



ID de Contribution: 35

Type: **Non spécifié**

Joint Search between Gravitational-wave and High-Energy Neutrino Detectors

mercredi 20 mai 2009 11:15 (30 minutes)

Cataclysmic cosmic events, e.g. gamma ray bursts (GRBs), can be plausible sources of both gravitational waves (GWs) and high-energy neutrinos (HENs). Identifying correlations between GW and HEN detection channels shall enable new searches, as one has significant additional information about the common source. Beyond the benefit of a potential discovery, coincident detection of GW and HEN arriving from the same astronomical source might allow us to answer important scientific questions, which would be out of reach for a single channel detector. Analysis method options and Monte Carlo simulations will be discussed to demonstrate the expected performance of feasible searches. A survey of cosmic source candidates will be presented to describe the possible science reach of the data analysis initiative

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Classification de Session: Overview of data analysis