# Very long term change in oceanic through flow

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**Abstract**

## 1 Introduction

In the last 65 Ma in our history major changes have occurred in the climate of the earth. One of the changes that is studied intensively is the change in geometry of the earth. In this period the earth moved from having one major oceanic system in the Atlantic to having the 3 oceanic systems we now know. The exact timing of passage openings in the worlds oceans is a topic of rigorous debate[2][3]. Studying the effects of this change in geometry has in the past resulted in major challenges changing the bathymetry in many models is exceedingly difficult. Papers often focus on simplified geometries taking instead using records on temprature and CO2 data to model the changes in the climate.[4].

This paper will focus solely on changes in bathymetry using very simplified zonally averaged global forcings to estimate global changes in oceanic through flow and strength of the meridional overturning currents (MOC).

## 2 Methods

About veros Parameters chosen Highly idealised oceanic basin Highly idealised oceeanic forcing About the overturning currents

converting the data from [1] to veros

ignoring many things idealized global temprature profile idealized global salinity idealized global wind stress

## 3 Results

## 4 Summary

## References

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[3] D. N. Schmidt. "The closure history of the Panama Isthmus: Evidence from isotopes and fossils to models and molecules". In: *ResearchGate* (2007), p. 429444. URL: https://www.researchgate.net/publication/282323290_The_closure_history_of_the_Panama_Isthmus_Evidence_from_isotopes_and_fossils_to_models_and_molecules.

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