



FIG. 5.8 Temperature error,  $(T_{\text{apparent}} - T_{\text{actual}})/T_{\text{actual}}$  (%) at different magnetic fields for various zirconium-oxynitride thermometers (Cernox™) (300 W to 8000 W at 4.2 K). Error bars for the 18 T and 32 T curves represent plus and minus one standard deviation among different sensors. These data were calculated and replotted as temperature error from magnetoresistance data of Brandt et al. (1999). A detailed tabulation of the magnetic-field corrections for zirconium-oxynitride sensors, along with examples of how to use the correction factors, is given in Appendix A5.6. Orientation of the sensor is such that the film is perpendicular to the magnetic field (canister parallel to the field).