

Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

1T-TiTe₂: scattering rate from infrared and Raman data LEV GASPAROV, University of North Florida, G. GUENTHERODT, Physikalisches Institut, RWTH-Aachen, Germany, H.H. BERGER, L. FORRO, G.G. MARGARITONDO, EPFL, Lausanne, Switzerland, D. TANNER, University of Florida, Gainesville, USA — The normal-state properties of high temperature superconductors (HTSC) are usually described as those of a non-Fermi liquid, on account of the unusual temperature and frequency dependence of their optical and dc conductivities. This description can be challenged, however, because one has no good example Fermi-liquid (FL) behavior for comparison, especially considering the quasi two-dimensionality of the HTSC. One could address this issue with the help of a reference compound 1T-TiTe₂. Both transport and photoemission data on 1T-TaTe₂ agree well with the Fermi liquid predictions. Thus 1T-TaTe₂ is believed to be a “model Fermi liquid”. However, the key signature of the FL is the frequency and temperature dependence of the carrier scattering rate. In this report we discuss our infrared and Raman measurements of the scattering rate in 1T-TiTe₂ and compare our data to the available photoemission and transport data. *Supported by Petroleum Research Fund award # 40926-GB10 and Research Corporation Cottrell College science award # cc6130

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Date submitted: 22 Dec 2004

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