Cameras Reveal Elements in the Short Wave Infrared

Jet Propulsion Laboratory

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Originating Technology/NASA Contribution

- NASA's LCROSS mission launched a rocket stage into the Moon to determine the presence of water in the resulting plume
- Two of the LCROSS instruments were short wave infrared (SWIR) cameras

Partnership

- Since the 1990s, NASA sought advanced imaging technology for the SWIR wavelengths
- Through Small Business Innovation Research (SBIR) contracts, Sensors Unlimited Inc.—later acquired by Goodrich—refined its indium gallium arsenide (InGaAs) SWIR camera technologies

Product Outcome

- The cameras combine small size, low weight, and low power with high sensitivity/resolution
- Applications include detecting moisture in pulp, paper, and agriculture; sorting recycled plastic products; machine vision; spectroscopy; semiconductor inspection; and detecting defects in solar panels