



第123回エンレイソウの会

場 所： 工学部3階 A3-62(物理工学系会議室1)

日 時： 平成20年 7月 22日(火曜日)

16:00~17:30

講演者： 陳 智泓 氏

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題 目： 『**Topological phase transition and spin anisotropy in the 2D frustrated spin systems**』

要 旨： Recently, searching for the spin liquid has made great progress due to the discovery of several candidates. Among them, NiGa_2S_4 and $\text{ZnCu}_3(\text{OH})_6\text{Cl}_2$ are the most promising candidates because of low spin, low dimensionality and the perfect crystal structure. Current theoretical attempts from the microscopic point of view have met difficulties from either technical problem in computation or complicate microscopic details. In this talk, we will introduce the phenomenological approach to understand these two materials qualitatively. We will show that $\text{ZnCu}_3(\text{OH})_6\text{Cl}_2$ has large spin anisotropy albeit it is a spin-1/2 system. The spin anisotropy was later confirmed experimentally. In NiGa_2S_4 , we will show that the spin-freezing transition is likely to be the Kosterlitz-Thouless transition.

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