Erratum: ‘‘Accurate, short series approximation to Fermi–Dirac integrals of order -1/2, 1/2, 1, 3/2, 2, 5/2, 3, and 7/2’’ [J. Appl. Phys. 57, 5271 (1985)]

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Erratum: "Accurate, short series approximation to Fermi–Dirac integrals of order $-1/2$, $1/2$, 1, $3/2$, 2, $5/2$, 3, and $7/2$" [J. Appl. Phys. 57, 5271 (1985)]

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Table I is missing from the printed article. The table below should replace the table printed on p. 5271.

TABLE I. Coefficients used in Eq. (4).

j	$-1/2$	$1/2$	1	$3/2$	2	$5/2$	3	$7/2$
a_1	0.999 909	1.000 000	1.000 000	1.000 000	1.000 000	1.000 000	1.000 000	1.000 000
a_2	0.706 781	0.353 568	0.250 052	0.176 826	0.125 046	0.088 392	0.062 592	0.044 203
a_3	0.572 752	0.192 439	0.111 747	0.064 772	0.037 642	0.021 407	0.013 661	0.007 157
a_4	0.466 318	0.122 973	0.064 557	0.033 677	0.018 183	0.007 917	0.009 796	0.001 976
a_5	0.324 511	0.077 134	0.040 754	0.021 353	0.012 484	0.003 723	0.012 976	0.000 719
a_6	0.152 889	0.036 228	0.020 532	0.011 451	0.007 486	0.001 716	0.010 659	0.000 317
a_7	0.033 673	0.008 346	0.005 108	0.003 032	0.002 133	0.000 451	0.003 446	0.000 106

Also, there are errors and omissions in Tables II and III. The tables below should replace those printed on p. 5272.

TABLE II. Coefficients used in Eq. (6) for $x>4$ ($j = 1/2,3/2,5/2,7/2$) and for $x>5$ ($j = -1/2$).

j	$-1/2$	$1/2$	$3/2$	$5/2$	$7/2$
a_1	1.12837	0.752253	0.300901	0.085972	0.019105
a_2	−0.470698	0.928195	1.85581	1.23738	0.494958
a_3	−0.453108	0.680839	−0.466432	1.07293	2.13722
a_4	−228.975	25.7829	−7.71648	0.362030	−0.503902
a_5	8303.50	−553.636	120.535	38.7579	−6.99243
a_6	−118124	3531.43	−800.702	−750.718	96.6031
a_7	632895	−3254.65	2189.84	4378.70	−426.046

TABLE III. Coefficients used in Eq. (7).

x	$j=$	$-1/2$	$1/2$	$3/2$	$5/2$	$7/2$
$0-y^a$				0.867200	0.927560	0.961478
$0-y/2$	a_1	0.604856	0.765147			
$y/2-y$		0.638086	0.777114			
$0-y$				0.765101	0.866971	0.927751
$0-y/2$	a_2	0.380080	0.604911			
$y/2-y$		0.292266	0.581307			
$0-y$				0.302693	0.383690	0.432494
$0-y/2$	a_3	0.059320	0.189885			
$y/2-y$		0.159486	0.206132			
$0-y$				0.062718	0.098863	0.129617
$0-y/2$	a_4	−0.014526	0.020307			
$y/2$		−0.077691	0.017680			

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TABLE III. Continued.

x	$j=$	$-1/2$	$1/2$	$3/2$	$5/2$	$7/2$
$0-y$				0.005793	0.017398	0.023308
$0-y/2$	a_5	−0.004222	−0.004380			
$y/2-y$		0.018650	−0.006549			
$0-y$				−0.001342	0.000418	0.004067
$0-y/2$	a_6	0.001335	−0.000366			
$y/2$		−0.002736	0.000784			
$0-y$				0.000089	−0.000067	−0.000051
$0-y/2$	a_7	0.000291	0.000133			
$y/2-y$		0.000249	−0.000036			
$0-y$						
$0-y/2$	a_8	−0.000159				
$y/2-y$		−0.000013				
$0-y$						
$0-y/2$	a_9	0.000018				
$y/2-y$		0.000000				

[a] $y=4$ for $j=1/2,3/2,5/2,7/2$. $y=5$ for $j=-1/2$.