;Dedication

To my father

And

The soul of my mother

Acknowledgement

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الاية

بسم الله الرحمن الرحيم

انما الهكم الله الذي لا اله الاهو وسع كل (98) شئ علما

صدق الله العظيم

سورة طه الاية(98)

Abstract

In this work amplification of electromagnetic waves is related to the phase between the external and internal field. It is shown that amplification exists

when the external and internal fields are in phase. When the two fields are normal to each other no amplification exists. While absorption happens when the two fields apposes each other.

الملخص

في هذا العمل تم ايجاد علاقة الطور بين المجالين(الداخلي والخارجي) وتضخيم الموجات

الكهرومغناطيسية . وقد وضح ان التضخيم يكون حاضرا متي ما كان المجالين(الداخلي والخارجي) في طور واحد . وعندما يكون المجالين متعامدين لبعضهما البعض ينعدم التضخيم . بينما يحدث الامتصاص عندما يعاكس المجالين بعضهما البعض.

Contents

Chapter1

Introduction

Chapter2

Electromagnetic field Amplification

Chapter3

The effect of phase between electric current and external field on amplification