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Neutrino Pair Emission from Hot Nuclei During Stellar Collapse WENDELL MISCH, UC San Diego, ALEX BROWN, Michigan State University, GEORGE FULLER, UC San Diego — We present the results of shell model calculations that show that particle-hole repulsion helps enhance the rate of neutral current de-excitation of thermally excited nuclei into neutrino-antineutrino pairs. Our calculations indicate that this process is the dominant source of low energy neutrino pairs near the onset of neutrino trapping during stellar collapse.

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