Quantum Holographyⁱ: Permits the imaging of hidden objects with entangled photons. it's possible to build a hologram of the hidden object provided that the photons in the illuminating beam are entangled with photons in another beam. Each photon in an entangled pair has properties (such as momentum or polarization) that are unknown until a measurement is performed on one photon or the other. When a property of one of the photons is measured, corresponding information about its entangled mate is instantly determined. In quantum holography, the researchers measure the simultaneous arrivals of an illuminating photon that is sent into the chamber and a companion photon in the other entangled beam. This measurement tells the researchers about the interference of various possible paths that the single photon inside the chamber could travel. And it's the interference of the possible paths that encodes the holographic image of the hidden object. Very spooky indeed. Edgar Mitchell, former astronaut, and founder of the Institute of Noetic Sciences, has written a paper which presents a hypothesis for integrating psi phenomena such as ESP into the framework of modern science via the quantum holograph.

ⁱ American Institute of Physics <u>http://www.aip.org/pnu/2001/split/566-1.html</u> Edgar Mitchell: Nature's Mind: The Quantum Hologram