

CU Physics Department Particle Seminar

Wednesday, April 16, 2008 705 Pupin Hall 1:00 PM

Astrophysics with LIGO

Gravitational wave detectors are now reaching a level of sensitivity where even the absence of detections has significant astrophysical implications. Even more exciting, the construction of advanced detectors will within a decade begin an epoch where multiple detections per year are assured, allowing us for example to measure the formation efficiency of black hole binaries. In this talk we use four examples to illustrate the range of astrophysics that is now or will soon be accessible due to gravitational detectors: solving the mystery of short GRBs, probing the nature of nuclear matter, understanding how binary stars evolve, and revealing the many-body dynamics of the young dense star clusters in which a significant fraction of all stars may be born.



Professor Richard O'Shaughnessy

