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A comparative investigation of middle Cretaceous basalts from the Liaoning Province, northeastern China. Palaeointensities as determined with the microwave technique.

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The Cretaceous Normal Superchron (CNS) has been subject to much discussion but the intensity of the magnetic field during this time is still not well known. Zhu et al. (Phys. Earth Planet. Int. 142, 49-59. 2004) performed Thellier palaeointensity analysis on Cretaceous basalt (^{40}Ar/^{39}Ar experiments gave 102.2 $\pm$ 0.5Ma – 105.5 $\pm$ 0.5Ma) from the Liaoning Province, northeastern China, yielding a mean VDM of (4.07 $\pm$ 0.2) x 10^{22}Am^2. This is approximately half the strength of the modern day field. Rock magnetic studies combined with electron microprobe analysis indicated that titanomagnetite is the prime carrier of remanence within the basalt. Transmitted light optical imaging and SEM techniques as well as a suite of rock magnetic experiments have been carried out in order to obtain further information concerning the magnetic properties of the basalt and to verify the suitability of the samples for palaeointensity study. Results obtained using the microwave palaeointensity technique will be compared to the previously published results derived using the conventional heating procedure.