

Scientists measure snowpack with laser-equipped plane

By David Bienick, KCRA

High above the Sierra Nevada mountains, scientists on board a propeller plane wear oxygen masks as they stare at computer screens.

When they pull a cord, a door in the belly of the plane slides open and reveals a large lens.

As the plane reaches a certain point above Yosemite National Park, mirrors behind the lens begin to spin and fire invisible laser beams at the snow-covered peaks below.

Every second 800,000 laser beams, a technology known as LIDAR, hit the snow's surface then bounce back up to sensors on the plane.

"This is basically what's measuring the distance from the plane to the ground," explained Brandon Benjamin, an engineer from NASA's Jet Propulsion Laboratory.

By comparing that distance when the mountains are bare to when they are covered in snow, Benjamin and other scientists are able to create 3-D maps that show snow depth to within about a half-inch.

Read the whole story