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A Multi-Messenger Search for Radio Transients and Gravitational Waves

MICHAEL KAVIC, Long Island University

The sensitivity of gravitational waves searches could be improved by coincident observation of electromagnetic signals from expected gravitational wave sources. One possibility is using low-frequency radio transients to trigger and constrain searches for gravitational wave signals. Both are all-sky observations with a number of common sources, and low frequency observations are able to provide spatial and temporal constraints to the search for gravitational wave signals. There is also the added benefit that coincident low-frequency radio and gravitational spectra will allow for more in-depth study of astrophysical events and processes than otherwise possible. In this talk I will layout the case for using low-frequency radio observations to trigger and constrain searches for coincident gravitational wave signals. Common sources and potential ways the joint observation of low-frequency radio and gravitational waves can enhance our understanding of the physics behind these sources will be addressed.