IOP and LIFTaPP Half-Day meeting
(13 December 2013)

Supported by the Atomic and Molecular Interactions Group of the Institute of Physics, UK (IOP, http://www.iop.org/) and the London Institute of Field Theory and Particle Physics (LIFTaPP, http://www.liftapp.ac.uk/)

CPT and Antimatter Physics

The meeting will bring together theorists and experimentalists with a view to discussing and exploiting synergies between various theoretical models on induced CPT violation and experimental searches. Topics to be presented include antimatter experiments, neutrinos, meson factory physics and theoretical models of CPT and Lorentz violation including consequences of CPT violating geometries in the early universe.

The meeting will be held on the **Strand campus of King's College London (KCL)** .
The directions can be found in the following link:

http://www.kcl.ac.uk/campuslife/campuses/strand/StrandCampusLocation.aspx

Program

Refreshments

13:00-14:00
S7.06 (7th floor of the Strand Building, KCL)

The actual meeting will be held in K2.31, Strand Campus 2nd Floor (King's Building, KCL)

14:00 - 14:05
Sarben Sarkar (KCL)
Welcome

14:05-14:30
John Ellis (KCL/CERN)
Is nothing sacred? (20+5 mins)

14:30 -15:00
Jose Bernabeu (Valencia)
T and CPT Violation in mesonic transitions (25+5 mins)

15:00 - 15:30
Elizabeth Winstanley (Sheffield)
CPT and decoherence in neutrino physics (25+5 mins)

15:30 –16.00
Justin Evans (Manchester)
Experimental tests and bounds on CPT violation in neutrinos (25+5 mins)

Coffee
16.00-16.30
7th Floor, Strand Building, KCL

16:30-16:55
Eoin Butler (Imperial)
Towards antihydrogen CPT and gravity tests with ALPHA (20+5 mins)

16:55-17:20
Dirk Peter van der Werf (Swansea)
Progress towards gravity measurements on antimatter with GBAR (20+5 mins)

17:20-17.45
David Cassidy (UCL)
Production of Rydberg Positronium for a free-fall experiment (20+5 mins)

17:45-18:10
Stephen Hogan (UCL)
Rydberg atom optics for antimatter gravity measurements (20+3 mins)

18:10-18:35
Graham Shore (Swansea)
Quantum effects in gauge theories with gravity (20+5 mins)

18:35-19:00
Nick E Mavromatos (KCL)
CPT Violation in the Early Universe and the Matter-Antimatter Asymmetry (20+5 mins)

19:05-19:30
ROUNDTABLE:

End of Meeting