



Abstract Details

[AOGS 1st Annual Meeting](#) > [Ocean and Atmospheres](#) > **Study on Interdecadal Variability at the North Pacific** >

Corresponding Author : Prof. Jai-Ho Oh (ymmin@climate.pknu.ac.kr)

Organization: Pukyong National University

Category: Ocean and Atmospheres

Paper ID: 57-OOA-A1667

Title: Study on Interdecadal Variability at the North Pacific

Abstract:

Large-scale variation over the North Pacific may influence the Pacific Ocean. A recent study by Frauenfeld and Davis (2002) suggested that the variability of atmospheric circulation in the Eurasia might be the source of the decadal PDO-like variability in the extratropical Pacific Oscillation. This has been distinguished from the El Niño-Southern Oscillation (ENSO). In this study, it is attempted to explain variability in the PO with a newly defined index, Wind Anomaly Index (WAI), which has been introduced to consider the interaction between the atmospheric circulation and sea surface temperature (SST) anomalies. The interdecadal (10~20 years) and interannual variability (3~5 years) of WAI are clearly shown in Figure 1. These modes are similar to the Pacific Decadal Oscillation Index (PDOI) and Southern Oscillation Index (SOI). And each level of WAI mode is consistent with different indices (e.g., SOI et al). In another wavelet analysis, large-scale variations (10~20 years) are representing SOI, WAI (at 200hPa) and PDOI in that order. We can see that tropical SST variability was transferred to atmospheric variability and then atmospheric variability was transferred to North Pacific SST. Then atmospheric vertical variability was transferred from bottom to top directly. Finally WAI might be useful because it can represent the atmospheric circulation condition with a simple index number and this WAI can be easily compared to other indices such as the SOI, PDOI, and the Arctic Oscillation Index (AOI).

Presentation Mode: Oral

Keywords: ENSO, PDO, WAI, SOI, Interdecadal variability

Status: Pending.

Co-Authors

No.	Title	First Name	Family Name	Organization
1	Mr.	Tae-Hoon	Kim	Pukyong Nat'l Univ.
2	Prof.	Jai-Ho	Oh	Pukyong Nat'l Univ.
3	Mr.	Kyoung-Min	Lee	Pukyong Nat'l Univ.