

# The Pacific Regional Oceanographic Atlas

**Rusty Brainard**

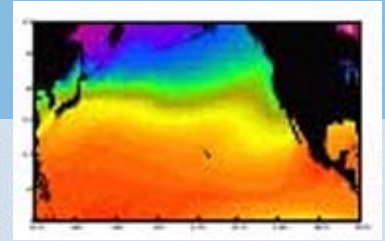
**John Sibert**

**Russell Moffitt**

**William Skirving**



# Overview



Project Goal

Participants

Distribution Format

- Electronic Atlas
- Printed version

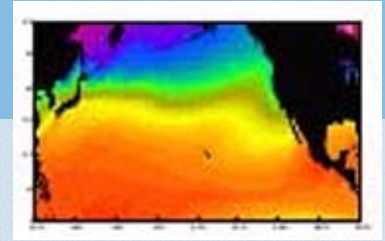
Geographic Coverage

Web Interface

Time Line (milestones)



# The Atlas Project



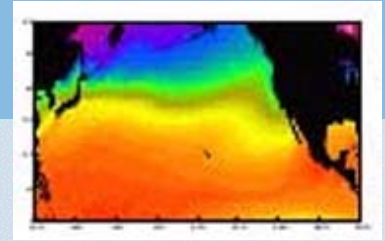
## GOAL:

To provide a single point of access to oceanographic data for use by scientists and managers of fisheries and coral reefs

## Participants:

- JIMAR
  - PFRP
- NOAA
  - NMFS
  - NESDIS
  - NODC

# Distribution Format



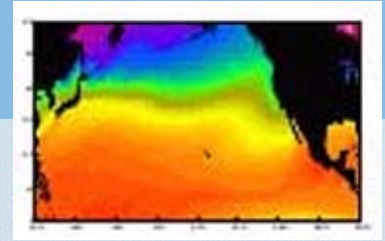
## Electronic atlas

- static  $\Rightarrow$  *initially*
- near-real-time  $\Rightarrow$  *after printed version*

## Printed version

- static  $\Rightarrow$  *periodically updated*

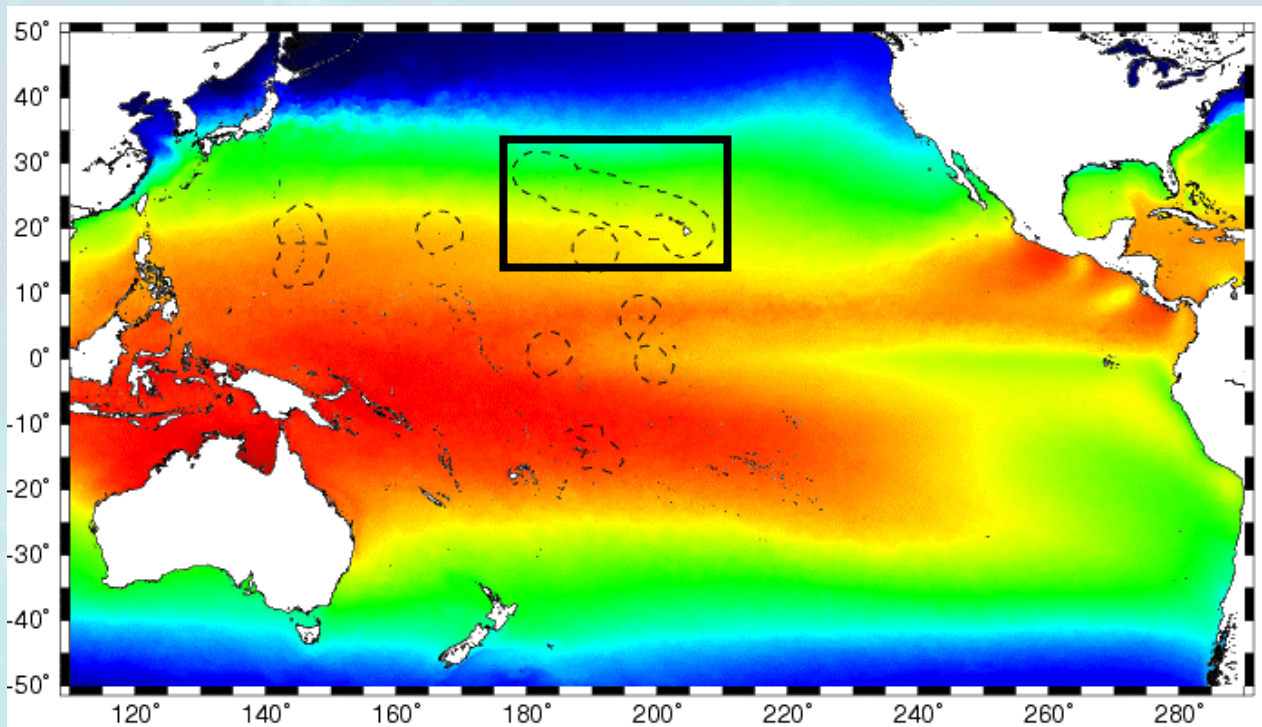
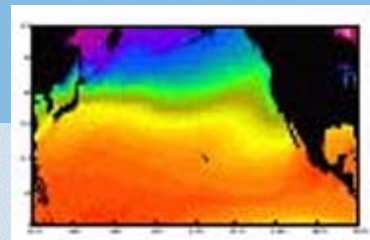
# Atlas functionality



## Electronic Atlas:

- Interactive visualization of data
- Plotting and overlay different data sets
- Archive and access to unique data
- Links and instructions to non-unique data

## Geographic Coverage

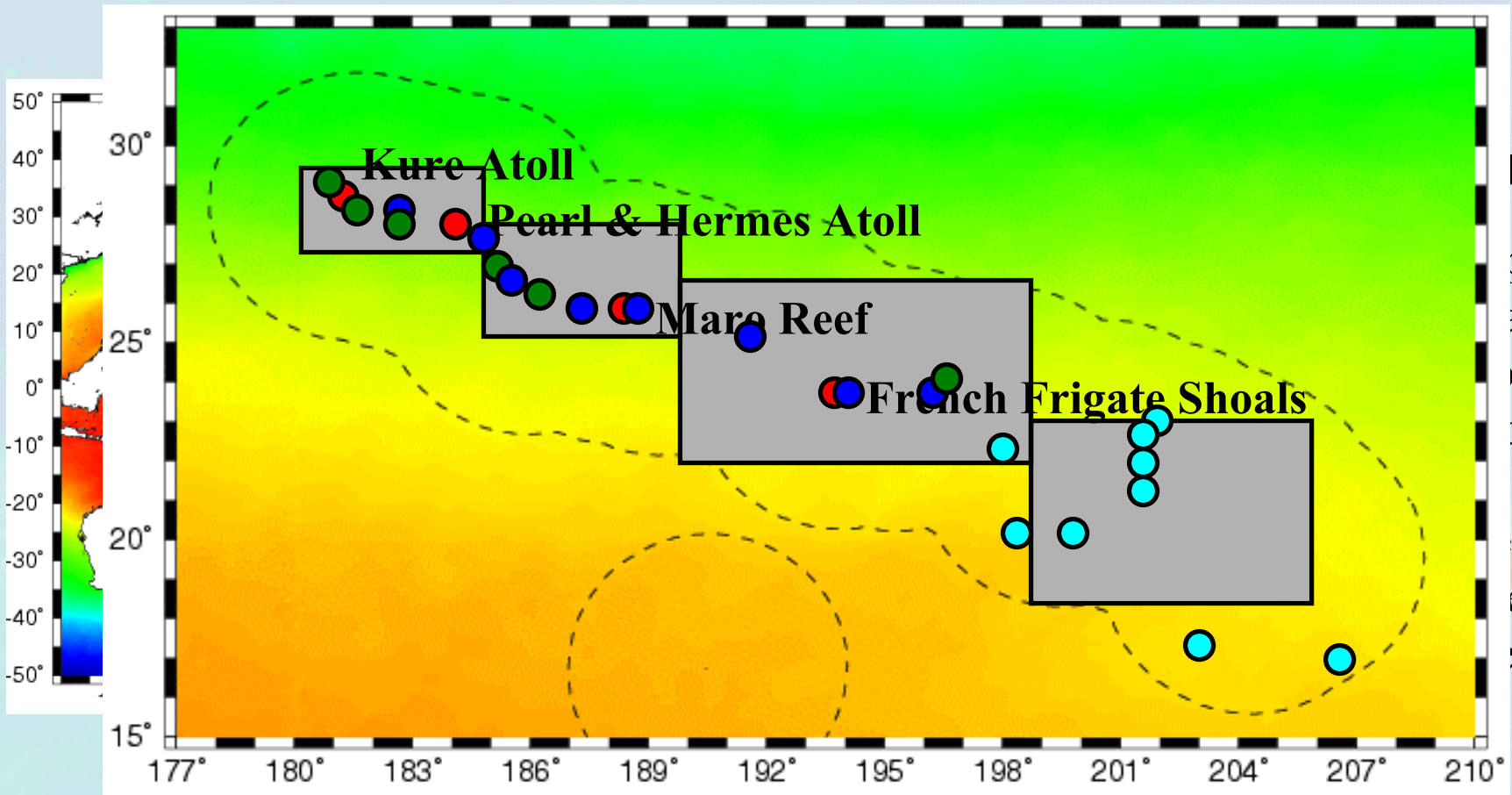
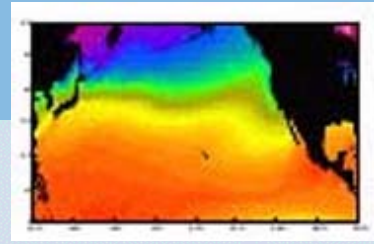


### Sub regions

- Hawaiian Archipelago
- American Samoa
- Marianas Archipelago
- US Pacific Remote Island Areas
- Freely Associated States of Micronesia
- The Great Barrier Reef

**Pacific Basin**

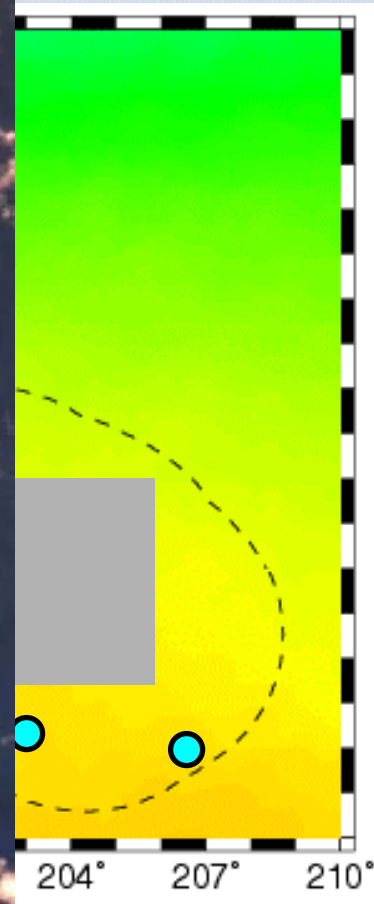
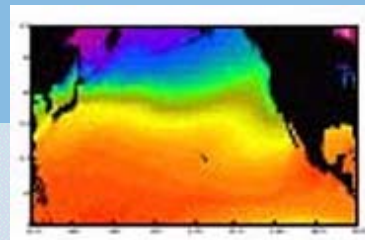
# Geographic Coverage



Pacific Basin

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## Geographic Coverage



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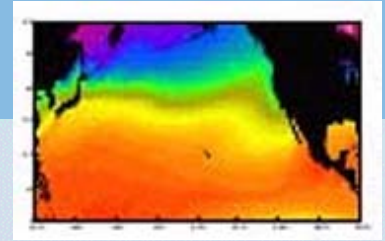
analysis

lly

• 1km eventually



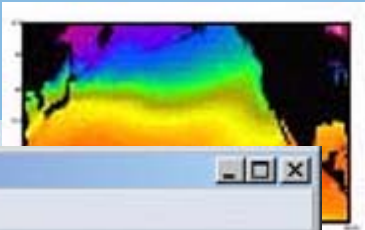
# Web Interface



What will the Web Atlas look like?



## Web Interface



Oceanographic Atlas of the Pacific - Netscape

File Edit View Go Bookmarks Tools Window Help

Oceanographic Atlas of the Pacific

OCEANOGRAPHIC ATLAS OF THE PACIFIC

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REGION: Pacific Basin | Hawaiian Islands

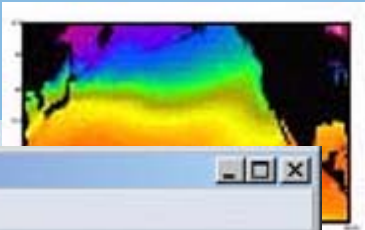
Basemaps	
<input checked="" type="checkbox"/> Temperature	
<input type="checkbox"/> SST Climatology Pathfinder 9km Annual	
<input checked="" type="checkbox"/> SST Climatology Pathfinder 9km Winter	
<input type="checkbox"/> Wind	
<input type="checkbox"/> Surface Wind Speed QuikSCAT January 2003	
<input type="checkbox"/> Chlorophyll	
<input type="checkbox"/> Sea Surface Height	
<input type="checkbox"/> Salinity	
<input type="checkbox"/> Oxygen	
Overlays	
<input type="checkbox"/> Temperature	
<input type="checkbox"/> Surface Wind Speed QuikSCAT January 2003	
<input type="checkbox"/> Wind	
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<input type="checkbox"/> Sea Surface Height	
<input type="checkbox"/> Salinity	
<input type="checkbox"/> Oxygen	

50° 40° 30° 20° 10° 0° -10° -20° -30° -40° -50°

120° 140° 160° 180° 200° 220° 240° 260° 280°



## Web Interface



**Oceanographic Atlas of the Pacific - Netscape**

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REGION: Pacific Basin | Hawaiian Islands

**Basemaps**

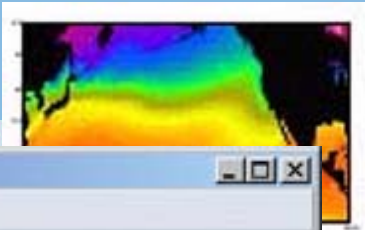
- Temperature
- SST Climatology  
Pathfinder 9km  
Annual
- SST Climatology  
Pathfinder 9km  
Winter
- Wind
- Surface Wind Speed  
QuikSCAT  
January 2003
- Chlorophyll
- Sea Surface Height
- Salinity
- Oxygen

**Overlays**

- Temperature
- Surface Wind Speed  
QuikSCAT  
January 2003
- Wind
- Chlorophyll
- Sea Surface Height
- Salinity
- Oxygen



## Web Interface



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REGION: Pacific Basin | Hawaiian Islands

**Basemaps**

- Temperature
  - SST Climatology Pathfinder 9km Annual
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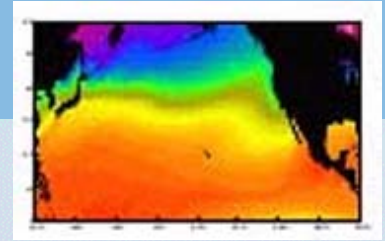
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midway\_ts.gif @ 100% [Index]

SST Time Series at Midway Atoll

Year	SST (C)
2000	21.5
2001	27.5
2002	21.5

## Scope of Atlas



### Variables under consideration:

Note: each variable will have multiple products, i.e. climatologies, trends, anomalies, etc.

Sea surface temperature

Sub-surface temperature

Thermocline depths

Air temperature

Barometric pressure

Sea surface height

Wind speed and direction

Wind stress

Chlorophyll

Turbidity

Currents

Tides

Surface solar radiation

Sub-surface solar radiation

Surface UV

Sub-surface UV

Wave height and length

Bathymetry

Mixing parameters

Disolved oxygen

Disolved organic matter

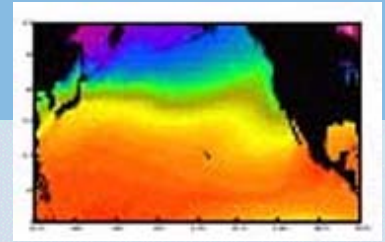
Salinity

Coral bleaching indices

etc



## Time line



- 1. April '04** ⇒ demonstration version of Hawaiian Atlas  
at least one variable from each data type
- 2. July '04** ⇒ complete static version of Hawaiian Atlas
  - in situ ⇒ buoy and logger data
  - satellite data ⇒ AVHRR, SeaWiFS, etc.
  - model outputs ⇒ NLOM, OSCAR, etc.
  - long term data sets ⇒ ERSST
- 3. October '04** ⇒ near-real-time updates of Hawaiian Atlas
- 4. November '04** ⇒ Move to the American Samoa Atlas
  - add new variables/products
  - produce new static atlas