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Bose-Einstein condensation of strontium MENG KHOON TEY, SIMON STELLMER, BO HUANG, RUDOLF GRIMM, FLORIAN SCHRECK, Inst. for Quantum Optics and Quantum Information, Austrian Acad. of Sciences, and Inst. of Experimental Physics, Innsbruck Univ., Innsbruck, Austria — We report on the attainment of Bose-Einstein condensation with ultracold strontium atoms. We use the ^{84}Sr isotope, which has a low natural abundance but offers excellent scattering properties for evaporative cooling. By accumulating the atoms in a metastable state during the initial MOT phase, followed by narrowline cooling, and straightforward evaporative cooling in an optical trap, we obtain pure condensates containing 1.5×10^5 atoms. This puts ^{84}Sr in a prime position for experiments on quantum-degenerate gases involving atomic two-electron systems. Furthermore, we report on recent advances towards a degenerate Fermi gas of ^{87}Sr.

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