Facility for Advanced 
Collider Experimental Tests

FACET will use the first 2/3 of the SLAC linac to study plasma acceleration, using short, intense pulses of electrons and positrons to create a source called a plasma wakefield accelerator. The alignment network was remeasured due to shrinking walls in the tunnel. The data were analyzed ‘hard’ X-ray laser light was produced within 2 hours of commissioning.

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Sector 0
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In the undulator hall a battery of sensors (hydrostatic leveling sensors and wire position monitors) is used to monitor the position of 33 girders. The alignment network was remeasured due to shrinking walls in the tunnel. The data were analyzed ‘hard’ X-ray laser light was produced within 2 hours of commissioning.

After transitioning to ESRI software, the system is continuing to grow with the addition of a large variety of data types that have been attached and quantified. A 2D demonstration was created providing details on new buildings while a 3D demonstration was focused on SLAC’s new LCLS project. Data and graphics related to the structures in and around the LCLS in the Research Yard as well as beam line components were created and the related databases were filled in. The project is expanding to incorporate more Alignment Engineering data and SLAC’s fire department and safety groups are beginning to utilize the capabilities of the GIS.

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