JIMAR ANNUAL REPORT, FY 1999

P.I. NAME: Jeffrey Polovina and Gary Mitchum

PROJECT TITLE: Evaluation of remote sensing technologies for the identification of oceanographic features critical to pelagic fish distributions around the Hawaiian Archipelago

FUNDING: NOAA(PFRP)

1. Purpose of the Project:
   Develop methods to identify fronts and eddies with satellite altimetry and ocean color data and investigate whether these features are important to the spatial and temporal dynamics of pelagic fish catches around Hawaii.

2. Progress during FY 1999:
   Developed methods to process ocean color data from the Japoneses OCTS and the US SeaWIFS sensors for the North Pacific, 1997-99. Described the spatial and temporal dynamics of the Subtropical Chlorophyll Front which serves as the northern boundary of the longline fishing ground for swordfish. Conducted the Subtropical Front oceanographic cruise, May 1999, to validate the remote sensing data and collect subsurface data. Used the remote sensing methods and data developed together with data on satellite telemetry of loggerhead turtles to describe the foraging habitat of the turtles and the overlap with the longline fishing grounds.

   Work continues on calculations using characteristics of the velocity field associated with the Subtropical Front, estimated from satellite altimetry, to describe the interannual variation in swordfish catch rates. This work extends on work presented earlier at AGU Ocean Sciences Meeting.


4. List of Papers Published in Referred Journals during FY 1999:

5. Other Papers


Presentation at 50th Tuna Conference: J.J. Polovina: Habitat of loggerhead turtles and an evaluation of space and area closures in the Hawaii longline fishery to reduce incidental captures of loggerhead turtles.