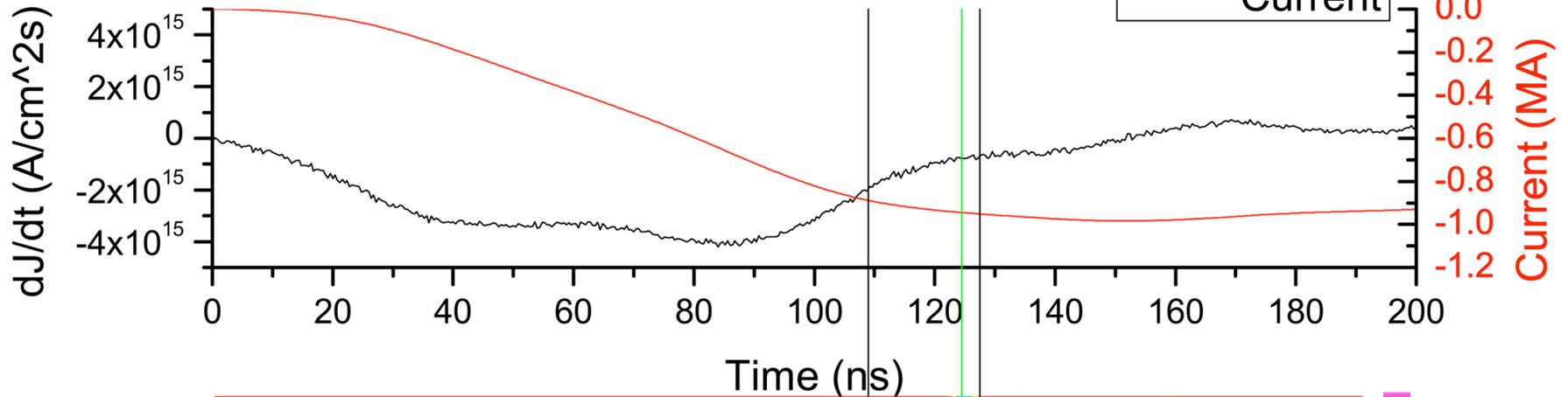


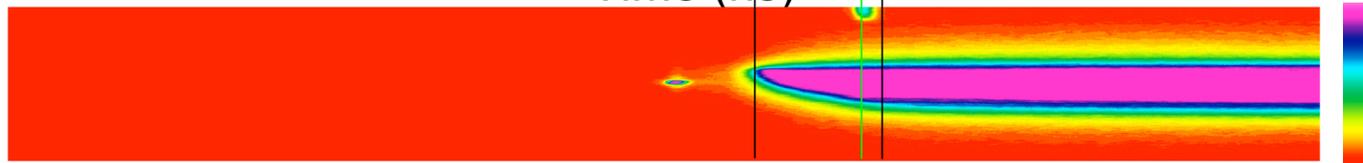
Sample Data: Thick Liner

2139: 23.5 micron

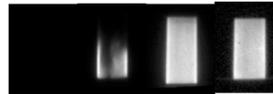
— dJ/dt
— Current



Cathode Slit:

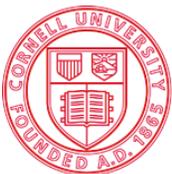


QC1:



QC2:

(no data on QC2)



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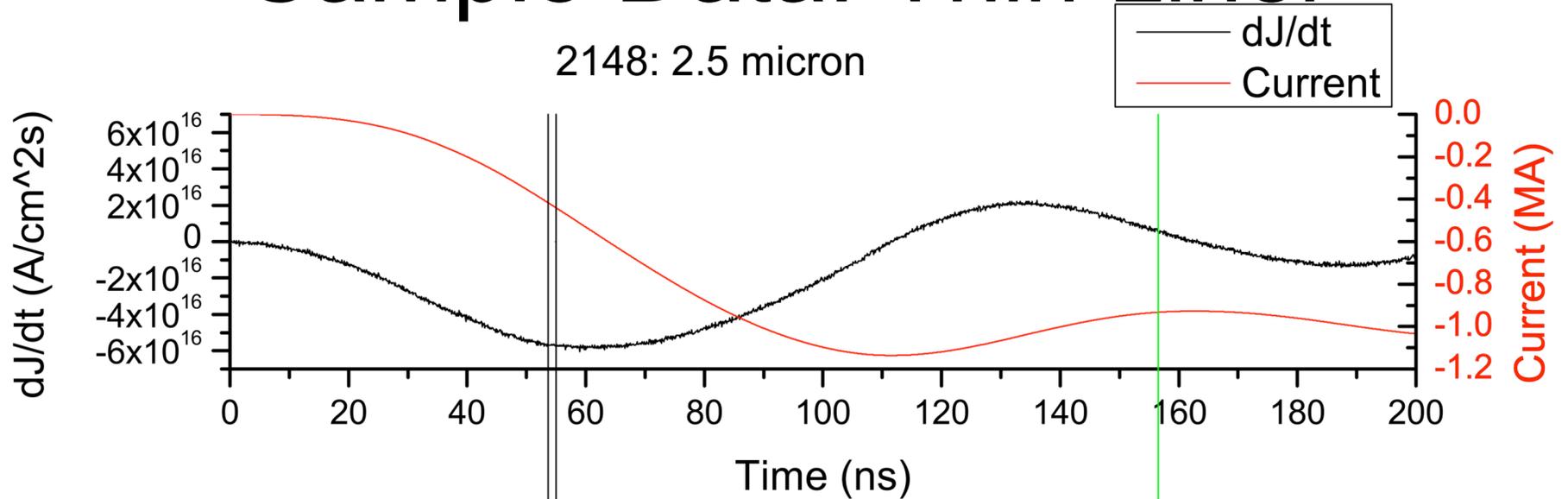
Sandia
National
Laboratories

NNSA
National Nuclear Security Administration

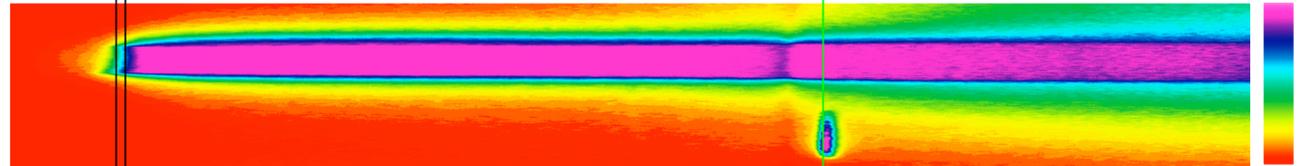


Sample Data: Thin Liner

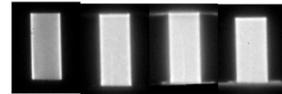
2148: 2.5 micron



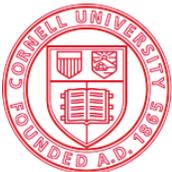
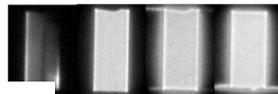
Anode Slit:



QC1:



QC2:



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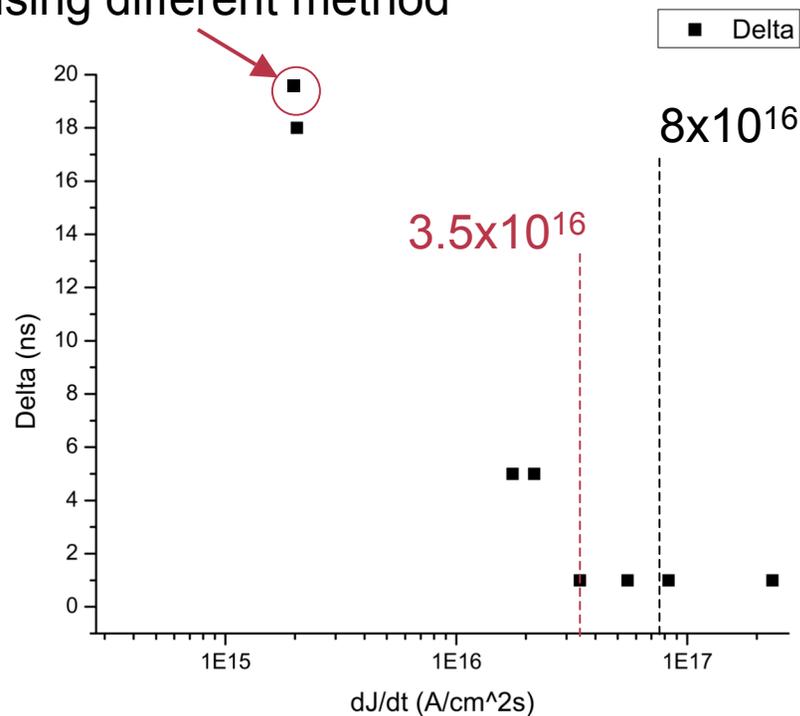


National Nuclear Security Administration

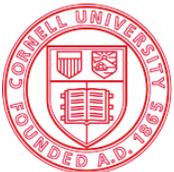


Compiled Data

data point analyzed
using different method



- At $>3.5 \times 10^{16}$ $A/cm^2/s$, liners initiate nearly instantly
- Good agreement with SCORPIO results
- XUV images show same trend, but slightly earlier light (more sensitive, but without continuous recording)



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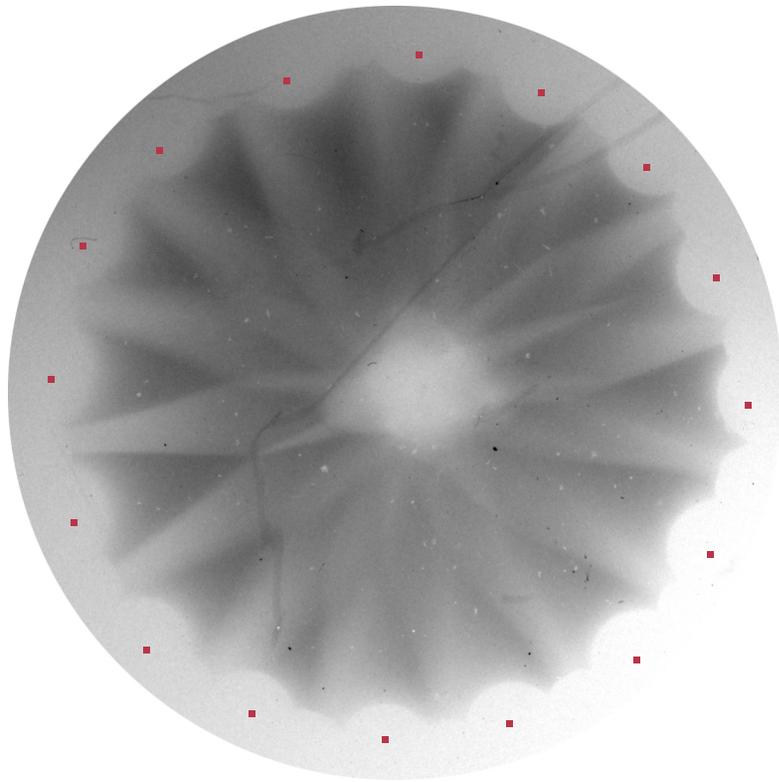


Wire Arrays vs. Solid Liners

r - θ density profiles

16x75- μm Cu, 4-mm diameter

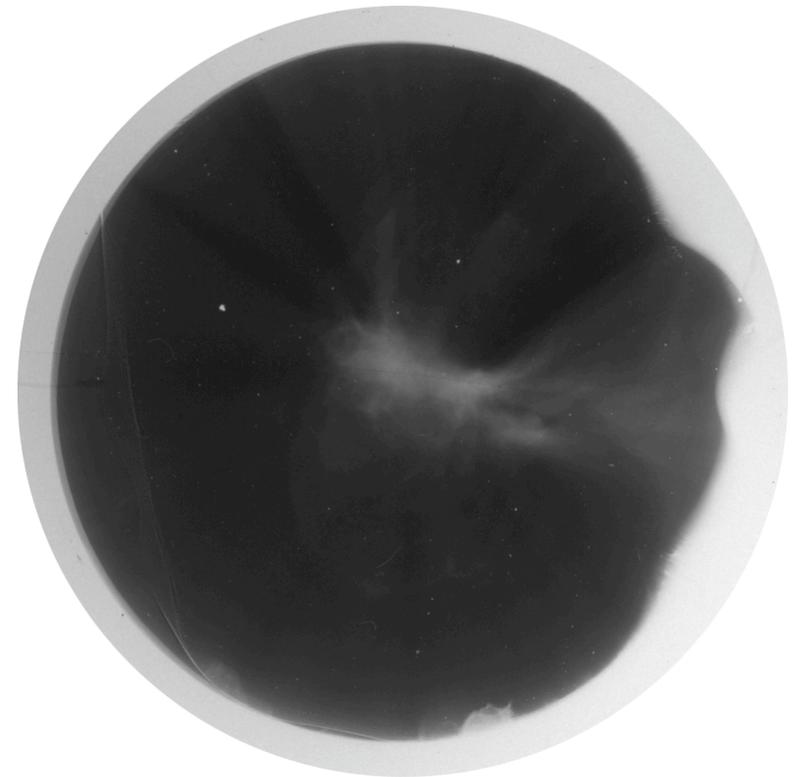
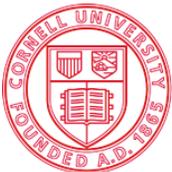
6- μm Cu foil, 4-mm diameter



$t=115$ -ns

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$t=134$ -ns

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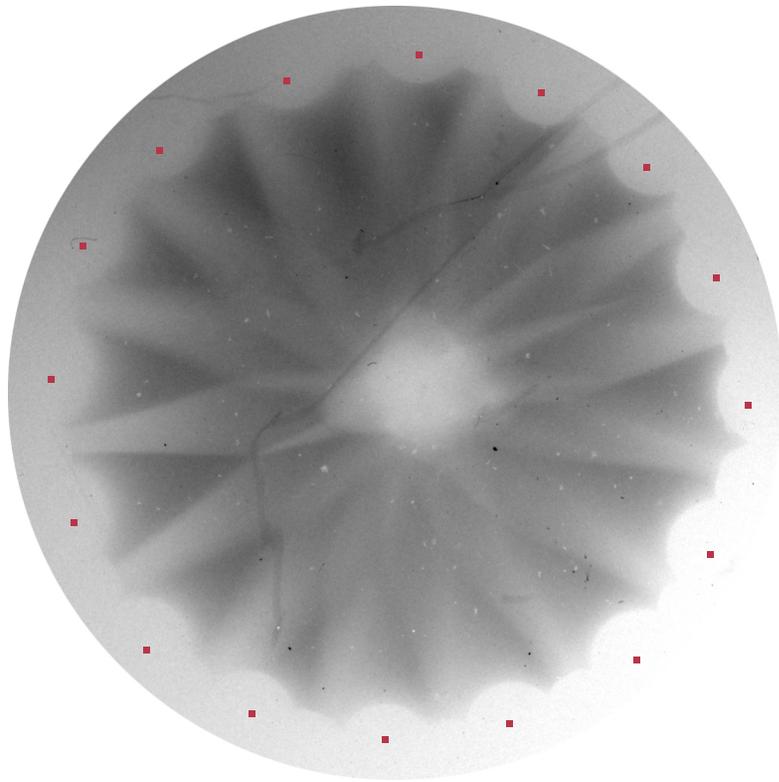


Wire Arrays vs. Solid Liners

r - θ density profiles

16x75- μm Cu, 4-mm diameter

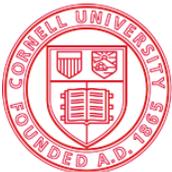
6- μm Cu foil, 4-mm diameter



$t=115$ -ns

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$t=128$ -ns

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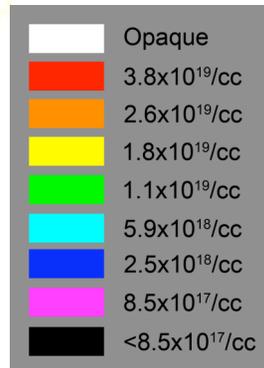
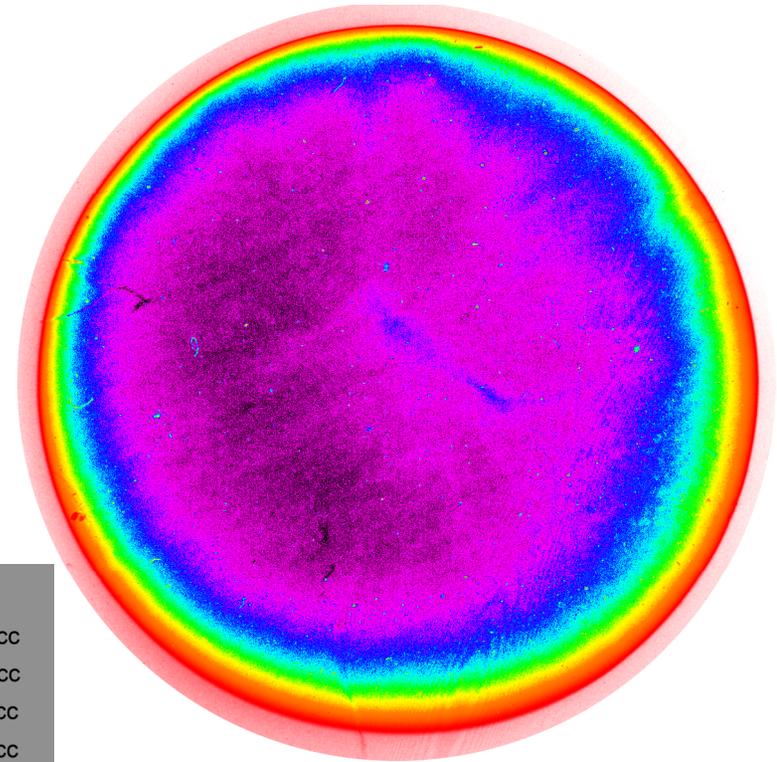
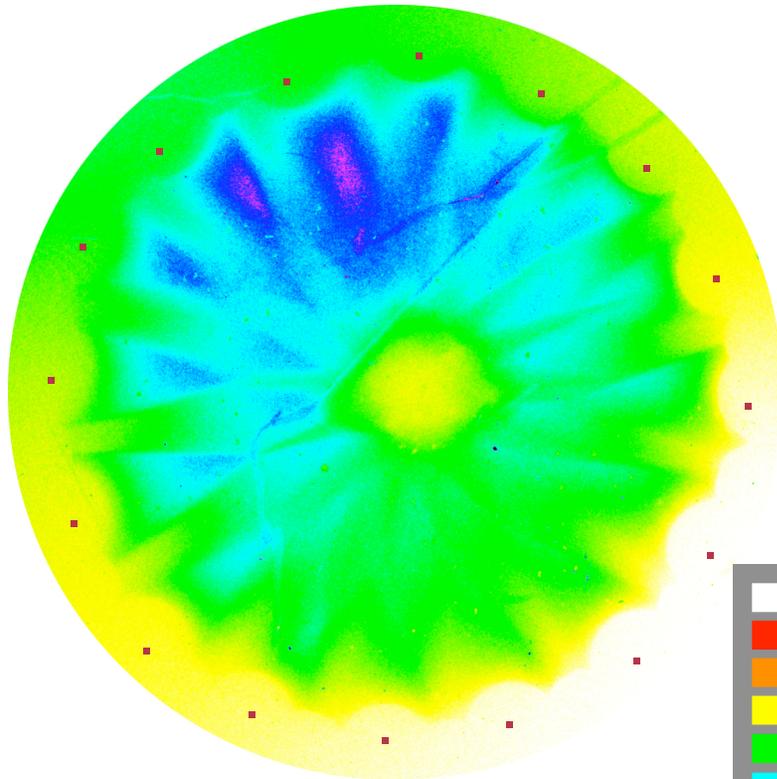


Wire Arrays vs. Solid Liners

r- θ density profiles

16x75- μm Cu, 4-mm diameter

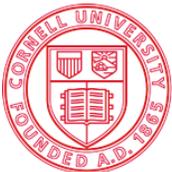
6- μm Cu foil, 4-mm diameter



t=115-ns

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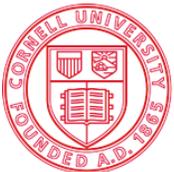
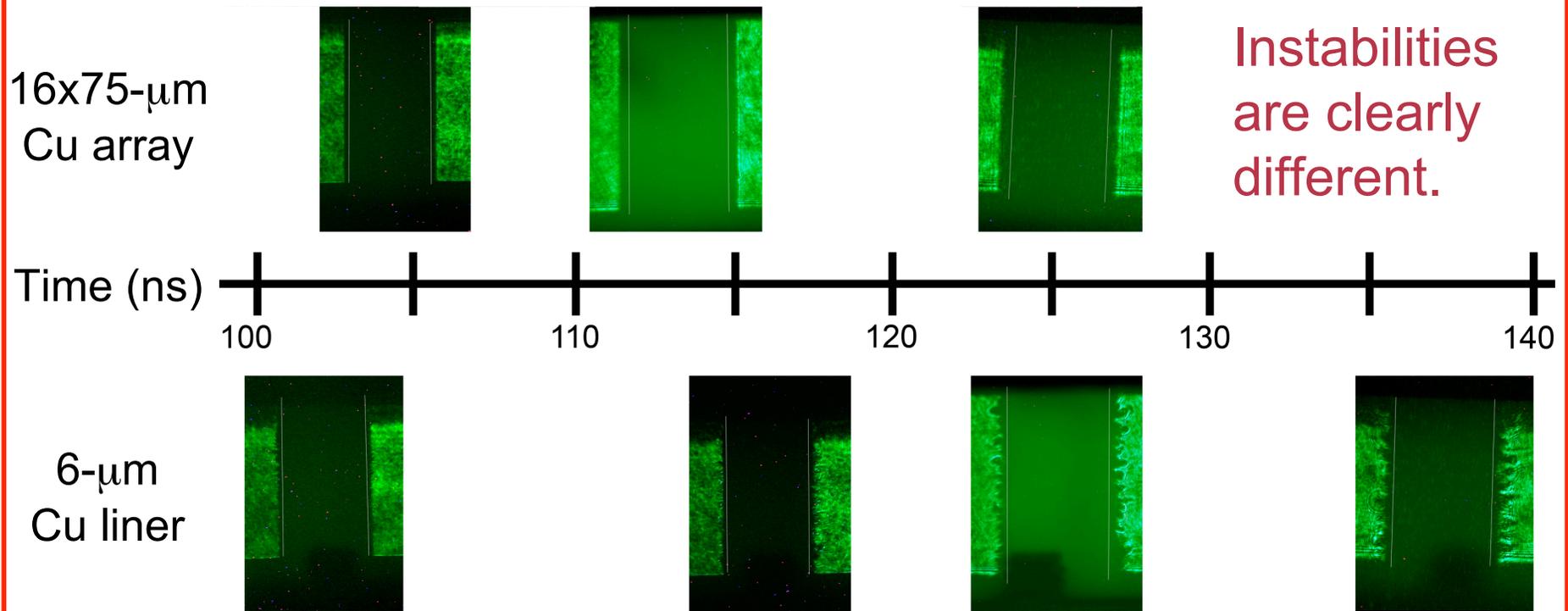


t=128-ns

NNSA
National Nuclear Security Administration



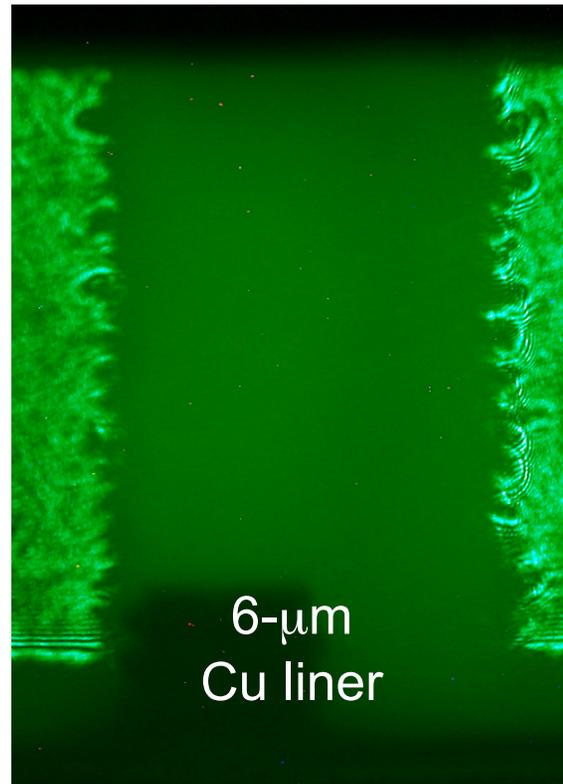
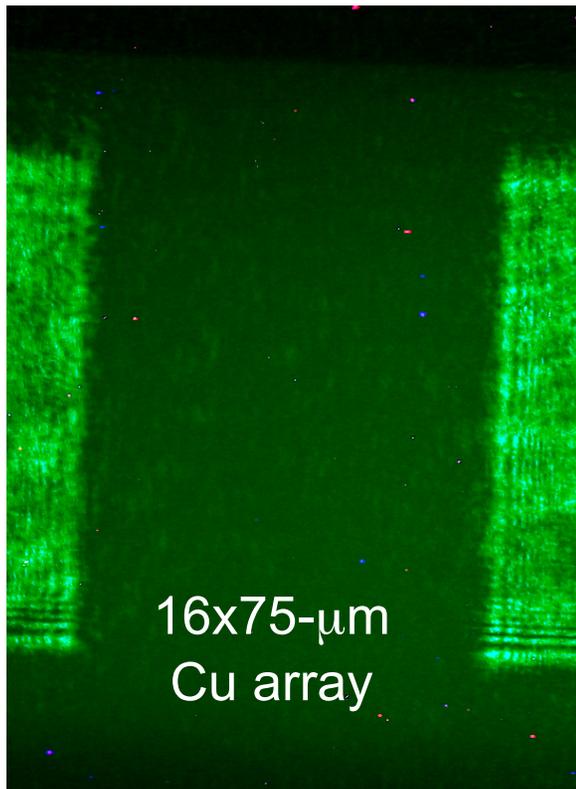
Wire Arrays vs. Solid Liners Instability Growth



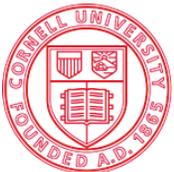
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Wire Arrays vs. Solid Liners Instability Growth



Instabilities
are clearly
different.

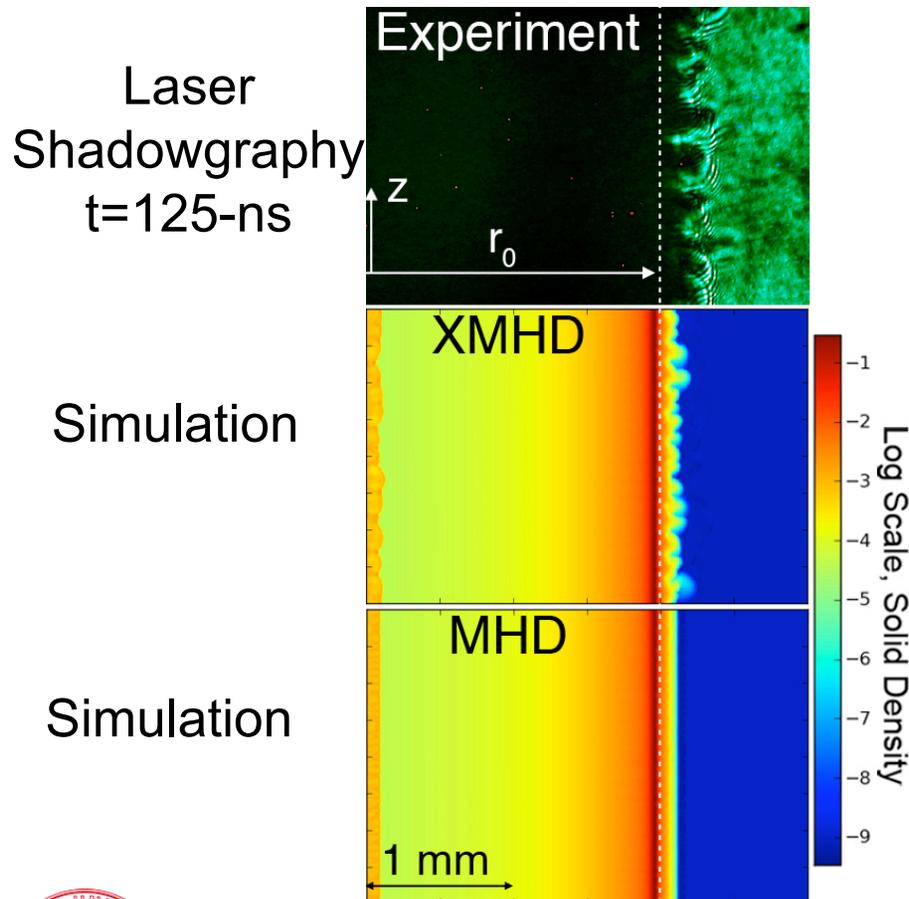


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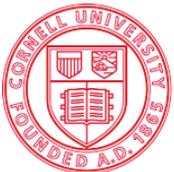


Outward Instability of Solid Liners

Comparisons to PERSEUS



- XMHD simulations are able to qualitatively reproduce the instability
 - MHD simulations do not reproduce the instability
- Outward instability is **NOT** Magnetic Rayleigh-Taylor



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