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Is Dark Energy Composed of Photons with Negative Mass (Dark

Photons)? DOUGLAS SNYDER, None — Dark energy may be composed of photons with negative inertial and gravitational mass. Since the photons comprising dark energy would have negative mass, they could not be observed even though they exert a repulsive gravitational force on photons that have positive mass. Furthermore, dark photons possess little mass which is a feature of dark energy. Dark photons are small enough to comprise the needed density to support a universe that is close to flat. They also may allow for repelling entities with positive mass while they are attracted to particles with positive mass, a possible requirement of dark energy. First presented at Space Telescope Science Institute Spring Symposium: A Decade of Dark Energy, May 5-8, 2008, Baltimore, MD.

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