

THEORETICAL PHYSICS SEMINAR

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Title: Making Gravity maps with satellite borne Atomic Clocks

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Date/Time/Venue: 10th November (Tuesday)/2:30 PM/ Room No. 469

ABSTRACT

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Gravity maps over a terrain give information of the underground density variations and can be used to map subterranean acquirers, hydrocarbon and mineral deposits. The advances in the accuracy of atomic clocks is now such that General Relativistic corrections to Newtons gravity are measurable and these can be used to make accurate maps of "Geoid Anomalies" or local subterranean density variations. As a byproduct, accurate measurements of atomic frequency shifts in the gravitational field of the Earth can be used to test Einstein's General Relativity. This talk is a theory backup of the GMAP (Gravity Map) proposal which the Theory Division is putting forward for approval in the next plan.

All are welcome to attend