

Visible Diagnostics Calibration Workshop

Monday, November 27, 2023 - Wednesday, November 29, 2023

ITER Headquarters

Book of Abstracts

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Welcome

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Factory Acceptance Test - Internal Calibration and Alignment

Objectives: FAT alignment concepts and required tooling, needs from other PBSes, expected difficulties and risk, how to store and use the calibration data records, etc.

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Discussions/exchanges all participants on FAT

Objectives: clarify the installation sequence and associated tolerances affecting the diagnostic tenant and their alignment strategy.

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Tolerance Chains and alignment strategy

Objectives: clarify the installation sequence and associated tolerances affecting the diagnostic tenant and their alignment strategy.

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On-site alignment during integration at Port-Integrator Facility or in the Port Cell

Objectives: how to align optical modules in the PIF, tooling, alignment in the Port Cell, alignment/installation sequence and required inputs from the Port-Integrators, etc.

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Discussions/exchanges all participants on tolerances and on-site alignment

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Recap Day 1

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Calibration during integration and on-site commissioning

Objectives: how to calibrate sub-assemblies during their integration (PIF, PPTF, Port-Cell), Front-to-End calibration (nice-to-have or needed?), tooling (including in the Port-Cell), etc.

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Discussions/exchanges all participants on topic

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Discussions/exchanges all participants on Calibration topic

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Recap Day 2

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Active Alignment during discharges

Objectives: Discussion on active alignment during pulses.

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Raman Scattering for Thomson Scattering diagnostics

Discussion on Raman Scattering calibration by the TS expert community.

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In-vessel Calibration with periodic sources

Objectives: Discuss potential solutions for in-vessel calibration with the use of sources that are introduced in the machine when the VV is vented. Solutions prior AFP (neutron scaffolding) and post AFP (Agile Robot Transporter) will be discussed.

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Discussions/exchanges all participants

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Reference Plasma for Diagnostics Calibration

Objectives: Discussion on the possibility to have referenced plasmas for diagnostic calibration.

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Beam into Gas / Beam into Ohmic discharges

Objectives: Discussion on the possibility to calibrate with beam-into-gas/ohmic discharges in ITER.

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Close-out discussion and Day 3 Recap