

## **Exploring many-body physics in a planar Bose gas with precision measurements**

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I will describe recent experiments exploring the physics of the two-dimensional Bose gas. We have developed high-resolution spectroscopy using the clock states of the rubidium atom. Thanks to the precision of these measurements, we have been able to probe various many-body effects. I will show the signature and interest of magnetic dipole-dipole interactions. I will describe the measurement of the Tan contact over the entire superfluid-to-normal transition and discuss recent experiments on atom-dimer interactions in the gas.