

Fiber Laser Grand Challenge (FLGC)



Sandia National Laboratories

PI: Jeff Keylor PM: Wen Hua

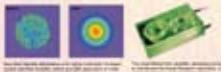
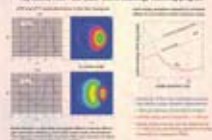


Figure 1. Sandia National Laboratories' Fiber Laser Grand Challenge (FLGC) program is a multi-physics, multi-scale, multi-disciplinary effort to develop a fiber laser system that is capable of generating a high-power, high-quality, high-stability laser beam.

Primary objectives of Sandia's Fiber Laser Grand Challenge

1. Develop a high-power fiber laser system that is capable of generating a high-quality, high-stability laser beam.
2. Demonstrate a high-power fiber laser system that is capable of generating a high-quality, high-stability laser beam.
3. Demonstrate a high-power fiber laser system that is capable of generating a high-quality, high-stability laser beam.

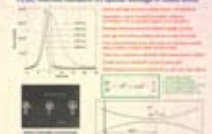
Key results from Fiber Laser Grand Challenge modeling program



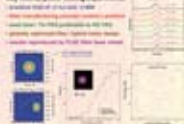
Fiber laser modeling software developed under FLGC



FLGC research identifies an optical design for fiber lasers



Key results power scaling experiments



Key FLGC research through characterization of the air seeding problem



Development of all-fiber substrate detector diodes



Development of experimentally verified laser combining techniques

