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## Electronic phase separation in TmBa<sub>2</sub>Cu<sub>4</sub>O<sub>8</sub>

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### Abstract

The NQR spectra of Cu(2) in the superconductor TmBa<sub>2</sub>Cu<sub>4</sub>O<sub>8</sub> are studied at temperatures from 300 to 4.2 K. In analyzing the spectra it is assumed that the NQR line of each isotope contains two Gaussian components - narrow (n) and broad (b). It is discovered that the NQR frequencies have a minimum at the temperature  $T^* = 150$  K. The frequencies of the components of the spectrum are close at temperatures from  $T^*$  to 4.2 K and differ substantially at temperatures  $T > T^*$ . Both components are broadened as the temperature decreases, but this broadening occurs especially rapidly at temperatures  $T$