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A novel signal consistency check for gravitational waves RYAN MAGEE, LIGO Laboratory, Caltech — Gravitational wave detection pipelines have successfully identified dozens of candidate GWs originating from the merger of binary black holes, binary neutron stars, and neutron star black hole binaries. Despite the success of these pipelines, noise transients or glitches can occasionally mimic characteristics of astrophysical signals. We describe a new signal consistency check in the GstLAL-based matched filter pipeline that measures the response of the entire template bank to each GW candidate.

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