

## I. DIAGNOSTICS

Tokamak T-10 soft X-ray imaging diagnostic.

**First author:** P.V. Savrukhn et al.

Mo 27 I 1 IV-1484

Measurement of neutral deuterium fluxes on T-10 periphery.

**First author:** E.L. Berezovskij et al.

Mo 28 I 2 IV-1488

Density fluctuation measurements on ATF using a two-frequency reflectometer.

**First author:** E. Anabitarte et al.

Mo 29 I 3 IV-1492

Measurements of deuteron density profiles in JET.

**First author:** W. Mandl et al.

Mo 30 I 4 IV-1496

First measurements of electron density profiles on JET with a multichannel reflectometer.

**First author:** R. Prentice et al.

Mo 31 I 5\* IV-1500

A method for the determination of the total internal magnetic field in JET.

**First author:** L. Porte et al.

Mo 32 I 6 IV-1504

Current profile measurement using neutral He beam in JT-60 tokamak.

**First author:** H. Takeuchi et al.

Mo 33 I 7 IV-1508

Real time profiling of total radiation in the TJ-1 tokamak by a fluorescent detector.

**First author:** B.G. Zurro et al.

Mo 34 I 8 IV-1512

Ion temperature determination from neutron rate measurements during deuterium injection.

**First author:** B. Wolle et al.

Mo 35 I 9 IV-1516

Absolute determination of high neutron yields for ASDEX.

**First author:** R. Bätzner et al.

Mo 36 I 10 IV-1520

Plasma diagnostics in infrared and far-infrared range for Heliotron E.

**First author:** K. Kondo et al.

Mo 37 I 11 IV-1524

\* This paper will also be presented orally on Friday 29 June at 10.00 hrs.

Neutral beam probe diagnostic at TEXTOR.

**First author:** E.P. Barbian et al.

Mo 38 I 12 IV-1528

Visible bremsstrahlung measurements on TEXTOR for the determination of  $Z_{\text{eff}}$  under different discharge and heating conditions.**First author:** J. Ongena et al.

Mo 39 I 13 IV-1532

Electron density propagation on magnetic surface in T-10 during pellet injection.

**First author:** N.L. Vasin et al.

Mo 40 I 14 IV-1536

Measurements of ion cyclotron emission and ICRF-driven waves in TFTR.

**First author:** G.J. Greene et al.

Mo 41 I 15 IV-1540

Density fluctuation measurements from microwave scattering on TFTR.

**First author:** R. Nazikian et al.

Mo 42 I 16 IV-1544

Influence of neutron scattering on measured TFTR neutron profiles.

**First author:** J.D. Strachan et al.

Mo 43 I 17 IV-1548

Edge density X-mode reflectometry of RF-heated plasmas on ASDEX.

**First author:** R. Schubert et al.

Th 32 I 18 IV-1552

Measurement of poloidal rotation on ASDEX.

**First author:** J.V. Hofmann et al.

Th 33 I 19 IV-1556

Localized density measurements on ASDEX using microwave reflectometry.

**First author:** M.E. Manso et al.

Th 34 I 20 IV-1560

Tangential soft X-ray/VUV tomography on COMPASS-C.

**First author:** R.D. Durst et al.

Th 35 I 21 IV-1564

A new probe to determine the Mach number of plasma flow in a magnetized plasma.

**First author:** K. Höthker et al.

Th 36 I 22 IV-1568

Reflectometry observations of density fluctuations in Wendelstein VII-AS stellarator.

**First author:** J. Sanchez et al.

Th 37 I 24 IV-1572

On density and temperature fluctuations observed by ECE diagnostics in Wendelstein VII-AS stellarator.

**First author:** H.J. Hartfuss et al.

Th 38 I 25 IV-1576

Fast scanning fiber-multiplexer used for plasma-edge visible spectroscopy on TORE SUPRA. <b>First author:</b> W.R. Hess et al.	Th 39	I 26	IV-1580
Fusion profile measurement on TORE SUPRA. <b>First author:</b> G. Martin et al.	Th 40	I 27	IV-1584
First density fluctuations observations by CO <sub>2</sub> scattering in TORE SUPRA. <b>First author:</b> C. Laviron et al.	Th 41	I 28	IV-1588
Turbulence studies in TJ-1 tokamak by microwave reflectometry. <b>First author:</b> J. Sanchez et al.	Th 42	I 29	IV-1592
X-mode broadband reflectometric density profile measurements on DIII-D. <b>First author:</b> E.J. Doyle et al.	Th 43	I 30	IV-1596
Strongly non-maxwellian electron velocity distributions observed with Thomson scattering at the TORTUR tokamak. <b>First author:</b> C.J. Barth et al.	Th 44	I 31	IV-1600
Microturbulence studies on DIII-D via far infrared heterodyne scattering. <b>First author:</b> R. Philipona et al.	Th 45	I 32	IV-1604
Ion temperature measurements at JET. <b>First author:</b> H.W. Morsi et al.	Th 46	I 33	IV-1608
A simple and sensitive instrument for plasma electron temperature determination. <b>First author:</b> Yu.V. Gott et al.	Tu 27	I 34	IV-1612
Determination of poloidal fields by the peculiarities of elliptically polarised probe wave in tokamak. <b>First author:</b> Yu.N. Dnestrovskij et al.	Tu 28	I 35	IV-1616
Space-time tomography problem for plasma diagnostic. <b>First author:</b> Yu.N. Dnestrovskij et al.	Tu 29	I 36	IV-1620
Electron and ion tagging diagnostic for high temperature plasmas. <b>First author:</b> F. Skiff et al.	Tu 30	I 37	IV-1624

Transient internal probe diagnostic. <b>First author:</b> E.J. Leenstra et al.	Tu 31	I 38	IV-1628
On the possibility of laser diagnostics of anisotropically superheated electrons in magnetic fusion systems. <b>First author:</b> A.B. Kukushkin	Tu 32	I 39	IV-1632
Collective scattering spectra with anisotropic distributions of fast ions and alpha particles. <b>First author:</b> U. Tartari et al.	Tu 33	I 40	IV-1636
Feasibility study of bulk ion temperature measurement on JET by means of a collective scattering of a gyrotron radiation. <b>First author:</b> F. Orsitto	Tu 34	I 41	IV-1640
On the possibilities of spectroscopic measurements of various electric fields and related plasma parameters for tokamak conditions. <b>First author:</b> E. Oks	Tu 35	I 42	IV-1644
Modelling of non-thermal electron cyclotron emission during ECRH. <b>First author:</b> V. Tribaldos et al.	Tu 36	I 43	IV-1648
Physics studies of compact ignition plasmas using neutron measurements. <b>First author:</b> G. Gorini et al.	Tu 37	I 44	IV-1652
The multi-channel interferometer/polarimeter for the RTP tokamak. <b>First author:</b> A.C.A.P.van Lammeren et al.	Tu 38	I 45	IV-1656
Application of function parametrization to the analysis of polarimetry and interferometry data at TEXTOR. <b>First author:</b> B.Ph.van Milligen et al.	Tu 39	I 46	IV-1660
Feasibility of alpha particle diagnostics for the active phase of JET, using Charge Exchange Recombination Spectroscopy. <b>First author:</b> G.J. Frieling et al.	Tu 40	I 47	IV-1664
Polarization rotation and ion Thomson scattering. <b>First author:</b> D.A. Boyd	Tu 41	I 48	IV-1668
A possible electric field measurement by a molecular hydrogen beam. <b>First author:</b> W. Herrmann	Fr 27	I 49	IV-1672

The limitations of measurements of the local wavenumber. <b>First author:</b> A. Carlson et al.	Fr 28	I 50	IV-1676
Ion temperature measurements in the TCA tokamak by collective Thomson scattering. <b>First author:</b> M. Siegrist et al.	Fr 29	I 51	IV-1680
Thomson scattering diagnostics development in FT-I tokamak for the electron temperature temporal variation measurements. <b>First author:</b> M. Yu. Kantor et al.	Fr 30	I 52	IV-1684
In-beam study of ${}^9\text{Be}(\alpha n_1 \gamma){}^{12}\text{C}$ reaction, promising as fast alpha-particle diagnostics in tokamak plasmas. <b>First author:</b> V.G. Kiptilyj et al.	Fr 31	I 53	IV-1688
A high resolution LIDAR-Thomson scattering system for JET. <b>First author:</b> H. Fajemirokun et al.	Fr 32	I 54	IV-1692
Localization of fluctuation measurement by wave scattering close to a cut off layer. <b>First author:</b> X.L. Zou et al.	Fr 33	I 55	IV-1693
Polarization of hard X rays, a contribution to the measurement of the non-thermal electron distribution function (L.H.C.D.). <b>First author:</b> M. Hesse et al.	Fr 34	I 56	IV-1697
The Thomson scattering systems of TORE SUPRA. First results. <b>First author:</b> J. Lasalle et al.	Fr 35	I 57	IV-1701
Differential electron-cyclotron wave transmission for investigation of a lower-hybrid fast tail in the reactor regime. <b>First author:</b> R.L. Meyer et al.	Fr 36	I 58	IV-1705
Diagnostic potentialities of electron cyclotron waves in L.H. current drive experiments. <b>First author:</b> G. Ramponi et al.	Fr 37	I 59	IV-1709
Feasibility of diagnostic of JET LHCD plasmas by means of X-ray crystal spectroscopy. <b>First author:</b> F. Bombarda et al.	Fr 38	I 60	IV-1713
The JET time of flight neutral particle analyser. <b>First author:</b> G. Bracco et al.	Fr 39	I 61	IV-1717

Project of magnetic fluctuation measurement by cross polarization scattering in the TORE SUPRA tokamak. <b>First author:</b> M. Paume et al.	Fr 40	I 62	IV-1721
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## J. BASIC COLLISIONLESS PLASMA PHYSICS

To the theory of Jupiter's decametric S-emission.

**First author:** A.G. Boyev et al.

Mo 115 J 1 IV-1725

On a gas-dynamic description of scattering of a rapid electron cloud in a plasma.

**First author:** V.N. Mel'nik

Mo 116 J 2 IV-1729

Nonequilibrium spectra forming for relativistic electrons interacting with MHD-turbulence.

**First author:** A.E. Kochanov

Mo 117 J 3 IV-1733

Resonant absorption of MHD bulk waves via surface modes.

**First author:** V.K. Okretic et al.

Mo 118 J 4 IV-1737

Nonlinear transparency of underdense plasma layer under the effect of intense circularly-polarized electromagnetic wave.

**First author:** V.V. Demchenko

Mo 119 J 5 IV-1741

Formation and equilibrium of an electron plasma in a small aspect ratio torus.

**First author:** Puravi Zaveri et al.

Mo 120 J 6 IV-1745

Formation of vortices in a toroidal plasma.

**First author:** A.K. Singh et al.

Mo 121 J 7 IV-1749

Arbitrary-amplitude electron-acoustic solitons in a two electron component plasma.

**First author:** R.L. Mace et al.

Mo 122 J 8 IV-1750

The obliquely propagating electron-acoustic instability

**First author:** M.A. Hellberg et al.

Mo 123 J 9 IV-1754

Generation of extraordinary mode radiation by an electrostatic pump in a two electron temperature plasma.

**First author:** S. Guha et al.

Mo 124 J 10 IV-1758

Propagation of electromagnetic waves in a modulated density plasma.

**First author:** M. Lontano et al.

Mo 125 J 11\* IV-1762

\* This paper will also be presented orally on Monday 25 June at 16.00 hrs.

Laser wakefield acceleration in an external magnetic field.

**First author:** P.K. Shukla

Mo 126 J 12 IV-1766

Radiative energy transport in thermonuclear plasmas.

**First author:** S. Puri

Tu 87 J 13 IV-1770

Nonlinear excitation of P-polarized surface wave in anisotropic plasma layer.

**First author:** Sh.M. Khalil et al.

Tu 88 J 14 IV-1774

Non-linear coupling of drift modes in a quadrupole.

**First author:** J.A. Elliott et al.

Tu 89 J 15 IV-1778

A two-dimensional collisionless model of the single-ended Q-machine.

**First author:** S. Kuhn et al.

Tu 90 J 16 IV-1782

Ion-acoustic eigenmodes in a collisionless bounded plasma.

**First author:** S. Kuhn et al.

Tu 91 J 17 IV-1786

Plasma heating by a strong multimode laser field.

**First author:** R. Daniele et al.

Tu 92 J 18 IV-1790

Turbulence and fluctuation induced transport in a double plasma device.

**First author:** M.J. Alport et al.

Tu 93 J 19 IV-1794

Resonant four-wave mixing and phase conjugation in an unmagnetized plasma.

**First author:** N.C. Luhmann, Jr. et al.

Tu 94 J 20 IV-1798

Kinetic vortices in magnetized plasmas.

**First author:** A.G. Sitenko et al.

Tu 95 J 21 IV-1802

Electron-cyclotron waves in non-maxwellian, relativistic plasmas.

**First author:** F. Moser et al.

Tu 96 J 22 IV-1803

Ion cyclotron wave excitation by double resonance parametric coupling.

**First author:** A. Fasoli et al.

Tu 97 J 23 IV-1807

Ion wave excitation for the study of wave-induced transport.

**First author:** T.N. Good et al.

Fr 86 J 24 IV-1811

The sheath formation near an electron absorbing boundary. <b>First author:</b> N. Jelić et al.	Fr 87	J 25	IV-1815
Kinetic description of nonequilibrium plasma fluctuations. <b>First author:</b> O.D. Kocherga	Fr 88	J 26	IV-1819
On the role of anomalous resistivity in a dynamics of plasma switching. <b>First author:</b> A.S. Kingsep et al.	Fr 89	J 27	IV-1820
Kinetic theory on Alfvén solitons in collisional plasmas. <b>First author:</b> Chuan-Hong PAN et al.	Fr 90	J 28	IV-1824
Ion-acoustic rarefactive soliton in two-electron temperature plasma. <b>First author:</b> V.K. Sayal et al.	Fr 91	J 29	IV-1828
Relativistic dispersion functions for anisotropic plasmas. <b>First author:</b> M. Bornatici	Fr 92	J 30	IV-1832
Boundary Larmor radius effects. <b>First author:</b> Jin LI et al.	Fr 93	J 31	IV-1836
Numerical solution of the Vlasov-Maxwell system in the heavy-ion fusion problems. <b>First author:</b> O.V. Batishchev et al.	Fr 94	J 32	IV-1840
Nonstationary self-action of electromagnetic wave beams in the beat accelerator. <b>First author:</b> L.A. Abramyan et al.	Fr 95	J 33	IV-1844
Self-interaction of the magnetohydrodynamic surface waves at the plasma-metal boundary. <b>First author:</b> N.A. Azarenkov et al.	Fr 96	J 34	IV-1848

## K. INERTIAL CONFINEMENT FUSION

Detection of SRS produced electron plasma waves by the use of enhanced Thomson scattering. <b>First author:</b> E.J. Leenstra	Th 83	K 1	IV-1852
Measurements of mass ablation rate and ablation pressure in planar layered targets. <b>First author:</b> F. Dahmani et al.	Th 84	K 2	IV-1856
Heavy-ion driver design for indirect-drive implosion experiments. <b>First author:</b> R.C. Arnold et al.	Th 85	K 3	IV-1860
Nova Program at LLNL. <b>First author:</b> D. Correll et al.	Th 86	K 4	IV-1861
Study of instabilities in long scalelength plasmas with and without laser beam smoothing techniques. <b>First author:</b> O. Willi et al.	Th 87	K 5	IV-1864
Hydrodynamic behavior of the plasma ablation in laser-irradiated planar targets. <b>First author:</b> D.P. Singh et al.	Th 88	K 6	IV-1867
Experimental studies on the mechanism of Mach wave generation. <b>First author:</b> V. Palleschi et al.	Th 89	K 7	IV-1871
Evaluating KrF lasers for ICF applications. <b>First author:</b> D.C. Cartwright et al.	Th 90	K 8	IV-1875
Second harmonic: a versatile diagnostic for laser interaction with underdense plasmas. <b>First author:</b> D. Giulietti et al.	Th 91	K 9	IV-1876
Excitation of sound by electromagnetic pulse in a dense semi-infinite non-isothermal collisional plasma. <b>First author:</b> V.I. Muratov et al.	Th 92	K 10	IV-1880