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Gravitons to Photons – attenuation of gravitational waves PRESTON JONES, Embry Riddle Aeronautical University Prescott — In the International Gravity Essay Contest for 2015 we examine the Fulling-Davies-Unruh detector response to a gravitational wave background. The spectrum of the Unruh-Dewitt radiation is of the same form as some scattering processes or three body decays such as muon-electron scattering or muon decay. Based on this similarity we propose that the Fulling-Davies-Unruh detector response implies an attenuation of the gravitational wave through production of photons. Over large distances this attenuation may have consequences for the detection of gravitational waves.

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