

Syllabus GEOF 345

Satellite Remote Sensing in Meteorology and Oceanography

Meteorology part

Satellite Meteorology - An introduction *Stanley Q Kidder / Thomas H. Vonder Haar*

Chapter 2 Orbits and navigation	
2.4 Meteorological satellite orbits	
2.4.1 & 2.4.2	26 - 29
Chapter 3 Figs. 3.11 - 3.14	66 - 68
Chapter 4 Meteorological Satellite Instrumentation	
4.1. - 4.1.3	87 – 105
4.3.2 – 4.3.5	138 – 141
Chapter 6 Temperature and Trace Gases	
6.1 – 6.6 -6.4	183 – 225
Chapter 7 Winds	
7.1 – 7.3.2	233 - 250
Chapter 8 Clouds and aerosols	
8.1 – 8.2.6	259 - 289
8.5	298 - 301
Chapter 9 Precipitation	
9.3	345 - 350

Atmospheric Remote Sensing by Microwave Radiometry

Michael A. Janssen

Chapter 1 An introduction to the passive microwave remote sensing of the atmospheres	
1.1 – 1.3	1 – 13
Chapter 3 Microwave radiative transfer in hydrometeors	
3.1 – 3.2	91 – 95
3.2.2	97 - 98
Chapter 6 Remote sensing of the atmosphere from satellites using microwave radiometry	
6.1 – 6.5 + Appendix 6A	259 – 319

Oceanography Part

Measuring the Oceans from Space

The principles and methods of satellite oceanography

Ian S. Robinson

Chapter 2 Sensors for observing the ocean

Chapter 3 Space and time scales in satellite oceanography

Chapter 6 Ocean color remote sensing

Chapter 7 Infrared measurements of the sea surface temperature

Chapter 8 Microwave radiometry

Chapter 9*
Chapter 10*
Chapter 11*



Radars, sea surface roughness, sea level, currents

*** Selected sections from these chapters**