

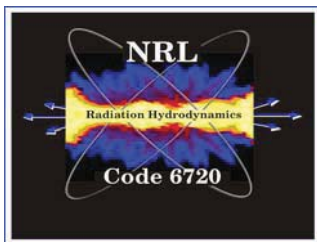
# RADIATION

# HYDRODYNAMICS BRANCH

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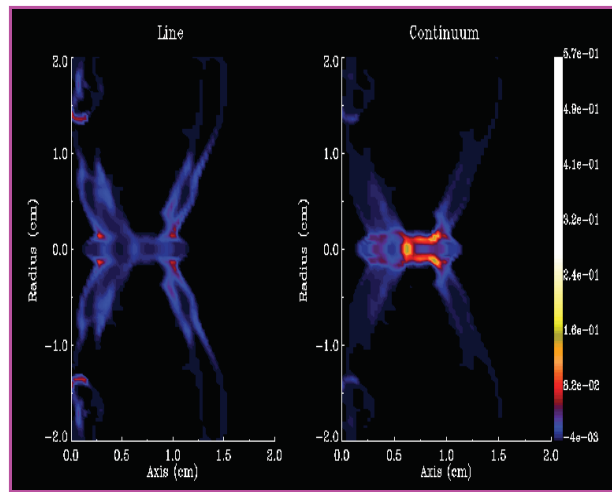
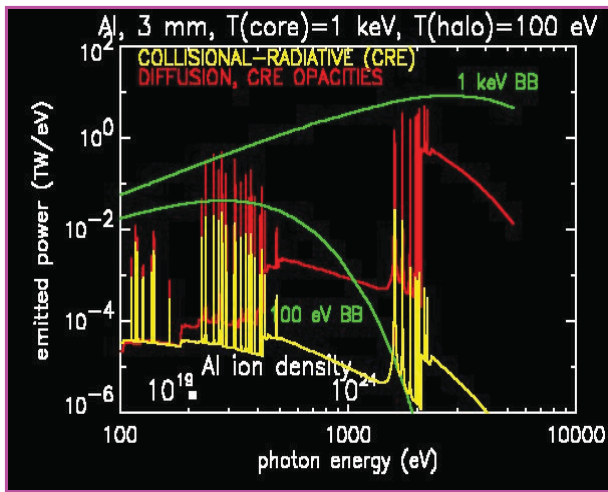
Basic and applied research is carried out in intense radiation source development, ultra short wavelength lasers, dense plasma physics, atomic physics, plasma spectroscopy, and nuclear weapons effects simulations. The principal emphasis is in the development and application of theoretical models and state-of-the-art numerical simulations



combining magnetohydro- dynamics, ionization dynamics and radiation physics. In addition, the program has scientific collaborations with theoretical and

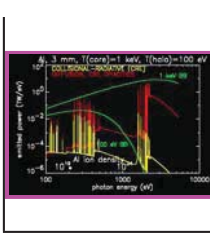
experimental groups inside and outside of NRL in the areas of: x-ray production from pulsed power driven and laser produced plasmas, radiation transport and hydrodynamic flows, electrical physics of power flow and opening switches, x-ray laser modeling and design, physics and dynamics of electromagnetic launchers, plasma arc torch processing of shipboard wastes, z-pinch physics, basic atomic and radiation physics, equation-of-state physics, theory of strongly coupled and degenerate plasmas, and strong field effects on gain, radiative emission, and fundamental atomic phenomena.

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## RESEARCH ACTIVITIES

	<h1><u>Atomic Physics</u></h1>
	<h1><u>Z-pinch Physics</u></h1>
	<h1><u>Laser Physics</u></h1>
	<h1><u>Lighting Concepts</u></h1>



# Radiation Transport

## NRL LINKS

- [Plasma Physics Division](#)
- [Naval Research Laboratory](#)