

Advanced Design Consulting delivers 3 Beamlines to CHESS-U

Lansing, NY, September 3, 2018 – ADC has completed the design, manufacturing, and assembly of 3 identical Front-End Beamlines to Cornell University’s High Energy Synchrotron Source (CHESS). The third and final one was picked up at ADC by the CHESS crew in July. These three beamlines are a part of the major upgrade taking place at CHESS, called CHESS-U.



The CHESS-U upgrade project entails the creation of three new x-ray beamlines with six new experimental stations with three new front ends fed by six insertion devices. The Front End (FE) is comprised of all components involved in safely transporting the x-ray beams from the storage ring (CESR) to the first optical enclosure (FOE) beyond the storage ring shielding wall. This includes all components related to personnel and equipment safety, beam position monitoring, collimators and shielding, water-cooled apertures, and shutters.



To reduce installation time at CHESS, all Front-End components were assembled onto a single support beam and precisely aligned. The fully assembled FE’s were then tested, pumped down, and baked-out prior delivery to CHESS. Off-site alignment at ADC allowed for a final installation which only required positioning of the support beam, and not each individual component. Off-site pumping down and baking also aided in reducing beamline downtime.

To learn more about CHESS and CHESS-U, please go to:
<https://www.chess.cornell.edu/>

For more information about ADC’s beamlines, please go to:
<https://www.adc9001.com/beamlines---beamline-components.html>

To watch a time-laps of the assembly, please go to:
<https://youtu.be/8gTDSCMQmkc>

