



# COLLOQUIUM IN PHYSICS AND ASTRONOMY

## X-RAY LASER

### The Linac Coherent Light Source

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**Tuesday, 5 Dec. at 15.15**

**Lecture Hall B, Physics Department**

The free-electron laser was first invented and developed in the early 60s. At that time wavelengths were limited to the infrared. This limitation was slowly lifted as improvements were made in electron beam quality, magnet systems, and optics. Today it appears possible to build and operate a free-electron laser at x-ray wavelengths and indeed one is being constructed at the Stanford Linear Accelerator Center (SLAC) in California. The speaker will present a brief history of synchrotron light sources and free-electron lasers. This will be followed by an introduction to free-electron lasers and the requirements that must be met to reach x-ray wavelengths. Finally some details of the Linear Coherent Light Source (LCLS) project at SLAC will be given.

**These Colloquia are aimed at students, teachers, researchers and interested public. Coffee and cake will be served before the talk from 15.00**

**Welcome!**

Melvyn B Davies, Cecilia Jarlskog (chair), Stacey Sorensen