

CEA - Saclay 91191 Gif-sur-yvette Cedex  
Service de Physique de l'Etat Condensé  
SÉMINAIRE

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Mercredi 11 juin 11h00

Orme des Merisiers SPEC Salle Itzykson, Bât.774

Flow and Static Properties of Two-Dimensional Foams

**Gijs Katgert (Kamerlingh Onnes Lab.,  
U. Leiden, Pays-Bas)**

In this talk, I will discuss the linear shear flow of a bidisperse foam monolayer, confined between a glass plate and the surface of a soapy solution. We measure velocity profiles as a function of applied shear rate and packing fraction, and fit these profiles to solutions of a model that only takes into account the drag forces acting in the system. The non-trivial scaling of these drag forces with bubble velocity is confirmed by rheometry, and the crucial role of non-affine motion in establishing the connection between the local drag forces and the bulk foam viscosity is demonstrated. I'll finally touch upon analysis of static foam packings that yield experimental validation of simulation results for two-dimensional frictionless discs.