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Validation of raw experimental data during shoting at the LIL facility OLIVIER HENRY, VINCENT DOMIN, PHILIPPE ROMARY, DIDIER RAFFESTIN, CEA-CESTA — The LIL (Laser Integration Line) facility at CESTA (Aquitaine, France) is a facility allowing the delivery of 20 kJ at 3ω. The experiment system includes 13 diagnostics. The facility must be able to deliver, within one hour following shoting, all the results of the plasma diagnostics, alignment images and laser diagnostic measurements. These results have to be guaranteed in terms of conformity to the request and quality of measurement. The LIL has developed a tool for the visualisation, analysis and validation of the data. The software is written in the Delphi language for the main body. The configuration is based on XML files. It is thus possible to re-read the external analysis modules in Python (the language used on the future LMJ). The software is built on three pillars: definition of a validation model prior to the campaign, basic physical models to qualify the signal as compliant and exploitable, and inter-comparison of the shoting and signals over a given campaign or period. Validation of the raw plasma data must serve to validate and guarantee performances, assure the conformity of the PD configuration to the request from the client, check the consistency of measurements, trigger corrective maintenance if necessary.

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