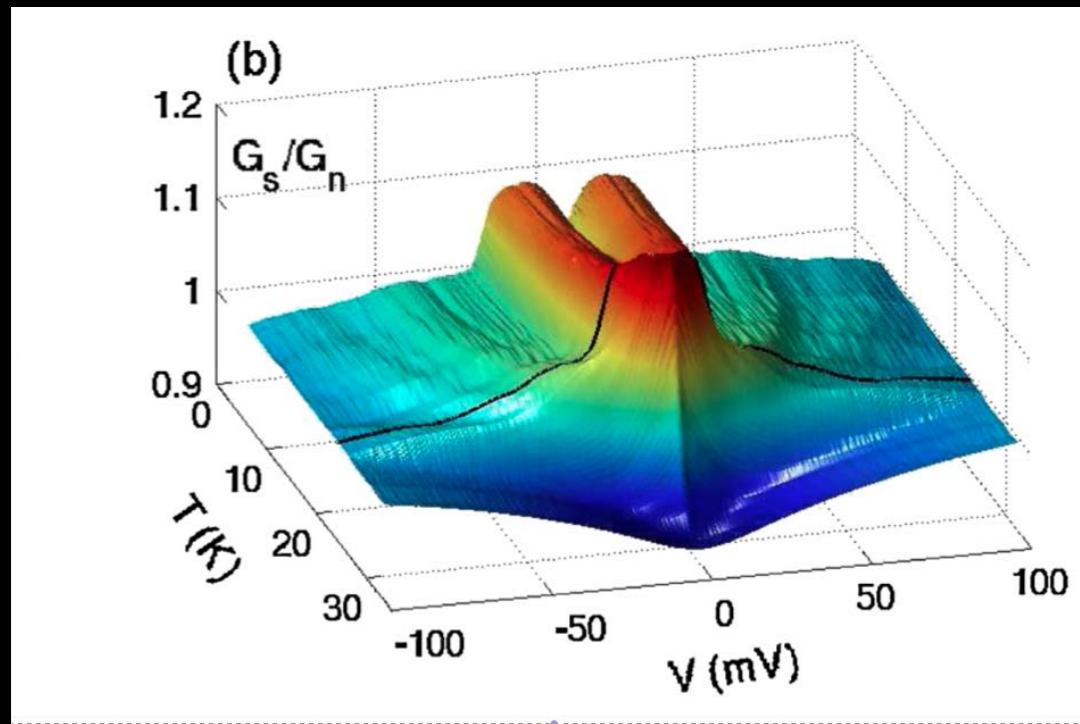


# Andreev spectroscopy of 122 superconductors



Sheet et al, PRL 105, 167003:

Ba(Fe<sub>1.92</sub>Co<sub>0.08</sub>)As<sub>2</sub> “... high quality single crystal films.”

BTK fits required “very large” values of the inelastic rate.

Maxim Vavilov  
UW-Madison

KITP  
Jan 19, 2011

$$\Delta = 6.4 \text{ meV}$$

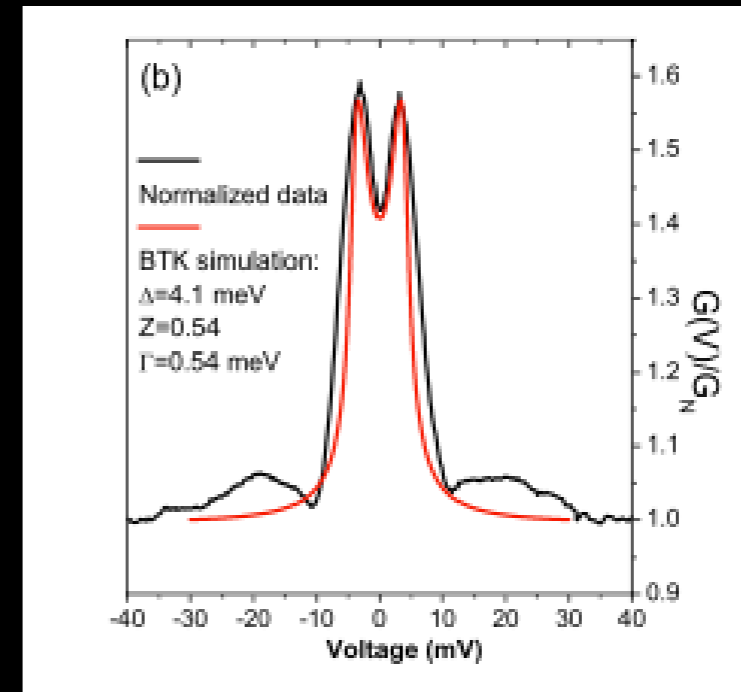
$$Z = 0.4$$

$$\Gamma = 0.64 \text{ meV}$$

$$2\Delta/T_c \approx 4.0$$

with D.

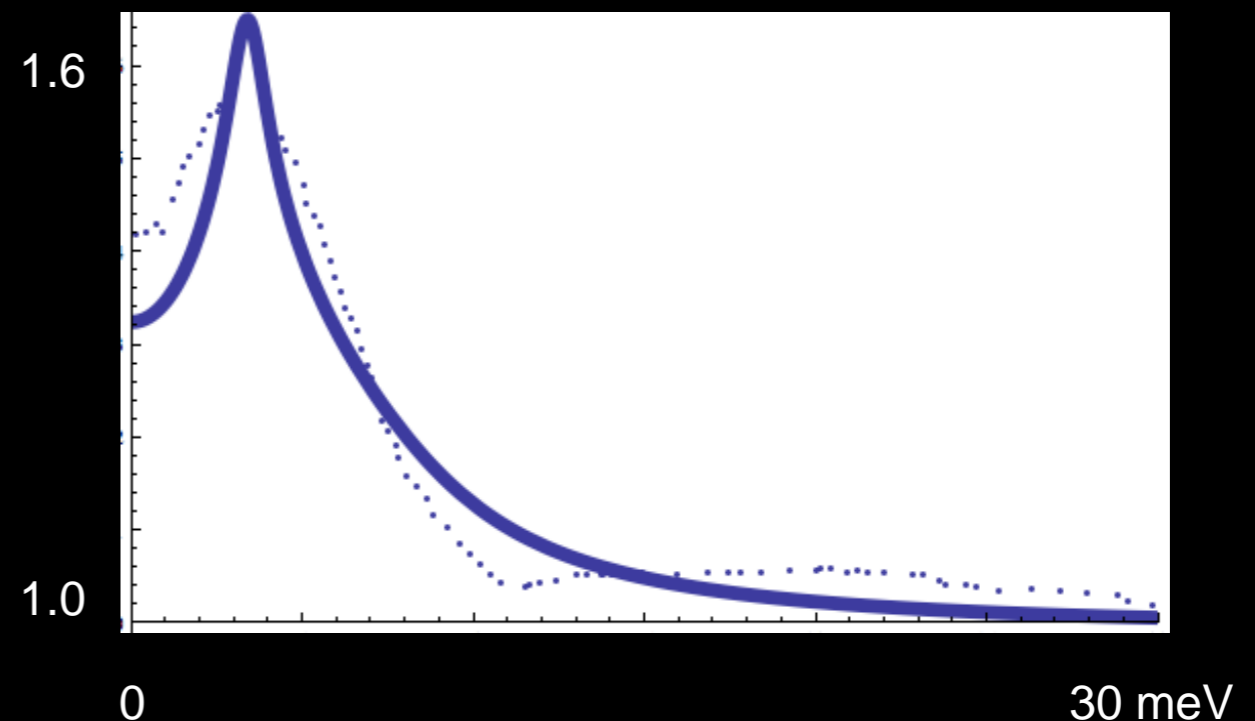
Kuzmanovski, in progress



Lu et al, Supercond. Sci Tech. 23 054009:

(Ba<sub>0.6</sub>K<sub>0.4</sub>)Fe<sub>2</sub>As<sub>2</sub> crystals and Au tip;

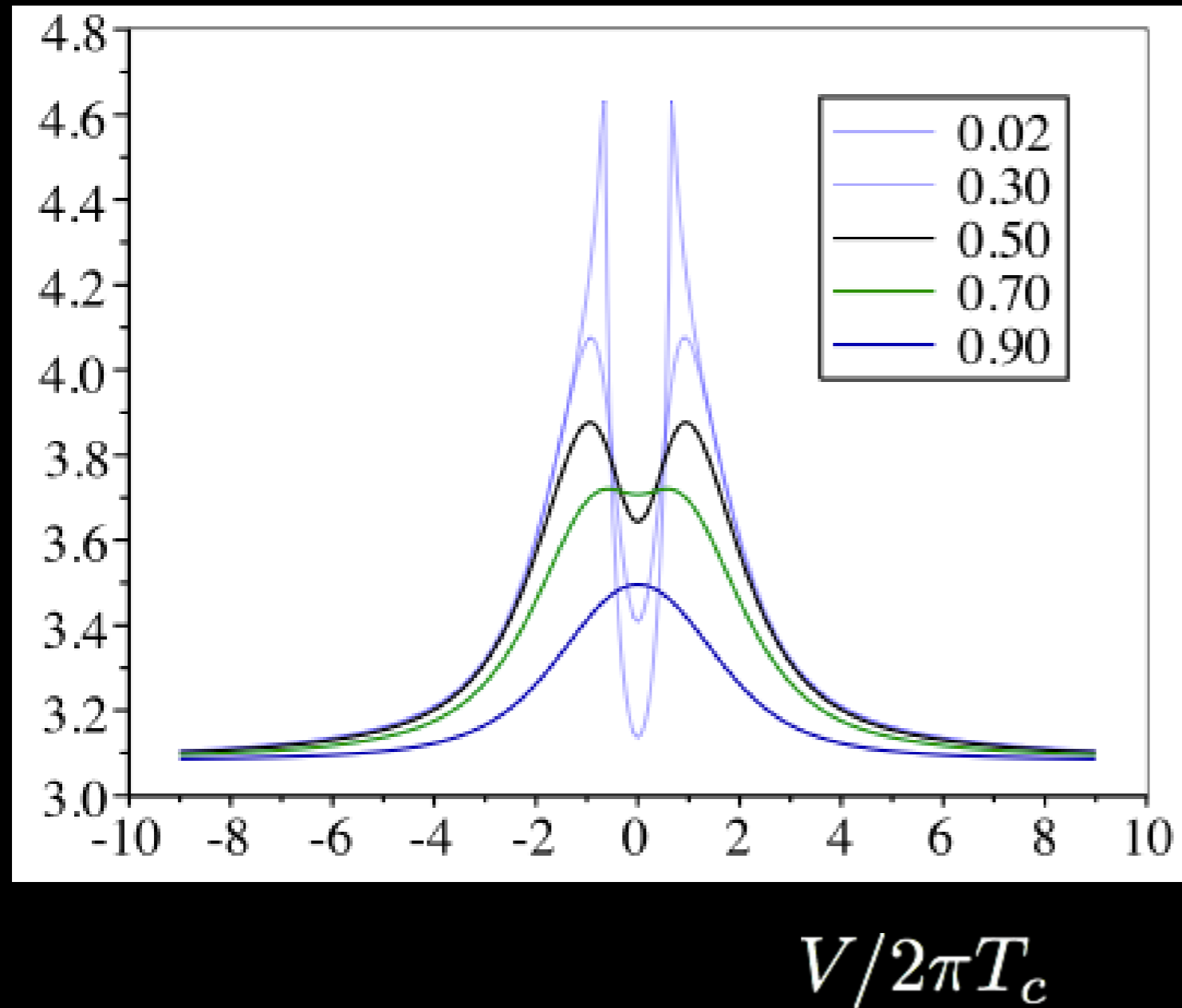
BTK result with a phenomenological inelastic scattering rate.



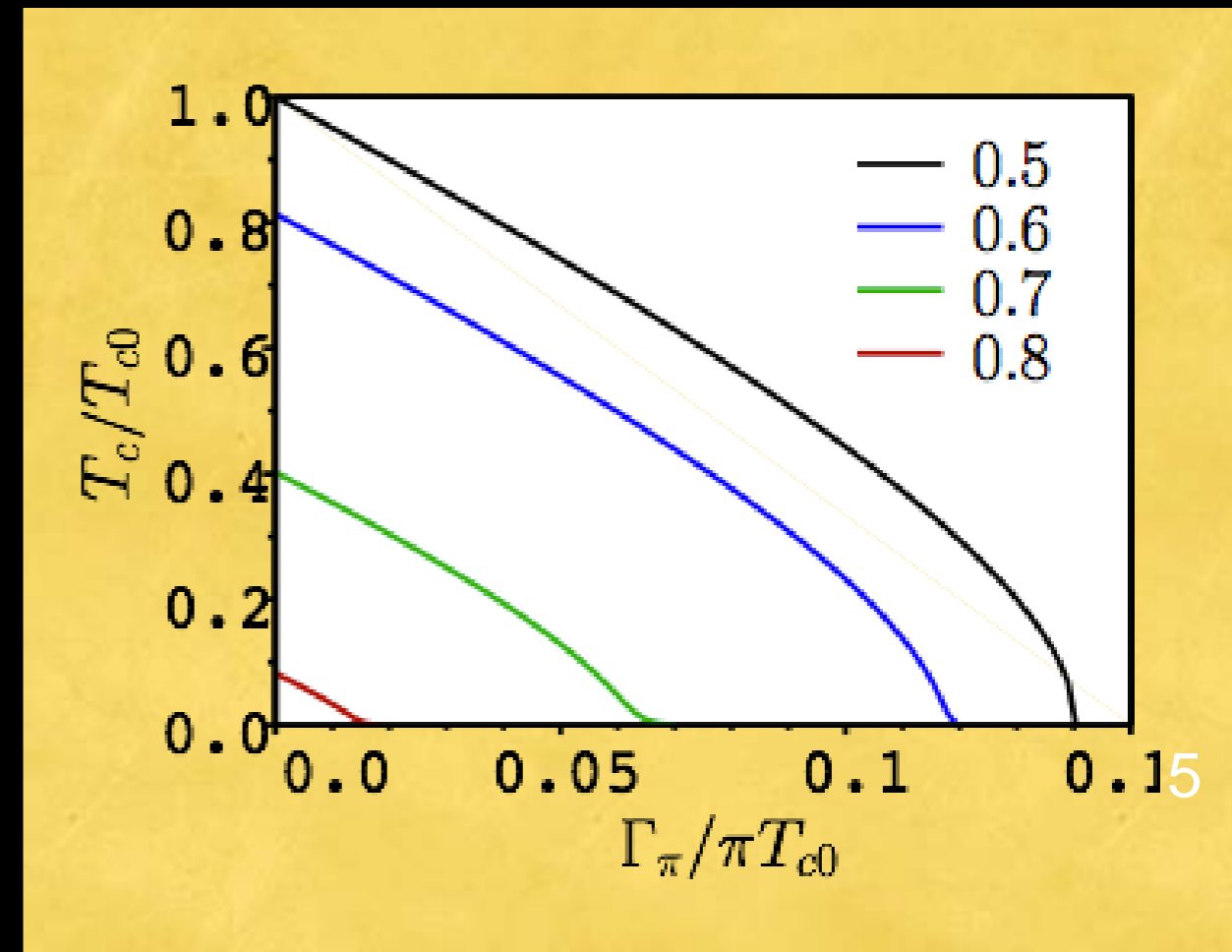
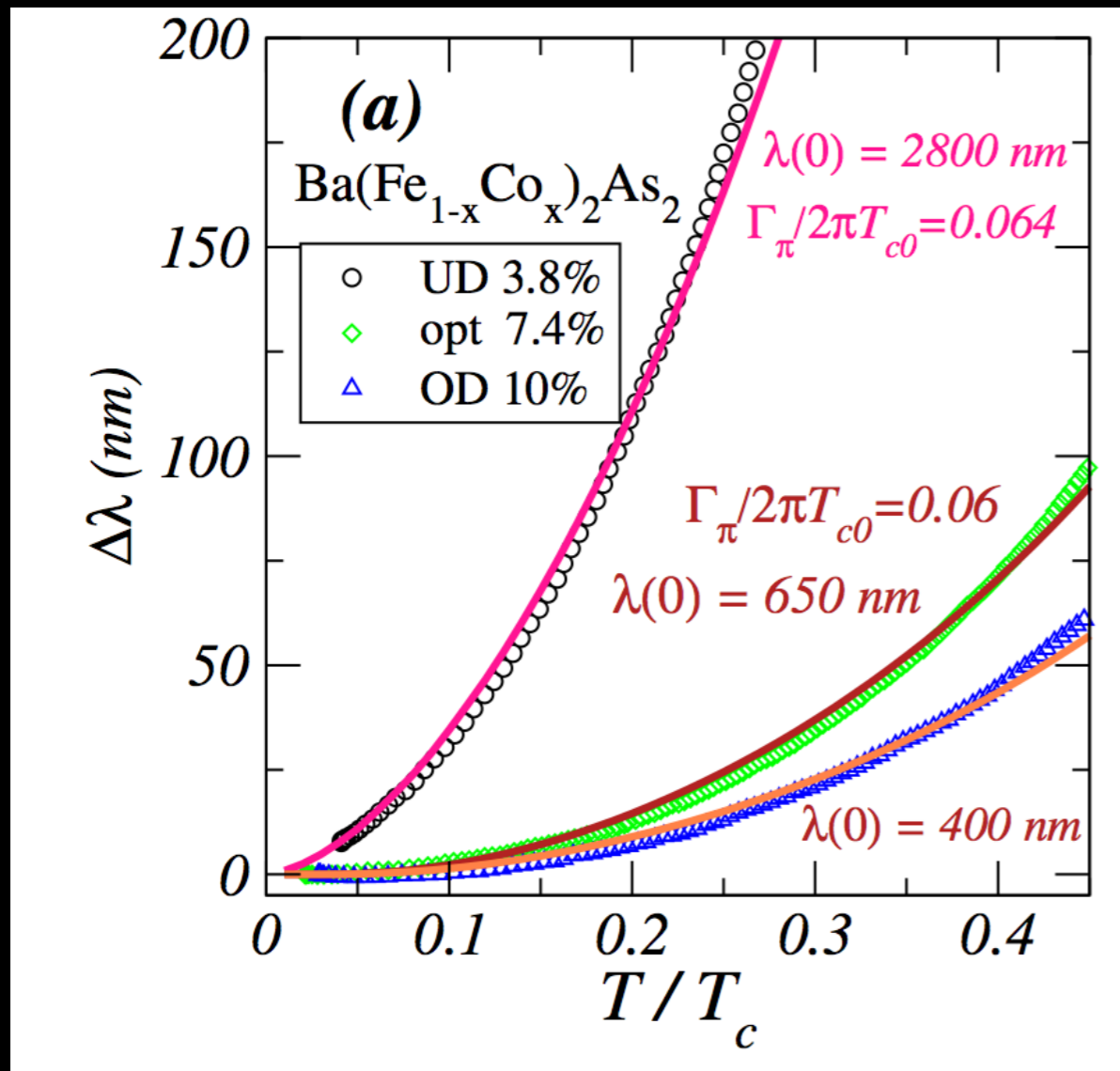
# Andreev spectroscopy of 122 superconductors

$(h/e^2)(dI/dV)$

Different temperatures



# Magnetic penetration depth in electron doped 122



Vorontsov, MV, Chubukov, PRB 79 140507(R):  
fits for Ames NL data with two-band  $s^{+-}$  SC with  
interband scattering.