NAME **Cécile Robilliard**

Email: cecile.robilliard@irsamc.ups-tlse.fr

AFFILIATION : Laboratoire CAR, IRSAMC, CNRS/Université Paul Sabatier, Toulouse, France

TITLE: The BMV project: Photoregeneration of axion-like particles.

ABSTRACT
Since the axion has been proposed 30 years ago to solve the strong CP problem, several attempts were made to detect it, based on astronomical observations or laboratory experiments. Last year, the PVLAS collaboration announced that they might have detected axions for the first time through the Primakoff effect. However, the mass and axion-photon coupling constant inferred from their measurements are inconsistent with the CAST limits, and more generally with astronomical limits. Moreover, the scalar or pseudo-scalar nature of the particle is not yet clearly determined. It is therefore very important that other groups conduct similar experiments to confirm or infirm the PVLAS results. Within the BMV project, we have built a "light shining through the wall "experiment that uses pulsed magnets and the kilojoule laser facility at LULI (Palaiseau). Our experiment will be able to test the PVLAS results with a 5-sigma confidence. After describing the experimental set-up, I will present the tests we have done and the schedule of the data taking concerning both scalar and pseudo-scalar particles.