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Discovery of the First Electromagnetic Counterpart to a Gravitational Wave Source DAVID COULTER, RYAN FOLEY, CHARLES KILPATRICK, Univ of California-Santa Cruz, MARIA DROUT, ANTHONY PIRO, Observatories of the Carnegie Institution for Science, BEN SHAPPEE, Observatories of the Carnegie Institution for Science; Institute for Astronomy, University of Hawaii, MATTHEW SIEBERT, Univ of California-Santa Cruz, JOSH SIMON, Observatories of the Carnegie Institution for Science, DANIEL KASEN, Univ of California-Berkeley, BARRY MADORE, Observatories of the Carnegie Institution for Science, ARIADNA MURGUIA-BERTHIER, YEN-CHEN PAN, JASON PROCHASKA, ENRICO RAMIREZ-RUIZ, Univ of California-Santa Cruz, ARMIN REST, Space Telescope Science Institute, CESAR ROJAS-BRAVO, Univ of California-Santa Cruz, ONE METER, TWO HEMISPHERES TEAM — I will present observations of GW170817/SSS17a from the One-Meter, Two-Hemispheres (1M2H) collaboration. Our team, using the Swope Telescope, discovered the optical counterpart, Swope Supernova Survey 2017a (SSS17a). I will describe that discovery as well as observations of SSS17a and its host galaxy made over the following several weeks. From the electromagnetic data alone, we can independently and definitively say that GW170817 came from the merger of a binary neutron star system, that its luminosity is consistent with being powered by the decay of radioactive r-process material, and that it likely originates from an older stellar population. I will discuss future observational plans for O3 starting later in 2018.

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