Subject of the M1 SOAC internship - 2024-2025 :

Titre : Air-sea interaction : Study of 2023 and 2024 typhoon events using collected field data

Objectives and descriptions (a few lines)

- Investigating the Interaction Between Wave Energy Spectra and Wind Speed:
  We are examining how energy and momentum are transferred from the wind to the waves in the high-frequency regime and evaluating the effectiveness of current methods for estimating wind speed from wave information. We are also studying the dynamics between waves of different scales relative to wind speed.

- Dynamics of Bubble and Air Entrainment During Typhoon Events:
  At high wind speeds, breaking waves play an important role in momentum exchange and generate sea spray and bubble injection into the water. We are investigating bubble dynamics during typhoon events.

- Other Potential Topics: ADCP and 3-D Anemometer Data Analysis:
  Our Wave Gliders are equipped with instruments such as ADCPs for measuring currents and high-frequency anemometers for near-surface turbulence, which may uncover key mechanisms in air-sea interaction research.

Location

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