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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
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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.

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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

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!

Contents

List of Figures

List of Tables

Abbreviations

EOA Example of Abbreviation.

Part I

INTRODUCTION

1 State of the art

Background of your work.

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

2 Objectives of this Thesis

Main goals and contributions arising from this Thesis.

3 Layout of this Thesis

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 fundamentals that applies to this work...

Part II

FUNDAMENTALS

4

Aerosol and climate

5

Atmosphere structure and properties

6 Radiation-atmosphere interaction

7

Atmospheric aerosol characterization

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13 Lidar data preprocessing

13.1 Dead time correction

13.2 Trigger delay correction

13.3 Background subtraction

13.4 Overlap correction

13.5 Analog and photocounting signals gluing

13.6 Near- and far-field signals gluing

Let’s include Figure 13.1 as an example.

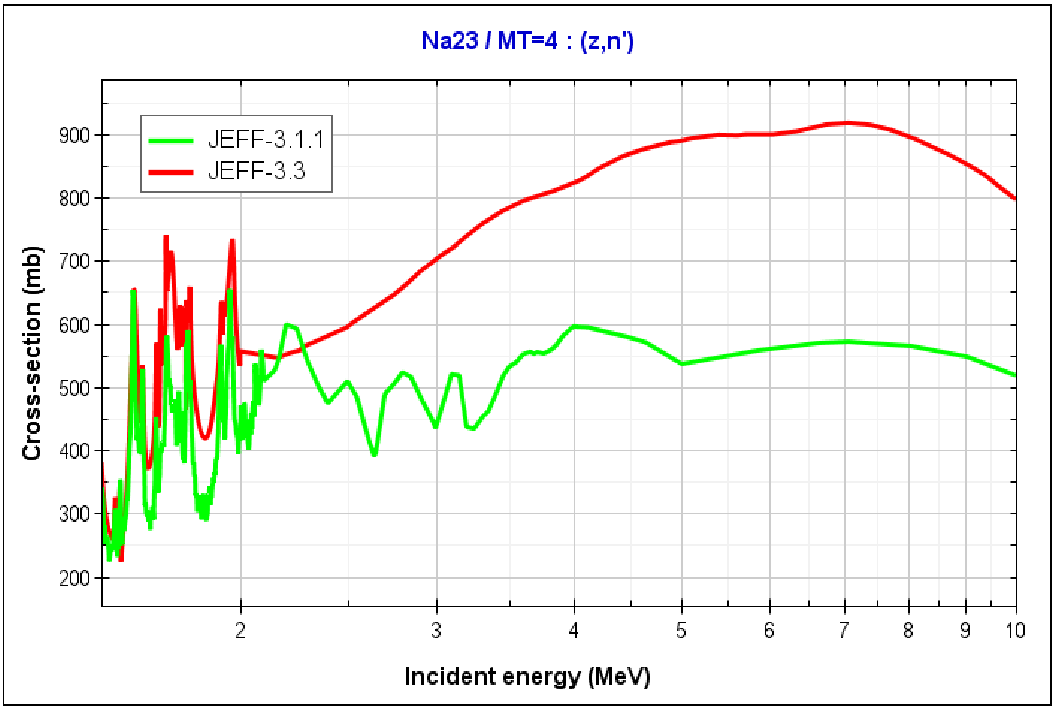

Fig. 13.1.: Figure caption.

14 Conventional lidar data processing

Let’s include Table 15.1 as an example.

Tab. 14.1.: Table caption.

X1	X2	X3	X4	X5
Y1	XY1	XY2	XY3	XY4

15 Fluorescence data processing

15.1 Bandwidth filter fluorescence channel measurements

15.2 Fluorescence spectra measurements

Let's include Table 15.1 as an example.

Tab. 15.1.: Table caption.

X1	X2	X3	X4	X5
Y1	XY1	XY2	XY3	XY4

Part V

CONCLUSIONS AND FUTURE WORK

16 Conclusions

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

17 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