Faster than the speed of sight

2010 R&D 100 Winner



N934 Los Alamos Lab



L&R Precision Tooling

The world's fastest and most flexible movie camera, Los Alamos National Laboratory's (Los Alamos, N.M.) MOXIE: Movies of eXtreme Imaging Experiments is unique in that it can simultaneously provide both the highest photographic speed and the highest physical speed without compromising either. Because pixels in the MOXIE camera are very large, the focalplane array created has far more collection area than competing technologies and is correspondingly large and thus sensitive. To increase speed, MOXIE uses a highly parallel architecture in a manner similar to the way a supercomputer thousands of processors. With more than 1,000 channels operating in parallel on each module, the camera captures images at unprecedented speed: currently more than 4,000 frames at 20 million frames per second.

L&R Precision Tooling, Inc. (Lynchburg, VA.) is proud to have made this critical component that played a role in the development phase involving the focal plane array for this project. While not at liberty to discuss its exact use what is of significance from a machining perspective is there are 131,589 holes and practically speaking none are perpendicular to the surface. It was made on one of our vertical mills utilizing a five axis trunnion table.

Information on MOXIE from: http://www.rdmag.com/award-winners/2010/08/faster-speed-sight