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Anisotropic Josephson effects in point contacts between the heavy fermion superconductor URuĆSiĆ and Nb

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Point contacts between the heavy-fermion superconductor URu(2)S(i)2 and Nb are studied. A finite de Josephson current is found in contacts aligned parallel to the a-b directions of URu2Si2 whereas it is absent in contacts aligned along the c direction. We attribute this extreme anisotropy; of the Josephson current to an unconventional superconducting order parameter in URu2Si2, with a symmetry leading to destructive interference for Josephson currents along the c direction.

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