# Article information:

A Conceptual Model of Polar Overturning Circulations in: Journal of Physical Oceanography Volume 51 Issue 3 (2021)  
<https://journals.ametsoc.org/view/journals/phoc/51/3/JPO-D-20-0139.1.xml>

# Article summary:

1. This paper presents a conceptual physical model of polar overturning circulations in both the Arctic and Antarctic.

2. The model includes budgets for mass, salt, and heat, as well as physical parameterizations of Polar Water (PW) and Overflow Water (OW) formation.

3. The model synthesizes existing ideas from the polar oceanography literature, such as salinization processes to produce dense shelf water, the importance of sea ice in moving freshwater from shelves to freshen SAMW and AAIW, and the formation of deep water by freezing and brine rejection.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable and trustworthy. It is based on existing research in the field of polar oceanography, which provides a solid foundation for its claims. The authors provide detailed explanations of their conceptual physical model and how it applies to both the Arctic and Antarctic regions. They also cite relevant sources throughout the article to support their arguments.

However, there are some potential biases that should be noted. For example, the authors do not explore any counterarguments or present both sides equally when discussing their model's implications for climate science. Additionally, they do not discuss any possible risks associated with their proposed model or consider any other points of view that may differ from theirs. Furthermore, some of their claims are unsupported by evidence or data; instead they rely solely on theoretical arguments without providing any empirical evidence to back them up.

In conclusion, while this article is generally reliable and trustworthy due to its reliance on existing research in polar oceanography, there are some potential biases that should be taken into account when evaluating its trustworthiness and reliability.

# Topics for further research:

* Polar oceanography research
* Climate science implications
* Counterarguments to physical model
* Risks associated with proposed model
* Empirical evidence for theoretical arguments
* Alternative points of view on polar oceanography

# Report location:

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