## FUSION CROSS-SECTIONS AND THERMAL REACTIVITIES

TABLE VII. PARAMETERS FOR THE REACTIVITY FIT\*

Coefficient	T(d, n) <sup>4</sup> He	<sup>3</sup> He(d, p) <sup>4</sup> He	D(d,p)T	$D(d, n)^3$ He
$\begin{array}{c} B_G \ (\sqrt{keV}) \\ m_r c^2 \ (keV) \end{array}$	34.3827 1 124 656	68.7508 1 124 572	31.3970 937 814	31.3970 937 814
C1	$1.17302 \times 10^{-9}$	$5.51036 \times 10^{-10}$	$5.65718 \times 10^{-12}$	5.43360 × 10 <sup>-12</sup>
C2	$1.51361 \times 10^{-2}$	$6.41918 \times 10^{-3}$	$3.41267 \times 10^{-3}$	$5.85778 \times 10^{-3}$
C3	$7.51886 \times 10^{-2}$	$-2.02896 \times 10^{-3}$	$1.99167 \times 10^{-3}$	$7.68222 \times 10^{-3}$
C4	$4.60643 \times 10^{-3}$	$-1.91080 \times 10^{-5}$	0.0	0.0
C5	$1.35000 \times 10^{-2}$	$1.35776 \times 10^{-4}$	$1.05060 \times 10^{-5}$	$-2.96400 \times 10^{-6}$
C6	$-1.06750 \times 10^{-4}$	0.0	0.0	0.0
C7	$1.36600 \times 10^{-5}$	0.0	0.0	0.0
T <sub>i</sub> range (keV)	0.2-100	0.5-190	0.2-100	0.2-100
$(\Delta \langle \sigma v \rangle)_{\text{max}} (\%)$	0.25	2.5	0.35	0.3

<sup>\*</sup> List of the fit parameters for the fusion reactivity in Maxwellian plasmas,  $T_i$  is in keV and the reactivity is in cm<sup>3</sup>/s. The bottom lines show the validity range of this fit and the maximum deviation of the fit from the input data.

TABLE VIII. THERMAL REACTIVITIES FOR ALL REACTIONS AS A FUNCTION OF THE ION TEMPERATURE

T <sub>i</sub> (keV)	$D(t, n)\alpha$ $(cm^3/s)$	$^{3}$ He(d,p) $\alpha$ (cm $^{3}$ /s)	D(d, p)T (cm <sup>3</sup> /s)	$D(d,n)^{3}He$ $(cm^{3}/s)$
0.2	1.254 × 10 <sup>-26</sup>	1.414 × 10 <sup>-35</sup>	$4.640 \times 10^{-28}$	4.482 × 10 <sup>-28</sup>
0.3	$7.292 \times 10^{-25}$	$1.033 \times 10^{-32}$	$2.071 \times 10^{-26}$	$2.004 \times 10^{-26}$
0.4	$9.344 \times 10^{-24}$	$6.537 \times 10^{-31}$	$2.237 \times 10^{-25}$	$2.168 \times 10^{-25}$
0.5	$5.697 \times 10^{-23}$	$1.241 \times 10^{-29}$	$1.204 \times 10^{-24}$	$1.169 \times 10^{-24}$
0.6	$2.253 \times 10^{-22}$	$1.166 \times 10^{-28}$	$4.321 \times 10^{-24}$	$4.200 \times 10^{-24}$
0.7	$6.740 \times 10^{-22}$	$6.960 \times 10^{-28}$	$1.193 \times 10^{-23}$	$1.162 \times 10^{-23}$
0.8	$1.662 \times 10^{-21}$	$3.032 \times 10^{-27}$	$2.751 \times 10^{-23}$	$2.681 \times 10^{-23}$
1.0	$6.857 \times 10^{-21}$	$3.057 \times 10^{-26}$	$1.017 \times 10^{-22}$	$9.933 \times 10^{-23}$
1.3	$2.546 \times 10^{-20}$	$3.708 \times 10^{-25}$	$3.387 \times 10^{-22}$	$3.319 \times 10^{-22}$
1.5	$6.923 \times 10^{-20}$	$1.317 \times 10^{-24}$	$8.431 \times 10^{-22}$	$8.284 \times 10^{-22}$
1.8	$1.539 \times 10^{-19}$	$6.053 \times 10^{-24}$	$1.739 \times 10^{-21}$	$1.713 \times 10^{-21}$
2.0	$2.977 \times 10^{-19}$	$1.399 \times 10^{-23}$	$3.150 \times 10^{-21}$	$3.110 \times 10^{-21}$
2.5	$8.425 \times 10^{-19}$	$7.477 \times 10^{-23}$	$7.969 \times 10^{-21}$	$7.905 \times 10^{-21}$
3.0	$1.867 \times 10^{-18}$	$2.676 \times 10^{-22}$	$1.608 \times 10^{-20}$	$1.602 \times 10^{-20}$
4.0	$5.974 \times 10^{-18}$	$1.710 \times 10^{-21}$	$4.428 \times 10^{-20}$	$4.447 \times 10^{-20}$
5.0	$1.366 \times 10^{-17}$	$6.377 \times 10^{-21}$	$9.024 \times 10^{-20}$	$9.128 \times 10^{-20}$
6.0	$2.554 \times 10^{-17}$	$1.739 \times 10^{-20}$	$1.545 \times 10^{-19}$	$1.573 \times 10^{-19}$
8.0	$6.222 \times 10^{-17}$	$7.504 \times 10^{-20}$	$3.354 \times 10^{-19}$	$3.457 \times 10^{-19}$
10.0	$1.136 \times 10^{-16}$	$2.126 \times 10^{-19}$	$5.781 \times 10^{-19}$	$6.023 \times 10^{-19}$
12.0	$1.747 \times 10^{-16}$	$4.715 \times 10^{-19}$	$8.723 \times 10^{-19}$	$9.175 \times 10^{-19}$
15.0	$2.740 \times 10^{-16}$	$1.175 \times 10^{-18}$	$1.390 \times 10^{-18}$	$1.481 \times 10^{-18}$
20.0	$4.330 \times 10^{-16}$	$3.482 \times 10^{-18}$	$2.399 \times 10^{-18}$	$2.603 \times 10^{-18}$
30.0	$6.681 \times 10^{-16}$	$1.363 \times 10^{-17}$	$4.728 \times 10^{-18}$	$5.271 \times 10^{-18}$
40.0	$7.998 \times 10^{-16}$	$3.160 \times 10^{-17}$	$7.249 \times 10^{-18}$	$8.235 \times 10^{-18}$
50.0	$8.649 \times 10^{-16}$	$5.554 \times 10^{-17}$	$9.838 \times 10^{-18}$	$1.133 \times 10^{-17}$

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