

COLLOQUE DE PHYSIQUE EPFL

EPFL PHYSICS COLLOQUIUM

Monday, November 27, 2017, 16:15

Room CE3

Prof. Jo van den Brand
VU University Amsterdam
Virgo spokesman

Probing dynamical spacetimes with gravitational waves



When compact objects such as black holes and neutron stars merge, Einstein's theory of General Relativity predicts ripples through space and time. The LIGO Virgo Collaboration (LVC) studies these gravitational waves and the first detection took place on September 14, 2015. Since then multiple detections have been made. LVC's instruments are Michelson interferometers with arms featuring kilometer long optical resonators. With these instruments it is possible to measure relative length changes smaller than 10^{-22} . We will discuss both the scientific implications of gravitational wave astronomy, and the innovative instrumentation needed to make such measurements possible.

Host: T. Nakada, 30475, tatsuya.nakada@epfl.ch