

Microphysics Of Clouds And Precipitation

[DOWNLOAD HERE](#)

1;TABLE OF CONTENTS;6 2;PREFACE TO THE FIRST EDITION;15 3;PREFACE TO THE SECOND EDITION;17 4;CHAPTER 1 HISTORICAL REVIEW;22 5;CHAPTER 2 MICROSTRUCTURE OF ATMOSPHERIC CLOUDS ANDPRECIPITATION;31 5.1;2.1 Microstructure of Clouds and Precipitation Consisting ofWater Drops;31 5.1.1;2.1.1 THE RELATIVE HUMIDITY INSIDE CLOUDS AND FOGS;31 5.1.2;2.1.2 MICROSTRUCTURE OF FOGS;33 5.1.3;2.1.3 MICROSTRUCTURE OF CLOUDS;36 5.1.4;2.1.4 FORMULATIONS FOR THE DROP SIZE DISTRIBUTIONS IN CLOUDSAND FOGS;45 5.1.5;2.1.5 THE MEAN DISTANCE BETWEEN DROPS IN CLOUDS AND FOGS;48 5.1.6;2.1.6 MICROSTRUCTURE OF RAIN;51 5.2;2.2 Microstructure of Clouds and Precipitation Consisting ofIce Particles;59 5.2.1;2.2.1 SHAPE, DIMENSIONS, BULK DENSITY AND NUMBER CONCENTRATIONOF SNOW CRYSTALS;61 5.2.2;2.2.2 SHAPE, DIMENSIONS, BULK DENSITY, AND NUMBER CONCENTRATIONOF SNOWFLAKES, GRAUPEL, AND HAILSTONES;79 6;CHAPTER 3 THE STRUCTURE OF WATER SUBSTANCE;95 6.1;3.1 Structure of an Isolated Water Molecule;95 6.2;3.2 Structure of Water Vapor;98 6.3;3.3 Structure of Ice;99 6.4;3.4 Structure of Water and Aqueous Solutions;107 6.4.1;3.4.1 STRUCTURE OF WATER;107 6.4.2;3.4.2 STRUCTURE OF AQUEOUS SOLUTIONS;119 7;CHAPTER 4 EQUILIBRIUM BETWEEN WATER VAPOR, WATER, AQUEOUSSOLUTIONS, AND ICE IN BULK;121 7.1;4.1 Useful Thermodynamic Relations;121 7.2;4.2 General Conditions for Equilibrium;123 7.3;4.3 Phase Rule for Bulk Phases;125 7.4;4.4 Ideal versus Real Behavior of Dry Air, Water Vapor, andMoist Air;126 7.5;4.5 Chemical Potential of Water Vapor in Humid Air, and ofWater in Aqueous Solutions;128 7.6;4.6 Equilibrium Between an Aqueous Salt Solution andWater Vapor;130 7.7;4.7 Latent Heat of Phase Change and its TemperatureVariation;136 7.8;4.8 Clausius-Clapeyron Equation;137 7.9;4.9 Equilibrium Between an Aqueous Salt Solution and Ice;144 8;CHAPTER 5 SURFACE PROPERTIES OF WATER SUBSTANCE;147 8.1;5.1 Surface Tension;147 8.2;5.2 Equilibrium Conditions;148 8.3;5.3 Phase Rule for Systems with Curved Interfaces;149 8.4;5.4 Water-Vapor Interface;150 8.4.1;5.4.1 EFFECT OF TEMPERATURE ON THE SURFACE TENSION OF WATER;151 8.4.2;5.4.2 SURFACE TENSION OF AQUEOUS SALT SOLUTIONS;151 8.5;5.5 Angle of

[DOWNLOAD HERE](#)

Similar manuals: