Test Stand Design for Hall A's Large Area Picosecond Photodiode Detector

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This note presents the three-dimensional model of the support frame and the gantry for Hall A's Large Area Picosecond Photodiode Dectector (LAPPD) test stand generated using Siemens Next Generation Design Platform (NX-12).

The LAPPD detector's test stand comprises a black box, an LAPPD enclosure box, a Zaber LC40B motorized linear stage gantry, and a support structure that holds the gantry that positions the LED box an inch over the LAPPD detector, Fig. 1 (isometric and front view).

The components of the support structure are two-inch wide, 26-inch long, extruded aluminum, T-slot bars. The LC40B has a travel range of 12 in x 12 in along the *x* and *y* axes with a rated precision of 16 Mils, Fig. 1(top view).

The NX-12 model shows that the support frame legs are three inches from the black box and three inches from the LAPPD enclosure box, Fig. 1 (top and side view). The top of the support frame is four inches below the top of the black box, Fig. 1 (right-side view).

The NX-12 design shows adequate space inside the black box to place the LAPPD test stand.

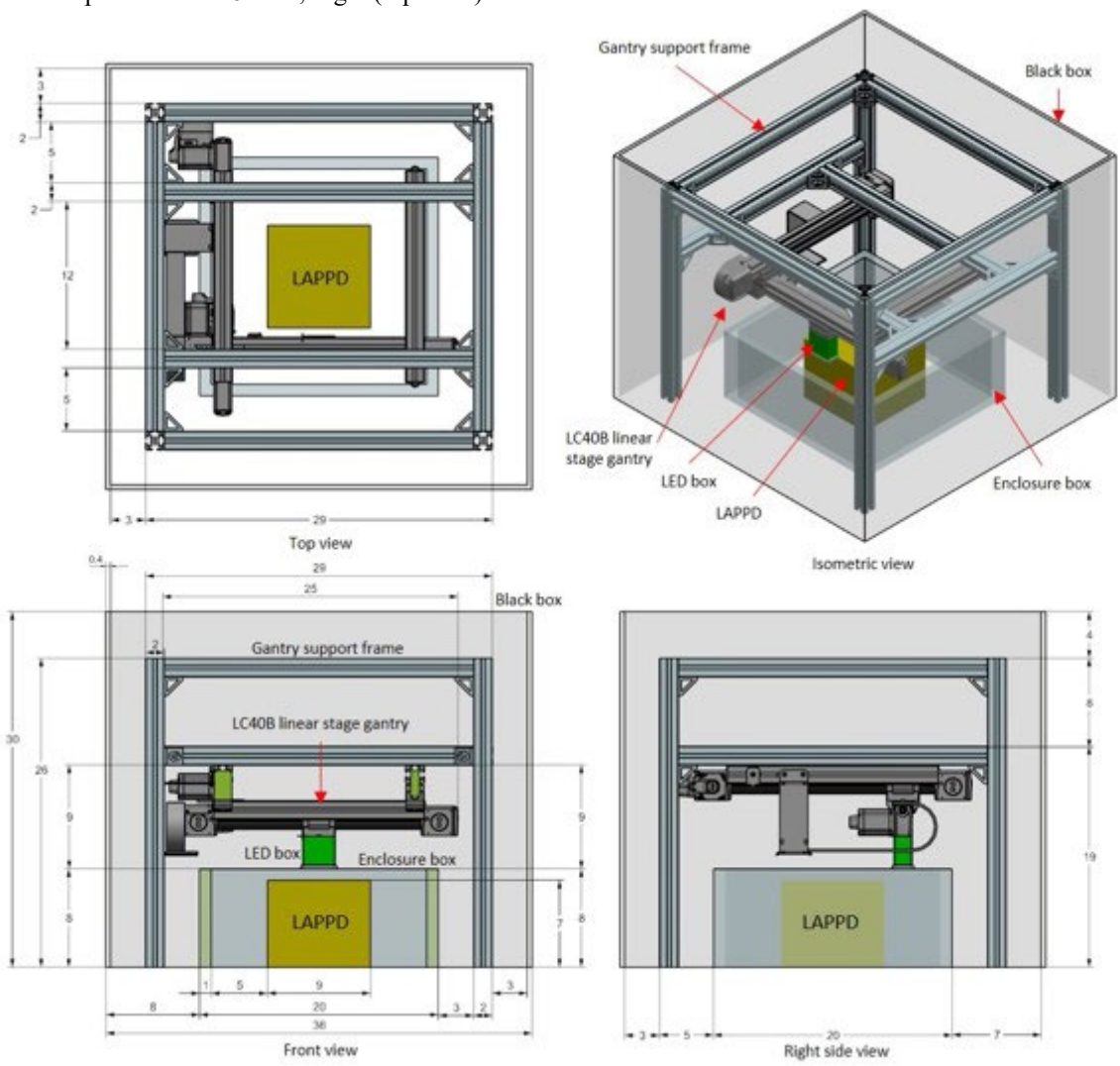

FIG. 1. Three-dimensional design generated with NX-12 showing different views of the LAPPD test stand inside the black box. Dimension units are inches.