



FRONTIERS IN OPTICAL COHERENT AND ULTRAFAST SCIENCE

A NATIONAL SCIENCE FOUNDATION PHYSICS FRONTIER CENTER AT
THE UNIVERSITY OF MICHIGAN AND THE UNIVERSITY OF TEXAS AT AUSTIN

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A new tool “nugget” from FOCUS:
Lambda Cubed Laser-based x-rays
G. Mourou and J.Nees

Here a Mo target is illuminated at 10^{18} W/cm² and generates a few-micron-dimension source with 17.5 keV x-ray intensities above 10^{11} W/cm².

The geometry shown provides 80X magnification. Femtosecond x-ray emission times are clearly expected based on the reduced spot-size.

The relativistic λ^3 laser creates the world's smallest laser-based x-ray source with femtosecond bursts of hard x-rays for precision imaging.

