

Abstract Submitted
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The LIL Facility: Overview GASTON THIELL, CEA/CESTA/DLP, LIL TEAM — The completion of the “Ligne d’Intgration Laser” (LIL) is a major milestone of the Laser MégaJoule (LMJ) project¹. The LIL Facility has been designed to achieve two main goals: i) act as a prototype beamline to demonstrate LMJ performances, ii) perform applied research into the physics of high temperatures and high densities. We discuss here the results of 1ω and 3ω commissioning shots for one quad of beams (30kJ total energy in 3.5ns at $0.35\mu\text{m}$). The Stimulated Raman Scattering effects in the beam transport path are characterized using spatially shaped pulses and it is shown that the spatial modulation rate and the spot diameter of the best focus meet the LMJ requirements. The LIL quad of beams was focused using focusing diffraction gratings on solid targets for plasma diagnostics commissioning. The advantages of this final focusing system will be highlighted for laser-plasma interaction experiments and preliminary results of plasma experiments will be given.

¹C. Cavailler, N. Camarcat, F. Kovacs and M. Andr, Inertial Fusion Sciences and Applications 2003, September 7-12, 2003, pp. 523-528.

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