



CEA – Saclay, 91191 Gif-sur-Yvette Cedex
Service de Physique de l'Etat Condensé - UMR 3680

SÉMINAIRE

Mercredi 31 janvier 2018 à 11h15

Orme des Merisiers SPEC, Salle Itzykson, Bât.774

Clément GODFRIN

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Playing with a single $3/2$ nuclear spin

Recent advances in experimental techniques offer physicists the opportunity to implement simple systems worth of the “gedanken-experiments” imagined by the founders of quantum theory to address its controversial aspects.

I will present experiments on one of these toy model systems, namely a single $3/2$ nuclear spin.

I will first show how, using a single molecular magnet transistor, we can measure an object which otherwise is highly isolated from its environment. I will then present the coherent manipulation of the three possible nuclear spin transitions. Finally I will illustrate how we use this fully controlled 4-level system to explore foundational aspects of the quantum world.

Thiele S. et al. Science 344, 1135 (2014)

Godfrin C. et al. ACS Nano 11, 3984 (2017)

Godfrin C. et al. Phys. Rev. Lett. 119, 187702 (2017)

A coffee break will be served at 11h00. The seminar will be given in English.
