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The Search for Low Mass Compact Binary Coalescences in LIGO's S5 and Virgo's VSR1 Data DAVE MCKECHAN, Cardiff University, ON BEHALF OF THE LIGO SCIENTIFIC COLLABORATION AND VIRGO COLLABORATION — We report on the search for gravitational waves from coalescing compact binary systems with total mass from 2-35 $M_{\odot}$ in the LIGO Fifth Science run (S5) data and Virgo's Science Run 1 (VSR1). We describe the pipeline employed by the LSC/Virgo to search for such waveforms in LIGO/Virgo data including how we suppress false signals originating from instrumental noise, how we evaluate the search efficiency for systems which may include spinning component objects, and how we establish confidence in likely detection candidates. Finally, we describe Bayesian coalescence rate upper limit calculations as a function of mass of the binary system and for several canonical mass systems including mass distributions representing binary neutron stars, binary black holes, and black hole neutron star binaries.

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