

Convergent Photonics

PROBLEM STATEMENT

Astride: How's the fiber inspection bench going?

Alex: Not as well as it could. As you know, we need to be sure that the fiber we use in our lasers has no flaws that could cause the laser to fail. Cracks, breaks, bubbles, variations in the core diameter, places where the cladding has separated from the core- anything out of spec and the fiber could overheat and ruin the laser.

Astride: So this helium neon laser isn't doing the job? It looks like you are using it to illuminate the fiber while it's still on the spool. What kinds of flaws can you spot?

Alex: Well, it has a few problems. First, it only penetrates the top few layers of the fiber spool so if there are problems below we can't see them. And then, it only shows actual breaks, not more subtle flaws. We need to find a better way to do this inspection, something that's simple and cost effective.