

Table 17.6 ELLIPTIC INTEGRAL OF THE SECOND KIND  $E(\varphi|\alpha)$ 

$$E(\varphi|\alpha) = \int_0^\varphi (1 - \sin^2 \alpha \sin^2 \theta)^{\frac{1}{2}} d\theta$$

$\alpha \setminus \varphi$	65°	70°	75°	80°	85°	90°
0°	1.13446 401	1.22173 048	1.30899 694	1.39626 340	1.48352 986	1.57079 633
2	1.13423 517	1.22145 628	1.30867 442	1.39589 024	1.48310 448	1.57031 792
4	1.13354 929	1.22063 443	1.30770 767	1.39477 165	1.48182 929	1.56888 372
6	1.13240 837	1.21926 717	1.30609 916	1.39291 030	1.47970 717	1.56649 679
8	1.13081 573	1.21735 820	1.30385 297	1.39031 062	1.47674 288	1.56316 223
10	1.12877 602	1.21491 274	1.30097 484	1.38697 886	1.47294 312	1.55888 720
12	1.12629 522	1.21193 748	1.29747 215	1.38292 302	1.46831 652	1.55368 089
14	1.12338 066	1.20844 065	1.29335 393	1.37815 292	1.46287 363	1.54755 458
16	1.12004 099	1.20443 195	1.28863 089	1.37268 017	1.45662 693	1.54052 157
18	1.11628 624	1.19992 262	1.28331 541	1.36651 823	1.44959 085	1.53259 729
20	1.11212 778	1.19492 542	1.27742 153	1.35968 233	1.44178 179	1.52379 921
22	1.10757 834	1.18945 465	1.27096 502	1.35218 961	1.43321 813	1.51414 692
24	1.10265 204	1.18352 618	1.26396 337	1.34405 903	1.42392 023	1.50366 214
26	1.09736 439	1.17715 743	1.25643 578	1.33531 146	1.41391 049	1.49236 871
28	1.09173 228	1.17036 745	1.24840 326	1.32596 967	1.40321 335	1.48029 266
30	1.08577 404	1.16317 686	1.23988 858	1.31605 841	1.39185 532	1.46746 221
32	1.07950 942	1.15560 796	1.23091 635	1.30560 436	1.37986 503	1.45390 780
34	1.07295 961	1.14768 469	1.22151 305	1.29463 629	1.36727 328	1.43966 215
36	1.06614 728	1.13943 273	1.21170 705	1.28318 499	1.35411 306	1.42476 031
38	1.05909 660	1.13087 946	1.20152 870	1.27128 343	1.34041 965	1.40923 972
40	1.05183 322	1.12205 408	1.19101 036	1.25896 675	1.32623 066	1.39314 025
42	1.04438 435	1.11298 760	1.18018 648	1.24627 240	1.31158 614	1.37650 433
44	1.03677 875	1.10371 291	1.16909 366	1.23324 019	1.29652 865	1.35937 700
46	1.02904 677	1.09426 484	1.15777 077	1.21991 241	1.28110 340	1.34180 606
48	1.02122 034	1.08468 023	1.14625 899	1.20633 398	1.26535 837	1.32384 218
50	1.01333 305	1.07499 796	1.13460 200	1.19255 255	1.24934 449	1.30553 909
52	1.00542 010	1.06525 908	1.12284 604	1.17861 873	1.23311 580	1.28695 374
54	0.99751 835	1.05550 682	1.11104 010	1.16458 621	1.21672 971	1.26814 653
56	0.98966 632	1.04578 671	1.09923 604	1.15051 210	1.20024 724	1.24918 162
58	0.98190 414	1.03614 663	1.08748 883	1.13645 710	1.18373 339	1.23012 722
60	0.97427 354	1.02663 689	1.07585 669	1.12248 590	1.16725 747	1.21105 603
62	0.96681 780	1.01731 023	1.06440 132	1.10866 752	1.15089 364	1.19204 568
64	0.95958 158	1.00822 192	1.05318 814	1.09507 580	1.13472 145	1.17317 938
66	0.95261 084	0.99942 966	1.04228 653	1.08178 986	1.11882 658	1.15454 668
68	0.94595 256	0.99099 354	1.03176 998	1.06889 476	1.10330 172	1.13624 437
70	0.93965 447	0.98297 583	1.02171 634	1.05648 221	1.08824 773	1.11837 774
72	0.93376 462	0.97544 068	1.01220 781	1.04465 133	1.07377 505	1.10106 217
74	0.92833 088	0.96845 360	1.00333 091	1.03350 951	1.06000 556	1.08442 522
76	0.92340 024	0.96208 074	0.99517 606	1.02317 331	1.04707 504	1.06860 953
78	0.91901 802	0.95638 776	0.98783 670	1.01376 904	1.03513 640	1.05377 692
80	0.91522 691	0.95143 847	0.98140 781	1.00543 295	1.02436 393	1.04011 440
82	0.91206 588	0.94729 297	0.97598 331	0.99831 000	1.01495 896	1.02784 362
84	0.90956 905	0.94400 544	0.97165 228	0.99255 019	1.00715 650	1.01723 692
86	0.90776 445	0.94162 171	0.96849 392	0.98830 025	1.00123 026	1.00864 796
88	0.90667 305	0.94017 677	0.96657 142	0.98568 915	0.99748 392	1.00258 409
90	0.90630 779	0.93969 262	0.96592 583	0.98480 775	0.99619 470	1.00000 000
	$\left[ \begin{smallmatrix} (-5)9 \\ 6 \end{smallmatrix} \right]$	$\left[ \begin{smallmatrix} (-4)1 \\ 7 \end{smallmatrix} \right]$	$\left[ \begin{smallmatrix} (-4)2 \\ 7 \end{smallmatrix} \right]$	$\left[ \begin{smallmatrix} (-4)2 \\ 9 \end{smallmatrix} \right]$	$\left[ \begin{smallmatrix} (-4)3 \\ 9 \end{smallmatrix} \right]$	$\left[ \begin{smallmatrix} (-4)4 \\ 10 \end{smallmatrix} \right]$
5	1.13303 553	1.22001 878	1.30698 342	1.39393 358	1.48087 384	1.56780 907
15	1.12176 337	1.20649 962	1.29106 728	1.37550 358	1.45984 990	1.54415 050
25	1.10005 236	1.18039 569	1.26026 405	1.33976 099	1.41900 286	1.49811 493
35	1.06958 479	1.14359 813	1.21665 853	1.28896 903	1.36076 208	1.43229 097
45	1.03292 660	1.09900 829	1.16345 846	1.22661 050	1.28885 906	1.35064 388
55	0.99358 365	1.05063 981	1.10513 448	1.15755 065	1.20849 656	1.25867 963
65	0.95606 011	1.00378 508	1.04769 389	1.08838 943	1.12673 373	1.16382 796
75	0.92579 978	0.96518 626	0.99915 744	1.02823 305	1.05342 632	1.07640 511
85	0.90857 873	0.94269 813	0.96992 212	0.99022 779	1.00394 027	1.01266 351