

Colóquio:

"Spectroscopy of atomic and molecular gases
close to dielectric surfaces"

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Data: 20 de Setembro de 2021

Horário: 16:00 hrs

Local: Plataforma Google Meet

link: <https://meet.google.com/pmo-axrw-tx>

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Resumo do Colóquio:

Interactions of the Casimir type are a quantum phenomenon that is due to the modification of electromagnetic quantum fluctuations near macroscopic dielectric boundaries. In this seminar, I will give a quick overview of Casimir-Polder experiments measuring the interaction between quantum polarizable particles (atoms or molecules) and dielectric surfaces. In particular, I will focus on spectroscopic techniques developed in the University Sorbonne Paris Nord over the past 30 years to probe Casimir-Polder interactions using atomic vapor gas cells. I will then describe our efforts to measure the Casimir-Polder interactions of highly excited Rydberg atoms that are now attractive candidates for quantum technology applications. Finally, I will briefly explain a new generation of spectroscopic experiments probing molecular gases next to dielectric surfaces thus paving the way towards molecule-surface interaction spectroscopy.

