

Abstract Submitted  
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**Simulation of heating and current drive sources for various scenarios of the ITER Research Plan using the IMAS H&CD workflow**  
MIREILLE SCHNEIDER, ITER Organization — The ITER Integrated Modelling & Analysis Suite (IMAS) has been developed to provide a standard and modular framework for supporting scenario preparation and plasma operation through a standardised data model designed to support both simulated and experimental data [1]. One of the most sophisticated physics workflows developed so far in IMAS is for Heating and Current Drive (H&CD) modelling. The IMAS Python H&CD workflow has been developed by the ITER Organization based upon earlier developments carried out within the EU [2]. It can be coupled to any transport solver adapted to IMAS as a natural consequence of using IMAS's standard Interface Data Structures. It can simulate the synergy between H&CD sources and provides a high degree of modularity between various H&CD models including all the heating sources available in ITER, i.e. ECRH, ICRH, NBI and fusion reactions. This enables it to describe all scenarios in the ITER Research Plan. In this work, the modelling results of the H&CD workflow will be presented for the Pre-Fusion Power Operation (PFPO) phase of the ITER Research Plan. [1] F. Imbeaux et al, Nucl. Fusion 55 (2015) 123006 [2] G. Falchetto et al, 26<sup>th</sup> IAEA FEC, Kyoto, Japan (2016)

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