

Abstract Submitted
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Variations of the magnetic field at CNSC, VA TATIANA GILSTRAP, Randolph College, JAMES KEANE, Lynchburg College — The current work had the goal to map the magnetic field at Claytor Nature Study Center (CNSC) near Bedford, VA. Magnetic ground measurements of the total intensity of the magnetic field were conducted over a period of two years. The data were obtained using a Geometrics G-856 proton precession magnetometer and were interpreted using the Mag2dc algorithm. The magnetometer provides a repeatable absolute total field magnetic reading. It has resolution of 0.1 nanotesla (nT), and accuracy of 0.5 nT. Readings were taken along several survey lines. Magnetic anomalies due to metal fences, buried pipes, well casings, and power lines were eliminated. The Mag2dc algorithm calculates the magnetic anomaly over 2.5 dimensional bodies. Each body can be represented by a polygon with up to 50 sides. The magnetic susceptibility for each body is assumed to be constant. Magnetic anomalies on the order of a few hundred to over a thousand nT were observed. The results were interpolated to obtain a continuous map of the magnetic field at CNSC.

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