

QED 2000 Draft Program

Thursday, October 5th

Arrivals

17:00 – 20:00

Registration –Adriatico Palace Hotel (ICTP Guest House) - Grignano

18:30 – 20:00

Welcome cocktail –Adriatico Palace Hotel (ICTP Guest House) - Grignano

Friday, October 6th

ICTP Main Lecture Hall

9:00 – 9:15

Opening ceremony

Morning session – Chairmen: I. Lindgren, W. Dittrich

9:15 – 10:00

W. Greiner - **Long living nuclear molecules and the possibility to test the change of the $e+e^-$ - vacuum in supercritical systems**

10:00 – 10:45

F. Kottmann - **Towards a Lamb Shift Measurement in Muonic Hydrogen**

10:45 – 11:15

Coffee break

11:15 – 12:00

U. Mohideen - **Precision Measurements of the Casimir Force using an Atomic Force Microscope**

12:00 – 12:45

C. Schubert - **QED in the worldline formalism**

Lunch

Afternoon session – Chairmen: J. Ulbricht, W. Greiner

14:30 – 15:00

R. Floreanini - **Dissipative effects in the propagation of polarized photons**

15:00 – 15:45

P. Indelicato - **Self-Energy Screening in Two-Electron Ions**

15:45 – 16:30

D. Bakalov - **Density effects in the precision spectroscopy of antiprotonic helium**

16:30 – 17:00

Coffee Break

17:00 – 17:45

S. Reynaud - **Quantum algebraic representation of localization and motion of a Dirac electron**

17:45 – 18:30

H. Gies - **From effective actions to actual effects**

Saturday October 7th

ICTP Main Lecture Hall

Morning session – Chairmen: A.C. Melissinos, S. Reynaud

9:00 – 9:45

E. Zavattini - **PVLAS: an experiment to search for small anisotropies induced in vacuum by a magnetic field**

9:45 – 10:30

E. Massó - **Pseudoscalar production in electromagnetic fields by a Schwinger-like mechanism**

10:30 – 11:00

Coffee break

11:00 – 11:45

G. Calucci - **Decay of the vacuum with production of $e^{(+)}e^{(-)}$ pairs in very strong magnetic fields**

11:45 – 12:30

R. Bluhm - **QED Tests of Lorentz and CPT Symmetry**

12:30 – 12:50

I. Pirozhenko - **The Heat-kernel coefficients and the Casimir energy of the dielectric cylinder**

Lunch

Afternoon session – Chairmen: D. Bakalov, R. Faustov

14:30 – 15:15

C. Rizzo - **A 25 T dipole pulsed magnet to study the magnetic birefringence of vacuum: the BMV project**

15:15 – 16:00

F. Marin - **An optical transduction chain for gravitational waves bar detectors**

16:00 – 16:30

Coffee Break

16:30 – 17:15

I. Lindgren - **Treatment of atomic quasi-degeneracy in bound-state QED**

17:15 – 18:00

W. Quint - **The g-Factor of the Bound Electron in Hydrogen-like Ions: a High-Accuracy Test of Bound-State QED**

18:00 – 18:20

A. Tishchenko - **Three-Photon Interaction In Dense Fermionic Medium**

Sunday October 8th

8:45 – 16:30 – *Boat trip for the “Barcolana” 2000 boat race*

8:45 – Boat sails from Grignano bay, in front of the Adriatico Hotel (ICTP Guest House)

9:00 – 11:30 – Cruise in the Gulf of Trieste to watch the Barcolana 2000

12:00 – Arrival in Muggia

12:30 – Lunch in Trattoria “La Risorta”, Muggia

15:30 – Boat sails from Muggia to Grignano bay

16:30 – Arrival in Grignano

Monday October 9th

ICTP Main Lecture Hall

Morning session – Chairmen: F. Biraben, F. Kottmann

9:00 – 9:45

A.C. Melissinos - **Neutrino scattering in a magnetic field**

9:45 – 10:30

J. Rafelski (W. Dittrich)

10:30 – 11:00

Coffee break

11:00 – 11:45

M. Nio - **Complete result of the $\alpha(Z\alpha)^3$ Muonium Hyperfine Structure**

11:45 – 12:30

B.G. Englert - **Making Fock states in cavity QED**

12:30 – 13:00

E. Milotti - **Quantum fluctuations of the gravitational field and propagation of light: a heuristic approach**

Lunch

Afternoon session – Chairmen: E. Polacco, L. Simons

14:30 – 15:15

J. Vigué - **Atomic interferometry: principles and applications to fundamental physics.**

15:15 – 16:00

Y. Semertzidis – **Muon g-2: A Probe for Physics Beyond The Standard Model**

16:00 – 16:30

Coffee Break

16:30 – 17:15

R. Faustov - **Hadronic Vacuum Polarization Contribution to the Spectra of Hydrogenic Atoms**

17:15 – 18:00

C.O. Petrascu - **First results from the DEAR experiment on DAFNE**

18:00 – 18:20

M. Verbeni - **Axial Anomaly and Mass singularity Cancellation in QED**

20:30 – **Social Dinner** at “Le Terrazze” restaurant, Grignano

Guest Speaker: A.C. Melissinos - "**An outsider's look at precision Physics**"

Tuesday October 10th

ICTP Main Lecture Hall

Morning session – Chairmen: J. Vigué, E. Zavattini

9:00 – 9:45

W. Dittrich - **Second-Order Radiative Corrections to the Axial Vector Anomaly**

9:45 – 10:30

J. Ulbricht - **Limits on sizes of fundamental particles and on gravitational mass of a scalar**

10:30 – 11:00

Coffee break

11:00 – 11:45

G. Dunne - **QED Effective Actions in Inhomogeneous Backgrounds: Summing the Derivative Expansion**

11:45 – 12:30

J. Zhao - **QED Test at LEP200 Energies in the Reaction $e+e- \rightarrow \gamma(\gamma)$**

12:30 – 13:00

Y. Semertzidis - **Sensitive Search for a Muon Electric Dipole Moment**

Lunch

Afternoon session – Chairmen: E. Remiddi, U. Mohideen

14:30 – 15:15

F. Biraben - **Metrology of hydrogen atom: determination of the Rydberg constant and Lamb shifts**

15:15 – 16:00

L. Simons - **Crystal Spectroscopy and Exotic Atoms**

16:00 – 16:30

Coffee Break

16:30 – 17:15

A. Martynenko - **Proton polarizability contribution to the hydrogen Lamb shift and hyperfine splitting**

17:15 – 18:00

E. Widmann - **High-precision spectroscopy of antiprotonic helium**

18:00 – 18:20

E.O. Le Bigot – **Screened self-energy of almost-degenerate two-electron atomic states**

18:20

E. Zavattini – **Closing remarks and arrivederci**