Service de Physique de l'Etat Condensé
SÉMINAIRE

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Vendredi 23 novembre 11h00

Orme des Merisiers SPEC Salle Itzykson, Bât.774

The happy marriage between superconductivity and astronomy

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Many new observational astronomical instruments are currently being built based on superconducting devices (Herschel Space Telescope and Atacama Large Millimeter Array). The challenge is to perform at frequencies from 100 GHz to 5 THz high-resolution spectroscopy to determine the chemical composition of the interstellar gas. Superconducting devices provide a high-sensitivity and, usually, a wide band width. Up to frequencies of about 1.4 THz non-linear tunnel I-V curves are used with a well-developed theory. Beyond this frequency-range non-equilibrium properties, depending on the details of the geometry, play a key-role. Future research is directed towards direct detectors based on superconductors to be in a multi-pixel system.

Attention Jour Inhabituel

Le cafe sera servi 10 minutes avant
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http://www-drecam.cea.fr/spec/Phocea/Vie_des_labos/Seminaires/index.php