

Abstract Submitted
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PyGRB: Cleaning up GRB Analyses using the Burst Veto Definer

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LIGO COLLABORATION — Objective: The objective of this experiment is to discover methods of improving data quality in LIGO's gamma-ray burst (GRB) offline analyses, by comparing two different versions of a method of eliminating glitches called "veto definers": one that is typically used for burst searches, and one used for searches for compact binary coalescences (CBC). Methods: The main method used was the comparison of two analyses of GRB190610A, the first using the standard PyCBC veto definer, and the second using the Burst veto definer. Other aspects of the two runs were identical. Results: The Burst veto definer outperforms the standard PyCBC veto definer in the number of glitches it vetoes from the analyses. These results are noticeable and significant when comparing both the Off-source SNR plots and the Signal Consistency plots from each run. The Burst veto definer removed glitches 15 SNR lower on average than the PyCBC veto definer.

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