

Abstract Submitted
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Do Event Horizons Really Exist? ALAN M. KADIN, Retired, Princeton Junction, NJ — Black holes surrounded by event horizons are standard solutions of orthodox gravitational theory, and are universally believed to have been observed in galactic centers and binary stars. On the contrary, it is suggested here that the theory has never been proven in the strong-field regime, and that the convincing observations of compact astronomical objects do not validate the presence of event horizons with divergent spacetime. Indeed, it is easy to construct non-divergent spacetime models that give rise to compact objects without event horizons [1]. Recent detailed observations of black holes, such as those from the Event Horizon Telescope and the Laser Interferometric Gravitational-Wave Observatory, may be mostly confirmation bias of noisy data [2]. Until such time as the measurements have much higher resolution, the prudent scientific approach is to regard black holes and event horizons as interesting mathematical objects that may or may not exist in the real universe. [1] A.M. Kadin, “Gravitation and Cosmology Without Divergences,” 2018. <https://vixra.org/abs/1804.0231> [2] A.M. Kadin, “Why We Should Be Skeptical of Black Holes,” 2020. <https://vixra.org/abs/2005.0152>

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