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Simulations of magnetotransport in Hg-1201 SYLVIA LEWIN, JAMES ANALYTIS, University of California, Berkeley — The superconducting compounds $HgBa_2Ca_{n-1}Cu_nO_{2n+2+\delta}$ hold the distinction of having the highest transition temperatures at ambient pressure for a given number of CuO_2 layers (up to $n = 3$). They also have a simple tetragonal structure and have relatively little structural distortion or chemical disorder in the CuO_2 planes compared to other high-temperature superconductors. The simplest of these structures is $HgBa_2CuO_{4+\delta}$ (Hg-1201), making it an attractive model system to study. I will share simulations of magnetotransport in Hg-1201 for a variety of possible Fermi surfaces, which should help to elucidate current data and guide future experiments on this material.

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