بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــسـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

Faculty of Science
Physics Department

Core of Nucleon-Nucleon Interaction

A THESIS

Submitted to the Faculty of Science (Sohag),

South Valley University

In Partial Fulfillment of the Requirements

for the Degree of Master of Science

(Physics)

By

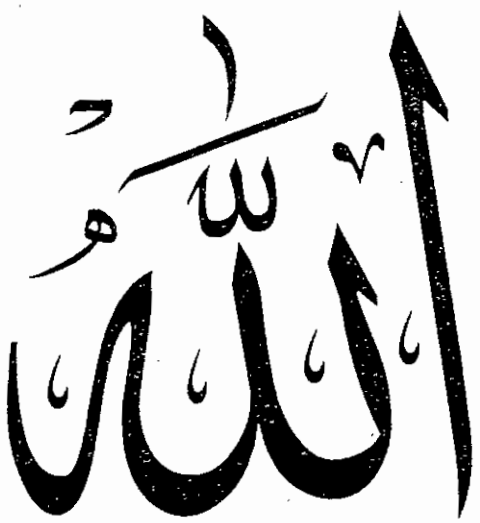
Khaled Saber Ahmed Hassaneen

B. Sc. Physics (1994)

1419-1998

بسم الله الرحمن الرحيم

وكان فضلُ



عليك عظيماً

South Valley University
Faculty of Science(Sohag)

Approval

of the M. Sc. thesis and degree.

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Thesis title : Core of Nucleon-Nucleon Interaction
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ABSTRACT

Thesis's title: Core of Nucleon-Nucleon Interaction.
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We investigated the argument of Vinh Mau *et al.* [1991] that the good description of the nucleon-nucleon NN interaction at short distances by quark models could be questioned. The quark model is simulated at short distances by a repulsive short range nonlocality. For larger radii, the one pion exchange potential OPEP is used. We found that the quark model alone at the core region can only reproduce the deuteron binding energy, but fitting other NN properties needs high *local* repulsion.

Key Words
quark model , hard-core , core region , deuteron, nucleon-nucleon interaction, $^3S_1 - {}^3D_1$.

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