



Canadian Association
of Physicists

Association canadienne
des physiciens et physiciennes

Contribution ID: 4469 Type: **Oral Competition (Graduate Student) / Compétition orale (Étudiant(e) du 2e ou 3e cycle)**

(G*) Gravitational scattering of the light emitted by the CMB due to fluctuations in the density of the universe.

Monday, May 27, 2024 3:00 PM (15 minutes)

Using quantum field theory, we calculate the total effect on the photon flux in the microwave background due to some photons being gravitationally scattered toward us and others being gravitationally scattered away from us. The scattering is produced by the density fluctuations which act like point masses in a FLRW background, which can be of either sign. The net effect of having masses of either sign is to give a Debye screening of the graviton.

Keyword-1

Sachs-Wolfe effect

Keyword-2

Gravitational scattering

Keyword-3

Author: FORGET, Thomas (Université de Montréal)

Presenter: FORGET, Thomas (Université de Montréal)

Session Classification: (DTP) M2-2 Gravity and Cosmology | Gravité et cosmologie (DPT)

Track Classification: Technical Sessions / Sessions techniques: Theoretical Physics / Physique théorique (DTP-DPT)