INFN LASA – MS19

**Short Description of the Facility**

LASA is characterized by the presence of four test facilities devoted to:

* Superconducting (SC) Magnets
* Superconducting (SC) RF Cavities
* High Brightness Photocathodes for Electron Sources
* Laser Applications to High Power Fabry Perot Cavities and Advanced Timing Systems.

The four facilities have been conceived at the beginning as research facilities for the activities undergoing at LASA. The more relevant part of efforts has been dedicated equipping them with advanced instrumentation.

The service improvements foreseen in this program are devoted to revamp the control and data acquisition infrastructures in order to facilitate their usage from external users. Moreover, we have to consider that the usage of the 2 SC based facilities require consumables very expensive (a RF cavity test may require 200-300 LHe and the cost of it is of the order of 25 Euro/l).

**Details for the planned activities**

The possibility to expand the number and the panorama of users will request few improvement activities on the following subsystems:

* control system performances
* automatized data acquisition procedures
* new data storage and analysis networks
* more comfortable HMI facilities

**Budget Planning**

We are going to give priority to improvements in automatic control and data acquisition procedures to allow an easier access to the facilities.

This will involve an unbalanced expenditure commitment towards the first two years of activity

**Status of the Facility**

The four LASA facility are ready to accept users from external institutions. All the four facilities are operative and in use.

We may have the first users within 1 month. All the safety device procurements and safety procedures are underway, and this time is the one required to complete these actions.

Service improvements may be carried out in the meantime we proceed with the first experimental activities.

**Expected Users**

The facilities above described are of interest for many research activities both in Europe and all around the world.

The typical users may be researchers that will improve their knowledge on basic physics after taking their University Degree of to refine their thesis during a PhD.

Advanced senior researchers may propose advanced research programs taking advantage both of the peculiar instrumentation available and of the experience of the people dedicated at each facility.

To promote the availability of these facilities we are preparing a dedicated leaflet and a video to show all the opportunities.