

Surface Current Variability in the EAC

Line 2 I question the phrase decadal fluctuations, they have only recorded 8 years of data

Line 25 “intricate flow patterns” can you describe more

Line 57 Tasman Front moves towards

Line 63 capitalize Integrated Marine Observation System

Line 79 unweighted least-squares (Lipa reference)

Lipa, B., and D. Barrick. "Least-squares methods for the extraction of surface currents from CODAR crossed-loop data: Application at ARSLOE." *IEEE Journal of Oceanic Engineering* 8, no. 4 (1983): 226-253.

Line 86 what does the (2) refer to?

Line 126 remove “land based”

Line 140 CODAR Ocean Sensors

Line 149 sentence ends with preposition from, please fix

Line 153 direction finding

Table 1 the formatting of the table could be improved. Can you add lines for each row. I think this would make it easier to read.

Figure 1 I think you should separate the coverage maps for the COF network and RHED network since the length of time they were operating were so different. The colormap for Figure 1a should be changed to cmocean speed.

Line 163 what does FV00 mean, can you explain more

Figure 2 why did the coverage decrease at RRK and NNB starting in 2021

Line 189 remove sentence “The drifters will be described more ...”

Line 201 Each SVP drifter

Line 243 is the equation needed?

Line 255 independent validation dataset, which is?

Line 270 comparison was

Line 303 what were the validation points

Line 308 imbalance of radar observations, please explain more

Line 352 can you explain “resulting in reversal” more

Table 3 theta phase difference, can you explain more

Table 4 can you make the gap filling 2dvar data its own section, so you’ll have LS, 2dVar and 2dVar gap filled as the 3 main columns

Line 446 radar-derived currents

Figure 8 the ellipses over the vectors are hard to read, can you separate

Line 484 I thought the COF data was 8 years?

Figure 9 Can you group the panels by season summer (Dec, Jan, Feb) etc.

Line 498 the widening jet, can you explain that more, I don’t see it in Fig 11

Fig 11 can you color the months by season summer (black), fall (red), winter (blue), spring (green)

Line 508 mooring and radar data

Line 535 within the range of ___ cm/s , missing number

Line 609 I disagree with the statement that the radar datasets have certain inherent limitations, if one of the radar stations goes offline, then you lose totals. That is a limitation in the design of the observing system, not the radar technology. Redundant coverage would eliminate this limitation.