

# Experimental studies of quantum critical phenomena in heavy-electron metals

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1. The prototypical non-Fermi-liquid (NFL) superconductor  $\text{CeCu}_2\text{Si}_2$  shows a quantum phase transition (QPT) of itinerant (SDW) nature.

Q:

Does the same hold true for all NFL heavy-electron superconductors?

2. The NFL metal  $\text{YbRh}_2\text{Si}_2$  exhibits a QPT of local (-moment) nature. Even single crystals of highest purity are not superconducting.

Q:

Are local quantum critical fluctuations unfavorable for superconductivity?