<u>Summary of the activities</u>
Summary of the activities during the period in areas of the group's focus are summarized:

magnetic field (2.65 T), results from codes varied due to poor one-pass absorption. On the other hand, in a He plasma with H minority at half current (7.5 MA) and half magnetic field (2.65 T), it was found that good absorption can be expected with lower frequency. ICRF experimental results were reported from JET and LHD.

presented. Core transport was solved with GLF23, while the edge conditions were extrapolated from the DIII-D experiments. Baseline heating mix at 9 MA gives 90% non-inductive currents at Q = 4.5-5. Thirty different steady state scenarios calculated with different heating mix. ECH or ECH+ICH give at best 75% non-inductive current and Q $\sim$ 4.4, NBCD is really needed for full CD at 9 MA at Q = 5. At 8

## activity:

"Development of ITER Advanced Hybrid and Steady State Scenarios" C. E. Kessel, et.al.

"Plasma Models for Real-Time Control of Advanced Tokamak Scenarios"
D. Moreau, et.al.

## <u>High priority research items for 2010 – 2011</u>

For 2010 – 2011, the IOS-TG has contributions to the following for the high priority research items for the TG, including response to ITER's research needs.

- Joint experiments: Focus on qualifying candidates for ITER scenarios.
- The breakdown, current rise and ramp down of ITER. Joint experiments to be closed. Continue modeling especially on ramp-down.
- Qualify access conditions for advanced inductive and steady-state in joint experiments. Modeling to incorporate the experiment.
- Code benchmark and scenario development of ICRF especially for pre-DT phase.
- Qualify requirement and strategy on integrated control.
- Continue the focused modeling-benchmark activity on ITER Hybrid, current rise and steady state scenarios, using common input data.

The 5<sup>th</sup> meeting of the TG will be held at Seoul, Korea hosted by SNU, 18<sup>th</sup> – 21<sup>st</sup> October 2010.