l

extrapolation to ITER advanced scenarios
Assessments of ITER actuators have been carried out;
   EC system: optimization of launch

empirical Bohm/gyro-Bohm, CDBM, GLF23, MMM08, scaling based models) in various codes (CRONOS, JETTO, TASK, TRANSP, TSC) have been benchmarked with the demonstration discharges. Still more studies would be necessary to find a decent transport model for ramp-up scenario development.

IOS-JA2: Modeling of the ramp

Encourage summary and publication from JEs
IAEA FEC 2012 contributions (5 proposals)

The 8th meeting of the TG will be held in Madrid, Spain, 16th – 19th April 2012.
The 9th meeting of the TG will be held in San Diego, US, 15th – 18th October 2012
(temporal schedule).

Publication list 2008-2011

2008:
"Integrated modeling of steady-state scenarios for ITER: physics and computational challenges",
G. Giruzzi et al., Proc. of 22nd IAEA Fusion Energy Conference (Geneva, Switzerland, Oct.
13-18, 2008), IT/P6-4.
http://www-naweb.iaea.org/napc/physics/FEC/FEC2008/papers/it_p6-

"Prospects for Off-Axis Neutral Beam Current Drive in the DIII-D Tokamak", M. Murakami, et.al., Fusion Sci. and Tech., 54 994-1002 (2008)

"The influence of rotation on the β_N threshold for the 2/1 neoclassical tearing mode in DIII-

" Principal physics developments evaluated in the ITER design review", R.J. Hawryluk, et.al.,
Nucl. Fusion 49 065012 (2009)

" Non

"Absorption of lower hybrid waves in the scrape off layer of a diverted tokamak", G.M. Wallace, et al, Physics of Plasmas 17 (8) 082508 (2010).

"Development of Advanced Inductive Scenarios for ITER", T.C. Luce, et al., Proc. of 23rd IAEA Fusion Energy Conference (Daejon, Korea, 11-16 October 2010), ITR/1-5

"On Maximizing the ICRF Antenna Loading for ITER plasmas", ML. Mayoral, et al., Proc. of 23rd IAEA Fusion Energy Conference (Daejon, Korea, 11-16 October 2010), ITR/P1-11

"Development of ITER Advanced Hybrid and Steady State Scenarios", C.E. Kessel, et.al., Proc. of 23rd IAEA Fusion Energy Conference (Daejon, Korea, 11-16 October 2010), ITR/P1-22

"Impact of the current profile evolution on tearing stability of ITER demonstration discharges in DIII-D", F. Turco and T.C. Luce, Nucl. Fusion 50 095010 (2010)

"Demonstration of ITER operational scenarios on DIII-D", E.J. Doyle, et.al., Nucl. Fusion 50 075005 (2010)

"Experimental simulation of ITER rampdown in DIII-D" P.A. Politzer, et.al., Nucl. Fusion 50 035011 (2010)

"Observation of ELM suppression in hybrid discharges using n = 3 magnetic perturbations on DIII-D" C.C. Petty, et.al., Nucl. Fusion 50 022002 (2010)

"On the roles of direct feedback and error field correction in stabilizing resistive-wall modes", Y. In, et.al., Nucl. Fusion 50 042001 (2010)

"Requirements for active resistive wall mode (RWM) feedback control", Y In, et.al., Plasma Phys. Control. Fusion 52 104004 (2010)

"On the roles of direct feedback and error field correction in stabilizing resistive-wall modes", Y. In, et.al., Nucl. Fusion 50 042001 (2010)

"Stabilization of the external kink and the resistive wall mode", M S Chu and M Okabayashi, Plasma Phys. Control. Fusion 52 123001 (2010)

"On the heating mix of ITER", F Wagner, et.al., Plasma Phys. Control. Fusion 52 124044 (2010)

"Iterated finite-orbit Monte Carlo simulations with full-wave fields for modeling tokamak ion cyclotron resonance frequency wave heating experiments", M. Choi, et.al., Phys. Plasmas 17, 056102 (2010)

2011:
"ECRH-assisted plasma start-up with toroidally inclined launch: multi-machine comparison and perspectives for ITER", J. Stober, et al., Nucl. Fusion, 51, 083031 (2011)
http://iopscience.iop.org/0029-5515/51/8/083031?fromSearchPage=true

"Current ramps in tokamaks: from present experiments to ITER scenarios", F. Imbeaux, et al., Nucl. Fusion 51 083026 (2011)
http://iopscience.iop.org/0029-5515/51/8/083026?fromSearchPage=true

"Experimental investigation and validation of neutral beam current drive for ITER through ITPA Joint Experiments", T. Suzuki, Nucl. Fusion, 51, 083020, (2011)

"Integrated modelling of steady-state scenarios and heating and current drive mixes for ITER", M. Murakami, Nucl. Fusion, 51, 103006 (2011).

"Plasma models for real-time control of advanced tokamak scenarios", D. Moreau, et al., Nucl. Fusion 51 063009 (2011)
http://iopscience.iop.org/0029-5515/51/6/063009?fromSearchPage=true

"Development of the ITER baseline inductive scenario", T. Casper, Nucl. Fusion, 51 accepted for publication (2011).

"Benchmarking ICRF simulations for ITER", R. Budny, et.al, Nucl. Fusion, 51 accepted for publication (2011).

"Advances on modelling of ITER scenarios: physics and computational challenges", G. GIRUZZI et al., Plasma Phys. Contr. Fusion 53, 124010 (2011).
http://iopscience.iop.org/0741-3335/53/12/124010/pdf/0741-3335_53_12_124010.pdf

"Effect of N2, Ne and Ar seeding on Alcator C-Mod H-mode confinement", M.L. Reinke, et al., J. Nucl. Mater. 415, S340-S344 (2011)

"High confinement/high radiated power H-mode experiments in Alcator C-Mod and consequences for International Thermonuclear Experimental Reactor (ITER) $Q_{DT}=10$ operation", A. Loarte, et al., Phys. Plasmas 18, 056105 (2011)

"Power requirements for superior H-mode confinement on Alcator C-Mod: experiments in support of ITER", J.W. Hughes, et al., Nucl. Fusion 51 083007 (2011).

"Lower Hybrid Current Drive at High Density in Alcator C-Mod", G. Wallace, et.al., Nucl. Fusion 51 (2011) 083032.

" Core transport properties in JT