THEORETICAL PHYSICS SEMINAR

Title: New Physics searches in radiative charm decays

Speaker: Dr. Aritra Biswas, IACS Kolkata

Date/Time/Venue: 20th April. (Thursday)/4:00 PM/ Room No. 469

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Tea will be served at 3:30pm outside Room 469
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ABSTRACT

We show that for a heavy vector-like quark model with a down type isosinglet, branching ratio for c--> u gamma decay is enhanced by more than O(10^2) as compared to that in the Standard model when QCD corrections to next-to-leading order are incorporated. In a left-right symmetric model (LRSM) along with a heavy vector-like fermion, enhancement of this order can be achieved at the bare (QCD uncorrected) level itself. We propose that a measurement of the photon polarization could be used to signal the presence of such new physics inspite of the large long distance effects. We find that there is a large region within the allowed parameter space of the LRSM, as well as in the model with vector-like quark with additional left-right symmetry, where the photon polarization can be dominantly right-handed.

All are welcome to attend

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