**GW 170817 Falsifies Dark Matter Emulators**

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This talk is based on arXiv:1710.06168, 0804.3804 and 0705.0153. In 2007 Emre Kahya and I pointed out that a single coincident detection of gravitational radiation and either electromagnetic or neutrino radiation from a cosmic event would falsify an entire class of modified gravity models which dispense with the need for dark matter. With the nearly simultaneous observation of a binary neutron star merger in both gravitational and electromagnetic radiation on August 17, our condition has been realized. I define the class of ``dark matter emulators'' and explain why GW170817 falsifies them. I also review what this tells us about constructing modified gravity theories to avoid the need for dark matter.