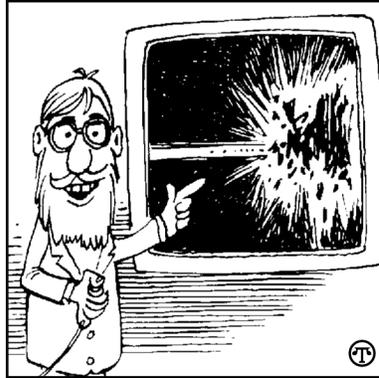


# THE SCIENCE OF LIGHT

## Digital Photography

(NAPS)—Digital technology developed by the Air Force has begun to take flight on its own.

Air Force scientists are working with high-speed digital imagery to better determine—among other things—what happens when weapons smash into their targets.



**Picture this: Using lasers to get a glimpse of what happens when a bullet hits its target.**

The technology uses silicon chips that act like high-speed shutters, recording 15 gigabits of information per second. In one digital camera model, this adds up to 1,000 frames per second. Another camera shoots a million frames per second—compared to 30 images per second shot by a standard television camera.

Soon, doctors may also use digital cameras and lasers that pulse millions of times per second as an “optical radar” to see inside the human body—more clearly than they could with radar and without any radiation hazard.

The digital cameras—which are smaller, cheaper and easier to use than other models—also make it possible for scientists to work in “real time,” whereas developing images on film takes hours.

These breakthroughs are expected to help doctors diagnose patients, give movies even more incredible special effects, make flying safer and even help baseball players hit a pitch better.

For more information about the science of light, visit the Optical Society of America’s Web site at [www.osa.org](http://www.osa.org).