UNIVERSIDAD DE GRANADA

FACULTAD DE CIENCIAS
DEPARTAMENTO DE FÍSICA APLICADA
GRUPO DE INVESTIGACIÓN DE FÍSICA DE LA ATMÓSFERA - IISTA

Exploring aerosol-cloud interaction in the atmospheric column using improved remote sensing methods

PhD. Dissertation

María Soledad Fernández Carvelo

PhD candidate

Universidad de Granada

Thesis director: Cat. Lucas Alados Arboledas
Catedrático de la Universidad de Granada
Thesis director: Dr. Juan Antonio Bravo Aranda
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Tribunal nombrado por el Magfco. y Excmo. Sr. Rector de la Universidad Politécnica de Madrid, el día ___ de _____ de 202X.

Presidente: PhD jury committee 1.

Secretario: PhD jury committee 2.

Vocal: PhD jury committee 3.

Vocal: PhD jury committee 4.

Vocal: PhD jury committee 5.

Suplente: PhD jury committee 6.

Suplente: PhD jury committee 7.

Opta a la mención de "Doctor Internacional"

Evaluadores de organizaciones internacionales:

Reviewer 1, Institution, Country.

Reviewer 2, Institution, Country.

Realizado el acto de defensa y lectura de la Tesis el día ___ de _____ de 202X en la E. T. S. Ingenieros Industriales.

CALIFICACIÓN:

EL PRESIDENTE   LOS VOCALES

EL SECRETARIO

Abstract

Abstract (English version).

Resumen (Spanish)

Resumen (versión en español).

Acknowledgements

Time to say thank you!

Contents

List of Figures

List of Tables

Abbreviations

EOA   Example of Abbreviation.

Part I

INTRODUCTION

Thesis background 1

Background of your work.

This is an example of a reference (Croff 1983).

Objectives and original contributions

Main goals and contributions arising from this Thesis.

Thesis structure

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This Thesis is divided into five Parts, with several related Chapters in each of them. Firstly, Part I establishes the framework and background of this Thesis and presents the original contributions and outcomes.

Part II corresponds to the description of the state of the art that applies to this work...

Part II

STATE OF THE ART

Chapter 4

4.1 Introduction

Introduction to Chapter 1 of Part State of the Art. Here we go!

Chapter 5

5.1 Introduction

Introduction to Chapter 2 of Part State of the Art. Here we go!

Chapter 6

6.1 Introduction

Introduction to Chapter 3 of Part State of the Art. Here we go!

Part III

DEVELOPMENTS AND APPLICATIONS I

Chapter 7

7.1 Introduction

Introduction to Chapter 1 of Part Developments and Applications I. Here we go!

Let's define the Equation 7.1 for the first time:

$$q\left(\vec{r}, \vec{\Omega}, E, t\right) = \frac{\chi(E)}{4\pi} \int_E \int_\Omega \nu\Sigma_f\left(\vec{r}, E'\right) \Psi\left(\vec{r}, \vec{\Omega'}, E', t\right) d\Omega' dE' +$$
$$+ \int_E \int_\Omega \Sigma_s\left(\vec{r}, \vec{\Omega'} \to \vec{\Omega}, E' \to E\right) \Psi\left(\vec{r}, \vec{\Omega'}, E', t\right) d\Omega' dE' + \quad (7.1)$$
$$+ S_{ext}$$

Chapter 8

8.1 Introduction

Introduction to Chapter 2 of Part Developments and Applications I. Here we go!

Chapter 9

9.1 Introduction

Introduction to Chapter 3 of Part Developments and Applications I. Here we go!

Part IV

DEVELOPMENTS AND APPLICATIONS II

Chapter

<div style="text-align: right">

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</div>

10.1 Introduction

Introduction to Chapter 1 of Part Developments and Applications II. Here we go!

Let's include Figure 10.1 as an example.

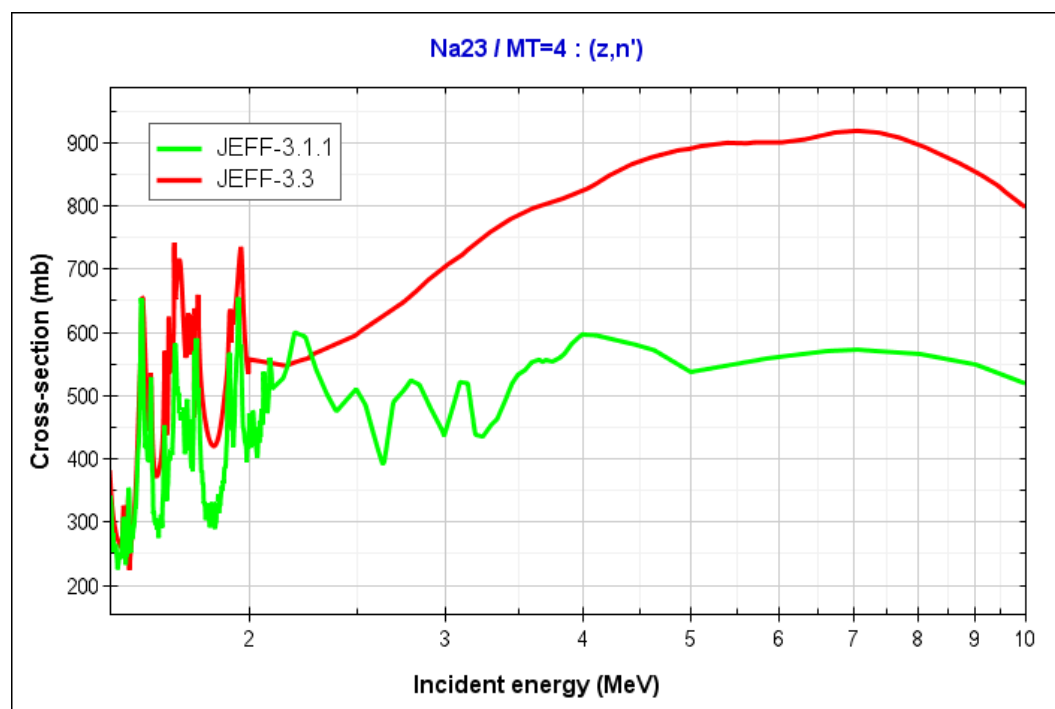**Fig. 10.1.:** Figure caption.

Chapter 11

11.1 Introduction

Introduction to Chapter 2 of Part Developments and Applications II. Here we go!

Let's include Table 11.1 as an example.

Tab. 11.1.: Table caption.

X1	X2	X3	X4	X5
Y1	XY1	XY2	XY3	XY4

Chapter | 12

12.1 Introduction

Introduction to Chapter 3 of Part Developments and Applications II. Here we go!

Part V

CONCLUSIONS AND FUTURE WORK

Conclusions

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Conclusions and main outcomes of work carried out in this Thesis.

Future work

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As a continuation of the work carried out in this Thesis, the following lines are identified for further research.

Bibliography

Croff, A. G. (1983). "ORIGEN2: A Versatile Computer Code for Calculating the Nuclide Compositions and Characteristics of Nuclear Materials". In: *Nuclear Technology* 62.3, pp. 335–352. DOI: 10.13182/NT83-1 (cit. on p. 3).

A

APPENDIX

A.1 APPENDIX I