

Abstract Submitted  
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**Possible microscopic origin of large broadening parameter in point Andreev reflection spectroscopy**<sup>1</sup> JIAN WEI<sup>2</sup>, GOUTAM SHEET<sup>3</sup>, VENKAT CHANDRASEKHAR, Northwestern University — We report on the low frequency noise in ballistic point-contacts between a silver tip and a niobium foil. The ballistic nature is confirmed by point-contact Andreev reflection (PCAR) spectroscopy. As has been found by others, a broadening parameter  $\Gamma$  needs to be introduced to fit the PCAR spectra. For contacts with higher resistance, a larger  $\Gamma$  is required to fit the PCAR spectra, and we find that random two level fluctuations dominate the noise spectra. This finding suggests that two level fluctuations contribute to the broadening of the gap features.

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