

A light echo is a phenomenon that we sometimes see when a star suddenly becomes very much brighter, for example a nova outburst. What one sees is at first the star becomes very bright, and then can even fade away back to its normal brightness, and then later on, we can see a shell of light glow around the star expanding in size. Now what's happening is that the light from the outburst reached us in a direct line, but then light from the outburst also goes out in all directions from the star, illuminates dust and the surroundings around the star, and only then is directed on a path towards us. So this light takes longer to reach us than the light directly from the star, and that's why we see a glow expanding around the star after its outburst.