

CONTENTS

1.	Introduction and Basic Principles	1
2.	Meteorological Observations and Measurements at Sea	6
	2.1 Basic Problems	6
	2.2 Operational Questions	8
	2.3 Review of Instruments and Methods	22
3.	Composition and Properties of the Marine Atmosphere	42
	3.1 General Considerations	42
	3.2 Atmospheric Nuclei above the Oceans	43
	3.3 Chemistry of the Marine Atmosphere	64
	3.4 Electricity and Radioactivity in the Marine Atmosphere	84
4.	Flow Characteristics of the Marine Atmosphere	1012
	4.1 General Character of the Sea Surface as Lower Boundary of an Air Flow	101
	4.2 Geometry of the Sea Surface	102
	4.3 The Wind Field in the First Few Meters over the Sea Surface	121
	4.4 The Wind Structure in the Maritime Friction Layer	171
	4.5 Time Variations of Air Flow above the Sea Surface	219
5.	Thermodynamic Processes in the Marine Atmosphere	227
	5.1 The Temperature of the Sea Surface	227
	5.2 The Temperature and Moisture Field in the First Few Meters above the Sea Surface	247
	5.3 Thermodynamic Processes of Medium Scale in the Marine Atmosphere	289
	5.4 Time Variations of Air Temperature and Humidity	367
6.	Concluding Remarks	386
	References	389
	Textbooks for Mariners Published Since 1950	414
	AUTHOR INDEX	415
	SUBJECT INDEX	421