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**Magnetism, Superconductivity and Pseudogap at the LaAlO<sub>3</sub>-SrTiO<sub>3</sub> Interface**

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The electron liquid at the LaAlO<sub>3</sub>-SrTiO<sub>3</sub> interface is a two-dimensional superconductor and simultaneously displays magnetic order. To experimentally explore the fundamental properties of this state, we developed a planar tunnel junction technology that allows to measure the spectral density-of-states of the superconducting liquid while its carrier density can be altered by the electric-field effect. These studies yield surprising results, as key features of the superconducting electron liquid at the LaAlO<sub>3</sub>-SrTiO<sub>3</sub> interface are found to be analogous to features deemed characteristic for the high- $T_c$  cuprates. This work was performed in collaboration with C. Richter, H. Boschker, W. Dietsche, E. Fillis-Tsirakis, R. Jany, F. Loder, L.F. Kourkoutis, D.A. Muller, J.R. Kirtley, and C.W. Schneider.