



# WP14 – Transnational Access to INFN-LNF

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# Accessible LNF Facilities



## Electron-Positron Collider DAΦNE

Finuda  
Kloe  
Siddharta  
Amadeus



## Beam Test Facility (BTF)

# SCIENTIFIC HIGHLIGHTS

- **Electron-Positron Collider DAΦNE performances:**

$$L_{\text{peak}} = 4.5 \cdot 10^{32} \text{ cm}^{-2}\text{s}^{-1}$$

$$\langle L_{\text{int/day}} \rangle = 15 \text{ pb}^{-1}$$

$$\langle L_{\text{int/month}} \rangle = 350 \text{ pb}^{-1}$$

- **Beam test facility**

electron or positron beams with tunable energy from 50 MeV to 750 MeV

intensity can be varied from  $10^{10}$  particles per pulse, down to a single particle per pulse

# MACHINE PERFORMANCE FOR ALL USERS (hadron physics, BTF, DAFNE-Light)

- Machine: 4.000 beam hours/y
- Hadron physics: 90% = 3.600 beam hours/y
- DAFNE-Light (parasitic and dedicated mode):  
30% = 1.200 beam hours/y
- BTF (parasitic mode): 80% = 3.200 beam hours/y
- Total: 8.000 beam hours/y  
*of which 6.800 beam hours/y are for users of the hadron physics  
and BTF facilities*
- Total quantity of access to users of hadron physics and BTF facility  
in 30 months  $E' = 6.800 \times 2,5 = 17.000$  beam hours
- Quantity of access offered to users of hadron physics and BTF  
facility under this Grant Agreement  
 $H = 14\% E' = 14\% 17.000 = 2.400$  beam hours.

# AVERAGE ANNUAL ACCESS TO THE SINGLE FACILITIES OF LNF

<b>FACILITY</b>	<b>USERS</b>	<b>MAN X DAYS</b>	<b>TRAVELS</b>	<b>PROJECTS</b>
1. Hadron Physics	50	1.250	65	6
2. Beam Test Facility	20	250	20	6
<b>TOTAL</b>	<b>70</b>	<b>1.500</b>	<b>85</b>	<b>12</b>

# 30-MONTH IMPLEMENTATION PLAN

Short name of installation	DAFNE
Unit of access	Beam hour
Unit cost (EUR)	80,00
Min. quantity of access to be provided	2.400
Estimated number of users	175
Estimated number of days spent at the infrastructure	3.750
Estimated number of projects	30

# SUPPORT TO USERS

- **Computing Service**
  - access to several computing clusters and servers
  - a high b.w. LAN (wired 100/1000 Mb/s, wireless 54 Mb/s)
  - a high performance WAN (GARR)
- **Mechanical engineering**
  - equipped with modern CAD for the design of large and complex structures as well as for the development of new detectors
- **Electronics**
  - design, assembly and support research equipment
- **Stockrooms**

# USER SELECTION PROCEDURE

- Eligible researchers are required to submit a written proposals, which will be evaluated by the *User Selection Panel (USP)*
- The USP bases the evaluation following the principle of scientific merit and transparence
- The access to the DAFNE Beam Test Facility (BTF) is regulated by the BTF Users Committee

# USERS SELECTION PANEL

- Paul Kienle, TUM (*Chairman*)
- Jean-Pierre Egger, Université de Neuchatel
- Paolo Calvani, Università di Roma “La Sapienza”
- Fabio Bossi, INFN-LNF
- Calogero Natoli, INFN-LNF