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Tricritical wings in itinerant ferromagnet LaCrGe3 under pressure[1] UDHARA KALUARACHCHI, SERGEY BUD'KO, PAUL CANFIELD, Iowa State University/ Ames LabLaboratory, VALENTIN TAUFOUR, Ames LabLaboratory — In ferromagnetic systems, quantum criticality is avoided either by a change of the transition order, becoming of the first order at a tricritical point (TCP), or by the appearance of modulated magnetic phases. In the first case, for pressures above TCP, application of magnetic field reveals the wing structure phase diagram in T-p-H space. In the case where the transition leads to modulated magnetic phase, no wing structure phase diagram has been reported so far. Recent pressure study on ferromagnetic $LaCrGe_3$ revealed that the paramagnetic-ferromagnetic quantum critical point is avoided by the appearance of a modulated magnetic phase[2]. We will present the constructed T-p-H phase diagram of $LaCrGe_3$ via electrical resistivity measurement and discuss a new possibility where tricritical wings appear in addition to the modulated magnetic phase.

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[2]Taufour *et al.* Phys. Rev. Lett. **117**, 037207 (2016)

Udhara Kaluarachchi
Iowa State Univ

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