

Panel Discussion

Objective: To help researchers calibrate their codes to model LPP Plasmas for EUV and soft X-ray sources.

What are we trying to model? Tin LPP

$\lambda = 2 \mu\text{m}$ laser irradiation of tin microdroplets and/or slab targets

Simulation parameters:

- $\lambda = 2 \mu\text{m}$
- Droplet diameter: **25 μm** and 50 μm
- Temporal profile: Box shape, **10 ns** duration
- Spatial profile: Gaussian having a beam waist ($1/e^2$) of **100 μm**
- Laser power densities: **5 - 1, 0.5, 0.1 and 0.05** $\times 10^{10}$ W/cm²

Output quantities:

- **Time- and space-dependent *electron and/or ion densities*.**
- **Time- and space-dependent *electron temperatures*.**
- **EUV spectra and conversion efficiencies.**

What are we trying to model? Tin LPP

$\lambda = 2 \mu\text{m}$ laser irradiation of tin microdroplets and/or slab targets

Simulation parameters:

- $\lambda = 2 \mu\text{m}$
- Droplet diameter: **25 μm** and 50 μm
- Temporal profile: Box shape, **10 ns** duration
- Spatial profile: Gaussian having a beam waist ($1/e^2$) of **100 μm**
- Laser power densities: **5 - 1, 0.5, 0.1 and 0.05** $\times 10^{10} \text{ W/cm}^2$

Next year:

Experimental data will be provided to assist in benchmarking simulations.

What experimental parameters? Who will provide data? Spectra?

What are we trying to model? Tin LPP

$\lambda = 2 \mu\text{m}$ laser irradiation of tin microdroplets and/or slab targets

Simulation parameters:

- $\lambda = 2 \mu\text{m}$
- Droplet diameter: **25 μm** and 50 μm
- Temporal profile: Box shape, **10 ns** duration
- Spatial profile: Gaussian having a beam waist ($1/e^2$) of **100 μm**
- Laser power densities: **5 - 1, 0.5, 0.1 and 0.05** $\times 10^{10} \text{ W/cm}^2$

Next year:

We should define a set of **fundamental atomic data** to be used in the simulations (ensures meaningful comparisons between simulations).

What data should be used? Level of detail required? Opacity data?