

3D tokamak Wall description within ITER Integrated Modelling and Analysis (IMAS) framework

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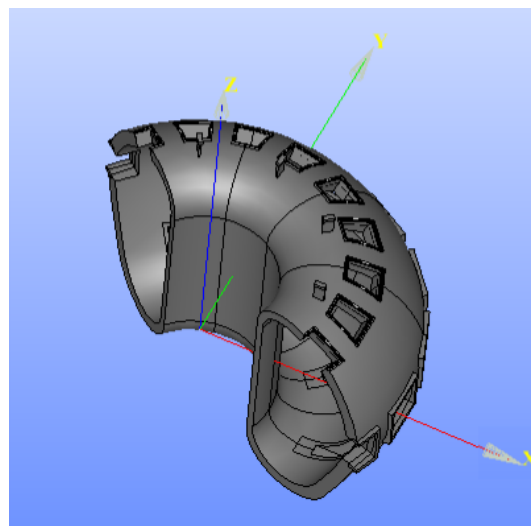
An utility has been developed for storing and accessing ITER fusion device 3D wall grid geometry within the Integrated Modelling Analysis Suite (IMAS) [1], that is being developed and used at the ITER Organization and more widely in the EUROfusion community.

The 3D grid geometry data is being stored in IMAS Interface data structures (IDS) [2] which provide standardised data archival and retrieval together with easier data sharing and distribution. The data can then be accessed and further processed in many post-process simulations and calculations.

The main objective of the “IMAS 3D wall” is to facilitate the access and usage of ITER 3D wall together with ITER grid geometry model by numerical codes, for modelling applications that can span Resistive Wall Mode (RWM) models [3] e.g. the CarMa code [4] or halo-currents modelling codes, or else for other fusion devices.

References

- [1] S. Pinches, 44th EPS Conference on Plasma Physics P4.155, Europhysics Conference Abstracts Vol. 41F ISBN: 979-10-96389-07
- [2] F. Imbeaux, et al, Nuclear Fusion 55 (12), 123006, (2015)
- [3] F. Villone, Y.Q. Liu, Effects of three-dimensional conducting structures on Resistive Wall Models, Theory of fusion plasmas, Varenna, August 2008
- [4] F. Villone, Y. Liu, A. Pironti, G. Rubinacci, S. Ventre, ITER passive and active RWM analysis with the CarMa code, 38th EPS Conference on Plasma Physics (2011)



*See <http://www.euro-fusionscipub.org/eu-im>