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Environmental Influences in the Sixth Science Run of LIGO¹

ANAMARIA EFFLER, Louisiana State University, LIGO SCIENTIFIC COLLABORATION AND THE VIRGO COLLABORATION — The LIGO gravitational wave detectors at the Hanford and Livingston Observatories are very sensitive to environmental effects, stationary or transient, which are a subtle and important source of noise and false positives. We present seismic, acoustic and magnetic influences in the sixth LIGO science run and explain some of the coupling mechanisms. The methods are general enough to be employed in the future, and will be used to measure the environmental influence in the more sensitive Advanced LIGO detectors currently being installed.

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