

TABLE C.4 χ^2 distribution. Values of the reduced chi-square $\chi^2_{\nu} = \chi^2 / \nu$ corresponding to the probability $P_{\chi}(\chi^2; \nu)$ of exceeding χ^2 vs. the number of degrees of freedom ν

0.99 0.98 (0.98 (0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.99 0.98 (0.0001) 0.00001 0.00001 0.00001 0.00001 0.00001 0.00002 0.0103 0								
016 0.000063 0.00193 0.0158 0.0642 0.148 0.275 00 0.0202 0.0515 0.105 0.1235 0.437 0.511 11 0.117 0.196 0.223 0.437 0.511 0.623 1 0.150 0.129 0.232 0.469 0.660 0.731 2 0.189 0.273 0.322 0.469 0.660 0.731 2 0.223 0.310 0.405 0.649 0.660 0.731 2 0.224 0.436 0.546 0.660 0.731 0.782 2 0.224 0.446 0.546 0.649 0.601 0.881 2 0.234 0.446 0.547 0.648 0.771 0.848 3 0.348 0.446 0.556 0.647 0.781 0.883 4 0.345 0.542 0.644 0.570 0.784 0.784 5 0.346 0.556 0.646 <th>66.0</th> <th>86.0</th> <th>(0.95</th> <th>0.90</th> <th>080</th> <th>0.70</th> <th>09.0</th> <th>0.50</th>	66.0	86.0	(0.95	0.90	080	0.70	09.0	0.50
00 0.0202 0.0515 0.105 0.123 0.357 0.511 83 0.0617 0.117 0.195 0.335 0.459 0.651 11 0.150 0.117 0.126 0.433 0.405 0.600 0.731 1 0.150 0.229 0.326 0.463 0.643 0.660 0.731 2 0.223 0.310 0.465 0.546 0.660 0.731 2 0.224 0.340 0.463 0.546 0.667 0.732 2 0.224 0.342 0.463 0.548 0.741 0.837 2 0.234 0.463 0.463 0.548 0.771 0.837 2 0.236 0.443 0.443 0.443 0.443 0.443 0.443 0.444 0.774 0.839 3 0.348 0.443 0.522 0.664 0.774 0.839 0.841 4 0.443 0.543 0.522 0.644 <td>0.00016</td> <td>0.00063</td> <td>0.00393</td> <td>0.0158</td> <td>0.0642</td> <td>0.148</td> <td>0.275</td> <td>0.455</td>	0.00016	0.00063	0.00393	0.0158	0.0642	0.148	0.275	0.455
83 0.06617 0.1117 0.195 0.335 0.475 0.623 42 0.1007 0.1738 0.226 0.442 0.560 0.731 9 0.1007 0.1279 0.236 0.442 0.600 0.731 1 0.223 0.2342 0.436 0.542 0.667 0.785 2 0.234 0.342 0.436 0.487 0.658 0.701 6 0.234 0.342 0.487 0.618 0.771 0.883 6 0.306 0.346 0.487 0.618 0.771 0.883 6 0.328 0.416 0.557 0.651 0.771 0.884 6 0.348 0.446 0.557 0.653 0.771 0.889 0.881 6 0.439 0.446 0.570 0.687 0.773 0.881 7 0.448 0.552 0.653 0.774 0.881 0.881 8 0.445 0.552	0.0100	0.0202	0.0515	0.105	0.223	0.357	0.511	0.693
42 0.107 0.178 0.226 0.445 0.549 0.688 1150 0.1259 0.3222 0.4469 0.638 0.762 2 0.189 0.273 0.346 0.546 0.660 0.731 2 0.224 0.342 0.445 0.574 0.691 0.893 2 0.224 0.346 0.445 0.574 0.691 0.803 2 0.224 0.346 0.445 0.543 0.446 0.671 0.817 8 0.348 0.416 0.525 0.651 0.727 0.836 8 0.348 0.446 0.525 0.661 0.771 0.836 9 0.349 0.449 0.556 0.667 0.771 0.883 1 0.443 0.522 0.664 0.771 0.889 0.971 1 0.437 0.542 0.644 0.575 0.644 0.772 0.889 1 0.442 0.532	0.0383	0.0617	0.117	0.195	0.335	0.475	0.623	0.789
1 0.150 0.229 0.322 0.469 0.600 0.731 6 0.189 0.273 0.367 0.512 0.669 0.600 0.731 7 0.223 0.310 0.4465 0.544 0.661 0.883 0.762 8 0.224 0.342 0.4465 0.544 0.661 0.883 0.762 9 0.224 0.348 0.448 0.487 0.618 0.771 0.831 9 0.348 0.443 0.527 0.653 0.741 0.840 1 0.348 0.443 0.542 0.664 0.774 0.836 1 0.348 0.443 0.522 0.674 0.783 0.848 1 0.443 0.448 0.570 0.664 0.774 0.863 1 0.441 0.484 0.570 0.664 0.774 0.883 1 0.4427 0.542 0.674 0.774 0.883 0.944	0.0742	0.107	0.178	0.266	0.412	0.549	0.688	0.839
5 0.189 0.273 0.367 0.512 0.657 0.785 0.224 0.310 0.405 0.546 0.657 0.667 0.785 0.224 0.342 0.436 0.574 0.667 0.785 0.281 0.369 0.448 0.589 0.711 0.803 0.348 0.416 0.525 0.651 0.777 0.830 0.348 0.448 0.552 0.651 0.773 0.848 0.348 0.449 0.550 0.676 0.773 0.848 0.349 0.449 0.550 0.676 0.773 0.848 0.449 0.550 0.644 0.570 0.887 0.781 0.869 0.449 0.522 0.644 0.772 0.808 0.871 0.893 0.441 0.522 0.644 0.772 0.808 0.871 0.893 0.442 0.532 0.644 0.570 0.774 0.883 0.971 0.540	0.111	0.150	0.229	0.322	0.469	0.600	0.731	0.870
7 0.223 0.310 0.4465 0.546 0.657 0.705 0.224 0.342 0.446 0.574 0.691 0.788 0.224 0.342 0.4463 0.574 0.691 0.881 0.348 0.446 0.547 0.651 0.771 0.880 0.348 0.446 0.525 0.651 0.773 0.880 0.387 0.448 0.570 0.654 0.773 0.880 0.439 0.448 0.570 0.664 0.773 0.880 0.439 0.484 0.570 0.664 0.773 0.881 0.420 0.522 0.664 0.774 0.887 0.887 0.421 0.522 0.676 0.774 0.889 0.887 0.422 0.510 0.684 0.774 0.883 0.971 0.423 0.522 0.664 0.774 0.883 0.91 0.421 0.523 0.664 0.774 0.883 0.88	0.145	0.189	0.273	0.367	0.512	0.638	0.762	0.801
6 0.254 0.342 0.436 0.574 0.691 0.803 2 0.281 0.369 0.443 0.574 0.691 0.803 0.306 0.306 0.436 0.457 0.618 0.717 0.830 0.348 0.446 0.525 0.651 0.753 0.841 0.804 0.348 0.446 0.525 0.651 0.753 0.843 0.863 0.348 0.449 0.556 0.657 0.773 0.863 0.441 0.484 0.550 0.676 0.773 0.863 0.442 0.550 0.557 0.687 0.773 0.863 0.442 0.552 0.694 0.774 0.883 0.907 0.442 0.552 0.604 0.712 0.883 0.907 0.453 0.561 0.532 0.674 0.722 0.883 0.907 0.550 0.551 0.653 0.742 0.883 0.907 0.914 <tr< td=""><td>0.177</td><td>0.223</td><td>0.310</td><td>0.405</td><td>0.546</td><td>0.667</td><td>0.785</td><td>0.007</td></tr<>	0.177	0.223	0.310	0.405	0.546	0.667	0.785	0.007
2 0.281 0.369 0.463 0.598 0.710 0.817 8 0.326 0.487 0.618 0.727 0.830 9 0.348 0.446 0.525 0.651 0.727 0.839 0.348 0.445 0.452 0.651 0.773 0.848 0.367 0.453 0.526 0.657 0.773 0.848 0.387 0.449 0.525 0.664 0.774 0.836 0.439 0.444 0.570 0.687 0.773 0.849 0.439 0.448 0.570 0.687 0.773 0.883 0.447 0.439 0.521 0.697 0.774 0.889 0.450 0.543 0.622 0.697 0.772 0.883 0.451 0.522 0.604 0.714 0.890 0.874 0.452 0.533 0.622 0.729 0.883 0.991 0.542 0.543 0.622 0.632 0.729	0.206	0.254	0.342	0.436	0.574	0.691	0.803	0.018
6 0.306 0.394 0.487 0.618 0.727 0.830 8 0.328 0.416 0.525 0.651 0.727 0.836 0.348 0.436 0.542 0.664 0.753 0.848 0.387 0.449 0.556 0.664 0.773 0.848 0.389 0.449 0.556 0.676 0.773 0.863 0.413 0.498 0.556 0.677 0.883 0.869 0.427 0.510 0.582 0.677 0.781 0.869 0.427 0.522 0.604 0.714 0.883 0.874 0.482 0.532 0.613 0.772 0.883 0.897 0.440 0.532 0.613 0.742 0.883 0.907 0.440 0.553 0.613 0.742 0.883 0.907 0.550 0.651 0.652 0.752 0.838 0.907 0.551 0.652 0.653 0.742 0.833 <td>0.232</td> <td>0.281</td> <td>0.369</td> <td>0.463</td> <td>0.598</td> <td>0.710</td> <td>0.817</td> <td>0.007</td>	0.232	0.281	0.369	0.463	0.598	0.710	0.817	0.007
8 0.328 0.416 0.507 0.635 0.741 0.840 0.348 0.436 0.525 0.651 0.754 0.849 0.348 0.469 0.525 0.654 0.754 0.865 0.399 0.484 0.536 0.676 0.773 0.863 0.413 0.489 0.532 0.667 0.773 0.869 0.439 0.522 0.604 0.714 0.869 0.874 0.439 0.522 0.604 0.714 0.802 0.883 0.442 0.532 0.604 0.714 0.802 0.883 0.4439 0.522 0.604 0.714 0.802 0.883 0.4451 0.532 0.604 0.714 0.802 0.883 0.4462 0.532 0.604 0.712 0.803 0.813 0.893 0.4462 0.543 0.622 0.722 0.838 0.911 0.911 0.550 0.656 0.657 0	0.256	0.306	0.394	0.487	0.618	0.727	0.830	0.034
6 0.350 0.741 0.840 6 0.364 0.453 0.525 0.651 0.773 0.848 6 0.364 0.453 0.542 0.664 0.764 0.883 6 0.367 0.453 0.542 0.664 0.764 0.883 0 0.383 0.469 0.556 0.667 0.773 0.848 0 0.439 0.484 0.570 0.687 0.773 0.869 0 0.427 0.582 0.670 0.789 0.874 0.879 0 0.427 0.532 0.674 0.786 0.883 0.897 0 0.445 0.532 0.672 0.772 0.803 0.874 0 0.452 0.653 0.742 0.883 0.997 0 0.452 0.720 0.833 0.902 0 0.530 0.653 0.742 0.883 0.901 0 0.544 0.616 0.772 </td <td>9770</td> <td>0.336</td> <td>0.416</td> <td>0 500</td> <td>0000</td> <td></td> <td>0000</td> <td>1000</td>	9770	0.336	0.416	0 500	0000		0000	1000
6 0.456 0.450 0.525 0.654 0.753 0.848 3.867 0.469 0.554 0.664 0.773 0.848 9 0.387 0.469 0.556 0.676 0.773 0.848 9 0.389 0.484 0.570 0.687 0.781 0.856 9 0.439 0.522 0.604 0.714 0.802 0.883 0 0.439 0.522 0.604 0.714 0.802 0.883 0 0.439 0.522 0.604 0.714 0.802 0.883 0 0.451 0.522 0.604 0.712 0.883 0.887 0 0.462 0.543 0.622 0.722 0.883 0.997 0 0.506 0.573 0.762 0.883 0.911 0.911 0 0.516 0.653 0.762 0.833 0.911 0.911 0 0.544 0.616 0.774 0.884	0 208	0.340	0.410	0.50	0.033	0.741	0.840	0.940
0.397 0.4533 0.5452 0.6644 0.764 0.7645 0.6546 0.6546 0.7647 0.856 3 0.383 0.469 0.575 0.677 0.677 0.863 0.439 0.484 0.570 0.687 0.773 0.863 0.413 0.498 0.552 0.604 0.774 0.863 0.439 0.522 0.604 0.714 0.889 0.887 0.451 0.522 0.604 0.714 0.802 0.883 0.462 0.543 0.622 0.722 0.889 0.887 0.482 0.561 0.622 0.722 0.883 0.907 0.500 0.577 0.665 0.772 0.881 0.915 0.530 0.665 0.772 0.884 0.915 0.544 0.616 0.784 0.772 0.884 0.924 0.557 0.665 0.772 0.884 0.924 0.924 0.557 0.667 <t< td=""><td>0.230</td><td>0.540</td><td>0.430</td><td>0.525</td><td>0.651</td><td>0.753</td><td>0.848</td><td>0.945</td></t<>	0.230	0.540	0.430	0.525	0.651	0.753	0.848	0.945
9 0.383 0.469 0.556 0.676 0.773 0.863 0.399 0.484 0.570 0.687 0.778 0.863 0.413 0.484 0.570 0.687 0.778 0.869 0.427 0.510 0.593 0.706 0.796 0.874 0.427 0.512 0.604 0.714 0.802 0.883 0.482 0.522 0.613 0.771 0.802 0.883 0.482 0.543 0.622 0.772 0.803 0.883 0.482 0.542 0.638 0.772 0.803 0.883 0.550 0.577 0.652 0.772 0.803 0.907 0.530 0.577 0.653 0.772 0.883 0.907 0.544 0.616 0.655 0.774 0.845 0.911 0.557 0.656 0.774 0.786 0.813 0.921 0.557 0.665 0.774 0.786 0.924 0.924	0.310	0.36/	0.453	0.542	0.664	0.764	0.856	0.949
9 0.399 0.484 0.570 0.687 0.781 0.869 1 0.439 0.484 0.570 0.687 0.781 0.869 0 0.439 0.522 0.604 0.776 0.789 0.874 0 0.439 0.522 0.604 0.774 0.808 0.887 0 0.451 0.532 0.613 0.772 0.808 0.887 0 0.452 0.532 0.613 0.772 0.808 0.887 0 0.482 0.543 0.622 0.772 0.808 0.887 0 0.536 0.665 0.742 0.833 0.907 0 0.530 0.657 0.665 0.772 0.833 0.901 0 0.544 0.616 0.774 0.884 0.911 0 0.556 0.665 0.772 0.884 0.924 0 0.547 0.720 0.809 0.874 0.924 0 </td <td>0.333</td> <td>0.383</td> <td>0.469</td> <td>0.556</td> <td>9290</td> <td>0.773</td> <td>0.863</td> <td>0.953</td>	0.333	0.383	0.469	0.556	9290	0.773	0.863	0.953
0.413 0.498 0.582 0.697 0.789 0.874 0.427 0.510 0.593 0.706 0.796 0.873 0.427 0.510 0.593 0.706 0.796 0.883 0.451 0.522 0.604 0.714 0.802 0.883 0.462 0.543 0.622 0.722 0.808 0.887 0.482 0.561 0.632 0.772 0.808 0.897 0.500 0.577 0.665 0.772 0.838 0.907 0.530 0.605 0.665 0.772 0.838 0.907 0.531 0.605 0.676 0.773 0.839 0.901 0.544 0.616 0.687 0.774 0.885 0.918 0.556 0.627 0.696 0.778 0.884 0.924 0.557 0.646 0.712 0.798 0.804 0.924 0.540 0.653 0.772 0.804 0.924 0.650	0.349	0.399	0.484	0.570	0.687	0.781	698.0	0.956
0.427 0.510 0.593 0.706 0.705 0.705 0.439 0.522 0.604 0.714 0.802 0.883 0.443 0.522 0.604 0.714 0.802 0.883 0.4451 0.532 0.613 0.772 0.808 0.887 0.462 0.543 0.652 0.772 0.808 0.887 0.500 0.577 0.652 0.773 0.831 0.902 0.530 0.657 0.665 0.772 0.833 0.907 0.530 0.605 0.676 0.773 0.835 0.911 0.544 0.616 0.687 0.774 0.845 0.911 0.556 0.657 0.689 0.786 0.886 0.924 0.557 0.646 0.712 0.798 0.864 0.924 0.587 0.657 0.704 0.792 0.860 0.924 0.587 0.657 0.772 0.804 0.924 0.60	0.363	0.413	0.498	0.582	769.0	0.789	0.874	0 0 0
0.439 0.522 0.604 0.714 0.832 0.833 0.451 0.532 0.613 0.714 0.802 0.887 0.462 0.543 0.622 0.729 0.813 0.890 0.500 0.551 0.638 0.742 0.883 0.897 0.500 0.577 0.655 0.753 0.831 0.902 0.516 0.552 0.753 0.833 0.907 0.530 0.665 0.773 0.845 0.911 0.544 0.616 0.687 0.779 0.885 0.915 0.557 0.657 0.704 0.786 0.924 0.924 0.557 0.646 0.712 0.786 0.924 0.924 0.557 0.646 0.712 0.786 0.924 0.924 0.557 0.663 0.720 0.804 0.924 0.924 0.558 0.663 0.772 0.809 0.875 0.932 0.604 0.659	0.377	0.427	0.510	0.593	0.706	962 0	0.879	1960
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0.462 0.543 0.622 0.729 0.333 0.890 1 0.482 0.543 0.622 0.779 0.813 0.890 0 0.500 0.577 0.652 0.774 0.823 0.897 0 0.516 0.592 0.665 0.772 0.833 0.907 0 0.536 0.605 0.676 0.771 0.845 0.911 0 0.536 0.616 0.687 0.779 0.885 0.911 0 0.557 0.663 0.772 0.886 0.924 0.911 0 0.577 0.696 0.778 0.880 0.924 0.924 0.577 0.653 0.772 0.890 0.884 0.924 0.578 0.663 0.772 0.890 0.872 0.932 0.604 0.677 0.733 0.813 0.932 0.932 0.604 0.677 0.734 0.825 0.884 0.934 0.934	0.402	0.451	0.532	0.613	0.722	0.808	0.887	0.065
0.482 0.561 0.683 0.742 0.823 0.897 0.500 0.577 0.665 0.773 0.831 0.902 0.516 0.522 0.665 0.773 0.831 0.907 0.516 0.652 0.762 0.838 0.907 0.530 0.605 0.676 0.771 0.845 0.911 0.544 0.616 0.687 0.779 0.885 0.915 0.557 0.637 0.704 0.792 0.865 0.924 0.577 0.646 0.712 0.798 0.844 0.924 0.587 0.657 0.704 0.778 0.864 0.924 0.596 0.657 0.770 0.804 0.878 0.924 0.607 0.653 0.772 0.804 0.878 0.937 0.627 0.630 0.774 0.825 0.884 0.937 0.628 0.720 0.744 0.825 0.884 0.934 0.629	0.413	0.462	0.543	0.622	0.729	0.813	080	0.067
0.500 0.501 0.000 0.742 0.825 0.897 0.500	0.434	0.487	0.561	0 630	2770	0000	2000	0000
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0.530 0.605 0.702 0.702 0.838 0.907 0.530 0.605 0.607 0.771 0.845 0.911 0.544 0.616 0.687 0.771 0.845 0.911 0.544 0.616 0.687 0.779 0.855 0.918 0.556 0.637 0.704 0.792 0.806 0.924 0.557 0.663 0.720 0.804 0.805 0.928 0.505 0.663 0.726 0.809 0.875 0.928 0.601 0.607 0.733 0.813 0.875 0.930 0.601 0.607 0.733 0.813 0.875 0.930 0.602 0.603 0.744 0.825 0.881 0.934 0.602 0.603 0.603 0.754 0.825 0.981 0.934 0.603 0.603 0.754 0.825 0.911 0.955 0.700 0.804 0.803 0.905 0.905 0.700 0.603 0.700 0.825 0.905 0.905 0.905 0.700 0.803 0.700 0.825 0.905 0.905 0.700 0.703 0.700 0.825 0.901 0.955 0.700 0.703 0.700 0.825 0.901 0.955 0.700 0.703 0.700 0.825 0.901 0.905 0.700 0.703 0.700 0.825 0.901 0.905 0.700 0.703 0.700 0.825 0.803 0.803 0.803 0.803 0.905 0.700 0.700 0.823 0.803 0.803 0.905 0.700 0.700 0.823 0.803 0.905 0.700 0.700 0.823 0.803 0.905 0.700 0.700 0.823 0.803 0.905 0.700 0.700 0.823 0.803 0.905 0.700 0.700 0.823 0.803 0.905 0.700 0.700 0.803 0.905 0.700 0.700 0.803 0.700 0.700 0.803 0.700	0.460	0.500	0.50	0.032	0.753	0.831	0.902	0.972
0.554 0.616 0.687 0.771 0.845 0.911 0.554 0.616 0.687 0.779 0.885 0.915 0.556 0.627 0.696 0.786 0.885 0.918 0.577 0.646 0.712 0.792 0.860 0.921 0.577 0.653 0.720 0.809 0.825 0.924 0.587 0.663 0.726 0.809 0.872 0.928 0.604 0.670 0.733 0.813 0.875 0.930 0.612 0.677 0.738 0.818 0.875 0.930 0.620 0.637 0.734 0.822 0.881 0.934 0.621 0.663 0.744 0.825 0.884 0.936 0.622 0.690 0.744 0.825 0.884 0.936 0.633 0.662 0.720 0.774 0.844 0.894 0.936 0.634 0.739 0.730 0.749 0.825 0	0.409	0.510	0.592	0.000	0.762	0.838	0.907	0.974
0.556 0.627 0.696 0.779 0.850 0.915 0.557 0.627 0.696 0.778 0.855 0.918 0.567 0.646 0.712 0.786 0.855 0.918 0.587 0.646 0.712 0.798 0.864 0.924 0.587 0.655 0.726 0.804 0.868 0.926 0.604 0.667 0.733 0.813 0.878 0.928 0.602 0.663 0.733 0.818 0.878 0.930 0.620 0.683 0.744 0.825 0.931 0.934 0.627 0.690 0.749 0.825 0.884 0.934 0.633 0.695 0.774 0.825 0.884 0.934 0.634 0.739 0.749 0.825 0.949 0.944 0.635 0.720 0.774 0.884 0.935 0.944 0.634 0.739 0.790 0.885 0.911 0.952	0.400	0.530	0.000	0.0/0	0.7/1	0.845	0.911	0.976
0.556 0.627 0.696 0.786 0.855 0.918 0.567 0.646 0.712 0.792 0.860 0.921 0.587 0.646 0.712 0.798 0.864 0.924 0.587 0.655 0.720 0.804 0.868 0.926 0.596 0.663 0.772 0.809 0.872 0.926 0.604 0.670 0.733 0.813 0.878 0.930 0.620 0.637 0.744 0.825 0.881 0.934 0.627 0.690 0.744 0.825 0.886 0.934 0.633 0.695 0.774 0.882 0.886 0.934 0.634 0.739 0.774 0.887 0.949 0.944 0.642 0.730 0.774 0.885 0.911 0.952 0.653 0.662 0.720 0.774 0.887 0.944 0.944 0.684 0.739 0.730 0.886 0.911 0	0.490	0.344	0.616	0.687	0.779	0.850	0.915	0.978
0.567 0.637 0.704 0.792 0.860 0.921 0.587 0.646 0.712 0.798 0.864 0.924 0.587 0.653 0.720 0.804 0.864 0.924 0.596 0.663 0.726 0.809 0.872 0.926 0.604 0.667 0.733 0.813 0.873 0.932 0.620 0.633 0.644 0.822 0.881 0.934 0.627 0.690 0.744 0.825 0.884 0.934 0.633 0.695 0.754 0.825 0.886 0.937 0.634 0.739 0.774 0.844 0.897 0.949 0.642 0.720 0.774 0.844 0.897 0.949 0.653 0.662 0.720 0.774 0.844 0.897 0.949 0.654 0.739 0.790 0.8856 0.901 0.952 0 0.731 0.755 0.803 0.891 0.92	0.511	0.556	0.627	969.0	0.786	0.855	0.918	0.979
0.577 0.646 0.712 0.798 0.864 0.924 0.587 0.655 0.720 0.804 0.868 0.926 0.596 0.663 0.726 0.809 0.872 0.926 0.604 0.670 0.733 0.813 0.875 0.930 0.612 0.677 0.738 0.818 0.878 0.934 0.620 0.683 0.744 0.825 0.881 0.934 0.633 0.695 0.749 0.825 0.884 0.936 0.634 0.739 0.774 0.844 0.897 0.949 0.703 0.755 0.803 0.865 0.911 0.952 0.718 0.739 0.790 0.885 0.911 0.953 0.718 0.755 0.803 0.865 0.911 0.953 0.731 0.779 0.824 0.873 0.962 0.962 0.732 0.738 0.880 0.928 0.962 0.962	0.523	0.567	0.637	0.704	0.792	0.860	0.921	0.980
0.587 0.655 0.720 0.804 0.868 0.926 0.596 0.663 0.726 0.809 0.872 0.928 0.604 0.670 0.733 0.813 0.875 0.928 0.612 0.677 0.738 0.818 0.878 0.934 0.620 0.683 0.744 0.822 0.881 0.934 0.627 0.690 0.749 0.825 0.884 0.936 0.633 0.609 0.774 0.844 0.897 0.944 0.684 0.739 0.774 0.844 0.897 0.944 0.684 0.739 0.779 0.865 0.911 0.952 0.718 0.755 0.803 0.865 0.911 0.952 0.731 0.779 0.824 0.879 0.917 0.955 0.732 0.798 0.899 0.928 0.962 0.942 0.733 0.823 0.889 0.934 0.965 0.965	0.534	0.577	0.646	0.712	0.798	0.864	0.924	0.982
0.596 0.663 0.726 0.809 0.872 0.928 0.604 0.670 0.733 0.813 0.875 0.930 0.612 0.677 0.738 0.818 0.875 0.930 0.620 0.683 0.744 0.822 0.881 0.932 0.627 0.690 0.749 0.825 0.884 0.936 0.633 0.663 0.774 0.884 0.936 0.937 0.684 0.720 0.774 0.844 0.897 0.944 0.684 0.739 0.790 0.786 0.910 0.945 0.718 0.755 0.803 0.865 0.917 0.955 0.718 0.768 0.814 0.873 0.917 0.958 0.731 0.779 0.824 0.879 0.917 0.958 0.732 0.738 0.880 0.928 0.962 0.962 0.744 0.881 0.898 0.928 0.962 0.962	0.545	0.587	0.655	0.720	0.804	0.868	0.926	0.983
0.604 0.670 0.733 0.813 0.875 0.930 0.612 0.677 0.738 0.818 0.878 0.932 0.620 0.683 0.744 0.822 0.881 0.932 0.627 0.690 0.749 0.825 0.881 0.934 0.633 0.695 0.754 0.829 0.886 0.937 0.634 0.720 0.774 0.844 0.897 0.944 0.684 0.739 0.790 0.856 0.911 0.952 0.703 0.755 0.803 0.865 0.911 0.952 0.718 0.758 0.814 0.873 0.911 0.955 0.731 0.779 0.879 0.921 0.955 0.732 0.798 0.899 0.921 0.955 0.733 0.798 0.890 0.928 0.965 0.734 0.825 0.934 0.965 0.770 0.823 0.938 0.965 <tr< td=""><td>0.554</td><td>0.596</td><td>0.663</td><td>0.726</td><td>6080</td><td>0.872</td><td>0.928</td><td>0.983</td></tr<>	0.554	0.596	0.663	0.726	6080	0.872	0.928	0.983
0.612 0.677 0.738 0.818 0.878 0.932 0.620 0.683 0.744 0.822 0.881 0.934 0.627 0.690 0.749 0.825 0.884 0.936 0.633 0.695 0.754 0.829 0.886 0.937 0.662 0.720 0.774 0.844 0.897 0.944 0.684 0.739 0.790 0.856 0.905 0.949 0.703 0.755 0.803 0.865 0.911 0.952 0.718 0.776 0.879 0.911 0.955 0.731 0.779 0.879 0.928 0.965 0.731 0.779 0.879 0.928 0.965 0.732 0.798 0.899 0.928 0.965 0.784 0.823 0.896 0.934 0.965 0.784 0.823 0.896 0.938 0.965 0.794 0.886 0.910 0.938 0.906 <td>0.563</td> <td>0.604</td> <td>0.670</td> <td>0.733</td> <td>0.813</td> <td>0.875</td> <td>0.030</td> <td>0 984</td>	0.563	0.604	0.670	0.733	0.813	0.875	0.030	0 984
0.620 0.683 0.744 0.822 0.881 0.934 0.627 0.690 0.749 0.822 0.881 0.934 0.633 0.695 0.754 0.829 0.884 0.934 0.662 0.720 0.774 0.844 0.897 0.944 0.684 0.739 0.790 0.856 0.905 0.949 0.703 0.755 0.803 0.865 0.911 0.952 0.718 0.778 0.814 0.873 0.917 0.955 0.731 0.779 0.824 0.873 0.928 0.965 0.753 0.798 0.839 0.891 0.928 0.965 0.753 0.798 0.880 0.934 0.965 0.770 0.812 0.880 0.934 0.965 0.794 0.823 0.805 0.938 0.965 0.796 0.868 0.910 0.942 0.970	0.572	0.612	0.677	0.738	0.818	0.878	0.032	0.985
0.627 0.690 0.749 0.825 0.884 0.936 0.663 0.695 0.754 0.825 0.884 0.937 0.695 0.754 0.825 0.884 0.937 0.662 0.720 0.774 0.844 0.897 0.944 0.684 0.739 0.790 0.886 0.911 0.952 0.718 0.755 0.803 0.865 0.911 0.952 0.718 0.779 0.824 0.873 0.911 0.955 0.718 0.779 0.824 0.873 0.911 0.955 0.770 0.823 0.880 0.928 0.965 0.770 0.812 0.880 0.905 0.905 0.784 0.823 0.880 0.905 0.905 0.796 0.823 0.868 0.910 0.942 0.907 0.796	0.580	0.620	0.683	0.744	0.822	0.881	0.034	0 986
0.633 0.695 0.754 0.829 0.886 0.937 0.662 0.720 0.774 0.844 0.897 0.944 0.684 0.739 0.790 0.856 0.905 0.949 0.703 0.755 0.803 0.865 0.911 0.952 0.718 0.778 0.814 0.873 0.911 0.955 0.718 0.779 0.824 0.873 0.917 0.955 0.779 0.824 0.879 0.921 0.955 0.770 0.823 0.889 0.994 0.965 0.770 0.812 0.880 0.905 0.905 0.796 0.823 0.868 0.910 0.928 0.965 0.796 0.823 0.868 0.910 0.942 0.906	0.587	0.627	0690	0.749	0.825	0.884	0.036	0 986
0.662 0.720 0.774 0.844 0.897 0.944 0.684 0.739 0.790 0.856 0.905 0.944 0.684 0.739 0.790 0.856 0.905 0.949 0.703 0.755 0.803 0.865 0.911 0.952 0.731 0.779 0.824 0.879 0.917 0.958 0.753 0.798 0.839 0.899 0.928 0.962 0.770 0.812 0.880 0.924 0.965 0.784 0.823 0.898 0.934 0.965 0.786 0.833 0.866 0.905 0.938 0.796 0.833 0.868 0.910 0.942 0.970	0.594	0.633	0.695	0.754	0.829	0.886	0.037	0.987
0.752 0.720 0.774 0.844 0.897 0.944 0.809 0.703 0.739 0.790 0.856 0.905 0.949 0.703 0.758 0.803 0.805 0.911 0.952 0.718 0.788 0.814 0.873 0.917 0.955 0.731 0.779 0.824 0.879 0.921 0.958 0.770 0.812 0.839 0.890 0.928 0.965 0.784 0.833 0.860 0.905 0.938 0.965 0.784 0.833 0.868 0.910 0.943 0.970 0.770	3690	0,667	0000	,,,,	,,,,,	2000		0000
0.703 0.755 0.803 0.856 0.905 0.949 0.703 0.755 0.803 0.865 0.911 0.952 0.718 0.779 0.824 0.879 0.921 0.958 0.770 0.812 0.850 0.998 0.954 0.784 0.823 0.868 0.910 0.938 0.965 0.796 0.833 0.868 0.910 0.937	0.640	0.007	0.720	0.774	0.844	0.897	0.944	0.989
0.703 0.755 0.803 0.865 0.911 0.952 0.718 0.768 0.814 0.873 0.917 0.955 0.731 0.779 0.824 0.879 0.928 0.958 0.770 0.812 0.850 0.905 0.905 0.784 0.823 0.880 0.905 0.938 0.965 0.796 0.833 0.868 0.910 0.938 0.906	0.049	0.084	0.739	0.790	0.856	0.905	0.949	0.660
0.718 0.768 0.814 0.873 0.917 0.955 0.731 0.779 0.824 0.879 0.921 0.958 0.753 0.798 0.839 0.890 0.928 0.962 0.770 0.812 0.850 0.898 0.934 0.965 0.784 0.823 0.868 0.910 0.937	0.009	0.703	0.755	0.803	0.865	0.911	0.952	0.992
0.731 0.779 0.824 0.879 0.921 0.958 0.753 0.798 0.839 0.890 0.928 0.965 0.770 0.812 0.850 0.898 0.934 0.965 0.784 0.823 0.860 0.905 0.938 0.965 0.796 0.833 0.860 0.905 0.938 0.967	0.686	0.718	0.768	0.814	0.873	0.917	0.955	0.993
0.753 0.798 0.839 0.890 0.928 0.962 0.770 0.812 0.850 0.898 0.934 0.965 0.784 0.823 0.860 0.905 0.938 0.968 0.796 0.833 0.868 0.910 0.942 0.970	0.701	0.731	0.779	0.824	0.879	0.921	0.958	0.993
0.770 0.812 0.850 0.898 0.934 0.965 0.784 0.862 0.905 0.905 0.938 0.968 0.796 0.833 0.868 0.910 0.947 0.970	0.724	0.753	0.798	0.839	0.890	0.928	0.962	0.994
0.784 0.823 0.860 0.905 0.938 0.968 0.796 0.833 0.868 0.910 0.942 0.970	0.743	0.770	0.812	0.850	868.0	0.934	5960	0.995
0.796 0.833 0.868 0.910 0.942 0.970	0.758	0.784	0.823	0.860	0.905	0.938	896.0	0.996
0.000								

TABLE C.4 χ^2 distribution (continued)

	0.40	0.30	0.20	0.10	0.05	0.05	10.0	0.001
1	0.708	1.074	1.642	2.706	3.841	5.412	6.635	10.827
2	0.916	1.204	1.609	2.303	2.996	3.912	4.605	806.9
3	0.982	1.222	1.547	2.084	2.605	3.279	3.780	5.423
4	1.011	1.220	1.497	1.945	2.372	2.917	3.319	4.617
2	1.026	1.213	1.458	1.847	2.214	2.678	3.017	4.102
9	1.035	1.205	1.426	1.774	2.099	2.506	2.802	3.743
1	1.040	1.198	1.400	1.717	2.010	2.375	2.639	3.475
8	1.044	1.191	1.379	1.670	1.938	2.271	2.511	3.266
6	1.046	1.184	1.360	1.632	1.880	2.187	2.407	3.097
01	1.047	1.178	1.344	1.599	1.831	2.116	2.321	2.959
=	1.048	1.173	1.330	1.570	1.789	2.056	2.248	2.842
12	1.049	1.168	1.318	1.546	1.752	2.004	2.185	2.742
13	1.049	1.163	1.307	1.524	1.720	1.959	2.130	2.656
14	1.049	1.159	1.296	1.505	1.692	1.919	2.082	2.580
15	1.049	1.155	1.287	1.487	1.666	1.884	2.039	2.513
9	1.049	1.151	1.279	1.471	1.644	1.852	2.000	2.453
17	1.048	1.148	1.271	1.457	1.623	1.823	1.965	2.399
8	1.048	1.145	1.264	1.444	1.604	1.797	1.934	2.351
61	1.048	1.142	1.258	1.432	1.586	1.773	1.905	2.307
07	1.048	1.139	1.252	1.421	1.571	1.751	1.878	2.266
22	1.047	1.134	1.241	1.401	1.542	1.712	1.831	2.194
4	1.046	1.129	1.231	1.383	1.517	1.678	1.791	2.132
97	1.045	1.125	1.223	1.368	1.496	1.648	1.755	2.079
8	1.045	1.121	1.215	1.354	1.476	1.622	1.724	2.032
08	1.044	1.118	1.208	1.342	1.459	1.599	1.696	1.990
. 75	1.043	1.115	1.202	1.331	1.444	1.578	1.671	1.953
4	1.042	1.112	1.196	1.321	1.429	1.559	1.649	1.919
98	1.042	1.109	1.191	1.311	1.417	1.541	1.628	1.888
88	1.041	1.106	1.186	1.303	1.405	1.525	1.610	1.861
9	1.041	1.104	1.182	1.295	1.394	1.511	1.592	1.835
15	1.040	1.102	1.178	1.288	1.384	1.497	1.576	1.812
4	1.039	1.100	1.174	1.281	1.375	1.485	1.562	1.790
91	1.039	1.098	1.170	1.275	1.366	1.473	1.548	1.770
8	1.038	1.096	1.167	1.269	1.358	1.462	1.535	1.7.1
20	1.038	1.094	1.163	1.263	1.350	1.452	1.523	1.733
09	1.036	1.087	1.150	1.240	1.318	1.410	1.473	1.660
0/	1.034	1.081	1.139	1.222	1.293	1.377	1.435	1.605
80	1.032	1.076	1.130	1.207	1.273	1.351	1.404	1.560
06	1.031	1.072	1.123	1.195	1.257	1.329	1.379	1.323
00	1.029	1.069	1.117	1.185	1.243	1.311	1.336	1.434
120	1.027	1.063	1.107	1.169	1.221	1.283	1.325	1.446
40	1.026	1.059	1.099	1.156	1.204	1.261	1.299	1.410
09	1.024	1.055	1.093	1.146	1.191	1.243	1.278	1.381
80	1.023	1.052	1.087	1.137	1.179	1.228	1 261	1 358
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