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بالرسالة صفحات
لم ترد بالأصل

PRODUCTION OF CHARGED AND NEUTRAL HIGGS
BOSONS WITH CHARGINOS AND NEUTRALINOS
THROUGH DIFFERENT PROPAGATORS IN THE *MSSM*

BY

HATIM HEGAB ALI HEGAB

A Dissertation submitted to the Faculty of Science, Cairo University
in partial fulfillment of the requirements
for the Degree

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Approval Sheet

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with Charginos and Neutralinos through different
propagators in the MSSM"**

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DEDICATION

This work is dedicated to my first teacher of mathematics, **my mother**.

And to my father, the late **Prof. Hegab Ali Hegab, ex. Prof. of Microbiology at The Technical Agricultural Institute in Kaseem, Bureidah, Saudi Arabia** whose guidance, instructions and kind heart helped to shape and build my personality.

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ABSTRACT

ASSOCIATED PRODUCTION OF CHARGED AND NEUTRAL HIGGS BOSONS ACCOMPANIED BY CHARGINOS AND NEUTRALINOS THROUGH DIFFERENT PROPAGATORS

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Egypt, 2006

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In this work, the following reactions have been studied;

1. $e^-e^+ \rightarrow H^- \tilde{\chi}_1^+ \tilde{\chi}_1^o$

2. $e^-e^+ \rightarrow h \tilde{\chi}_1^+ \tilde{\chi}_1^-$

3. $e^-e^+ \rightarrow h \tilde{\chi}_1^o \tilde{\chi}_1^o$

4. $e^-e^+ \rightarrow hH^+H^-$.

where $\tilde{\chi}_1^\pm$ is the chargino and $\tilde{\chi}_1^0$ is the neutralino. h represent the lightest neutral Higgs boson, and H_3 (sometimes referred to as A) is the pseudoscalar Higgs boson.

The work went to calculate the differential cross section due to each Feynman diagram, then, the *total cross section* for each reaction is calculated according to a carefully used set of parameters. Results are graphed and tabulated.

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