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Multivariate classification of signal versus background in the LIGO-Virgo search for high-mass compact binary coalescences KARI HODGE, LIGO-VIRGO COLLABORATION — The LIGO-Virgo collaboration searches for gravitational waves (GWs) from astrophysical sources such as compact binary coalescences (CBCs). Unfortunately, the expected GW signals from high-mass CBCs have waveforms similar to those from glitches in the detectors. Thus, our goal is to develop robust methods for separating rare GW signals from the background of glitches. We will discuss why multivariate statistical classification methods are not only naturally suited for this problem, but also can give insight into our understanding of the background.

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