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**Broadband microwave absorption of Fe-based superconductors**

JAKE BOBOWSKI, PINDER DOSANJH, JAMES DAY, DOUG BONN, WALTER HARDY, Department of Physics and Astronomy, University of British Columbia — Preliminary microwave measurements of the penetration depth in single crystals of the hole-doped iron-based superconductor  $\text{Ba}_{1-x}\text{K}_x\text{Fe}_2\text{As}_2$ , using cavity perturbation and ac susceptometry, have been performed by our group. These results hint at a gap with nodes plus the presence of scattering. As a complement to these techniques, we have also undertaken broadband microwave absorption (i.e., surface resistance) measurements on the same pnictide samples. Our initial results of the microwave conductivity are consistent with a system possessing a finite density of states at low temperature due to impurity scattering which then evolves with temperature above about 5 K.

James Day  
Department of Physics and Astronomy, University of British Columbia

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