rod_loewen@lynceantech.com

Who we are

- A small company, about 12 technical staff of mostly physicists and engineers
- Started in 2002, but this year we have a new CEO and marketing VP to drive commercialization
- Funded primarily through government NIH grants (more than $25M)

What we have done

- Develop a new generation X-ray source—a lab-based miniature synchrotron
- Sold our first system to Technical University Munich, in use since April 2015

What we are good at

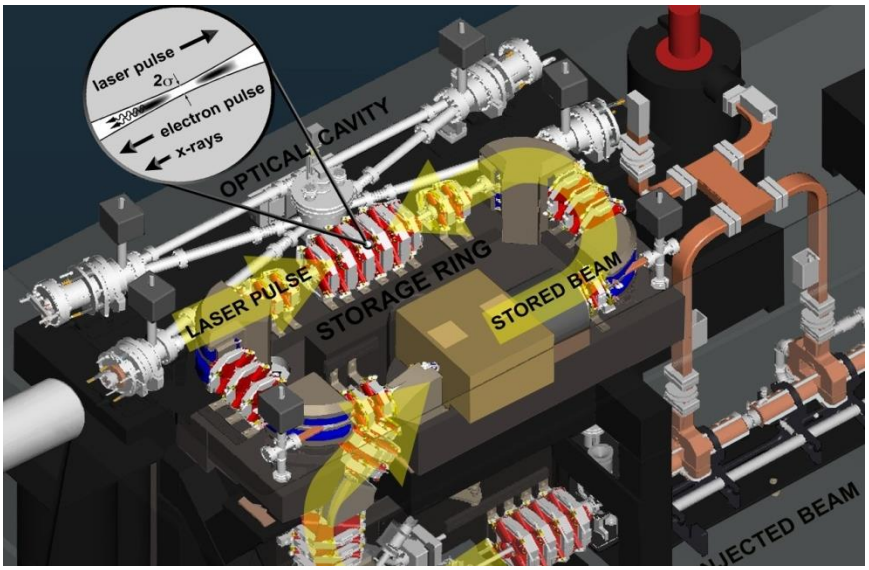
- World experts in accelerator technology, a spin-off from SLAC National Lab
- Engineering, such as high-power optical pulse enhancement cavities (100+ kW)
- Developing X-ray endstations and applications

Our pitch

We are creating a cutting-edge tool for X-ray science that will enable many state-of-the-art measurement techniques developed at nationally run synchrotrons to be done in the local laboratory. The availability of a lower cost synchrotron light source opens the door for mid-scale X-ray facilities in universities, research centers, and industry. Applications cover life sciences such as structural biology, proteomics, medical imaging, therapies, to chemistry and material sciences, such as oil & gas to semiconductor and nanotechnology.

Why Optical Cavity development is important

X-rays are produced by scattering optical photons off relativistic electrons—Inverse Compton Scattering. More stored optical photons = more X-rays! Cavity roadmap development means pushing power from ~150kW to 1MW, with stability, reliability, and mode control. Also, different laser wavelengths will produce a different range of X-ray energies, which for instance offers a unique path to high-energy X-rays for medical applications.



The Compact Light Source storage ring and cavity showing detail of the interaction region.