

## **Gravitational Wave Detection: What is new**

Odylio D. Aguiar - INPE

The quest for gravitational wave detection has been one of the toughest technological challenges ever faced by experimental physicists and engineers. Despite the null results to date, after four decades of research, the community involved in this area is continuously growing. One of the main reasons for this is because the first gravitational wave detection and the regular observation of gravitational waves are among the most important scientific goals for the beginning of this millennium. They will test one of the foundations of physics, Einstein's theory of general relativity, and will open a new window for the observation of the universe, which certainly will cause a revolution in our knowledge of physics and astrophysics. In this talk I will give an updated report about the status of some relevant detectors (interferometers, bars, spheres, radio-telescopes, and CMB experiments), in operation, going to an upgrading, under construction, or still as projects. In particular, I will give details about the Brazilian Schenberg detector and our participation in the LIGO project.