

Abstract Submitted
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Adding an astrophysically motivated detection confidence test, Effective Distance Ratio, to our standard confidence tests for Inspiral Candidate Events CRISTINA TORRES, LIGO Livingston Observatory, LIGO SCIENTIFIC COLLABORATION¹ — In order to detect gravitational-wave signals from compact binary inspiral systems in the data from the LIGO detectors the LSC-Virgo Compact Binary Coalescence (CBC) group has developed an analysis method based on optimal matched filtering. In order to confirm the possible discovery of gravitational waves, the CBC group has developed a detection checklist intended to validate the statistically significant candidate events produced by the CBC analysis. This checklist is a series of additional tests under active development for integration into our search infrastructure, or a set of “final” quantitative checks geared to corroborating a detection or to identifying a false alarm. We practice this checklist with the loudest candidates found (even if not statistically significant) and with simulated signals. As part of this talk we will present an evolving checklist test, the Effective Distance Ratio, and discuss this tests potential for candidate validation because of simple astrophysical basis. In addition to presenting this test, we will review the standard inspiral candidate validation methodology giving context about where our new confidence test fits into the inspiral search hierarchy.

¹CBC Followup sub-working group

Cristina Torres
LIGO Livingston Observatory

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