

What Do Satellites See?

Satellite images are not photographs like those you might take with a camera or smartphone. They are digital recordings of light that is being reflected or emitted by features on the Earth's surface. Some of that light we can see (visible light), and some we can't (infrared light).

Instruments on board earth-observing satellites contain thousands of sophisticated sensors. Each sensor is tuned to detect a narrow range, or band, of light wavelengths. For example, a given sensor might detect just red light, just green light, or only a particular type of infrared.

The sensors on these satellites work together to record light coming from the Earth's surface in multiple bands, day after day, year after year. In a very real sense, they are scanning the Earth's vital signs through time, gathering vast amounts of information—coded in the form of light energy—about changing conditions and the health of our planet.

