

Atom	Capture limit		Doppler limit		Recoil limit	
	$v_c$ (m/s)	$T_c$ (mK)	$v_D$ (cm/s)	$T_D$ (μK)	$v_r$ (cm/s)	$T_r$ (μK)
<sup>1</sup> H	12.11	17.77	443.	2389.	325.	1285.
<sup>4</sup> He*	1.76	1.49	28.44	38.95	9.200	4.075
<sup>4</sup> He*	0.58	0.16	27.25	35.75	25.6	31.61
<sup>7</sup> Li	3.97	13.33	41.03	142.11	8.474	6.061
<sup>9</sup> Be	25.58	709.4	155.23	2612.	18.8	38.48
<sup>20</sup> Ne*	5.43	70.80	29.07	203.29	3.116	2.335
<sup>23</sup> Na	5.90	96.18	29.47	240.18	2.945	2.399
<sup>24</sup> Mg	23.09	1539.	82.04	1942.	5.830	9.80
<sup>40</sup> Ar*	4.77	109.33	17.12	140.96	1.230	0.727
<sup>39</sup> K	4.67	102.23	17.66	146.16	1.335	0.836
<sup>40</sup> Ca	14.64	1031.	41.57	831.	2.361	2.680
<sup>52</sup> Cr	2.13	28.41	13.87	120.23	1.805	2.035
<sup>84</sup> Kr*	4.51	205.47	11.50	133.40	0.586	0.346
<sup>85</sup> Rb	4.66	222.12	11.85	143.41	0.602	0.370
<sup>88</sup> Sr	2.07	45.15	10.09	107.58	0.985	1.025
<sup>132</sup> Xe*	4.25	286.83	8.54	115.64	0.343	0.186
<sup>133</sup> Cs	4.42	312.14	8.82	124.39	0.352	0.198
<sup>138</sup> Ba	10.15	1710.	16.28	439.96	0.522	0.453

TABLE C.3. Limiting values for the velocity and temperature for laser cooling of different elements. Values for the velocity  $v$  and temperature  $T$  are given for the capture, Doppler and recoil limit.