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Mode-coupling and 3D effects in Indirect-Drive Rayleigh-Taylor experiments on OMEGA ALEXIS CASNER, G. HUSER, J.-P. JADAUD, S. LIBERATORE, D. GALMICHE, M. VANDENBOOMGAERDE, Commissariat à l'Energie Atomique, Centre DAM Ile de France, BP 12, 91680 Bruyères le Châtel, France — Indirect-Drive Rayleigh-Taylor experiments have been performed on the OMEGA laser facility since 2002 with rugby-ball shaped hohlraums [1]. A set of consistent data has been acquired for different single mode wavelengths (λ = 35, 50 and 70 μm) machined on brominated and germanium-doped samples. Hohlraum energetics was characterized by Dante measurements through the LEH while complementary shock breakout measurements or side-on radiography allow us to assess the x-ray flux incident on the wall-mounted sample. We recently address the problem of mode-coupling by comparing the growth of 2-mode patterns (λ = 35 and 70 μm), either in phase or in opposite phase. Depending on phase one or the other wavelength becomes predominant. Comparison between the FCI2 code calculations and the experimental data will be shown. We will also compare the experimental growth of 3D pattern (70 μm * 70 μm) with the equivalent 2D (λ =50 μm) one.

[1] A. Casner *et al.*, Proceedings of the 4^{th}IFSA Conference, Biarritz (2005).

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