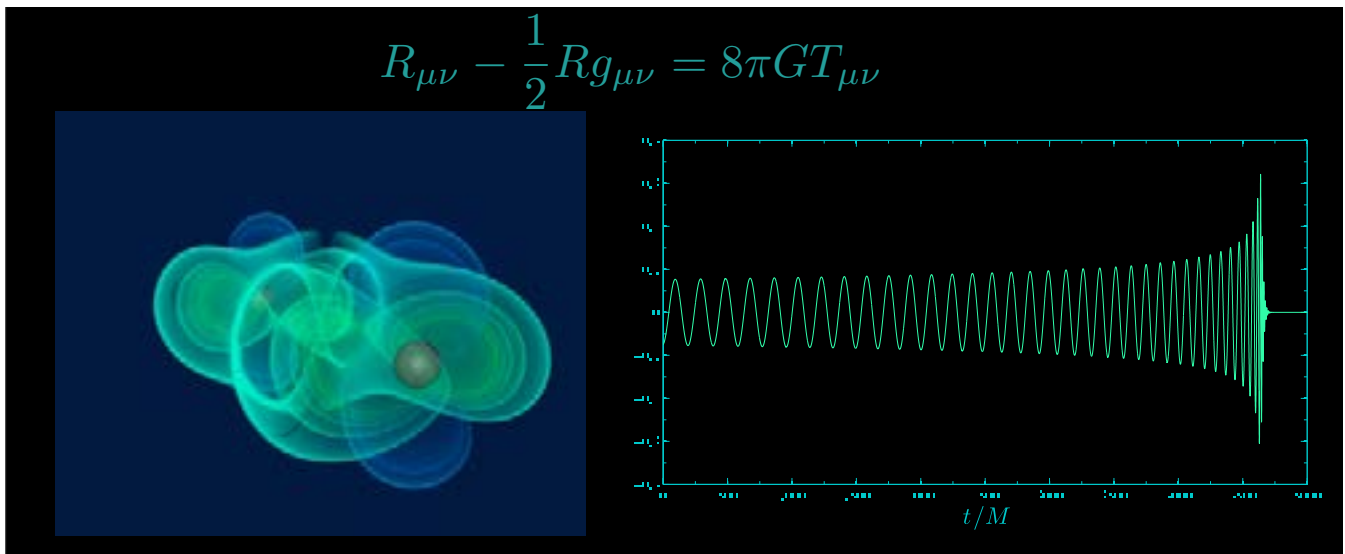


Solvay Colloquium

Thibault Damour

(Institut des Hautes Etudes Scientifiques, France)

Gravitational Waves from Coalescing Binary Black Holes



A network of ground-based interferometric gravitational wave detectors (LIGO/VIRGO...) is currently being upgraded, and should, in a few years, reach a sensitivity enabling them to detect the gravitational waves emitted by coalescing compact binaries: i.e. binary systems made of black holes and/or neutron stars. This prospect has motivated renewed theoretical studies of the motion and radiation of relativistic two-body systems. I will review the recent analytical studies of (comparable-mass) two-body systems, and their comparison to numerical relativity results. Particular attention will be given to the recently developed “Effective One Body” approach to the motion and radiation of binary systems.

Wednesday 4 March 2015 at 4.00 P.M.

COFFEE AND TEA WILL BE SERVED AT 3.45 P.M. IN FRONT OF THE SOLVAY ROOM

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