

Abstract Submitted
for the APR11 Meeting of
The American Physical Society

The Meanings of Frame-Drag Vortex Lines and Tidal Tendex Lines¹ FAN ZHANG, California Institute of Technology — Frame-drag vortex lines and tidal tendex lines provide a tensorial visualization of gravitational waves and their generation that contains more information than traditional scalar quantities such as the Newman-Penrose Ψ_4 . By examining the example of a head-on merger of identical black holes with transverse spins, I will present some relationships between the vortex and tendex viewpoint and other formalisms in wave zone. I will also discuss analogies to electromagnetism, with the aim of demonstrating how one might build up intuition into the information embodied in vortex and tendex lines, and their vorticities and tendicities.

¹This work was supported in part by the Sherman Fairchild Foundation, and NSF Grants No. PHY-0601459.

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Date submitted: 16 Jan 2011

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