

## **Laser Synchronization for the LCLS XFEL**

The Linac Coherent Light Source (LCLS) at the SLAC National Accelerator Lab requires many short pulse lasers to be synchronized to the XFEL on the scale of femtoseconds. This is accomplished in several ways, by locking to the electron beam arrival time after the undulator, or to the accelerator RF system. We discuss several of the tools used, and some of the lessons learned in the process.

**Primary author:** SMITH, Stephen R. (SLAC National Accelerator Lab)

**Co-authors:** FRISCH, Josef (SLAC National Accelerator Lab); MAY, Justin (SLAC National Accelerator Lab)

**Presenter:** SMITH, Stephen R. (SLAC National Accelerator Lab)