

Abstract Submitted
for the APR18 Meeting of
The American Physical Society

Gravitational Waves: Propagation Speed is Coordinate Dependent STEPHEN CROTHERS, No Company Provided — The speed of propagation of Einstein's gravitational waves pertains to the derivation of a wave equation from the linearized field equations of General Relativity. It is routinely claimed that the resulting wave equation predicts propagation speed at that of light. However, the speed is in fact coordinate dependent – change the coordinates then the speed of propagation is entirely different from that of light. Coordinate changes can be arbitrarily made ad infinitum. Consequently there is no unique propagation speed. The coordinates used by Einstein were purposely introduced to satisfy his assumptions that the waves exist and travel at the speed of light. His argument assumes as premise that which is to be demonstrated and is therefore invalid (*petitio principii*). Moreover, the objective cannot be achieved because General Relativity cannot localize its gravitational energy - it violates the usual conservation laws for a closed system and is thereby in conflict with a vast array of experiments. To try to satisfy the usual conservation laws Einstein constructed his pseudotensor, which is a meaningless collection of mathematical symbols because it violates the rules of pure mathematics.

Stephen Crothers
None

Date submitted: 14 Feb 2018

Electronic form version 1.4