

SPECIAL PROJECT FINAL REPORT

All the following mandatory information needs to be provided.

Project Title:	Interaction between the tropics and extratropics and the implications for seasonal and interannual prediction
Computer Project Account:	spdegrea
Start Year - End Year :	2019 - 2019
Principal Investigator(s)	Dr. Felicitas Hansen
Affiliation/Address:	GEOMAR Helmholtz Centre for Ocean Research Kiel Düsternbrooker Weg 20 24105 Kiel Germany
Other Researchers (Name/Affiliation):	Prof. Dr. Richard J. Greatbatch (GEOMAR) Dr. Gereon Gollan (GEOMAR) Prof. Dr. Katja Matthes (GEOMAR)

The following should cover the entire project duration.

Summary of project objectives

(10 lines max)

Latest generation seasonal forecasting systems have shown significant skill at predicting the wintertime North Atlantic Oscillation (NAO) when initialized about one month ahead. However, predictions that extend beyond that range to one or even multiple years are also of large interest to a number of societal, economic and scientific sectors. This project aimed at creating a set of 2-year forecast experiments run with the coupled atmosphere-ocean model to investigate both the sources of seasonal to interannual predictability for the wintertime NAO as well as identify mechanisms by which the extratropics could influence the tropics. A relaxation technique where different parts of the atmosphere are relaxed towards reanalysis data to obtain “perfect forecasts” for the relaxed regions has proven useful in our former ECMWF special projects investigating seasonal forecasts and was now intended to be applied to the longer forecasts which were focus of this project.

Summary of problems encountered

(If you encountered any problems of a more technical nature, please describe them here.)

Unfortunately, we had to withdraw this special project without being able to perform any of the experiments originally planned due to unexpected changes in the professional situations of some of the researchers involved in this project.

Experience with the Special Project framework

(Please let us know about your experience with administrative aspects like the application procedure, progress reporting etc.)

The administrative aspects work really well. Thank you for all your great support.

Summary of results

(This section should comprise up to 10 pages, reflecting the complexity and duration of the project, and can be replaced by a short summary plus an existing scientific report on the project.)

List of publications/reports from the project with complete references

Future plans

(Please let us know of any imminent plans regarding a continuation of this research activity, in particular if they are linked to another/new Special Project.)

Right now, we do not see an opportunity to continue working on the ideas of this project.