

Institute of Oceanology, Chinese Academy of Sciences

The group discovered the Mindanao Undercurrent, Luzon Undercurrent and North Equatorial Undercurrent, revealed the origin and structure of the undercurrent system, and proposed dynamic mechanism for the formation of these undercurrents. They carried out a series of observations with a huge number of subsurface moorings, which are recognized as the largest mooring array in the region with swift currents and steep topography. On the basis of the mooring array they measured the multi-scale variability of these undercurrents directly. The above findings have advanced the western Pacific ocean circulation study from 2-D into 3-D stages, fundamentally changed traditional understanding framework, made a key breakthrough in this research direction, and inaugurated a new research field. The group initialized the NPOCE international program, and published the first Nature review paper on the Pacific Ocean circulation. The achievement above caused far-ranging international influence, established guiding role of China in the field of western tropical Pacific circulation study, and realized historic leap from following to leading in this field.

MUC LUC NEUC

(c) (b) (a)

Undercurrent (b NEUC) and Luzon Undercurrent (a LUC) measured

2012

NPOCE inauguration meeting in 2012

研究集体突出贡献者

Observation mooring arrays in the

NPOCE  
NPOCE inauguration meeting and its Science/ Implementation Plan

1988  
Norge Larson  
Norge Larson on R/V Science I

研究集体主要完成者

Nature

2010 6100  
Deployment of the 6100 m deep ocean mooring in

western boundary currents and their roles in climate