

Abstract Submitted
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**Simulation of Wire-Array Z Pinches with ALE-
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CHRISTINE COVERDALE, CHRIS DEENEY, CLINT HALL,
THOMAS HALL, BRENT JONES, PAUL LEPELL, BRYAN
OLIVER, DANIEL SINARS — Wire-array z pinches provide the x-ray
radiation drive for Inertial Confinement Fusion Experiments at San-
dia National Laboratories. A physical understanding of the physics of
wire-array z pinches is important in providing a future radiation source
capable of driving high-yield fusion capsules. Modeling of wire-array im-
plosions on the Z machine were performed using the 2-D radiation MHD
code Alegra. These new calculations use more accurate initial condi-
tions that are more representative of the experimental data, allowing us
to model the implosion through stagnation, to avoid radiation collapse,
and to generate a radiation pulse that compares well with data. Code
predictions will be compared with tungsten & aluminum wire-array data
from Z.

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