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# Validation of Analyzed Mesoscale Sea Surface Data with the Buoy Observation near the Korean Peninsula

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The air-sea interaction has been studied using appropriate oceanic data such as SST as well as meteorological data. These datasets are generally obtained from ocean buoy, ship, satellite and NCEP reanalysis data (Kalnay et al. 1996). But most of these datasets are irregular and have coarse resolution in time and space. Several studies in the past have shown that these datasets are not suitable to fully understand the complexity of air-sea interaction mechanism.

To overcome these limitations, a numerical estimation of various surface and atmospheric parameters has been done using weather generator MM5 (Dudhia 1993) for the period 1970 to 1999. The Correlation coefficients (CCs) have been computed between estimated data and values measured at five stations namely Dukjuk, Chilbal, Geoje, Geomun and Eastsea for the period January 1999. The magnitude of CCs are between 0.48~0.73 for wind field, 0.88~0.92 for pressure field and 0.78~0.92 for temperature field. These results indicate good agreement between the estimated and measured data (Fig. 1). Present study has also divided the ocean surrounding the Korean Peninsula into three sectors namely eastern sea, western sea and southern sea for detail study. Then we have analyzed long-term variability of some atmospheric parameters over three oceanic sectors using high resolution data based on numerical estimation. Finally, we will study inter-annual variability using above parameters over each oceanic sectors and Korea Peninsula in future.

Keywords: Mesoscale, correlation coefficients, sea surface temperature

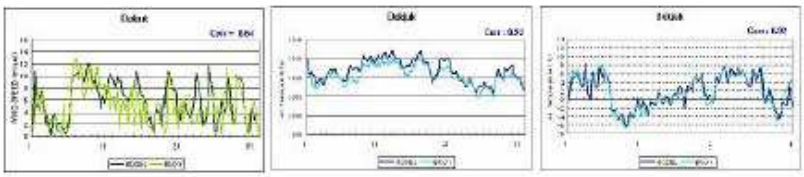

Figure 1: Comparison between buoy measurements of Dukjuk location and model results at corresponding point.

## References

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