Transport Studies of Thin Palladium Films*
W.C. McGinnis, M.J. Burns, G. Deutscher, G. Grüner
and P.M. Chaikin, Univ. of CA. Los Angeles--Room
temperature evaporation of pure palladium can produce
very thin uniform films as evidenced by electron-
interference effects seen in proximity effect tun-
neling. For thicknesses less than $\sim 40\text{Å}$ the effects
of electron localization become increasingly important
with exponential temperature dependence at high resis-
tance per square and logarithmic temperature dependence
at low resistance per square, the crossover occurring
at $\sim 20\text{ Å}$. Measurements of temperature and electric
field dependent conductivity, frequency dependent
conductivity, magnetoresistance and hall effect and
thermoelectric power will be presented.
*Research supported by NSF #DMR78-12000.