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Systematic Uncertainty of Standard Sirens From the Viewing Angle of Binary Neutron Star Inspirals[1] HSIN-YU CHEN, Massachusetts Institute of Technology — The joint detection of gravitational-wave and electromagnetic-wave emissions from neutron star mergers GW170817 allowed for the first standard-siren measurement of the Hubble constant. Future standard sirens will potentially shed light on the tension between the local distance ladders and Planck experiments. Therefore, thorough understanding of the sources of systematic uncertainty for the standard siren method is crucial. In this talk, I will discuss a systematic uncertainty of the standard siren method introduced by the aspherical electromagnetic emission of neutron star mergers. Depending on the observational strategies and the understanding of the electromagnetic emissions, the systematics originated from the geometry of electromagnetic emissions of neutron star mergers may be a major challenge before the standard sirens can resolve the tension in Hubble constant.

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