

## **When Gravity Waves**

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The recent gravitational wave observations of the collision of black holes and neutron stars have allowed us to pierce into the extreme gravity regime, where gravitational fields are unfathomably strong and wildly dynamical. Such gravitational-wave observations encode a trove of information that is prime for the taking, including potential revelations about the validity of Einstein's theory in strong gravity. In this talk, I will describe how we can use gravitational wave observations to put Einstein's theory to the test and to learn about our extreme gravity universe.