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Caustic echoes and their astrophysical applications CHAD GALLEY, ANIL ZENGINOGLU, California Institute of Technology — A source of waves (scalar, electromagnetic, or gravitational) near the event horizon of a black hole leads to the formation of a caustic on the other side of the horizon. The caustic forms from the trapping of energy by the strong curvature near the black hole and leads to echoes of the source that may have astrophysical consequences. In this talk, I briefly review the main properties of “caustic echoes” and discuss some potential astrophysical applications that may also be relevant for future gravitational wave searches.

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