

SFB 608

Einladung zum Kolloquium

- Ort:** Universität zu Köln
II. Physikalisches Institut, Seminarraum 201
- Zeit:** Freitag, 24. September 04, 15 Uhr c.t.
- Sprecher:** Y. Kuramoto
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Sendai, Japan
- Thema:** Octupole orders in strongly correlated electrons

Electronic orders in rare-earth and actinide systems are influenced by strong spin-orbit interaction. Magnetic moments in Ce or U systems are mainly determined by orbital angular momentum. Therefore dipole, quadrupole, octupole and even hexadecapole moments are coupled to each other, and give rise to rich ordering and fluctuation phenomena. We propose that higher multipoles are candidates of hidden order parameters in certain rare-earth and actinide compounds. As a specific example, an octupole ordering model for phase IV of $\text{Ce}_{1-x}\text{La}_x\text{B}_6$ is introduced. Experimental consequences of multiple orders are discussed with reference to NMR, μSR , elastic anomaly, neutron and X-ray scatterings etc.

Gez. Priv.-Doz. G. Uhrig