

Re: LIGO.

Source: <http://sci.tech-archive.net/Archive/sci.physics.relativity/2007-02/msg00733.html>

- *From:* Joe M. <nomail@xxxxxxxxxxx>
 - *Date:* Fri, 09 Feb 2007 12:54:07 -0000
-

Tom Roberts wrote:

The no-gravitational-wave light beam is adjusted to give no output from the interferometer when everything is settled down, and this is modeled by computing the light's total phase difference over the path length by integrating over all those atomic-sized inertial frames (in practice one uses a coarser approximation), for each arm. The initial phase delay is equal for the two arms, because that is the condition for null output. When a gravitational wave comes by, those integrals will change (one arm increases in total phase delay while the other decreases), implying that the interferometer output will no longer be nulled.

Is the phase delay measured by the spatial displacement of interference fringes, or pulse time delay?

.