China’s Potential Role in TPOS-2020

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Overview of China’s Relevant Institutions

- **State Oceanic Administration**
  - First Institute of Oceanography
  - Second Institute of Oceanography
  - Third Institute of Oceanography
  - National Marine Environment Forecast Center
  - …

- **Chinese Meteorological Administration**
  - National Climate Center
  - Shanghai Typhoon Institute
  - …

- **Chinese Academy of Sciences**
  - Institute of Oceanology
  - South China Sea Institute of Oceanology
  - Institute of Atmospheric Physics
  - …

- **Ministry of Education**
  - Ocean University of China
  - East China Normal University
  - Xiamen University
  - Tongji University
  - …
Current Observations: In-Situ Programs

SOA’s Operational Network
- 28 buoys/moorings
- 8 HF radars

[Map with buoys and HF radars marked]
Current Observations: Remote Sensing

- Chlorophyll
- SSP
- Temperature
- Global change
- Water Quality
- Fishery
- Hazards detection
- Oceanography
- New Satellites
- CO2
- China’s Satellite Oceanography during 1979-2011
- 1999.7.2 渤海黄河口赤潮
- 1500 平方公里球形棕囊藻
- HY-1A
- HY-1B
- HY-2A
- HY-3A, HY-3B
- HJ-1A/B
- SZ-3, SZ-4
- FY-1A, FY-1B, FY-1C, FY-1D
- FY-3A, FY-3B
- HY-1A
- HY-1B
- HY-2A
- HY-3A, HY-3B
- HJ-1A/B
- SZ-3, SZ-4
- FY-1A, FY-1B, FY-1C, FY-1D
- FY-3A, FY-3B
- HJ-1A/B
- SZ-3, SZ-4
Scientific and Operational Needs for TPOS

- ENSO, monsoon and typhoon
- WP warm pool; WBC
- Ocean environment forecasting
- Regional climate prediction

ENSO, monsoon and typhoon
WP warm pool; WBC
Ocean environment forecasting
Regional climate prediction

Monsoon
MJO
El Nino
Typhoon
Technical Expertise of SIO

- 400 Scientists and supporting staff; 200 Graduate students
- Leading China’s ocean satellite and Argo programs
- Current annual budget is approximately 400 million RMB
Planned Observations: LLWBC and ITF

CAS Program (2014-2018)

Array of 40 moorings
There will be a total of 34 satellite missions before 2020 that can be used for ocean observation:

- **12 Ocean Observation Satellites**
- **11 Meteorological Satellites**
- **11 Disaster Monitoring Satellite Constellation**
Concluding Remarks

- China has the resources and expertise to play a significant role in TPOS
- There is consensus among Chinese scientists that we should contribute more
- Current projects are mostly research rather than operation oriented
- Considerable efforts are needed to persuade the government for sustained support
Thank You