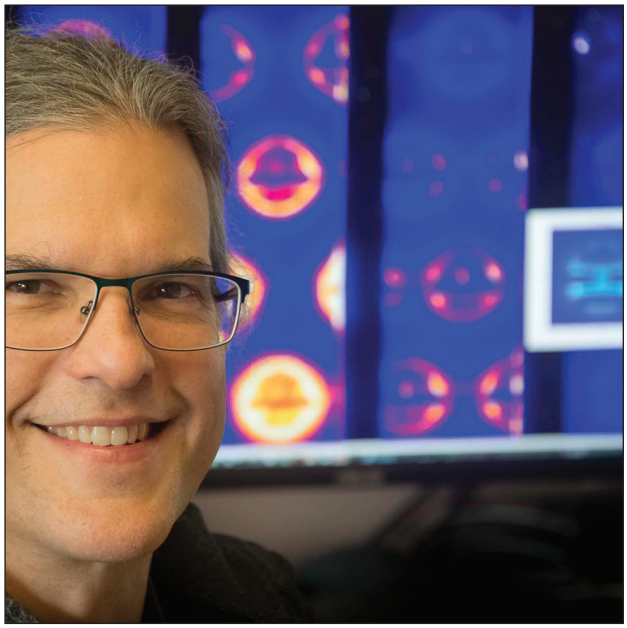
About the Cover:

The backlit radiograph images on the front cover are simulated and experimental results from recent National Ignition Facility (NIF) experiments that demonstrated the proof-of-principle concept using the wavelength-detuning cross-beam energy transfer (CBET) mitigation scheme. A technique called cone-swapping was employed on the southern hemisphere to induce the required wavelength difference from each hemisphere about the equatorial region (where the majority of CBET occurs in polar direct drive) using the current NIF configuration. Shown in the top row are the results from this configuration when zero wavelength detuning was used; this sets the baseline measurement for reference. The images in the bottom row result when wavelength detuning was enabled with a ±2.3-Å UV detuning. An observable change in the morphology and shell trajectory of the equatorial region was not only predicted but observed experimentally, validating the *DRACO* simulations and demonstrating the wavelength-detuning CBET mitigation scheme. The small amount of detuning currently available on the NIF (±2.3 Å UV) represents only the beginning of foreseeable CBET mitigation benefits since it is predicted that NIF laser amplification can achieve full power at ±6 Å UV with changes only to the front and back ends of the entire chain.



The photo to the right shows J. A. Marozas and another set of simulated and experimental self-emission images showing good agreement in the background. Those self-emission images show the predicted and measured shell morphology as well as the self-emitting core that is consistently observed only when wavelength detuning is enabled.

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