

# The 12th Omega Laser Facility Users Group Workshop

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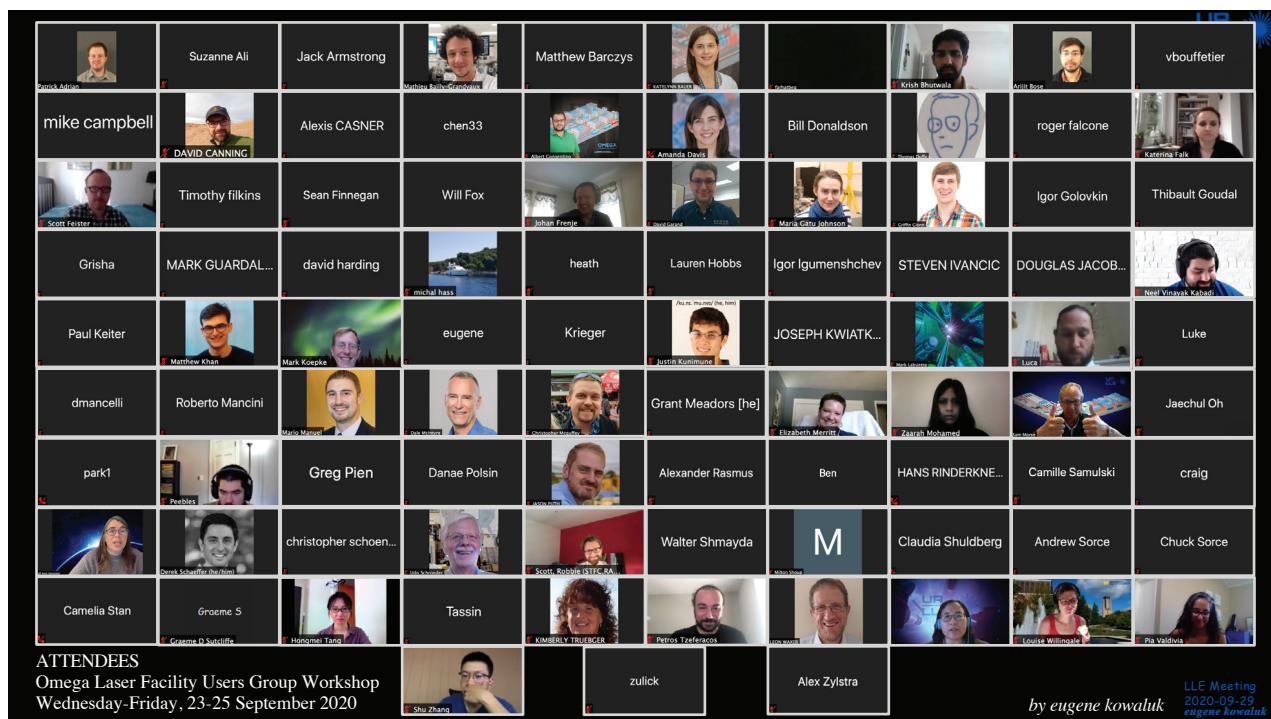
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LLE hosted a virtual meeting for the Omega Laser Facility User Group (OLUG) 23–25 September 2020 with more than 90 participants from 27 institutions (see Fig. 1). The objective of this meeting was the development of Findings and Recommendations (F&R's) to improve facility capabilities and user experience/effectiveness. The first day of the meeting began with two facility presentations: “Omega Facility Updates” (including LLE responses to the 2019 OLUG F&R's) and “Omega RemotePI Operation,” (a comprehensive description of the RemotePI capability developed during the pandemic lockdown in Q3). Over the three days (two hours each day), OLUG members discussed and developed a list of 23 new F&R's. A few highlights include:

- Automated online access to post-processed neutronic data through the Omega operation webpage.
- A dedicated gas-jet nozzle characterization station to measure the plasma density for each specific nozzle used to create targets for experiments.
- Enhanced VISAR (velocity interferometer system for any reflector)/SOP (streaked optical pyrometer) capability, including its implementation in an additional ten-inch manipulator (TIM) on OMEGA EP to allow simultaneous shock pressure and x-ray diffraction measurements.
- A new TIM-based particle spectrometer that works in an intense x-ray background.
- Enhanced pulse-shaping capability to flexibly control/correct the as-shot laser pulse shapes on OMEGA.
- Longer pulse durations on OMEGA EP (UV beams) for studying photoionized plasmas, laboratory astrophysics, and high-energy-density hydrodynamics.
- A dedicated short-pulse beam (i.e., not sourced from OMEGA EP) on OMEGA for ultrafast diagnostics and short-pulse interaction physics in the OMEGA chamber (a longer-term development project).

On the last day of the meeting, Mingsheng Wei gave an update on the Omega Basic Science Program and Ann Satsangi described the NNSA perspectives and gave an update on Academic Programs.

The next OLUG Workshop with a full meeting agenda including poster sessions will be held virtually 27–30 April 2021.



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Figure 1  
 2020 OLUG virtual meeting attendees.