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Abstract for an Invited Paper for the APR16 Meeting of the American Physical Society

## Hans A. Bethe Prize: Implications of the LIGO Discovery of a Binary Black Hole Coalescence VASSILIKI KALOGERA, Northwestern University

In this talk I will review how we extract astrophysical information from gravitational-wave signals, including source parameters and implied rates of black hole inspirals and mergers. I will discuss the implications of these results in the context of astrophysical models for binary black-hole formation as well as implications for testing general relativity in the strong-field regime, for the first time.