

ET-WP2 workshop



Thursday, 26 February 2009 - Friday, 27 February 2009

Department of Physics

Scientific Programme

First announcement

In the framework of the activity for the design study of Einstein Telescope (FP7 - ET), we organize a workshop devoted to the thermal noise issues in GW future detectors. We take this occasion to review the thermal noise models for advanced Virgo and to progress with the activity of the working group (WP2) devoted to the suspension and thermal noise issues for ET.

Because of the overlap of the people interested to both the subjects we decided to merge the workshop in a two days event where the first day is devoted to the Virgo thermal noise modeling and the second day is devoted to ET-WP2.

The workshop is held in Rome at the Department of Physics of the Rome University La Sapienza, the 26-27th of February.

The 26th we will focus the discussion on thermal noise modeling, mainly for AdVirgo issues as

- Suspension thermal noise:
- Passage from the current ribbon model to the fiber model
- fiber shaping
- thermo-elastic contribution first
- silicate bonding contribution
- clamping contribution
- Cavity Mirror thermal noise
- Substrate model
- Coating "last news": thermo-optic model
- Role of the other payloads: BS, PRs, SRs

The second day (27th) we will discuss on Et

- Search on coating properties vs the temperature
- Investigations on Thermo physical properties of Fibers

- Cooling strategies and their infrastructure impact
- Upper suspension system for ET
- New sensor and actuators at room and low temperature for suspension control.