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Superconductivity in ZrVGe and HfVGe compounds ANTONIO JEFFERSON MACHADO, Escola de Egenharia de Lorena, Universidade de São Paulo, P.O. Box 116, Lorena, SP, Brazil, ZACHARY FISK, Departments of Physics and Astronomy, University of California at Irvine, Irvine, CA 92697, USA — In the Zr-V-Ge and Hf-V-Ge there are two ternary phases of ZrVGe and HfVGe compositions which crystallize in a tetragonal symmetry. Both structures crystallize in the UGeTe prototype with space group I4/mmm. The lattice parameters of the two compounds are a = 3.72 Å and c = 14.34 Å for HfVGe and a = 3.75 Å and c = 14.48 Å for ZrVGe. In this structure the elements are arranged in layers in which obey V-RM-Ge sequence, where RM represents the refractory metal like Zr or Hf. In this work we show that both compounds are bulk superconductor with superconducting critical temperature at 4.8 K for HfVGe and 6.0 for ZrVGe.

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