



Contribution ID : 17

Type : **Invited**

Ab initio determination of tungsten ions ionization energies for plasma diagnostic purpose

For modelling calculations and for diagnostics of key tokamak plasma parameters, it is important to know highly accurate atomic data for all stages of ionization of tungsten, with ionization energies at the top of the list. Ionization energies data for tungsten ions collected in the NIST Atomic Spectra Database have varied accuracy, moreover, the reported accuracy of NIST data for some high-ionization states of tungsten may be doubtful. Fully relativistic Multi-Configuration Dirac-Hartree-Fock method with Configuration Interaction has been employed to provide the reference values of ionization energies of tungsten ions with uncertainties substantially reduced comparing to the previous reference values.

Primary author(s) : Dr KAROL, Koziol (IPPLM)

Presenter(s) : Dr KAROL, Koziol (IPPLM)