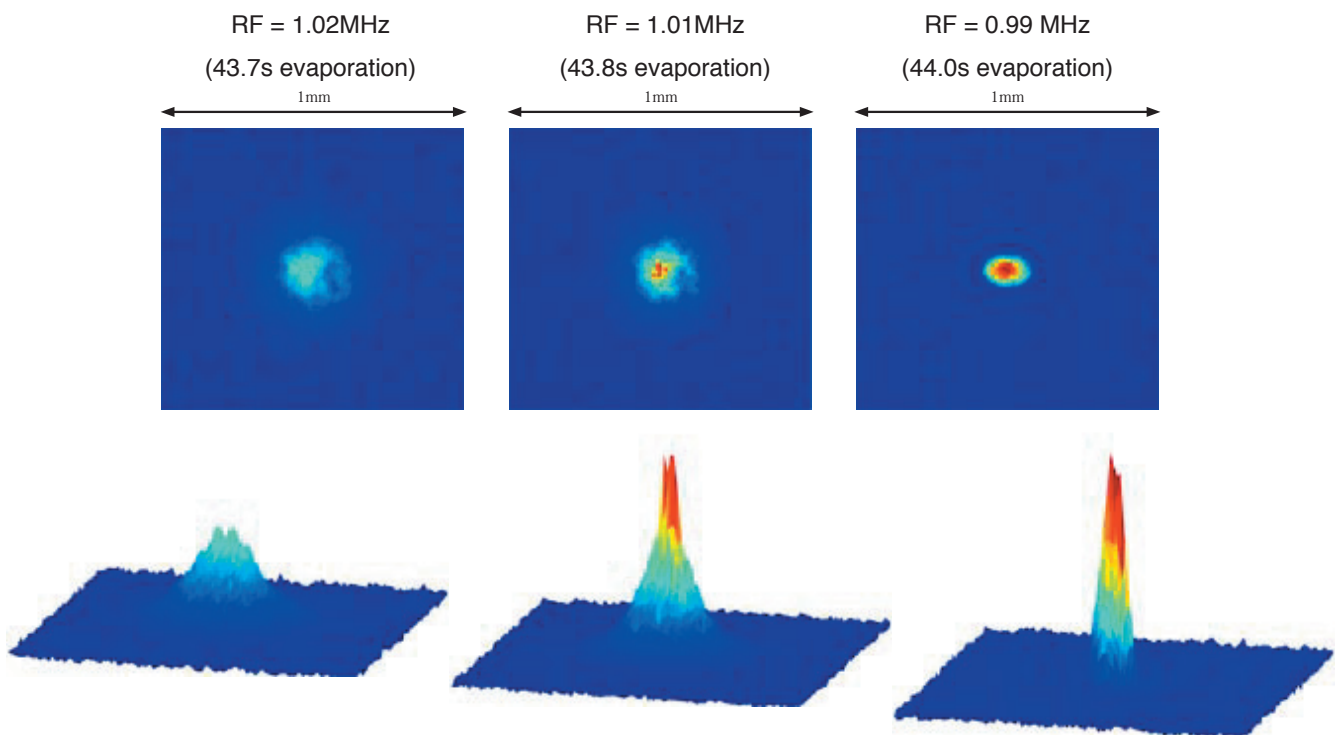


BEC in NTT*

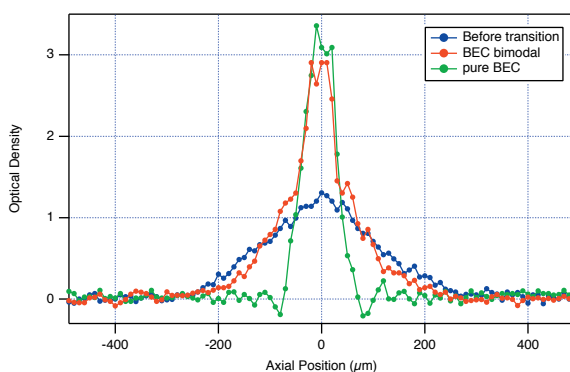
Japanese telecommunication company has made it.

As of July 8, 2002, BEC has been achieved in ^{87}Rb $|F=2, m_F=+2\rangle$. At first about 5×10^8 atoms are collected in the 2nd MOT in 30 seconds. After polarization gradient cooling, the atoms are loaded into a cloverleaf magnetic trap. The trap is adiabatically compressed over about 4s to an axial trap frequency of 18.8 Hz and radial trap frequencies of 182 Hz. Evaporative cooling is performed with a quasi-exponential RF ramp from 30 MHz to around 1.00 MHz in 44s, and end up with a condensate of $(2.0 \pm 0.3) \times 10^5$ atoms.

Atom Species : ^{87}Rb $|F=2, m_F=+2\rangle$
 Pre-cooling : Double MOT (Back ground pressure : $(2.4 \pm 0.4) \times 10^{-11}$ torr)
 MT type : Cloverleaf (IP trap), ($\omega_z = 2\pi \times 18.8$ Hz, $\omega_r = 2\pi \times 182$ Hz)
 Number of condensed atoms = $(2.0 \pm 0.3) \times 10^5$



Time of flight images are taken after 16ms along gravitational axis.



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* NTT : NIPPON TELEGRAPH AND TELEPHONE CORPORATION