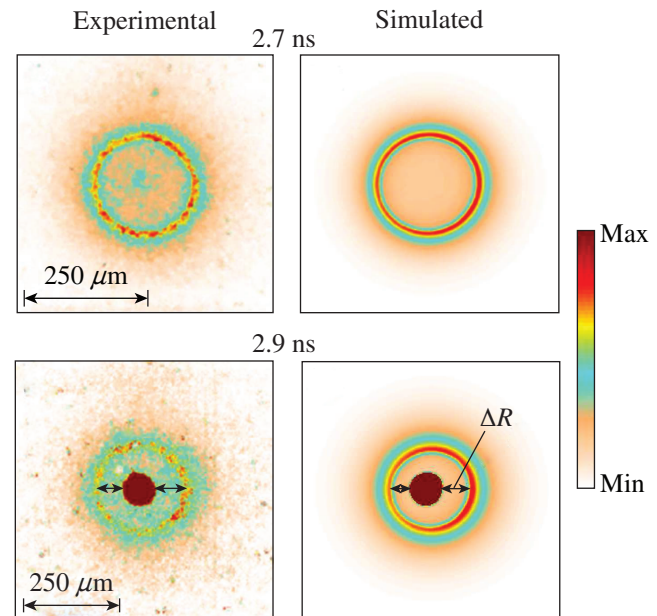


About the Cover:

The cover photo shows LLE Scientist Dr. Igor Igumenshchev in front of the LLE cluster Typhoon. He developed a three-dimensional Eulerian, radiation–hydrodynamics code, known as *ASTER*, to model the implosion of spherical targets. Typhoon is the latest cluster to be installed at LLE, with over 5000 cores, 50 TB of memory, and interconnected with an EDR (Enhanced Data Rate) Infiniband, providing the computational power necessary to run large codes such as *ASTER*.

ASTER can use the measured pointing and power history of each of the 60 OMEGA beams, the measured target offset, the measured target thickness as a function of position, and can include the target stalk in a full three-dimensional simulation of an individual OMEGA target shot. Shown to the right are experimental and simulated x-ray self-emission images for OMEGA shot 79638 at 2.7 ns and 2.9 ns, showing the ability of the code to reproduce experimental results.



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