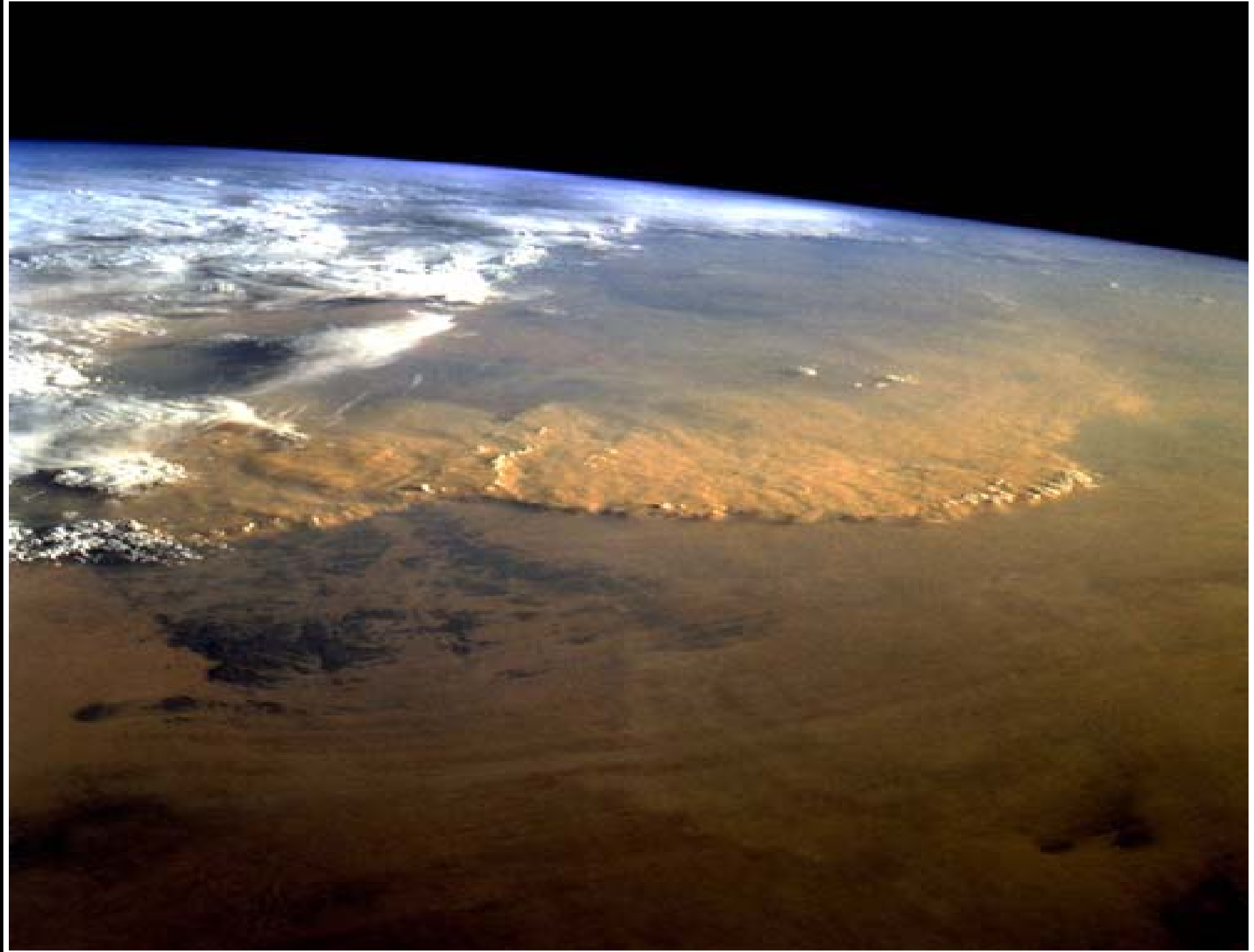
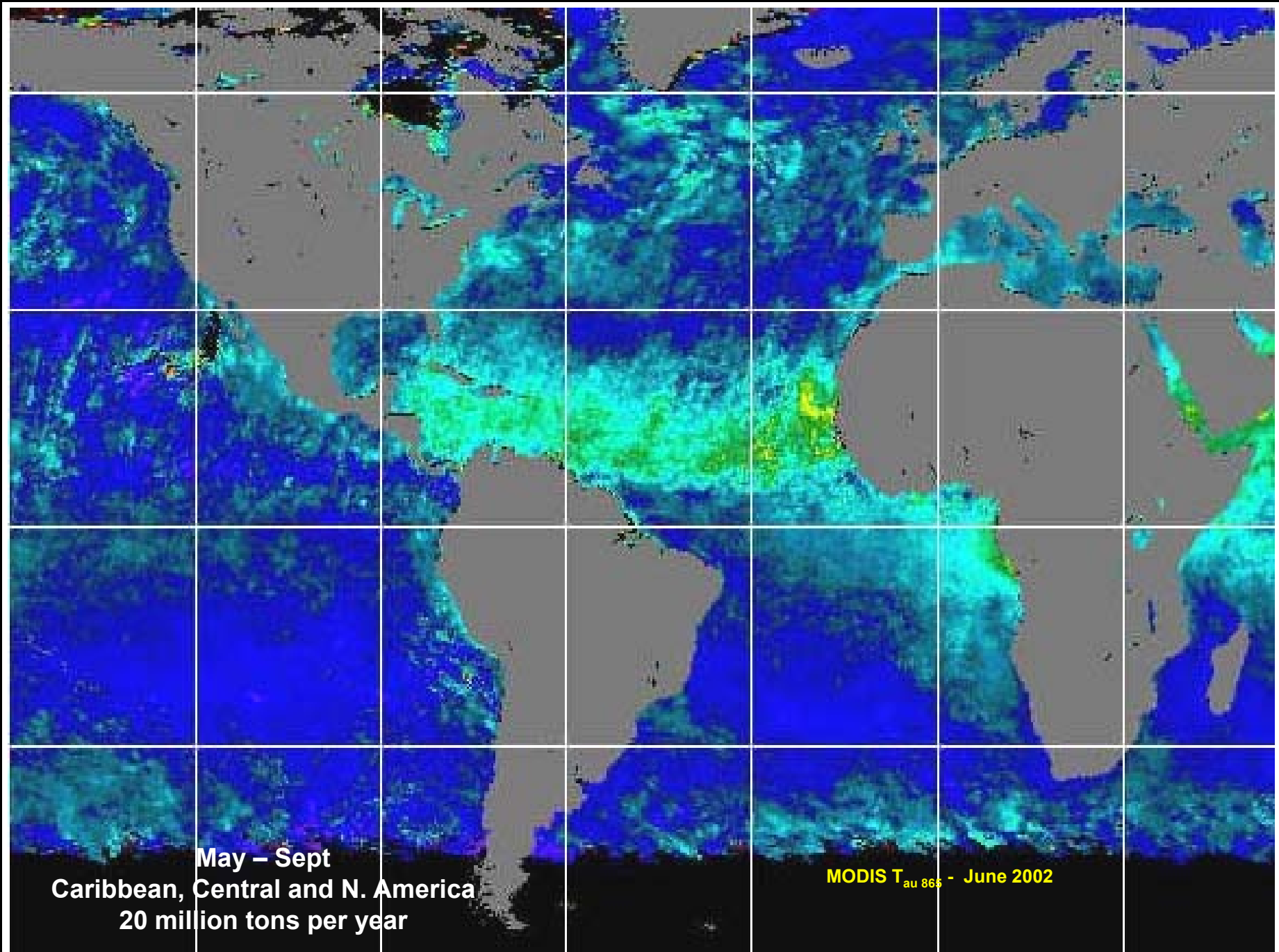
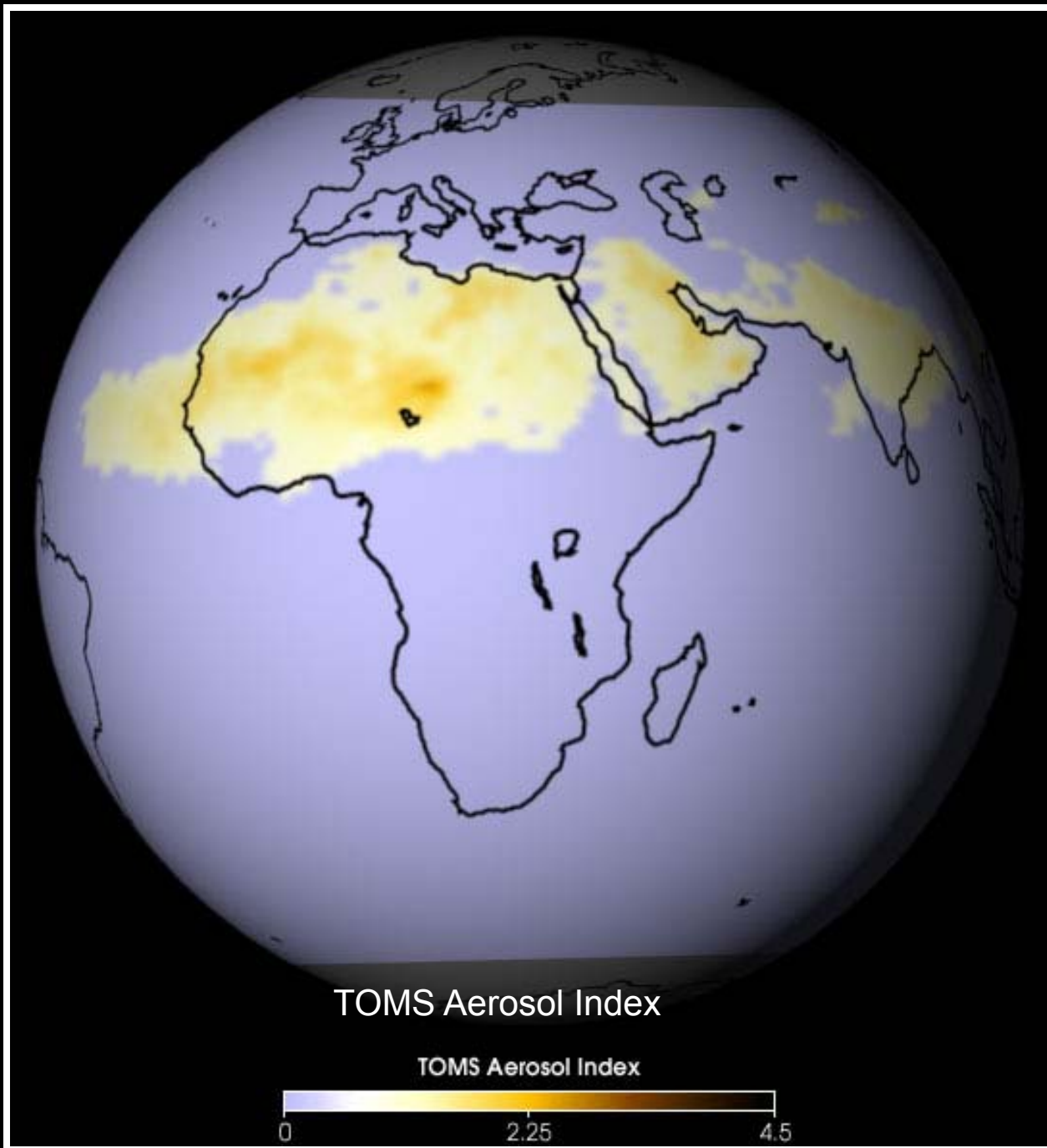
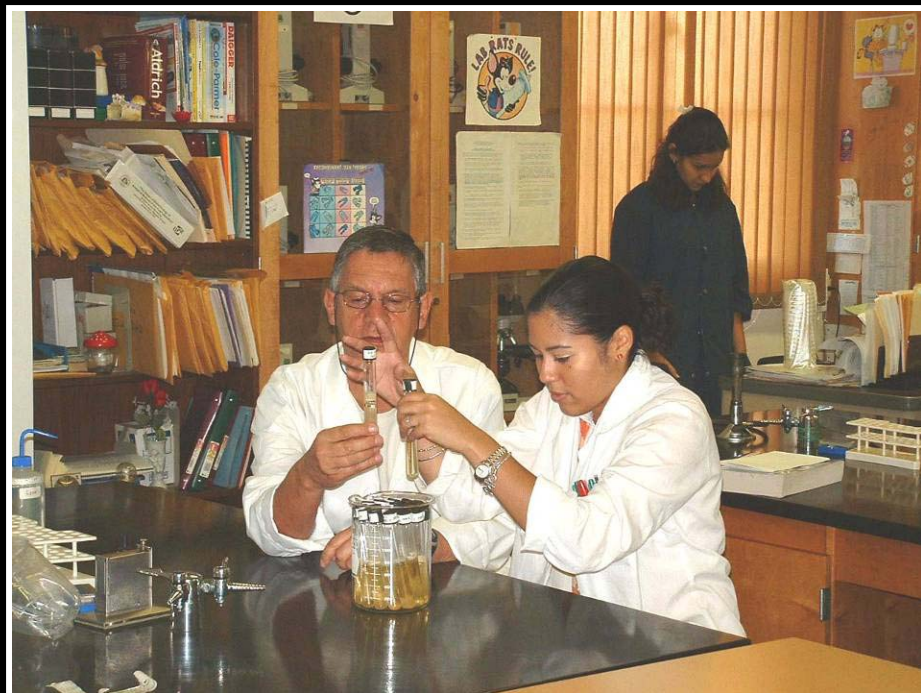








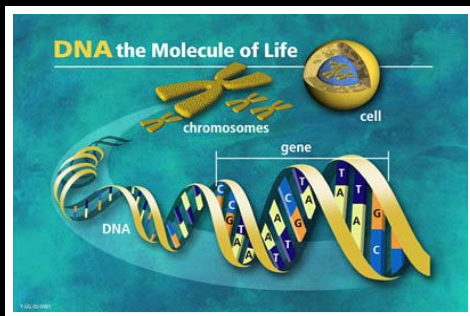
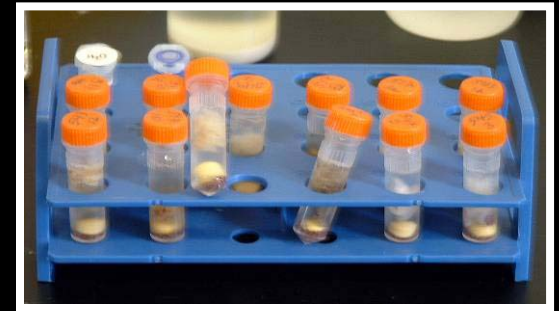
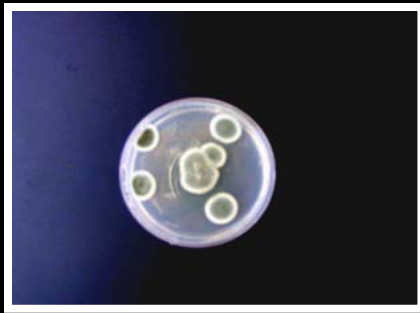




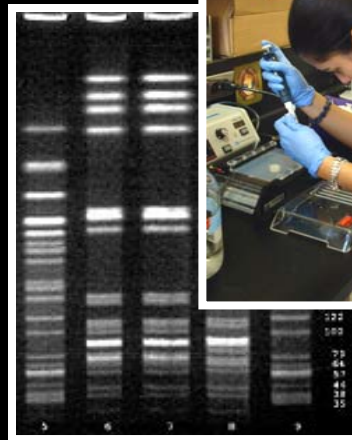
Molecular Identification of Fungal Species in Sahara Dust Samples

Growth of culture in
Czapek's broth

Micelial mats for DNA extraction



PCR (ITS region)
Sequencing
Gene Bank Search



DNA extraction & electrophoresis



Lysis of cells and tissues

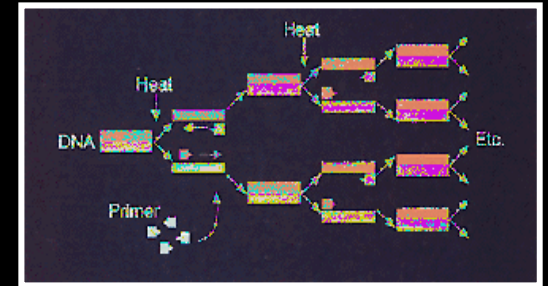
Molecular Identification of Bacterial Species in Sahara Dust Samples



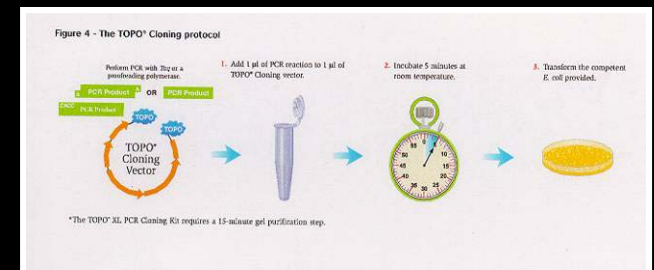
Dust sample



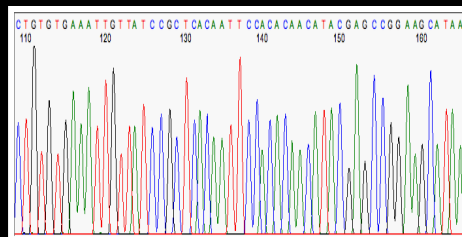
DNA extraction



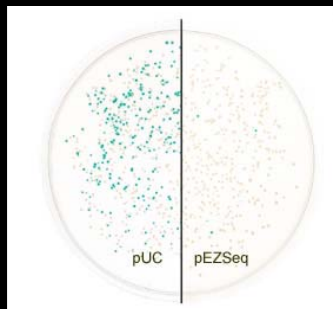
PCR



Ligation



Sequencing



Blue and white screening
for transformed colonies

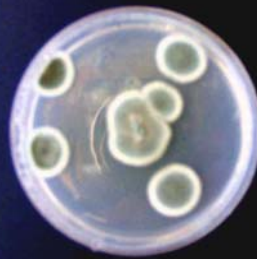


**NCBI BLAST
Search**

**Collaboration: Dr. Jaime Matta
Ponce School of Medicine**

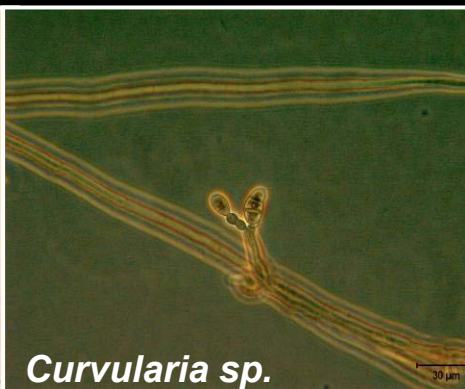
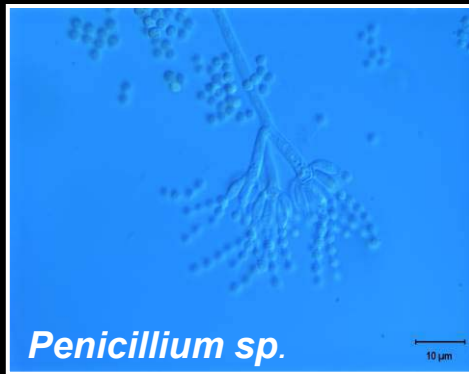
Sahara Dust

Fungi Identification - Isolated Colonies



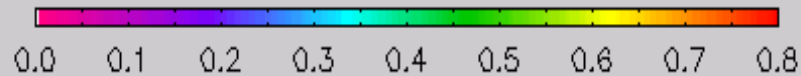
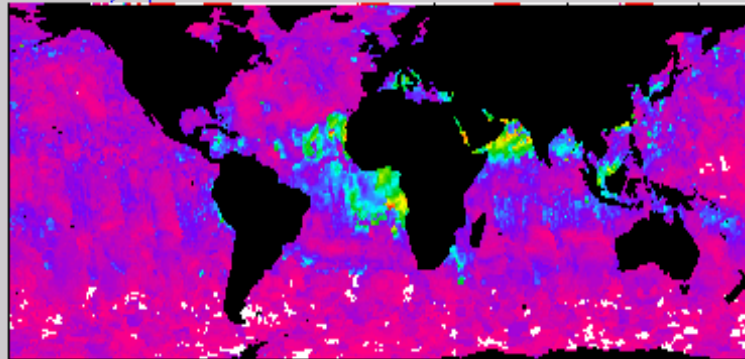
Sahara Dust

Fungi Identification – Reproductive Structures



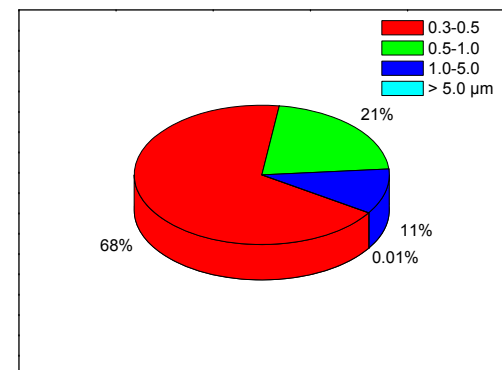
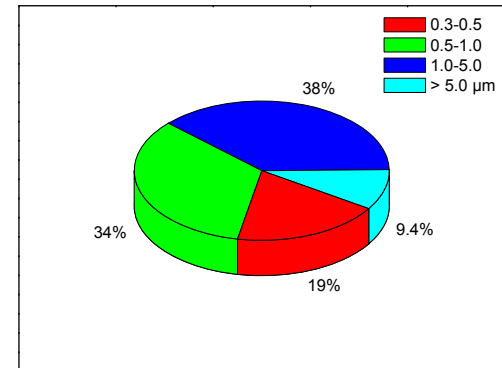
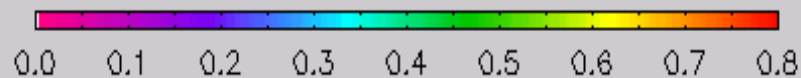
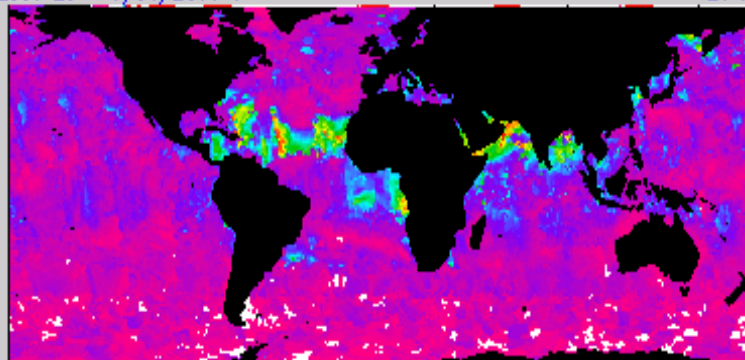
NOAA/NESDIS EDGE IMAGE DISPLAY

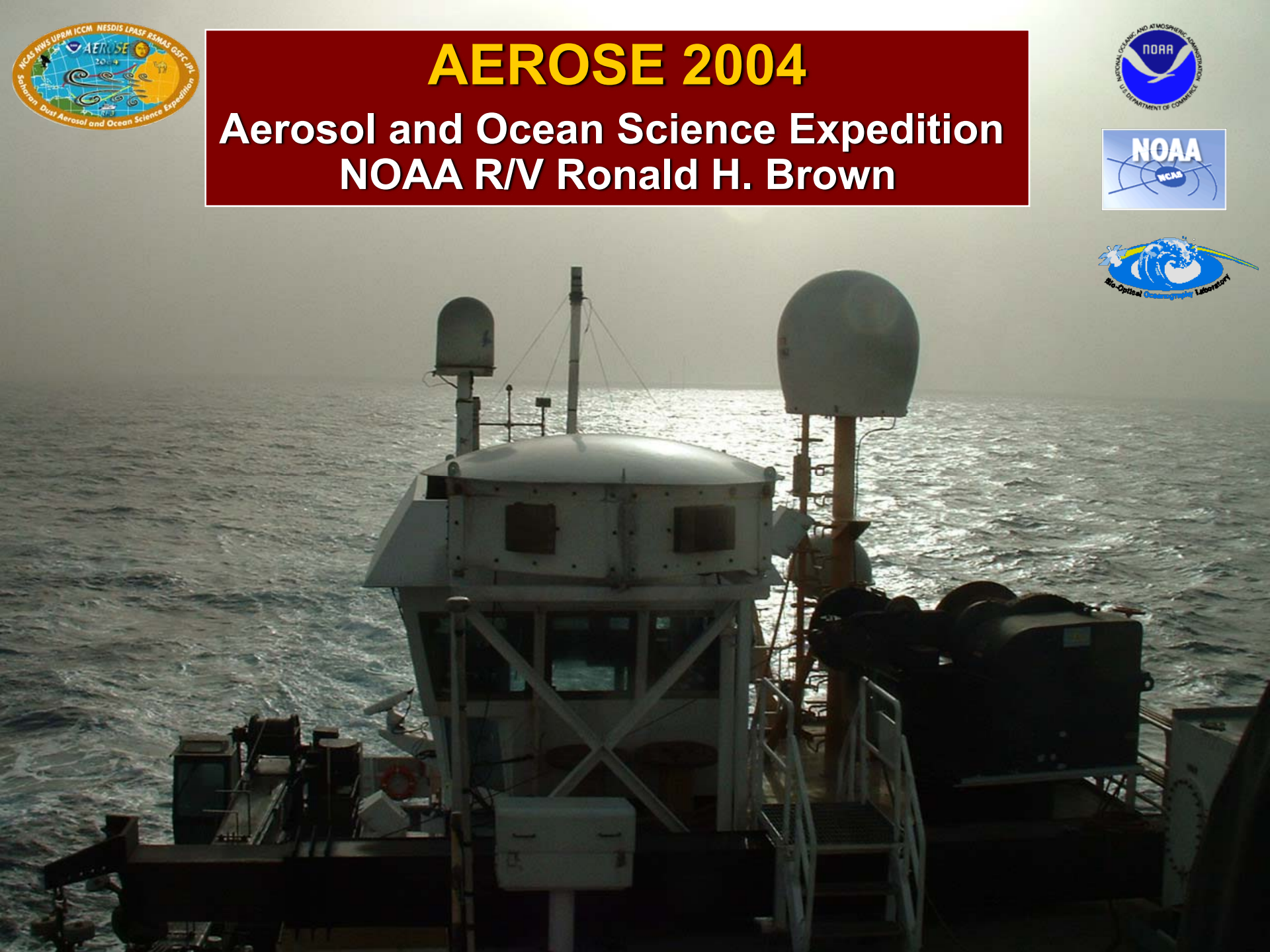
OPT. THK. -70.0000 TO 70.0000 LAT
 100KM GLOBAL ANALYSIS N18 DAILY ANALYSIS -180.000 TO 179.000 LON
 6/19/2006 1 - 6/20/2006 0 23 HOURS



NOAA/NESDIS EDGE IMAGE DISPLAY

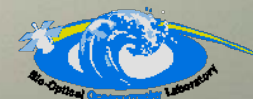
OPT. THK. -70.0000 TO 70.0000 LAT
 100KM GLOBAL ANALYSIS N18 DAILY ANALYSIS -180.000 TO 179.000 LON
 7/28/2006 23 - 7/30/2006 1 26 HOURS





AEROSE 2004

Aerosol and Ocean Science Expedition NOAA R/V Ronald H. Brown



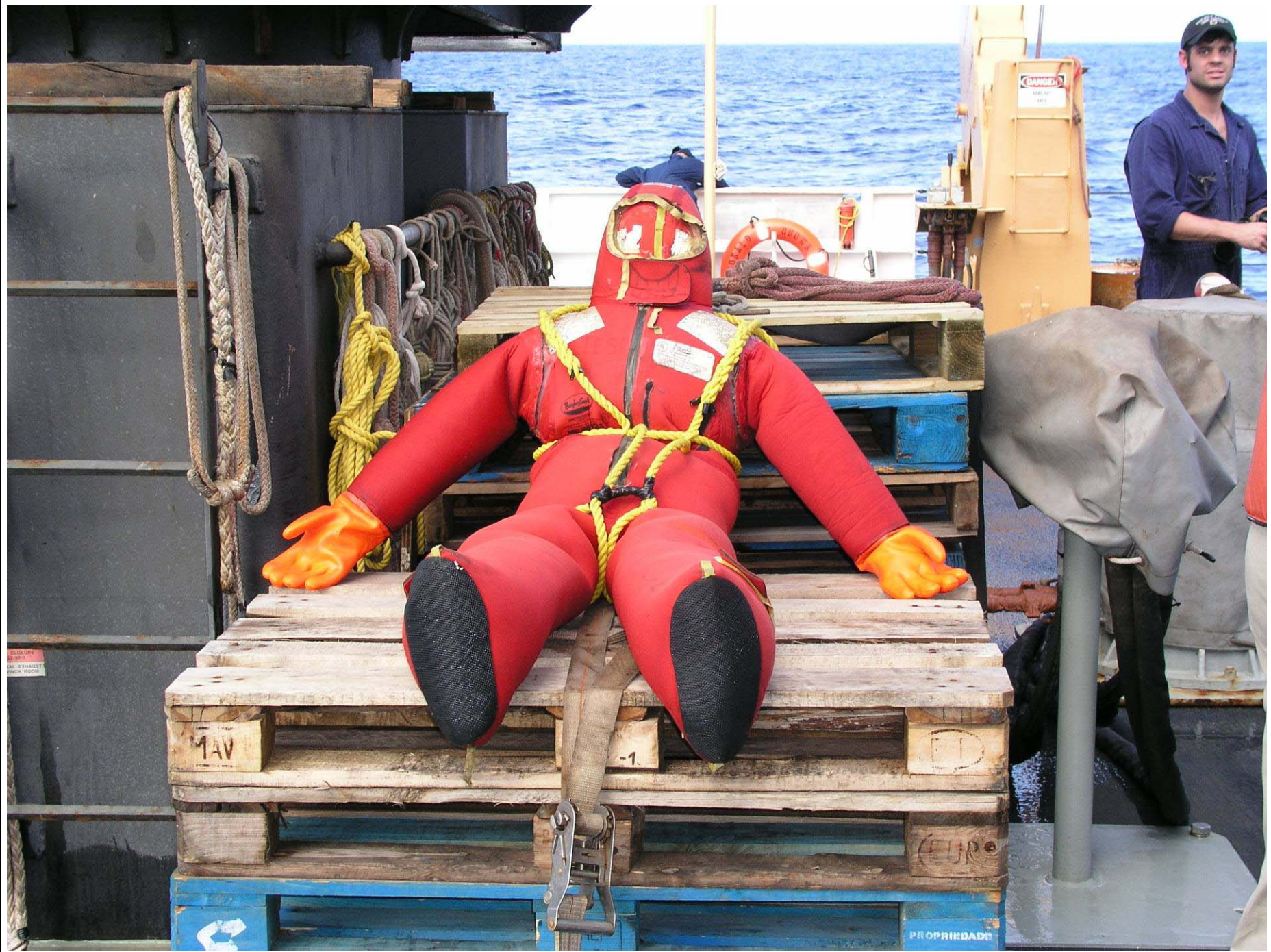
NOAA Ship R/V Ronald H. Brown



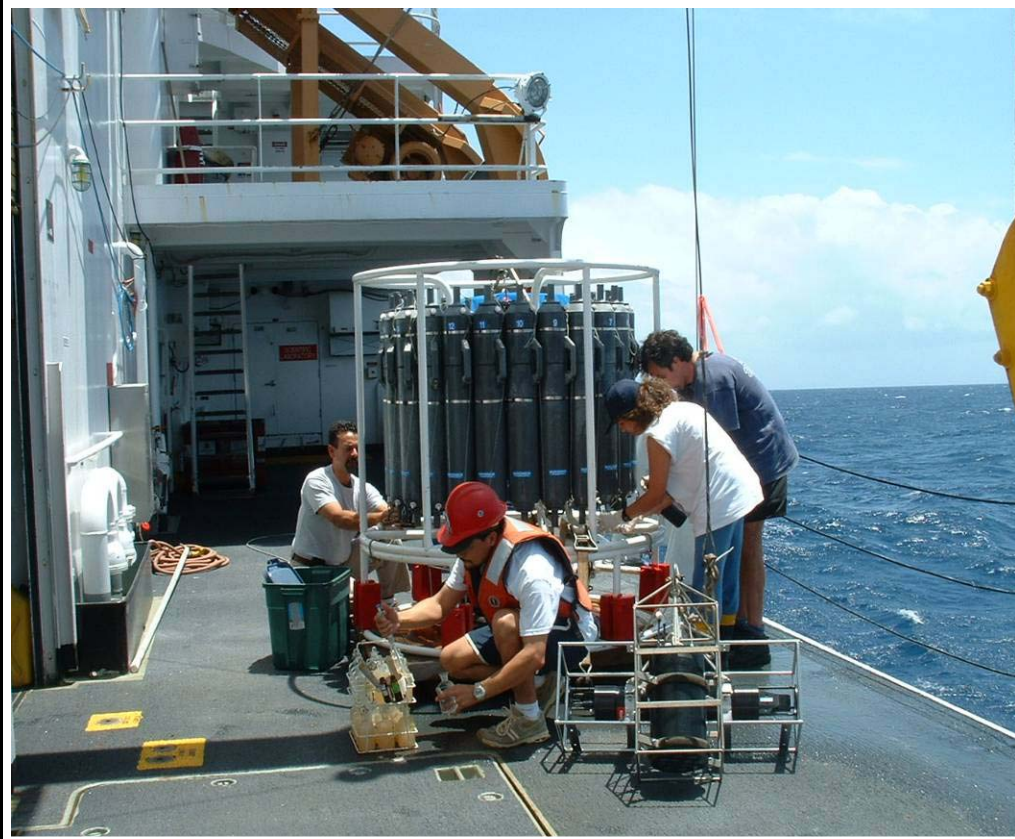








Oceanographic Measurements













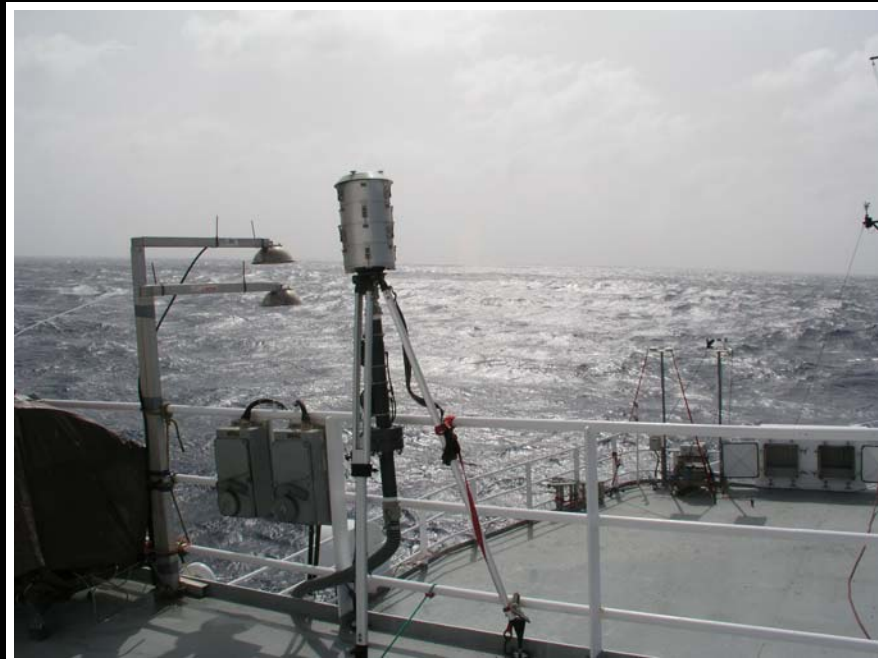
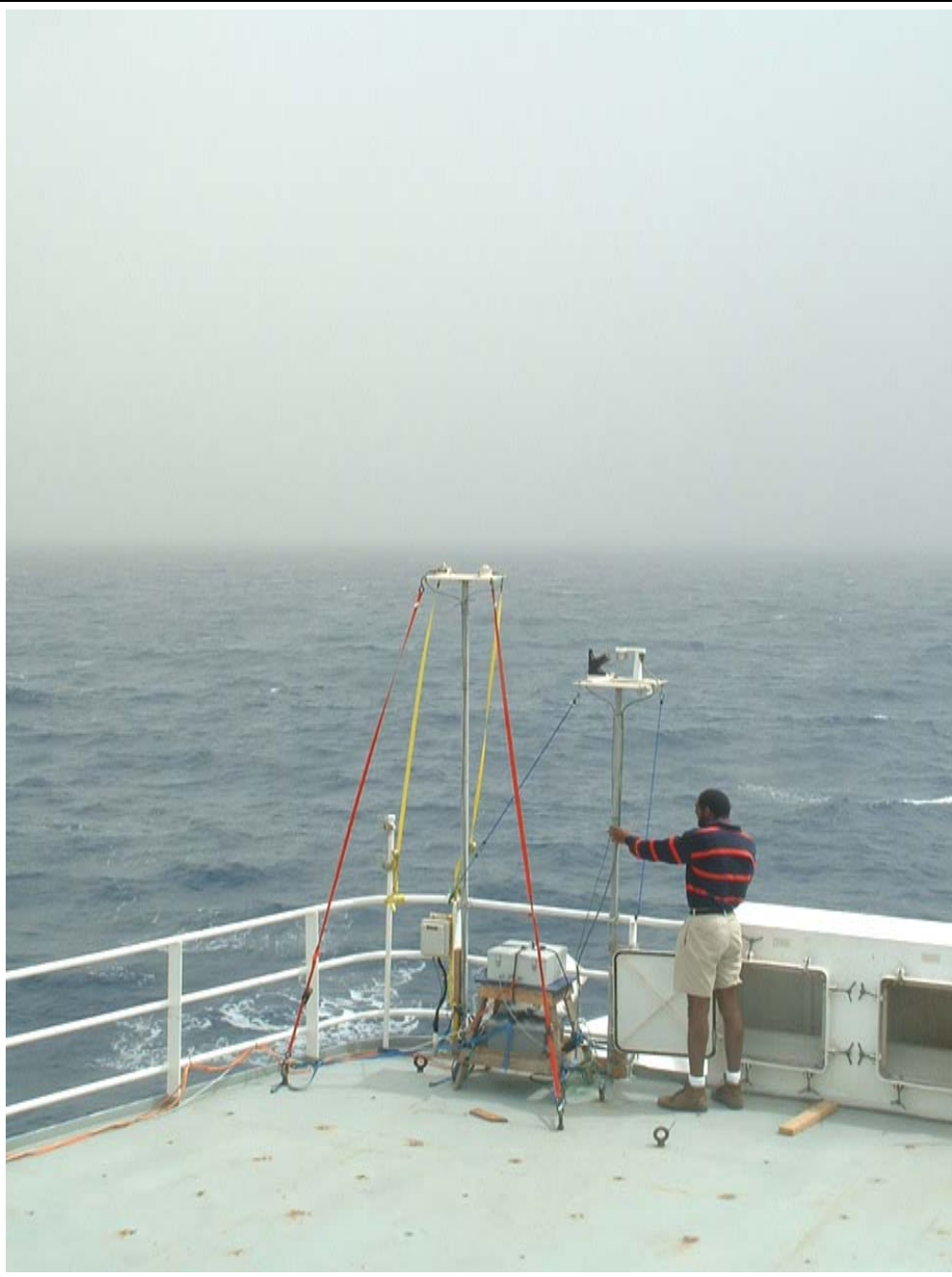


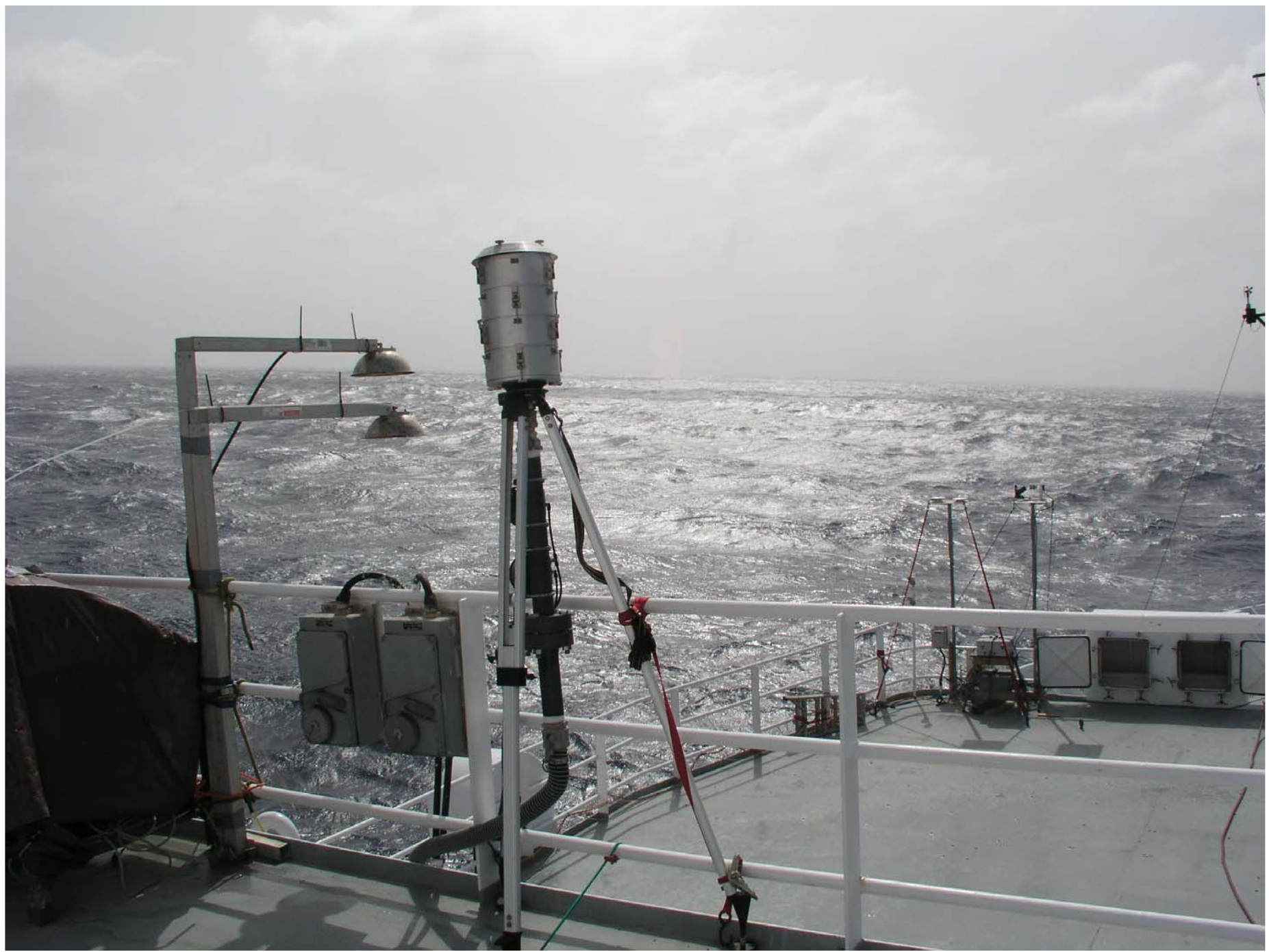


12 12:39PM



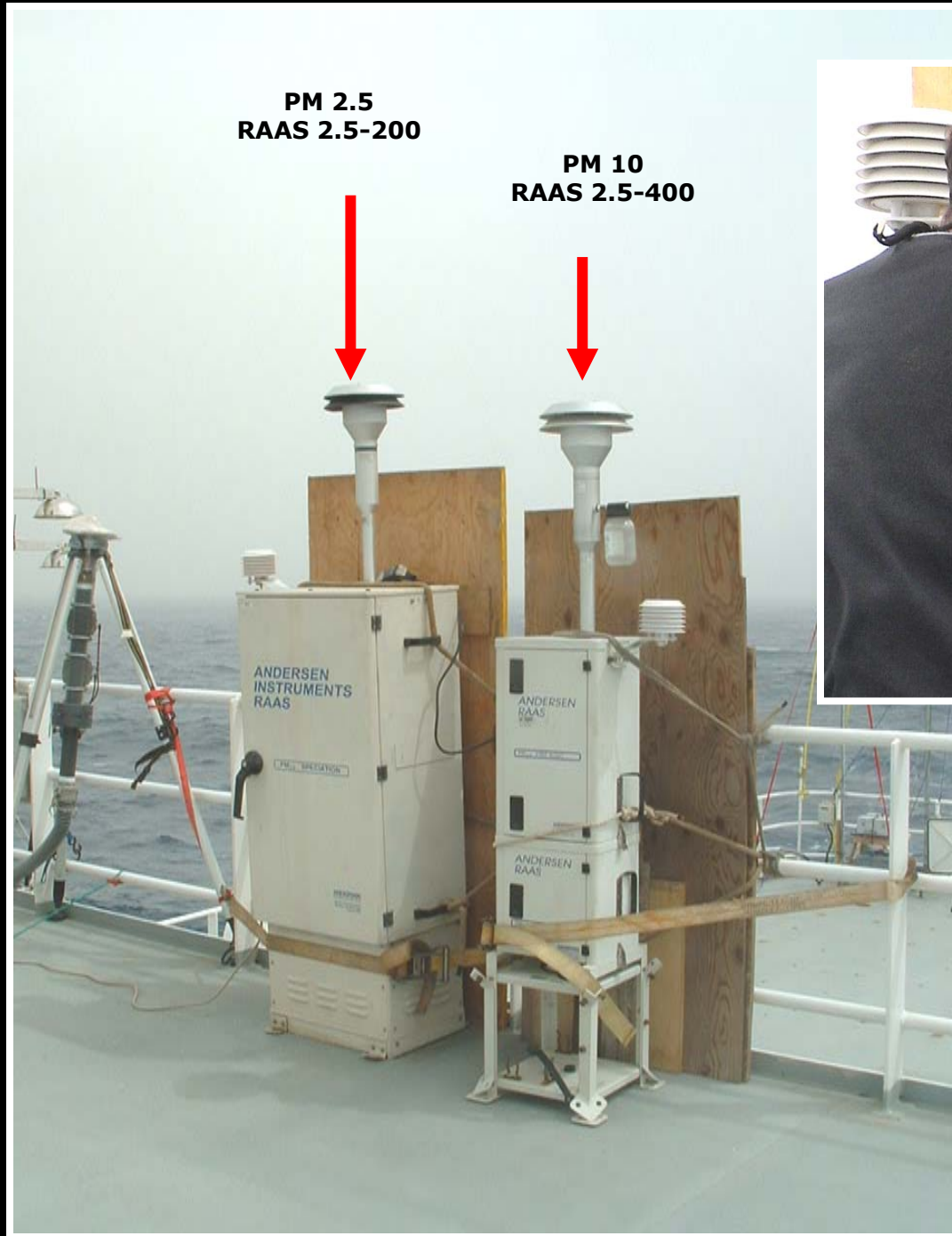






**PM 2.5
RAAS 2.5-200**

**PM 10
RAAS 2.5-400**











5 5:49PM

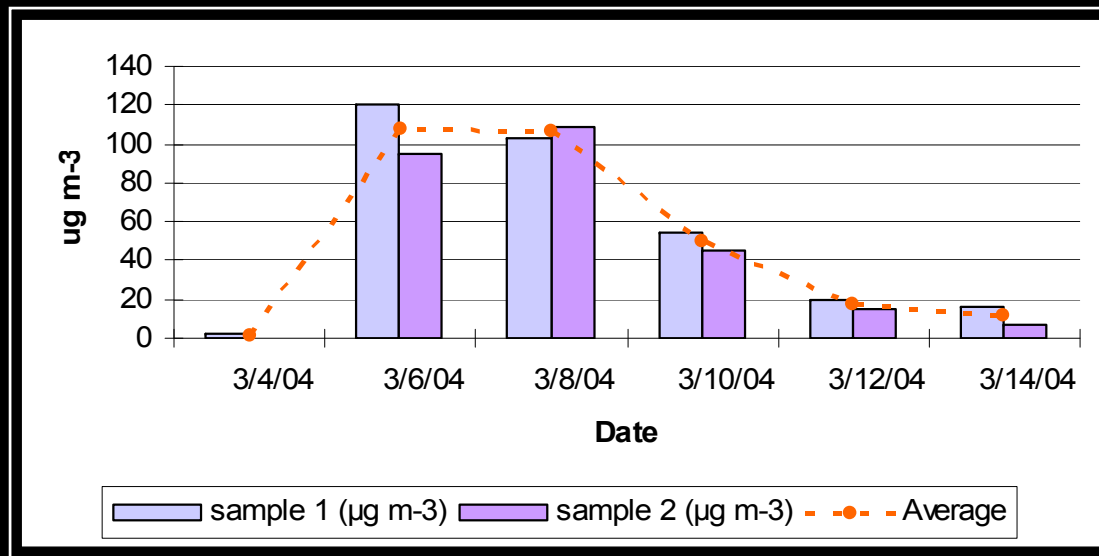
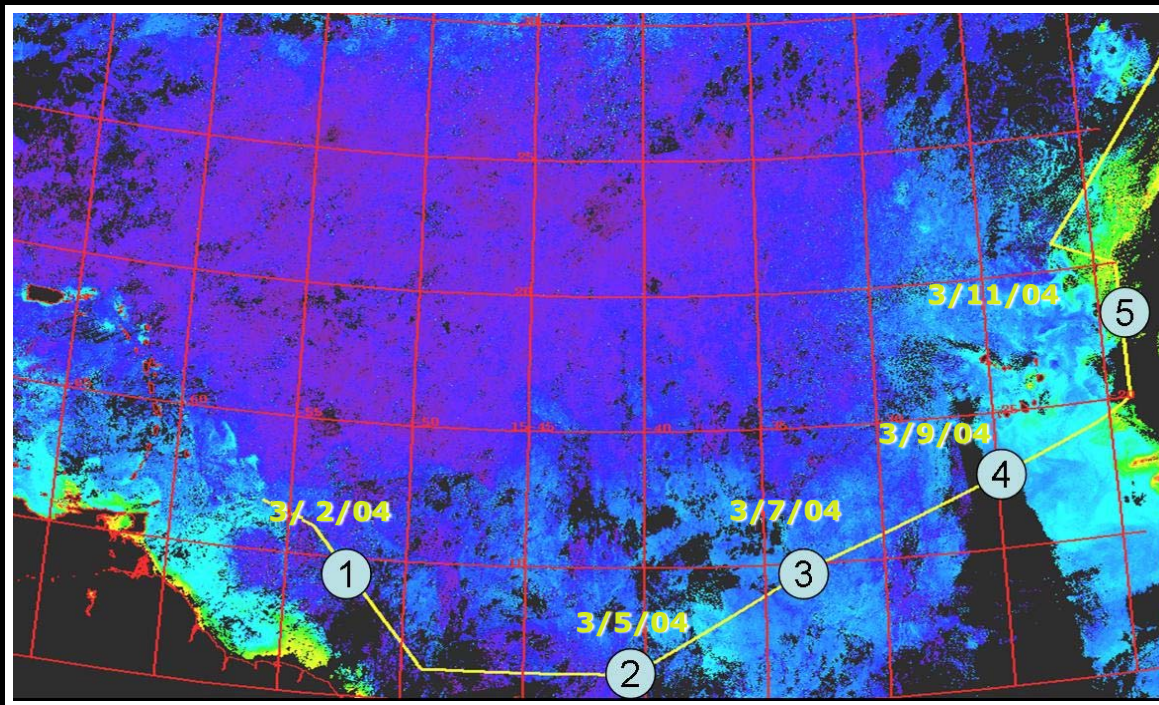


BEFORE DUST EVENT

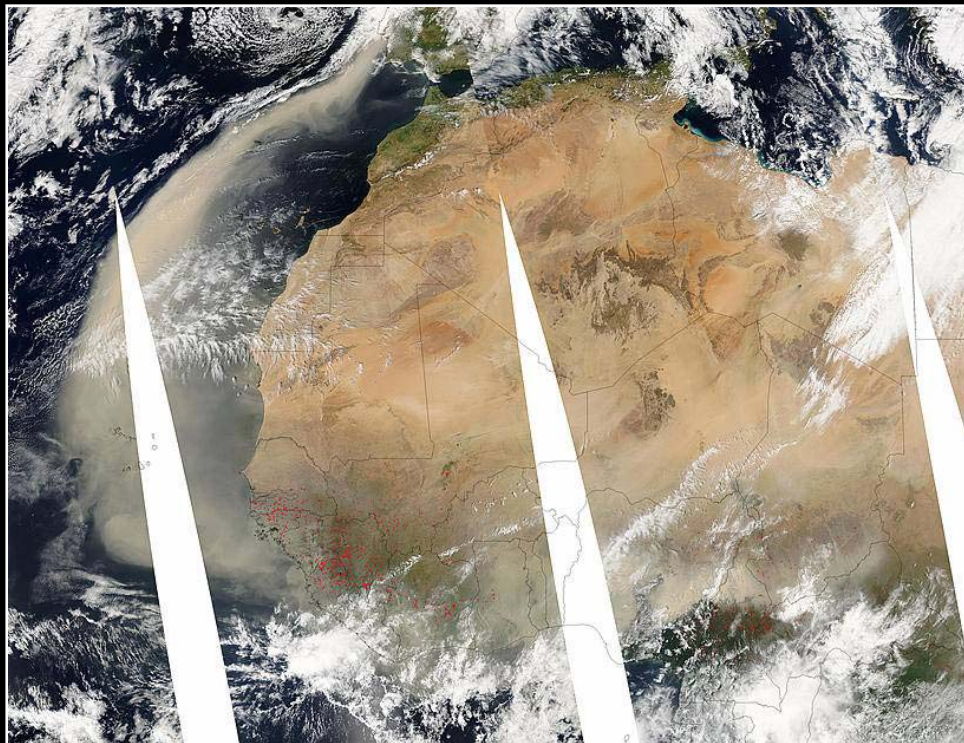


DURING DUST EVENT





Biomass Burning and Dust



03/05 at 14 :05 UTC
Dust storm across Central and West Africa
MODIS Aqua - Pixel size: 8km



03/05 at 12 :40 UTC
Dust over Cape Verde Islands
MODIS Terra - Pixel size: 1km



March 2, 2004



March 6, 2004





Dust storm over the Atlantic Ocean as seen from the International Space Station on March 8, 2004



AEROSE Participating Institutions

- Howard University (HU)
- Univ of Puerto Rico at Mayagüez (UPRM)
- Canary Institute of Marine Sciences (ICCM)
- Spanish Institute of Oceanography (IEO)
- Laboratory of Atmospheric Physics in Dakar (LPA)
- Univ of Miami Rosenstiel School of Marine and Atmospheric Science (UM/RSMAS)
- Univ of Washington Applied Physics Laboratory (UW/APL)
- Univ of Arizona
- Univ of Maryland Baltimore County
- NASA Goddard Space Flight Center (GSFC)
- International Space Station
- Kutztown University of Pennsylvania (KUP)
- NOAA/NWS and NESDIS

