**Characterising the watermasses in the EAC system (JGR? GRL? Ocean Science)**

**Data**: 5 years (2015, 2016, 2018, 2019, 2021, 2022) off CTDs in the EAC / WCE / CCE / shelf

(\* get Martina / Iain data? Add moorings at some point?)

T,S, chl, DO, nutrients

Redefine categories? Specific criteria EAC (V<-0.3m/s) / eddies (SLA anomalies? or closed contour? Or eddy detection? )

**Questions**

* Categorization of watermasses in different flow regimes
* Classification and origin (Peirce et al 2081)?
* TS: variability over the years: how much changes + which depths / density
* BGC characteristics: add DO, chlorophyll, nutrients
* Anomalies of nutrients?

**Figures**:

* Figure 1: map
* Figure 2: Profiles of T, S, O2, chl over depth (/pressure) EAC / WCE / CCE / SH
* + nutrients
* Figure 3: TS diagram: on top of Peirce et al -> origin of watermasses (EAC / WCE / CCE / SH)
* Figure 4: variability ts\_per\_cruise
* Figure5: anomalies T,S, nutrients
* -> reproduce TS watermasses in the Tasman / EAC from Peirce (adding O2 and nutrients characteristics?)

**Key-points:**

* 1st characterization of EAC BGC watermass
* Distinction between EAC and eddies
* Depth of variability

**LOGISTICS**

* Github project
* Meeting Sep -> figures
* Draft sections

REFS:

https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2015GL066050 :

“A profile is considered to be within a cyclonic (anticyclonic) eddy if the SLA immediately above the float is less (greater) than −0.02 m (+0.02 m), and if the SLA decreases (increases) monotonically between the location of the float and the location of the nearest SLA minimum (maximum) at the time of the observation.”

[**https://www.sciencedirect.com/science/article/pii/S0967063708001283**](https://www.sciencedirect.com/science/article/pii/S0967063708001283)

[**https://d1wqtxts1xzle7.cloudfront.net/9598964/warreen-with-cover-page-v2.pdf?Expires=1659061593&Signature=cmCem8oSveB8cVWn5qaSNkpg48oQQpPKqi4gB0Pkw3Au1putqfKdE1F0aZK25O2yAr7C82xUmMgtlU-ABoxF2EPP9vU4VUCEpp0hngweNvzIwPgsbj4Wcj5oPDq1M7UBmsLsHaivoeBv6CN9HF1W~Y-LqbcRZUA78UEIv-0VF0b1NwnO9u1uowMF-HR4fzovlvKfves5-kK~Fvi6NRq05MzpuCEtcxwDc3BXqTPYXShw8DJMsRkJ33RNoiXu7-mBRcAB7fN-SuXwL0J5vV9VY8YI-NRfhHyXJdDB3MiHB~7ngOD2xeaJAffzHM1igYj-kojRgtiO54cynF4xjsweBg\_\_&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA**](https://d1wqtxts1xzle7.cloudfront.net/9598964/warreen-with-cover-page-v2.pdf?Expires=1659061593&Signature=cmCem8oSveB8cVWn5qaSNkpg48oQQpPKqi4gB0Pkw3Au1putqfKdE1F0aZK25O2yAr7C82xUmMgtlU-ABoxF2EPP9vU4VUCEpp0hngweNvzIwPgsbj4Wcj5oPDq1M7UBmsLsHaivoeBv6CN9HF1W~Y-LqbcRZUA78UEIv-0VF0b1NwnO9u1uowMF-HR4fzovlvKfves5-kK~Fvi6NRq05MzpuCEtcxwDc3BXqTPYXShw8DJMsRkJ33RNoiXu7-mBRcAB7fN-SuXwL0J5vV9VY8YI-NRfhHyXJdDB3MiHB~7ngOD2xeaJAffzHM1igYj-kojRgtiO54cynF4xjsweBg__&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA)