

ZFSW 2025 Breakout Session

Theory and Computation / Data Science and Machine Learning

Wednesday (Aug. 6th)

(15:30—16:00) **Kyle Cochrane**, SNL: *Multiphase equations of state, multiphysics codes, and multi-headaches*

(16:00—16:30) **Ray Clay**, SNL: *Spin-orbit quantum Monte Carlo for heavy element equations of state*

(16:30—17:00) **Jeff Woolstrum**, SNL: *FLEXO simulations of a new combined stability platform for Z-Pinch ICF*

(17:00—17:30) **Gabe Shipley**, LANL: *Simulated performance enhancement for current-scaled MagLIF target implosions enabled by dynamic screw pinches*

Thursday (Aug. 7th)

(13:30—14:00) **Bekah White**, SNL: *An introduction to using Next Generation Workflows to optimize MagLIF target design*

(14:00—14:30) **Nat Hamlin**, SNL: *Sensitivity analysis of flyer modeling in the FLEXO extended-MHD code*

(14:30—15:00) **Dale Welch**, VOSS Scientific: *CHICAGO simulation capabilities for pulsed power and target design*

(15:00—15:30) **Nicki Bennett**, SNL: *Physics models for Z power flow simulations*

(15:30—16:00) **Julian Kinney**, University of Michigan/SNL: *Bremsstrahlung in strongly coupled plasmas*

Friday (Aug. 8th)

(09:00—09:30) **Josh Leveillee**, LANL: *Utilizing first principles calculations to map the equation of state of chromium: low temperature magnetic phases through warm dense matter*

(09:30—10:00) **Ember Salas**, SNL: *Investigating phase changes on Z with atomistic material models*

(10:00—10:30) **Minh Nguyen**, SNL: *Comparing first-principles computational methods for electrical conductivity: time-dependent density functional theory versus Kubo-Greenwood*

(10:30—11:00) **Tom Gardiner**, SNL: *Hydrodynamic simulations and the vapor dome*

Time (MST)	Wednesday (Aug. 6)	Thursday (Aug. 7)	Friday (Aug. 8)
09:00			Josh Leveillee
09:30			Ember Salas
10:00	Break	Break	Minh Nguyen
10:30			Tom Gardiner
11:00			Free
11:30			Lunch
12:00	Lunch	Lunch	
12:30			
13:00			End
13:30		Bekah White	
14:00		Nat Hamlin	
14:30		Dale Welch	
15:00	Break	Nicki Bennett	
15:30	Kyle Cochrane	Julian Kinney	
16:00	Ray Clay	Poster Setup	
16:30	Jeff Woolstrum	Poster Session	
17:00	Gabe Shipley		
17:30	End		
18:00			
18:30		End	