IOS-1.3 Operation near PLH

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| **TG priority:** Moderate | **Start date:** 2013 | **Status:**  On-going | **Personnel exchange:**  Yes |
| **IO priority:** | **End date:** 2017 | **Motivation:** Plasma Operations | |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Device / Association** | **Contact**  **Persons** | **2016 TG Request** | **Activity (from JEX/JA spreadsheet)** | | | | |
| **2013** | **2014** | **2015** | **2016** | **2017** |
| JET | G. Sips  I. Nunes | Desirable | Committed | Committed | Committed |  |  |
| DIII-D | T. Luce | Desirable | Considering | Analysis | Considering |  |  |
| AUG | J. Stober | Desirable | Committed | Committed | Committed |  |  |
| C-Mod | C. Kessel | Desirable | Considering | Considering | Considering |  |  |
| EAST | ? | Desirable |  |  | Committed |  |  |
| KSTAR | ? | Desirable | Committed | Committed |  |  |  |

**Purpose/Aims**

ITER requires access to burn at input power close to the L-H threshold power levels. The experiments under IOS-1.1 provide data for stationary H-modes. However, the H-mode behaviour, just after the H-mode transition and at N~1.6-1.8 and the impact on access to fusion performance, needs to be documented. The aim of the joint experiments is to:

* + - * Assess the core performance as a function of Pnet/PLH
      * Provide data on ELM behaviour, stored energy evolution and density evolution, the control of the core radiation.
      * Document access conditions (current rise or q-profile) for the operation scenario at Pnet/PLH ~1, including the use of external actuators to provide ELM pacing to improve discharge stationary after the L-H transition if necessary.
      * Document stable exit strategies (from H~1) at low beta
      * Preparation and assessment of the burn control in ITER.

**Results for 2015**

* No results to report?

**Plans for 2016**

* The aim is to write well focused proposals for experiments in JET, AUG and DIII-D for the entry to H-mode with dedicated power and gas scans. Existing data from C-Mod can be analyzed.
* Also EAST and KSTAR would like to contribute data to H-mode operation at low input power.
* The JE will remain open, provided better experimental proposals are written for DIII-D, AUG and JET.