



Canadian Association  
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Contribution ID: 49    Type: **Oral Competition (Graduate Student) / Compétition orale (Étudiant(e) du 2e ou 3e cycle)**

## **(G\*) Test of Quantum Gravity in Statistical Mechanics**

*Monday 7 June 2021 11:58 (3 minutes)*

We study Quantum Gravity effects on the density of states in statistical mechanics and its implications for the critical temperature of a Bose Einstein Condensate and fraction of bosons in its ground state. We also study the effects of compact extra dimensions on the critical temperature and the fraction. We consider both neutral and charged bosons in the study and show that the effects may just be measurable in current and future experiments.

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**Session Classification:** M1-2 Classical and Quantum Gravity I (DTP) / Gravité classique et quantique I (DPT)

**Track Classification:** Theoretical Physics / Physique théorique (DTP-DPT)