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Double-degenerate Bose-Fermi mixture of strontium

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We report on the attainment of a double-degenerate Bose-Fermi mixture of strontium. A sample of fermionic ^{87}Sr atoms is spin-polarized and sympathetically cooled by interisotope collisions with the bosonic isotope ^{84}Sr . A degeneracy with $T/T_F = 0.30(5)$ is reached for a ^{87}Sr Fermi sea of 2×10^4 atoms together with an almost pure ^{84}Sr BEC of 10^5 atoms. The rich electronic structure and the large nuclear spin of ^{87}Sr make it a promising candidate for quantum simulation of $\text{SU}(N)$ magnetism and quantum information processing.