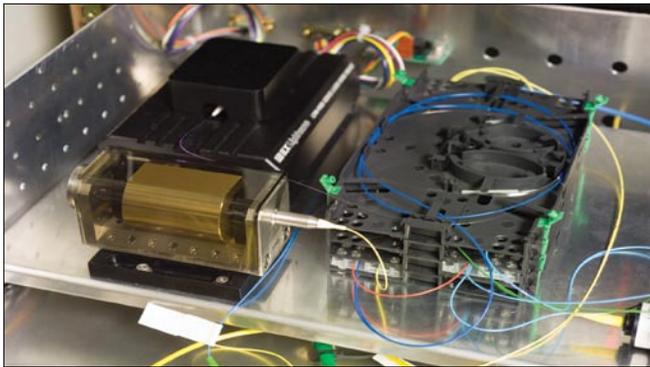


## About the Cover:



The front cover shows LLE scientist John Marciante and LLE engineer Rick Roides with the integrated front-end sources (IFES) for each of the four driverlines on the OMEGA Laser System. IFES is a rack-mounted, front-end seed source that was developed at LLE for the OMEGA and OMEGA EP Laser Systems. This laser source generates an optical pulse in the 100-pJ range using a compact, stable, single-frequency fiber DFB laser, dual lithium niobate amplitude modulators, and a high-gain polarization-maintaining fiber amplifier. A single rack-mounted box contains the amplitude modulators, the LLE-built fiber amplifier, and custom LLE control electronics, as shown in the photo at the top left, and is driven by software written at LLE (ACSL v2). The key to the success of this system is the high-gain fiber amplifier, as shown in the bottom left photo. This amplifier was developed at LLE and is detailed in the article beginning on p. 63. Without any adjustable alignment, the IFES system has demonstrated high stability, turn-key operation, and low maintenance. IFES has contributed significantly to the stability of the OMEGA front end, and thus has helped provide higher reliability in the generation and reproducibility of shaped pulses on OMEGA.

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