

A01 & A05研究項目合同ワークショップ プログラム

2006.7.19

7月27日(木)

14:00-14:10 opening

Ring Exchange (3D) 座長:久保 健

14:10-15:00 福山 寛 (東大理)

[Lecture] Ring Exchanges in Solid ^3He

15:00-15:30 佐々木豊 (京大理)

Ultra Sound Study of Nuclear Ordered Solid Helium 3

15:30-16:00 宮下精二 (東大理)

Quantum ordering structures in inhomogeneous systems
--- Super-solid state in the interface region ---

16:00-16:30 coffee break

Ring Exchange (2D, 1D) 座長:常次宏一

16:30-17:20 久保 健 (青学大理工)

[Lecture] Ring-exchange interactions in solid ^3He

17:20-17:50 森下将史 (筑波大物理)

Heat Capacity of ^3He Solid Films on Graphite in Magnetic Fields

17:50-18:20 坂井 徹 (原子力機構)

Ring-exchange induced exotic phenomena in low-dimensional strongly correlated electron systems

18:30-19:30 夕食

ポスターセッション 座長:桃井 勉

19:40-20:30 ポスタープレビュー(一人2分以内)

20:30-22:30 ポスターセッション

7月28日(金)

Mott Transitions (Electron Systems) I 座長: 福山 寛

9:00-10:00 今田正俊 (東大工)

[Lecture] Mott Physics

10:00-10:30 賀川史敬 (東大工)

Mott criticality in the quasi-two-dimensional organic conductor kappa-(BEDT-TTF)₂Cu[N(CN)₂]Cl: NMR and transport studies

10:30-11:00 coffee break

Mott Transitions (Electron Systems) II 座長: 求 幸年

11:00-11:30 川上則雄 (阪大工)

Mott Transitions in Correlated Electron Systems: Geometrical and Orbital Frustration

11:30-12:00 野原 実 (東大新領域)

Mott and magnetic criticality in NiS₂

12:00-12:30 横山寿敏 (東北大理)

Variational Monte Carlo study of Mott transitions in two dimensions

集合写真撮影

12:30-15:00 昼食

Mott Transitions (3He, 4He systems) 座長: 今田正俊

15:00-15:50 John Saunders

[Invited Talk] Quantum Phase Transitions in Two Dimensional Helium Films

15:50-16:20 村川 智 (東工大理工)

Quantum Phase Diagram of a Strongly Correlated Two-Dimensional 3He

16:20-16:50 高木丈夫 (福井大)

Stability of $\sqrt{7} \times \sqrt{7}$ phase

16:50-17:20 coffee break

Mott Transitions, Quantum Liquids 座長: 川上則雄

17:20-17:50 山地洋平 (東大工)

Quantum and topological criticalities of Lifshitz transitions
—in Relation to Metal-Insulator Transitions

17:50-18:20 堀田知佐 (青学大理工)

Novel liquid state of spinless fermions on a triangular lattice

18:20-18:50 初貝安弘 (東大工)

Quantized Berry Phases and Entanglement Entropy in Quantum Liquids: For a Characterization of Topological Orders

19:10 懇親会

7月29日(土)

Spin Liquids I 座長:加藤礼三

9:00-10:00 常次宏一 (京大基研)

[Lecture] Spin Liquids and Related Topics

10:00-10:30 求 幸年 (東大工)

Macroscopic degeneracy and exotic states in pyrochlore Heisenberg antiferromagnets

10:30-11:00 中辻 知 (東大物性研)

Spin disordered states on the geometrically frustrated magnets NiGa₂S₄ and Pr₂Ir₂O₇

11:00-11:30 coffee break

Spin Liquids II 座長:野原 実

11:30-12:00 清水康弘 (理研)

Magnetism and Mott transition in molecular conductors with triangular lattice

12:00-12:30 田村雅史 (理研)

Quantum Triangular Antiferromagnets Based on a Organic Molecule, [Pd(dmit)₂]

(集合写真撮影・予備日)

12:30-13:30 昼食

Spin Liquids III 座長:中辻 知

13:30-14:00 石本英彦 (東大物性研)

The ground state in two-dimensional anti-ferromagnetic solid ³He in high magnetic field

14:00-14:30 是常 隆 (理研)

From the triangular lattice to the kagome lattice: Double peak structures and low energy excitations

14:30-15:00 桃井 勉 (理研)

Magnetic Multipole Orders in Ring Exchange Models

15:00-15:10 closing 総括:福山 寛

ポスターセッション

- P.1 當山清彦、大屋満明、松並絢也、岡本徹
Spin polarization and metal-insulator transition in strongly correlated 2D electron systems
- P.2 佐藤大輔、向 賢一、村川 智、辻 太輔、神原 浩、福山 寛
Pulsed-NMR studies of Two-dimensional ^3He near Localization
- P.3 辻 太輔、村川 智、向 賢一、松本 洋介、神原 浩、福山 寛
Heat capacity studies of new quantum phases at higher densities than the 4/7 phase in 2D ^3He on graphite.
- P.4 松本洋介、夏目恭平、山口 明、石本英彦
Heat capacity measurements of two-dimensional ^3He in high magnetic fields
- P.5 安田 千寿、久保 健
Spin-Wave Theory of the Multiple-Spin Exchange Model on a Triangular Lattice in a Magnetic Field
- P.6 根間裕史、田中祐一、山口明、石本英彦
Magnetization of 4/7 Phase on ^3He or ^4He Monolayer Preplated Graphite in high magnetic fields
- P.7 南部雄亮、小沼圭介、中辻知、前野悦輝
Spin Disordered State in the Quasi-Two-Dimensional Triangular Antiferromagnet NiGa_2S_4
- P.8 小沼圭介、南部雄亮、中辻 知、坂井 修、殿村宏史、前野悦輝
Single Crystal Study of $S = 1$ Heisenberg Triangular Antiferromagnet NiGa_2S_4
- P.9 小沼圭介、中辻 知、前野悦輝
A $S = 3/2$ Quasi-Two-Dimensional Ferromagnet
- P.10 笠原甫、宮川和也、清水康弘、鹿野田一司
Unconventional behavior of superconductivity near a spin liquid phase
- P.11 宇田川 将文、求 幸年
Suppression of horizontal charge ordering and coexistence of short-range charge modulations in $\text{Yb}(\text{BEDT-TTF})_2\text{MM}'(\text{SCN})_4$
- P.12 町田 洋、中辻 知、前野悦輝、田山 孝、榊原俊郎
Spin Liquid Behavior and Anomalous Hall Effect of the Frustrated Kondo Lattice $\text{Pr}_2\text{Ir}_2\text{O}_7$
- P.13 田中孝佳、八谷全典、佐々木豊、水崎隆雄
Magnetic Domain Structure of Nuclear Ordered Solid Helium 3
- P.14 岡本佳子、大見哲巨
Spin wave and Sound in High Field Phase of Solid ^3He
- P.15 引原俊哉
Effects of magnetic field in two-leg spin ladder with ring exchanges
- P.16 野村 清英、肘井 敬吾
Universality class of $S=1/2$ quantum spin ladder systems with four-spin exchange
- P.17 高島信也、竹下直、寺倉千恵子、野原実、高木英典
Pressure effect on NiS_2 - Mott critical point and quantum critical point
- P.18 大橋琢磨、桃井勉、川上則雄、常次宏一
Cellular dynamical mean field study of Mott transition in triangular lattice Hubbard model
- P.19 是常 隆、求 幸年、古崎 昭
Metal-Insulator transition in the two-dimensional Hubbard model on an anisotropic triangular lattice
- P.20 稲葉謙介、古賀昌久、菅誠一郎、川上則雄
The effect of orbital fluctuations on the Mott transitions in the multiorbital Hubbard model.
- P.21 渡辺真仁、今田正俊、三宅和正
Electronic states near quantum critical points of valence transition

- P.22 丸山勲、初貝安弘
Quantum Phase Transition in Quasi one dimensional Strongly Correlated Electron Systems with Interchain Hopping
- P.23 伏屋雄紀
Effect of the dimensionality in spin- and superconducting-fluctuations
- P.24 阿部陽香、上田哲人、野村竜司、奥田雄一
Interface Motion and Nucleation of 4He Crystal Induced by Acoustic Wave
- P.25 阿部陽香、上田哲人、野村竜司、奥田雄一
Faraday Instability on solid-liquid interface of 4He