# Article information:

OS - Global representation of tropical cyclone-induced short-term ocean thermal changes using Argo data
<https://os.copernicus.org/articles/11/719/2015/>

# Article summary:

1. Argo floats are used to examine the global-scale thermal changes caused by tropical cyclones (TCs).

2. TCs are responsible for 1.87 PW of heat transfer annually from the ocean to the atmosphere during storm passage.

3. The ocean experiences a 0.75 ± 0.25 PW heat gain annually for hurricanes, and a 0.41 ± 0.21 PW heat loss under TS/TD conditions, suggesting that the overall oceanic thermal response is particularly sensitive to the intensity of the event.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article provides an overview of how Argo floats can be used to measure short-term ocean thermal changes induced by tropical cyclones on a global scale, and presents results from an analysis of cross-track thermal responses along all storm tracks during 2004–2012. The article is well written and provides clear explanations of its methodology and findings, making it easy to understand for readers with some knowledge in this field.

The authors have provided evidence for their claims in the form of data from Argo floats, which is reliable as it has been collected over a long period of time (2004–2012). However, there is no mention of any potential biases or errors in the data collection process that could affect the accuracy of their results, such as instrument malfunctioning or incorrect calibration procedures. Additionally, there is no discussion on how other factors such as climate change may have impacted their findings or whether they have taken these into account when interpreting their results.

The article also does not provide any counterarguments or alternative perspectives on its findings, which could help readers better understand its implications and draw more informed conclusions about its reliability and trustworthiness. Furthermore, while it does mention that TCs are responsible for 1.87 PW of heat transfer annually from the ocean to the atmosphere during storm passage, it does not provide any information on what this means in terms of potential risks or impacts on marine ecosystems or coastal communities that could be affected by these changes in temperature and circulation patterns due to TCs.

In conclusion, while this article provides useful insights into how Argo floats can be used to measure short-term ocean thermal changes induced by tropical cyclones on a global scale, it lacks sufficient evidence and discussion regarding potential biases in data collection processes as well as possible risks associated with these changes in temperature and circulation patterns due to TCs which could affect marine ecosystems or coastal communities negatively if not properly addressed or managed appropriately.

# Topics for further research:

* Tropical cyclone impacts on marine ecosystems
* Ocean thermal changes due to climate change
* Potential biases in Argo float data collection
* Risks associated with ocean thermal changes
* Coastal communities affected by tropical cyclones
* Management strategies for mitigating tropical cyclone impacts

# Report location:

<https://www.fullpicture.app/item/fd6c12a4771c263243184f2b5a417248>