Observations in the tropical ocean (POSEIDON & GAIA & TIPEX)

Any question should be asked to Dr. Jae-Hak Lee (jhlee@kiost.ac)
KIOST’s target area

KIOST: Korean Institute of Ocean Science and Technology
POSEIDON project

2006-2014
POSEIDON cruises (2006-2014)

2013 Cruise
(1) Period: May 14 – June 1, 2013
(2) Area : ECS~NW Pacific
(3) Physical measurement
   • Subsurface Mooring System: 3
   • PIES : 6
   • CTD/LADCP : 32/24
(4) Marine ecological measurement
   • Phyto- and zooplankton : 14
   • Benthos : 7
(5) Sediment trap : 2

2014 Cruise
(1) Period: May 13 – June 1, 2014
(2) Area : ECS~NW Pacific
(3) All mooring equipment were recovered
GAIA project
2009-2019
Component of GAIA project

Ocean Observation
- Large scale Air-sea interaction
- Mixing parameterization
- Time series data

Climate change Science
- Modeling results analysis

Data assimilation system
- Reanalysis data
- Improvement of model

Earth system model

IPCC 6th Report
Equatorial current monitoring

- Subsurface ADCP mooring (with deep T/S sensor)
  - 2N, 5N, 7N along 165E
  - Field campaign / with NOAA: 2013.8: 2N, 5N; 2014.6: 5N, 7N
  - First 2~3 years: pilot
  - 2016 (with new RV) ~: routine operation
    (add one at 2S, an activity of TPOS)
TIPEX project

(Submitted, 2015? ~ ????)

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TIPEX (Tropical Indo-Pacific Transport Exp.)

Themes and contents

- **T1-Ocean monitoring**
  - Observation
  - Satellite
  - Mooring
  - Glider, Drifter

- **T2-Ocean modeling**
  - Ocean model
  - ITF circulation
  - ITF variation

- **T3-Tropical marine biology**
  - Species diversity
  - Biogeochemistry
  - Gene

- **T4-Climate variation**
  - ITF-WP/ENSO/IOD
  - ITF-Asian Monsoon
  - ITF-Korean climate
  - Relation T1-T3
감사합니다

Thank you
Three projects

• POSEIDON
• GAIA
• TIPEX