

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

Profesor Titular de la Universidad de Granada

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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"

Evaluable 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 VOCAL

EL SECRETARIO

The research leading to this doctoral dissertation has received funding from the following programs.

Abstract

Abstract (English version).

Resumen (Spanish)

Resumen (versión en español).

Acknowledgements

Time to say thank you!

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Abbreviations

EOA Example of Abbreviation.

Part I

INTRODUCTION

Thesis background

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

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

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 II

DEVELOPMENTS AND APPLICATIONS I

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:

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

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 III

DEVELOPMENTS AND APPLICATIONS II

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.

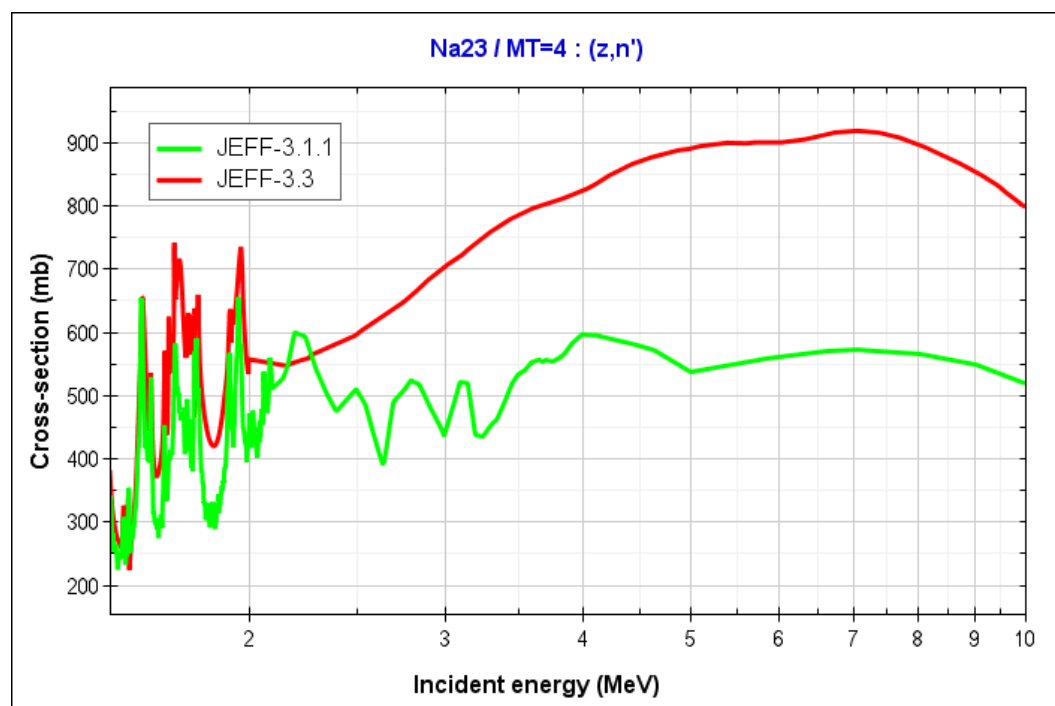


Fig. 10.1.: Figure caption.

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 IV

CONCLUSIONS AND FUTURE WORK

Conclusions

13

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

Future work

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).

APPENDIX

A

A.1 APPENDIX I

