



Dark Forces at Accelerators Workshop

INFN – Laboratori Nazionali di Frascati
16th -19th October, 2012



BULLETIN N. 2

The Dark Forces at Accelerators Workshop (DARK2012) will be held in the INFN Laboratories of Frascati (LNF), from October 16 to 19, 2012. It follows a first successful meeting on these topics held in September 2009 at SLAC.

Topics to be discussed at this workshop are:

- Experimental searches for new light gauge bosons in collider, fixed target and nuclear physics experiments
- Precision tests of the SM with low energy experiments
- Searches for New Physics signals at LHC
- Searches for Dark Matter candidates

Registration and Conference Fee

The registration to the Conference is closed. Participants must confirm their registration at the Conference Secretariat Desk, starting Tuesday 16th, h. 8:30 (LNF, Building n. 36, Room T-75).

The conference fee is 250,00 €, to be paid in cash (eurocheques, traveller cheques and cheques from Italian banks are accepted as well). Credit cards cannot be accepted.

The fee includes:

- receptions
- lunches
- social events
- transportations (to and from the airport and the Frascati hotels)
- proceedings

There is a bank and an ATM inside the LNF, building N. 33, ground floor.

Talks

The workshop is organized in plenary sessions only. The planned duration of each talk is 35 minutes, including questions. The final program will be published on the conference web site.

The list of approved talks is the following:

S. Andreas:	Hidden photons in beam dump experiments
R. Ayad:	Status of Belle II and SuperKEKB
J Beacham:	APEX: A Prime Experiment
T. Beranek:	Light dark gauge boson searches in e-p scattering: description of present data and simulation for future experiments
C. Boehm	Dark matter candidates: where do we stand?
J. Boyce:	The Dark Light experiment: a status report

F. Cerulli:	Direct detection of dark matter particles
F. Curciarello:	U boson search in e^+e^- to m^+m^-g events with KLOE.
R. Essig:	First direct detection on sub-GeV dark matter and future prospects
R. Faccini:	Status of the SuperB project
P. Fayet:	Dark bosons extra U(1)'s and new forces
P. Fermani:	Indirect dark matter searches with neutrino telescopes
J. Fu:	Search for dark sector at BESIII
S. Galli:	CMB as a powerful probe of DM annihilation at the epoch of recombination
A. Gaz:	Searches for dark photons and dark Higgs at BaBar
E. Graziani:	Search for dark higgstrahlung processes with KLOE
E. Guido:	Searches for dark photons at BaBar
C. Gullstroem:	Search for a new gauge boson in p^0 decays with WASA-at-COSY
V. Heijne:	Search for long lived exotic particles at LHCb
S. Ivashin:	Search for dark photons at low energy e-gamma colliders
J. Jaeckel:	10 orders of magnitude lighter: fundamental physics at really low energy
I. Jaegle:	Dark photons search and the Higgstrahlung channel at Belle
J. Jaros:	The Heavy Photon Search experiment
Y. Kataoka:	Searches for R-parity conserving supersymmetry with the ATLAS detector
K. Kouvaris	The dark side of the stars
A. Krasznahoray:	Search for a light neutral boson in nuclear transitions
F. Maas:	A new parity violation experiment
W. Marciano:	The muon anomaly and dark parity violation
H. Merkel:	Searches for dark photons at the Mainz microtron
A. Morselli:	Searches for dark matter in the sky
M. Pospelov:	Dark forces and New Physics at the intensity frontier
I. Sarra:	U boson search in Φ dalitz decays with KLOE
N. Srimanobhas:	Search for dark matter at the Compact Muon Solenoid experiment
J. Stark:	Searches for invisible particle production in monojet and monophotons events with missing transverse momentum with the ATLAS detector
N. Toro:	Concluding remarks
G. Venanzoni:	The new muon g-2 experiment at Fermilab
C. Wallace:	Deeply Inelastic Dark Matter

Proceedings

The proceedings of the workshop will be published in electronic form only, as an issue of the Frascati Physics Series. Instructions on how to contribute together with a LaTeX template file will be provided at the time of the workshop and posted on the workshop web site.

Speakers

Oral presentations will use a PC and a projector. Apple users please provide a pdf version and /or check compatibility of your talk with a PC. **Talks must be uploaded at least 48 hours in advance via the Indico page of your contribution.**

Public event

In the afternoon of **Thursday 18th**, a public event is being organized , with a talk on Dark Matter for general public and schools. The talk will be in Italian.

Social Events

A welcome cocktail has been organized for participants on Tuesday 16th, at 18:30 in the Laboratory.

On Thursday 18th, participants are invited to the social dinner at the restaurant "Terrazza del Cesàri" in Rome. Bus transportation from/to Frascati will be provided.

Daily Program

Morning Session h. 8:45*	B. Touschek Auditorium (Bldg. 36, ground floor)
Lunch h. 13:30	ENEA Canteen
Afternoon Session h. 14:50*	B. Touschek Auditorium (Bldg. 36, ground floor)

**coffee breaks in the B. Touschek Auditorium hall*

Social Program

Tuesday 16 th , h. 18:30	Welcome Cocktail at LNF (Bldg. 33)
Thursday 18 th , h. 20:00	Social Dinner at "La Terrazza del Cesàri", Rome (Via di Pietra, 89A ph. +39-06-6749701)

Internet Access

Attendees will have at their disposal a Computer Room (n. T73). A wireless ethernet connectivity is also available (standard IEEE 802.11b).

To access the LNF network and connect to Internet, participants must authenticate with a username and a password. In order to get such credentials, non-INFN participants should submit a request before coming to Frascati, otherwise we cannot guarantee to provide the internet access in short time. The request can be done by filling out a form available on the conference web site. The upload of a valid identification document is required (n.b.: in JPEG format only). Username and password will be sent to your email address.

INFN participants will be able to connect by using their INFN certificate or the username and password used to access the network at their INFN Division.

Hotel Accommodation

Participants are invited to provide by themselves to their accommodation. A list of suggested hotels can be found in the workshop web page.

Travel Arrangements

Participants traveling by plane may reach the Frascati Laboratories by **train** or by **taxi**, from the airports of Fiumicino and Ciampino (see also "How to get here").

Airport Shuttle

A shuttle bus will be available to reach Frascati for people arriving at "Leonardo da Vinci" Fiumicino Airport (FCO) on **Monday 15th, h. 19:00**. The bus will stop outside the **Terminal 3 (T3)**, on the right side of the road. To identify the bus look for: **SCHIAFFINI** (the bus company) and **INFN-DARK2012**.

A bus transportation will also be provided at the end of the conference to reach the Fiumicino airport, on **Friday 19th, at h. 13:00.**

Conference Shuttle

A shuttle bus service will be provided during the conference days to link the LNF to the hotels and to the center of Frascati, in due time for the beginning and the end of the daily program.

Conference Shuttle Timetable

BUS DEPARTURES	Tue.	Wed.	Thu.	Fri.
From Hotels to LNF				
- Frascati center (stop A)	h. 8:10	h. 8:15	h. 8:15	h. 8:15
- Villa Mercedes (stop B)	h. 8:20	h. 8:25	h. 8:25	h. 8:25
- Antica Colonia (stop C)	h. 8:25	h. 8:30	h. 8:30	h. 8:30
From LNF to Frascati /Hotels	h. 20:00	h. 19:20	h. 14:30	h. 14:30
From Frascati to Rome (Social Dinner)				
- Frascati center (stop A)			h. 18:30	
- Villa Mercedes (stop B)			h. 18:35	
- Antica Colonia (stop C)			h. 18:40	
From Rome to Frascati			h. 22:30	

n.b: time departure from LNF may change depending from the end of the session.

Hotel Shuttle bus

In addition to the conference shuttle bus service (see above **timetable**), Villa Mercedes and Antica Colonia hotels, provide their own shuttle bus for the connection with the LNF and the Frascati and Tor Vergata Railway Stations. The reservation of this service may be asked directly to the hotels.

How to get here

Frascati is located 20 km south-east of Rome and about 40 km est of Fiumicino Airport (FCO). The Frascati National Laboratories are about 2 km from the center of Frascati.

Traveling by airplane

- **From Fiumicino Airport "Leonardo da Vinci" to Roma Termini central railway station:** take the "Leonardo Express" train; the journey takes about 35 minutes; tickets are available at the Airport station and cost 14,00 Euro.
- **From Ciampino Airport "Giovanni Battista Pastine" to the Ciampino railway station:** take a bus, Schiaffini Travel or COTRAL; tickets cost 0,77 Euro.

From **Termini and Ciampino Railway Stations** take a train to **Frascati or Tor Vergata stations** (see below).

Taxi (licensed white or yellow cabs are strongly advised): from Fiumicino the distance is about 30 km and the taxi fare amounts to approximately 70,00 Euro. From Ciampino the taxi fare is approximately 40,00 Euro.

Traveling by train/bus

- **From "Roma Termini" to Frascati-LNF (Tor Vergata):** take the train Roma-Cassino, or Roma-Frosinone, or Roma-Colleferro (FM6) and get off at "Tor Vergata" (second stop, close to LNF) . The journey takes about 20 minutes. The LNF are at 350 mt up hill on E. Fermi Street. Tickets are available at tobacconist's shops and newspapers kiosk and cost 1,30 Euro.
- **From "Roma Termini" to Frascati downtown:** take the train Roma-Frascati (FM4). It stops about 2 km far from LNF and it is possible to take a taxi to LNF. Otherwise from "Roma Termini" take the Underground - "linea A" (tickets cost 1,00 Euro) to the "Anagnina Station", then a bus (COTRAL) to Frascati (nearly every 30 minutes). Tickets are available at tobacconist's shops and newspapers kiosks and cost 1,90 Euro.
- **From Ciampino Railway Station to Frascati:** you can take a train on both lines, to Tor Vergata (FM6) or to Frascati downtown (FM4). Tickets cost 1,30 Euro.

Note: remember to validate your ticket before you get on the train.

Traveling by car

Take the ring highway "Grande Raccordo Anulare", Exit 21-22, then the state highway "Tuscolana" to Frascati. Turn left (via E. Fermi) at the traffic-lights after Villa Mercedes Hotel. The LNF are at about 1 km.

LNF Shuttle Service

Service free of charge, available only during working days .

Itinerary	Rome »» LNF	LNF »» Rome
Piazzale Cinecittà, ERG station	08:45	18:40 (monday-thursday) 16:40 (friday)
Frascati – P.za Marconi (City Hall)	09:05	18:20 (monday-thursday) 16:20 (friday)
Frascati - LNF	09:10	18:15 (monday-thursday) 16:15 (friday)

Weather

October is generally a nice month in Rome, with temperatures ranging between 12 and 20 °C. There is some possibility of rains, though. Please note that the social dinner site has a large terrace "au dehors" so please bring some properly heavy suit for the purpose.

Contacts

DARK2012

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Via Enrico Fermi, 40
00044 Frascati (Rome) Italy

Conference Secretariat

Maria Cristina D'Amato

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E-mail: dark_loc@lists.lnf.infn.it

Website: <http://www.lnf.infn.it/conference/dark>

Useful numbers

LNf emergency 5555

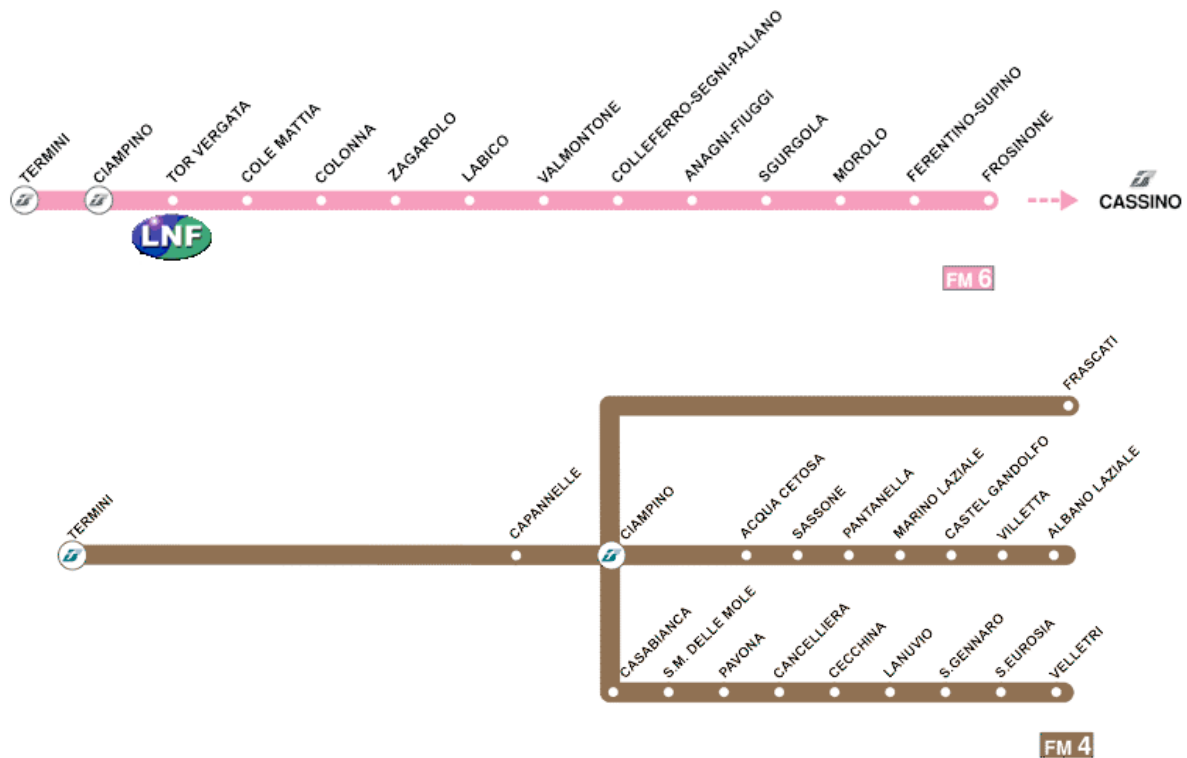
From LNf dial 0 to get external line:

Emergency phone (health) 118

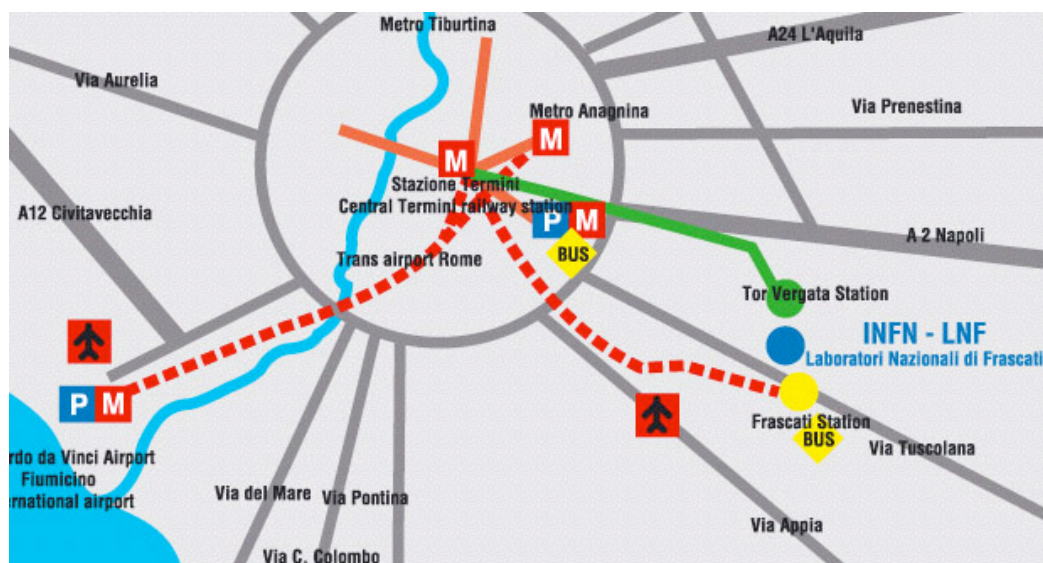
Emergency phone (Police) 113

Taxi Frascati 06 942 2500

Railway lines FM6 and FM4



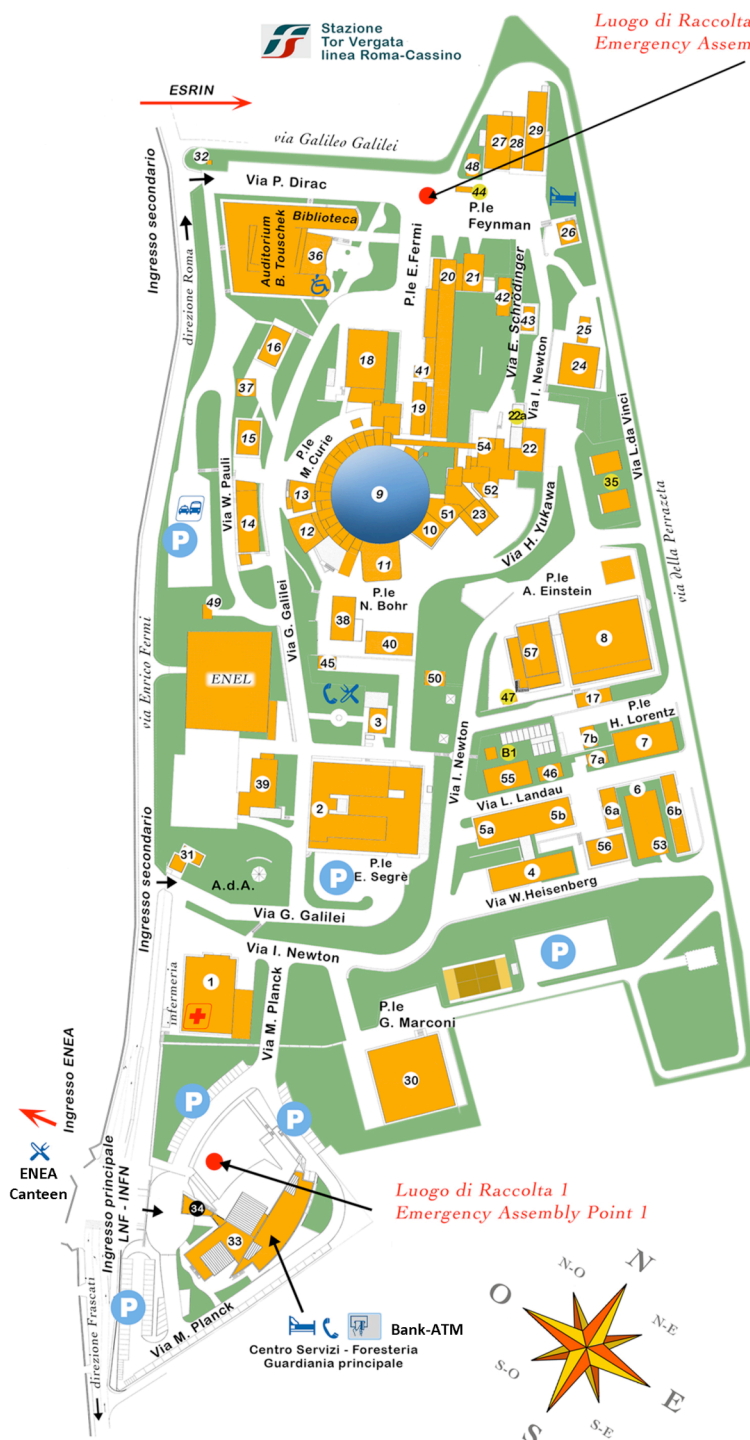
Area map



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Stazione
Tor Vergata
linea Roma-Cassino

Luogo di Raccolta 2
Emergency Assembly Point 2



- 1 Direzione - Uffici Amministrativi e Magazzino Centrale
(Aula Direzione)
- 2 Divisione Acceleratori e Divisione Tecnica
(Aula Dafne)
- 3 Bar
- 4 Puls, Divisione Acceleratori e Divisione Tecnica
(Aula Master, Aula Puls)
- 5a Laboratorio Servizi Vuoto - 5b Officine Servizi Ingegneria Meccanica
- 6 SPARC - 6a Sala Controllo - 6b Sala Macchine
- 7 Laboratorio Tecnologie - 7a & 7b Sala Compressori
- 8 Laboratori Gran Sasso ed Antenna Gravitazionale NAUTILUS
- 9 DAFNE
- 10 Centrale Impianto Criogenico
- 11 Sala Sperimentale KLOE
- 12 Sala Sperimentale DAFNE - Luce
- 13 Sala Sperimentale DAFNE - Luce UV
- 14 Edificio Centrale Calcolo
(Aula Calcolo)
- 15 Edificio Fisica Sanitaria
- 16 Edificio Prevenzione e Protezione, Fisica Sanitaria
- 17 Laboratorio ROG
- 18 Sala Macchine Alimentatori
- 19 Divisione Tecnica, Laboratorio Impianti a Fluido e uffici annessi
- 20 Sala Modulori
- 21 LINAC
- 22 Edificio Fisica Nucleare - 22a Lab. SIDDHARTA
(Aula Leale)
- 23 Sala Booster Accumulatore
- 24 Uffici distaccati Alte Energie - Luce Sincrotrone
- 25 Laboratorio produzione Superconduttori
- 26 Foresteria Adone
- 27 Laboratori supporto Fisica Nucleare
- 28 Laboratorio Camere pulite ausiliarie
- 29 Laboratori supporto Fisica Subnucleare
- 30 Amministrazione Centrale - Uffici
- 31 Guardiania ingresso secondario
- 32 Guardiania pedonale e ingresso secondario
- 33 Centro Servizi - Foresteria
(Aula E. Fermi)
- 34 Guardiania ingresso principale
- 35 Deposito materiali attivati
- 36 Edificio Alte Energie
(Aula B. Touschek, Aula Seminari, Auletta A1, B1, B34, T73, T75)
- 37 Deposito Sorgenti
- 38 Laboratorio Misure magnetiche
- 39 Divisione Tecnica, Stazione Elettrica e uffici annessi
- 40 Sala pompe DAFNE
- 41 Deposito materiale
- 42 Sala Pompe Linac
- 43 Magazzini Linac
- 44 Cabina elettrica
- 45 Locale deposito
- 46 Cabina elettrica
- 47 Locale compressori
- 48 Locale deposito
- 49 Centrale idrica antincendio
- 50 Box impresa pulizie
- 51 Sala pompe Accumulatore
- 52 Sala alimentatori Accumulatore
- 53 Capannone deposito materiale
- 54 Sala controllo BTF
- 55 Uffici SPARC
- 56 Laboratorio FLAME
- 57 Ampliamento Laboratorio Gran Sasso,
Divisione Ricerca e Divisione Tecnica con annessi uffici
(Aula M. Conversi)
- B1 Box - Uffici - Magazzini

