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Postdoc Fellowship: Environmental Monitoring at the European Gravitational Observatory site of the Gravitational Wave Detector VIRGO

Context

A two-year postdoc fellowship is available at EGO to work on the commissioning of Virgo. Virgo is a gravitational wave detector aiming at the detection of gravitational waves generated by galactic and extra-galactic astrophysical sources. The detector is based on a laser interferometer with arms 3 km long. The interferometer is located at EGO near Pisa (Italy) and it is currently going through its commissioning phase.

Assignment

The fellow will participate to the commissioning of the interferometer within the general goal of reaching the interferometer design sensitivity and operate the interferometer for long scientific runs. In particular this fellowship is dedicated to the commissioning and development of the environmental noise monitoring system and to the study and reduction of the effect of such noise on the Virgo interferometer. The fellow will maintain, characterize and improve the existing set-up for the environmental noise monitoring. He/She will study the coupling of the environmental disturbances into the interferometer output signals and will propose strategy to reduce this coupling. In addition the work will consist of the development of automatic procedures required to allow the operator team and in general non-expert people, to operate, monitor and diagnostic the environmental monitoring system. The fellow will work within the commissioning group. Within this group he/she will also participate to the preparation of the data taking periods and to the detailed study of the effect of environmental noise during these periods.

Background

Sensing devices, electronics, signal processing and interferometry. A background in the field of gravitational wave detection with laser interferometers and in particular on subjects such as sensing devices, environmental noise monitoring and interferometer noise hunting, will be appreciated. A PhD thesis in fields related to the above mentioned subjects would be a title of merit. Fluency in the English language will be considered an essential qualification.

Application

Interested candidates are welcome to send their CVs using the EGO Application Form, to be found at http://www.ego-gw.it/job/Employment_App_Form.doc to jobs@ego-gw.it as soon as possible quoting the reference number of this vacancy notice.

