

Simplified expressions for the magnetic anomalies due to vertical rectangular prisms.

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Abstract

The magnetic anomaly due to a uniformly magnetized vertical rectangular prism and that due to an arbitrary structure which can be divided into a number of such prisms are expressed in forms suitable for rapid computation. Both two-dimensional and three-dimensional cases are considered. The simplified expressions will find use in interpretation techniques where repeated computations have to be made of the anomaly due to prisms as in automated fitting of prism anomalies to observed magnetic anomalies using non-linear optimization techniques or related methods.