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Multi-messenger observations of radio transients using gravitational wave telescopes and the Nasu radio telescope

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The Waseda Nasu pulsar observatory consists of eight 20m diameter spherical dish antennas and a 30m diameter spherical dish antenna. The telescopes are designed to detect radio transient signals and variable radio objects, and detected more than 10 events since 2004. Although the origin of these transient events is still unknown, one of potential sources is radio remnants of compact binary mergers which are prime sources of gravitational waves. The merger expects to produce significant energetic outflows, of which optimal frequency takes place 1.4GHz which is the same as the observation frequency of Nasu telescopes(Nakar and Piran, Nature 2011). During TAMA's observations 1 radio transient event was detected, and during LIGO/Virgo's observations 4 events. In this presentation, we report current status of a joint analysis of TAMA-Nasu, and a proposal of LIGO/Virgo-Nasu analysis and discuss the strategy.