THE DETERMINATION OF THE EARTH MAGNETIC FIELD BY NUCLEAR INDUCTION (การวัติการองสนามแม่งหลักโลกโดยการเหนี่ยวนำนีวเคลียร์)

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Thesis

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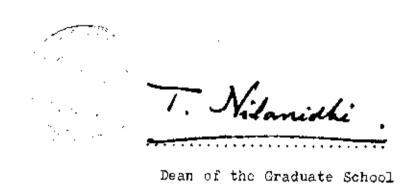
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ABSTRACT

The absolute value of the earth's magnetic field in the field in front of the Auditorium of Chulalongkorn University, Bangkok, has been determined with precision by means of nuclear magnetometer. The technique consists of the accurate measurement of the precession frequency about the earth field of hydrogen nuclei in a sample of distilled water. A typical value of the earth field at 6.02 p.m. on February 18, 1970, was found to be 0.41963 ± 0.00004 gauss. Variation of a few gammas(10⁻⁵ gauss) was observed during a period of one hour, and there is also a large variation from day to day.

. บพคัดยอ

ราสมัญรณ์ของสมานแม่เหล็กโลกที่สนามค้านหน้าหอประชุมของจุฬาจงกรณะหาวิทยาลัย ไควัดไว้แล้วอย่างละเจียด โดยไขนิวเคลียร์แมกนีโตมีเตอร์ วิธีการประกอบตัวยการวัด ความถื่อย่างละเจียดของการควงรอบ ๆ สนามแม่เหล็กโลกของนิวคีลอายของไฮโดรเจน ในน้ำกลัน วัดคาสนามแม่เหล็กโลกเพื่อวันที่ 18กุมภาพันธุ์ 2513 เวลา 18.02 น ได้ 0.41963 ± 0.00004 เกาส์ ในช่วงเวลา 1 ชั่วโมงปรากฏว่า สนามแบ่เหล็กโลก มีการเปลี่ยนแปลงขนาด 2-3 แกมมา และแต่ละวันมีการเปลี่ยนแปลงจางกับมาก

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