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**The effect of magnetic field on electron-boson spectral function in the cuprates** SASA DORDEVIC, C.C. HOMES, G. GU, QIANG LI, Brookhaven National Lab, Y.G. WANG, National High Magnetic Field Lab — We will report results of our infrared spectroscopy studies of high  $T_c$  cuprates in high magnetic field. Several families of cuprates, such as YBCO, Bi2212, LBCO and NCCO have been studied using magneto-optical measurements, with magnetic field as high as 18 Tesla. From these measurements we extract the electron-boson spectral function  $\alpha^2F(\omega)$  and estimate the effect magnetic field has on it. The results will be critically compared with the existing theoretical models.

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