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Gap structure of heavy-fermion superconductor CeIrIn5 from heat transport HAMIDEH SHAKERIPOUR, Physique Department, Université de Sherbrooke, S.Y. LI, N. DOIRON-LEYRAUD , LOUIS TAILLEFER, C. PETROVIC, Brookhaven National Laboratory — We present measurements of the in-plane and out-plane thermal conductivity of heavy-fermion superconductor CeIrIn5 down to temperatures approaching Tc/10, throughout the vortex state. We use the observed anisotropy in residual linear term and response to a magnetic field to shed light on the nodal structure of the superconducting gap. We compare our results to existing theoretical calculations and discuss the possibility of multi-band superconductivity, observed recently in the related material CeCoIn5 [1].

[1] M.A. Tanatar et al., Phys. Rev. Lett. 95, 067002 (2005).

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