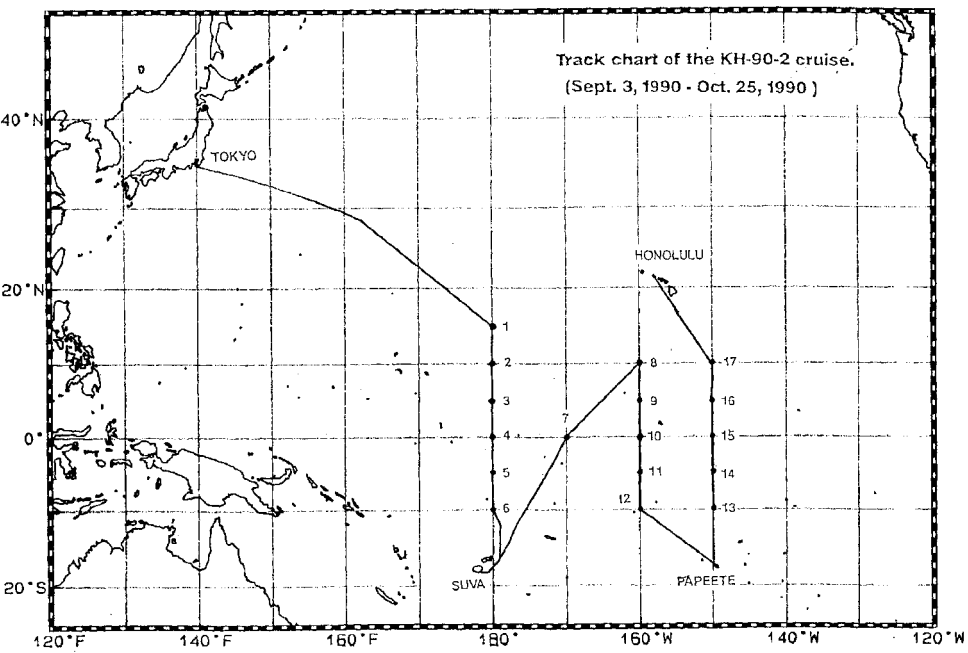


| CRUISE INFORMATION | | | |
|---------------------------------|--|--|---------------|
| Ship | Research Vessel Hakuho Maru | | |
| | Operator | Ocean Research Institute, University of Tokyo 1-15- Minamidai Nakano-ku, Tokyo 164-8639, Japan Phone: +81-3-5512-1563, Fax: +81-3-3505-0570 http://www.ori.u-tokyo.jp/ | |
| Cruise No | KH-90-2 | | |
| Departure | September 3, 1990: Tokyo, Japan | | |
| Arrival | October 25, 1990: Honolulu, USA | | |
| Area | Eastern Tropical Pacific | | |
| Objectives | The objectives of the Hakuho Maru, KH-90-2 cruise were to study the biological productivity, biogeochemical circulation of nitrogen and carbon, and biogeography and vertical migration of zoo plankton and micronekton in order to analyze the Equatorial Pacific Ecosystem and compare with previous data to more fully understand long-term variation in this region | | |
| Project | | | |
| Measurement Parameters | ADCP, CTDO, DO, NH ₄ , Chl-a, SiO ₂ , PO ₄ , NO ₃ , NO ₂ , PP, Phytoplankton, Zooplankton, Micronekton, pCO ₂ | | |
| Principle Investigators | <i>Name</i> | <i>Term</i> | <i>Number</i> |
| | M. Terazaki ORI, Univ. of Tokyo | Chief Scientist | |
| | M. Terazaki | CTDO/Temp, Salinity, Dissolved Oxygen 0-2000m | 17 stations |
| | M. Terazaki | Niskin Sampler 0-2000m/NH ₄ , Chl-a, SiO ₂ , PO ₄ , NO ₃ , NO ₂ | 34 stations |
| | M. Terazaki | Norpac Net 0-200m Zooplankton Collection | 17 stations |
| | M. Terazaki | ORI Net 2000m wireout oblique tow zooplankton collection | 16 stations |
| | M. Terazaki | IKMT oblique tow Micronekton Collection | 16 stations |
| | M. Terazaki | ORI-VMPS, 0-100-250-500-750m Zooplankton Collection 4 layers | 17 stations |
| | T. Saino ORI, Univ. of Tokyo | Octopus 0-200m/ Transmittance Temp. Sal, DO, Fluorescence | 71 station |
| K.Ohwada ORI, Univ. of Tokyo | NBS-BPS 0-2000m/ Bacteria Analysis | 3 stations | |
| Methods | <p>Underway Measurement</p> <p>Temp, Sal, In-vivo fluorescence of phytoplankton pigments: Thermosalinograph (Alec Electric Co., ACT-20)</p> <p>Surface Current: Acoustic Doppler Current Profiler (Furuno Electric Co.)</p> <p>Vertical Profiles</p> <p>Temp, Sal, Oxygen: OCTOPUS system</p> <p>Sal, Oxygen of CTD (Nel Brown, mark III) were calibrated against the bottle data</p> <p>Nutrients, Chl-a, DO: Rosette sampler of OCTPUS</p> <p>Nutrients/Technicon Autoanalyser II</p> <p>Chl-a/Turner Design Fluorometer</p> <p>DO/Winker's method using automatic Titrator (Hirama Rika Co., ART3),</p> <p>Sal/salinometer (Guildline, AutoSal)</p> | | |

| | |
|---------------------------|---|
| <p>Track Chart</p> |  <p>Track chart of the KH-90-2 cruise. (Sept. 3, 1990 - Oct. 25, 1990)</p> <p>The chart shows a cruise track starting from Tokyo, Japan, heading south to station 1 at approximately 18°N, 160°W. From station 1, the track proceeds south to station 2 at 10°N, 160°W, then to station 3 at 5°N, 160°W, station 4 at 0° (Equator), 160°W, station 5 at 5°S, 160°W, and station 6 at 10°S, 160°W. From station 6, the track turns east to station 7 at 10°S, 150°W, then to station 8 at 10°N, 150°W. From station 8, the track proceeds south to station 9 at 5°N, 150°W, station 10 at 0° (Equator), 150°W, station 11 at 5°S, 150°W, and station 12 at 10°S, 150°W. From station 12, the track turns east to station 13 at 10°S, 140°W, station 14 at 5°S, 140°W, station 15 at 0° (Equator), 140°W, station 16 at 5°N, 140°W, and station 17 at 10°N, 140°W. The track ends at Papeete, Tahiti, which is located at approximately 17°S, 150°W. Honolulu is marked at approximately 21°N, 158°W. The chart includes a coordinate grid from 20°S to 40°N latitude and 120°E to 120°W longitude.</p> |
| <p>References</p> | <p><i>With regard to the further information on the research, please refer to the following issue;</i> Preliminary report of R/V Hakuho Maru Cruise KH-90-2, September 3-October 25, 1990, Eastern Tropical Pacific, Ocean Research Institute, University of Tokyo</p> |