The Comprehensive Investigation in Autumn at the Southern West Pacific Basic Report

# 1 Basic Information

## 1.1 Cruise name

The Comprehensive Investigation in Autumn at the Southern West Pacific

## 1.2 Sponsoring institution

|  |  |
| --- | --- |
| Name | Ocean University of China |
| Address | 238 Songling Road, Qingdao, P. R. China |
| Name of director | Zhigang Yu |

## 1.3 Chief Scientist of the Cruise

|  |  |
| --- | --- |
| Name | Jiwei Tian |
| Nation | China |
| Institution | Ocean University of China |
| Address | 238 Songling Road, Qingdao, P. R. China |
| Telephone | 086-532-66782367 |
| Email | tianjw@ouc.edu.cn |

## 1.4 Investigation Application and approval of the United State of America

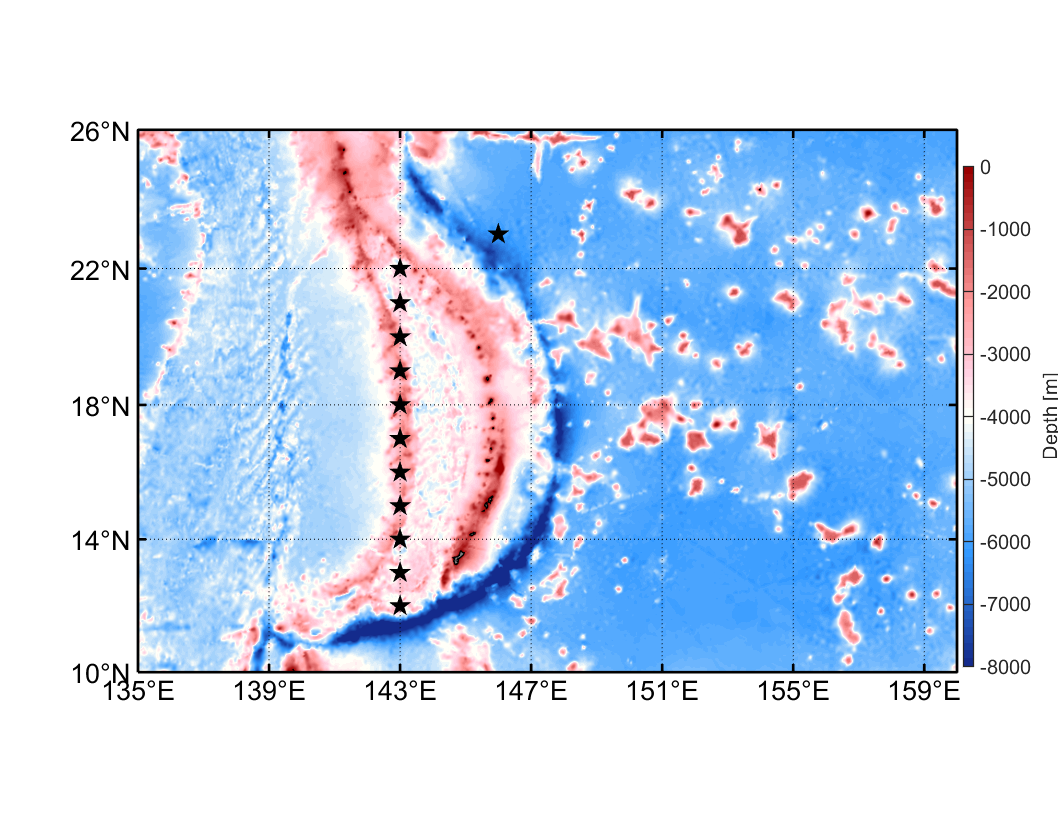
1. Jan. 20, 2017, Submitted the Investigation application of in jurisdictional sea of the United State of America;
2. Aug. 2017, the application was approved.

**Table1.1. Application and approval Stations**

|  |  |  |
| --- | --- | --- |
| **NO.** | **Application and approval Stations** | |
| **E (°E)** | **N (°N)** |
| 1 | 146.00 | 23.00 |
| 2 | 143.00 | 22.00 |
| 3 | 143.00 | 21.00 |
| 4 | 143.00 | 20.00 |
| 5 | 143.00 | 19.00 |
| 6 | 143.00 | 18.00 |
| 7 | 143.00 | 17.00 |
| 8 | 143.00 | 16.00 |
| 9 | 143.00 | 15.00 |
| 10 | 143.00 | 14.00 |
| 11 | 143.00 | 13.00 |
| 12 | 143.00 | 12.00 |

**Table1.2. Investigation Contents**

|  |  |  |  |
| --- | --- | --- | --- |
| **Subjects** | **Type of samples and data** | **Methods to be used** | **Instruments to be used** |
| Physical Oceanography | Temperature, salinity and current | Field observation | Conductivity-Temperature-Depth Sampler, Acoustic Doppler Current Profiler |
| Meteorology | Meteorology elements | Field observation | Auto meteorology station |
| Marine Chemistry | Marine chemistry elements | Water sample collection | Water sampler |
| Marine Biology | Marine biology elements | Water sample and plankton sample collection | Water sampler, vertical tow net |



**Figure 1.1. The main Investigation area, which located in** **jurisdictional sea of the United State of America**

## 1.5 Scientific Purpose

To observe water mass, nutrients and biogeochemical cycling variation at island arc area of Western Pacific under global warming.

# 2 Investigation Execution

## 2.1 Investigation Date

The comprehensive Investigation in autumn at the Southern West Pacific was executed from, Sep. 26, 2017 to Dec. 15 2017. Originally planned entry & departure (jurisdictional sea of USA) time was Sep.01, 2017 - Nov. 30, 2017; Actual entry & departure time: Oct. 17, 2017 - Dec. 07, 2017.

**Table 2.1. Actual Investigation Date**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Application Stations** | | **Approval Stations** | | **Actual Investigation Date** |
| **（°E）** | **（°N）** | **（°E）** | **（°N）** |
| 1 | 146.00 | 23.00 | 145°59.711′ | 23°00.463′ | 2017.10.17 |
| 2 | 143.00 | 22.00 | 142°59.397′ | 21°59.356′ | 2017.12.07 |
| 3 | 143.00 | 21.00 | 143°00.013′ | 20°59.924′ | 2017.12.05 |
| 4 | 143.00 | 20.00 | 142°59.901′ | 20°00.118′ | 2017.11.30 |
| 5 | 143.00 | 19.00 | 142°59.829′ | 19°00.081′ | 2017.11.28 |
| 6 | 143.00 | 18.00 | 143°00.016′ | 17°59.981′ | 2017.11.28 |
| 7 | 143.00 | 17.00 | 142°59.856′ | 16°59.954′ | 2017.11.28 |
| 8 | 143.00 | 16.00 | 142°59.267′ | 16°00.005′ | 2017.11.27 |
| 9 | 143.00 | 15.00 | 142°59.315′ | 14°59.256′ | 2017.11.27 |
| 10 | 143.00 | 14.00 | 142°59.995′ | 14°00.175′ | 2017.11.26 |
| 11 | 143.00 | 13.00 | 142°59.893′ | 13°00.250′ | 2017.11.26 |
| 12 | 143.00 | 12.00 | 142°58.815′ | 12°00.017′ | 2017.11.25 |

## 2.2 Investigation Researcher

**Table 2.2. Investigation Researcher**

| **No.** | **Name** | **Title** | **Affiliation** |
| --- | --- | --- | --- |
|  | Tian Jiwei | Chief Scientist | Ocean University of China |
|  | Zhou Chun | Researcher | Ocean University of China |
|  | Guan Yanfeng | Researcher | Ocean University of China |
|  | Xu Qinbo | Researcher | Ocean University of China |
|  | Xu Xing | Researcher | Ocean University of China |
|  | Zhao Dongliang | Researcher | Ocean University of China |
|  | Liu Min | Researcher | Ocean University of China |
|  | Chen Hongtao | Researcher | Ocean University of China |
|  | Yang Fuxia | Researcher | Ocean University of China |
|  | Bai Xueyan | Researcher | Ocean University of China |
|  | Dong Mingfan | Researcher | Ocean University of China |
|  | Liu Xiangyu | Researcher | Ocean University of China |
|  | Zang Han | Researcher | Ocean University of China |
|  | Wu Yingcui | Researcher | Ocean University of China |
|  | Xu Feng | Researcher | Ocean University of China |
|  | Wang Min | Researcher | Ocean University of China |
|  | Yang Qingwei | Researcher | Ocean University of China |
|  | Zhu Min | Researcher | Ocean University of China |
|  | Xiao Shicong | Researcher | Ocean University of China |
|  | You Siyuan | Researcher | Ocean University of China |
|  | Wang Shihao | Researcher | Ocean University of China |
|  | Yu Hao | Researcher | Ocean University of China |
|  | Chen Dawei | Researcher | Ocean University of China |
|  | Xiao Lin | Researcher | Ocean University of China |
|  | Jiang Yifei | Researcher | Ocean University of China |
|  | Zhou Qingwei | Researcher | Ocean University of China |
|  | Chen Jiaqing | Researcher | Ocean University of China |
|  | Meng Jie | Researcher | Ocean University of China |

## 2.3 Sample / Data

**Table 2.3. Sample / Data**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Subjects** | **Type of samples and data** | **Methods to be used** | **Instruments to be used** | **Sample / Data** |
| Physical Oceanography | Temperature, salinity and current | Field observation | Conductivity-Temperature-Depth Sampler, Acoustic Doppler Current Profiler | Data |
| Meteorology | Meteorology elements | Field observation | Auto meteorology station | Data |
| Marine Chemistry | Marine chemistry elements | Water sample collection | Water sampler | Water Sample |
| Marine Biology | Marine biology elements | Water sample and plankton sample collection | Water sampler, vertical tow net | Water Sample& Biological Samples |