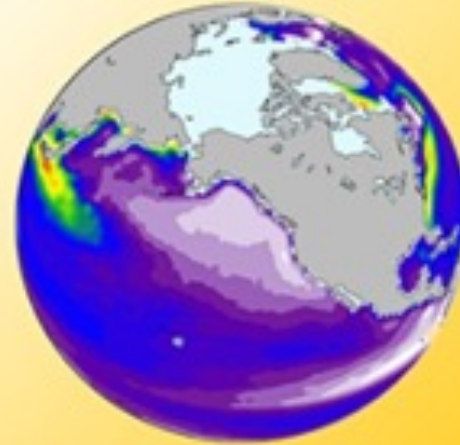


## International workshop for mid-latitude air-sea interaction: advancing predictive understanding of regional climate variability and change across timescales



Date: **June 8-9 (online) &  
June 12-14 (online + in-face)**  
Place (in-face): **Sapporo, Japan**  
Science organizing committee:  
Shoshiro Minobe, Masami Nonaka,  
Satoshi Iizuka, Noel Keenlyside,  
Hyodae Seo, and Shang-ping Xie



This workshop was closely related to Japanese Hotspot2 project, lead by Masami Nonaka.

This workshop is sponsored by the HotSpot2 Project.



- 126 presentations from 14 countries including 54 presentations from abroad. These include 15 early career researchers, who received their PhD in the last five years, and 36 students.
  - Online setting will help a relatively large number of presentations and participants of early career researchers and students from abroad.
  - Presentation awards were given to eight early career researchers and students.

## Notable comments from the breakout sessions

- Many breakout groups recognized **high-resolutions** and **large ensembles** are important designs of numerical simulation.
- **Signal-to-noise paradox** should be examined, because this paradox implies predictable components are underestimated, and the air-sea interaction is a one of potential source of the underestimation.
- The meaning of air-sea interaction in the context of **prediction** especially for extreme events (e.g., tropical cyclones or explosively developing extratropical cyclones) should be studied including **understanding of mechanisms in different regions**.
- Increase of observation capability is crucial. For example, **autonomous observation platforms**, such as wavegliders and saildrones may have big potentials.