

**Thursday, 19 January 2017, 14:00**

Campus Schenefeld, Main building (XHQ), Room E1.173

## Zachary Wolf

SLAC

### Plans for an Helical Afterburner at LCLS II

SLAC is presently designing three Delta undulators to be placed at the end of the soft x-ray line of LCLS-II and which will collectively give intense elliptical polarization. We were alerted by the Swiss Light Source that the K value in EPU's can have a strong position dependence, and this has a big impact on the design of the undulators and their alignment tolerances. I will discuss an analytic calculation describing this position dependence of K and the consequences for the undulator design. I will also discuss assembly tolerances on the Delta undulators in order to minimize phase errors. Finally, I will discuss our LCLS-II measurement plans including fitting K vs gap, the phase matching algorithm to set the phase shifter, radiation damage measurements in the tunnel, and how we will deal with the Earth's magnetic field.

**Host: Joachim Pflüger**

