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A Quantitative Analysis of the Feynman Disk Paradox LENNON

CROW, JAMES ESPINOSA, Weatherford College — In his undergraduate lectures of physics, Richard Feynman created an electrodynamic disk paradox that we solved, using Ritz's action at a distance force law, in closed form. All other authors have solved variants of Feynman's disk since a direct solution using Maxwell's equation appears insoluble without significant approximations. The literature also shows that there is a misconception of the relative contributions of the mechanical and electromagnetic angular momentum to the total amount. We will describe a realistic disk and proceed to compare the exact electromagnetic momentum to the mechanical.

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