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Expanding the Search Parameter Space for Low Latency Compact Binary Searches STEPHEN PRIVITERA, Max Planck Institute for Gravitational Physics, Potsdam-Golm, LIGO COLLABORATION — Searches for compact binary signals in gravitational wave data are continually progressing towards providing results in the lowest latency possible. Rapid identification of candidate events in these searches is crucial for a number of reasons, including (i) maximizing the probability of associating the event with its electromagnetic counterpart, if any, (ii) knowing whether to followup an event electromagnetically at all, in case the event is known to have no counterpart, (iii) allowing for detailed followup investigations into the detector state at the time of the event, in case of an interesting candidate, and (iv) identifying and correcting problems in the detectors that are impacting search backgrounds, in case of a false alarm. In this talk, we report on progress towards expanding the online parameter space for compact binary searches beyond what ran in LIGO's first observing run, to ensure as many as possible of our scientific targets are reaping the benefits of low latency identification.

Stephen Privitera
Max Planck Institute for Gravitational Physics, Potsdam-Golm

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