

Abstract Submitted  
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**Toward improving the duty factor of GW interferometers** SZYMON STEPLEWSKI, Washington State University, LIGO COLLABORATION — The LIGO detectors are being operated to discover gravitational waves from a variety of astrophysical sources in the universe. Their operation is dependent on being in a resonant condition known as “lock,” which can be broken by instrumental or environmental disturbances. I am working to identify the specific causes of these broken locks and trying to understand where potential improvements would be most useful in maintaining lock. Towards this goal I have been developing new instrumental monitors that will help researchers track down disruptions in the system. I am also working on software that attempts to categorize the disruptive events according to the source. Understanding these events will eventually allow longer periods of lock with less downtime.

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