



Contribution ID: 716

Type: **Invited talk in the parallel session**

Tractor beams, pressor beams, and stressor beams within the context of general relativity.

Wednesday, 7 July 2021 06:50 (30 minutes)

Both wormholes and warp drives, concepts originally developed within the context of science fiction, have now (for some 30 odd years) been studied and carefully analyzed within the framework of general relativity. An overarching theme of the general relativistic analysis is unavoidable violations of the classical energy conditions. Another science fiction trope, now over 80 years old, is the tractor beam and/or pressor beam. I shall discuss how to formulate both tractor beams and/or pressor beams, and a variant to be called a stressor beam, within the context of reverse engineering the spacetime metric. (While such reverse engineering is certainly well beyond our civilization's current capabilities, we shall be more interested in asking what an arbitrarily advanced civilization might be able to accomplish.) We shall see that tractor beams and/or pressor beams can be formulated by suitably modifying the notion of warp drives, and that, as for wormholes and warp drives, violations of the classical energy conditions are utterly unavoidable.

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Session Classification: Wormholes, Energy Conditions and Time Machines

Track Classification: Alternative Theories: Wormholes, Energy Conditions and Time Machines