Accuracy of Linear Interpolation of B(z, r=0) vs. Grid Spacing

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The graph below shows that over the range −300 cm < z < 550 cm the maximum error with linear interpolation is 10% [at z = 300 cm] with a grid spacing of 100 cm, and 0.1% with a grid spacing of 10 cm. Interpolation error is proportional to the square of grid spacing, so a grid spacing of 1 cm would achieve an accuracy of 1 part in 10^5. Interpolation in the radial direction should be of comparable accuracy, so long as the interpolation does not cross a boundary of the winding pack.