

Abstract Submitted
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VISRAD, 3-D Target Design and Radiation Simulation Code.
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Prism Computational Sciences (United States) — The 3-D view factor code VISRAD
is widely used in designing HEDP experiments at major laser and pulsed-power fa-
cilities, including NIF, OMEGA, OMEGA-EP, SLAC, ORION, LMJ, Z, and PLX. It
simulates target designs by generating a 3-D grid of surface elements, utilizing a vari-
ety of 3-D primitives and surface removal algorithms, and can be used to compute the
radiation flux throughout the surface element grid by computing element-to-element
view factors and solving power balance equations. Target set-up and beam pointing
are facilitated by allowing users to specify positions and angular orientations using
a variety of coordinates systems (e.g., that of any laser beam, target component,
or diagnostic port). Analytic modeling for laser beam spatial profiles for OMEGA
DPPs and NIF CPPs is used to compute laser intensity profiles throughout the grid
of surface elements. We will discuss recent improvements to the software package
and plans for future developments.

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