

CALCULATED FIELD DISTRIBUTIONS FOR THE 50-MM-BORE 31T MAGNET

VRS# 50-20-R-4C-3.11

z [mm]	r = 0.0 [mm]			r = 50 / 4 = 12.5 [mm]			r = 50 / 2 = 25.0 [mm]		
	Bz/Bo [1]	dBz/(dzBo) [1/mm]	Bz*dBz/(dzBo^2) [1/mm]	Bz/Bo [1]	dBz/(dzBo) [1/mm]	Bz*dBz/(dzBo^2) [1/mm]	Bz/Bo [1]	dBz/(dzBo) [1/mm]	Bz*dBz/(dzBo^2) [1/mm]
0	1.000000E+00	-1.951493E-15	-1.951493E-15	1.001837E+00	-3.214223E-15	-3.220128E-15	1.007209E+00	9.183495E-16	9.249697E-16
1	9.999763E-01	4.734509E-05	4.734397E-05	1.001814E+00	4.613334E-05	4.621704E-05	1.007188E+00	4.264932E-05	4.295587E-05
2	9.999053E-01	9.472152E-05	9.471255E-05	1.001745E+00	9.229675E-05	9.245781E-05	1.007124E+00	8.532479E-05	8.593261E-05
3	9.997869E-01	1.421607E-04	1.421304E-04	1.001630E+00	1.385203E-04	1.387460E-04	1.007017E+00	1.280526E-04	1.289511E-04
4	9.996210E-01	1.896940E-04	1.896221E-04	1.001468E+00	1.848342E-04	1.851055E-04	1.006867E+00	1.708590E-04	1.720324E-04
5	9.994075E-01	2.373530E-04	2.372123E-04	1.001260E+00	2.312687E-04	2.315600E-04	1.006675E+00	2.137703E-04	2.151973E-04
6	9.991462E-01	2.851693E-04	2.849258E-04	1.001005E+00	2.778541E-04	2.781335E-04	1.006440E+00	2.568131E-04	2.584669E-04
7	9.988371E-01	3.331748E-04	3.327874E-04	1.000704E+00	3.246211E-04	3.248497E-04	1.006161E+00	3.000139E-04	3.018624E-04
8	9.984798E-01	3.814015E-04	3.808217E-04	1.000356E+00	3.716004E-04	3.717327E-04	1.005840E+00	3.433995E-04	3.454049E-04
9	9.980742E-01	4.298817E-04	4.290538E-04	9.999609E-01	4.188230E-04	4.188066E-04	1.005475E+00	3.869971E-04	3.891158E-04
10	9.976200E-01	4.786478E-04	4.775086E-04	9.995183E-01	4.663202E-04	4.660956E-04	1.005066E+00	4.308340E-04	4.330165E-04
20	9.903206E-01	9.894264E-04	9.798493E-04	9.924085E-01	9.635332E-04	9.562185E-04	9.985029E-01	8.886375E-04	8.873071E-04
30	9.776083E-01	1.567480E-03	1.532381E-03	9.800319E-01	1.525873E-03	1.495404E-03	9.871029E-01	1.403874E-03	1.385768E-03
40	9.586150E-01	2.252666E-03	2.159439E-03	9.615404E-01	2.193952E-03	2.109573E-03	9.701082E-01	2.015032E-03	1.954799E-03
50	9.320628E-01	3.085232E-03	2.875630E-03	9.356424E-01	3.015567E-03	2.821493E-03	9.463054E-01	2.776717E-03	2.627622E-03
60	8.963613E-01	4.079704E-03	3.656889E-03	9.005670E-01	4.034564E-03	3.633395E-03	9.137769E-01	3.781373E-03	3.455332E-03
70	8.502019E-01	5.147028E-03	4.376013E-03	8.543627E-01	5.220197E-03	4.459941E-03	8.691810E-01	5.252452E-03	4.565331E-03
80	7.940783E-01	6.015771E-03	4.776993E-03	7.967083E-01	6.227822E-03	4.961757E-03	8.050190E-01	7.555592E-03	6.082395E-03
90	7.314575E-01	6.424780E-03	4.699454E-03	7.320406E-01	6.602008E-03	4.832938E-03	7.330680E-01	6.986848E-03	5.121835E-03
100	6.670441E-01	6.398682E-03	4.268203E-03	6.662410E-01	6.496158E-03	4.328007E-03	6.623987E-01	6.739554E-03	4.464272E-03
200	2.595320E-01	2.215678E-03	5.750392E-04	2.587079E-01	2.206421E-03	5.708186E-04	2.562595E-01	2.179960E-03	5.586354E-04
300	1.155060E-01	8.788268E-04	1.015097E-04	1.151974E-01	8.758264E-04	1.008929E-04	1.142752E-01	8.668566E-04	9.906019E-05
400	5.696640E-02	3.720002E-04	2.119151E-05	5.684822E-02	3.708943E-04	2.108468E-05	5.649498E-02	3.675898E-04	2.076698E-05
500	3.116749E-02	1.73310E-04	5.402291E-06	3.111921E-02	1.729204E-04	5.381146E-06	3.097483E-02	1.716935E-04	5.318177E-06
600	1.861351E-02	8.895757E-05	1.655812E-06	1.859188E-02	8.879396E-05	1.650846E-06	1.852716E-02	8.830478E-05	1.636037E-06
700	1.191709E-02	4.961919E-05	5.913165E-07	1.190649E-02	4.954798E-05	5.899426E-07	1.187475E-02	4.933493E-05	5.858401E-07
800	8.059571E-03	2.963581E-05	2.388519E-07	8.053952E-03	2.960210E-05	2.384139E-07	8.037120E-03	2.950121E-05	2.371047E-07
900	5.693653E-03	1.871438E-05	1.065532E-07	5.690472E-03	1.869720E-05	1.063959E-07	5.680939E-03	1.864578E-05	1.059255E-07
1000	4.166546E-03	1.236968E-05	5.153882E-08	4.164642E-03	1.236036E-05	5.147647E-08	4.158939E-03	1.233245E-05	5.128990E-08
2000	5.260216E-04	7.876164E-07	4.143032E-10	5.259602E-04	7.874634E-07	4.141744E-10	5.257761E-04	7.870047E-07	4.137883E-10
3000	1.560808E-04	1.559678E-07	2.434358E-11	1.560727E-04	1.559543E-07	2.434021E-11	1.560484E-04	1.559138E-07	2.433009E-11
4000	6.587734E-05	4.938861E-08	3.253590E-12	6.587541E-05	4.938620E-08	3.253336E-12	6.586963E-05	4.937897E-08	3.252575E-12
5000	3.373629E-05	2.023678E-08	6.827138E-13	3.373566E-05	2.023614E-08	6.826796E-13	3.373376E-05	2.023425E-08	6.825773E-13
6000	1.952551E-05	9.761100E-09	1.905905E-13	1.952526E-05	9.760888E-09	1.905839E-13	1.952450E-05	9.760253E-09	1.905640E-13
7000	1.229678E-05	5.269395E-09	6.479659E-14	1.229666E-05	5.269311E-09	6.479493E-14	1.229631E-05	5.269059E-09	6.478998E-14
8000	8.238240E-06	3.089048E-09	2.544832E-14	8.238180E-06	3.089010E-09	2.544782E-14	8.237999E-06	3.088897E-09	2.544633E-14
9000	5.786151E-06	1.928573E-09	1.115902E-14	5.786118E-06	1.928555E-09	1.115885E-14	5.786017E-06	1.928499E-09	1.115833E-14
10000	4.218194E-06	1.265382E-09	5.337626E-15	4.218174E-06	1.265372E-09	5.337559E-15	4.218115E-06	1.265342E-09	5.337359E-15

r [mm]	z = 0.0 [mm]			z = 100.0 [mm]			z = 1000.0 [mm]		
	Bz/Bo [1]	dBz/(drBo) [1/mm]	Bz*dBz/(drBo^2) [1/mm]	Bz/Bo [1]	dBz/(drBo) [1/mm]	Bz*dBz/(drBo^2) [1/mm]	Bt/Bo [1]	dBt/(drBo) [1/mm]	Bt*dBt/(drBo^2) [1/mm]
0	1.000000E+00	0.000000E+00	0.000000E+00	6.670441E-01	-1.147937E-16	-7.657244E-17	4.166546E-03	4.484128E-18	1.868332E-20
1	1.000012E+00	-2.366683E-05	-2.366711E-05	6.670394E-01	9.366188E-06	6.247616E-06	4.166538E-03	1.518672E-08	6.327604E-11
2	1.000047E+00	-4.732192E-05	-4.732416E-05	6.670253E-01	1.879856E-05	1.253911E-05	4.166515E-03	3.037318E-08	1.265503E-10
3	1.000106E+00	-7.096352E-05	-7.096108E-05	6.670018E-01	2.836417E-05	1.891895E-05	4.166477E-03	4.55914E-08	1.898211E-10
4	1.000189E+00	-9.454993E-05	-9.456782E-05	6.669685E-01	3.813187E-05	2.543276E-05	4.166424E-03	6.074435E-08	2.530867E-10
5	1.000296E+00	-1.180994E-04	-1.181344E-04	6.669254E-01	4.817334E-05	3.212802E-05	4.166356E-03	7.592855E-08	3.163453E-10
6	1.000425E+00	-1.415904E-04	-1.416507E-04	6.668721E-01	5.856419E-05	3.905483E-05	4.166272E-03	9.111148E-08	3.795952E-10
7	1.000579E+00	-1.650113E-04	-1.651068E-04	6.668082E-01	6.938541E-05	4.626676E-05	4.166173E-03	1.062929E-07	4.428347E-10
8	1.000755E+00	-1.883505E-04	-1.884928E-04	6.667332E-01	8.072497E-05	5.382202E-05	4.166060E-03	1.214726E-07	5.060619E-10
9	1.000955E+00	-2.115966E-04	-2.117988E-04	6.666466E-01	9.268003E-05	6.178483E-05	4.165931E-03	1.366502E-07	5.692753E-10
10	1.001179E+00	-2.347382E-04	-2.350148E-04	6.665477E-01	1.053596E-04	7.02270E-05	4.165786E-03	1.518256E-07	6.324029E-10
11	1.001425E+00	-2.577640E-04	-2.581313E-04	6.664357E-01	1.188882E-04	7.923132E-05	4.165627E-03	1.669984E-07	6.956532E-10
12	1.001694E+00	-2.806628E-04	-2.811383E-04	6.663096E-01	1.334105E-04	8.89270E-05	4.165452E-03	1.821685E-07	7.588142E-10
13	1.001986E+00	-3.034236E-04	-3.040263E-04	6.661685E-01	1.490981E-04	9.932444E-05	4.165263E-03	1.973356E-07	8.219545E-10
14	1.002301E+00	-3.260354E-04	-3.267856E-04	6.660111E-01	1.661579E-04	1.106630E-04	4.165058E-03	2.124994E-07	8.850720E-10
15	1.002638E+00	-3.484875E-04	-3.494068E-04	6.658358E-01	1.848450E-04	1.230764E-04	4.164838E-03	2.276596E-07	9.481653E-10
16	1.002998E+00	-3.707690E-04	-3.718805E-04	6.656409E-01	2.054793E-04	1.367754E-04	4.164602E-03	2.428161E-07	1.011232E-09
17	1.003380E+00	-3.928696E-04	-3.941974E-04	6.654243E-01	2.284697E-04	1.520293E-04	4.164352E-03	2.579685E-07	1.074272E-09
18	1.003784E+00	-4.147788E-04	-4.163482E-04	6.651833E-01	2.543481E-04	1.691881E-04	4.164086E-03	2.731167E-07	1.137282E-09
19	1.004209E+00	-4.364866E-04	-4.383239E-04	6.649147E-01	2.838173E-04	1.887143E-04	4.163806E-03	2.882603E-07	1.200260E-09
20	1.004656E+00	-4.579830E-04	-4.601155E-04	6.646145E-01	3.178169E-04	2.112257E-04	4.163510E-03	3.033992E-07	1.263206E-09
21	1.005125E+00	-4.792580E-04	-4.817143E-04	6.642776E-01	3.576124E-04	2.375539E-04	4.163199E-03	3.185330E-07	1.326116E-09
22	1.005615E+00	-5.003023E-04	-5.031115E-04	6.638974E-01	4.049030E-04	2.688140E-04	4.162873E-03	3.336616E-07	1.388991E-09
23	1.006126E+00	-5.211065E-04	-5.242986E-04	6.634654E-01	4.619198E-04	3.064678E-04	4.162532E-03	3.487846E-07	1.451827E-09
24	1.006657E+00	-5.416613E-04	-5.452672E-04	6.629705E-01	5.314141E-04	3.523118E-04	4.162175E-03	3.639018E-07	1.514623E-09
25	1.007209E+00	-5.619581E-04	-5.660091E-04	6.623987E-01	6.162685E-04	4.082154E-04	4.161804E-03	3.790130E-07	1.577378E-09
1000	-2.118302E-03	-6.361976E-06	1.347659E-08	-2.024855E-03	-5.900259E-06	1.194717E-08	1.179559E-03	2.119122E-06	2.499629E-09
2000	-2.640656E-04	-3.964641E-07	1.046925E-10	-2.611034E-04	-3.890651E-07	1.015862E-10	2.388556E-04	3.225410E-07	7.704072E-11
3000	-7.817786E-05	-7.821379E-08	6.114587E-12	-7.778741E-05	-7.756318E-08	6.033439E-12	7.609464E-05	7.377412E-08	5.613815E-12
4000	-3.297116E-05	-2.473500E-08	8.155415E-13	-3.287848E-05	-2.461916E-08	8.094407E-13	3.265198E-05	2.420585E-08	7.903690E-13
5000	-1.687877E-05	-1.012903E-08	1.709655E-13	-1.684840E-05	-1.009866E-08	1.701462E-13	1.680715E-05	1.003227E-08	1.686138E-13
6000	-9.76023E-06	-4.884108E-09	4.770319E-14	-9.754817E-06	-4.873937E-09	4.754436E-14	9.746261E-06	4.860489E-09	4.737160E-14
7000	-6.150362E-06	-2.636107E-09	1.621301E-14	-6.144715E-06	-2.632073E-09	1.617334E-14	6.143138E-06	2.629018E-09	1.615042E-14