**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

2026

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

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 Objectives of this Thesis

Main goals and contributions arising from this Thesis.

# 2 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

CONCLUSIONS AND FUTURE WORK

# 3 Conclusions

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

# 4 Future work

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

# APPENDIX A

## A.1 APPENDIX I