Auxiliary material for

Periodicity and patterns of ocean wind and wave climate

Justin E. Stop and Kwok Fai Cheung

(Ocean Resources and Engineering, University of Hawaii at Manoa, Honolulu, HI)

Journal of Geophysical Research, Oceans, 2013

Introduction

As reference we provided the corresponding Figures ("fs01.jpeg" to fs12.jpeg") from the EOF time and frequency analysis of the ERA-I wind and wave datasets of *Dee et al.* [2012]. *Stopa and Cheung* [2014] concluded that CFSR and ERA-I datasets have significant improvements over their predecessors at their respective institutions confirming their importance to the communities. Despite the actively improving wave model datasets as described by *Tolman et al.* [2013] and *Rascle and Ardhuin* [2013], the wind forcing from CFSR and ERA-I provide essential information to the wave modeling communities in its present state. In general, the results from CFSR and ERA-I are very similar and the color scales are identical to those presented from the CFSR results to provide a direct means of comparison. Refer to the text of the main article for the physical interpretations and descriptions of the information.

List of Figures

- 1. "fs01.jpeg" Wind speed EOFs in the time-domain analysis (top) and frequency-domain analysis (bottom) for the Atlantic Ocean.
- "fs02.jpeg" Significant wave height EOFs in the time-domain analysis (top) and frequencydomain analysis (bottom) for the Atlantic Ocean.

- "fs03.jpeg" Principal components for wind speeds (top) and significant wave heights (bottom). Red denotes mode 1, blue mode 2, and green mode 3 with top 10 annotated in the Atlantic Ocean.
- 4. "fs04.jpeg" Power spectral density from representative periods for the wind speed (top) and significant wave heights (bottom) in the Atlantic Ocean.
- 5. "fs05.jpeg" Wind speed EOFs in the time-domain analysis (top) and frequency-domain analysis (bottom) for the Indian Ocean.
- "fs06.jpeg" Significant wave height EOFs in the time-domain analysis (top) and frequencydomain analysis (bottom) for the Indian Ocean.
- "fs07.jpeg" Principal components for wind speeds (top) and significant wave heights (bottom). Red denotes mode 1, blue mode 2, and green mode 3 with top 10 annotated in the Indian Ocean.
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- 9. "fs09.jpeg" Wind speed EOFs in the time-domain analysis (top) and frequency-domain analysis (bottom) for the Pacific Ocean.
- 10. "fs10.jpeg" Significant wave height EOFs in the time-domain analysis (top) and frequencydomain analysis (bottom) for the Pacific Ocean.
- 11. "fs11.jpeg" Principal components for wind speeds (top) and significant wave heights (bottom). Red denotes mode 1, blue mode 2, and green mode 3 with top 10 annotated in the Pacific Ocean.
- 12. "fs12.jpeg" Power spectral density from representative periods for the wind speed (top) and significant wave heights (bottom) in the Pacific Ocean.

References

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