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Josephson current noise above Tc in superconducting tunnel junctions[1] ALEX LEVCHENKO, University of Minnesota — Tunnel junction between two superconductors is considered in the vicinity of the critical temperature. Superconductive fluctuations above Tc give rise to the noise of the ac Josephson current although the current itself is zero in average. As a result of fluctuations, current noise spectrum is peaked at the Josephson frequency, which may be considered as precursor of superconductivity in the normal state. Temperature dependence and shape of the Josephson current noise resonance line is studied for various junction configurations.

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