASDEX.

First author: G.G. Borg et al.
Fr 44 F 51 III-1175

An experimental study of Alfvén wave heating using electrostatically shielded antennas in TCA.

First author: G.G. Borg et al.
Fr 45 F 52 III-1179

Acceleration of beam ions in simultaneous injection of NB and LH wave on JT-60.

First author: M. Nemoto et al.
Fr 46 F 53 III-1183

Stochastic heating of charged particles by two modes of plasma oscillations.

First author: V.S. Krivitaky et al.
Fr 47 F 54 III-1187

G. CURRENT DRIVE AND PROFILE CONTROL

On the filling of the "spectral gap" by particles in the process of a driven current generation. First author: S.I. Popel et al.	Mo 76	G 1	III-1190
The effect of the induced RF current density profile during lower-hybrid current drive on the evolution of the q profile and sawteeth stabilization. First author: M. Shoucri et al.	Mo 77	G 2	III-1191
The 3.7 GHz lower hybrid current drive system for the tokamak de Varennes. First author: A. Hubbard et al.	Mo 78	G 3	III-1195
Effect of quasi-linear distortions on the LH-wave current drive in a reactor-tokamak. First author: V.S. Belikov et al.	Mo 79	G 4	III-1199
Parametric decay instabilities studies in ASDEX. First author: V. Pericoli Ridolfini et al.	Mo 80	G 5	III-1203
Quasilinear theory for spatially delimited wave patterns. First author: E. Canobbio et al.	Mo 81	G 6	III-1207
Parametric study on lower hybrid current drive efficiency for next step devices. First author: H. Takase et al.	Tu 67	G 7	III-1211
Combined operation of pellet injection and lower hybrid current drive on ASDEX. First author: F.X. Söldner et al.	Tu 68	G 8	III-1215
Transport effects on current drive efficiency and localisation. First author: M. Cox et al.	Tu 69	G 9	III-1219
M=2 mode limit on lower hybrid current drive in ASDEX. First author: H. Zohm et al.	Tu 70	G 10	III-1223
Evaporation rate of an hydrogen pellet in presence of fast electrons. First author: B. Pégourié et al.	Tu 71	G 11	III-1227
Lower hybrid wave experiments in TORE SUPRA. First author: M. Goniche et al.	Tu 72	G 12	III-1231

Modelling of plasma current ramp-up by lower hybrid waves: comparison with experiments and application to NET. First author: J.G. Wégrowe et al.	Tu 73	G 13	III-1235
Numerical studies of an electron cyclotron current drive efficiency and the role of trapped particles. First author: Yu.N. Dnestrovskij et al.	Mo 82	G 14	III-1239
Impact of source power spectrum on ECRH current drive efficiency. First author: A.G. Shishkin et al.	Mo 83	G 15	III-1243
Electron cyclotron current drive and tearing mode stabilization in ITER. First author: L.K. Kuznetsova et al.	Mo 84	G 16	III-1247
Three-dimensional Fokker-Planck analysis on RF current drive in tokamaks. First author: A. Fukuyama et al.	Mo 85	G 17	III-1251
Linear evaluation of current drive in TJ-II. First author: F. Castejón et al.	Mo 86	G 18	III-1255
Electron cyclotron current drive experiments on DIII-D. First author: R.A. James et al.	Mo 87	G 19	III-1259
Investigation of electron cyclotron emission in the ASDEX tokamak during lower hybrid current drive and heating. First author: K. Wira et al.	Mo 88	G 20	III-1263
Electron cyclotron current drive for $\omega < \omega_c$. First author: A.C. Riviere et al.	Tu 74	G 21	III-1267
Current drive experiments at the electron cyclotron frequency. First author: V. Erckmann et al.	Tu 75	G 22*	III-1271
Non-inductive currents in W VII-AS: experimental results and theoretical modelling. First author: U. Gasparino et al.	Tu 76	G 23	III-1275
Current drive by electron-cyclotron and fast waves in DIII-D. First author: G. Giruzzi et al.	Tu 77	G 24	III-1279

* This paper will also be presented orally on Monday 25 June at 14.25 hrs.

Lower hybrid current drive in DITE. First author: B. Lloyd et al.	Tu 78	G 25*	III-1283
Coupling of the 2 x 24 waveguide grill at 2.45 GHz in ASDEX. First author: F. Leuterer et al.	Tu 79	G 26	III-1287
Lower hybrid current drive efficiency at 2.45 GHz in ASDEX. First author: F. Leuterer et al.	Tu 80	G 27	III-1291
Simulation of fast waves current drive by multi-loop antennae in ITER. First author: V.L. Vdovin et al.	Mo 89	G 28	III-1295
A 1-2/2 D Eulerian Vlasov code for the numerical simulation of beat current drive in a magnetized plasma. First author: M. Shoucri et al.	Mo 90	G 29	III-1299
High frequency current drive by nonlinear wave-wave interactions. First author: S.J. Kartunen et al.	Mo 91	G 30	III-1303
Possibility of ion current drive by RF helicity injection. First author: K. Hamamatsu et al.	Mo 92	G 31	III-1307
Development of fast-wave ICRF current drive systems at ORNL. First author: R.H. Goulding et al.	Mo 93	G 32	III-1311
Current drive via Landau damping of kinetic Alfvén wave in toroidal geometry. First author: A.G. Elfimov et al.	Mo 94	G 33	III-1315
RF current drive by a standing Alfvén wave in the R-O device as a possible effect of RF helicity injection. First author: A.G. Kirov et al.	Mo 95	G 34	III-1319
Profile control with lower hybrid waves on ASDEX. First author: F.X. Söldner et al.	Tu 81	G 35**	III-1323
Tearing mode stabilization by local current density profiling in tokamak. First author: M.P. Gryaznevich et al.	Tu 82	G 36	III-1327

* This paper will also be presented orally on Monday 25 June at 14.45 hrs.

** This paper will also be presented orally on Monday 25 June at 15.05 hrs.

Surface wave antenna for excitation of travelling fast magnetosonic or ion Bernstein waves in plasma. First author: A.V. Longinov et al.	Tu 83	G 37	III-1331
Hard X-ray emission during 2.45 GHz LH experiments on ASDEX. First author: A.A. Tuccillo et al.	Tu 84	G 38	III-1335
Neutral beam current drive with balanced injection. First author: D. Eckhart	Tu 85	G 39	III-1336
Absorption characteristics of 200 MHz fast wave in JFT-2M tokamak. First author: Y. Uesugi et al.	Tu 86	G 40	III-1340

H. IMPURITY AND EDGE PHYSICS

Special phenomena of edge density fluctuations in HL-1 tokamak. First author: Qingwei YANG et al.	Mo 96	H 1	III-1341
Influence of neutral injection inhomogeneity on tokamak edge plasma. First author: M.Z. Tokar ¹	Mo 97	H 2	III-1345
Influence of the helical resonant fields on the plasma edge of TBR-1 tokamak. First author: I.L. Caldas et al.	Mo 98	H 3	III-1349
Edge fluctuation studies in ATF. First author: C. Hidalgo et al.	Mo 99	H 4	III-1353
Effect of limiter composition on Z_{eff} and recycling in JET. First author: J.P. Coad et al.	Mo 100	H 5*	III-1357
Charge exchange spectroscopy measurements of light impurity behaviour in the JET beryllium phase. First author: H. Weisen et al.	Mo 101	H 6	III-1361
Retention of gaseous (Ar, He) impurities in the JET X-point configuration. First author: G. Janeschitz et al.	Mo 102	H 7	III-1365
Modelling impurity control in the JET pumped divertor. First author: R. Simonini et al.	Mo 103	H 8	III-1369
Scrape-off layer parameters at JET during density limit discharges. First author: S. Clement et al.	Mo 104	H 9	III-1373
Temperatures and densities in the JET plasma boundary deduced from deuterium and beryllium spectra. First author: M.F. Stamp et al.	Mo 105	H 10	III-1377
Formation of detached plasmas during high power discharges in JET. First author: G.M. McCracken et al.	Mo 106	H 11	III-1381

* This paper will also be presented orally on Friday 29 June at 11.00 hrs.

An investigation into high ion temperatures in the JET plasma boundary. First author: S.K. Erements et al.	Mo 107	H 12	III-1385
Edge plasma behaviour in the FT tokamak. First author: V. Pericoli Ridolfini	Mo 108	H 13*	III-1389
Scrape-off layer based model for the disruptive tokamak density limit and implications for next-generation tokamaks. First author: K. Borrass	Mo 109	H 14	III-1393
Simulation of edge plasma and divertor conditions in NET/ITER. First author: H.D. Pacher et al.	Mo 110	H 15	III-1397
Collector probe measurements of impurity fluxes in TEXTOR with molybdenum and graphite limiters. First author: M. Rubel et al.	Mo 111	H 16	III-1401
Electron excitation coefficients for the continuous spectrum of deuterium. First author: B.M. Jelenković et al.	Mo 112	H 17	III-1405
3d-Monte Carlo modelling of the neutral gas transport in pump limiters. First author: A. Nicolai	Mo 113	H 18	III-1409
Radiation from impurities in JET limiter plasmas during the C and Be phases. First author: K.D. Lawson et al.	Mo 114	H 19	III-1413
Modelling of carbon in the TFTR edge plasma. First author: B.J. Braams et al.	Fr 68	H 20	III-1417
First-wall behavior in TFTR. First author: C.S. Pitcher et al.	Fr 69	H 21	III-1419
Multi-species impurity accumulation phenomena in ASDEX. First author: G. Fussmann et al.	Fr 70	H 22	III-1423
Power flow and electric current asymmetries in the ASDEX SOL. First author: N. Tsois et al.	Fr 71	H 23	III-1427

* This paper will also be presented orally on Friday 29 June at 11.20 hrs.

Determination of impurity transport coefficients by sinusoidal modulated gas puffing. First author: K. Krieger et al.	Fr 72	H 24	III-1431
Impurity transport and production in lower hybrid discharges in ASDEX. First author: R. De Angelis	Fr 73	H 25	III-1435
Plasma edge behavior on the way to and at the density limit. First author: K. McCormick et al.	Fr 74	H 26	III-1439
Thermoelectric currents in the scrape-off layer. First author: R. Chodura	Fr 75	H 27	III-1443
Influence of plasma-neutral interactions on ALT-II pump limiter performance during NI heating at TEXTOR. First author: R.A. Moyer et al.	Fr 76	H 28	III-1447
An analytical model for neutral and charged particles in closed pump limiter. First author: M.Z. Tokar'	Fr 77	H 29	III-1448
Ergodized edge experiments in JFT-2M tokamak. First author: T. Shoji et al.	Fr 78	H 30	III-1452
Edge turbulence and its possible suppression by velocity shear in TEXT. First author: Ch.P. Ritz et al.	Fr 79	H 31	III-1456
A comparison of fluctuations and transport in the scrape-off layer of a limiter [TEXT] and divertor tokamak [ASDEX]. First author: R.D. Bengtson et al.	Fr 80	H 32	III-1460
Structure of density fluctuations in the edge plasma of ASDEX. First author: A. Rudyj et al.	Fr 81	H 33	III-1464
Evaluation of neutral gas flux measurements in the ASDEX-divertor with respect to divertor-geometry and recycling. First author: D. Meisel et al.	Fr 82	H 34	III-1468
A study of impurity transport in the TEXTOR plasma boundary. First author: S.J. Fielding et al.	Fr 83	H 35	III-1472

Effects of boronisation on the plasma parameters in TCA. First author: B. Joye et al.	Fr 84	H 36	III-1476
Pump limiter influence on the helium discharge parameters in TUMAN-3 tokamak. First author: V.I. Afanasiev et al.	Fr 85	H 37	III-1480