Abstract Submitted
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Loading a K dipole trap from a MOT[1] BRUNO MARANGONI, CARLOS MENEGATTI, LUIS MARCASSA, University of Sao Paulo — We report the loading of a K crossed dipole trap directly from a regular K MOT. We start from a 300 μK MOT. In the sequence, we apply a molasses phase by varying the frequency and power of trapping and repumping beams, which allow us to cool the sample to 50 μK. Then the sample is loaded into a crossed broadband optical dipole trap. Our crossed beam configuration uses 25 W (at 1064 n, bandwidth of 2 nm) in each beam with about 50 micron waist radius of the focus and a depth of about 700 μK. In the final sample, we have about 2 x 10^6 atoms, a temperature of 10 μK and a trap lifetime of 200 ms. The sample will be used for cold molecule experiments.

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