

SAR Marine Applications

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Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG

FAKULTÄT

FÜR MATHEMATIK, INFORMATIK
UND NATURWISSENSCHAFTEN

Any Alternative to Satellite Oceanography?



- 1957: first satellite launched (Sputnik)
- 1978: first satellite dedicated to oceanographic applications (Seasat)
- today: satellite remote sensing inherent part of oceanography

SAR Marine Applications

Friday, 9 Sep, Morning:

1 - History & Basics

- Introduction
- Radar/SAR History
- Basics
- Scatterometer

2 - Wind and Waves

- SAR Wind Fields
- Storms, Tropical Cyclones
- Ocean Surface Waves
- Oceanic Internal Waves
- Marine Surface Films
- Rain

Friday, 9 Sep, Afternoon:

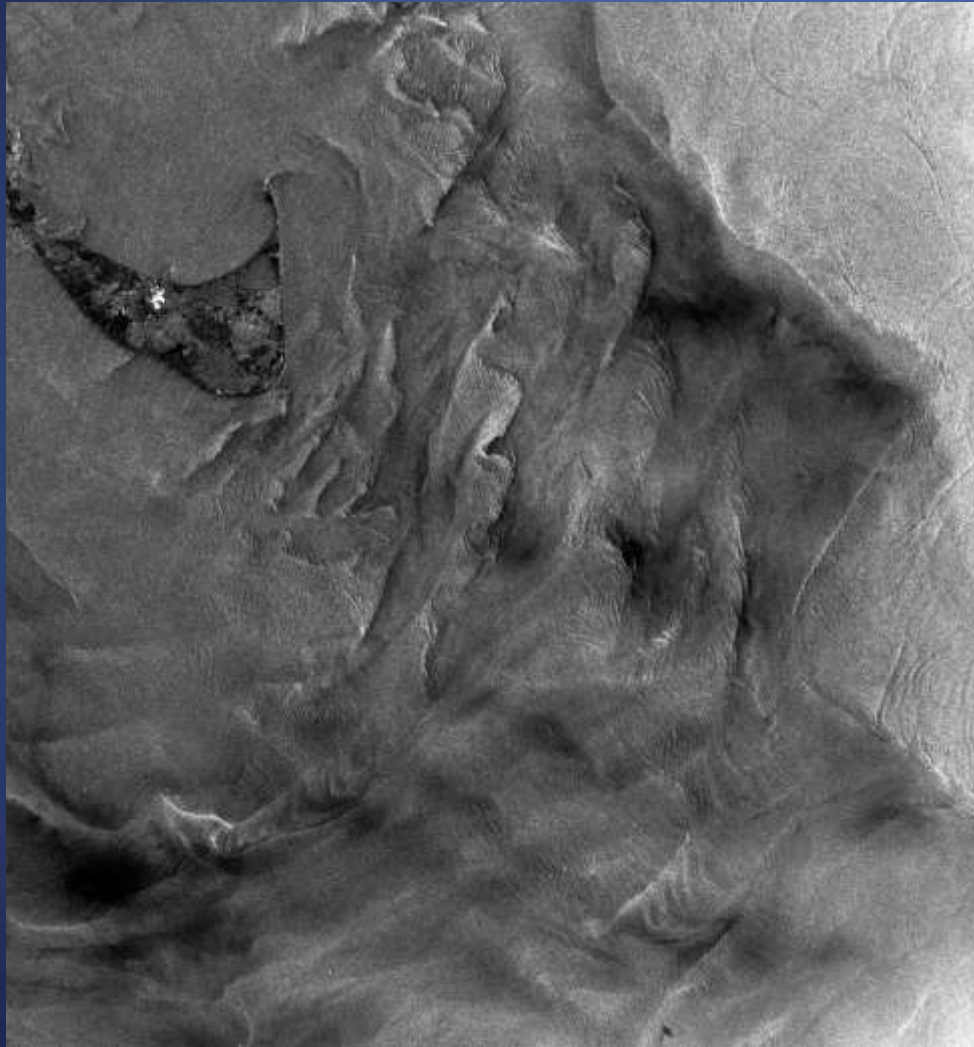
3 - Currents and Objects

- Surface Currents
- Sea Bottom Topography
- Ship Detection
- Oil Pollution Monitoring
- Sea Ice

4 - Practicals

- SNAP Toolbox:
- Georeferencing, Mosaics
- Image Interpretation:
- Wind Fields, Oil Pollution,
- Sea Ice, Objects

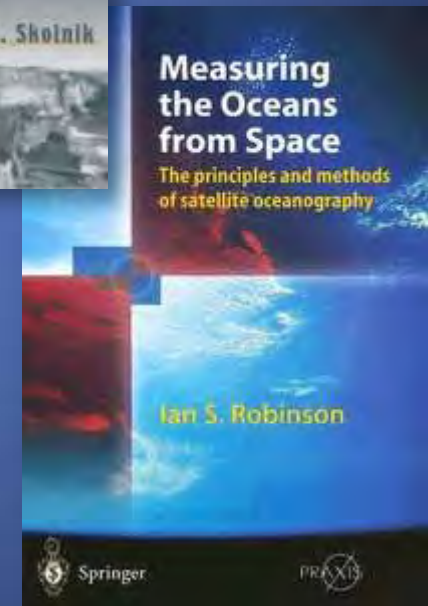
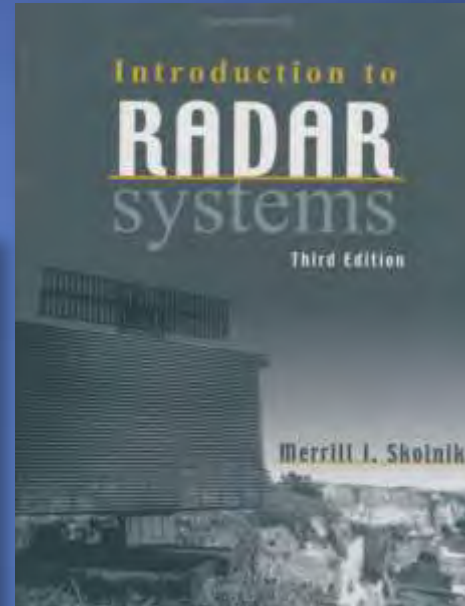
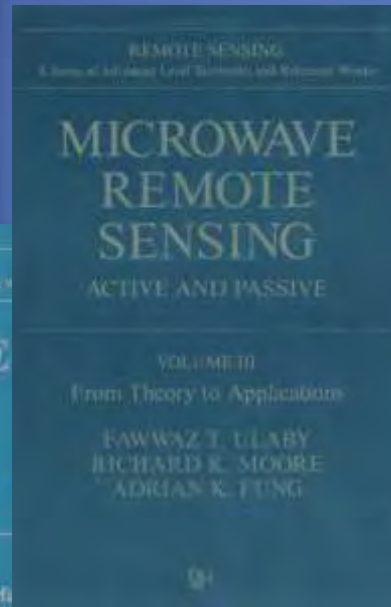
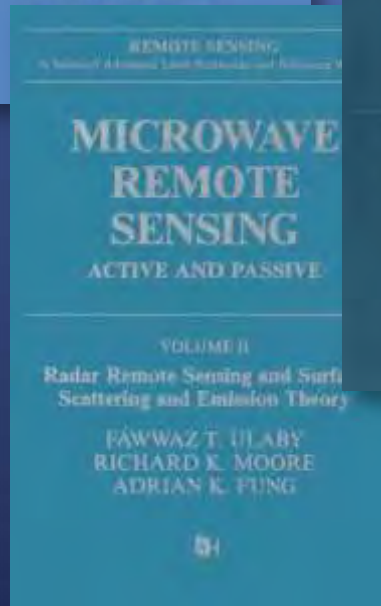
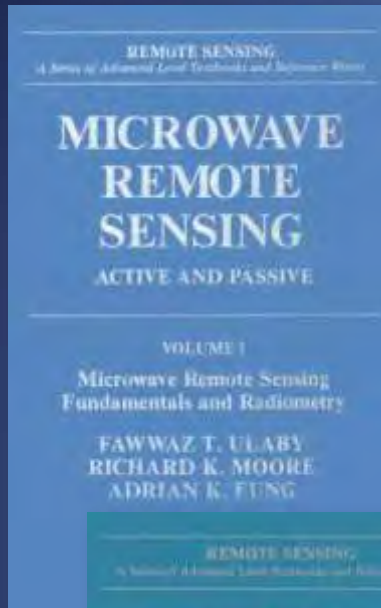
Seasat SAR Image



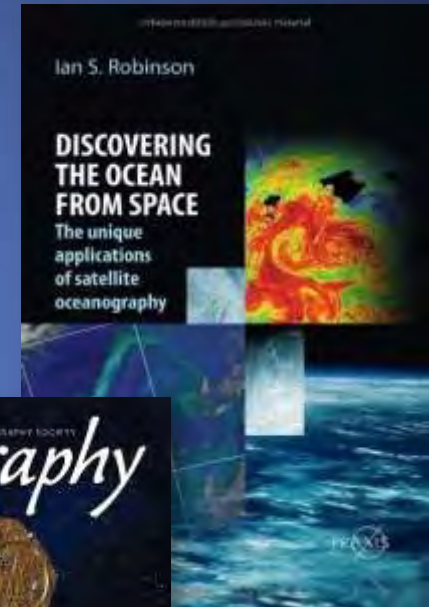
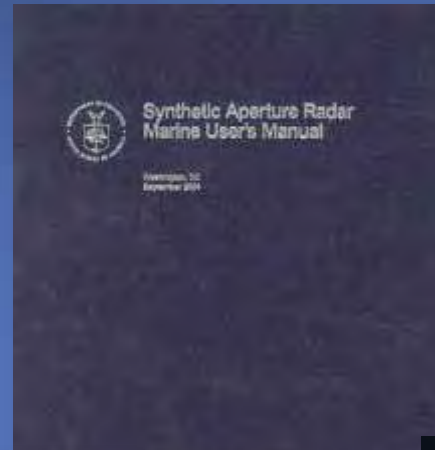
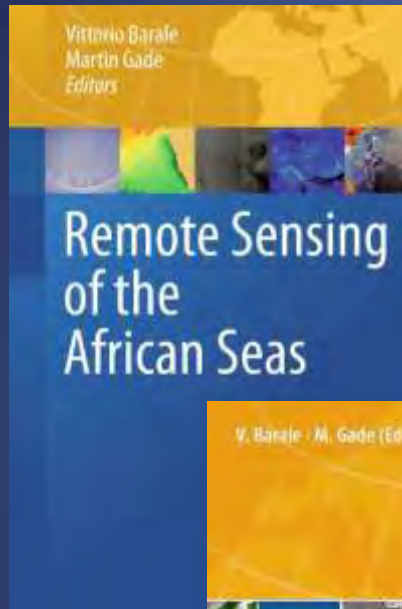
What is shown here?

Seasat SAR Image (L-HH, 80 km × 75 km)
Nantucket Island
(27 August 1978, 12:34 UTC)

Books: Basics & Theory



Books: Examples and Applications



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Environmental Satellite, Data, and Information Service
Office of Research and Applications





to be continued...