



*Organisé conjointement par  
CPHT-École Polytechnique et Groupe Théorie IPN Orsay*

## **SÉMINAIRE de PHYSIQUE des PARTICULES**

**Zsolt Szép**

(Eötvös University, Budapest)

### **Thermodynamics of the vector meson extended quark-meson model**

**Résumé :**

We investigate the effects of (axial)vector mesons on the chiral phase transition of the model containing 2+1 constituent quarks and Polyakov-loop degrees of freedom. A  $\chi^2$  minimization procedure is used to parameterize the model based on tree-level decay widths and vacuum scalar and pseudoscalar curvature masses which includes the vacuum and thermal contribution of the constituent quarks. The pressure and the derived thermodynamical observables determined from it at finite temperature  $T$  and chemical potential using a simple approximation for the grand potential are compared to lattice results. The best parametrization of the model allows for the existence of the critical end point (CEP) of the  $T$  phase diagram.

**Vendredi 28 avril 2017**

*(Attention: jour inhabituel !)*

**11:00**

**École Polytechnique, CPHT, Salle des Conférences**