DAMOP16-2016-020102

Abstract for an Invited Paper
for the DAMOP16 Meeting of
the American Physical Society

Detection of gravitational waves: a hundred year journey

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In February 2016, scientists announced the first ever detection of gravitational waves from colliding black holes, launching a new era of gravitational wave astronomy and unprecedented tests of Einsteins theory of general relativity. I will describe the science and technology, and also the human story, behind the long quest that led to this discovery.

Bio: Nergis Mavalvala is Professor of Physics at the Massachusetts Institute of Technology (MIT). Her research links the world of quantum mechanics, usually apparent only at the atomic scale, with gravitational waves, arising from some of the most powerful, yet elusive, forces in the cosmos. In 2016, she was part of the team that announced the first detection of gravitational waves from colliding black holes. She received a B.A. from Wellesley College in 1990 and a Ph.D. from MIT in 1997. She was a postdoctoral fellow and research scientist at the California Institute of Technology between 1997 and 2002. Since 2002, she has been on the Physics faculty at MIT, and was named a MacArthur Fellow in 2010. She is a Fellow of the American Physical Society and the Optical Society of America.